Sampling, Drilling
and
Airborne Geophysical Report
on the Troitsa Project

Omineca Mining Division
Tenure Numbers:
530747, 562810, 591929, 610463, 610466, 626523, 637152, 818105, 821422, 822483, 829162, 830887-830892, 884549, 1015633

NTS: 093E11W
Latitude 53 31 25 N Longitude 127 21 03 W

UTM Zone: 09 (NAD 83)
5931752N 0609179E

Work performed July 30-August 30, 2012
By Ken Galambos and Callinex Mines Inc. personnel

for

Callinex Mines Inc.
Suite 1110 - 555 W. Hastings Street
Vancouver, British Columbia
V6H 4V4

on claims owned by
Ken Galambos, Shawn Turford and Ralph Keefe

BC Geological Survey
Assessment Report
33984

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June 14, 2013

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Item 1: Summary

The Troitsa property consists of nineteen contiguous quartz claims, 292 cells, covering an area of 5611.21ha. Three Minfile showings are covered by the present property. These are the Troitsa Lake (093E 003), Troitsa Main (093E 055) and Troitsa Cirque (093E 009) showings. Minimal work was completed on the property between 1986 and 2010 and all showings date from the late 1960's. The property is located on Troitsa Lake in west central British Columbia. The centre of the area lies approximately 18 km SW of the Huckleberry mine site and 140km south of the community of Smithers, BC on mapsheet 93E11W.

Mineralization on the Troitsa property fits the classic calc-alkaline deposit model with stockworks of quartz veinlets, quartz veins, closely spaced fractures and breccias containing pyrite and chalcopyrite with lesser molybdenite in granodiorite to quartz monzonite. In British Columbia, twenty-nine calc-alkaline deposits and/or camps have yielded 7.6 billion kilograms of copper, 109.6 million grams (3.5 million ounces) of gold and 2.1 billion grams (67.5 million ounces) of silver.

The nearby Huckleberry mine has been in production since October, 1997 and has produced 404.2 million kilograms of copper, 3.5 million kilograms of molybdenum, 4.9 million grams (143,855 ounces) of gold and 93.2 million grams (2.7 million ounces) of silver from 94.4 million tonnes of ore milled to the end of 2011. For the first 9 months of 2012, production was 11.86 million kilograms copper, 2071 kilograms of molybdenum, 66,709 grams (1946 ounces) of gold and 4.77 million grams (139,155 ounces) of silver.

Drilling by Goldreach Resources in 2012, at its Ootsa deposit, located 20km to the northeast, has resulted in the publishing of an inferred resource of 463.5 million tonnes at a 0.2% copper equivalent cutoff. This resource is contained in two deposits on the property and includes Seel, 410,880,000 tonnes at 0.16% Cu, 0.11ppm Au, 0.018% Mo, 1.95ppm Ag (0.31% CuEq) and Ox, 52,650,000 tonnes at 0.21% Cu, 0.03ppm Au, 0.022% Mo, 1.35ppm Ag (0.32% CuEq).

The Troitsa property was optioned by Callinan Mines Limited in September 2010. The company conducted a small surface program of geochemical surveying and prospecting. A continuous 121m channel sample was collected over the chalcopyrite and molybdenite mineralization at the Troitsa Main showing and over mineralization that was located downstream and apparently not previously sampled. This mineralization averaged 0.282% Cu over the full 121m sampled and included two zones of higher grade mineralization. The western zone averaged 0.445% Cu/28m and included the historic Troitsa Main showing. The eastern zone averaged 0.594% Cu/24m. Copper-in-soil geochemistry suggests that the Main zone mineralization may have a strike extension of at least 300m and possibly 1150m and remains open to the northwest and southeast, with a number of parallel anomalies to the west.

In 2011, Callinex Mines Inc., a spinoff from Callinan, completed 3DIP and magnetic surveys and diamond drilled 2770.9m in eight holes from six different locations. Highlights of this drilling include an intercept from TR11-07, located approximately 200m northwest of the Troitsa Main showing, that averaged 0.317% copper over 86.71m within a wider zone that averaged 0.204% copper over 164.44m. The geophysical surveys completed during the program have identified numerous chargeability, resistivity and magnetic targets that remain untested by drilling. Final interpretation of the IP data shows that TR11-07 tested a near surface chargeability anomaly adjacent to a deeper, coincident magnetic, resistivity and chargeability anomaly.

Diamond drilling in 2012 of three holes led to the discovery of wide intercepts of copper mineralization. TR12-09, collared 82m southwest of TR11-07 returned 0.65% copper and 4.84ppm silver over 19.42m and averaged 0.169% copper over the entire 264.95m drilled. TR12-10, located a further 240m to the northwest returned 0.858% copper and 4.77ppm silver over 23.18m within a wider interval of 0.224% copper/169.87m. The drillhole averaged 0.176% copper over 309.99m and tested one of the deep chargeability/resistivity anomalies. The final hole, TR12-11, drilled over the top of a chargeability/resistivity target located 700m southwest of the Troitsa Main showing. The hole was collared at -45° and shallowed to a dip of -27° at its bottom. Separate, narrow intercepts were encountered in the hole, and included 0.271% copper/2m, 0.127% copper over 6m and 0.107% copper over 8m, all within 100m of surface. The drillhole averaged 206ppm copper over its entire 403.73m length.

Geotech Ltd. completed 1011 line km of ZTEM and magnetometer airborne geophysical surveys for Callinex in 2012, with roughly 25% being flown over the Troitsa property. The survey was successful in identifying large magnetic and conductive/resistive features at Troitsa. A 900m wide relatively conductive zone was identified trending northwest through the area of known mineralization. The northeast trending magnetic anomaly identified in ground surveys in 2011 is seen as being part of a larger circular magnetic anomaly that measures roughly 4km in diameter. Numerous other conductive zones highlight known faults and other previously unrecognized linear features, and suggest that the structure in the area is more complex than earlier thought. The features mapped by the ZTEM survey at Troitsa are deep-seated and can be seen from near surface to depths of 2900m.

Concurrent with the 2012 drilling, a surface sampling program was successful in discovering high grade molybdenum and precious metal showings either on or near the property boundaries. Chip sampling returned values as high as 21.224% molybdenum and >1000ppb rhenium over 1m in the central area of the Troitsa intrusion and 0.593% copper, 0.213gm/t gold and 7.37gm/t silver over 1m near its southeast contact with the overlying volcanics. Grab samples in the area returned values as high as 2.43% copper, 19.4gm/t gold and >300gm/t silver.

In light of the widespread base metal mineralization associated with large structural features found on the property to date, the local precious metal enrichment and the number of untested ground geophysical targets remaining, the author believes the Troitsa property to be a property of merit, with the potential to host one or more significant mineralized bodies. Additional exploration expenditures are warranted.

Item 2: Introduction

2.1 Qualified Person and Participating Personnel

Mr. Kenneth D. Galambos, P.Eng. was commissioned by Callinex Mines Inc., of British Columbia,, to oversee the 2012 surface sampling and drilling programs on the Troitsa Project and to make recommendations for the next phase of exploration work in order to test the economic potential of the area.

This report describes the property in accordance with the guidelines specified in National Instrument 43-101 and is based on historical information and an examination and evaluation of the property by the author from July 30 to August 30, 2012. The exploration program entailed the services of numerous personnel under contract to or employed by Callinex Mines Inc.

2.2 Terms, Definitions and Units

- All costs contained in this report are denominated in Canadian dollars.
- Distances are primarily reported in metres (m) and kilometers (km) and in feet (ft) when reporting historical data.
- GPS refers to global positioning system.
- Minfile showing refers to documented mineral occurrences on file with the British Columbia Geological Survey.
- The term ppm refers to parts per million, equivalent to grams per metric tonne (g/t).
- ppb refers to parts per billion.
- The abbreviation oz/t refers to troy ounces per imperial short ton.
- The symbol % refers to weight percent unless otherwise stated. 1% is equivalent to 10,000ppm.
- Elemental and mineral abbreviations used in this report include: arsenic (As), gold (Au), lead (Pb), molybdenum (Mo), rhenium (Re), silver (Ag), chalcopyrite (Cpy), galena (PbS), molybdenite (MoS_2) and pyrite (Py).

2.3 Source Documents

Sources of information are detailed below and include the available public domain information and private company data.

- Research of the Minfile data available for the area at http://www.empr.gov.bc.ca/Mining/Geoscience/MINFILE/Pages/default.aspx .

- Research of mineral titles at https://www.mtonline.gov.bc.ca/mtov/home.do
- Review of company reports and annual assessment reports filed with the government at http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/Pages/default.aspx
- Review of geological maps and reports completed by the British Columbia Geological Survey at http://www.empr.gov.bc.ca/Mining/Geoscience/MapPlace/MainMaps/Pages/default.aspx .
- Published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.
- Work on the property by the author and personnel from Callinex Mines Inc. from July 30-August 30, 2012.

2.4 Limitations, Restrictions and Assumptions

The author has assumed that the previous documented work in the area of the property is valid and has not encountered any information to discredit such work. The author directly supervised work on the project in 2012.

2.5 Scope

This report describes the 2012 surface sampling, airborne surveys and drilling program, geology, previous exploration history and mineral potential of the Troitsa Project. Research included a review of the historical work that related to the immediate and surrounding area of the property. Regional geological data and current exploration information have been reviewed to determine the geological setting of the mineralization and to obtain an indication of the level of industry activity in the area. The property was examined and evaluated by the author July 30-August 30, 2012. Work consisted of prospecting, surface sampling and diamond drilling of 1006m of HQ/NQ drill core and the completion of approximately 250 line-km of airborne geophysical surveys (ZTEM and magnetics) over the Troitsa claims.

Item 3: Reliance on Other Experts

Some data referenced in the preparation of this report was compiled by geologists employed by various companies in the mineral exploration field. These individuals would be classified as “qualified persons” today, although that designation did not exist when some of the historic work was done. The author believes the work completed and results reported historically to be accurate but assumes no responsibility for the interpretations and inferences made by these individuals prior to the inception of the “qualified person” designation.

Item 4: Property Description and Location

The Troitsa claim group consists of nineteen contiguous quartz claims covering an area of 5611.21ha (292 cells) between Troitsa and Coles lakes in west central BC. The property is located on mapsheet 93E11W, 140km south of the community of Smithers, BC. Logging roads extend to within 18km of the property.

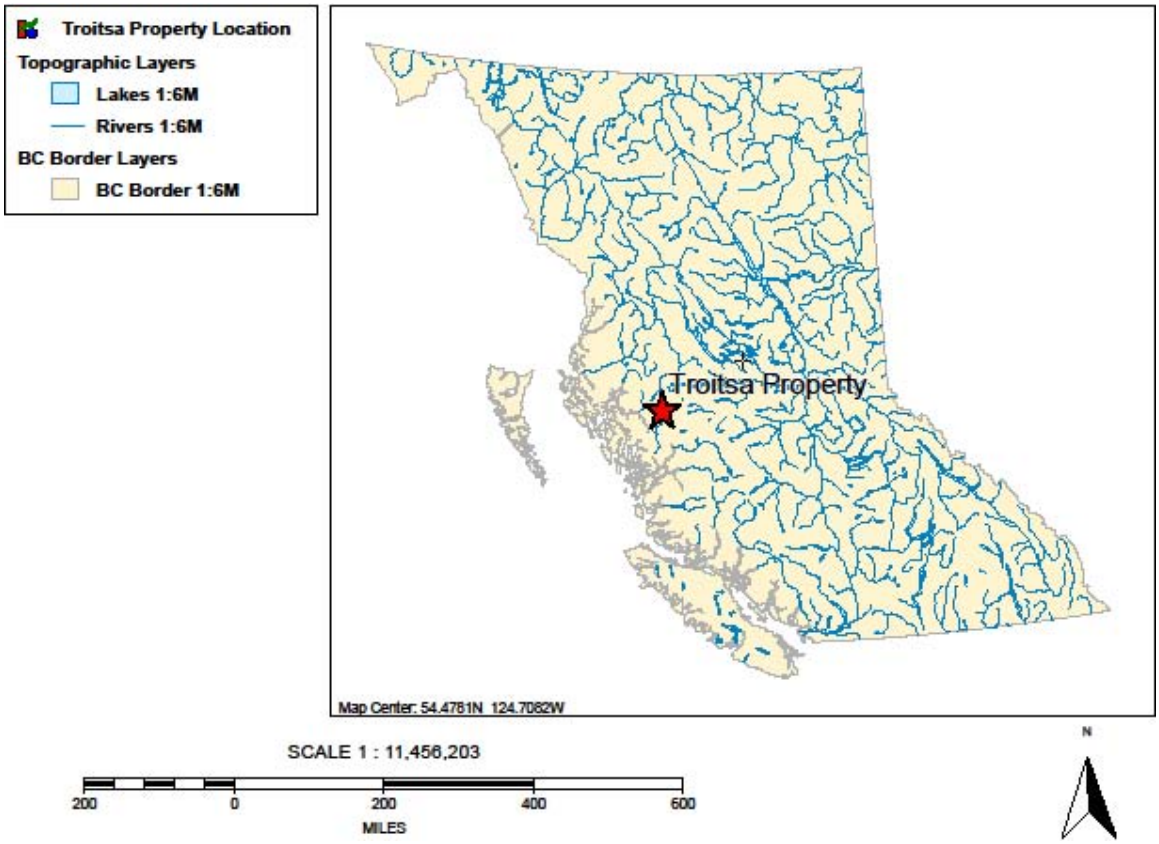


Figure 1: Troitsa Location Map

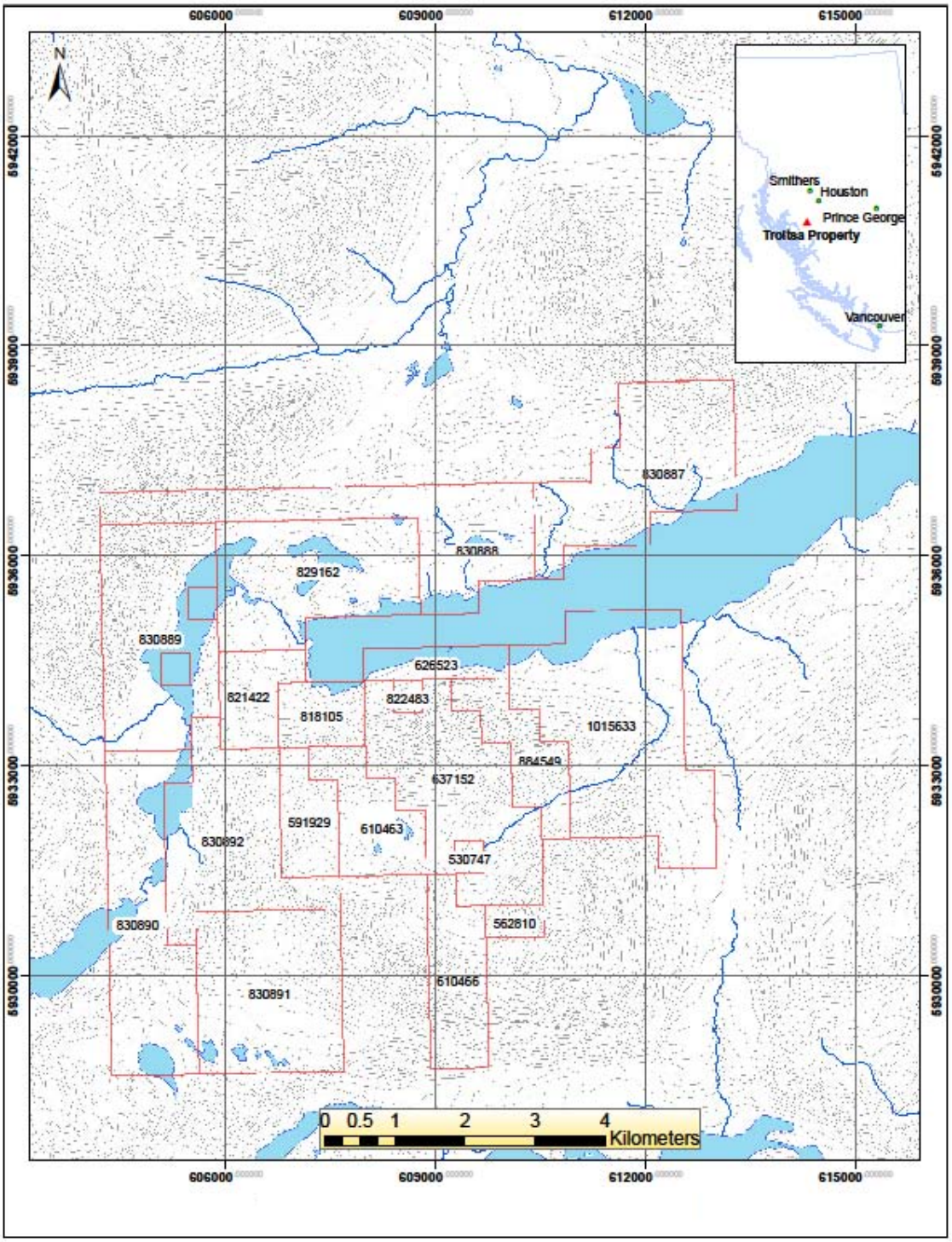


Figure 2: Troitsa Claim Map

A listing of the tenures covering the Troitsa project is contained in Table 1 below. Upon acceptance of this report for assessment purposes, the highlighted tenures will have Expiry dates moved to July 5, 2023.

Table 1: Claim Data

Tenure #	Claim name	Issue date	Expiry date	Registered Owner
530747	Troitsa	28-Mar-06	5-Jul-2023	Turford, Shawn A
562810	Troitsa 1	10-Jul-07	5-Jul-2023	Turford, Shawn A
591929	TSA105	25-Sep-08	5-Jul-2023	Turford, Shawn A
610463		23-Jul-09	5-Jul-2023	Galambos, Kenneth D
610466	Troitsa	23-Jul-09	5-Jul-2023	Keefe, Ralph R
626523		1-Sep-09	5-Jul-2023	Galambos, Kenneth D
637152	Troitsa	19-Sep-09	5-Jul-2023	Galambos, Kenneth D
818105	TSA 202	14-Jul-10	5-Jul-2023	Turford, Shawn A
821422	TSA West	19-Jul-10	5-Jul-2023	Turford, Shawn A
822483	TSA10901	21-Jul-10	5-Jul-2023	Turford, Shawn A
829162	TSA North	27-Jul-10	5-Jul-2023	Turford, Shawn A
830887		30-Jul-10	5-Jul-2023	Galambos, Kenneth D
830888		30-Jul-10	5-Jul-2023	Galambos, Kenneth D
830889		30-Jul-10	5-Jul-2023	Galambos, Kenneth D
830890		30-Jul-10	5-Jul-2023	Galambos, Kenneth D
830891		30-Jul-10	5-Jul-2023	Galambos, Kenneth D
830892		30-Jul-10	5-Jul-2023	Galambos, Kenneth D
884549	Troitsa Final	08-Aug-11	5-Jul-2023	Galambos, Kenneth D
1015633	Troitsa	02-Jan-13	25-Jan-2018	Galambos, Kenneth D

The claims listed above were subject to an option agreement between Callinan Mines Limited, the optionee and Shawn Turford, Ralph Keefe and Ken Galambos, the optionors dated November 1, 2010 however the property was recently returned to the vendors in April, 2013.

The Claims comprising the Troitsa property are being held as an exploration target for possible hardrock mining activities which may or may not be profitable. Any exploration completed will be subject to the application and receipt of necessary Mining Land Use Permits for the activities recommended in this report. There is no guarantee that this application process will be successful. The Claims lie in the Traditional territories of a number of local First Nations and to date minimal dialog has been undertaken with these First Nations regarding the Troitsa property. There is no guarantee that approval for the proposed exploration will be received.

Item 5: Accessibility, Climate, Local Resources, Infrastructure and Physiography

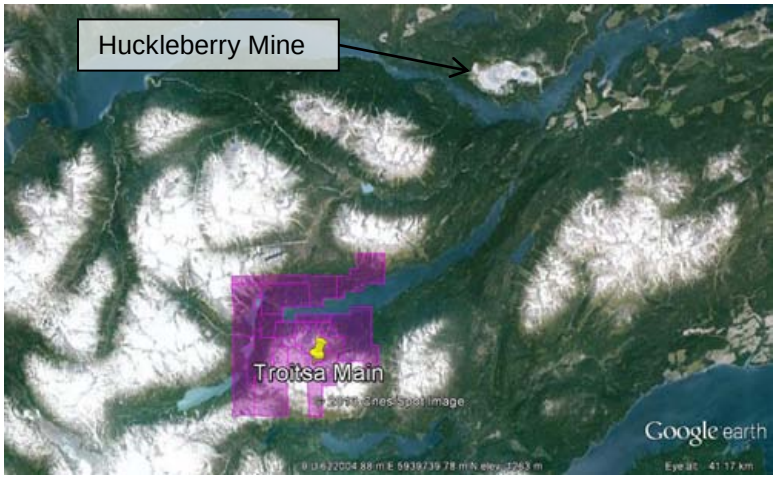


Plate 1: Satellite Image showing claims in relation to the Huckleberry mine

The Troitsa project lies on the south side of Troitsa Lake in west central British Columbia. The centre of the area lies approximately 18 km southwest of the Huckleberry mine site Wicommunity of Smithers, BC on mapsheet 93E11W. The property is currently accessed with a floatplane landing on Troitsa Lake or via chartered helicopter bases located in Smithers, Houston or Terrace, BC. The author accessed the Troitsa property using a contract helicopter based in the Coles Creek camp approximately 10km to the east of the property. The claims lie within the Omineca Mining Division and are administered out of Smithers, BC.

Climate is transitional between that of the Coast Ranges and that of the Central Interior, with short cool summers, and long relatively mild winters. Annual temperature variation in the region is approximately -25 to +25 degrees Celsius. Snowpack in the winter ranges from approximately 1 to 4 metres, but has reached a maximum of 10 metres during the past 20 years. The operating season for ground based activities such as geological mapping, surface sampling and geophysical surveys would extend from approximately May to October.

Plate 2: Large flat area above the Main Showing

There exists adequate area within and adjacent to the project site for the installation of a concentrator site, tailing ponds and waste dumps required in any contemplated mine operation. Power is available at the Huckleberry mine site, 18km to the northeast

and there is adequate fresh water available from the surrounding surface water bodies for use the mining and milling activities. Central British Columbia has a long history with mining and the nearest communities of Smithers and Houston both have a workforce familiar with the industry. Lodging, groceries, building supplies and helicopter charter companies are available in both communities while Smithers, hosts a regional airport with daily service to Vancouver. Smithers also hosts a number of diamond drilling and exploration service companies.

The general area of the Troitsa property is located in the Tahtsa Ranges near the north-western edge of the Interior Plateau, on the eastern flank of the Coast Mountains. Rugged peaks and steep serrated ridges rise to more than 2250m. Well-developed cirques sculpted by alpine glaciers are common on the higher peaks and associated morainal deposits cover many of the upland valleys and plateaus. On the property, relief is pronounced. With a base level at Troitsa Lake of 898m there is a mountain ridge which rises steeply to the south to an elevation of 1982m over a horizontal distance of 1200m. The south side of the ridge settles to an upland valley measuring approximately 1500m x 2500m with elevations between 1220m and 1460m.

Further to the south, glaciers reside in steep cirques below rugged mountain peaks which rise to nearly 2050m in height. Most of the property lies above timber line which is situated at approximately 1370m. Here, scrub alder, willow and dwarf balsam fir grow near creeks while lower in elevation, balsam fir and spruce dominate. Devil's Club is sparse with the exception of shaded hillsides below mature stands of evergreen trees and near creeks at lower elevations near Troitsa and Blanket lakes.

Plate 3: Wide upland plateau suitable for tailings storage lies immediately to the east of the property. Photo looking south.

Item 6: History

Mineralization was discovered in the Troitsa Lake area in 1966 by G. Bleiler and F. Giauque. The two prospectors staked the OVP 1-76 group of claims in August and September and optioned the property to Silver Standard Mines. The company carried out geological mapping, trenching and sampling programs in 1966 and 1967 and drilled three holes totaling 370.33m. Silver Standard staked

an additional 60 claims (MK Group) in 1967 over new mineralization discovered in an upland valley south of Troitsa Lake. A program consisting of geological mapping; trenching of the known showings; and a very limited IP geophysical survey were completed. The company diamond drilled two holes totaling 361.80m of “A” sized core in 1968 prior to returning the property to the vendors.

Mineralization at the Troitsa Lake showing is described as at least five closely spaced sets of quartz-pyrite-chalcopyrite veins and mineralized fractures occurring in granodiorite and altered volcanic rocks over 30m. The host rocks and the stockwork mineralization have been cut by at least three ages of andesitic and dioritic dikes. Previous trenching indicated average grades in the order of 0.60% Cu in the stockwork mineralization and values of 0.30% to 0.40% Cu in one of the late dikes. Minor amounts of molybdenite were noted in some veins and fractures. (D.A. Davidson and R. Wolverton 1969)

The Troitsa Main showing, located 2.8km south, is a wide zone of disseminated and fracture controlled chalcopyrite with minor molybdenite in strongly altered granodiorite. Historical sampling of the zone returned 1.02% Cu over 21.3m including 1.49% Cu over 12.2m. Most of the mineralization was related to a sheeting of veins up to 12.7cm wide and mineralized jointing that trended 150˚ AZ and dipped steeply to the west. Disseminated chalcopyrite occurred peripheral to the mineralized jointing and veining. Mineralization was noted both east and west of the Main showing but in lower concentrations. A number of historic drill platforms have been located but in most cases, drill core has been removed from site and is not available for inspection. None of the results from the historic drilling on the Troitsa property have been reported.

The Troitsa Cirque showing, a further 1.2km south, is described as being similar in character to the Main showing but with weaker alteration and mineralization. Silver Standard collected forty-four 3.05m chip samples over a 42.5m wide zone of mineralization. The sampling returned 0.33% Cu over 16.7m from altered granodiorite and 0.13% Cu over 25.8m from fresh granodiorite. A historic drill platform and core was located in 2011 near the suspected location of the Cirque showing. Copper and molybdenum mineralization was noted throughout the hole.

In 1969, Aston Resources Ltd. entered into an agreement to further explore the area. Aston conducted geological mapping, geochemical and ground geophysical surveys and a helicopter based airborne magnetic and electromagnetic surveys.

In 1971, Cerro Mining Company of Canada Limited optioned the property from Aston Resources Limited. Work completed that year included various geochemical surveys including silt, soil, talus and rock chip sampling programs in an effort to focus future exploration. The soil geochemical surveys returned values as high as 5507ppm Cu, 165ppm Mo and outlined a number of targets near the Troitsa Main showing and elsewhere on the property. In 1972, Quintana Minerals Corporation completed a single 457m diamond drill hole.

Detailed geologic mapping was carried out by N. G. Cawthorn in 1973 and published as part of his M. Sc. Thesis at the University of British Columbia, titled Geology and Petrology of the Troitsa Lake Property, Whitesail Lake Map Area, B.C.

The claim-group lapsed and was re-staked in 1983 in part by Payday Resources Inc. as the Nuswat, Core Lode 1 and Core Lode 2 mineral claims. Payday completed extensive geochemical soil surveys over the central and northwestern areas of the property and outlined numerous multi-element anomalies for both base and precious metals. Subsequent geochemical and geophysical magnetic surveys and geological mapping focused on the western and northern areas of the property where precious metals appeared to be concentrated. Payday Resources reports that rock samples collected from an area 1524m x 1067m in the central part of the Troitsa stock consistently returned values of 0.1% Cu while geochemical surveys returned values up to 810ppb Au from fault related (?) targets in the rhyolite dominated area in the northwest portion of the intrusive rocks.

Two limited prospecting programs were completed by Shawn Turford under the British Columbia Prospectors Assistance Program in 1999 and 2000. Mr. Turford re-examined the Troitsa Lake showings and prospected the areas covered by the Payday Resources geochemical surveys. A new showing of rusty mineralized BFP intrusive rocks containing >10,000ppm Cu and 1.3g/t Au was discovered in 1999 within the Payday geochemical anomaly. The showing is reported to be roughly 7m wide with an additional 30m of lesser mineralized material.

In 2010, Callinan's exploration program consisted of extensive prospecting, soil and rock geochemical sampling and limited structural mapping. Attempts were made to locate and resample each of the three Minfile showings located on the property. Access of the Troitsa Lake showing proved to be difficult. Very steep hillsides made traversing from the west unpractical and the lack of helicopter landing sites to the east of the showing hampered air access into the area. At present, the most practical means of visiting the Troitsa Lake showing is by boat until suitable helicopter landing sites can be cleared closer to the site. The Troitsa Cirque showing was not located despite a number of traverses into the general area.

The Troitsa Main showing was located and re-sampled with a 121m long channel sample. The mineralization averaged 0.282% Cu over the full 121m and included two zones of higher grade mineralization. The western zone averaged 0.445% Cu/28m and included the historic Troitsa Main showing. The eastern zone averaged 0.594% Cu/24m.

The Turford showing to the west was not located as it may have been covered by slumping of the hillside in 2000. A 2m x 2m outcrop of similar material was

discovered approximately 250m south of the reported 1999 showing location. The outcrop consisted of roughly 2% disseminated chalcopyrite and returned results of 0.8148% Cu and 0.405g/t Au from a representative grab sample. Soil cover hampered sampling a larger area of the mineralized intrusive and no estimations of the size of the zone could be made.

A number of new zones of mineralization were located, some in areas that would have been snow and ice covered when the original evaluations of the property were completed. Chalcopyrite and molybdenite occur both as disseminations and in veinlets and veins in intrusive and volcanic rocks in these areas parallel to the structural fabric (150˚ AZ). Arsenopyrite, gold and base metal mineralization is associated with late shear zones that cross-cut earlier mineralization. Much of the late faulting has a trend of approximately 030˚ AZ. Select rock samples collected from these late structures during the 2010 program returned values as high as 5.24% Cu, >2000ppm Mo, 7.022g/t Au and 408g/t Ag.

Geochemical surveys were completed over a 1050m x 2000m area. Traditional B-horizon soils were collected over the entire grid area, while MMI sampling was completed over a 750m x 2000m area on the same grid. Copper-in-soil geochemistry suggests that the Main zone mineralization may have a strike extension of at least 300m and possibly 1150m and remains open to the northwest and southeast, with a number of parallel anomalies to the west.

The 2011 program consisted of the re-establishment and expansion of the 2010 flagged grid over the Troitsa Main showing area with a cut and picket grid that was used for control for geophysical surveys. SJ Geophysics of Vancouver completed a total of 22.25km of 3DIP and 22.65km of magnetic surveys during the program. Preliminary survey results were discussed with the SJ crew chief on a daily basis with the last four diamond drill holes TR11-5, TR11-6, TR11-7 and TR11-8 spotted partially on this data in conjunction with soil geochemical results and geological observations. Final geophysical interpretations were not completed until early spring 2012.

The survey revealed a wide magnetic body that traversed the area to the northwest of the Troitsa Main showing. Interpretation of the magnetic data in conjunction with the shallow (50-100m depth) resistivity data led to the belief that the geophysical data is reflecting the location of a number of late, northwest trending, faults that are offsetting the northeast trending magnetic feature. If these structures are projected to depth, the same offsets are observed in the chargeability and resistivity data. With these offsets reset, the magnetic zone would have a continuous 2000m open ended strike length. As noted in Figure 3 below, none of the 2011 drilling tested the anomaly.

The possible faulting, as noted, is the result of field mapping and the interpretation of the resistivity data, primarily resistivity low trends that often reflect clay altered zones associated with structure. The suspected northeast

trending faults with the exception of the large fault at the Troitsa Main showing have not been field checked and may not be evident at surface.

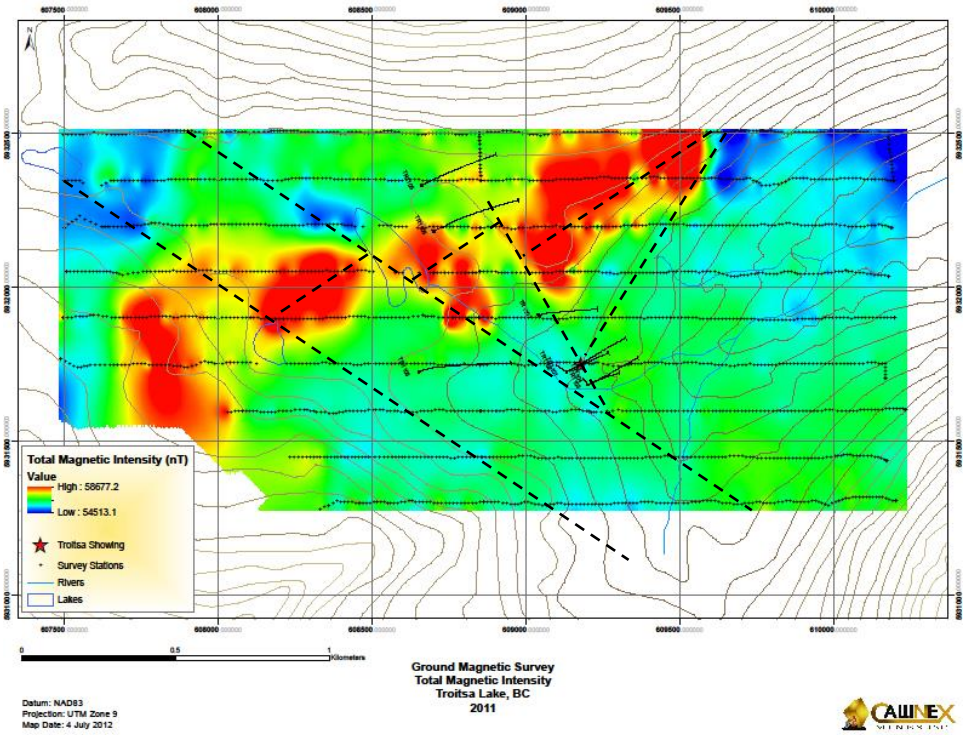


Figure 3: Magnetic survey results.

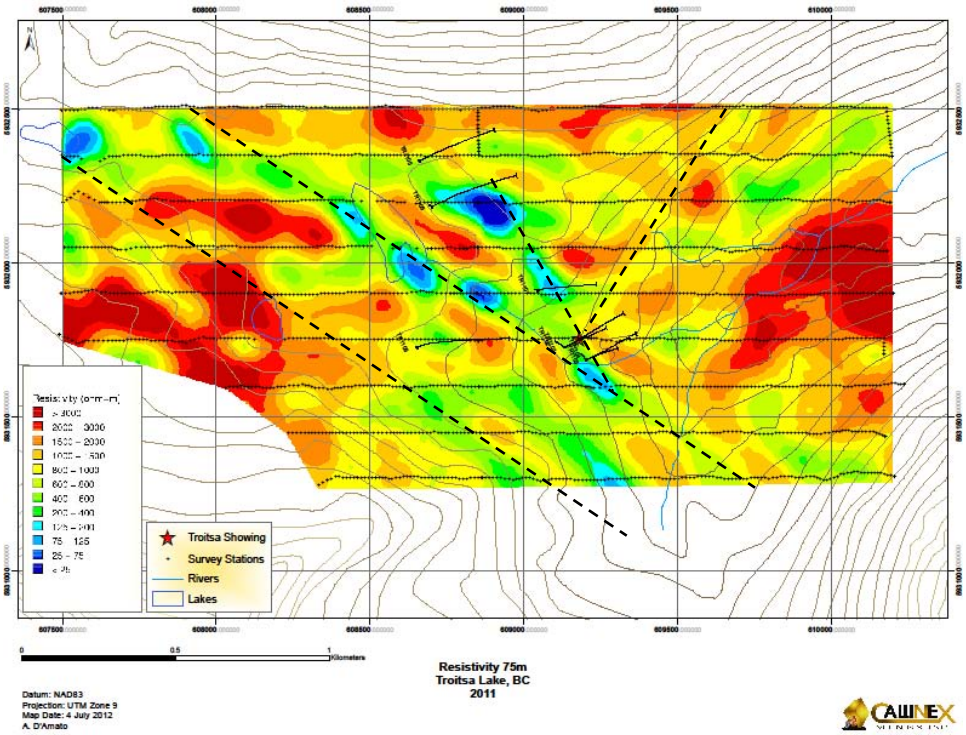


Figure 4: IP Resistivity at 75m depth.

The 3DIP survey revealed at least nine large chargeability high anomalies that either have coincident or flanking resistivity low targets at a depth of 200-300m. The low resistivity, chargeability high zones may represent areas that have seen structural preparation followed by increased fluid flow resulting in more intense alteration and possible mineralization. Areas of high resistivity, low chargeability may represent areas of silicification and in general 'tighter' rocks with lesser amounts of sulphide mineralization.

The central cluster of deeper IP chargeability/resistivity targets is coincident with the northeast trending magnetic anomaly and may reflect a significant structural zone that is not evident in shallower IP Resistivity data and is not seen on surface except as narrow faults. Of note is that the Troitsa Main showing exhibits a narrow zone of near surface chargeability that disappears with depth.

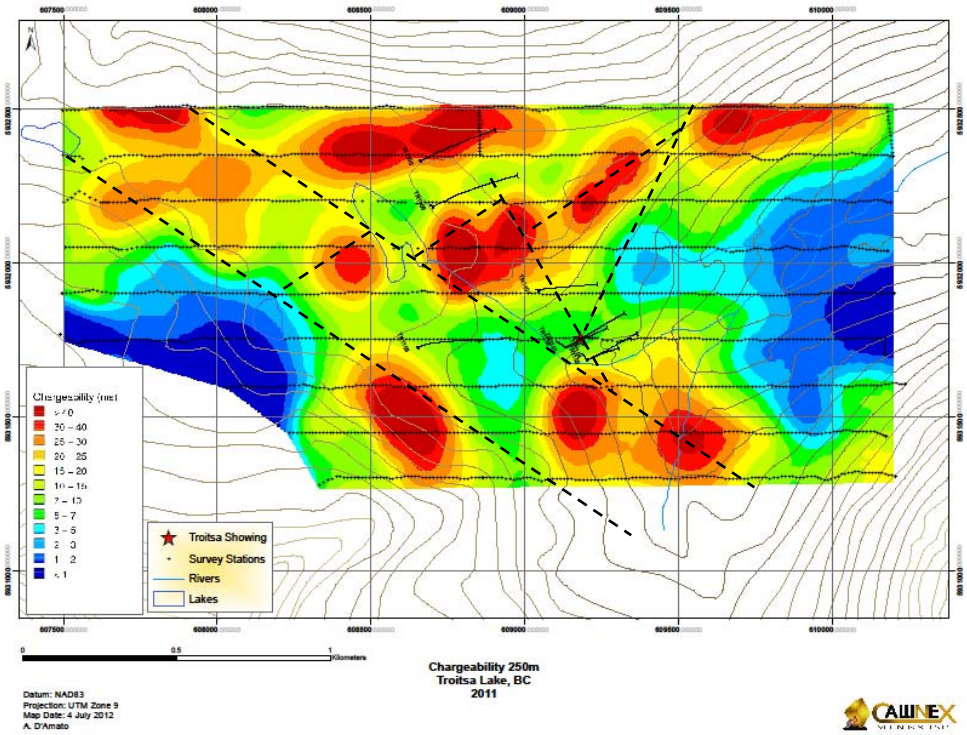


Figure 5: IP Chargeability at 250m depth

Diamond drilling of the Troitsa Main showing was the initial target of the 2011 program. The showing averaged 0.282% Cu/121m from a continuous surface channel sample. TR11-01 and TR11-02 tested the upper high grade mineralization, 0.445% Cu/28m while TR11-03 and TR11-04 targeted the lower high grade interval of 0.594% Cu/24m. All four holes drilled at the Troitsa Main showing intersected wide zones of highly anomalous copper. TR11-01 returned 225.42m averaging 0.124% Cu while TR11-02 drilled 355.13m of 0.117% Cu from the same collar location. TR11-03 returned 179.49m of 0.132% Cu, including 13.57m averaging 0.63% Cu while TR11-04 assayed 0.135% Cu over 244.79m, including 12m of 0.491% Cu, again from a common pad. The most

significant intersection from the 2011 program came from TR11-07, located approximately 200m northwest of the Main showing. Results from the hole returned 164.44m averaging 0.204% Cu including an 86.17m intercept that averaged 0.317% Cu.

The orientation of the mineralization intersected by drilling was primarily that noted in the surface showings, trending 155° and dipping steeply to the west. Faulting and minor veining was noted cutting this trend in the core and is believed to relate to the late northeast-trending faulting found at various points on the property. Some of the higher grade molybdenum intervals were related to veining at a low angle to the core axis which is believed to represent the late northeast structural event. Molybdenum mineralization intersected at the Main zone may demonstrate the low angle nature of some of the structure. Higher grade mineralization (>0.04% Mo) was intersected at a depth of 249m in TR11-03, drilled at an inclination of -50°, and at a depth of 236m in TR11-04, drilled at an inclination of -70°. The apparent dip of the mineralization would be approximately 25° to the southwest as both holes were drilled at a bearing of 065°. Without additional information, the true strike and dip of the mineralization and that of any possible structures cannot be determined.

Item 7: Geological Setting and Mineralization

7.1 Regional Geology

Regionally, the Troitsa Lake area lies within the Stikinia Terrane, approximately 15 km east of the main granitic and metamorphic rocks of the Coast Plutonic Complex. Lower Jurassic Hazelton Group-Telkwa Formation calc-alkaline volcanic rocks and middle Jurassic Smithers Formation undivided sedimentary rocks are the oldest rock units in the area. Overlying the Hazelton Group in the claim region and to the north are sediments of the Lower Cretaceous Skeena Group and a thick sequence of subaerial andesitic volcanic rocks of the Kasalka Group. Intimately related to Cretaceous volcanism are various quartz diorite and granodiorite intrusions grouped as Bulkley or Kasalka type.

Block faulting, ring and radial faults, and subsequent intrusion by dykes and/or hydrothermal fluids may have affected a large part of the area between Tahtsa and Troitsa lakes where a large caldera, 22 km in diameter, is believed to have formed during Cretaceous volcanism. The Troitsa property straddles the southern rim of this obscure collapse feature.

Troitsa Property Regional Geology

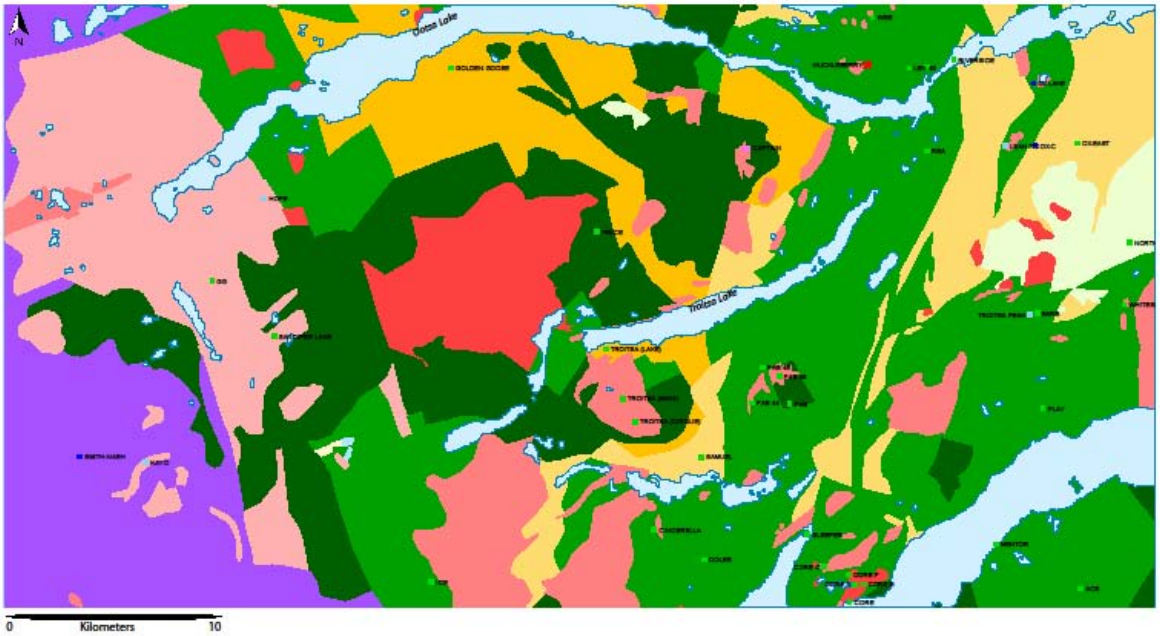


Figure 6: Regional Geology

Geology Legend

Bounding Box: *North: 53.717 South: 53.429 West: -127.801 East: -127.001*
NTS Mapsheet: 093E

Eocene

	EBo	**Boundary Stock:** granodioritic intrusive rocks
	Eqp	high level quartz phyric, felsitic intrusive rocks

Coast Plutonic Complex(?)

	Eg	intrusive rocks, undivided

Ootsa Lake Group

	EO	rhyolite, felsic volcanic rocks

Cretaceous

Kasalka Group

	uKK	andesitic volcanic rocks

Late Cretaceous

	LKgd	granodioritic intrusive rocks

Bulkley Plutonic Suite

	LKBdr	dioritic intrusive rocks
	LKBfp	feldspar porphyritic intrusive rocks
	LKBgd	granodioritic intrusive rocks
	LKBqp	high level quartz phyric, felsitic intrusive rocks
	LKBqd	quartz dioritic intrusive rocks

Kasalka Plutonic Suite

	LKKP	granodioritic intrusive rocks

Lower Cretaceous

Skeena Group

	lKS	undivided sedimentary rocks
	lKSN	**Mt. Ney Volcanics:** undivided volcanic rocks

Upper Jurassic

Bowser Lake Group

	uJBAm	**Ashman Formation:** mudstone, siltstone, shale fine clastic sedimentary rocks

Middle Jurassic to Late Jurassic

Gamsby Complex

MLJG quartz dioritic intrusive rocks

Middle Jurassic

MJMc **Mount Choquette Pluton:** dioritic intrusive rocks

Hazelton Group

mJHSms **Smithers Formation:** undivided sedimentary rocks

mJHSmvc **Smithers Formation:** volcaniclastic rocks

Trapper Plutonic Suite

MJTqd quartz dioritic intrusive rocks

Lower Jurassic

Hazelton Group

lJHT **Telkwa Formation:** calc-alkaline volcanic rocks

Upper Triassic

Stuhini Group

uTrSsv marine sedimentary and volcanic rocks

Upper Paleozoic to Middle Jurassic

Gamsby Complex

uPzJGgs greenstone, greenschist metamorphic rocks

Devonian to Permian

Stikine Assemblage

DPSsv marine sedimentary and volcanic rocks

British Columbia Ministry of Energy, Mines and Petroleum Resources
Geological Survey Branch

7.2 Property Geology

The Troitsa property is underlain, in large part, by a compositionally zoned stock of granodiorite to quartz monzonite which intrudes Hazelton, Skeena and Kasalka Group rocks. The Troitsa stock measures approximately 4km long and 2.5km wide in plan with its long axis trending roughly northwest-southeast. A thick lensoid-shaped plug of rhyolite intrudes along the stock's western margin and strikes to the north-northeast. The prominent, northeast trending, Blanket Lakes fault separates the rhyolite plug from a thick sequence of Kasalka volcanics to the west. The rhyolite is exposed as multiple sills in the north facing walls of steep cirques to the south of the broad upland plateau. The property is cut by numerous northwest and northeast trending faults. The northeast fabric appears to be late as it offsets much of the jointing, but is itself cut by some of the northwest faulting. Feldspar porphyry, quartz-feldspar porphyry, basalt, andesite and lamprophyre dykes cut both the main intrusion and rhyolite plug and often core the northwest and northeast trending shear zones.

Plate 4: Troitsa Main zone with potassically altered northeast trending fault. (Photo looking north)

The QFP dykes are generally non-magnetic, especially when altered to any degree. In contrast, the quartz monzonite which comprises the vast majority of the Troitsa intrusion is weakly to strongly magnetic. When this rock is

Plate 5: Northeast trending fault zone cutting the Troitsa Main showing mineralization.

moderately altered, it also loses its magnetic characteristics.

7.3 Mineralization

Mineralization discovered to date is typical of that found in the classic calc-alkaline deposit model, with stockworks of quartz veinlets, quartz veins, closely spaced fractures and breccias containing pyrite and chalcopyrite with lesser molybdenite in granodiorite to quartz monzonite. Some QFP dykes that intrude along the northwest regional fabric commonly exhibit significant concentrations of disseminated chalcopyrite often replacing primary biotite. The chalcopyrite mineralization is often seen with rims of chalcocite. At the Troitsa Main showing, a channel sample across the zone returned 0.282% Cu over the full 121m sampled and included two zones of higher grade mineralization. The western zone averaged 0.445% Cu/28m and included the historic Troitsa Main showing. The eastern zone averaged 0.594% Cu/24m.

Drilling of the historic Troitsa Main zone intersected 0.124% Cu over 225.42m (4.66m-230.08m), including 0.176% Cu over 112.62m (18.66m-131.28m) from TR11-01 (-50°, 065°) with widespread molybdenum values ranging up to 0.018% Mo over 10m (107.28m-117.28m).

TR11-02 (-70°, 065) at the same location intersected 0.117% Cu over 355.13m (7.33m-362.46m), including 0.253% Cu over 50.91m (118.38m-169.29m) with widespread molybdenum values including 0.022% Mo over 8.0m (161.29m-169.29m) , 0.045% Mo over 6m (209.29m-215.29m) and 0.033% Mo over 13.37m (338.18m-351.55m).

Approximately 80m to the southeast, TR11-03 and TR11-04, again drilled from a common pad, intersected the downstream mineralization noted in the 2010 channel sample. Drill hole TR11-03 (-50°, 065°) intersected 0.132% Cu over 179.49m (20.90m-200.39m), including 0.630% Cu over 13.57m (75.25m-88.82m). The drill hole intersected widespread molybdenum values including 0.023% Mo over 6.68m (73.25m-79.93m), 0.019% Mo over 23.33m (157.00m-180.33m) and 0.042% Mo over 4.0m (247.04m-251.04m).

TR11-04 (-70°, 065°) returned 0.135% Cu over 244.79m (17.37m-262.16m), including 0.255% Cu over 26m (30.04m-56.04m), 0.491% Cu over 12.0m (120.02m-132.02m), with widespread molybdenum values including 0.016% Mo over 18.2m (52.04m-70.24m) and 0.041% Mo over 7.74m (232.26m-240.00m).

The orientation of the mineralization intersected by drilling was primarily that noted in the surface showings, trending 155° and dipping steeply to the west. Faulting and minor veining was noted cutting this trend in the core and is believed to relate to the late northeast-trending faulting found at various points on the property. Some of the higher grade molybdenum intervals were related to veining at a low angle to the core axis which is believed to represent the late

north-northeast structural event. Gold was reported over 2m in each of holes TR11-01 and TR11-02, 0.205g/t and 0.789g/t respectively. The mineralization is associated with zones of strong to intense sericite alteration and quartz-chalcopyrite-pyrite-molybdenite veining to 10cm. Significant rhenium mineralization is associated with a few of the molybdenum intercepts with values as high as 119ppb Re over 2m.

TR11-07 (-50°, 065°), located roughly 200m along strike to the northwest from the main zone intersected 0.204% Cu over 164.44m (8.92m-173.36m), including 0.317% Cu over 86.71m (8.92m-95.63m) and 0.212% Cu over 5.82m (162.44m-168.26m). Molybdenum values were conspicuously absent from this hole with only two intervals between surface and 73m assaying between 0.01% and 0.02% Mo over 2m.

TR12-09 (-50°, 065°), drilled 82m behind TR11-07 and in the same direction, intersected 0.169% Cu over its entire 264m core length, including 0.191% Cu over 28.69m (15.85m-44.54m) and 0.20% Cu over 168.77m (55.58m-224.35m), including 0.651% Cu, 4.84ppm Ag over 19.42m (110.47m-129.89m). A 4m intercept (179.65m-183.65m) averaged 0.273ppm Au. Molybdenum values averaged 43ppm Mo over the entire hole and up to 502ppm Mo over 2.85m and 382ppm Mo over 4.79m near the bottom of the hole. This increase in metal concentrations for both copper and molybdenum may indicate that one is approaching a higher grade core of mineralization to the southwest of the collar location and at depth.

TR12-10 (-60°, 065°), was drilled 200m northwest of TR12-09 and intersected 0.176% Cu over 309.99m, including 0.224% Cu over 169.87m (132.25m-302.12m), including 0.807% Cu, 4.575ppm Ag over 25.18m (150.63m-175.81m). Gold and molybdenum were encountered intermittently over widths to 2m and grades up to 0.125ppm and 485.25ppm respectively with one interval returning 209ppm Mo over 4.4m.

Drilling further along strike to the northwest intersected anomalous to highly anomalous copper and molybdenum values over significant core lengths. TR11-06 (-50°, 065°), located 220m northwest of TR12-10, returned highly anomalous values of 0.076% Cu over 395.53m (7.90m-403.43m), including 0.284% Cu over 9.54m (213.91m-223.45m) and 0.215% Cu over 12m at the bottom of the hole (388.84m-400.43m). Gold mineralization was returned from two intercepts between 338 and 354m and was associated with strong clay and sericite alteration and/or chalcopyrite veining.

TR11-05 (-50°, 065°), located approximately 150m northwest of the TR11-06, intersected 0.019% Cu over 358.63m (3.15m-361.75m).

TR11-08 (-50, 065°), located approximately 470m west of TR11-01, intersected anomalous values of 0.039% Cu over 368.91m (6.60m-375.51m), including 0.337% Cu over 5.97m (159.90m-165.87m). Drilling intersected numerous 2m

intervals of molybdenum mineralization assaying between 0.011% Mo and 0.036% Mo with one section assaying 0.021% Mo over 10.41m (219.92m-230.33m) including 0.104% Mo over 1.48m at the top of the section. The hole bottomed in anomalous copper, 0.04% Cu over 10m (364.31m-374.21m), and molybdenum values, 0.03% Mo over 2m (370.31m-372.31m).

TR12-11 (-45°, 270°), located approximately 400m south east of the Troitsa Main showing, drilled over the planned target and as a result did not intersect any significant mineralization with the exception of a few narrow sections within 150m of surface. These include 0.127% Cu over 6m (10.97m-16.97m), 0.107% Cu over 8m (60.9m-68.9m), 0.271% Cu over 2m (94.9m-96.9m) as well as a few other 2m intercepts up to 0.175% Cu deeper in the hole.

Item 8: Deposit Models

A number of deposit models are relevant for the general area with the porphyry copper/molybdenum model being the main focus of the current program. Other intrusion related models that may be significant are the low sulphidation epithermal model, the subvolcanic copper/gold/silver model, and the polymetallic silver/lead/zinc model.

8.1 Porphyry copper/molybdenum

The porphyry Copper/Molybdenum target is the main deposit type thought to be associated with the Troitsa property. Panteleyev, (1995) describes the Porphyry Cu+/-Mo+/-Au model in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Open File 1995-20, pages 87-92 as a Calcalkaline porphyry Cu, Cu-Mo, Cu-Au deposit type. Classic British Columbia examples include: Brenda (092HNE047), Berg (093E 046), Huckleberrry (093E 037) and Schaft Creek (104G 015); while others include Casino (Yukon, Canada), Inspiration, Morenci, Ray, Sierrita-Experanza, Twin Buttes, Kalamazoo and Santa Rita (Arizona, USA), Bingham (Utah, USA),El Salvador, (Chile), Bajo de la Alumbrera (Argentina).

Host intrusions vary from coarse-grained phaneritic to porphyritic stocks, batholiths and dike swarms, with compositions that range from quartz diorite to granodiorite and quartz monzonite. There are commonly multiple emplacements of intrusive phases and a wide variety of breccias that modify the stock geometry. The deposits usually exhibit a lateral outward zoning of alteration and sulphide minerals from a potassic (K-feldspar and biotite) altered core through phyllic (quartz-sericite-pyrite) alteration to propylitic (chlorite-epidote-calcite). Less commonly argillic and in the uppermost parts of some ore deposits, advanced argillic (kaolinite-pyrophyllite) alteration occur.

Characteristics of this deposit type have large zones, up to 10 km² in size, of hydrothermally altered rock containing stockworks of quartz veins and veinlets, closely spaced fractures and breccia zones containing pyrite and chalcopyrite +/- molybdenite, bornite and magnetite. Disseminated sulphide minerals are present

but in minor amounts. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low-grade, concentrically zoned mineralization.

Ore controls include igneous contacts with the surrounding wallrocks and internal contacts between intrusive phases; cupolas and the uppermost, bifurcating parts of stocks, dike swarms, early formed intrusive breccias and hydrothermal breccias. Ore minerals are chalcopyrite; molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold, electrum and arsenopyrite. In many deposits late veins commonly contain galena and sphalerite in a gangue of quartz, calcite and barite.

Two main periods of deposit formation occurred in the Canadian Cordillera during the Triassic/Jurassic (210-180 Ma) and Cretaceous/Tertiary (85-45 Ma). Elsewhere deposits are mainly Tertiary, but range from Archean to Quaternary.

British Columbia porphyry Cu/Mo ± Au deposits range from <50 to >900 Mt with 0.2 to 0.5% Cu, 0.0 to 0.04% Mo, <0.1 to 0.6gm/t Au, and 1 to 3gm/t Ag. Median values for 40 B.C. deposits with reported reserves are: 115 Mt with 0.37% Cu, 0.01% Mo, 0.3gm/t Au and 1.3gm/t Ag.

Porphyry deposits contain the largest reserves of Cu, significant Mo resources and close to 50% of Au reserves in British Columbia.

8.2 Polymetallic silver/lead/zinc veins

Numerous examples of this model exist in the immediate Troitsa area. The Coles Creek property immediately to the east hosts numerous examples with the Fab (093E 041), Fab 44 (093E 044) and Samuel (093 104) showings.

Lefebure and Church (1996) describe the deposit type as sulphide-rich veins containing sphalerite, galena, silver and sulphosalt minerals in a quartz and carbonate gangue. The deposit type is analogous to silver/base metal epithermal deposits and can host significant Ag, Pb, Zn (Cu, Au, Mn).

British Columbia examples include: Wellington (082ESE192) and Highland Lass-Bell (082ESW030, 133), Beaverdell camp; Silver Queen (093L 002), Duthie (093L 088), Cronin (093L 127), Porter-Idaho (103P 089), Indian (104B 031)

Veins occur in country rock marginal to an intrusive stock. The veins typically crosscut volcanic or meta-sedimentary sequences and follow pre-existing volcano-tectonic structures, such as caldera ring-faults or radial faults. In some cases the veins cut older intrusions. In many districts there is a close association to felsic to intermediate intrusive bodies. Mafic igneous rocks are less common. Many veins are associated with dikes that follow the same structures. Veins are typically narrow, steeply dipping, tabular or splayed and occur as sets of parallel or offset veins. Individual veins can vary from centimetres up to more than 3 m

wide and can be traced from a few hundred metres to more than 1000m in length and depth. Veins can widen to tens of metres in stockwork or breccia zones. Mineralization occurs as fine-grained disseminations or coarse-grained sulphides as patches and pods and is generally confined to the veins.

Regional structures are important to ground preparation but, veins are typically associated with smaller, second order structures. In igneous rocks the faults may relate to volcanic centers. Significant deposits are restricted to competent lithologies that are more susceptible to brittle failure. Dikes are often emplaced along the same faults and at some locations are believed to be roughly contemporaneous with mineralization. Some polymetallic veins are found surrounding intrusions with porphyry deposits or prospects. Ore mineralogy is comprised of galena, sphalerite, tetrahedrite-tennantite and other sulphosalts including pyrargyrite, stephanite, bournonite and acanthite, native silver, chalcopyrite, pyrite, arsenopyrite, stibnite. Silver minerals often occur as inclusions in galena. Native gold and electrum occurs in some deposits yet Au grades are normally low for the amount of sulphides present. Vein gangue mineralogy is composed of primarily quartz and carbonate and may contain specular hematite, hematite, barite and fluorite. Alteration is usually limited to a few metres, but in volcanic and intrusive hostrocks the alteration assemblage is argillic, sericitic or chloritic and may be quite extensive.

British Columbian deposits are mainly Cretaceous to Tertiary in age but can date back as old as the Proterozoic. Individual vein systems can range from several hundred to several million tonnes grading from 5 to 1500gm/t Ag, 0.5 to 20% Pb and 0.5 to 8% Zn. In British Columbia, for deposits larger than 20,000 tonnes, the average is 161,000 tonnes with grades of 304gm/t Ag, 3.47% Pb and 2.66% Zn. Copper and gold are reported in less than half the occurrences, with average grades of 0.09% Cu and 4gm/t Au. Polymetallic veins are the most common deposit type in British Columbia with over 2,000 occurrences and were a significant source of Ag, Pb and Zn until the 1960s. They have declined in importance as industry focused more on syngenetic massive sulphide deposits. Larger polymetallic vein deposits are still attractive because of their high grades and relatively easy benefication.

8.3 Subvolcanic copper/gold/silver veins

A single example of this deposit type is documented at the Price/Kasalka showing (093E 099) located on the Kate property. Here, mineralization is believed to be associated with a buried mineralized porphyry system. Other significant British Columbia examples are Equity Silver (093L 001) and the Thorn prospect (104K031, 116).

Panteleyev (1995) describes this transitional or intrusion-related (polymetallic) stockwork and vein model as pyritic veins, stockworks and breccias in subvolcanic intrusive bodies with stratabound to discordant massive pyritic replacements, veins, stockworks, disseminations and related hydrothermal

breccias in country rocks. These deposits are located near or above porphyry Cu hydrothermal systems and commonly contain pyritic auriferous polymetallic mineralization with Ag sulphosalt and other As and Sb-bearing minerals. Extensional tectonic regimes allow high-level emplacement of the intrusions. Rhyodacite and dacite flow-dome complexes with fine to coarse-grained quartz-phyric intrusions are common. Dike swarms and other small subvolcanic intrusions are likely to be present.

These deposits represent a transition from porphyry copper to epithermal conditions with a combination of porphyry and epithermal characteristics. Mineralization is related to hydrothermal systems derived from porphyritic, subvolcanic intrusions and occurs in strongly fractured to crackled zones in cupolas and internal parts of intrusions and flow-dome complexes and along faulted margins of high-level intrusive bodies. Stockworks and closely-spaced to sheeted sets of sulphide-bearing veins occur within intrusions and as structurally controlled and stratabound or bedding plane replacements along permeable units and horizons in surrounding country rock. Veins and stockworks form in transgressive hydrothermal fluid conduits that can pass into pipe-like and planar breccias. Breccia bodies are commonly tens of metres and, rarely, hundreds metres in size. Massive sulphide zones can pass outward into auriferous pyrite-quartz-sericite veins and replacements. Multiple generations of veining and hydrothermal breccias are common. Pyrite is dominant and quartz is minor to absent in veins. The vein and replacement style deposits can be separated from the deeper porphyry Cu mineralization by 200 to 700 m. Ore mineralogy consists of pyrite, commonly as auriferous pyrite, chalcopyrite, tetrahedrite/tennantite; enargite/luzonite, covellite, chalcocite, bornite, sphalerite, galena, arsenopyrite, argentite, sulphosalts, gold, stibnite, molybdenite, wolframite or scheelite, pyrrhotite, marcasite, realgar, hematite, tin and bismuth minerals. Depth zoning is commonly evident with pyrite-rich deposits containing enargite near surface, passing downwards into tetrahedrite/tennantite + chalcopyrite and then chalcopyrite in porphyry intrusions at depth.

The deposits can be quite large such as those at Equity Silver where the bulk mineable reserves were approximately 30Mt grading 0.25% Cu, 86gm/t Ag and 1gm/t Au. International examples include the Recsk deposit in Hungary where a shallow breccia-hosted Cu-Au ores overlie a porphyry deposit containing ~1000 Mt with 0.8% Cu. The closely spaced pyritic fracture and vein systems at Kori Kollo, La Joya district, Bolivia contained 10 Mt oxide ore with 1.62 gm/t Au and 23.6 gm/t Ag and had sulphide ore reserves of 64 Mt at 2.26 gm/t Au and 13.8 gm/t Ag.

8.4 Epithermal (low Sulphidation)

In British Columbia, Jurassic deposits are important while worldwide Tertiary deposits are most abundant. The Coles (093E 110) showing in Jurassic volcanics, located 8km to the southeast of the Troitsa property, demonstrates the potential of this deposit type in the immediate area. Significant examples of this

deposit type in British Columbia include the Toodoggone district deposits - Lawyers (094E 066), Baker (094E 026), Shas (094E 050); Blackdome (092O 050, 092O 051, 092O 052, 092O 053); Premier Gold (Silbak Premier), (104B 054) and Cinola (103F 034).

Panteleyev (1996) describes low sulphidation epithermal deposits as quartz veins, stockworks and breccias that carry precious metals and variable amounts of base metals in high-level (epizonal) to near surface environments. Mineralization commonly exhibits open-space filling textures and is associated with volcanic-related hydrothermal to geothermal systems. The tectonic settings of the deposits are volcanic island arc, continent-margin magmatic arcs and continental volcanic fields with extensional structures. They are associated with regional-scale fracture systems related to grabens, resurgent calderas, flow-dome complexes and rarely with maar diatremes. Extensional structures are common and graben or caldera-fill clastic rocks may be present in higher level systems. Locally resurgent or domal structures are related to underlying intrusive bodies such as high-level (subvolcanic) stocks and/or dikes and pebble breccia diatremes.

Most deposits occur in calcalkaline volcanic rocks of andesitic composition while some deposits occur in areas with bimodal volcanism and extensive subaerial ashflow deposits. Ore zones are typically localized in extensional structures with high-grade ore shoots commonly found in dilational zones in faults at flexures, splays and in cymoid loops. Significant mineralization can occur where ore forming fluids invade permeable lithologies. Upward-flaring ore zones centered on structurally controlled hydrothermal conduits are typical. Individual veins can range from >1m and hundreds of metres in strike length to mm in scale. The vein systems can be laterally extensive but ore shoots generally have relatively restricted vertical extent of a few hundred metres. Deposits can be strongly zoned along strike and vertically. Deposits are commonly zoned vertically over 250 to 350 m from a base metal poor, Au-Ag-rich top to a relatively Ag-rich base metal zone and an underlying base metal rich zone grading at depth into a sparse base metal, pyritic zone. As a result of the confined nature of the mineralization, deposits are generally small. The median deposit size of 41 Comstock-type 'bonanza' deposits is 0.77 Mt grading 7.5 gm/t Au, 110 gm/t Ag with minor Cu, Zn and Pb.

Item 9: Exploration

9.1 Prospecting and Sampling Program

The 2012 sampling program was successful in locating a new molybdenum showing and significant gold mineralization in bedrock. A total of 106 samples were collected on and in the immediate vicinity of the Troitsa property. A narrow pegmatite dike located south of the area of drilling contained molybdenite rosettes up to 5cm in size. A 1m chip sample across the dyke (sample 103490) returned 21.224% Mo and >1000ppb Re. Further to the southeast, a grab sample of malachite and chalcopyrite along jointing (sample 103492) returned 2.4% Cu, 19.4gm/t Au and >300gm/t Ag.

Plate 6: Molybdenite showing partially buried by lateral moraine.

Plate 7: Close up of high grade molybdenite.

In the same general area, a 1m chip (sample 103493) returned 0.593% Cu, 0.213gm/t Au and 7.373gm/t Ag. A second 1m chip (sample 103495) returned 0.385% Mo. A summary of sample locations and results can be found in Appendix A, sample location map and elemental plots in Appendix B and assay certificates in Appendix C.

9.2 Airborne Survey

Geotech Ltd. conducted a detailed ZTEM and magnetic airborne survey over the project area in 2012. A total of 1011 line-kilometres of geophysical data were acquired between July 24th and August 2nd, 2012 over the Coles/Troitsa Lake project. Approximately 25% of the survey was flown over the Troitsa claims.

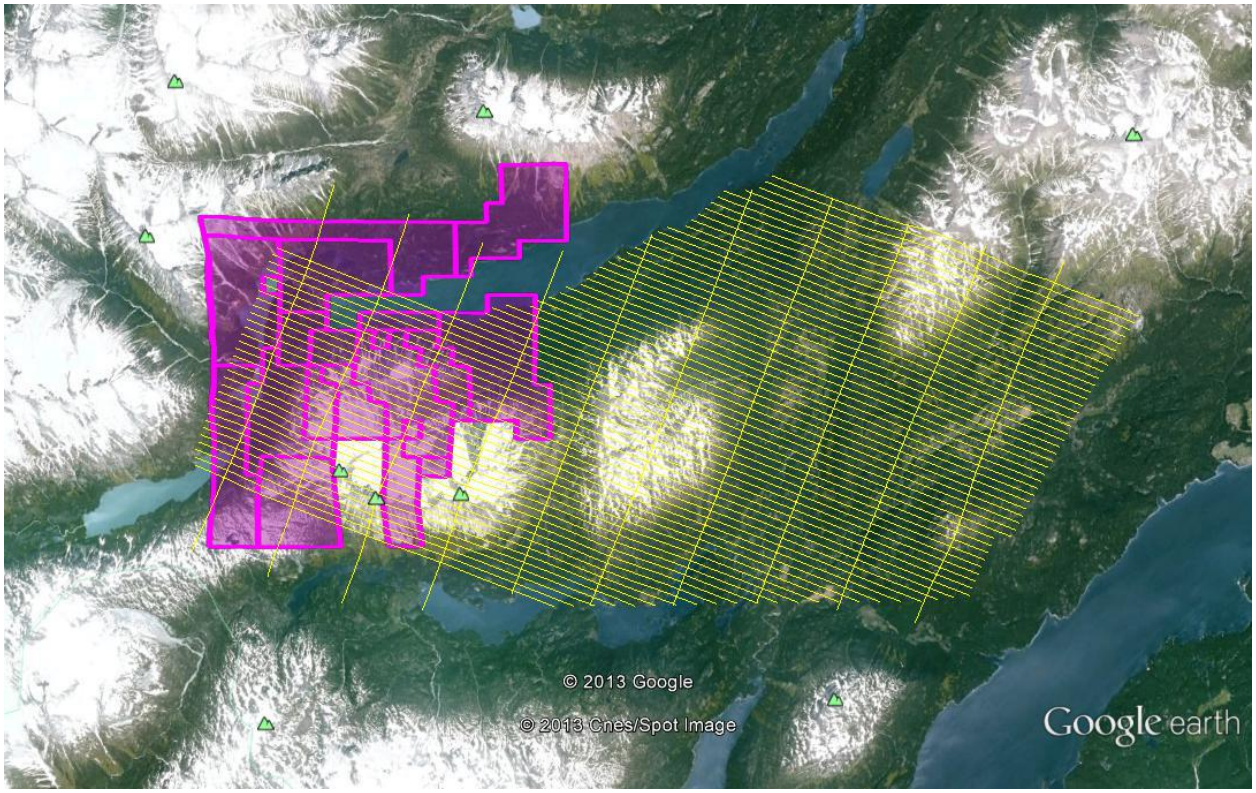


Plate 8: Satellite image of the Troitsa claims and airborne survey grid.

The survey outlined numerous magnetic and electromagnetic anomalies including a deep seated 800-900m wide and 5000m long northwest trending EM anomaly in the general area of the porphyry mineralization. The zone is most identifiable on the 720Hz and 360Hz plans, 590m and 840m skin depth respectively but is still apparent on the 30Hz, 2900m skin depth plan. The zone of low resistance would correspond broadly with sericite and clay alteration seen at surface and in drilling. The area of lowest resistance would lie immediately to the north of drill hole TR12-10. This zone is bracketed to the east and west by two resistive bodies roughly one km in diameter. A number of parallel resistivity low anomalies are apparent to the northeast. A subtle 200-400m wide and 2000m long anomaly is present east of the Troitsa Lake showing and a much stronger 600-800m wide and 6000m long resistivity low is present on the eastern boundary of the claim group.

A significant northeast trending resistivity low anomaly lies along the trace of the Blanket Lakes fault to the west. The anomaly is approximately 600-700m wide and 4000m long. An offset of this anomaly appears to trend down the axis of Troitsa Lake.

The magnetic survey data shows that the east-north-east trending magnetic anomaly discovered in the 2011 ground surveys to be part of a large roughly circular magnetic high anomaly 5000m in diameter. It is at the core of this magnetic anomaly that a number of IP chargeability targets are located south and west of the Troitsa Main showing. Where the EM low feature crosses the northern limb of the magnetic anomaly, the magnetic intensity drops slightly. The Blanket Lakes fault is identified as a northeast trending linear magnetic low that corresponds well with the resistivity low anomaly in the same area. The full Report on a Helicopter Borne Z-Axis Tipper Electromagnetic (ZTEM) and Aeromagnetic Geophysical Survey can be found in Appendix I with survey maps in Appendix J.

Item 10.0: Drilling

Drilling of the Troitsa property in 2012 was successful in confirming significant mineralization at several locations on the property. A total of 1005.43m of HQ and NQ sized core was drilled in three holes and extended the trend of the Main Zone mineralization over an additional 240m to the northwest for a total indicated strike length of approximately 650m. Better grade mineralization was located in a number of feldspar porphyry dykes with strong sericite and potassic alteration Drill hole details are summarized in Table 3.

Table 3: Collar locations

Hole ID	Easting	Northing	Elevation (m)	Az	Dip	Depth (m)
TR12-09	608980	5931865	1413	65°	-50°	280.80
TR12-10	608831	5931999	1446	65°	-60°	313.01
TR12-11	608852	5931445	1465	270°	-45°	412.70

TR12-09, drilled 82m behind TR11-07 and in the same direction, intersected 0.169% Cu and 43ppm Mo over its entire 264m core length, including 0.191% Cu over 28.69m and 0.20% Cu over 168.77m, including 0.651% Cu, 4.84ppm Ag over 19.42m. A 4m intercept (179.65m-183.65m) averaged 0.273ppm Au. Mineralization continued near the bottom of the hole with two intercepts of significant copper and molybdenum values over shorter intervals. This includes 0.583% Cu, 502ppm Mo over 2.85m and 0.336% Cu, 191ppm Mo over 4.79m. This increase in metal concentrations for both copper and molybdenum when compared to TR11-07, may indicate that one is approaching a higher grade core of mineralization to the west and at depth.

TR12-10, was drilled 200m northwest of TR12-09 and intersected 0.176% Cu over 309.99m, including 0.224% Cu over 169.87m, including 0.807% Cu, 4.575ppm Ag over 25.18m. Gold and molybdenum were encountered intermittently over widths to 2m and grades up to 0.125ppm and 485.25ppm respectively with one interval returning 209ppm Mo over 4.4m. The hole is situated on the southern flank of an intense resistivity low anomaly identified in

the airborne survey however final results of the survey were not received until after the completion of the drill program.

TR12-11, located approximately 400m south east of the Troitsa Main showing, drilled over top of the planned target as the hole flattened to an inclination of 27.1° near its bottom. As a result, the hole did not intersect any significant mineralization with the exception of a few narrow sections throughout the hole. These include 0.127% Cu over 6m, 0.107% Cu over 8m, 0.271% Cu over 2m as well as a few other 2m intercepts up to 0.175% Cu deeper in the hole.

Logs of the 2012 drilling with assays of copper, molybdenum, gold and silver values are contained in Appendix D.

The Troitsa drill core is dry stacked at the Coles Creek camp near the core logging tent at approximately 0619375E, 5933945N.

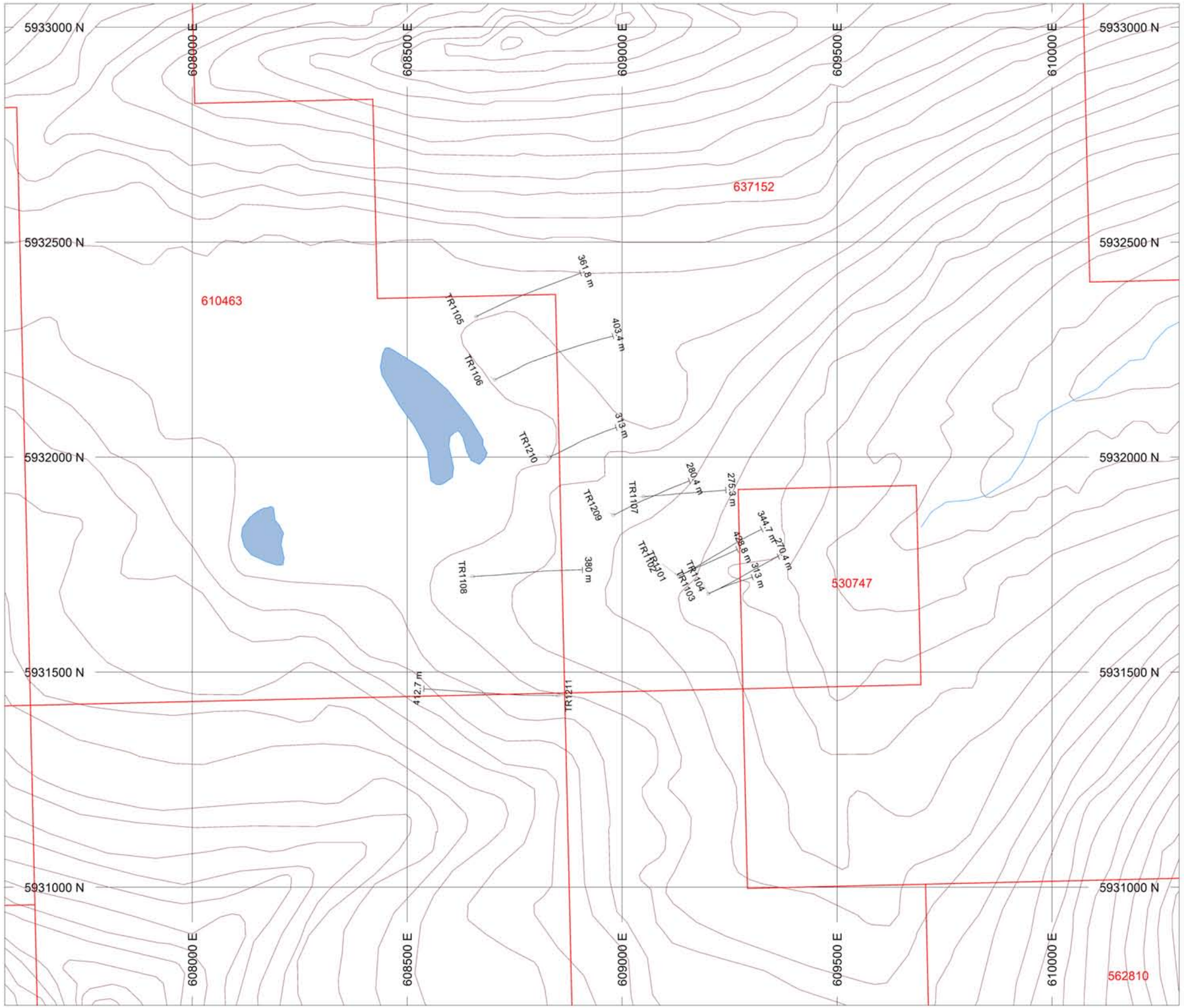
Table 4: Significant Results

Hole	From (m)	To (m)	Interval (m)	Cu (%)	Mo (%)	Ag gm/t)	Au (gm/t)
TR12-09	15.85	280.80	264.95	0.169	0.004		
including	15.85	44.54	28.69	0.191	0.004		
and	55.58	224.35	168.77	0.203	0.004		
including	110.47	129.89	19.42	0.651	0.004	4.839	
and	179.65	183.65	4.00	0.093			0.273
and	260.88	263.37	2.85	0.583	0.050	2.80	
and	271.73	276.52	4.79	0.336	0.019	1.72	
TR12-10	3.02	313.01	309.99	0.176	0.003		
including	3.02	122.10	119.08	0.134	0.004		
including	117.79	122.10	4.40	0.408	0.021	8.844	
and	132.25	302.12	169.87	0.224	0.003		
including	150.63	175.81	25.18	0.807	0.001	4.575	
and	193.81	195.81	2.00	1.793		8.159	
and	223.81	225.81	2.00	1.291	0.039	5.169	
TR12-11	10.97	16.97	6.00	0.127		1.152	
and	60.90	68.90	8.00	0.107			
and	94.90	96.90	2.00	0.271		2.137	
and	166.90	167.95	1.05	0.145		2.891	
and	285.60	287.60	2.00	0.175		2.505	

The inclination of each of the holes drilled at Troitsa in 2012, shallowed to various extents. TR12-09 flattened from a planned dip of -50° at surface to 43.4° at a depth of 233.8m. TR12-10 reacted in a similar fashion from -60° at surface to -54.2° at 306.9m. Of most significance was TR12-11 which drilled over the planned IP chargeability target. The hole had a planned dip of -45° yet flattened to -40.3° by 159.6m and ultimately to -27.1° at a depth of 406m. A complete listing of the Reflex tests is summarized in Table 4.

Table 5: Reflex Tests

Hole ID	DEPTH (m)	Azimuth	Azimuth Corrected	DIP
TR12-09	47.9	42.9	62.1	-48.8
TR12-09	96.6	45.0	64.2	-47.8
TR12-09	139.3	48.8	68.0	-46.0
TR12-09	188.1	45.6	64.8	-44.7
TR12-09	233.8	49.3	68.5	-43.4
TR12-10	11.3	46.9	66.1	-59.8
TR12-10	57.0	44.1	63.3	-58.8
TR12-10	102.7	44.1	63.3	-58.5
TR12-10	148.4	41.9	61.1	-57.6
TR12-10	194.2	50.6	69.8	-56.3
TR12-10	239.9	48.6	67.8	-55.1
TR12-10	306.9	52.0	71.2	-54.2
TR12-11	17.4	251.7	270.9	-45.3
TR12-11	63.1	250.3	269.5	-44.4
TR12-11	111.9	253.7	272.9	-42.1
TR12-11	159.6	254.1	273.3	-40.3
TR12-11	203.3	254.6	273.8	-38.5
TR12-11	252.0	257.0	276.2	-35.6
TR12-11	297.0	259.0	278.2	-33.3
TR12-11	353.0	259.8	279.0	-30.6
TR12-11	389.0	261.2	280.4	-28.0
TR12-11	406.0	262.4	281.6	-27.1



SCALE 1 : 10000

(m)

-100 0 100 200 300 400

NAD83 / UTM zone 9N

N W E S

Callinex Mines Inc.

Troitsa, BC

Drill Collar Map

20130415

Item 11: Sample Preparation, Analysis and Security

Callinex Mines Limited has implemented a quality control procedure to ensure that drill core from the Property is handled, sampled, and analyzed according to best practice protocols, that samples are representative of mineralization intersected by drilling, and that no systematic sample bias has occurred. Core from diamond drilling is logged by the geologist, who also determines and marks intervals to be sampled, generally not longer than 2m, or less than 0.3m. Sample intervals do not cross lithologic boundaries, and an effort is made to avoid sampling across anticipated changes in mineralization. In 2012, Callinex diamond drilled 1005.43m and collected 496 core, samples standard and blank samples for analysis, representing an average sample length of 2.03m. A total of 28 standard and blank samples were analyzed as part of the drilling program.

Drill core was initially logged and separated into individual samples generally 2m or less in length. Smaller or larger sample size generally occurred as the result of lithologic contacts or structural boundaries. It is normal practice to not sample across such features. Each sample was assigned a unique number using pre-labeled sample books supplied by the analyzing laboratory. The sample was sawn in half with an electric or gas powered diamond saw, with half of the core retained for further testing and re-logging purposes. The second half of the core sample was placed in a labeled plastic bag which corresponded to the number assigned to that sample.

The samples were sorted and placed in labeled rice bags which were then sealed with zip ties to discourage tampering. The samples were delivered by helicopter to a staging site south of the Goldreach campsite and transferred to UTM Exploration employees for delivery to the ACME prep lab in Smithers, BC.

Here, the core samples were crushed to 80% passing 10 mesh and then a 250g split pulverized to 85% passing 200 mesh. The 250g subsample was then delivered to the main ACME Analytical laboratory located at 1020 Cordova St. East Vancouver, BC, V6A 4A3, for subsequent analyses.

For each subsample, a 15g sample of pulp was digested in hot Aqua Regia solution for one hour then made up to volume with dilute HCL acid prior to elemental determinations by ICP Mass Spectrometer. Precious metal analyses were completed with a 30g sample and standard fire assay techniques.

Item 12: DATA VERIFICATION

A QAQC program was implemented for the Troitsa 2012 drill program which involved the submittal of Standard reference material and blanks at regular intervals in the sampling program. A decision was made at the start of the program by Callinex personnel to not submit duplicate samples.

Standard reference material consisted of the Cu163 standard purchased from WCM Minerals, 7729 Patterson Ave., Burnaby, BC, V5J 3P4. The material was certified to contain 1.06% Cu, 0.156% Mo, 99g/t Ag and 4.35g/t Au. Blank material consisted of un-mineralized Flin Flon granite.

The standard reference material was found to assay from 0.0.864% Cu to 1.096% Cu, slightly low for one sample, with the balance well within acceptable range. Molybdenum values assayed from 0.112% Mo - 0.142% Mo, which is understandably low in that molybdenite is only partially digested in an Aqua Regia solution. Silver values ranged from 85g/t -104g/t Ag, slightly below expected values for two samples with the balance within acceptable range. Gold values assayed from 4.496g/t-4.951g/t Au, slightly high for a number of samples. The absence of gold in the majority of the core makes this slight exaggeration in gold inconsequential.

Blanks returned generally low values for all elements with maximum values of 38.58ppm Cu, 1.65ppm Mo, 88ppb Ag and <0.005ppm Au.

ACME duplicates, standards and blanks were within an acceptable range for elements of interest.

It is the author's opinion that for the stage of the drilling project, the QAQC program that was implemented for the sampling is adequate and that the assay values received to date accurately reflect the mineralization seen in the core.

Item 13: Mineral Processing and Metallurgical Testing

No mineral processing and metallurgical testing were completed as part of the exploration program.

Item 14: Mineral Resource Estimates

No mineral resource estimates were completed as part of the exploration program.

Item 15: Adjacent Properties

The following summaries are drawn from publicly available data. The author has not made any effort to verify the accuracy of the information and the summaries are provided for informational purposes only and are not indicative of the mineralization on the Troitsa property, which is the subject of this report.

15.1 Huckleberry

The Huckleberry mine (093E 037) has been in production since October, 1997. Published reserves for the deposit in 2010 were Proven and Probable reserves totaling 14.01 million tonnes grading 0.362% Cu, 0.005% Mo, Measured and

Indicated reserves of 182.9M tonnes grading 0.321% Cu and Inferred reserves of 45.4M tonnes grading 0.288% Cu. Reserves were calculated with 0.20% Cu cut-off grade.

15.2 Berg

The Berg property (093 046) hosts a large porphyry deposit recently purchased by Thompson Creek Metals. The deposit has a recently published 43-101 compliant measured & indicated resource of 557.8 million tonnes, grading 0.30% Cu and 0.037% Mo and 3.77g/t Ag and an inferred resource of 159.4 million tonnes grading 0.23% Cu, 0.033% Mo and 2.5 g/t Ag using a 0.30% copper equivalent cut-off grade.

15.3 Poplar

The Poplar deposit (093L 239) contains an National Instrument 43-101 compliant Indicated Resource of 171.3 million tonnes grading 0.28% Cu, 0.008% Mo, .08g/t Au and 2.3g/t Ag (0.40%CuEq), plus an Inferred Resource of 209.0 million tonnes grading 0.23% Cu, 0.004% Mo, 0.06g/t Au and 3.62g/t Ag (0.33% CuEq) at 0.15% copper cut-off. The deposit occurs in a Middle-Late Cretaceous Bulkley intrusion intruding into Lower-Middle Hazelton Group volcanics.

15.4 Ox Lake

The Ox Lake deposit (093E 004) hosts a historical Inferred resource of 16.130M tonnes grading 0.30% Cu and 0.04% Mo in the contact zone between a Cretaceous granodiorite and overlying volcanic tuffs of the Lower-Middle Jurassic Hazelton Group

15.5 Seel

The Seel deposit (093 101) contains an indicated resource of 28.13 million tonnes grading 0.22% Cu, 0.21 g/t Au, 0.007% Mo and 1.1 g/t Ag (0.40% Cu Eq) plus an inferred resource of 214.78 million tonnes grading 0.17% Cu, 0.13 g/t Au, 0.017% Mo, and 2.17 g/t Ag (0.33% Cu Eq).

15.6 New Nanik

The New Nanik occurence (093E 055) contains a non 43-101 compliant Inferred resource of 16.5 million tonnes grading 0.437% Cu calculated in 1973 by Quintana Minerals using data from a fourteen hole diamond drill program on the property. The mineralized zone lies along a large shattered and faulted zone trending 030° and dipping 20° to 40° west along the western contact of intrusive rocks and Hazelton Group rocks.

15.7 Equity Silver

The Equity Silver mine (093L 001) operated from 1981-1994 and mined 33.8M tonnes with an average grade of 0.4% Cu, 64.9g/t Ag and 0.46g/t Au. The open pit and underground operation mined tabular fracture zones 30-100m thick comprised of primarily veins and with only minor disseminations of sulphides.

15.8 Emerald Glacier

The Emerald Glacier past producer (093E 001) operated intermittently between 1951 and 1968, contains an estimated 40,800 tonnes grading 355 grams per tonne silver, 8.23 per cent lead, 9.49 per cent zinc and 1.13 grams per tonne gold in unclassified reserves. Mineralization consisting of en echelon quartz veining with galena, sphalerite, chalcopyrite and pyrite extends for at least 1200 metres and is hosted in the transitional zone between Lower-Middle Jurassic Hazelton Group sedimentary and volcanic rocks.

Item 16: Other Relevant Data and Information

There is no other relevant data or information other than that included in this report.

Item 17: Interpretation and Conclusions

Significant porphyry mineralization has been located on the Troitsa property. Both surface and subsurface sampling has intersected wide sections of anomalous to highly significant copper mineralization. Channel sampling of the Troitsa Main showing has shown this surface mineralized zone to be at least 121m long. Previous soil surveys have indicated that anomalies associated with the mineralization extend over widths up to several hundred metres and along strike at least 800m and possibly 1200m. The anomalies are open in both directions along strike. The dominant trend to surface and near surface mineralization is parallel to the regional jointing fabric, 150˚-160˚AZ. Molybdenite mineralization is present with the chalcopyrite in the steeply west dipping veins and also in veins that trend the same, but with dips of the 10˚-30˚ to the west. Very little pyrite was noted in the Troitsa Main showing area. Field observations have noted that intersections of northeast faulting with the mineralized jointing can produce blowouts of mineralization at the outcrop scale.

IP geophysical surveys completed on the property in 2011 support the previous observations with near surface Resistivity and Chargeability anomalies trending to the northwest. Resistivity low anomalies above 75m depth are thought to represent late, northwest-trending, fault zones in that the anomalies follow creek drainages and are often accompanied by narrow dykes of varying composition. In drill core similar dykes are often seen to have faulted margins. Below 150m, the trend of both the resistivity and chargeability shifts to the northeast, parallel to a large magnetic high anomaly. These suspected late, northwest trending, faults are thought to cut and offset magnetic, resistivity low and chargeability high anomalies. This is seen in the magnetic data and resistivity and chargeability data below 150m depth.

Chargeability high anomalies are thought to represent concentrations of sulphide material. Drilling of the narrow chargeability anomaly at the Troitsa Main showing intersected grades of 0.135% Cu/225.42m, 0.117% Cu/355.13m, 0.132%

Cu/179.49m and 0.135% Cu/244.79m. Higher grade sections reached 0.63% Cu/13.57m. Approximately 200m to the northwest of the Troitsa Main showing, TR11-07 targeted an area of coincident anomalous MMI, B-horizon soils and IP chargeability high values. The drill hole returned 0.204% Cu/164.44m from a depth of 8.92m, including 0.317% Cu over 86.71m at the top of the intersection. The 3D Inversion Model shows a marked decrease in the IP chargeability in the area of the drill trace below a depth of 200m.

TR12-09, drilled 82m behind TR11-07 and in the same direction, intersected 0.169% Cu and 43ppm Mo over its entire 264m core length, including 0.191% Cu over 28.69m and 0.20% Cu over 168.77m, including 0.651% Cu, 4.84ppm Ag over 19.42m. A 4m intercept (179.65m-183.65m) averaged 0.273ppm Au. Mineralization continued near the bottom of the hole with two intercepts of significant copper and molybdenum values over shorter intervals. This includes 0.583% Cu, 502ppm Mo over 2.85m and 0.336% Cu, 191ppm Mo over 4.79m. This increase in metal concentrations for both copper and molybdenum when compared to drill hole TR11-07, may indicate that one is approaching a higher grade core of mineralization to the west and at depth.

TR12-10, was drilled 200m northwest of TR12-09 and intersected 0.176% Cu over 309.99m, including 0.224% Cu over 169.87m, including 0.807% Cu and 4.575ppm Ag over 25.18m. Gold and molybdenum were encountered intermittently over widths to 2m and grades up to 0.125ppm and 485.25ppm respectively with one interval returning 209ppm Mo over 4.4m. The hole is situated on the southern flank of an intense resistivity low anomaly identified in the airborne survey however final results of the survey were not received until after the completion of the drill program. TR12-10 is the only drill hole to date on the Troitsa property to test one of the many large IP chargeability targets found with the 2011 ground surveys. The hole only partially tested the anomaly in that much of the chargeability high was beneath and to the northwest of the collar location. See Figure 5 for the IP chargeability targets at 250m depth and Appendix E and F for drill plans and sections

In light of the results obtained in the 2012 field program, it is the author's opinion that the Troitsa property is a property of merit and additional expenditures are warranted to further assess its economic potential.

Item 18: Recommendations

A systematic program of Geochemical sampling and Geophysics (magnetics and IP) should be completed over an expanded grid on the Troitsa Lake property, especially over the northwest area, where highly anomalous gold in soils was reported in historic reports and where significant base and precious metals was found in the 2010 sampling program. A concerted effort should be made to locate and sample the Cirque zone and expand upon the significant base and precious metals found in the 2012 programs. Preliminary sampling should be completed over the newly acquired claim (tenure 1015633), especially in the areas identified

by the 2012 airborne surveys as having the large resistivity low anomalies parallel to the Main Zone trend.

In the Main Showing area, an initial program of 4000m of drilling in 10-12 holes is recommended to follow up the IP chargeability anomalies found in the area. As noted earlier, very little pyrite has been seen in the drilling to date, generally <25%. Chargeability anomalies should reflect concentrations of copper mineralization.

Proposed budget for 2012

Project Geologist (100 days @ 600/day)		60,000
Geologist (100 days @ $500/day)		50,000
Prospector/sampler x 4 (50 days @ $400/day)		80,000
Core cutter (100 days @ $300/day)		30,000
Mob/demob		10,000
Drilling NTW (4000m @ $120/m)		480,000
Helicopter (200 hrs @ $1500 wet)		300,000
Assaying (2500 samples @ $55/ea)		137,500
Camp costs (1300 person days @ $170/day)		221,000
Reporting		20,000
	Subtotal	1,388,500
Contingency (15%)		208,275
	Total	$1,596,775

Contingent on the results of the program, additional diamond drilling should target favorable anomalies.

Respectfully submitted this 14th day of June, 2013.

Ken Galambos P.Eng.
APEY #0916
APEGBC #35364

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13.0 CERTIFICATION, DATE AND SIGNATURE

1) I, Kenneth Daryl Galambos of 1535 Westall Avenue, Victoria, British Columbia am self-employed as a consultant geological engineer, authored and am responsible for this report entitled “Troitsa Sampling, Drilling and Airborne Geophysical Report”, dated June 14, 2013.

2) I am a graduate of the University of Saskatchewan in Saskatoon, Saskatchewan with a Bachelors Degree in Geological Engineering (1982). I began working in the mining field in 1974 and have more than 26 years mineral exploration and production experience, primarily in the North American Cordillera. Highlights of this experience include the discovery and delineation of the Brewery Creek gold deposit, near Dawson City, Yukon for Noranda Exploration Ltd.

3) I am a registered member of the Association of Professional Engineers of Yukon, registration number 0916 and have been a member in good standing since 1988. I am a registered Professional Engineer with APEGBC, license 35364, since December, 2010.

4) I have visited the subject mining property of this report and am a “Qualified Person” in the context of and have read and understand National Instrument 43-101 and the Companion Policy to NI 43-101.

5) This report is based upon a site visit to the property from August 8-October 3, 2011, the author’s personal knowledge of the region and a review of additional pertinent data.

6) As stated in this report, in my professional opinion the property is of potential merit and further exploration work is justified.

7) To the best of my knowledge this report contains all scientific and technical information required to be disclosed so as not to be misleading.

8) I am partners with Shawn Turford and Ralph Keefe on the Troitsa property and a number of other properties in British Columbia. My professional relationship is as a non-arm’s length consultant, and I have no expectation that this relationship will change.

9) I consent to the use of this report by Callinex Mines Inc. for such assessment and/or regulatory and financing purposes deemed necessary, but if any part shall be taken as an excerpt, it shall be done only with my approval.

Dated at Victoria, British Columbia this 14th day of June, 2013.
“Signed and Sealed”

Ken Galambos, P.Eng. (APEY Reg. No. 0916, APEGBC license 35364)
KDG Exploration Services
1535 Westall Ave.
Victoria, British Columbia V8T 2G6

Item 21: Statement of Expenditures
For the period July 24-September 10, 2012

UTM personnel (cooks, core cutters, camp logistics)
Ken Galambos
David Legault
Adam MacDonald
Vic Sidic
Darrell Oulton
Alannah Grande
Ryan Periana
Shawn Turford

Total Exploration costs (helicopter, camp, wages, drilling, assays, transportation etc) also includes property visit by Riverside Resources August 22, 2012.		$629,699
Airborne Geophysical surveys (Troitsa cost is ~25% of $400,000) (Coles cost is $300,696)		$99,304
Report		$15,000
	Total	**$744,003**

Item 22: Software used in the Program

ArcGIS 10
Geosoft Target
Geosoft Geochemistry
Adobe Illustrator CS5
Microsoft Windows 7
Microsoft Office Professional Plus 2010
Adobe Reader X
Adobe Acrobat 9
Adobe Photoshop Elements 8.0
Internet Explorer
Google Earth

Appendices

Appendix A

Sample Descriptions

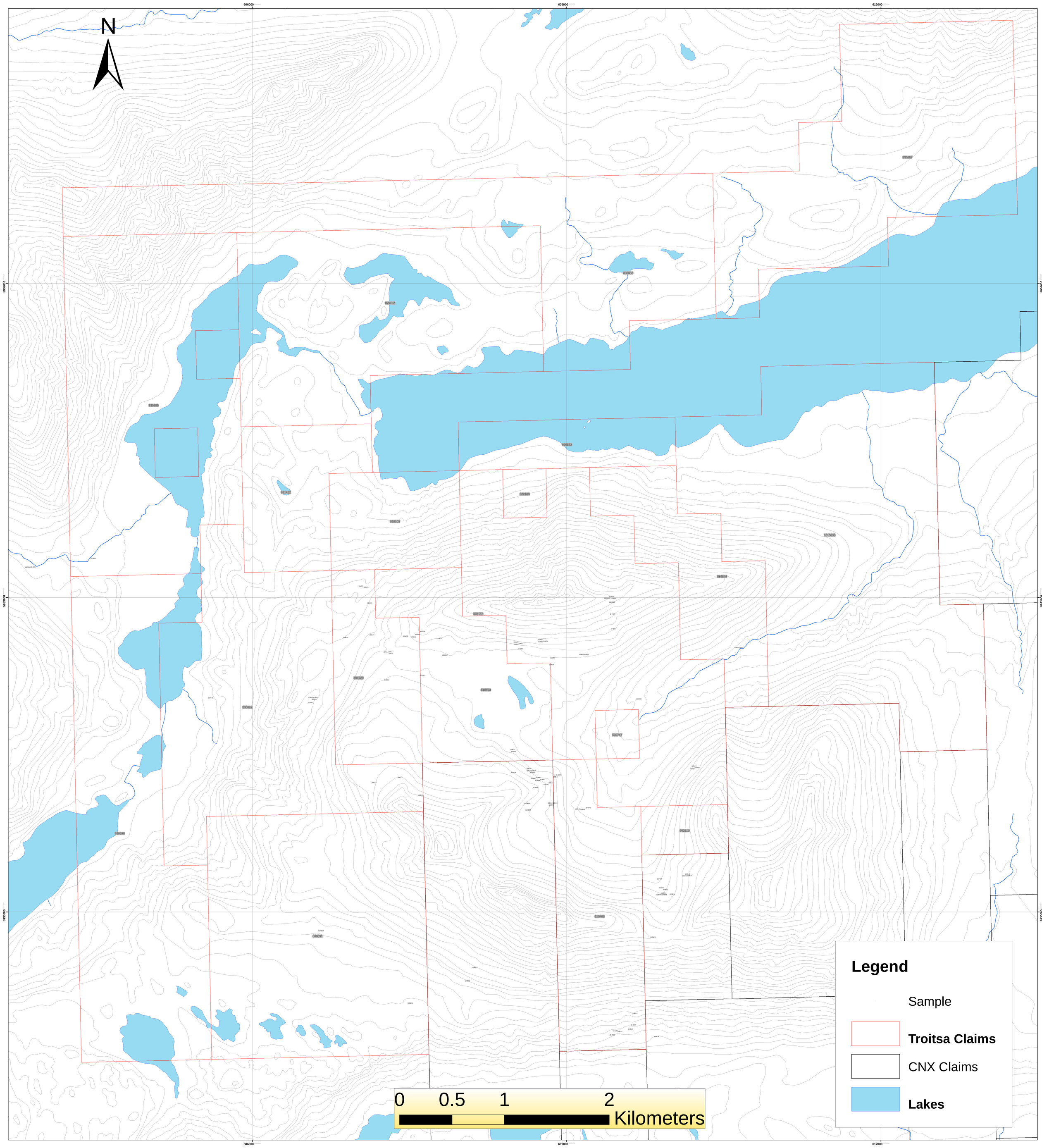
Sample #	UTM Easting	UTM Northing	Sample Type	Sample Description	Cu (ppm)	Mo (ppm)	Au (gm/t)	Ag (ppb)	Cu (%)	Mo (%)	Ag (gm/t)	Re (ppb)
103471	610644	5032509	2m chip	chip across contact, rhyolite contact with purple volcaniclastic	44.41	1.37	0.041	10539				
103472	606572	5932031	1m chip	drainage below outcrop is gossanous	56.39	39.91	<0.005	268				
103473	605576	5932033	2m chip	Drainage below outcrop is gossanous	26.73	4.38	<0.005	111				
103474	606576	5932027	1m chip	chip across rhyolite dyke, pyrite disseminated throughout	304.33	18.48	<0.005	281				
103475	606564	5932027	1m chip	clay altered rock with massive sulphides, contact with highly mineralized argellite	211.38	8.43	<0.005	617				
103476	606576	5932036	1m chip	clay altered chip beside fault, massive sulphides	38.6	11.26	<0.005	116				
103477	606575	5932036	grab	rhyolite, rust stained, visible sulphides	70.38	17.02	<0.005	43				
103478	606534	5932001	2m chip	chip across highly mineralized argellite	76.74	1.64	0.01	384				
103479	606527	5931987	grab	grey volcanic dyke	12.31	0.97	<0.005	51				
103480	610222	5931374	float	Quartz-Diorite, with massive chalcopyrite, bornite across fracture, minor chalcopyrite disseminations	799.58	2.43	0.053	397				
103481	610215	5931360	float	Granodiorite with massive sulphides, chalcopyrite	3893.36	4.48	0.055	5460				
103482	610222	5931375	float	Volcanic grey-green rock with molybdenum and chalcopyrite	3638.83	1765.86	0.03	1651				131
103483	610219	5931375	float	Granodiorite float with blobs of molybdenum and chalcopyrite	4545.68	186.07	0.452	2348				
103484	608700	5931266	float	Calcitic, altered float with chalcopyrite	288.92	14.53	0.133	39443				
103485	608700	5931265	grab	Granodiorite with sulphides, chalcopyrite	768.52	6.12	0.009	849				
103486	608700	5931274	1m chip	Quartz Feldspar with disseminated chalcopyrite-pyrite	947.75	1.47	0.012	1294				
103487	608741	5931255	grab	Feldspar-porphry with visible chalcopyrite	363.81	9.11	<0.005	587				
103488	608845	5931230	grab	Feldspar-porphry with visible chalcopyrite	5195.82	4	0.012	6378				
103489	608675	5931179	2m chip	Porphry Dyke, chalcopyrite and malachite visible	517.58	25.69	0.14	27363				
103490	608863	5931029	1m chip	Massive molybdenum rosets in feldspar dyke beside Granodiorite	14.65	>2000.00	0.03	1597		21.224		>1000
103491	608863	5931029	0.5m chip	Granodiorite with sulphides, chalcopyrite on jointing	118.37	53.91	<0.005	258				
103492	610136	5930354	grab	Malachite and chalcopyrite along jointing		19.14	19.4	>100.000	2.429		>300	
103493	609918	5930209	1m chip	Malachite, chalcopyrite along jointing. contact with Granodiorite Dyke		24.79	0.213		0.593424		7.373	
103494	609882	5930221	float	Float with massive sulphides, molybdenum		>2000.00	0.376		2.394	0.285	42.205	102
103495	609860	5930306	1m chip	Granodiorite, chip across jointing, Malachite and visible chalcopyrite		>2000.00	0.064		0.005874	0.385	3.189	>1000
103496	608509	5930967	grab	very chloritic quartz monzonite with disseminated chalcopyrite		267.27	0.006		0.306071		3.889	
103529	610190	5931384	0.50m chip	quartz poryphry, malachite staining	536.25	151.5	<0.005	297				
103530	608825	5931208	grab sample	green quartz porphry from fault zone @ 305/85		7.15	<0.005		0.007288			
103531	607764	5932601	grab	grey porphyry with orange spots		2.07	<0.005		0.000993			
103532	607515	5932614	grab boulder	red stained float		61.08	<0.005		0.000349			
103533	607595	5932251	grab	trace chalcopyrite in rusted out pyrite in rhyolite		1.38	<0.005		0.004032			
104451	608841	5932415	grab float	very fine grained rhyolite dyke with 10% coarse 0.5cm Py blebs	21.17	45.86	<0.005	93				
104452	608745	5932589	0.5m chip	rusty fault	57.5	131.7	0.006	251				
104453	608748	5932591	grab	rusty fault	25.59	7.23	<0.005	106				
104454	608774	5932576	1.4m chip	highly clay altered fault	55.85	13.02	<0.005	177				
104455	609411	5932835	0.3m chip	15m x 0.3m dyke. Quartz Monzonite, rusted, moderate disseminated pyrite, slight lateral shifting, 180 (N/S) orientation		7.35	<0.005		0.00309		4.828	
104456	610643	5932512	3m chip	maroon volcaniclastics. Rusty, massive quartz veining with mineralization (pyrite), potential contact zone with rhyolitic outcrop. 140/320 orientation	236.39	3.87	0.008	236				
104457	610647	5932511	3m chip	rhyolitic outcrop, disseminated pyrite, 130/310 orientation of jointing	33.28	1.06	<0.005	106				
104458	607438	5932623	0.5m chip	feldspar porphyry, slightly rhyolitic, disseminated chalcopyrite (0.5%), 135/318 orientation	42.54	1.32	0.024	70				
104501	609419	5932693	grab outcrop	altered intrusive, quartz diorite, well fractured, rust stained with pyrite	44.48	0.94	<0.005	39				

Sample #	UTM Easting	UTM Northing	Sample Type	Sample Description	Cu (ppm)	Mo (ppm)	Au (gm/t)	Ag (ppb)	Cu (%)	Mo (%)	Ag (gm/t)	Re (ppb)
104502	609164	5932448	1m chip	re-sampled 147037. FP dyke, heavy alteration, west side of dyke, massive pyrite 10-15 cm wide, strike 230/ jointing 340/70 W	159.13	23.4	0.009	161				
104503	609164	5932448	2.6m chip	extended zone from .5m to 2.6 m wide	170.41	66.99	<0.005	148				
104504	608832	5932350	grab outcrop	quartz monzonite outcrop, heavy rust, with vugs, visible sulphides	50.9	133.38	0.006	409				
104505	608538	5932566	grab	well fractured, porphry dyke, heavy rust, pyrite	18.51	4.08	0.007	107				
104506	608533	5932565	grab	porphry dyke, heavy rust, visible pyrite	77.6	3.36	<0.005	180				
104507	608538	5932551	grab	porphry dyke, heavy rust, visible pyrite	17.18	4.16	<0.005	26				
104508	608532	5932502	float	mineralized porphry, visible pyrite, arsenopyrite	16.54	3.98	<0.005	89				
104509	607599	5932668	float	quartz vugged crystals	1.83	29.77	<0.005	67				
104510	607550	5932639	float	breciated quartz, pyrite, possible arsenopyrite	34.44	165.85	0.008	593				
104511	607299	5932471	grab	fault zone, rhyolite dyke outcrop, limenite rock, cutting sills	49.97	3.8	0.006	1355				
104512	607298	5932472	grab	rhyolite, massive pyrite	55.84	6.71	0.058	3583				
104513	607297	5932473	grab	rhyolite, massive pyrite	498.66	5.13	0.067	28124				
104514	607254	5932204	grab	rhyolite, massive pyrite	494.37	6.33	0.095	44950				
104515	607385	5431127	grab	quartz intruded rhyolite dyke, visible pyrite	43.22	814.14	0.886	95592				
104516	607136	5931226	grab	well fractured quartz vein, visible pyrite, heavy carbonate, vuggs, crystals	30.5	191.78	0.028	6378				
104517	607385	5931277	grab	well fractured quartz vein, visible pyrite, heavy carbonate, vuggs, crystals	39.86	>2000.00	0.943	37545		0.346		
104519	606865	5932608	grab outcrop	argellitic, visible pyrite	116.89	9.67	0.015	1313				
104520	607116	5932635	float	feldspar porphyry, massive pyrite	19.66	10.7	0.014	213				
104521	607060	5933100	float	visible chalcopyrite in granodiorite	100.17	4.58	0.006	222				
104522	607095	5932940	grab	volcanic, visible pyrite	786.24	2.76	0.103	547				
104523	607060	5933090	grab	granodiorite, visible pyrite	9.49	1.5	<0.005	75				
104526	609833	5928802	float	Granodiorite, visible calcopyrite, pyrite	2112.21	17.96	0.046	4883				
104527	609628	5929020	float	silicious quartz vugged crystals	2658.75	32.51	5.625	>100000			>300	
104528	609411	5928818	float	visible, malachite, rhyolite	858.79	5.92	0.011	795				
104529	609584	5928874	float	BFP, visible sulphides	11.99	2.59	0.023	3118				
104530	609452	5928857	float	quartz rhyolite, visible sulphides	75.78	124.77	0.013	1137				
104531	609484	5928850	float	quartz rhyolite, visible sulphides	70.3	33.97	0.012	3952				
104532	609610	5928912	float	BFP, visible sulphides	4.82	4.36	0.008	203				
104533	608647	5931321	grab outcrop	highly pyritized	25.93	18.35	0.041	2679				
104534	608467	5931322	1m chip	quartz monzonite, malachite stained	136.26	5.74	0.01	334				
104535	608615	5931361	grab	vuggy quartz, visible sulphides	4547.11	15.89	0.039	6453				
104536	608466	5931539	float	quartz breccia	1294.87	254.32	0.049	73765				
104537	608460	5931540	float	quartz, visible pyrite	1770.66	868.06	0.384	20388				
104538	608661	5931338	float	silicious quartz, highly pyritic	120.49	35.15	0.024	1714				
104539	608661	5931338	float	silicious quartz, highly pyritic	85.57	13.55	0.046	10622				
104540	608870	5931280	grab	BFP, visible sulphides	4432.73	6.34	0.02	4650				
104541	608846	5931233	grab	Mineralized Porphry	7359.11	8.79	0.037	7983				
104542	608894	5931298	grab outcrop	Quartz diorite, visible sulphides	5674.49	1.85	0.039	6438				
104543	609099	5930974	float	Granodiorite, massive sulphides on fracture	45.76	13.55	0.011	1176				
104544	608824	5931223	grab	Quartz diorite, heavy quartz vein	260.44	19.32	0.021	8686				
104545	609128	5930968	grab	Quartz diorite, visible suphides on fracture	5258	1.55	0.037	13178				
104546	609180	5930986	grab	Massive cahlcopyrite on vein surface	>10000.00	5.53	0.086	6362	1.216			
104547	610148	5930351	1m chip	quartz diorite with malachite and azurite staining		96.5	5.046		2.083		>300	
104548	610130	5930352	grab	Quartz monzonie, visible sulphides from vein		224.73	0.865		0.078907		88.072	
104549	603883	5933283	grab	F-P dyke, visible sulphides		322.85	0.008		0.003122		4.576	
104550	608029	5929332	float	quartz breccia, visible suphides		171.79	0.03		0.001045		5.916	
1128851	607480	5929120	grab	faulted rhyolite, visible pyrite		24.62	<0.005		0.000623		0.72	

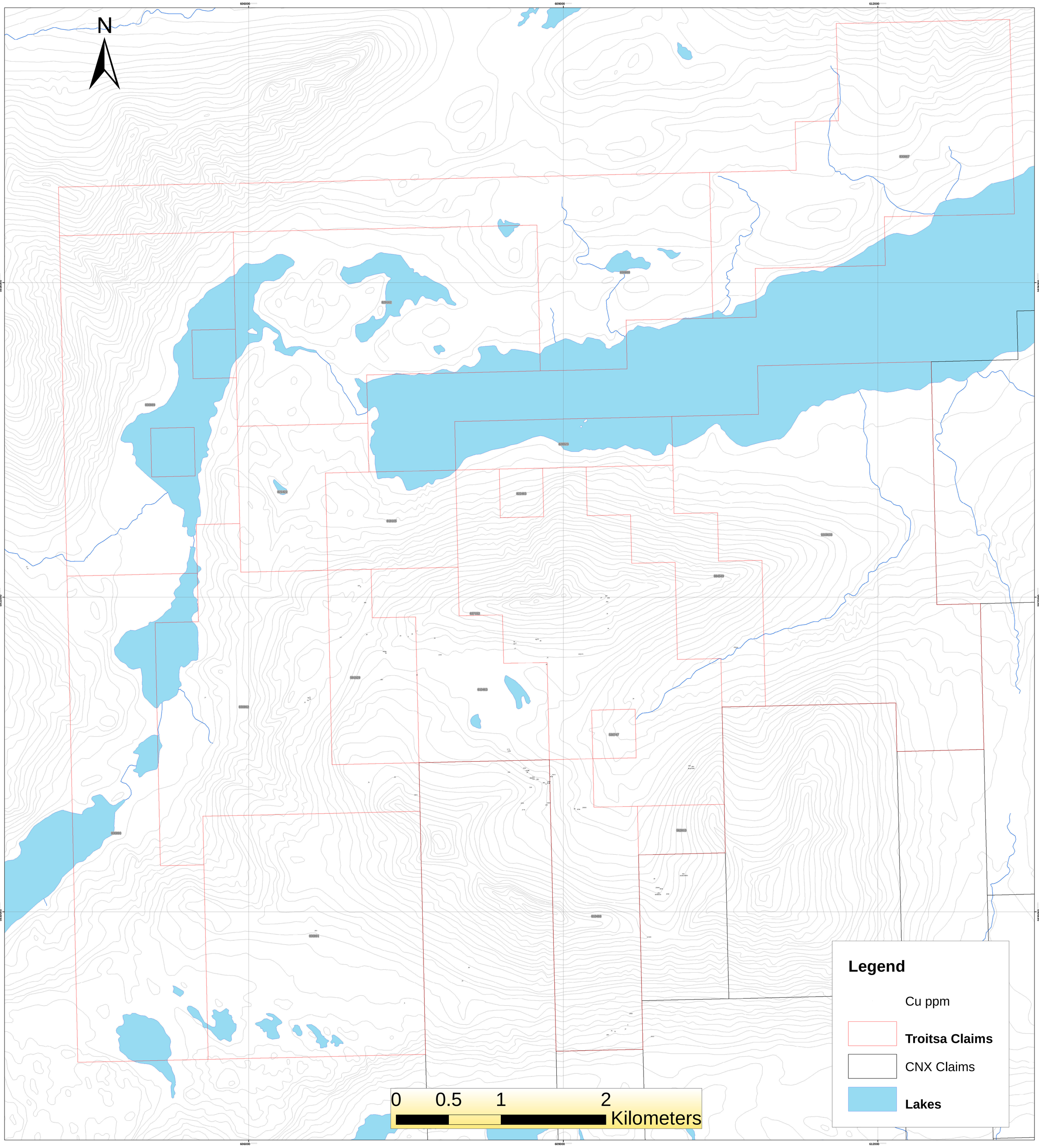
Sample #	UTM Easting	UTM Northing	Sample Type	Sample Description	Cu (ppm)	Mo (ppm)	Au (gm/t)	Ag (ppb)	Cu (%)	Mo (%)	Ag (gm/t)	Re (ppb)
1128852	606626	5929812	grab	mineralized dyke with heavy pyrite staining, visible pyrite		1.42	<0.005		0.033343		1.542	
1128853	609798	5929751	grab	poryphry outcrop, visible chalcopyrite		46.82	0.32		1.863		81.566	
1128854	609979	5930161	1m chip	mineralized quartz diorite		51.37	0.011		0.324968		4.448	
1128855	609903	5930155	float	visible sulphides, malachite staining in quartz float		98.11	0.018		0.359784		4.007	
1128856	609901	5930166	float	visible sulphides, malachite staining in quartz float		265.55	0.008		0.25245		2.741	
1128857	609897	5930171	chip	highly altered gossanized FP, visible chalcopyrite		4.36	<0.005		0.024064		0.231	
1128858	608604	5930963	float	quartz monzonite with visible chalcopyrite		5.07	0.04		0.377495		7.204	
1128859	608592	5931028	float	quartz monzonite with visible chalcopyrite		2.82	0.005		0.152035		2.2	
1128860	603874	5933281	silt	gossanous side creek	12.45	0.97	0.005	103				
1128861	604454	5933366	silt	highly gossanous side creek	14.8	1.26	0.01	88				
1128862	608091	5929459	silt	drainage below outcrop is gossanous	64.56	24.74	0.012	1025				
1128901	608826	5931011	4m chip	Chloritic QFP dyke with trace Py		3.5	<0.005		0.016335		1.002	
1128902	609403	5932946	grab float	quartz monzonite with silver black mineral along quartz veining		1.13	<0.005		0.079518		1.147	
1128903	609354	5932985	0.9m chip	Rusty, felsic, amygdaloidal and vessicular F-porphyry dyke. Py partially filling vessicles		4.14	<0.005		0.00271		0.288	
1128904	609660	5932023	grab float	very vuggy quart. Vugs are rusted out.		54.03	0.014		0.003372		1.572	
1128905	609417	5932984	grab outcrop	quartz vein filled fault. Grabs over 5m of strike		3.25	0.011		0.020794		2.461	
1128906	609398	5933004	4m chip	Feldspar porphyry dyke with 10-15% xenoliths of darker F-porphyry up to 30cm long x 10cm wide. Tr diss. Cpy		0.49	<0.005		0.028729		0.266	
1128907	607808	5932442	1m chip	Quart monzonite with 0.5-1% Cpy, Tr MoS2 at contact with rhyolite plug.		51.46	0.041		0.124309		0.847	
1128908	607577	5931105	grab outcrop	narrow fault with Py and Cpy. Fault at 120/70SW with strike-slip movement		423.94	<0.005		0.497682		26.219	

Appendix B

Sample Location Map and Elemental Plots



2012 Rock Sample Location and Assay



2012 Rock Sample Location and Assay

2012 Rock Sample Location and Assay

2012 Rock Sample Location and Assay

Appendix C

Sampling Assay Certificates

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By:	Email Distribution List
Receiving Lab:	Canada-Smithers
Received:	August 16, 2012
Report Date:	September 04, 2012
Page:	1 of 3

CERTIFICATE OF ANALYSIS SMI12000221.1

CLIENT JOB INFORMATION

Project:	Troitsa
Shipment ID:	TRP-12-001
P.O. Number	
Number of Samples:	41

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	41	Crush, split and pulverize 250 g rock to 200 mesh			SMI
G601	41	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
1F05	41	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
7AR	2	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.
All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 04, 2012

CERTIFICATE OF ANALYSIS SMI12000221.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
G1-SMI	Prep Blank	<0.01	0.007	0.14	2.62	2.69	39.9	10	2.7	4.0	517	17401	0.8	1.3	1.7	4.4	54.5	0.04	0.05	<0.02	32
G1-SMI	Prep Blank	<0.01	<0.005	0.08	3.24	2.38	42.6	8	2.1	3.5	540	17647	0.2	1.4	1.0	4.5	49.6	0.01	0.03	<0.02	31
103471	Rock	1.57	0.041	1.37	44.41	1041	2062	10539	25.8	11.4	5541	34567	5767	0.3	34.9	1.4	109.1	23.59	291.1	0.74	26
103472	Rock	1.30	<0.005	39.91	56.39	22.15	94.2	268	148.5	23.1	885	143626	5714	0.3	3.1	1.8	15.5	0.17	218.8	0.19	26
103473	Rock	0.96	<0.005	4.38	26.73	16.29	71.6	111	26.4	9.6	197	40112	135.0	0.2	0.6	4.4	11.5	0.11	5.00	0.17	30
103474	Rock	1.40	<0.005	18.48	304.3	13.86	129.0	281	165.9	59.7	1951	87310	1192	0.5	3.7	2.6	16.0	0.29	37.83	1.23	86
103475	Rock	1.08	<0.005	8.43	211.4	24.85	54.9	617	100.5	55.1	411	73419	980.2	0.2	1.5	1.5	7.9	0.23	17.94	1.71	42
103476	Rock	0.99	<0.005	11.26	38.60	9.88	93.3	116	48.3	22.2	1667	38245	93.0	0.6	0.5	0.9	11.8	0.48	4.28	0.25	73
103477	Rock	1.32	<0.005	17.02	70.38	2.47	59.9	43	65.2	27.8	715	39821	20.1	0.2	<0.2	0.8	132.1	0.09	1.90	0.35	115
103478	Rock	0.96	0.010	1.64	76.74	34.76	329.8	384	92.8	26.6	891	75247	50.8	0.2	<0.2	3.0	73.3	1.01	3.72	0.78	65
103479	Rock	0.91	<0.005	0.97	12.31	9.61	83.8	51	37.6	21.4	889	44399	11.8	0.2	<0.2	1.1	253.7	0.15	0.93	<0.02	68
104355	Rock	1.50	<0.005	0.86	8.18	29.08	93.7	113	6.6	6.4	868	33218	4.6	<0.1	<0.2	0.3	17.7	0.22	0.29	0.04	44
104356	Rock	1.71	<0.005	12.41	20.78	67.45	408.5	471	8.8	9.6	790	35601	10.7	<0.1	<0.2	0.4	10.5	1.24	0.49	0.15	36
104451	Rock	1.34	<0.005	45.86	21.17	1.92	1.0	93	3.3	16.8	16	12112	1.9	1.3	<0.2	35.6	1.6	<0.01	0.15	2.33	<2
104452	Rock	0.99	0.006	131.7	57.50	14.78	18.4	251	3.7	6.7	57	31815	14.3	2.7	7.2	12.3	13.7	<0.01	0.59	9.56	8
104453	Rock	0.93	<0.005	7.23	25.59	5.64	13.4	106	4.5	4.2	83	25065	2.1	1.0	1.4	5.6	7.5	0.03	0.14	1.95	24
104454	Rock	1.48	<0.005	13.02	55.85	5.63	20.1	177	5.9	4.4	483	18588	21.4	2.3	3.3	9.7	38.6	0.05	0.38	0.22	22
104456	Rock	0.98	0.008	3.87	236.4	7.72	66.1	236	10.6	12.8	327	33480	3.8	1.2	7.5	3.4	25.9	0.12	0.62	0.60	71
104457	Rock	0.99	<0.005	1.06	33.28	4.24	54.6	106	57.1	13.0	325	23685	13.0	0.2	<0.2	1.9	12.4	0.10	0.31	0.13	10
104458	Rock	0.98	0.024	1.32	42.54	6.84	47.9	70	11.1	3.8	348	23037	14.4	0.8	24.2	3.8	31.5	0.12	0.20	0.19	69
104501	Rock	1.00	<0.005	0.94	44.48	3.96	33.2	39	11.3	8.1	319	23675	0.9	2.1	<0.2	9.1	12.9	0.06	0.10	<0.02	60
104502	Rock	1.20	0.009	23.40	159.1	2.24	12.6	161	16.7	40.7	304	68229	4.1	4.9	7.3	8.9	7.0	0.13	1.92	0.62	5
104503	Rock	2.29	<0.005	66.99	170.4	5.10	22.7	148	9.0	32.5	450	38992	7.8	6.1	3.4	9.9	7.7	0.06	1.15	1.78	19
104504	Rock	0.55	0.006	133.4	50.90	21.25	12.3	409	1.5	98.2	24	27888	0.6	0.9	5.7	4.1	7.1	<0.01	0.09	2.71	4
104505	Rock	2.38	0.007	4.08	18.51	3.93	16.9	107	10.0	6.2	91	36673	6.1	2.2	4.9	6.3	7.2	<0.01	0.21	2.81	37
104506	Rock	1.65	<0.005	3.36	77.60	4.16	36.9	180	23.7	23.0	250	64845	7.8	2.2	3.2	4.5	9.1	0.02	0.18	4.22	84
104507	Rock	0.91	<0.005	4.16	17.18	1.90	23.0	26	6.5	2.0	122	26063	1.2	2.6	1.7	8.4	7.8	<0.01	0.15	1.55	54
104508	Rock	0.85	<0.005	3.98	16.54	5.66	12.9	89	8.1	5.7	64	28890	3.0	1.1	1.6	5.5	7.2	0.02	0.18	2.04	19
104509	Rock	1.45	<0.005	29.77	1.83	8.23	8.2	67	1.2	0.2	22	3031	5.2	0.3	<0.2	2.3	0.8	<0.01	0.39	1.16	<2
104510	Rock	2.80	0.008	165.8	34.44	55.77	29.2	593	4.0	20.4	21	14592	11.2	0.4	7.9	1.1	1.5	0.17	1.31	2.73	<2

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Project: Troitsa
Report Date: September 04, 2012

CERTIFICATE OF ANALYSIS SMI12000221.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
G1-SMI	Prep Blank	4274	629	9.1	6.0	4914	149.2	896	1	8476	831	4746	<0.1	2.2	0.30	<200	<0.005	<0.1	<0.02	4.1	2.63
G1-SMI	Prep Blank	4119	629	9.5	3.8	4763	136.6	847	2	7846	730	4513	<0.1	2.0	0.30	<200	0.006	<0.1	<0.02	4.2	2.62
103471	Rock	39098	765	5.9	12.5	10793	138.4	273	5	7878	328	3328	0.1	2.7	0.22	5310	0.023	0.5	0.09	2.8	2.47
103472	Rock	2898	743	8.8	17.2	3086	8.3	24	1	4530	51	1383	0.5	4.5	25.00	>100000	4.768	0.5	0.10	1.2	2.13
103473	Rock	967	497	16.2	21.0	844	56.9	<10	5	3721	49	1687	0.4	2.5	0.04	4450	0.056	0.5	0.05	1.1	3.13
103474	Rock	4407	1088	18.2	34.1	3608	26.3	14	1	6496	32	724	0.8	12.9	2.60	38161	0.978	0.9	0.29	1.8	2.01
103475	Rock	1632	788	16.2	22.4	521	28.4	15	1	6380	33	1209	0.9	8.3	1.64	48644	0.204	0.9	0.39	1.6	2.04
103476	Rock	2454	1022	12.9	33.7	514	99.7	25	1	5554	22	316	1.4	10.5	0.14	272	0.261	<0.1	0.10	1.5	1.10
103477	Rock	16072	1255	11.2	75.1	15227	198.5	341	1	30744	3156	4895	<0.1	9.7	0.33	2157	0.030	<0.1	0.05	9.0	5.32
103478	Rock	19964	590	15.5	59.8	9578	45.7	209	<1	20248	500	1524	<0.1	5.7	0.94	34174	0.053	1.5	0.10	5.8	10.24
103479	Rock	34454	1703	25.1	22.3	18930	97.9	27	<1	24506	336	1067	<0.1	6.6	0.05	<200	0.038	0.2	<0.02	7.8	4.01
104355	Rock	9158	252	2.0	8.7	8359	15.3	779	2	22269	1792	1062	<0.1	5.4	0.05	3055	0.018	<0.1	<0.02	8.4	2.39
104356	Rock	2892	234	2.3	11.2	8641	15.0	804	2	16839	917	778	<0.1	5.3	0.08	6655	0.035	<0.1	<0.02	7.5	1.86
104451	Rock	<100	<10	1.4	0.6	143	14.7	<10	<1	1053	285	572	1.9	<0.1	0.02	6509	0.026	1.0	1.52	1.0	0.14
104452	Rock	570	580	6.1	4.7	326	75.7	22	<1	3233	172	1229	0.6	0.6	0.14	4909	0.125	1.6	0.54	1.0	2.17
104453	Rock	1136	581	4.9	7.3	3502	39.8	73	2	5326	197	1741	0.4	1.4	0.09	963	0.025	0.8	0.21	2.8	1.16
104454	Rock	35975	561	15.7	6.8	3285	35.2	17	<1	3497	92	1403	1.0	2.2	0.06	1003	0.029	<0.1	0.11	1.2	2.27
104456	Rock	3527	954	9.3	17.4	8787	68.4	1000	<1	12575	734	3651	3.1	3.5	0.18	8745	0.015	0.3	0.31	6.6	1.83
104457	Rock	4240	390	4.8	12.2	5751	51.0	24	<1	9380	181	1468	<0.1	0.8	0.07	8414	0.018	0.8	0.06	2.4	0.68
104458	Rock	5660	1050	46.9	24.4	11129	197.2	563	1	12853	497	3955	<0.1	4.8	0.14	3529	0.007	<0.1	0.18	8.8	4.26
104501	Rock	2624	837	11.0	17.3	6321	154.9	1002	1	7247	715	3121	0.1	4.1	0.12	<200	<0.005	<0.1	<0.02	3.8	1.07
104502	Rock	1290	412	12.4	2.2	339	23.7	12	<1	2972	88	1494	0.8	2.1	0.09	67840	0.089	1.4	0.77	0.7	3.79
104503	Rock	1390	511	10.6	6.9	661	42.5	49	<1	3598	201	1583	2.2	2.7	0.09	27616	0.191	0.8	0.58	1.2	3.23
104504	Rock	<100	143	8.3	1.4	<100	47.8	30	<1	1201	169	1587	1.1	0.5	0.11	8952	0.015	4.3	0.36	0.4	0.79
104505	Rock	1575	792	6.3	19.1	6704	28.9	575	1	6527	324	1146	1.1	3.0	0.05	25354	0.011	4.3	1.02	3.6	0.85
104506	Rock	2973	1525	4.1	56.4	16255	19.8	1445	<1	14658	352	943	8.2	6.0	0.06	34174	0.010	5.4	1.65	10.0	1.84
104507	Rock	2076	882	3.8	22.5	8381	31.0	1232	1	8791	525	1022	1.0	4.2	0.04	4555	<0.005	1.4	0.23	6.0	0.54
104508	Rock	435	495	8.3	11.3	4817	60.8	13	1	4596	283	1324	0.4	1.0	0.05	17694	0.008	2.0	1.31	2.6	1.06
104509	Rock	<100	38	6.7	8.5	<100	19.4	<10	<1	1464	15	834	0.2	0.1	0.04	<200	<0.005	<0.1	0.14	0.4	1.07
104510	Rock	<100	57	1.7	0.8	<100	44.4	<10	<1	1315	25	1038	9.5	0.2	0.04	11941	0.016	0.5	0.28	0.4	0.67

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Project: Troitsa
Report Date: September 04, 2012

CERTIFICATE OF ANALYSIS SMI12000221.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Mo
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001
G1-SMI	Prep Blank	<0.1	0.05	0.45	39.0	0.4	<0.05	0.7	3.50	16.9	0.02	0.001	<0.1	26.1	<0.01	<0.002	
G1-SMI	Prep Blank	<0.1	0.03	0.43	39.6	0.4	<0.05	0.5	3.09	16.9	0.03	0.002	<0.1	27.6	<0.01	0.002	
103471	Rock	<0.1	0.02	0.06	18.0	0.1	<0.05	0.6	5.34	12.7	0.06	0.005	0.2	9.3	<0.01	<0.002	
103472	Rock	<0.1	0.04	0.02	6.4	0.3	<0.05	1.1	11.13	19.8	0.03	0.002	0.6	8.3	0.01	0.002	
103473	Rock	<0.1	<0.02	<0.02	8.4	0.1	<0.05	0.6	5.50	37.2	<0.02	0.001	0.6	15.6	<0.01	<0.002	
103474	Rock	0.2	0.04	<0.02	4.8	0.4	<0.05	1.1	15.35	39.6	0.08	<0.001	1.0	8.7	<0.01	<0.002	
103475	Rock	<0.1	<0.02	<0.02	6.1	0.3	<0.05	0.7	12.83	33.8	0.03	0.004	0.5	6.6	<0.01	<0.002	
103476	Rock	<0.1	0.02	<0.02	2.3	0.2	<0.05	0.6	15.72	29.6	0.07	<0.001	0.8	5.5	<0.01	<0.002	
103477	Rock	0.1	<0.02	<0.02	20.7	0.3	<0.05	0.5	18.13	18.7	0.04	0.002	0.5	30.6	<0.01	<0.002	
103478	Rock	0.1	0.03	0.04	10.5	0.4	<0.05	0.7	10.33	32.4	0.12	0.004	0.7	40.9	<0.01	<0.002	
103479	Rock	<0.1	0.03	<0.02	4.9	0.4	<0.05	0.8	14.38	53.2	<0.02	0.002	0.8	47.7	<0.01	<0.002	
104355	Rock	<0.1	0.03	0.03	4.5	0.1	<0.05	1.2	4.33	4.3	<0.02	0.001	0.4	29.8	<0.01	<0.002	
104356	Rock	<0.1	0.15	0.06	3.1	0.2	<0.05	2.7	4.86	4.8	0.05	0.006	0.4	24.4	<0.01	<0.002	
104451	Rock	<0.1	0.09	0.02	3.0	<0.1	<0.05	2.3	0.67	2.6	<0.02	0.003	0.2	0.2	<0.01	<0.002	
104452	Rock	<0.1	0.02	0.06	7.9	0.1	<0.05	0.8	2.93	10.9	<0.02	0.001	0.2	1.0	0.02	0.005	
104453	Rock	<0.1	0.05	0.11	13.6	0.1	<0.05	1.0	2.33	12.0	<0.02	<0.001	0.2	5.0	<0.01	<0.002	
104454	Rock	<0.1	<0.02	0.04	7.4	<0.1	<0.05	0.8	10.70	28.0	<0.02	<0.001	0.4	1.2	<0.01	<0.002	
104456	Rock	<0.1	0.08	0.08	15.5	0.5	<0.05	1.8	2.69	17.6	0.03	<0.001	0.2	28.7	<0.01	<0.002	
104457	Rock	<0.1	<0.02	<0.02	6.5	<0.1	<0.05	0.9	3.86	9.0	<0.02	0.005	0.3	19.5	<0.01	<0.002	
104458	Rock	<0.1	0.09	0.11	32.9	0.3	<0.05	2.7	16.28	82.0	<0.02	<0.001	0.3	24.3	<0.01	<0.002	
104501	Rock	0.2	0.05	0.34	20.8	0.2	<0.05	0.8	6.70	24.4	0.02	0.001	0.3	15.0	<0.01	<0.002	
104502	Rock	<0.1	0.03	0.02	12.0	<0.1	<0.05	1.1	8.20	21.7	<0.02	<0.001	0.2	1.0	<0.01	<0.002	
104503	Rock	<0.1	0.03	0.09	11.9	<0.1	<0.05	1.0	5.48	23.0	<0.02	<0.001	0.3	1.4	0.01	<0.002	
104504	Rock	<0.1	0.04	0.08	9.4	<0.1	<0.05	0.9	1.23	15.0	<0.02	0.002	<0.1	0.1	0.03	<0.002	
104505	Rock	<0.1	0.21	0.32	7.3	0.1	<0.05	8.4	3.07	12.5	<0.02	0.001	0.4	6.9	<0.01	0.003	
104506	Rock	<0.1	0.20	0.28	8.8	0.5	<0.05	6.8	2.64	8.7	<0.02	0.001	0.2	16.4	<0.01	<0.002	
104507	Rock	<0.1	0.28	0.65	6.8	0.2	<0.05	7.9	2.49	7.6	<0.02	0.001	0.2	9.4	<0.01	<0.002	
104508	Rock	0.1	0.18	0.16	7.6	<0.1	<0.05	6.7	1.98	15.5	<0.02	<0.001	<0.1	5.4	<0.01	<0.002	
104509	Rock	<0.1	<0.02	0.04	4.1	<0.1	<0.05	0.5	0.79	12.1	<0.02	<0.001	<0.1	0.5	<0.01	<0.002	
104510	Rock	<0.1	<0.02	0.03	3.9	<0.1	<0.05	0.4	0.34	2.9	<0.02	<0.001	<0.1	0.6	0.02	<0.002	

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Project: Troitsa
Report Date: September 04, 2012

CERTIFICATE OF ANALYSIS SMI12000221.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
104511	Rock	2.05	0.006	3.80	49.97	145.3	356.0	1355	0.9	18.1	506	22490	25.2	1.2	7.2	4.8	62.7	2.34	1.84	3.83	<2
104512	Rock	1.87	0.058	6.71	55.84	43.93	34.0	3583	0.5	19.0	28	55367	284.6	0.4	55.2	1.8	1.5	0.37	2.07	34.27	<2
104513	Rock	1.06	0.067	5.13	498.7	1724	1206	28124	1.1	22.1	969	36378	511.6	2.8	67.1	3.7	189.6	14.85	3.48	116.9	<2
104514	Rock	1.18	0.095	6.33	494.4	1504	71.1	44950	0.9	2.0	30	24075	599.5	0.1	105.0	0.6	<0.5	0.41	12.32	249.0	<2
104515	Rock	1.84	0.886	814.1	43.22	117.9	22.6	95592	11.4	18.5	122	38953	341.4	0.8	870.0	0.6	2.5	0.35	9.82	1.65	16
104516	Rock	1.82	0.028	191.8	30.50	17.50	19.7	6378	4.0	2.3	157	21643	161.6	0.3	33.2	0.7	10.2	0.12	2.81	0.31	12
104517	Rock	1.88	0.943	>2000	39.86	155.8	12.5	37545	3.2	1.3	54	30788	586.2	0.3	971.7	0.2	3.5	0.35	20.92	2.36	21
104518	Rock	0.66	0.176	>2000	5407	676.7	138.1	11379	19.6	45.4	159	71374	312.1	28.6	365.9	2.7	14.1	3.21	27.98	4.61	7
104519	Rock	0.84	0.015	9.67	116.9	83.47	908.8	1313	41.1	19.4	1075	108443	10.5	0.3	16.3	1.0	13.1	4.36	2.05	0.95	55
104520	Rock	0.84	0.014	10.70	19.66	5.29	29.3	213	15.7	15.2	209	53156	64.1	1.4	15.6	5.0	18.7	0.04	0.56	5.29	38
104521	Rock	0.89	0.006	4.58	100.2	8.19	13.9	222	3.1	4.7	84	10785	1.8	1.1	4.0	4.2	11.4	0.11	0.22	2.66	<2
104522	Rock	0.59	0.103	2.76	786.2	3.51	19.3	547	4.3	11.8	103	35772	4.3	3.0	147.8	4.3	4.2	0.07	0.23	207.4	6
104523	Rock	1.05	<0.005	1.50	9.49	5.53	55.8	75	9.8	4.6	359	15118	4.1	0.7	1.1	4.2	73.5	0.50	0.14	0.08	28

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 04, 2012

CERTIFICATE OF ANALYSIS SMI12000221.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
104511	Rock	17176	47	3.6	1.9	457	56.7	<10	<1	1876	41	1452	0.3	0.1	0.08	24412	0.056	1.3	0.68	0.4	1.24
104512	Rock	471	15	2.8	0.6	<100	20.5	<10	<1	1770	44	1668	0.9	0.1	0.05	62442	0.009	5.7	0.70	0.2	0.60
104513	Rock	21939	20	2.5	0.9	566	41.8	<10	<1	2016	37	1273	0.9	0.3	0.08	31700	0.015	3.0	0.48	0.4	0.81
104514	Rock	<100	15	2.9	0.5	<100	38.1	<10	<1	1627	53	1280	0.7	0.2	0.07	16678	0.014	1.8	0.31	0.4	0.28
104515	Rock	249	290	2.7	8.5	571	25.5	<10	<1	2646	44	1421	14.4	1.1	0.97	19804	0.223	0.8	31.38	1.0	3.71
104516	Rock	1591	484	12.1	9.5	1137	150.8	<10	<1	3818	17	1521	0.1	0.8	0.27	10032	0.044	0.3	2.63	1.6	2.60
104517	Rock	180	262	1.3	2.9	130	38.6	<10	<1	1997	22	1487	0.6	0.9	2.37	8885	0.467	2.4	19.82	0.9	1.80
104518	Rock	1238	380	20.5	14.4	3039	14.9	12	<1	2937	17	292	2.3	0.8	0.46	69295	0.074	6.5	0.55	1.6	0.49
104519	Rock	12647	2161	2.3	28.4	14044	2.5	538	3	17261	<10	<100	0.2	5.9	0.02	25206	0.028	3.9	0.43	6.7	0.43
104520	Rock	1980	1238	4.7	33.3	6062	21.3	79	<1	7362	676	1284	0.2	3.1	0.03	37173	<0.005	13.2	1.89	4.5	1.42
104521	Rock	1560	73	7.6	0.8	626	69.5	<10	<1	3300	411	2175	0.2	<0.1	0.07	8751	0.009	0.3	0.71	1.1	0.65
104522	Rock	1105	536	20.4	4.6	3210	52.6	30	<1	7002	198	2645	>100	0.4	0.12	22106	0.015	0.4	43.51	2.8	0.72
104523	Rock	10462	471	14.8	7.3	3321	358.9	805	1	8495	587	3266	0.1	3.7	0.07	<200	<0.005	<0.1	<0.02	3.5	3.59

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 04, 2012

CERTIFICATE OF ANALYSIS SMI12000221.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Mo
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001
104511	Rock	<0.1	0.05	0.05	5.4	<0.1	<0.05	1.8	3.38	6.3	<0.02	0.001	<0.1	0.6	<0.01	<0.002	
104512	Rock	<0.1	0.10	0.07	6.3	<0.1	<0.05	3.4	0.54	5.0	<0.02	<0.001	<0.1	0.1	<0.01	<0.002	
104513	Rock	0.1	0.08	0.07	4.4	0.1	<0.05	3.3	4.68	4.4	0.09	0.001	<0.1	1.1	<0.01	0.003	
104514	Rock	0.1	0.05	<0.02	4.0	0.2	<0.05	1.4	0.24	5.7	0.51	0.001	<0.1	0.5	<0.01	<0.002	
104515	Rock	<0.1	<0.02	<0.02	8.7	<0.1	<0.05	0.3	4.04	4.4	<0.02	0.015	0.2	1.8	*	<0.002	
104516	Rock	<0.1	0.03	<0.02	10.6	0.2	<0.05	0.8	3.34	18.9	<0.02	0.006	0.2	4.0	0.04	<0.002	
104517	Rock	<0.1	<0.02	0.02	10.9	<0.1	<0.05	0.6	3.21	2.6	<0.02	0.045	<0.1	1.0	*	<0.002	0.346
104518	Rock	0.1	<0.02	0.06	1.7	0.5	<0.05	0.5	2.83	33.2	<0.02	0.270	<0.1	6.4	*	<0.002	0.308
104519	Rock	0.3	0.05	0.14	0.2	1.4	<0.05	1.2	8.95	5.6	0.86	<0.001	0.4	21.2	<0.01	<0.002	
104520	Rock	<0.1	0.09	0.06	5.6	0.2	<0.05	3.5	2.37	10.5	<0.02	<0.001	0.2	6.8	<0.01	<0.002	
104521	Rock	<0.1	0.11	0.06	8.0	<0.1	<0.05	3.3	1.80	13.4	<0.02	<0.001	0.1	1.2	<0.01	<0.002	
104522	Rock	<0.1	0.13	0.04	11.5	<0.1	<0.05	4.3	4.09	37.1	0.03	<0.001	0.2	7.0	<0.01	<0.002	
104523	Rock	0.1	0.13	0.15	14.6	0.4	<0.05	3.6	10.39	30.0	<0.02	<0.001	0.6	8.4	<0.01	<0.002	

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Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 04, 2012

QUALITY CONTROL REPORT SMI12000221.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
Pulp Duplicates																					
103472	Rock	1.30	<0.005	39.91	56.39	22.15	94.2	268	148.5	23.1	885	143626	5714	0.3	3.1	1.8	15.5	0.17	218.8	0.19	26
REP 103472	QC		<0.005																		
104513	Rock	1.06	0.067	5.13	498.7	1724	1206	28124	1.1	22.1	969	36378	511.6	2.8	67.1	3.7	189.6	14.85	3.48	116.9	<2
REP 104513	QC			5.05	502.1	1740	1208	27843	1.2	22.2	964	36485	510.9	2.8	70.5	3.7	192.1	15.12	3.55	118.0	<2
Core Reject Duplicates																					
104510	Rock	2.80	0.008	165.8	34.44	55.77	29.2	593	4.0	20.4	21	14592	11.2	0.4	7.9	1.1	1.5	0.17	1.31	2.73	<2
DUP 104510	QC	<0.01	0.007	156.1	29.59	57.15	27.2	556	4.7	20.7	17	14390	10.7	0.3	8.3	0.8	1.3	0.17	1.30	2.72	<2
Reference Materials																					
STD DS9	Standard			13.74	107.3	122.2	292.6	1792	40.5	7.7	571	22620	24.3	2.7	141.7	6.5	68.2	2.18	5.25	5.80	38
STD DS9	Standard			12.37	107.0	119.3	304.8	1905	39.8	8.0	585	22905	25.6	2.6	114.8	6.4	74.0	2.32	6.40	6.98	38
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard		0.908																		
STD OXG99	Standard		0.937																		
STD OXG99	Standard		0.968																		
STD OXG99	Standard		0.972																		
STD OXK94	Standard		3.658																		
STD OXK94	Standard		3.855																		
STD OXK94	Standard		3.733																		
STD OXK94	Standard		3.781																		
STD OXG99 Expected			0.932																		
STD OXK94 Expected			3.562																		
STD DS9 Expected				12.84	108	126	317	1830	40.3	7.6	575	23300	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40
STD GC-7 Expected																					
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			<0.01	<0.01	<0.01	<0.1	5	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank		<0.005																		

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Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 04, 2012

QUALITY CONTROL REPORT SMI12000221.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
Pulp Duplicates																					
103472	Rock	2898	743	8.8	17.2	3086	8.3	24	1	4530	51	1383	0.5	4.5	25.00	>100000	4.768	0.5	0.10	1.2	2.13
REP 103472	QC																				
104513	Rock	21939	20	2.5	0.9	566	41.8	<10	<1	2016	37	1273	0.9	0.3	0.08	31700	0.015	3.0	0.48	0.4	0.81
REP 104513	QC	21937	22	2.5	1.1	561	42.2	<10	<1	1996	38	1286	1.1	0.3	0.09	31986	0.022	2.8	0.48	0.5	0.81
Core Reject Duplicates																					
104510	Rock	<100	57	1.7	0.8	<100	44.4	<10	<1	1315	25	1038	9.5	0.2	0.04	11941	0.016	0.5	0.28	0.4	0.67
DUP 104510	QC	<100	54	1.3	0.9	<100	37.1	<10	<1	1250	23	1013	6.6	<0.1	0.04	12674	<0.005	0.5	0.38	0.4	0.59
Reference Materials																					
STD DS9	Standard	7098	761	12.8	113.1	6049	282.4	1048	2	9342	881	4004	2.9	2.4	5.28	1313	0.207	5.2	4.73	3.8	2.32
STD DS9	Standard	7177	834	12.9	113.7	6077	285.5	1092	3	9444	856	3980	2.9	2.6	5.36	1700	0.202	5.3	5.02	4.5	2.44
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXG99 Expected																					
STD OXK94 Expected																					
STD DS9 Expected		7201	819	13.3	121	6165	295	1108		9577	853	3950	2.89	2.5	5.3	1615	0.2	5.2	5.02	4.59	2.37
STD GC-7 Expected																					
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				

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QUALITY CONTROL REPORT SMI12000221.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Mo
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001
Pulp Duplicates																	
103472	Rock	<0.1	0.04	0.02	6.4	0.3	<0.05	1.1	11.13	19.8	0.03	0.002	0.6	8.3	0.01	0.002	
REP 103472	QC																
104513	Rock	0.1	0.08	0.07	4.4	0.1	<0.05	3.3	4.68	4.4	0.09	0.001	<0.1	1.1	<0.01	0.003	
REP 104513	QC	<0.1	0.09	0.09	4.4	0.1	<0.05	4.7	4.74	4.4	0.13	<0.001	0.3	1.2	<0.01	<0.002	
Core Reject Duplicates																	
104510	Rock	<0.1	<0.02	0.03	3.9	<0.1	<0.05	0.4	0.34	2.9	<0.02	<0.001	<0.1	0.6	0.02	<0.002	
DUP 104510	QC	<0.1	<0.02	<0.02	3.7	<0.1	<0.05	0.2	0.32	2.1	<0.02	0.004	<0.1	0.4	0.01	<0.002	
Reference Materials																	
STD DS9	Standard	0.1	0.06	1.40	31.3	6.1	<0.05	1.9	5.28	23.7	2.12	0.055	4.4	24.4	0.11	0.343	
STD DS9	Standard	<0.1	0.08	1.54	33.1	6.8	<0.05	1.9	5.49	24.4	2.20	0.068	5.0	25.5	0.11	0.338	
STD GC-7	Standard																0.012
STD GC-7	Standard																0.012
STD OXG99	Standard																
STD OXG99	Standard																
STD OXG99	Standard																
STD OXG99	Standard																
STD OXK94	Standard																
STD OXK94	Standard																
STD OXK94	Standard																
STD OXK94	Standard																
STD OXG99 Expected																	
STD OXK94 Expected																	
STD DS9 Expected		0.1	0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	0.061	5.4	25.2	0.12	0.35	
STD GC-7 Expected																	0.011
BLK	Blank																
BLK	Blank																
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	0.002	<0.1	<0.1	<0.01	<0.002	
BLK	Blank																

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QUALITY CONTROL REPORT SMI12000221.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			0.03	<0.01	0.01	<0.1	4	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	<0.01	0.007	0.14	2.62	2.69	39.9	10	2.7	4.0	517	17401	0.8	1.3	1.7	4.4	54.5	0.04	0.05	<0.02	32
G1-SMI	Prep Blank	<0.01	<0.005	0.08	3.24	2.38	42.6	8	2.1	3.5	540	17647	0.2	1.4	1.0	4.5	49.6	0.01	0.03	<0.02	31

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AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
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Phone (604) 253-3158 Fax (604) 253-1716
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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 04, 2012

QUALITY CONTROL REPORT SMI12000221.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	4274	629	9.1	6.0	4914	149.2	896	1	8476	831	4746	<0.1	2.2	0.30	<200	<0.005	<0.1	<0.02	4.1	2.63
G1-SMI	Prep Blank	4119	629	9.5	3.8	4763	136.6	847	2	7846	730	4513	<0.1	2.0	0.30	<200	0.006	<0.1	<0.02	4.2	2.62

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QUALITY CONTROL REPORT SMI12000221.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Mo % 0.001
BLK	Blank																
BLK	Blank																
BLK	Blank																
BLK	Blank																
BLK	Blank																
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002	
BLK	Blank																<0.001
Prep Wash																	
G1-SMI	Prep Blank	<0.1	0.05	0.45	39.0	0.4	<0.05	0.7	3.50	16.9	0.02	0.001	<0.1	26.1	<0.01	<0.002	
G1-SMI	Prep Blank	<0.1	0.03	0.43	39.6	0.4	<0.05	0.5	3.09	16.9	0.03	0.002	<0.1	27.6	<0.01	0.002	

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By: Angie D'Amato
Receiving Lab: Canada-Smithers
Received: August 23, 2012
Report Date: September 12, 2012

CERTIFICATE OF ANALYSIS SMI12000265.1

CLIENT JOB INFORMATION

Project: Coles Creek
Shipment ID: TRP-12-002
P.O. Number
Number of Samples: 37

SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage
DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	37	Crush, split and pulverize 250 g rock to 200 mesh			SMI
XWSH	1	Extra Wash with Glass between each sample			VAN
G601	37	Lead Collection Fire - Assay Fusion - AAS Finish	30	Completed	VAN
1F05	37	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
7AR	3	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN
7AR.1	1	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.1	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Project: Coles Creek
Report Date: September 12, 2012

CERTIFICATE OF ANALYSIS SMI12000265.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
G1-SMI	Prep Blank	<0.01	<0.005	0.11	3.06	2.85	49.9	9	2.2	3.8	597	1.93	0.3	1.5	1.7	6.2	64.3	0.04	0.04	0.08	36
G1-SMI	Prep Blank	<0.01	<0.005	0.11	3.52	2.45	45.7	5	2.7	3.6	599	1.73	0.3	1.3	1.7	4.4	54.3	0.02	<0.02	0.04	32
103480	Rock	1.70	0.053	2.43	799.6	6.55	47.7	397	9.2	6.7	263	1.87	1.0	2.1	46.1	11.9	16.8	0.08	0.06	0.34	49
103481	Rock	2.03	0.055	4.48	3893	3.52	28.0	5460	11.3	9.8	320	2.77	0.1	3.6	84.9	10.2	13.7	0.11	0.06	1.80	49
103482	Rock	0.79	0.030	1766	3639	43.63	89.9	1651	6.9	5.3	2480	2.06	5.7	5.3	31.0	13.3	122.0	4.69	0.67	1.55	10
103483	Rock	1.58	0.452	186.1	4546	17.24	45.2	2348	15.2	7.4	199	2.91	<0.1	3.1	358.9	9.5	14.7	0.38	0.09	1.56	64
103484	Rock	1.39	0.133	14.53	288.9	9881	156.2	39443	7.0	55.9	435	3.74	25.0	1.5	148.0	4.1	9.0	2.86	3.23	53.82	4
103485	Rock	2.33	0.009	6.12	768.5	5.13	27.6	849	11.2	8.9	294	2.95	0.6	2.0	8.7	10.9	18.2	0.08	0.08	1.00	54
103486	Rock	2.59	0.012	1.47	947.7	18.19	35.4	1294	16.2	12.9	391	3.01	1.9	2.2	5.9	10.1	24.0	0.16	0.10	2.33	58
103487	Rock	0.76	<0.005	9.11	363.8	5.36	31.3	587	12.7	13.2	483	2.11	3.7	2.8	2.2	10.9	23.7	0.13	0.96	0.58	32
103488	Rock	0.96	0.012	4.00	5196	4.88	37.8	6378	14.0	14.7	328	2.90	1.4	1.5	9.4	9.5	18.8	0.44	0.22	1.36	41
103489	Rock	1.59	0.140	25.69	517.6	2125	122.2	27363	9.4	57.0	870	5.28	35.6	1.5	133.9	6.5	40.0	4.26	4.98	38.03	14
103490	Rock	0.75	0.030	>2000	14.65	85.70	11.2	1597	1.5	5.9	148	5.48	<0.1	8.8	11.0	2.6	4.7	269.8	0.23	2.53	93
103491	Rock	1.67	<0.005	53.91	118.4	9.84	31.5	258	11.9	9.2	440	2.34	0.4	7.3	1.7	12.3	46.5	0.25	0.08	0.81	46
103529	Rock	1.48	<0.005	151.5	536.3	4.83	31.8	297	10.7	7.6	341	2.53	0.8	4.1	1.8	12.2	16.3	0.33	0.06	0.70	56
104357	Rock	0.68	0.014	8.66	55.95	6.06	866.1	85	7.4	5.7	3429	10.41	39.4	1.2	<0.2	0.2	62.5	1.11	0.45	1.56	139
104524	Rock	0.79	0.010	18.04	14.61	97.93	1353	4640	6.6	5.5	48	2.90	42.9	0.7	7.4	3.1	6.3	4.60	3.43	6.88	7
104525	Rock	1.42	<0.005	7.53	2.66	17.92	111.5	108	3.3	3.9	891	2.97	1.1	0.2	0.3	0.6	143.3	0.25	0.99	0.19	48
104526	Rock	1.49	0.046	17.96	2112	12.79	128.1	4883	12.4	3.2	706	3.38	5.0	0.7	54.1	7.9	30.2	0.82	0.13	3.52	72
104527	Rock	0.94	5.625	32.51	2659	>10000	870.0	>100000	7.1	4.8	106	10.82	>10000	1.3	9995	0.9	37.4	6.41	194.9	>2000	13
104528	Rock	1.93	0.011	5.92	858.8	14.17	27.4	795	4.0	2.1	77	0.23	5.3	0.6	6.0	4.6	19.5	0.54	0.10	1.56	<2
104529	Rock	1.28	0.023	2.59	11.99	103.3	43.6	3118	17.1	5.0	526	2.83	40.6	0.5	20.8	6.0	42.1	0.06	0.62	13.78	61
104530	Rock	0.62	0.013	124.8	75.78	23.03	45.8	1137	13.4	2.8	242	2.11	17.6	0.3	7.6	1.5	1.3	0.28	2.01	1.06	20
104531	Rock	0.48	0.012	33.97	70.30	2362	4240	3952	0.9	0.8	349	0.44	18.6	1.1	4.8	4.8	39.6	62.84	1.47	2.41	<2
104532	Rock	0.87	0.008	4.36	4.82	20.08	69.3	203	21.3	28.0	410	2.77	3.5	0.7	3.0	5.3	19.9	0.51	0.14	1.34	61
104533	Rock	2.47	0.041	18.35	25.93	58.98	118.7	2679	24.5	1063	45	26.52	15.0	5.3	30.0	0.8	1.5	2.28	0.81	225.1	22
104534	Rock	1.54	0.010	5.74	136.3	19.64	45.6	334	17.8	151.2	548	3.84	9.3	6.5	2.9	8.8	42.0	0.33	0.49	2.92	28
104535	Rock	1.52	0.039	15.89	4547	119.6	71.0	6453	8.4	66.2	286	9.39	62.8	2.1	37.9	3.2	4.9	1.56	0.21	48.81	12
104536	Rock	1.76	0.049	254.3	1295	1020	224.4	73765	5.3	9.4	211	1.92	35.4	2.1	49.3	4.1	13.5	8.34	3.73	193.5	5
104537	Rock	1.71	0.384	868.1	1771	217.5	298.5	20388	10.5	159.6	233	6.05	97.1	17.8	518.2	5.7	19.9	12.13	2.85	77.05	12

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 12, 2012

CERTIFICATE OF ANALYSIS SMI12000265.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
	MDL	0.01	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
G1-SMI	Prep Blank	0.50	0.072	13.0	8.0	0.51	159.2	0.099	2	0.96	0.093	0.46	<0.1	3.2	0.32	<0.02	<5	<0.1	<0.02	5.2	2.77
G1-SMI	Prep Blank	0.42	0.069	10.4	4.6	0.49	134.8	0.089	3	0.79	0.079	0.45	<0.1	2.7	0.31	<0.02	<5	<0.1	<0.02	4.5	2.52
103480	Rock	0.32	0.073	10.8	22.7	0.44	82.5	0.055	1	0.46	0.080	0.21	0.2	2.6	0.10	0.05	<5	<0.1	0.16	3.6	1.56
103481	Rock	0.34	0.086	12.8	19.3	0.62	95.6	0.065	1	0.69	0.052	0.15	11.2	3.5	0.07	0.42	<5	1.2	0.07	4.6	1.08
103482	Rock	2.80	0.051	12.5	5.2	0.57	38.2	0.001	1	0.82	0.013	0.17	0.7	2.2	0.11	0.65	56	0.6	0.16	2.7	2.20
103483	Rock	0.36	0.070	10.6	20.7	0.48	145.4	0.068	1	0.54	0.051	0.17	0.2	2.2	0.07	0.34	<5	2.6	0.67	4.5	1.36
103484	Rock	0.14	0.042	8.9	8.4	0.22	34.7	0.001	2	0.51	<0.001	0.19	0.8	0.7	0.15	2.83	16	0.6	3.47	1.4	1.94
103485	Rock	0.49	0.084	19.2	22.4	0.95	82.1	0.052	3	1.14	0.052	0.13	22.2	3.2	0.05	0.39	<5	<0.1	0.14	7.6	1.14
103486	Rock	0.60	0.097	17.0	28.4	1.01	95.6	0.014	1	1.16	0.055	0.14	12.4	3.4	0.06	0.17	<5	0.3	0.04	7.3	1.71
103487	Rock	0.59	0.086	29.1	20.9	0.69	367.6	0.002	2	1.03	0.035	0.21	0.2	2.7	0.13	0.38	<5	0.3	0.11	4.8	2.60
103488	Rock	0.34	0.082	48.2	18.4	0.64	213.4	0.003	4	0.96	0.030	0.14	0.3	3.0	0.07	0.68	27	1.0	0.67	4.5	1.40
103489	Rock	0.36	0.069	11.9	9.8	0.41	25.2	0.002	3	0.78	0.004	0.22	1.6	1.9	0.17	2.49	8	1.0	5.15	2.7	2.90
103490	Rock	0.05	0.017	3.6	1.2	0.09	2.6	0.001	1	0.19	0.018	0.12	9.4	0.5	0.07	>10	621	70.4	2.26	0.8	0.55
103491	Rock	1.11	0.082	21.1	24.3	0.83	185.9	0.004	1	1.00	0.033	0.14	1.5	3.4	0.06	0.10	<5	<0.1	0.18	5.0	2.03
103529	Rock	0.38	0.087	11.6	21.4	0.78	35.8	0.093	1	0.81	0.046	0.08	0.3	3.9	0.02	0.04	<5	<0.1	0.03	4.8	0.61
104357	Rock	12.37	0.004	0.6	7.8	5.91	7.4	<0.001	2	0.09	0.016	<0.01	<0.1	34.8	<0.02	3.81	5	0.7	0.04	0.8	0.24
104524	Rock	0.06	0.052	9.7	2.3	0.02	26.8	<0.001	7	0.35	0.045	0.15	<0.1	1.0	0.14	2.84	135	1.7	0.83	1.5	1.27
104525	Rock	2.63	0.320	6.7	8.8	0.97	47.7	0.089	4	3.97	0.436	0.41	0.4	10.5	0.24	<0.02	<5	<0.1	<0.02	13.0	11.14
104526	Rock	0.75	0.113	21.0	24.1	1.20	75.7	0.115	2	1.73	0.072	0.11	0.2	4.8	0.06	0.38	6	<0.1	0.20	18.8	1.71
104527	Rock	<0.01	0.008	2.5	4.6	0.01	162.8	0.002	<1	0.28	0.005	0.07	0.4	0.3	0.28	0.67	260	27.7	16.44	1.3	0.36
104528	Rock	0.33	0.009	14.1	1.2	0.03	45.9	<0.001	2	0.29	0.064	0.13	<0.1	0.7	0.05	<0.02	<5	<0.1	<0.02	0.7	1.55
104529	Rock	1.18	0.110	7.2	35.8	1.27	101.5	0.052	2	1.31	0.060	0.09	<0.1	6.2	0.02	<0.02	<5	<0.1	<0.02	7.7	0.98
104530	Rock	0.02	0.023	7.6	14.2	0.28	17.3	<0.001	<1	0.77	0.001	0.14	<0.1	1.7	0.13	0.14	<5	<0.1	0.20	2.8	3.22
104531	Rock	0.44	0.010	11.7	2.6	0.06	376.5	<0.001	6	0.40	0.003	0.25	0.1	0.8	0.12	0.30	48	<0.1	0.08	1.1	3.82
104532	Rock	0.42	0.113	6.4	36.7	1.25	28.9	0.104	<1	1.42	0.087	0.03	0.2	7.3	<0.02	0.16	<5	0.1	0.10	7.8	0.96
104533	Rock	0.03	0.008	0.8	2.2	0.03	3.0	<0.001	1	0.13	0.005	0.03	6.8	0.8	0.08	>10	20	14.7	11.25	0.7	0.66
104534	Rock	1.07	0.093	18.3	11.5	0.58	56.2	0.003	<1	1.22	0.030	0.19	<0.1	3.1	0.17	1.85	7	0.3	0.26	4.6	7.62
104535	Rock	0.08	0.026	7.8	6.3	0.08	7.4	0.001	<1	0.20	0.008	0.09	3.3	1.2	0.08	8.10	<5	1.2	2.90	1.1	0.51
104536	Rock	0.43	0.026	6.3	3.4	0.08	24.0	<0.001	<1	0.24	0.003	0.12	3.3	1.0	0.16	1.56	80	0.8	3.64	1.0	1.60
104537	Rock	0.53	0.042	14.3	7.1	0.40	20.8	0.001	<1	0.65	0.005	0.14	0.2	1.2	0.12	5.97	19	1.3	3.41	2.8	2.53

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Project: Coles Creek
Report Date: September 12, 2012

CERTIFICATE OF ANALYSIS SMI12000265.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR	7AR	7AR.1
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Mo	Cu	Ag	Mo
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	%	%	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.001	0.001	2	0.001
G1-SMI	Prep Blank	0.1	0.10	0.41	40.9	0.5	<0.05	0.8	4.43	22.6	0.06	<1	0.2	28.9	<10	<2				
G1-SMI	Prep Blank	<0.1	0.06	0.51	42.2	0.3	<0.05	0.7	3.38	18.1	<0.02	2	0.2	26.6	<10	<2				
103480	Rock	0.2	0.04	0.18	19.4	0.3	<0.05	0.7	4.53	22.3	0.05	2	<0.1	8.4	<10	<2				
103481	Rock	0.2	0.04	0.13	11.6	0.3	<0.05	0.8	4.01	21.0	0.42	<1	0.2	9.7	<10	<2				
103482	Rock	<0.1	0.11	<0.02	12.0	<0.1	<0.05	2.8	8.46	22.3	<0.02	131	0.5	10.7	*	<2				
103483	Rock	0.2	0.06	0.29	13.3	0.8	<0.05	0.9	4.83	22.4	0.63	78	0.4	8.4	28	2				
103484	Rock	0.1	<0.02	<0.02	18.5	<0.1	<0.05	0.4	2.28	12.2	0.03	6	0.3	4.9	<10	<2				
103485	Rock	0.1	0.06	0.08	9.1	<0.1	<0.05	1.7	6.02	29.9	0.07	1	0.3	13.0	<10	<2				
103486	Rock	<0.1	0.05	0.03	10.2	0.1	<0.05	1.0	7.40	30.2	0.08	<1	0.2	13.9	<10	<2				
103487	Rock	<0.1	0.02	0.03	18.3	<0.1	<0.05	1.3	8.98	40.0	<0.02	2	0.4	12.6	<10	<2				
103488	Rock	<0.1	0.03	<0.02	12.6	0.1	<0.05	0.9	19.74	48.4	0.20	<1	0.6	10.5	<10	<2				
103489	Rock	<0.1	0.03	0.02	21.8	<0.1	<0.05	0.8	4.09	19.8	0.09	<1	0.4	8.5	<10	<2				
103490	Rock	0.1	0.06	0.09	6.6	0.3	<0.05	2.7	1.49	4.2	<0.02	>1000	0.1	1.8	*	17	>5	0.008	<2	21.22
103491	Rock	<0.1	0.06	<0.02	10.6	<0.1	<0.05	1.4	7.10	32.0	<0.02	20	<0.1	14.1	<10	<2				
103529	Rock	0.2	0.09	0.19	5.0	0.2	<0.05	1.5	4.19	20.9	0.03	25	0.6	14.3	<10	2				
104357	Rock	0.2	0.14	0.03	0.3	0.4	<0.05	4.2	14.96	1.7	0.42	<1	<0.1	1.4	<10	<2				
104524	Rock	<0.1	0.11	<0.02	6.1	<0.1	<0.05	3.8	1.21	15.8	0.90	7	<0.1	1.9	<10	<2				
104525	Rock	0.1	0.16	0.05	21.0	0.4	<0.05	2.6	15.81	13.0	0.06	8	0.6	34.5	<10	<2				
104526	Rock	0.1	0.19	0.14	6.8	0.3	<0.05	3.5	7.61	36.0	0.42	3	0.6	31.5	<10	<2				
104527	Rock	0.4	<0.02	0.08	4.0	1.7	<0.05	0.6	4.40	4.9	9.37	<1	0.8	1.4	<10	<2	0.003	0.260	>300	
104528	Rock	<0.1	0.12	0.03	5.3	<0.1	<0.05	4.8	4.94	22.5	0.03	<1	0.5	0.7	<10	2				
104529	Rock	<0.1	0.12	0.05	3.6	0.2	<0.05	4.2	3.02	14.9	0.05	1	0.4	16.5	13	<2				
104530	Rock	<0.1	<0.02	<0.02	7.9	<0.1	<0.05	0.2	2.12	14.4	<0.02	1	<0.1	14.0	<10	<2				
104531	Rock	0.1	0.08	<0.02	14.2	<0.1	<0.05	1.7	2.58	21.1	<0.02	8	1.5	1.3	<10	2				
104532	Rock	0.2	0.18	0.19	1.9	0.2	<0.05	6.8	3.24	14.3	0.03	1	<0.1	17.5	13	<2				
104533	Rock	0.3	<0.02	0.08	2.3	<0.1	<0.05	0.5	0.93	1.7	0.03	<1	0.2	1.2	<10	<2				
104534	Rock	0.2	<0.02	<0.02	13.6	<0.1	<0.05	0.6	9.03	32.6	<0.02	1	0.4	18.1	15	<2				
104535	Rock	0.2	<0.02	0.05	9.6	0.4	<0.05	0.3	1.67	13.7	0.50	2	<0.1	2.2	14	<2				
104536	Rock	<0.1	<0.02	<0.02	6.6	<0.1	<0.05	0.2	2.28	10.6	0.12	7	<0.1	2.2	*	<2				
104537	Rock	0.3	0.04	0.05	11.0	0.2	<0.05	0.6	7.63	30.7	0.26	70	0.4	12.1	*	<2				

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 12, 2012

CERTIFICATE OF ANALYSIS SMI12000265.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
104538	Rock	1.54	0.024	35.15	120.5	22.79	10.8	1714	3.2	2.7	247	1.19	57.9	2.3	20.3	3.2	3.4	0.20	3.70	4.90	6
104539	Rock	0.88	0.046	13.55	85.57	1273	1404	10622	14.8	304.1	74	20.71	24.2	4.5	39.0	1.1	2.4	22.32	0.26	10.74	18
104540	Rock	1.27	0.020	6.34	4433	3.93	37.6	4650	10.5	10.4	378	2.34	1.2	3.5	15.3	11.8	9.4	0.13	0.45	2.12	37
104541	Rock	1.27	0.037	8.79	7359	26.81	53.5	7983	11.3	80.6	160	3.63	0.6	5.4	39.3	10.3	13.8	0.46	0.28	6.24	41
104542	Rock	0.82	0.039	1.85	5674	5.36	45.8	6438	13.0	17.5	322	3.01	0.8	2.1	75.7	8.8	11.9	0.20	0.11	23.57	54
104543	Rock	1.23	0.011	13.55	45.76	10.64	33.7	1176	28.6	13.3	377	2.35	36.0	4.8	1.9	7.3	62.1	0.18	1.20	0.15	28
104544	Rock	1.39	0.021	19.32	260.4	184.0	62.1	8686	3.7	10.0	228	1.52	14.8	4.0	45.4	5.2	4.3	0.84	4.85	1.36	5
104545	Rock	2.53	0.037	1.55	5258	6.90	37.4	13178	9.8	8.0	200	2.44	0.7	2.7	149.0	10.5	13.7	0.14	0.10	102.8	50
104546	Rock	0.87	0.086	5.53	>10000	12.20	58.3	6362	21.2	66.4	358	4.90	<0.1	2.6	75.9	9.2	10.3	0.45	0.21	5.43	52

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CERTIFICATE OF ANALYSIS SMI12000265.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
	MDL	0.01	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
104538	Rock	0.06	0.027	4.6	3.8	0.10	24.1	<0.001	<1	0.24	0.002	0.10	0.2	0.7	0.10	0.14	15	<0.1	0.42	1.1	2.36
104539	Rock	<0.01	0.016	8.6	3.6	0.14	1.9	<0.001	<1	0.40	0.001	0.12	0.5	0.9	0.09	>10	86	9.3	11.05	1.8	0.82
104540	Rock	0.19	0.089	19.6	17.8	0.82	56.1	0.004	1	1.09	0.038	0.13	9.4	3.4	0.08	0.38	49	0.8	0.92	5.6	1.85
104541	Rock	0.19	0.083	8.2	20.8	0.66	49.4	0.006	<1	0.88	0.033	0.11	2.8	3.5	0.05	1.82	13	2.0	1.14	5.2	1.35
104542	Rock	0.24	0.087	8.8	19.9	0.99	55.2	0.050	<1	1.03	0.056	0.12	8.9	3.9	0.04	0.83	<5	1.4	5.75	6.4	0.70
104543	Rock	1.57	0.082	13.6	18.3	0.49	30.1	0.005	<1	0.93	0.056	0.10	0.3	2.1	0.11	1.39	<5	<0.1	1.60	4.6	1.71
104544	Rock	0.06	0.037	5.4	3.3	0.23	76.2	<0.001	1	0.49	0.001	0.17	0.3	0.6	0.11	0.20	36	0.3	0.33	1.3	2.71
104545	Rock	0.29	0.077	8.7	20.7	0.61	72.3	0.076	<1	0.72	0.075	0.19	4.5	2.3	0.06	0.57	<5	1.2	0.56	4.2	0.77
104546	Rock	0.18	0.084	11.4	21.3	0.90	43.7	0.014	2	1.09	0.053	0.10	32.4	3.2	0.04	2.54	6	4.9	1.23	6.4	1.15

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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR	7AR	7AR.1
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Mo	Cu	Ag	Mo
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	%	%	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.001	0.001	2	0.001
104538	Rock	<0.1	<0.02	<0.02	6.4	<0.1	<0.05	0.3	2.04	9.1	<0.02	<1	<0.1	2.8	<10	<2				
104539	Rock	0.3	0.03	0.05	10.0	0.2	<0.05	1.2	0.79	11.9	<0.02	4	<0.1	3.2	<10	<2				
104540	Rock	<0.1	0.05	0.03	9.7	0.1	<0.05	0.6	7.98	30.6	0.32	<1	0.2	14.1	12	<2				
104541	Rock	<0.1	0.05	<0.02	9.5	0.2	<0.05	1.1	3.16	13.8	0.41	3	0.4	11.4	<10	<2				
104542	Rock	0.1	0.04	0.12	7.8	0.4	<0.05	0.7	3.70	16.6	0.29	<1	<0.1	12.7	<10	<2				
104543	Rock	0.1	0.05	0.03	4.4	0.2	<0.05	1.2	6.09	26.4	<0.02	<1	0.4	10.7	<10	5				
104544	Rock	<0.1	<0.02	<0.02	14.7	<0.1	<0.05	0.9	1.70	9.8	0.09	<1	0.2	7.5	<10	<2				
104545	Rock	<0.1	0.04	0.16	12.3	0.4	<0.05	1.1	3.95	17.4	0.26	<1	0.1	8.8	<10	<2				
104546	Rock	<0.1	0.03	0.04	7.3	0.7	<0.05	0.7	4.34	20.0	0.65	<1	0.4	14.8	<10	<2	<0.001	1.216	5	

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Project: Coles Creek
Report Date: September 12, 2012

QUALITY CONTROL REPORT SMI12000265.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
Pulp Duplicates																					
103484	Rock	1.39	0.133	14.53	288.9	9881	156.2	39443	7.0	55.9	435	3.74	25.0	1.5	148.0	4.1	9.0	2.86	3.23	53.82	4
REP 103484	QC		0.133																		
104536	Rock	1.76	0.049	254.3	1295	1020	224.4	73765	5.3	9.4	211	1.92	35.4	2.1	49.3	4.1	13.5	8.34	3.73	193.5	5
REP 104536	QC			254.6	1292	1022	235.0	73436	5.2	9.6	215	1.93	36.8	2.1	57.8	4.3	13.6	8.35	4.18	200.3	5
104544	Rock	1.39	0.021	19.32	260.4	184.0	62.1	8686	3.7	10.0	228	1.52	14.8	4.0	45.4	5.2	4.3	0.84	4.85	1.36	5
REP 104544	QC			19.76	261.8	175.8	61.3	8700	3.8	10.3	222	1.53	14.6	3.8	47.3	4.9	4.8	0.87	4.91	1.34	5
104546	Rock	0.87	0.086	5.53	>10000	12.20	58.3	6362	21.2	66.4	358	4.90	<0.1	2.6	75.9	9.2	10.3	0.45	0.21	5.43	52
REP 104546	QC			5.57	>10000	13.16	61.8	6480	22.1	68.1	363	4.91	0.1	2.7	143.0	9.6	10.8	0.47	0.22	5.63	53
Core Reject Duplicates																					
103486	Rock	2.59	0.012	1.47	947.7	18.19	35.4	1294	16.2	12.9	391	3.01	1.9	2.2	5.9	10.1	24.0	0.16	0.10	2.33	58
DUP 103486	QC	<0.01	0.008	1.29	906.9	4.59	34.3	1150	14.4	12.2	389	2.95	1.9	2.1	6.1	9.6	23.8	0.12	0.08	1.68	57
Reference Materials																					
STD CCU-1C	Standard																				
STD CZN-3	Standard																				
STD DS9	Standard			13.16	113.2	124.7	311.5	1845	41.9	7.7	576	2.32	25.0	2.8	126.7	6.3	67.9	2.24	5.62	6.46	39
STD DS9	Standard			13.62	117.7	120.2	315.4	1916	41.2	8.0	585	2.34	25.8	2.6	129.1	6.2	68.5	2.36	5.44	6.47	39
STD DS9	Standard			13.56	106.7	125.2	305.1	1917	36.1	7.7	621	2.28	26.0	2.7	113.9	6.3	76.7	2.43	5.80	6.92	39
STD DS9	Standard			13.87	117.8	133.9	330.2	1961	41.9	7.8	568	2.37	26.7	3.0	135.7	6.9	82.6	2.54	6.11	7.16	39
STD GBM997-6	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard		0.916																		
STD OXG99	Standard		0.975																		
STD OXK94	Standard		3.414																		
STD OXK94	Standard		3.644																		
STD PTC-1A	Standard																				

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QUALITY CONTROL REPORT SMI12000265.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
	MDL	0.01	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
Pulp Duplicates																					
103484	Rock	0.14	0.042	8.9	8.4	0.22	34.7	0.001	2	0.51	<0.001	0.19	0.8	0.7	0.15	2.83	16	0.6	3.47	1.4	1.94
REP 103484	QC																				
104536	Rock	0.43	0.026	6.3	3.4	0.08	24.0	<0.001	<1	0.24	0.003	0.12	3.3	1.0	0.16	1.56	80	0.8	3.64	1.0	1.60
REP 104536	QC	0.40	0.026	6.5	3.9	0.08	26.5	<0.001	<1	0.24	0.003	0.12	3.2	0.7	0.18	1.57	78	1.2	3.83	0.9	1.80
104544	Rock	0.06	0.037	5.4	3.3	0.23	76.2	<0.001	1	0.49	0.001	0.17	0.3	0.6	0.11	0.20	36	0.3	0.33	1.3	2.71
REP 104544	QC	0.06	0.035	5.4	3.1	0.22	74.2	<0.001	2	0.48	0.001	0.17	0.4	0.6	0.11	0.20	40	0.2	0.39	1.3	2.67
104546	Rock	0.18	0.084	11.4	21.3	0.90	43.7	0.014	2	1.09	0.053	0.10	32.4	3.2	0.04	2.54	6	4.9	1.23	6.4	1.15
REP 104546	QC	0.19	0.082	11.9	21.4	0.90	45.5	0.014	1	1.10	0.055	0.10	34.9	3.2	0.04	2.53	<5	5.3	1.12	6.7	1.18
Core Reject Duplicates																					
103486	Rock	0.60	0.097	17.0	28.4	1.01	95.6	0.014	1	1.16	0.055	0.14	12.4	3.4	0.06	0.17	<5	0.3	0.04	7.3	1.71
DUP 103486	QC	0.62	0.102	16.2	27.1	1.01	89.7	0.013	<1	1.16	0.052	0.13	9.9	3.5	0.04	0.15	<5	<0.1	0.04	6.9	1.65
Reference Materials																					
STD CCU-1C	Standard																				
STD CZN-3	Standard																				
STD DS9	Standard	0.71	0.078	13.0	117.5	0.62	281.3	0.110	3	0.94	0.086	0.39	3.0	2.3	5.32	0.16	207	5.3	5.02	4.7	2.35
STD DS9	Standard	0.73	0.082	13.8	118.7	0.63	307.6	0.117	4	0.96	0.084	0.40	3.0	2.4	5.19	0.17	217	5.5	4.53	4.5	2.38
STD DS9	Standard	0.72	0.078	13.6	106.7	0.62	292.9	0.106	1	0.96	0.088	0.39	3.0	3.1	5.61	0.16	230	5.1	4.57	5.0	2.43
STD DS9	Standard	0.74	0.084	14.6	123.8	0.64	306.8	0.121	1	0.98	0.085	0.41	2.9	2.8	5.75	0.16	246	5.4	5.19	4.9	2.45
STD GBM997-6	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD PTC-1A	Standard																				

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 12, 2012

QUALITY CONTROL REPORT SMI12000265.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR	7AR	7AR.1
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Mo	Cu	Ag	Mo
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	%	%	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.001	0.001	2	0.001
Pulp Duplicates																				
103484	Rock	0.1	<0.02	<0.02	18.5	<0.1	<0.05	0.4	2.28	12.2	0.03	6	0.3	4.9	<10	<2				
REP 103484	QC																			
104536	Rock	<0.1	<0.02	<0.02	6.6	<0.1	<0.05	0.2	2.28	10.6	0.12	7	<0.1	2.2	*	<2				
REP 104536	QC	<0.1	<0.02	<0.02	7.3	<0.1	<0.05	0.3	2.38	11.0	0.08	6	<0.1	1.7	*	<2				
104544	Rock	<0.1	<0.02	<0.02	14.7	<0.1	<0.05	0.9	1.70	9.8	0.09	<1	0.2	7.5	<10	<2				
REP 104544	QC	<0.1	0.03	<0.02	14.3	<0.1	<0.05	0.9	1.80	10.0	0.11	<1	0.3	6.7	<10	<2				
104546	Rock	<0.1	0.03	0.04	7.3	0.7	<0.05	0.7	4.34	20.0	0.65	<1	0.4	14.8	<10	<2	<0.001	1.216	5	
REP 104546	QC	<0.1	0.04	0.04	7.5	0.7	<0.05	0.7	4.43	21.2	0.65	<1	0.3	15.1	<10	<2				
Core Reject Duplicates																				
103486	Rock	<0.1	0.05	0.03	10.2	0.1	<0.05	1.0	7.40	30.2	0.08	<1	0.2	13.9	<10	<2				
DUP 103486	QC	<0.1	0.03	0.03	9.6	<0.1	<0.05	1.0	7.27	29.9	0.08	<1	0.3	14.3	<10	<2				
Reference Materials																				
STD CCU-1C	Standard																			<0.001
STD CZN-3	Standard																			<0.001
STD DS9	Standard	0.1	0.04	1.47	33.4	6.3	<0.05	1.9	5.38	24.5	2.17	51	5.1	25.8	109	349				
STD DS9	Standard	0.1	0.07	1.40	33.9	6.6	<0.05	2.0	5.81	24.7	2.29	61	5.0	26.1	100	364				
STD DS9	Standard	0.2	0.09	1.31	34.3	7.3	<0.05	1.8	5.47	24.7	2.15	44	5.7	25.8	112	367				
STD DS9	Standard	0.1	0.11	1.41	34.3	7.0	<0.05	2.0	6.13	26.3	2.26	83	4.8	26.3	114	362				
STD GBM997-6	Standard																			<0.001
STD GC-7	Standard																0.009	0.552	>300	
STD GC-7	Standard																0.009	0.536	>300	
STD GC-7	Standard																0.012	0.551	>300	
STD GC-7	Standard																0.034	0.557	>300	
STD OXG99	Standard																			
STD OXG99	Standard																			
STD OXK94	Standard																			
STD OXK94	Standard																			
STD PTC-1A	Standard																			0.002

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 12, 2012

QUALITY CONTROL REPORT SMI12000265.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
STD OXK94 Expected			3.562																		
STD OXG99 Expected			0.932																		
STD GC-7 Expected																					
STD DS9 Expected				12.84	108	126	317	1830	40.3	7.6	575	2.33	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40
BLK	Blank		0.006																		
BLK	Blank		<0.005																		
BLK	Blank			0.10	0.56	<0.01	<0.1	5	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			<0.01	1.61	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			0.18	2.52	0.03	0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	<0.01	<0.005	0.11	3.06	2.85	49.9	9	2.2	3.8	597	1.93	0.3	1.5	1.7	6.2	64.3	0.04	0.04	0.08	36
G1-SMI	Prep Blank	<0.01	<0.005	0.11	3.52	2.45	45.7	5	2.7	3.6	599	1.73	0.3	1.3	1.7	4.4	54.3	0.02	<0.02	0.04	32

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 12, 2012

QUALITY CONTROL REPORT SMI12000265.1

		1F15 Ca % 0.01	1F15 P % 0.001	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg % 0.01	1F15 Ba ppm 0.5	1F15 Ti % 0.001	1F15 B ppm 1	1F15 Al % 0.01	1F15 Na % 0.001	1F15 K % 0.01	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S % 0.02	1F15 Hg ppb 5	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
STD OXK94 Expected																					
STD OXG99 Expected																					
STD GC-7 Expected																					
STD DS9 Expected		0.7201	0.0819	13.3	121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	2.5	5.3	0.1615	200	5.2	5.02	4.59	2.37
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.01	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.01	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.01	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	0.2	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	0.50	0.072	13.0	8.0	0.51	159.2	0.099	2	0.96	0.093	0.46	<0.1	3.2	0.32	<0.02	<5	<0.1	<0.02	5.2	2.77
G1-SMI	Prep Blank	0.42	0.069	10.4	4.6	0.49	134.8	0.089	3	0.79	0.079	0.45	<0.1	2.7	0.31	<0.02	<5	<0.1	<0.02	4.5	2.52

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 12, 2012

QUALITY CONTROL REPORT SMI12000265.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppb 1	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppb 10	1F15 Pt ppb 2	7AR Mo % 0.001	7AR Cu % 0.001	7AR Ag gm/t 2	7AR.1 Mo % 0.001
STD OXK94 Expected																				
STD OXG99 Expected																				
STD GC-7 Expected																	0.011	0.555	619	
STD DS9 Expected		0.1	0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	61	5.4	25.2	120	350				
BLK	Blank																			
BLK	Blank																			
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2				
BLK	Blank																			
BLK	Blank																			
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2				
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	3	<0.1	<0.1	<10	<2				
BLK	Blank																<0.001	<0.001	<2	
BLK	Blank																<0.001	<0.001	<2	
BLK	Blank																			<0.001
Prep Wash																				
G1-SMI	Prep Blank	0.1	0.10	0.41	40.9	0.5	<0.05	0.8	4.43	22.6	0.06	<1	0.2	28.9	<10	<2				
G1-SMI	Prep Blank	<0.1	0.06	0.51	42.2	0.3	<0.05	0.7	3.38	18.1	<0.02	2	0.2	26.6	<10	<2				

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By:	Email Distribution List
Receiving Lab:	Canada-Smithers
Received:	August 31, 2012
Report Date:	September 27, 2012
Page:	1 of 3

CERTIFICATE OF ANALYSIS SMI12000332.1

CLIENT JOB INFORMATION

Project:	Coles Creek
Shipment ID:	TRP-12-003
P.O. Number	
Number of Samples:	31

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	31	Crush, split and pulverize 250 g rock to 200 mesh			SMI
G601	31	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
1F05	31	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
G6Gr	1	Lead collection fire assay 30G fusion - Grav finish	30	Completed	VAN
7AR	5	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Project: Coles Creek
Report Date: September 27, 2012

CERTIFICATE OF ANALYSIS SMI12000332.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	%	%	%	gm/t	ppm	ppm	%	%	ppm	ppm	gm/t	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	1e-006	1e-006	1e-005	0.002	0.1	0.1	0.0001	0.01	0.1	0.1	0.0002	0.1	0.5	0.01	0.02	0.02	2
G1-SMI	Prep Blank	<0.01	<0.005	0.07	0.0002	0.0003	0.0045	0.015	2.7	4.3	0.0566	1.89	0.2	1.7	0.0013	5.5	64.2	0.02	0.04	0.12	35
G1-SMI	Prep Blank	<0.01	<0.005	0.10	0.0003	0.0003	0.0044	0.011	2.7	4.1	0.0562	1.96	<0.1	1.8	0.0009	6.2	64.1	0.02	0.06	0.04	36
103492	Rock	1.08	>10	19.14	>1	0.4065	0.4709	>100	9.2	74.7	0.1058	6.49	1601	4.2	24.24	3.4	36.0	242.0	>2000	>2000	10
103493	Rock	1.07	0.213	24.79	0.5934	0.0102	0.0087	7.373	11.8	11.8	0.0375	4.01	3.0	4.6	0.1944	10.6	31.2	1.55	2.07	58.25	33
103494	Rock	0.95	0.376	>2000	>1	0.0162	0.0031	42.20	42.2	102.4	0.0718	15.45	94.5	7.7	0.3474	1.6	47.5	<0.01	25.66	34.57	6
103495	Rock	0.91	0.064	>2000	0.0059	0.0061	0.0067	3.189	24.3	816.2	0.0224	13.53	131.9	14.2	0.0591	5.5	4.5	<0.01	1.77	10.33	9
103496	Rock	1.24	0.006	267.3	0.3061	0.0010	0.0031	3.889	21.0	51.2	0.0361	2.85	1.7	4.7	0.0120	10.2	12.6	<0.01	2.45	37.44	54
103530	Rock	1.51	<0.005	7.15	0.0073	0.0003	0.0038	0.082	15.9	12.3	0.0525	2.78	0.7	1.8	0.0007	11.2	6.7	0.12	0.18	1.31	44
103531	Rock	1.43	<0.005	2.07	0.0010	0.0002	0.0076	0.065	56.1	8.0	0.0943	4.18	2.4	0.4	0.0008	2.5	62.6	0.01	0.61	0.51	122
103532	Rock	0.76	<0.005	61.08	0.0003	0.0016	0.0006	0.139	0.4	0.4	0.0040	0.43	7.9	0.5	0.0044	4.2	1.2	0.14	0.69	1.17	<2
103533	Rock	1.48	<0.005	1.38	0.0040	0.0014	0.0023	0.216	0.9	1.6	0.0364	2.74	13.0	1.3	0.0021	6.5	6.8	0.05	0.74	0.48	10
104455	Rock	1.07	<0.005	7.35	0.0031	0.0038	0.0034	4.828	3.2	10.2	0.0025	3.63	4.7	0.7	0.0179	1.2	4.4	0.57	3.98	14.55	5
104547	Rock	1.66	5.046	96.50	>1	0.0345	0.1745	>100	8.9	69.3	0.2680	8.25	716.8	6.0	3.801	4.3	17.4	88.79	>2000	85.71	9
104548	Rock	1.99	0.865	224.7	0.0789	0.0381	0.0058	88.07	14.7	63.5	0.0567	13.63	71.5	2.7	0.9358	1.9	18.7	1.41	3.40	95.02	7
104549	Rock	1.29	0.008	322.8	0.0031	0.0029	0.0075	4.576	2.7	4.5	0.0272	2.65	6.9	3.9	0.0147	9.0	6.4	0.63	8.08	2.23	15
104550	Rock	0.87	0.030	171.8	0.0010	0.0020	0.0023	5.916	7.9	2.1	0.0051	1.51	112.7	0.1	0.0456	1.6	2.3	0.16	4.49	0.54	8
1128851	Rock	0.74	<0.005	24.62	0.0006	0.0007	0.0045	0.720	22.1	10.2	0.1883	4.66	45.0	<0.1	0.0043	0.3	373.7	0.15	1.43	0.06	70
1128852	Rock	1.06	<0.005	1.42	0.0333	0.0018	0.5636	1.542	77.2	46.5	0.1234	11.95	144.3	0.3	0.0002	2.1	39.6	56.66	1.48	0.26	50
1128853	Rock	1.52	0.320	46.82	>1	0.0367	0.0708	81.57	87.4	36.3	0.0470	7.56	266.2	6.1	0.1851	2.4	9.3	2.95	4.92	6.69	76
1128854	Rock	1.91	0.011	51.37	0.3250	0.0012	0.0063	4.448	26.2	15.8	0.0798	2.41	7.5	11.5	0.0251	7.0	27.3	0.26	1.51	1.74	30
1128855	Rock	0.95	0.018	98.11	0.3598	0.0008	0.0020	4.007	10.2	7.2	0.0873	1.63	7.7	2.1	0.0202	1.2	49.7	0.18	1.25	1.05	6
1128856	Rock	0.95	0.008	265.6	0.2525	0.0007	0.0019	2.741	11.3	7.7	0.0323	1.46	5.5	2.4	0.0148	3.2	13.7	<0.01	1.66	3.01	10
1128857	Rock	0.85	<0.005	4.36	0.0241	0.0004	0.0031	0.231	72.3	25.0	0.0214	6.04	0.7	7.6	0.0046	2.0	19.1	0.03	0.18	2.19	205
1128858	Rock	0.80	0.040	5.07	0.3775	0.0003	0.0044	7.204	13.8	7.9	0.0327	2.73	0.7	3.7	0.0448	11.0	9.5	0.06	1.47	1.16	54
1128859	Rock	1.24	0.005	2.82	0.1520	0.0004	0.0033	2.200	12.3	9.5	0.0300	2.06	0.7	4.4	0.0158	6.2	12.6	0.10	0.20	0.68	45
1128901	Rock	1.38	<0.005	3.50	0.0163	0.0096	0.0147	1.002	7.5	8.2	0.0610	2.44	1.1	3.2	0.0014	4.8	11.7	1.39	0.38	2.65	16
1128902	Rock	2.42	<0.005	1.13	0.0795	0.0012	0.0027	1.147	12.2	8.8	0.0341	4.67	1.0	2.2	0.0019	6.7	6.3	0.04	0.37	425.8	73
1128903	Rock	1.91	<0.005	4.14	0.0027	0.0009	0.0039	0.288	19.1	8.7	0.0246	6.46	10.2	2.0	0.0051	2.3	18.4	0.02	0.27	5.46	80
1128904	Rock	1.91	0.014	54.03	0.0034	0.0012	0.0024	1.572	4.7	1.7	0.0088	1.07	45.1	0.9	0.0190	1.0	2.8	<0.01	1.61	1.93	24
1128905	Rock	1.54	0.011	3.25	0.0208	0.0018	0.0003	2.461	1.2	2.5	0.0043	2.30	1.0	0.7	0.0216	1.3	7.2	0.02	0.19	90.72	6

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 27, 2012

CERTIFICATE OF ANALYSIS SMI12000332.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
	MDL	0.01	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
G1-SMI	Prep Blank	0.52	0.078	12.0	8.5	0.52	163.1	0.119	1	0.87	0.080	0.46	0.3	2.4	0.34	<0.02	9	<0.1	0.07	4.5	2.98
G1-SMI	Prep Blank	0.49	0.081	12.9	8.1	0.49	162.6	0.118	<1	0.93	0.097	0.48	<0.1	2.5	0.31	<0.02	6	<0.1	0.03	4.6	2.88
103492	Rock	0.59	0.023	<0.5	11.4	0.21	14.9	<0.001	1	0.38	0.004	0.11	16.2	0.9	0.16	6.44	2065	2.9	7.01	1.3	2.12
103493	Rock	0.66	0.083	11.2	16.6	0.62	46.5	0.002	1	0.92	0.025	0.19	1.1	2.5	0.10	2.16	13	0.4	0.62	3.6	3.10
103494	Rock	1.74	0.013	9.0	5.4	0.10	8.1	<0.001	<1	0.16	0.002	0.06	10.4	0.5	0.57	>10	66	22.2	4.71	0.8	0.76
103495	Rock	0.13	0.050	5.3	8.3	0.29	6.7	0.001	<1	0.38	0.012	0.11	1.3	0.8	0.12	>10	45	9.4	2.00	1.4	0.57
103496	Rock	0.39	0.103	17.9	29.9	0.79	28.7	0.121	<1	0.84	0.062	0.08	4.5	3.5	<0.02	0.48	<5	0.8	0.60	5.3	0.47
103530	Rock	0.18	0.091	23.6	23.4	0.74	50.6	0.002	<1	1.35	0.036	0.20	0.1	2.9	0.10	<0.02	<5	<0.1	0.05	5.0	2.59
103531	Rock	2.27	0.160	21.9	101.2	2.24	45.5	0.012	1	2.04	0.052	0.04	0.1	11.6	<0.02	<0.02	<5	<0.1	0.04	11.7	0.39
103532	Rock	0.01	0.004	12.6	2.7	0.01	56.9	<0.001	<1	0.29	0.002	0.21	0.2	0.2	0.09	<0.02	5	<0.1	0.18	0.7	2.78
103533	Rock	0.07	0.007	0.9	3.0	0.75	23.1	0.008	<1	0.87	0.055	0.08	<0.1	0.7	0.06	0.37	<5	0.2	0.26	4.6	1.64
104455	Rock	0.01	0.016	3.1	3.7	0.02	67.6	0.001	<1	0.34	0.007	0.24	6.7	0.3	0.07	1.93	16	1.9	2.76	0.7	0.34
104547	Rock	0.21	0.031	4.1	8.3	0.18	9.5	<0.001	2	0.36	0.005	0.14	49.3	0.9	0.11	7.19	3045	3.2	8.43	1.3	1.92
104548	Rock	0.37	0.016	2.4	9.0	0.18	8.5	<0.001	<1	0.30	0.002	0.10	5.9	0.5	0.08	>10	25	7.3	39.25	1.1	1.04
104549	Rock	0.23	0.091	51.5	2.4	0.05	71.3	0.001	<1	0.35	0.059	0.09	0.2	2.7	0.17	1.37	18	<0.1	0.45	1.0	0.47
104550	Rock	<0.01	0.011	6.7	14.1	0.02	29.4	<0.001	<1	0.27	0.002	0.19	0.3	0.7	0.40	0.63	86	0.2	0.72	1.2	3.25
1128851	Rock	10.70	0.055	6.4	23.1	4.43	28.1	<0.001	2	2.60	0.005	0.04	<0.1	5.0	0.08	1.36	126	<0.1	0.04	6.3	0.50
1128852	Rock	6.18	0.131	17.2	21.1	1.22	12.0	0.001	2	2.57	0.020	0.11	<0.1	7.2	0.30	8.42	30	4.6	0.27	7.0	1.65
1128853	Rock	0.29	0.112	5.1	46.0	1.48	13.0	0.064	<1	2.07	0.045	0.08	0.7	7.4	0.07	1.62	22	4.3	1.23	8.2	0.85
1128854	Rock	1.36	0.098	18.5	20.1	0.95	58.1	0.001	<1	1.24	0.017	0.19	0.3	3.7	0.13	0.53	21	0.8	0.17	5.6	4.42
1128855	Rock	1.79	0.015	7.0	12.0	0.14	18.4	<0.001	<1	0.17	0.001	0.05	0.6	0.6	0.05	0.71	26	0.7	0.22	0.8	0.92
1128856	Rock	0.30	0.032	8.9	12.4	0.26	56.7	<0.001	<1	0.44	0.007	0.11	1.1	0.7	0.06	0.54	6	0.6	0.24	1.8	1.76
1128857	Rock	0.32	0.136	9.4	219.8	3.57	36.6	0.247	<1	2.12	0.052	1.24	0.1	15.2	0.64	5.22	8	4.7	0.41	15.1	9.64
1128858	Rock	0.29	0.092	11.1	26.3	0.91	47.7	0.096	<1	0.94	0.047	0.12	84.0	4.3	0.05	0.28	<5	1.8	0.33	6.1	0.51
1128859	Rock	0.21	0.036	8.2	26.5	0.71	46.5	0.120	<1	0.92	0.070	0.13	0.3	3.3	0.03	0.04	<5	0.3	<0.02	5.2	0.50
1128901	Rock	0.28	0.074	17.6	6.5	0.73	57.0	0.002	1	1.25	0.021	0.25	0.1	1.7	0.16	0.04	20	<0.1	0.23	3.2	1.66
1128902	Rock	0.22	0.093	9.4	26.8	0.83	64.7	0.061	1	1.45	0.028	0.57	7.7	3.7	0.52	0.08	<5	<0.1	0.83	6.5	2.49
1128903	Rock	0.03	0.152	4.6	91.5	1.45	60.3	0.054	<1	1.22	0.055	0.15	0.1	4.5	0.06	1.93	<5	2.9	2.80	7.8	1.35
1128904	Rock	0.04	0.011	3.5	14.6	0.56	26.7	<0.001	<1	0.72	<0.001	0.06	0.1	0.5	0.05	0.04	8	<0.1	0.39	2.7	1.27
1128905	Rock	<0.01	0.012	10.7	5.8	0.03	285.0	0.001	<1	0.36	0.006	0.28	31.1	0.6	0.18	0.22	17	0.8	1.67	1.1	0.94

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Project: Coles Creek
Report Date: September 27, 2012

CERTIFICATE OF ANALYSIS SMI12000332.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Au	Mo	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	gm/t	%	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.9	0.001	0.001	2
G1-SMI	Prep Blank	0.1	0.08	0.52	43.0	0.6	<0.05	1.1	4.79	21.4	0.05	<1	0.3	31.3	<10	<2				
G1-SMI	Prep Blank	0.1	0.10	0.49	40.5	0.4	<0.05	1.1	5.12	23.2	<0.02	<1	0.3	31.8	<10	<2				
103492	Rock	<0.1	0.03	0.02	10.4	0.1	<0.05	0.5	2.89	7.9	0.57	<1	0.1	5.2	<10	<2	19.4	0.002	2.429	>300
103493	Rock	<0.1	0.03	0.02	14.2	0.3	<0.05	0.8	6.58	23.2	0.58	2	0.4	12.6	<10	<2				
103494	Rock	<0.1	<0.02	0.07	4.4	1.8	<0.05	0.5	11.97	15.1	0.91	102	0.2	2.6	*	<2		0.285	2.394	44
103495	Rock	<0.1	0.03	0.09	6.8	<0.1	<0.05	0.8	2.87	8.8	<0.02	>1000	0.2	6.6	*	<2		0.385	0.008	3
103496	Rock	0.1	0.13	0.40	4.8	0.6	<0.05	2.2	7.05	36.7	0.18	47	0.2	9.6	*	<2				
103530	Rock	<0.1	0.04	0.02	11.6	0.1	<0.05	1.1	8.06	40.3	<0.02	1	0.5	16.8	<10	<2				
103531	Rock	<0.1	0.08	0.02	2.2	0.5	<0.05	2.5	10.31	43.0	0.06	1	0.5	33.5	<10	<2				
103532	Rock	<0.1	<0.02	0.03	7.2	<0.1	<0.05	0.6	1.77	21.4	<0.02	<1	<0.1	0.5	<10	<2				
103533	Rock	<0.1	0.06	0.16	5.9	<0.1	<0.05	0.9	1.20	1.7	0.04	2	0.3	26.1	<10	<2				
104455	Rock	<0.1	0.07	0.02	10.8	0.3	<0.05	2.1	0.33	5.8	<0.02	<1	0.2	0.4	<10	<2				
104547	Rock	<0.1	0.04	0.04	13.2	0.3	<0.05	0.7	3.51	11.2	1.13	<1	0.3	4.8	<10	<2		0.012	2.083	>300
104548	Rock	<0.1	<0.02	0.05	9.0	<0.1	<0.05	0.4	2.24	4.5	0.11	3	0.2	4.5	*	2				
104549	Rock	<0.1	0.25	0.03	5.0	0.2	<0.05	8.4	20.73	99.2	0.08	9	0.5	1.4	<10	<2				
104550	Rock	<0.1	<0.02	<0.02	12.9	0.1	<0.05	0.7	2.12	14.1	<0.02	<1	0.1	1.1	<10	<2				
1128851	Rock	<0.1	<0.02	<0.02	2.2	0.1	<0.05	0.3	13.07	14.0	<0.02	<1	0.5	76.6	<10	<2				
1128852	Rock	<0.1	<0.02	<0.02	5.6	<0.1	<0.05	0.5	17.85	37.3	1.78	2	0.1	46.5	<10	<2				
1128853	Rock	0.1	0.20	0.14	7.9	1.9	<0.05	5.5	4.55	11.5	3.08	<1	0.3	29.5	<10	<2		0.004	1.863	80
1128854	Rock	<0.1	0.06	<0.02	14.6	<0.1	<0.05	3.0	13.31	35.0	0.13	3	0.3	16.7	<10	<2				
1128855	Rock	<0.1	<0.02	0.03	4.0	<0.1	<0.05	0.2	4.71	11.9	0.16	11	<0.1	3.4	15	<2				
1128856	Rock	<0.1	<0.02	<0.02	7.4	<0.1	<0.05	0.3	3.17	15.5	0.09	58	0.3	7.8	*	<2				
1128857	Rock	0.2	0.07	0.10	125.0	0.5	<0.05	1.5	5.03	15.8	<0.02	<1	0.2	26.0	<10	<2				
1128858	Rock	<0.1	0.06	0.21	9.7	0.3	<0.05	0.9	4.13	20.6	0.43	1	0.2	12.1	<10	<2				
1128859	Rock	<0.1	0.03	0.17	6.2	<0.1	<0.05	0.5	3.12	13.7	0.16	2	0.2	10.9	<10	<2				
1128901	Rock	<0.1	0.18	<0.02	20.2	<0.1	<0.05	7.9	4.04	31.7	<0.02	2	0.2	13.7	<10	<2				
1128902	Rock	<0.1	0.07	0.11	56.3	1.1	<0.05	1.0	4.29	24.5	0.10	<1	0.4	11.2	<10	<2				
1128903	Rock	<0.1	0.08	0.15	8.5	0.1	<0.05	3.5	3.00	10.5	0.02	<1	<0.1	13.1	<10	<2				
1128904	Rock	<0.1	<0.02	<0.02	3.5	<0.1	<0.05	0.4	1.43	7.5	<0.02	<1	0.2	12.7	<10	<2				
1128905	Rock	<0.1	<0.02	<0.02	23.0	0.5	<0.05	1.1	0.73	18.2	0.05	<1	0.2	0.5	<10	<2				

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Project: Coles Creek
Report Date: September 27, 2012

CERTIFICATE OF ANALYSIS SMI12000332.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	%	%	%	gm/t	ppm	ppm	%	%	ppm	ppm	gm/t	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	1e-006	1e-006	1e-005	0.002	0.1	0.1	0.0001	0.01	0.1	0.1	0.0002	0.1	0.5	0.01	0.02	0.02	2
1128906	Rock	2.10	<0.005	0.49	0.0287	0.0013	0.0047	0.266	20.1	5.6	0.0274	4.42	3.4	1.9	0.0038	7.3	14.8	0.96	0.18	1.83	85
1128907	Rock	1.27	0.041	51.46	0.1243	0.0009	0.0049	0.847	13.3	8.6	0.0315	2.97	4.0	3.5	0.0305	9.2	20.5	0.09	0.17	1.17	71
1128908	Rock	0.79	<0.005	423.9	0.4977	0.0054	0.0133	26.22	16.3	38.5	0.0578	4.23	16.1	4.0	0.0061	10.7	7.3	0.90	0.61	1.86	29

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Project: Coles Creek
Report Date: September 27, 2012

CERTIFICATE OF ANALYSIS SMI12000332.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
	MDL	0.01	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
1128906	Rock	0.28	0.107	11.0	32.0	1.14	37.3	0.079	<1	1.14	0.087	0.36	0.3	6.2	0.27	<0.02	<5	<0.1	0.15	6.6	4.67
1128907	Rock	0.39	0.082	30.5	24.2	0.85	84.7	0.092	1	1.07	0.063	0.33	0.2	3.8	0.14	0.19	<5	<0.1	0.17	6.6	3.40
1128908	Rock	0.20	0.074	5.5	12.7	0.91	100.7	0.003	<1	1.70	0.016	0.23	>100	2.5	0.11	0.78	*	0.7	0.06	6.5	1.44

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: September 27, 2012

CERTIFICATE OF ANALYSIS SMI12000332.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Au	Mo	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	gm/t	%	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.9	0.001	0.001	2
1128906	Rock	0.1	0.32	0.05	44.0	0.8	<0.05	9.2	5.82	28.8	0.03	<1	0.3	11.1	<10	<2				
1128907	Rock	<0.1	<0.02	0.26	30.6	0.3	<0.05	0.5	8.23	47.9	0.18	5	0.1	17.3	<10	<2				
1128908	Rock	<0.1	<0.02	0.02	15.0	0.1	<0.05	0.5	2.98	11.9	0.75	40	0.4	28.4	*	<2				

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QUALITY CONTROL REPORT SMI12000332.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	%	%	%	gm/t	ppm	ppm	%	%	ppm	ppm	gm/t	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	1e-006	1e-006	1e-005	0.002	0.1	0.1	0.0001	0.01	0.1	0.1	0.0002	0.1	0.5	0.01	0.02	0.02	2
Pulp Duplicates																					
103493	Rock	1.07	0.213	24.79	0.5934	0.0102	0.0087	7.373	11.8	11.8	0.0375	4.01	3.0	4.6	0.1944	10.6	31.2	1.55	2.07	58.25	33
REP 103493	QC		0.181																		
1128853	Rock	1.52	0.320	46.82	>1	0.0367	0.0708	81.57	87.4	36.3	0.0470	7.56	266.2	6.1	0.1851	2.4	9.3	2.95	4.92	6.69	76
REP 1128853	QC																				
1128857	Rock	0.85	<0.005	4.36	0.0241	0.0004	0.0031	0.231	72.3	25.0	0.0214	6.04	0.7	7.6	0.0046	2.0	19.1	0.03	0.18	2.19	205
REP 1128857	QC			4.82	0.0231	0.0004	0.0029	0.220	71.4	23.8	0.0210	5.89	0.7	7.3	0.0059	1.9	18.5	0.02	0.16	2.10	200
Core Reject Duplicates																					
104549	Rock	1.29	0.008	322.8	0.0031	0.0029	0.0075	4.576	2.7	4.5	0.0272	2.65	6.9	3.9	0.0147	9.0	6.4	0.63	8.08	2.23	15
DUP 104549	QC	<0.01	0.006	334.8	0.0010	0.0031	0.0078	4.335	2.6	4.5	0.0272	2.76	6.5	4.1	0.0131	9.1	7.7	0.48	1.98	2.35	15
Reference Materials																					
STD AGPROOF	Standard																				
STD DS9	Standard			13.77	0.0113	0.0120	0.0318	1.764	43.5	8.1	0.0597	2.32	25.1	3.0	0.1204	6.6	71.3	2.29	6.03	5.92	40
STD DS9	Standard			12.79	0.0108	0.0125	0.0311	1.915	40.3	7.6	0.0584	2.33	25.3	2.7	0.1182	6.4	70.1	2.38	5.74	6.68	40
STD GC-7	Standard																				
STD OREAS133B	Standard																				
STD OXG99	Standard		0.965																		
STD OXG99	Standard		0.953																		
STD OXK94	Standard		3.835																		
STD OXK94	Standard		3.703																		
STD SP49	Standard																				
STD OXG99 Expected			0.932																		
STD OXK94 Expected			3.562																		
STD SP49 Expected																					
STD AGPROOF Expected																					
STD DS9 Expected				12.84	0.0108	0.0126	0.0317	1.83	40.3	7.6	0.0575	2.33	25.5	2.69	0.118	6.38	69.6	2.4	4.94	6.32	40
STD GC-7 Expected																					
STD OREAS133B Expected																					
BLK	Blank		<0.005																		

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Suite 1110 - 555 W. Hastings St.
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Project: Coles Creek
Report Date: September 27, 2012

QUALITY CONTROL REPORT SMI12000332.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
	MDL	0.01	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
Pulp Duplicates																					
103493	Rock	0.66	0.083	11.2	16.6	0.62	46.5	0.002	1	0.92	0.025	0.19	1.1	2.5	0.10	2.16	13	0.4	0.62	3.6	3.10
REP 103493	QC																				
1128853	Rock	0.29	0.112	5.1	46.0	1.48	13.0	0.064	<1	2.07	0.045	0.08	0.7	7.4	0.07	1.62	22	4.3	1.23	8.2	0.85
REP 1128853	QC																				
1128857	Rock	0.32	0.136	9.4	219.8	3.57	36.6	0.247	<1	2.12	0.052	1.24	0.1	15.2	0.64	5.22	8	4.7	0.41	15.1	9.64
REP 1128857	QC	0.31	0.135	9.6	205.8	3.44	37.6	0.237	<1	2.05	0.052	1.21	0.1	14.9	0.61	5.11	9	4.7	0.40	14.2	9.23
Core Reject Duplicates																					
104549	Rock	0.23	0.091	51.5	2.4	0.05	71.3	0.001	<1	0.35	0.059	0.09	0.2	2.7	0.17	1.37	18	<0.1	0.45	1.0	0.47
DUP 104549	QC	0.24	0.089	53.0	2.5	0.05	78.8	0.002	<1	0.43	0.074	0.10	0.1	2.9	0.20	1.42	<5	<0.1	0.55	1.3	0.49
Reference Materials																					
STD AGPROOF	Standard																				
STD DS9	Standard	0.71	0.081	13.8	117.8	0.62	282.5	0.117	3	0.93	0.082	0.39	2.9	2.5	5.39	0.16	190	5.6	5.32	4.3	2.39
STD DS9	Standard	0.73	0.085	13.4	112.1	0.62	319.4	0.109	3	0.96	0.085	0.40	3.1	2.6	5.66	0.17	196	5.2	5.15	4.6	2.47
STD GC-7	Standard																				
STD OREAS133B	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD SP49	Standard																				
STD OXG99 Expected																					
STD OXK94 Expected																					
STD SP49 Expected																					
STD AGPROOF Expected																					
STD DS9 Expected		0.7201	0.0819	13.3	121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	2.5	5.3	0.1615	200	5.2	5.02	4.59	2.37
STD GC-7 Expected																					
STD OREAS133B Expected																					
BLK	Blank																				

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Project: Coles Creek
Report Date: September 27, 2012

QUALITY CONTROL REPORT SMI12000332.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Au	Mo	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	gm/t	%	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.9	0.001	0.001	2
Pulp Duplicates																				
103493	Rock	<0.1	0.03	0.02	14.2	0.3	<0.05	0.8	6.58	23.2	0.58	2	0.4	12.6	<10	<2				
REP 103493	QC																			
1128853	Rock	0.1	0.20	0.14	7.9	1.9	<0.05	5.5	4.55	11.5	3.08	<1	0.3	29.5	<10	<2		0.004	1.863	80
REP 1128853	QC																	0.004	1.880	80
1128857	Rock	0.2	0.07	0.10	125.0	0.5	<0.05	1.5	5.03	15.8	<0.02	<1	0.2	26.0	<10	<2				
REP 1128857	QC	0.1	0.07	0.10	116.4	0.5	<0.05	1.4	4.66	15.3	0.02	<1	0.3	25.9	<10	<2				
Core Reject Duplicates																				
104549	Rock	<0.1	0.25	0.03	5.0	0.2	<0.05	8.4	20.73	99.2	0.08	9	0.5	1.4	<10	<2				
DUP 104549	QC	<0.1	0.26	<0.02	5.6	0.2	<0.05	9.3	21.33	102.3	0.06	6	0.4	1.6	<10	<2				
Reference Materials																				
STD AGPROOF	Standard																<0.9			
STD DS9	Standard	<0.1	0.07	1.51	34.3	6.6	<0.05	2.0	5.75	25.7	2.38	59	5.6	24.5	120	346				
STD DS9	Standard	<0.1	0.11	1.57	34.1	6.4	<0.05	1.9	5.96	26.5	2.24	60	5.4	25.1	117	367				
STD GC-7	Standard																	0.011	0.554	>300
STD OREAS133B	Standard																	<0.001	0.031	107
STD OXG99	Standard																			
STD OXG99	Standard																			
STD OXK94	Standard																			
STD OXK94	Standard																			
STD SP49	Standard																18.0			
STD OXG99 Expected																				
STD OXK94 Expected																				
STD SP49 Expected																	18.34			
STD AGPROOF Expected																	0			
STD DS9 Expected		0.1	0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	61	5.4	25.2	120	350				
STD GC-7 Expected																		0.011	0.555	619
STD OREAS133B Expected																			0.0332	100
BLK	Blank																			

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Project: Coles Creek
Report Date: September 27, 2012

QUALITY CONTROL REPORT SMI12000332.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	%	%	%	gm/t	ppm	ppm	%	%	ppm	ppm	gm/t	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	1e-006	1e-006	1e-005	0.002	0.1	0.1	0.0001	0.01	0.1	0.1	0.0002	0.1	0.5	0.01	0.02	0.02	2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			<0.01	0.0000	<1e-006	<1e-005	<0.002	0.1	<0.1	<0.0001	<0.01	<0.1	<0.1	<0.0002	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
BLK	Blank																				
BLK	Blank			0.14	<1e-006	0.0000	<1e-005	0.009	<0.1	<0.1	<0.0001	<0.01	0.2	<0.1	<0.0002	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	<0.01	<0.005	0.07	0.0002	0.0003	0.0045	0.015	2.7	4.3	0.0566	1.89	0.2	1.7	0.0013	5.5	64.2	0.02	0.04	0.12	35
G1-SMI	Prep Blank	<0.01	<0.005	0.10	0.0003	0.0003	0.0044	0.011	2.7	4.1	0.0562	1.96	<0.1	1.8	0.0009	6.2	64.1	0.02	0.06	0.04	36

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QUALITY CONTROL REPORT SMI12000332.1

		1F15 Ca % 0.01	1F15 P % 0.001	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg % 0.01	1F15 Ba ppm 0.5	1F15 Ti % 0.001	1F15 B ppm 1	1F15 Al % 0.01	1F15 Na % 0.001	1F15 K % 0.01	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S % 0.02	1F15 Hg ppb 5	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.01	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.01	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	6	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	0.52	0.078	12.0	8.5	0.52	163.1	0.119	1	0.87	0.080	0.46	0.3	2.4	0.34	<0.02	9	<0.1	0.07	4.5	2.98
G1-SMI	Prep Blank	0.49	0.081	12.9	8.1	0.49	162.6	0.118	<1	0.93	0.097	0.48	<0.1	2.5	0.31	<0.02	6	<0.1	0.03	4.6	2.88

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QUALITY CONTROL REPORT SMI12000332.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppb 1	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppb 10	1F15 Pt ppb 2	G6Gr Au gm/t 0.9	7AR Mo % 0.001	7AR Cu % 0.001	7AR Ag gm/t 2
BLK	Blank																			
BLK	Blank																			
BLK	Blank																			
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2				
BLK	Blank																<0.9			
BLK	Blank																<0.9			
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2				
BLK	Blank																	<0.001	0.002	<2
Prep Wash																				
G1-SMI	Prep Blank	0.1	0.08	0.52	43.0	0.6	<0.05	1.1	4.79	21.4	0.05	<1	0.3	31.3	<10	<2				
G1-SMI	Prep Blank	0.1	0.10	0.49	40.5	0.4	<0.05	1.1	5.12	23.2	<0.02	<1	0.3	31.8	<10	<2				

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By:	Email Distribution List
Receiving Lab:	Canada-Smithers
Received:	August 31, 2012
Report Date:	October 01, 2012
Page:	1 of 2

CERTIFICATE OF ANALYSIS SMI12000333.1

CLIENT JOB INFORMATION

Project:	Coles Creek
Shipment ID:	TRP-12-003
P.O. Number	
Number of Samples:	3

SAMPLE DISPOSAL

DISP-PLP	Dispose of Pulp After 90 days
DISP-RJT-SOIL	Immediate Disposal of Soil Reject

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	5	Dry at 60C			SMI
SS80	5	Dry at 60C sieve 100g to -80 mesh			SMI
Soil Pulverize	5	Soil Pulverize			VAN
G601	3	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
1F05	3	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Acme Analytical Laboratories (Vancouver) Ltd.
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Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Coles Creek
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000333.1

	Method	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01
1128860	Silt	0.005	0.97	12.45	8.07	49.6	103	10.5	6.1	368	34563	2.6	1.3	0.6	3.6	32.3	0.13	0.22	0.14	80	>40
1128861	Silt	0.010	1.26	14.80	6.65	46.9	88	8.7	5.4	374	35390	1.7	1.6	1.2	4.3	31.3	0.10	0.17	0.16	76	>40
1128862	Silt	0.012	24.74	64.56	49.67	194.0	1025	62.5	31.9	1595	45756	174.2	1.8	9.7	3.8	16.4	0.96	4.25	0.41	52	>40

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CERTIFICATE OF ANALYSIS SMI12000333.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02	0.1
1128860	Silt	790	14.4	16.9	4717	55.1	476	<1	7542	197	496	<0.1	2.2	<0.02	<200	<0.005	<0.1	0.03	4.0	0.86	0.1
1128861	Silt	741	15.3	15.9	4123	53.4	489	2	6171	196	462	<0.1	1.8	<0.02	<200	0.008	<0.1	<0.02	3.3	0.68	<0.1
1128862	Silt	680	13.9	31.3	4914	135.7	87	<1	13490	<10	1099	0.2	4.9	0.41	306	0.049	0.4	0.15	4.3	7.93	0.1

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CERTIFICATE OF ANALYSIS SMI12000333.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002
1128860	Silt	<0.02	0.21	2.9	0.4	<0.05	0.9	9.16	32.7	0.02	<0.001	0.4	10.0	<0.01	<0.002
1128861	Silt	0.06	0.32	2.8	0.4	<0.05	2.1	10.06	32.7	<0.02	<0.001	0.3	8.4	<0.01	<0.002
1128862	Silt	<0.02	0.15	9.7	0.3	<0.05	0.6	7.72	33.9	0.05	<0.001	0.7	27.5	<0.01	<0.002

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Project: Coles Creek
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000333.1

	Method	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01
Pulp Duplicates																					
1128862	Silt	0.012	24.74	64.56	49.67	194.0	1025	62.5	31.9	1595	45756	174.2	1.8	9.7	3.8	16.4	0.96	4.25	0.41	52	>40
REP 1128862	QC	0.009																			
Reference Materials																					
STD DS9	Standard		12.92	111.2	121.2	324.0	1907	40.0	7.5	563	22846	27.4	2.7	112.6	6.2	72.2	2.54	6.00	6.62	42	>40
STD OXG99	Standard	0.909																			
STD DS9 Expected			12.84	108	126	317	1830	40.3	7.6	575	23300	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40	7201
STD OXG99 Expected		0.932																			
BLK	Blank		<0.01	<0.01	<0.01	<0.1	6	<0.1	<0.1	<1	<1	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	6.71
BLK	Blank	<0.005																			

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QUALITY CONTROL REPORT SMI12000333.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02	0.1
Pulp Duplicates																					
1128862	Silt	680	13.9	31.3	4914	135.7	87	<1	13490	<10	1099	0.2	4.9	0.41	306	0.049	0.4	0.15	4.3	7.93	0.1
REP 1128862	QC																				
Reference Materials																					
STD DS9	Standard	800	13.5	114.2	6082	302.0	1057	4	9280	805	3822	2.9	2.3	5.36	1591	0.224	5.1	5.13	4.6	2.49	0.1
STD OXG99	Standard																				
STD DS9 Expected		819	13.3	121	6165	295	1108		9577	853	3950	2.89	2.5	5.3	1615	0.2	5.2	5.02	4.59	2.37	0.1
STD OXG99 Expected																					
BLK	Blank	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02	<0.1
BLK	Blank																				

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QUALITY CONTROL REPORT SMI12000333.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002
Pulp Duplicates															
1128862	Silt	<0.02	0.15	9.7	0.3	<0.05	0.6	7.72	33.9	0.05	<0.001	0.7	27.5	<0.01	<0.002
REP 1128862	QC														
Reference Materials															
STD DS9	Standard	0.07	1.33	34.4	6.9	<0.05	1.5	5.61	25.0	2.36	0.055	4.6	24.2	0.12	0.359
STD OXG99	Standard														
STD DS9 Expected		0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	0.061	5.4	25.2	0.12	0.35
STD OXG99 Expected															
BLK	Blank	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002
BLK	Blank														

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Appendix D

Diamond Drill Logs with Assay Results

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	280.80m	**Start Date:**	Aug 08, 2012	**Finish Date:**	Aug 13, 2012
Hole #:	TR12-09	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608980E, 5931865N	**Core Size:**	HQ/NQ	**Logged By:**	KDG
Grid #:		**Angle & Direction:**	-50°/065°	**Elevation:**	1413m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
0.00	15.24	Casing										
15.24	15.85	Boulders of various lithologies - not sampled										
15.85	16.18	Andesite dyke, dark grey-green with fine, stretched, carbonate amygdules	15.85	16.18	0.33	1421551	29.26	1.27	0.005	61		
16.18	21.13	Quartz monzonite, weak potassic alteration of feldspars, weak chloritic alteration of biotte bocks, trace disseminated and stringer chalcopyrite. Trace malachite on joint surfaces, minor sections with moderate sericite alteration of feldspars.	16.18	18.18	2.00	1421552	558.12	3.07	0.007	281		
		@ 21.13m, FT contact at 50° TCA, trace malachite, CPy, MoS_2	18.18	20.18	2.00	1421553	1578.41	13.05	0.008	1786		
2.13	24.15	Andesite dyke, dark grey-green with ragged carbonate amygdules. Dyke becomes lighter coloured and more calcareous near mm to cm calcite veins	20.18	21.13	0.95	1421554	909.34	7.76	0.005	529		
		@ 22.5m, 1cm calcite vein at 30° to core axis (TCA)	21.13	24.15	3.02	1421555	53.01	1.21	<0.005	100		
		@ 23.85m, 2mm calcite veins at 25° TCA	24.15	26.15	2.00	1421556	997.32	47.37	<0.005	514		
		@ 24.15m, FT contact at 50° TCA, slickensides 50° to long axis of face	26.15	28.15	2.00	1421557	>10000.00	190.89	0.028	3115	1.095	
		@ 24.15m, FT at 20° TCA, slickenside 70° to long axis of face	28.15	30.15	2.00	1421558	1032.81	163.14	0.005	723		
24.15	37.44	Quartz monzonite, patchy moderate clay alteration, patchy strong sericite alteration, weak potassic alteration. TR - 0.5% CPy in veinlets to 1.5cm, minor patches and veins of calcite	30.15	32.15	2.00	1421559	2024.13	8	0.013	1083		
		@ 126.16m, 1.5cm CPy vein. Vein is offset by 50° TCA joint, approximately perpendicular to vein strike	32.15	34.15	2.00	1421560	2007.49	58.94	0.019	1109		
37.44	38.54	Intermediate dyke, medium green-grey, amygdaloidal dyke. Amygdules are calcite filled and often stretched parallel to contacts at 45° TCA. Both top and bottom contact are clay rich. Bottom contact is faulted with slickensides 80° to long axis of face.	34.15	36.15	2.00	1421561	578.21	30.45	0.006	346		
38.54	44.54	Quartz monzonite, weak pottassic alteration, moderate clay alteration. Trace -0.5% CPy veinlets 45°-60° TCA	36.15	37.44	1.29	1421562	1376.14	48.91	0.008	854		
		38.54-40.40m, strong clay alteration	37.44	38.54	1.10	1421563	11.21	1.59	<0.005	264		
		40.18-40.27m, Pale green sericite altered intermediate dyke. Contacts at 60° (top) and 50° (bottom)	38.54	40.54	2.00	1421564	1426.73	17.6	0.012	731		
		@ 42.73m, 0.5cm CPy vein at 45° TCA	40.54	42.54	2.00	1421565	1415.53	7.37	0.008	838		
44.54	55.58	Feldspar porphyry dyke, pale green, variably porphytritic with ragged clay altered feldspars. Top contact 50° TCA, bottom contact 70° TCA	42.54	44.54	2.00	1421566	3369.72	22.62	0.013	2006		
		@ 45.82m, reduced HQ to NQ	44.54	46.54	2.00	1421567	13.18	0.87	<0.005	61		
		@ 47.20m, open-spaced calcite vein 10° TCA	46.54	48.54	2.00	1421568	11.94	1.29	<0.005	32		
		48.31-54.25m, rusty "oxidized" sections to 30cm wide	48.54	50.54	2.00	1421569	10.44	1.69	<0.005	21		
		* drillers lost circulation in general area	50.54	52.54	2.00	1421570	2.06	0.97	<0.005	14		
55.58	110.47	Quartz monzonite, weak pottassic alteration , narrow-patchy strong sericite and clay alteration. Trace-0.5% CPy-Py-MoS2 in veinlets to 1.5cm. Trace malachite, bournite, kermesite	52.54	54.54	2.00	1421571	2.77	0.42	<0.005	15		
		55.58-55.84m, strong clay alteration	54.54	55.58	1.04	1421572	16.6	3.85	<0.005	148		
		@ 81.63m, 0.5cm MoS_2 - CPy veinlet at 50° TCA	55.58	57.58	2.00	1421573	1777.22	62.17	0.011	1393		
		@ 86.05m, 1.5cm CPy veinlet at 40° TCA	57.58	59.58	2.00	1421574	1252.39	6.89	<0.005	650		
		@ 91.52m, 1.5cm CPy-Mo veinlet at 45° TCA	59.58	61.58	2.00	1421575	1381.51	107.35	0.008	744		
		@ 92.50m, 2.5cm calcite vein at 70° TCA	61.58	63.58	2.00	1421576	1028.05	3.97	<0.005	679		
		@ 93.94m, 0.5cm CPy veinlet at 30° TCA	63.58	65.58	2.00	1421577	1044.09	7.19	0.007	550		
		94.08-94.27m, light salmon-pink fine-grained dyke	65.58	67.58	2.00	1421578	1231.92	13.1	0.007	753		
		@ 102.90m rusty "oxidized" gravel with malachite staining - probable fault	67.58	69.58	2.00	1421579	1568.74	101.96	0.005	844		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	280.80m	**Start Date:**	Aug 08, 2012	**Finish Date:**	Aug 13, 2012
Hole #:	TR12-09	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608980E, 5931865N	**Core Size:**	HQ/NQ	**Logged By:**	KDG
Grid #:		**Angle & Direction:**	-50°/065°	**Elevation:**	1413m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
		@ 105.53m, 0.5cm CPy vein at 80° TCA	69.58	71.58	2.00	1421580	1203.96	48.7	0.008	579		
		@ 106.47m, FT at 20° TCA, slickensides at 45° to long axis of face	71.58	73.58	2.00	1421581	1233.98	91.89	0.009	627		
		@ 109.5m, 2cm pale-pink fine-grained dyke at 30° TCA	73.58	75.58	2.00	1421582	960.51	8.97	<0.005	494		
		@ 109.76m, 0.5cm quartz-Py vein at 50° TCA but opposite dip to fine grained dyke above	75.58	77.58	2.00	1421583	2015.38	9.47	0.015	950		
		@ 110.09m, 1.5cm quartz-Py vein at 40° TCA	77.58	79.58	2.00	1421584	2033.67	5.44	0.013	924		
110.47	129.89	Feldspar porphyry - pale green colour, minor sercite alteration of feldspar phenocrysts and ground mass. 3-5% CPY clots up to 0.5cm, CPY veins to 2.5cm. 1-3% Py in clots up to 1.0cm, Py - CPy veins to 1.5cm. Trace bournite.	79.58	81.58	2.00	1421585	984.16	3.79	<0.005	438		
		@ 118.26m, 1cm CPy vein at 70° TCA	81.58	83.58	2.00	1421586	1904.74	179.99	0.013	997		
		@ 123.34m, 1.5cm quartz-CPy vein at 70° TCA	83.58	85.58	2.00	1421587	1594.54	43.08	0.006	773		
		@ 123.56m, 2mm CPy-bournite vein at 30° TCA	85.58	87.58	2.00	1421588	4736.99	58.65	0.017	1109		
		@ 123.98m, FT at 50° TCA, slickensides 10° to long axis of face	87.58	89.58	2.00	1421589	571.56	4.38	<0.005	305		
		@ 123.99m, 1.5cm Py-CPy (Mo) vein 50° TCA	89.58	91.58	2.00	1421590	1941.04	16.93	0.012	850		
		@ 124.05m, 2.5cm CPy vein at 60° TCA	91.58	93.58	2.00	1421591	1473.86	11.05	0.006	806		
129.89	161.20	Quartz monzonite, weak potassic alteration, narrow-patchy strong clay alteration, sections of moderate chlorite alteration. Trace-0.5% CPy-Py (Mo) veinlets to 0.5cm, 35 - 65° TCA	93.58	95.58	2.00	1421592	2520.86	11.31	0.009	1500		
		135.13-135.47m, Feldspar porphyry dyke, moderate potassic (biotite) alteration of ground mass gives rock a light brown appearance	95.58	97.58	2.00	1421593	2264.03	10.43	0.012	864		
		137.36-139.35m, rock is highly broken and clay altered	97.58	99.58	2.00	1421594	1225.78	20.03	<0.005	420		
		150.00-150.54m, ground core, oxidized with malachite staining. * drillers reported losing returns and encountering a cavity in the hole*	99.58	101.58	2.00	1421595	1092.67	5.21	<0.005	650		
		157.68-158.70m, moderate chlorite alteration	101.58	103.58	2.00	1421596	1459.33	6.14	0.007	1383		
161.20	167.88	Feldspar porphyry, light grey-brown in colour, moderate potassic (biotite) alteration of groundmass, patchy-strong clay alteration. Increasing strong sericite alteration to bottom of interval. Trace disseminated Py-CPy	STD, CU163			1421597	9981.11	1164.9	4.7	>100000		95
167.88	172.40	Fault breccia with short intervals of altered feldspar porphyry and altered quartz monzonite. Strong quartz-carbonate alteration, strong-patchy clay alteration	103.58	105.58	2.00	1421598	2650.35	37.23	0.018	1886		
		@ 167.88m, top and bottom fault contacts at 50° TCA	105.58	107.58	2.00	1421599	1320.04	22.97	0.009	696		
172.40	173.60	Mafic dyke. Sheared, dark green amygdaloidal dyke. Upper and lower contacts at 50° TCA	107.58	109.58	2.00	1421600	1016.21	6.42	<0.005	476		
173.60	173.65	Grey-green clay fault gouge. Lower contact at 65° TCA	109.58	110.47	0.89	1421601	2240.11	40.05	0.011	1376		
173.65	193.21	Quartz mozonite, strong sericite and clay alteration with increasing patchy chlorite alteration. TR-0.5% CPy-Py in veinlets to 0.6cm at 35°-65° TCA	110.47	112.47	2.00	1421602	5693.77	38.91	0.026	3618		
		173.65-177.50m, strongly sheared	112.47	114.47	2.00	1421603	3674.54	13.09	0.033	2524		
		@ 193.21m, lower contact at 40° TCA	114.47	116.47	2.00	1421604	3319.71	34.72	0.023	2064		
193.21	202.35	Feldspar porphyry dyke; weak potassic (biotite) alteration of groundmass. Rock is fairly fresh and strongly magnetic with 15-20cm chill margins. Chill margins are medium green in colour and weakly porphyritic. Dyke contains numerous large xenoliths up to 40cm long. TR -0.5% CPy in veinlets to 1cm at 20-50° TCA	116.47	118.47	2.00	1421605	4724.66	91.98	0.019	6608		
		@ 197.70m, FT at 20° TCA, slickensides 30° to long axis of face	118.47	120.47	2.00	1421606	5533.71	27.72	0.098	3342		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	280.80m	**Start Date:**	Aug 08, 2012	**Finish Date:**	Aug 13, 2012
Hole #:	TR12-09	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608980E, 5931865N	**Core Size:**	HQ/NQ	**Logged By:**	KDG
Grid #:		**Angle & Direction:**	-50°/065°	**Elevation:**	1413m	**(Signature):**	

INTERVAL		DESCRIPTION
From	To	
		@ 201.78m, 1cm CPy vein at 30° TCA
		@ 202.35m, contact at 65° TCA
202.35	260.88	Quartz monzonite, weak potassic alteration, narrow strong clay alteration, sections with strong sericite alteration. TR-0.5% CPy in veinlets to 0.5cm at 40°-50° TCA
		205.66 - 211.56m, strong sericite alteration with TR -1% disseminated Py, TR disseminated Cpy
		@ 209.87m, 2.5cm open calcite vein at 20° TCA
		@ 240.70m, FT at 30° TCA, slicks at 80° to long axis of face
		@ 246.20m, FT at 30° TCA, slicks at 70° to long axis of face. Fault mineralized with CPy and MoS2
260.88	263.73	Feldspar porphyry, phases are strongly porphyritic to weakly porphyritic with weak to strong potassic alteration. 5-7% very finely disseminated CPy, TR-1% MoS_2. Dyke is weakly magnetic.
263.73	274.10	Quartz monzonite, weak potassic alteration, narrow-patchy strong clay alteration. Trace CPy veinlets to 0.5cm
		@ 273.50m, steep (45°-50° TCA) CPy veins cut-off by 15° TCA mineralized structure
		@ 274.10m, FT contact at 30° TCA, slickensides 65° to long axis of face
274.10	276.52	Feldspar porphyry dyke with numerous low angle shears. 1-2% CPy, 0.5 - 1% Py, trace MoS2
		@ 274.80m, FT at 20° TCA, slickensides 30° to long axis of face
		@ 274.95m, FT at 40° TCA, slickensides parrallel to long axis of face.
		@ 276.52m, bottom fault contact on dyke 35° TCA, slickensides 65° to long axis of face
276.52	280.80	Quartz monzonite, weak potassic alteration, TR-1% Cpy, TR MoS_2 in veinlets to 2mm at 40°-50° TCA
		@ 280.40m, FT at 30° TCA, slickensides 50° to long axis of face
		280.80m, EOH

SAMPLE RECORD									
FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
120.47	122.47	2.00	1421607	5938.97	21.31	0.052	3201		
122.47	124.47	2.00	1421608	>10000.00	66.95	0.069	8312	1.711	
124.47	126.47	2.00	1421609	6344.62	43.82	0.066	5497		
126.47	128.47	2.00	1421610	5899.75	47.44	0.068	5028		
128.47	129.89	1.42	1421611	6951.04	44.82	0.065	9570		
Blank			1421612	31.12	0.2	<0.005	44		
129.89	131.65	1.76	1421613	1867.49	10.17	0.014	950		
131.65	133.65	2.00	1421614	1827.25	15.91	0.007	922		
133.65	135.65	2.00	1421615	1600.52	18.94	0.009	721		
135.65	137.65	2.00	1421616	1652.11	78.66	0.006	739		
137.65	139.65	2.00	1421617	2228.67	19.37	0.013	1476		
139.65	141.65	2.00	1421618	2991.37	8.78	0.018	1898		
141.65	143.65	2.00	1421619	1228.41	17.56	0.008	873		
143.65	145.65	2.00	1421620	2550.29	87.77	0.008	942		
145.65	147.65	2.00	1421621	2307.41	79.53	0.012	1870		
147.65	149.65	2.00	1421622	1984.25	46.95	0.009	812		
149.65	151.65	2.00	1421623	1791.18	41.8	<0.005	917		
151.65	153.65	2.00	1421624	2290.23	39.13	0.013	1459		
153.65	155.65	2.00	1421625	1727.4	19.15	0.008	814		
155.65	157.65	2.00	1421626	1521.35	21	<0.005	945		
157.65	159.65	2.00	1421627	992.76	44.57	<0.005	841		
159.65	161.20	1.55	1421628	1856.88	17.25	<0.005	970		
161.20	163.20	2.00	1421629	526	22.43	<0.005	404		
163.20	165.20	2.00	1421630	466.49	3.3	<0.005	232		
165.20	167.88	2.68	1421631	359.15	18.66	<0.005	198		
167.88	169.88	2.00	1421632	1176.67	39.66	0.009	2822		
169.88	171.88	2.00	1421633	2042.69	74.17	0.011	5104		
171.88	172.40	0.52	1421634	2064.46	52.33	0.008	2966		
STD, CU163			1421635	8644.9	1119.78	4.496	84937		
172.40	173.65	1.25	1421636	20.81	0.88	<0.005	50		
173.65	175.65	2.00	1421637	2240.76	58.61	0.007	5626		
175.65	177.65	2.00	1421638	3390.56	169.31	0.008	3262		
177.65	179.65	2.00	1421639	1588.97	64.69	0.008	797		
179.65	181.65	2.00	1421640	609.16	3.89	0.307	264		
181.65	183.65	2.00	1421641	1376.71	13.75	0.239	639		
183.65	185.65	2.00	1421642	1045.35	25.28	0.023	601		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	280.80m	**Start Date:**	Aug 08, 2012	**Finish Date:**	Aug 13, 2012
Hole #:	TR12-09	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608980E, 5931865N	**Core Size:**	HQ/NQ	**Logged By:**	KDG
Grid #:		**Angle & Direction:**	-50°/065°	**Elevation:**	1413m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			185.65	187.65	2.00	1421643	1583.44	35.33	0.02	983		
			187.65	189.65	2.00	1421644	1192.49	39.34	0.014	668		
			189.65	191.65	2.00	1421645	1935.88	73.12	0.008	886		
			191.65	193.21	1.56	1421646	1656.12	30.63	<0.005	913		
			193.21	195.21	2.00	1421647	571.5	3.68	<0.005	544		
			195.21	197.21	2.00	1421648	377.68	5.45	<0.005	258		
			Blank			1421649	6.52	0.19	<0.005	27		
			197.21	199.21	2.00	1421650	318.26	2.8	<0.005	188		
			199.21	201.21	2.00	1421651	237.64	2.33	<0.005	158		
			201.21	202.35	1.14	1421652	4532.1	59.86	0.005	1873		
			202.35	204.35	2.00	1421653	384.43	7.23	<0.005	284		
			204.35	206.35	2.00	1421654	924.4	43.89	<0.005	699		
			206.35	208.35	2.00	1421655	585.14	20.98	<0.005	499		
			208.35	210.35	2.00	1421656	463.55	3.73	<0.005	759		
			210.35	212.35	2.00	1421657	1010.78	17.1	<0.005	1059		
			212.35	214.35	2.00	1421658	1668.6	127.63	<0.005	2096		
			214.35	216.35	2.00	1421659	868.73	105.78	0.005	834		
			216.35	218.35	2.00	1421660	534.25	6.62	<0.005	268		
			218.35	220.35	2.00	1421661	370.24	7.86	<0.005	192		
			220.35	222.35	2.00	1421662	643.93	15.17	<0.005	352		
			222.35	224.35	2.00	1421663	1043.06	87.1	<0.005	806		
			224.35	226.35	2.00	1421664	496.77	29.21	<0.005	315		
			226.35	228.35	2.00	1421665	249.97	6.4	<0.005	113		
			228.35	230.35	2.00	1421666	380.35	216.88	<0.005	245		
			230.35	232.35	2.00	1421667	122.4	5.07	<0.005	69		
			232.35	234.35	2.00	1421668	66.92	6.16	<0.005	53		
			STD, CU163			1421669	>10000.00	1415.17	4.708	>100000	1.029	86
			234.35	236.35	2.00	1421670	478.37	326.04	<0.005	256		
			236.35	238.35	2.00	1421671	1221.68	20.14	0.005	706		
			238.35	240.35	2.00	1421672	124.06	7.25	<0.005	160		
			240.35	242.35	2.00	1421673	122.23	4.46	<0.005	79		
			242.35	244.35	2.00	1421674	84.98	6.41	<0.005	95		
			244.35	246.35	2.00	1421675	145.04	31.65	<0.005	151		
			246.35	248.35	2.00	1421676	81.98	18.17	<0.005	59		
			248.35	250.35	2.00	1421677	61.94	9.88	<0.005	98		
			250.35	252.35	2.00	1421678	32.5	2.26	<0.005	36		
			252.35	254.35	2.00	1421679	230.08	5.55	<0.005	160		
			254.35	256.35	2.00	1421680	568.53	12.57	<0.005	449		
			256.35	258.35	2.00	1421681	348.33	4.34	<0.005	345		
			258.35	260.88	2.53	1421682	841.38	6.48	<0.005	345		

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DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	280.80m	**Start Date:**	Aug 08, 2012	**Finish Date:**	Aug 13, 2012
Hole #:	TR12-09	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608980E, 5931865N	**Core Size:**	HQ/NQ	**Logged By:**	KDG
Grid #:		**Angle & Direction:**	-50°/065°	**Elevation:**	1413m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			260.88	261.95	1.07	1421683	8647.58	663.85	0.035	3929		
			261.95	263.73	1.78	1421684	4136.41	340.2	0.018	2121		
			BLK			1421685	34.18	1.65	<0.005	53		
			263.73	265.73	2.00	1421686	489.61	33.03	<0.005	239		
			265.73	267.73	2.00	1421687	850.34	29.16	<0.005	499		
			267.73	269.73	2.00	1421688	476.19	14.77	<0.005	261		
			269.73	271.73	2.00	1421689	723.05	93.4	0.006	430		
			271.73	274.10	2.37	1421690	1446.19	181.79	0.009	733		
			274.10	276.52	2.42	1421691	5228.08	200.48	0.011	3412		
			BLK			1421692	11.36	0.73	<0.005	37		
			276.52	278.52	2.00	1421693	232.39	3.42	<0.005	142		
			278.52	280.80	2.28	1421694	524.06	3.13	<0.005	350		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	313.01	**Start Date:**	Aug 14, 2012	**Finish Date:**	Aug 18, 2012
Hole #:	TR12 -10	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	**Cyr Drilling**
Claim #:		**UTM Coord:**	608831E, 5931999N	**Core Size:**	**HQ/NQ**	**Logged By:**	**KDG**
Grid #:		**Angle & Direction:**	-60°/065°	**Elevation:**	1446m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
0.00	3.02	Casing										
3.02	17.24	Quartz monzonite, moderate potassic alteration, TR-0.5% CPy-Py in veinlets at 30° and 50° TCA	3.02	5.02	2.00	1421695	1794.12	6.76	0.013	698		
		9.60 - 15.30m, strong sericite alteration with patchy strong clay alteration	5.02	7.02	2.00	1421696	1295.06	3.81	<0.005	550		
		11.38 - 11.65m, pale green dyke with strong carbonate alteration. Contacts at 50° TCA	7.02	9.02	2.00	1421697	2028.21	2.24	0.017	812		
		@12.14m, 2cm quartz-Py-CPy vein a 50° TCA	9.02	11.02	2.00	1421698	1400.81	2.48	<0.005	802		
17.24	17.75	Feldspar porphyry dyke, medium grey color, strong carbonate alteration	11.02	13.02	2.00	1421699	2469.74	85.8	<0.005	1653		
17.75	45.43	Quartz monzonite, moderate potassic alteration, Tr -0.5% CPy in veinlets to 0.5cm at 15° and 60° TCA	13.02	15.02	2.00	1421700	2376.89	43.46	<0.005	1125		
45.43	48.10	Pale green amygdaloidal dyke. Strong carbonate alteration. Top contact at 45° TCA, sheared bottom contact at 10°	15.02	17.24	2.22	1421701	385.35	9	<0.005	210		
48.10	54.65	Quartz monzonite, moderate potassic alteration, finer grained phases are medium grey in colour. Trace CPy in veinlets	17.24	17.75	0.51	1421702	178.49	2.23	<0.005	181		
54.65	54.82	Fault breccia, Quartz-CPy-Py-MoS2 in vein fragments. Lower contact at 40° TCA	STD CU163			1421703	9980.63	1310.5	4.694	>100000	1.084	104
54.82	55.35	Pale green amygdaloidal dyke, strong carbonate alteration. Bottom contact at 35° TCA	17.75	19.75	2.00	1421704	196.59	4.43	<0.005	98		
55.35	74.05	Quartz monzonite, moderate potassic alteration, patchy moderate chloritic alteration, narrrow strong clay alteration. Trace - 0.5% CPy in veinlets	19.75	21.75	2.00	1421705	1367.18	18.05	0.01	502		
		@ 70.02m, 1.5cm vein breccia with CPy-MoS_2-Py adjacent to 2cm grey-green fault gouge	21.75	23.75	2.00	1421706	690.82	3.1	0.007	292		
		71.40-73.50m, rock becomes quite fractured and sheared	23.75	25.75	2.00	1421707	1065.52	15.54	<0.005	493		
74.05	74.40	Medium green amygydaldidal dyke with strong carbonate alteration.	25.75	27.75	2.00	1421708	391.27	28.61	<0.005	171		
74.40	78.00	Quartz monzonite, strong patchy sericite alteration, narrow patchy clay alteration. TR-CPy	27.75	29.75	2.00	1421709	698.22	7.34	<0.005	325		
		@ 72.29m, 2cm CPy-Quartz vein at 70° TCA	29.75	31.75	2.00	1421710	2289.05	31.88	<0.005	1337		
		@ 73.33m, FT at 60° TCA, slickensides 80° to long axis of face. Fault plane 70° to CPy vein	31.75	33.75	2.00	1421711	1764.14	11.55	<0.005	865		
78.00	78.23	Fault - sheared quartz monzonite with 1cm open quartz vein with coxcomb crystals to 3mm	33.75	35.75	2.00	1421712	1315.07	2.47	<0.005	629		
78.23	88.70	Quartz monzonite, narrow patchy strong clay alteration. TR-1% very fine CPy stringers	35.75	37.75	2.00	1421713	919.85	15.02	<0.005	465		
		@ 81.38m, FT at 35° TCA, slickensides at 50° to long axis of face	37.75	39.75	2.00	1421714	1005.2	43.81	0.009	535		
		@ 83.25m, FT at 30° TCA, slickensides at 80° to long axis of face	39.75	41.75	2.00	1421715	1482.99	28.47	0.007	704		
		86.90-88.70m, strong sericite alteration	41.75	43.75	2.00	1421716	1400.86	46.05	0.009	731		
88.70	89.70	Medium green amygdaloidal dyke with strong carbonate alteration	43.75	45.43	1.68	1421717	1424.8	21.27	<0.005	703		
89.70	122.00	Quartz monzonite, medium potassic alteration, zones of moderate sericite alteration. TR-05% very fine CPy stringers	45.43	48.10	2.67	1421718	127.6	13.41	<0.005	236		
		111.64-111.72m, fault gouge - light green-grey clay	48.10	50.10	2.00	1421719	836.84	16.72	<0.005	385		
		@ 114.50m, FT at 10° TCA, slickensides at 80° to long axis of face	50.10	52.10	2.00	1421720	1262.51	74.75	<0.005	879		
		118.79-119.01m, amygdaloidal dyke	52.10	54.82	2.72	1421721	3174.86	217.32	0.032	40381		
		119.46-119.52m, fault gouge - light green-gray clay	Blank			1421722	7.19	0.32	<0.005	25		
		@ 121.96m, 4cm quartz-CPy-MoS_2 vein at 60° TCA	54.82	55.35	0.53	1421723	138.22	4.28	0.007	1620		
		@ 122.00m, FT at 50° TCA, slickensides at 10° to long axis of face	55.35	57.35	2.00	1421724	1046.17	13.9	0.013	3682		
122.10	132.25	Pale-green fine-grained dyke with strong carbonate alteration. Faulted lower contact has been intruded and rotated	57.35	59.35	2.00	1421725	1270.13	28.61	<0.005	666		
132.25	150.63	Quartz monzonite, moderate potassic alteration, sections of strong sericite alteration. Trace -0.5% CPy in stringers and veinlets to 0.5cm	59.35	61.35	2.00	1421726	961.14	25.06	<0.005	354		
150.63	173.81	Feldspar porphyry. Strong sericite alteration with 2-3% Cpy, 1% Py, TR MoS_2. Gradual Top contact, Faulted lower contact at 75° TCA	61.35	63.35	2.00	1421727	1377.85	18.59	0.005	667		
		@ 163.09m, 0.5cm Py-CPy vein at 70° TCA	63.35	65.35	2.00	1421728	1509.73	12.84	<0.005	641		
		@ 173.81m, 4cm quartz-feldspar-CPy-MoS_2 vein	65.35	67.35	2.00	1421729	896.6	50.23	0.044	393		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	313.01	**Start Date:**	Aug 14, 2012	**Finish Date:**	Aug 18, 2012
Hole #:	TR12 -10	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	**Cyr Drilling**
Claim #:		**UTM Coord:**	608831E, 5931999N	**Core Size:**	**HQ/NQ**	**Logged By:**	**KDG**
Grid #:		**Angle & Direction:**	-60°/065°	**Elevation:**	1446m	**(Signature):**	

INTERVAL		DESCRIPTION
From	To	
173.81	272.27	Quartz monzonite, moderate potassic alteration, sections of strong sericite alteration. TR-1% CPy in veinlets to 5cm vein at 15°-70° TCA. Larger CPy veins at 40°-65° TCA, often with MoS2 @ 194.80m, 5cm CPy vein at 40° TCA @ 212.84m, 4cm quartz-CPy-MoS_2 vein at 65° TCA @ 224.80m, 4cm quartz-CPy at 40° TCA @ 225.34m, 3cm quartz-CPy-Py-MoS_2 vein at 55° TCA 242.45-259.20m, numerous low angle faults 0°-30° TCA with slickensides from 20°-80° to long axis of face 264.25-272.27m, numerous faults 10°-60° TCA with slickensides 10°-80° to long axis of face
272.27	274.22	Fault zone, highly sheared QM with strong sericite alteration, numerous calcite veins to 4cm, 1-2% disseminated cubic pyrite, TR-0.5% CPy in veinlets to 0.5cm, 30° TCA
274.22	299.54	Quartz monzonite, moderate potassic alteration. Tr CPy in narrow veinlets, narrow patchy strong clay alteration 274.22-276.00m, strong sericite alteration
299.54	300.12	Faulted and flow banded (sheared) mafic dyke, flow bands and contacts at 50° TCA
300.12	313.01	Quartz mondonite, moderate potassic alteration. TR-0.5% CPy-Py in veinlets to 0.4cm. Minor faulting at 50° TCA 313.01m, EOH

SAMPLE RECORD

FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
67.35	69.35	2.00	1421730	397.56	62.76	<0.005	166		
69.35	71.35	2.00	1421731	530.36	37.07	<0.005	327		
71.35	74.05	2.70	1421732	401.58	11.92	<0.005	377		
74.05	74.40	0.35	1421733	169.7	5.3	<0.005	571		
74.40	76.40	2.00	1421734	345.49	8.55	<0.005	273		
76.40	78.40	2.00	1421735	4198.61	34.34	0.026	3007		
78.40	80.40	2.00	1421736	460.47	6.43	<0.005	261		
80.40	82.40	2.00	1421737	530.61	9.66	0.017	234		
STD CU163			1421738	>10000.00	1361.7	4.259	>100000	1.03	95
82.40	84.40	2.00	1421739	574.01	17.87	0.018	252		
84.40	86.40	2.00	1421740	317.71	6.1	<0.005	132		
86.40	88.70	2.30	1421741	1051.37	11.7	0.016	884		
88.70	89.70	1.00	1421742	487.15	12.06	0.012	4113		
89.70	91.70	2.00	1421743	1905.5	8.26	0.046	971		
91.70	93.70	2.00	1421744	3260.58	149.29	0.05	1537		
93.70	95.70	2.00	1421745	1932.08	13.49	0.033	791		
95.70	97.70	2.00	1421746	478.74	10.77	0.007	232		
97.70	99.70	2.00	1421747	1148.49	16.75	0.026	508		
99.70	101.70	2.00	1421748	511.62	20.19	0.007	253		
101.70	103.70	2.00	1421749	1702.28	37.91	0.039	871		
103.70	105.70	2.00	1421750	1393.35	7.89	<0.005	659		
Blank			1421751	14.82	0.19	<0.005	37		
105.70	107.70	2.00	1421752	1300.46	48.59	<0.005	788		
107.70	109.70	2.00	1421753	1007.3	51.96	0.009	847		
109.70	111.70	2.00	1421754	1898.97	47.16	0.013	2007		
111.70	113.70	2.00	1421755	1519.52	46.85	0.01	1644		
113.70	115.70	2.00	1421756	684.31	6.9	<0.005	514		
115.70	117.70	2.00	1421757	1179.96	44.75	<0.005	1093		
117.70	119.70	2.00	1421758	4249.95	191.43	0.015	9187		
119.70	122.10	2.40	1421759	3936.36	223.75	0.019	8559		
122.10	124.10	2.00	1421760	20.08	2.86	<0.005	254		
124.10	126.10	2.00	1421761	7.64	0.47	<0.005	75		
126.10	128.10	2.00	1421762	2.89	0.21	<0.005	50		
128.10	130.10	2.00	1421763	2.08	0.11	<0.005	14		
130.10	132.25	2.15	1421764	3.45	0.55	<0.005	23		
132.25	134.25	2.00	1421765	2094.45	218.79	0.016	2485		
134.25	136.25	2.00	1421766	295.89	4.15	<0.005	160		
136.25	138.25	2.00	1421767	392.44	6.42	0.008	214		
138.25	140.25	2.00	1421768	1743.99	21.2	0.011	892		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	313.01	**Start Date:**	Aug 14, 2012	**Finish Date:**	Aug 18, 2012
Hole #:	TR12 -10	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	**Cyr Drilling**
Claim #:		**UTM Coord:**	608831E, 5931999N	**Core Size:**	**HQ/NQ**	**Logged By:**	**KDG**
Grid #:		**Angle & Direction:**	-60°/065°	**Elevation:**	1446m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			140.25	142.25	2.00	1421769	1480.76	38.21	<0.005	1036		
			STD CU163			1421770	>10000.00	1266.2	4.129	>100000	1.095	100
			142.25	144.25	2.00	1421771	199.54	8.13	<0.005	133		
			144.25	146.25	2.00	1421772	971.41	14.15	0.009	943		
			146.25	150.63	4.38	1421773	399.89	7.34	<0.005	204		
			150.63	152.63	2.00	1421774	421.13	11.49	0.007	212		
			152.63	154.63	2.00	1421775	4875.87	4.53	0.022	3001		
			154.63	156.63	2.00	1421776	2292.16	7.49	<0.005	1427		
			156.63	158.63	2.00	1421777	1895.54	7.13	0.024	1515		
			158.63	160.63	2.00	1421778	5489.38	5.61	0.019	4173		
			160.63	162.63	2.00	1421779	>10000.00	28.4	0.072	7557	1.458	9
			162.63	164.63	2.00	1421780	>10000.00	40.09	0.045	6441	1.167	7
			164.63	166.63	2.00	1421781	>10000.00	13.29	0.038	5398	1.089	8
			166.63	168.63	2.00	1421782	>10000.00	1.92	0.074	4737	1.101	4
			168.63	170.63	2.00	1421783	>10000.00	2.33	0.034	5295	1.273	5
			170.63	172.63	2.00	1421784	>10000.00	3.09	0.035	5600	1.187	5
			172.63	173.81	1.18	1421785	8002.15	2.38	0.049	4725		
			173.81	174.81	1.00	1421786	6939.35	122.19	0.028	9246		
			Blank			1421787	38.58	<0.01	<0.005	88		
			174.81	176.81	2.00	1421788	2232.65	19.78	0.012	2281		
			176.81	178.81	2.00	1421789	392.01	2.97	<0.005	254		
			178.81	180.81	2.00	1421790	1616.23	13.82	<0.005	857		
			180.81	182.81	2.00	1421791	1187.96	5.86	<0.005	1629		
			182.81	184.81	2.00	1421792	1486.15	140.34	<0.005	2146		
			184.81	186.81	2.00	1421793	146.89	5.2	<0.005	126		
			186.81	188.81	2.00	1421794	351.57	2.47	<0.005	203		
			188.81	190.81	2.00	1421795	243.93	15.15	<0.005	122		
			190.81	192.81	2.00	1421796	1490.34	39.85	<0.005	989		
			192.81	194.81	2.00	1421797	708.06	4.19	<0.005	385		
			194.81	196.81	2.00	1421798	>10000.00	60.61	0.026	8159	1.793	10
			196.81	198.81	2.00	1421799	453.86	5.81	<0.005	274		
			198.81	200.81	2.00	1421800	468.72	7.6	<0.005	215		
			200.81	202.81	2.00	1421801	1335.25	130.88	0.012	816		
			202.81	204.81	2.00	1421802	682.91	15.69	<0.005	477		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	313.01	**Start Date:**	Aug 14, 2012	**Finish Date:**	Aug 18, 2012
Hole #:	TR12 -10	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	**Cyr Drilling**
Claim #:		**UTM Coord:**	608831E, 5931999N	**Core Size:**	**HQ/NQ**	**Logged By:**	**KDG**
Grid #:		**Angle & Direction:**	-60°/065°	**Elevation:**	1446m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			204.81	206.81	2.00	1421803	410.74	4.11	<0.005	193		
			206.81	208.81	2.00	1421804	1080.93	22.85	0.125	533		
			STD CU163			1421805	9293.4	1382.8	4.951	>100000	1.096	103
			208.81	210.81	2.00	1421806	441.33	15.32	0.018	247		
			210.81	212.81	2.00	1421807	104.46	2.01	<0.005	53		
			212.81	214.81	2.00	1421808	2434.13	23.7	0.006	780		
			214.81	216.81	2.00	1421809	898.11	9.74	<0.005	413		
			216.81	218.81	2.00	1421810	278.63	4.09	<0.005	82		
			218.81	220.81	2.00	1421811	69.66	1.66	<0.005	54		
			220.81	222.81	2.00	1421812	217.36	14.62	<0.005	108		
			222.81	224.81	2.00	1421813	716.37	15.56	<0.005	281		
			224.81	226.81	2.00	1421814	>10000.00	388.13	0.047	5169	1.291	6
			226.81	228.81	2.00	1421815	107.99	1.72	<0.005	63		
			228.81	230.81	2.00	1421816	342.87	4.63	0.005	149		
			230.81	232.81	2.00	1421817	557.01	9.56	<0.005	246		
			232.81	234.81	2.00	1421818	54.82	2.99	<0.005	32		
			234.81	236.81	2.00	1421819	161.29	2.19	0.176	96		
			236.81	238.81	2.00	1421820	186.98	2.87	<0.005	130		
			238.81	240.81	2.00	1421821	605.31	67.06	<0.005	228		
			240.81	242.81	2.00	1421822	3152.32	68.14	<0.005	1744		
			Blank			1421823	11.69	0.44	<0.005	40		
			240.81	242.81	2.00	1421824	200.6	2.91	<0.005	145		
			242.81	244.81	2.00	1421825	381.43	83.38	<0.005	2107		
			244.81	246.81	2.00	1421826	1546.34	16.65	<0.005	550		
			246.81	248.81	2.00	1421827	2182.82	485.25	0.01	420		
			248.81	250.81	2.00	1421828	1354.39	52.82	<0.005	576		
			250.81	252.81	2.00	1421829	1895.34	23.55	0.005	982		
			252.81	254.81	2.00	1421830	2081.98	21.72	<0.005	893		
			254.81	256.81	2.00	1421831	1770.11	66.06	<0.005	732		
			256.81	258.81	2.00	1421832	1687.8	46.31	<0.005	865		
			258.81	260.81	2.00	1421833	252.73	2.84	<0.005	137		
			260.81	262.81	2.00	1421834	263.94	29.67	<0.005	137		
			262.81	264.81	2.00	1421835	827.65	59.63	<0.005	1277		
			264.81	266.81	2.00	1421836	1289.91	9.14	<0.005	704		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	313.01	**Start Date:**	Aug 14, 2012	**Finish Date:**	Aug 18, 2012
Hole #:	TR12 -10	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	**Cyr Drilling**
Claim #:		**UTM Coord:**	608831E, 5931999N	**Core Size:**	**HQ/NQ**	**Logged By:**	**KDG**
Grid #:		**Angle & Direction:**	-60°/065°	**Elevation:**	1446m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			266.81	268.81	2.00	1421837	982.01	17.9	<0.005	538		
			268.81	272.27	3.46	1421838	793.48	25.2	<0.005	583		
			272.27	274.22	1.95	1421839	960.07	43.52	<0.005	1561		
			STD CU163			1421840	>10000.00	1307.8	4.861	>100000	1.066	100
			274.22	276.22	2.00	1421841	1160.96	71.67	<0.005	752		
			276.22	278.22	2.00	1421842	851.91	28.14	<0.005	635		
			278.22	280.22	2.00	1421843	251.46	3.43	<0.005	233		
			280.22	282.22	2.00	1421844	375.79	5.4	<0.005	361		
			282.22	284.22	2.00	1421845	761.5	72	<0.005	570		
			284.22	286.22	2.00	1421846	711.96	5.33	0.005	404		
			286.22	288.22	2.00	1421847	983.3	23.06	<0.005	623		
			288.22	290.22	2.00	1421848	455.12	3.25	<0.005	276		
			290.22	292.22	2.00	1421849	899.33	3.53	<0.005	562		
			292.22	294.22	2.00	1421850	342.7	4.39	<0.005	169		
			294.22	296.22	2.00	1421851	252.89	1.43	<0.005	126		
			296.22	298.22	2.00	1421852	664.22	5.44	<0.005	416		
			298.22	299.54	1.32	1421853	48.02	4.61	<0.005	68		
			299.54	300.12	0.58	1421854	111.25	5.24	<0.005	233		
			300.12	302.12	2.00	1421855	782.49	14	<0.005	278		
			302.12	304.12	2.00	1421856	492.18	12.69	<0.005	185		
			304.12	306.12	2.00	1421857	289.27	18.92	<0.005	237		
			306.12	308.12	2.00	1421858	L.N.R.	L.N.R.	L.N.R.	L.N.R.		
			306.12	308.12	2.00	1421859	357.65	22.61	<0.005	168		
			308.12	310.12	2.00	1421860	394.41	3.98	<0.005	204		
			310.12	313.01	2.89	1421861	619.95	5.58	<0.005	245		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	412.70m	**Start Date:**	Aug 19, 2012	**Finish Date:**	Aug 24, 2012
Hole #:	TR12 -11	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608852E, 5931445N	**Core Size:**	HQ/NQ	**Logged By:**	Alannan Grande
Grid #:		**Angle & Direction:**	-45°/270°	**Elevation:**	1465m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
0.00	8.97	overburden/casing										
8.97	31.56	Quartz monzonite, weak potassic alteration, patchy strong clay alteration, patchy strong sericite alteration. Trace CPy, bornite, Py, MoS_2 veinlets to 3mm. Trace malachite on fractures	8.97	10.97	2.00	1421862	118.16	2.22	<0.005	109		
		31.44-31.56m, sheared quartz monzonite at 20° TCA	10.97	12.97	2.00	1421863	1286.68	1.91	<0.005	1112		
31.56	37.40	Medium green-grey fine-grained intermediate dyke with strong carbonate alteration. Trace fine cubic pyrite	12.97	14.97	2.00	1421864	1902.8	80.59	<0.005	1826		
37.40	46.89	Pale-green fine-grained dyke with xenoliths of medium green dyke material. Strong carbonate alteration. Gradational contacts top and bottom	14.97	16.97	2.00	1421865	628.37	9.99	0.005	520		
46.89	54.28	Medium green-grey fine-grained intermediate dyke with strong carbonate alteration	16.97	18.97	2.00	1421866	289.61	5.64	<0.005	289		
54.28	54.91	Quartz monzonite	18.97	20.97	2.00	1421867	203.16	3.07	<0.005	153		
54.91	60.90	Medium green-grey dyke with strong carbonate alteration	20.97	22.97	2.00	1421868	311.5	6.09	<0.005	258		
60.90	79.62	Quartz monzonite, weak potassic alteration with sections of moderate and strong potassic alteration, sections of strong sericite alteration. Narrow patchy strong clay alteration. Trace - 0.5% CPy in quartz-CPy veinlets and CPy veinlets to 2mm at 20°-40° TCA	22.97	24.97	2.00	1421869	148.6	12.13	<0.005	114		
79.62	83.02	Fault zone dipping @ 40° TCA with strong clay alteration. No mineralization, incompetent rock	24.97	26.97	2.00	1421870	407.54	12.33	0.033	465		
83.02	123.48	Quartz monzonite, high sericite alteration. medium potassic alteration. Carbonate veins throughout some altered to hematite, some faulting 20°-35° TCA. Dark veins (5cm) of quartz with disseminated pyrite	26.97	28.97	2.00	1421871	819.88	1.81	<0.005	776		
		889.82m-95.72m, high sericite and potassic alteration, competent rock with several faults ranging from 30°-45°TCA. Boundary with above interval is gradual, but a fault zone creates a definite boundary with the next zone at 30° TCA. Veins of carbonates and a vein of pyrite.	28.97	31.56	2.59	1421872	738.65	34.12	<0.005	561		
		95.77m-123.48m, loss of pyrite vein due to faulting. Moderate sericite alteration. Little to no potassic alteration.	31.56	33.56	2.00	1421873	18.26	1.45	<0.005	100		
		95.72-96.96m, trace amounts CPy in long vein dipping 5° TCA	33.56	35.56	2.00	1421874	13.72	0.64	<0.005	83		
		@ 96.96m, fault at 40° TCA	STD CU163			1421875	>10000.00	1273.24	4.595	>100000	1.09	100
		@ 99.77m, quartz vein with pyrite at 20° TCA	35.56	37.56	2.00	1421876	16.12	2.04	<0.005	85		
		@ 100.82m, FT at 20° TCA, pyrite, thin calcite veins throughout at different orientations. No disseminated minerals	37.56	39.56	2.00	1421877	2.54	0.3	<0.005	26		
		@ 110.98m, 1cm qtz vein at 50° TCA, range throughout from 15°-50° TCA	39.56	41.56	2.00	1421878	5.47	0.36	<0.005	42		
123.48	131.79	FT zone, quartz monzonite, highly altered. Many faults, most beteen 30°-45° TCA	41.56	43.56	2.00	1421879	8.78	0.25	<0.005	89		
131.79	167.89	Quartz monzonite, small patches of sericite alteration. Most calcite veins very small, < 1mm, 25°-50°, average 35° TCA	43.56	45.56	2.00	1421880	6.63	0.29	<0.005	40		
		@ 140.77m, trace pyrite	45.56	47.56	2.00	1421881	5.09	1.71	<0.005	37		
		@ 142.65m, quartz breccia vein dipping 45° TCA, quartz broken up, calcite vein secondary, 9cm thick with high sericite altered area	47.56	49.56	2.00	1421882	10.42	1.73	<0.005	63		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	412.70m	**Start Date:**	Aug 19, 2012	**Finish Date:**	Aug 24, 2012
Hole #:	TR12 -11	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608852E, 5931445N	**Core Size:**	HQ/NQ	**Logged By:**	Alannan Grande
Grid #:		**Angle & Direction:**	-45°/270°	**Elevation:**	1465m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			49.56	51.56	2.00	1421883	11.03	1.47	<0.005	56		
		145.68-167.81m, far less competent rock. Small fractures from 25°-55° TCA, small quartz veins at about 30° TCA										
		@ 167.8m, fault with 10-15% pyrite approximately 4.00cm across	51.56	54.28	2.72	1421884	12.76	0.93	<0.005	52		
167.89	194.77		54.28	54.91	0.63	1421885	1568.34	35.8	<0.005	1410		
		Green-grey, fine-grained, intermediate dyke, strong carbonate alteration, small (<1cm) amygdules of calcite										
		@ 173.26m calcite vein approximately 1cm thick at 40° TCA	54.91	56.91	2.00	1421886	162.63	1.46	<0.005	243		
		@ 175.97m calcite vein approximately 0.70cm thick at 40° TCA	56.91	58.91	2.00	1421887	5.87	2.63	<0.005	78		
		@ 178.50m, 16cm wide fault zone at 30° TCA, brecciated quartz with secondary calcite	58.91	60.90	1.99	1421888	24.65	1.76	<0.005	105		
			60.90	62.90	2.00	1421889	1881.23	10.95	<0.005	1445		
		180.18-181.44m, fault zone at 65°-40° TCA, calcite and quartz veins, broken up rock held together by "mud"										
		@ 184.76m, zenolyth, dark green with pyrite.	62.90	64.90	2.00	1421890	1006.72	7.13	<0.005	760		
		Unit has a gradational colour change to dark green, unit is then ended at fault surface @ 25° TCA	64.90	66.90	2.00	1421891	600.08	6.49	<0.005	425		
194.77	312.72	Quartz monzonite	66.90	68.90	2.00	1421892	809.22	7.06	<0.005	773		
		194.77-199.00m, highly altered area, sericite and potassium alteration,	68.90	70.90	2.00	1421893	484.7	7.09	<0.005	797		
		@ 195.36m. Py stringer at 30° TCA, trace amounts of disseminated Cpy-Py	70.90	72.90	2.00	1421894	540.33	8.38	<0.005	671		
		@ 198.85m, 10cm thick calcite vein at 50° TCA, slickensides at 75°, area ends on a plane at 60° TCA	72.90	74.90	2.00	1421895	445.68	15.48	<0.005	1039		
		200.57-200.85m, small fault zone, first contact at 40°, second at 35° TCA, ground up clay + rocks	74.90	76.90	2.00	1421896	618.17	8.01	<0.005	991		
			76.90	78.90	2.00	1421897	223.73	5.68	<0.005	389		
		@ 201.49m, Potassic and sericite alteration becomes much less frequent and only occupies very short intervals										
		@ 203.49m, small calcite vein (< 4mm) at 25° TCA, pyrite stringers	Blank			1421898	6.56	0.17	<0.005	33		
		@ 208.07m, quartz vein at 15° TCA with pyrite stringers	78.90	80.90	2.00	1421899	393.18	8.17	<0.005	523		
		@ 219.58m, quartz vein with some trace pyrite	80.90	82.90	2.00	1421900	431.19	4.68	<0.005	1303		
		@ 256.68m, quartz vein at 30° TCA	82.90	84.90	2.00	1421901	282.21	4.09	<0.005	370		
		@ 229.10m, fault at 40° TCA	84.90	86.90	2.00	1421902	336.59	9.27	<0.005	876		
		229.60-233.24m, fault area, gouge and gravel	86.90	88.90	2.00	1421903	281.65	2.82	<0.005	374		
		@ 229.60m, fault at 60° TCA	88.90	90.90	2.00	1421904	96.54	4.06	<0.005	145		
		@ 231.43m, hematite vein with CPy stringer at 30° TCA, calcite vein at 60° TCA	90.90	92.90	2.00	1421905	161.48	2.13	<0.005	315		
		@ 231.63m, calcite veins at 40° TCA	92.90	94.90	2.00	1421906	430.87	4.39	<0.005	791		
		@ 232.00m, large, 5cm thick calcite at 30° TCA, large vug	94.90	96.90	2.00	1421907	2710.36	13.13	<0.005	2137		
		@ 238.10m CPy stringer, hematite at 35° TCA	96.90	98.90	2.00	1421908	431.12	16	<0.005	405		
		@ 243.27m, 0.05m fault with calcite veins, some diseminate pyrite	98.90	100.90	2.00	1421909	269.4	3.63	<0.005	524		
		@ 248.54m, 5cm fault at 40° TCA	STD CU163			1421910	>10000.00	1403.22	4.894	>100000	1.082	97
		241.34-249.73m, faulted zone, rock gouge, all faults at 30° TCA	100.90	102.90	2.00	1421911	312.74	2.38	<0.005	343		
		@ 252.80m, quartz vein at 45° TCA	102.90	104.90	2.00	1421912	241.08	2.2	<0.005	348		
		256.51-258.76m, fault zone, calcite veining with vugs	104.90	106.90	2.00	1421913	252.81	17.76	<0.005	308		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	412.70m	**Start Date:**	Aug 19, 2012	**Finish Date:**	Aug 24, 2012
Hole #:	TR12 -11	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608852E, 5931445N	**Core Size:**	HQ/NQ	**Logged By:**	Alannan Grande
Grid #:		**Angle & Direction:**	-45°/270°	**Elevation:**	1465m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
		@ 262.86m, 5cm fault zone at 50° TCA	106.90	108.90	2.00	1421914	405.51	6.87	<0.005	524		
		@ 268.59m, hemetite vein with traces of Py at 30° TCA	108.90	110.90	2.00	1421915	76.26	2.41	0.024	131		
		@ 276.43m, zenolith of fine grained rock with Cpy stringer at 277.00m, calcite amygdules. The xenolith is approx 10cm across and does not follow structure	110.90	112.90	2.00	1421916	151.3	5.77	<0.005	227		
		@ 277.44m, xenolith, 3cm across	112.90	114.90	2.00	1421917	196.95	15.65	<0.005	305		
		@ 279.27m, vuggy calcite stringer at 30° TCA with trace pyrite	114.90	116.90	2.00	1421918	98.07	26.28	<0.005	1660		
		283.82-283.94m, small fault zone at 30° TCA	116.90	118.90	2.00	1421919	35.06	2.58	<0.005	74		
		@ 285.77m, 5cm xenolith	118.90	120.90	2.00	1421920	104.09	4.31	<0.005	107		
		286.00-299.57m, fault zone, faults range from 20°-30° TCA	120.90	122.90	2.00	1421921	59.28	3.02	<0.005	100		
		@ 294.86m CPy stringers	122.90	124.90	2.00	1421922	120.13	4.63	<0.005	164		
		@ 299.18m, vuggy calcite stringer at 45° TCA	124.90	126.90	2.00	1421923	128.51	3.13	<0.005	196		
		@ 301.46m, trace amounts of pyrite in an hemate stringer	126.90	128.90	2.00	1421924	92.8	3.82	<0.005	108		
		@ 302.78m, quartz vein at 30° TCA and 1.5cm thick with trace MoS_2 along edges, veins at 30° TCA, in multiple places are being displaced by fractures at 80° TCA in some places, 30° TCA in others	128.90	130.90	2.00	1421925	402.75	2.87	<0.005	1170		
		@ 310.97m, large 15cm xenolith	130.90	132.90	2.00	1421926	425.17	19.42	<0.005	491		
312.72	314.35	Dark, fine-grained porphry dyke with calcite amygdules. Faulted off at 30° TCA on either side	132.90	134.90	2.00	1421927	107.34	5.2	<0.005	143		
314.35	329.48	Quartz monzonite	134.90	136.90	2.00	1421928	84.08	5.71	<0.005	80		
		@ 314.40m and 314.54m, veins at 30° TCA	136.90	138.90	2.00	1421929	236.29	3.51	<0.005	318		
		@ 315.57m and 315.68m, calcite veins at 30° TCA	138.90	140.90	2.00	1421930	274.92	3.09	<0.005	261		
		315.82-316.60m, fault zone at 35°-60° TCA	140.90	142.90	2.00	1421931	63.02	2.6	<0.005	79		
		@ 321.14m, fault zone at 30° TCA	142.90	144.90	2.00	1421932	223.45	1.77	<0.005	183		
		@ 328.74m, fault zone at 50° TCA	Blank			1421933	11.57	0.07	<0.005	15		
329.48	330.15	Dark, fine-grained dyke with calcite amygdules, runs along fault plane at 45° TCA	144.90	146.90	2.00	1421934	196.55	20.09	<0.005	331		
330.15	339.00	Quartz monzonite	146.90	148.90	2.00	1421935	23.41	15.92	<0.005	47		
		@ 331.76m, 10cm fault zone at 40° TCA	148.90	150.90	2.00	1421936	95.36	2.48	<0.005	84		
		@ 332.06m, 10cm fault zone at 55° TCA	150.90	152.90	2.00	1421937	450.58	9	<0.005	557		
		332.62-332.87m, quartz veins with trace Py at 40° TCA is being displaced by fractures at 30° TCA	152.90	154.90	2.00	1421938	199.01	4.55	<0.005	248		
		@ 333.70m, fault at 40° TCA	154.90	156.90	2.00	1421939	185.53	6.54	<0.005	304		
		@333.98m, fault at 45° TCA	156.90	158.90	2.00	1421940	174.08	4.84	<0.005	267		
		@ 338.08m, fault at 40° TCA	158.90	160.90	2.00	1421941	226.36	3.7	<0.005	337		
339.00	340.12	Dark, fine-grained dyke with calcite amydgules. Doesn't appear to start on fault plane	160.90	162.90	2.00	1421942	66.18	3.1	<0.005	99		
		@ 340.12m, ends with fault at 30° TCA	162.90	164.90	2.00	1421943	226.48	24.08	<0.005	272		
340.12	412.70	Quartz monzonite	164.90	166.90	2.00	1421944	153.66	2.95	<0.005	171		
		@ 339.90m, xenolith, 3cm wide	STD CU163			1421945	>10000.00	1338.82	4.783	>100000	1.053	94

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	412.70m	**Start Date:**	Aug 19, 2012	**Finish Date:**	Aug 24, 2012
Hole #:	TR12 -11	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608852E, 5931445N	**Core Size:**	HQ/NQ	**Logged By:**	Alannan Grande
Grid #:		**Angle & Direction:**	-45°/270°	**Elevation:**	1465m	**(Signature):**	

INTERVAL		DESCRIPTION
From	To	
		341.56-341.79m, fault at 30° TCA
		@ 353.60m, stringer at 25° TCA with trace pyrite
		@ 354.36m, stringer with CPy at 75° TCA
		@ 355.02m, cave
		356.67-356.77m, fault zone at 35° TCA
		@ 357.76m, 30° faults cut off 70° faults
		359.25-361.84m, fault zone ranges from 40°-70° TCA
		@ 363.63m,CPy-Py stringer at 35° TCA
		@ 367.30m and 367.50m aplite dykes 15cm across
		@ 369.50m, pyrite stringer on fault surface
		369.72-369.88m, fault zone at 30° TCA, some core missing
		@ 371.50m, fault at 30° TCA
		@ 372.30m, quartz vein 0.70cm thick at 15° TCA
		@ 376.20m, CPy stringer at 30° TCA
		@ 378.20m, CPy stringers at 10° TCA in quartz vein
		@ 380.65m, aplite dyke
		383.90-384.18m, fault at 45° TCA
		@ 392.68m, CPy on fault at 55° TCA
		394.80-395.78m, fault zone ranges from 20°-50° TCA
		396.90-397.10m, fault at 30° TCA
		397.60-400.00m, fault zone
		@ 399.20 pyrite stringer at 35° TCA
		401.80-403.98m, fault zone at 30°-60° TCA
		406.54-412.70m, fault zone with mean angle of 40° TCA
		412.70m, EOH

SAMPLE RECORD										
FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
166.90	167.95	1.05	1421946	1445.17	81.56	0.009	2891		
167.95	169.95	2.00	1421947	18.46	1.05	<0.005	207		
169.95	171.95	2.00	1421948	6.34	0.61	<0.005	102		
171.95	173.95	2.00	1421949	3.4	0.85	<0.005	74		
173.95	175.95	2.00	1421950	2.71	1.23	<0.005	69		
175.95	177.95	2.00	1421951	1.37	3.91	<0.005	52		
177.95	179.95	2.00	1421952	17.6	4.09	<0.005	189		
179.95	181.95	2.00	1421953	2.52	1.33	<0.005	71		
181.95	183.95	2.00	1421954	1.07	0.5	<0.005	46		
183.95	185.95	2.00	1421955	1.29	0.77	<0.005	40		
185.95	187.95	2.00	1421956	1.39	1.84	<0.005	37		
187.95	189.95	2.00	1421957	3.64	2.28	<0.005	63		
189.95	191.95	2.00	1421958	3.33	1.04	<0.005	49		
191.95	194.77	2.82	1421959	21.77	2.85	<0.005	133		
194.77	196.77	2.00	1421960	425.01	19.13	<0.005	1688		
196.77	198.77	2.00	1421961	537.25	1.94	<0.005	1567		
198.77	200.77	2.00	1421962	374.84	1.25	<0.005	536		
200.77	202.77	2.00	1421963	130.52	1.82	<0.005	153		
202.77	204.77	2.00	1421964	672.01	3.41	0.013	1274		
204.77	206.77	2.00	1421965	211.53	3.9	<0.005	224		
206.77	208.77	2.00	1421966	251.93	2.53	<0.005	307		
208.77	210.77	2.00	1421967	80.03	8.39	<0.005	129		
Blank			1421968	5.02	0.09	<0.005	35		
210.77	212.77	2.00	1421969	22.12	1.38	<0.005	40		
212.77	214.77	2.00	1421970	60.93	1.26	<0.005	59		
214.77	216.77	2.00	1421971	49.97	1.21	<0.005	45		
216.77	218.77	2.00	1421972	49.21	2.46	<0.005	62		
218.77	220.77	2.00	1421973	335.51	2.74	<0.005	911		
220.77	222.77	2.00	1421974	44.92	2.35	<0.005	72		
222.77	224.77	2.00	1421975	37.89	2.36	<0.005	88		
224.77	226.77	2.00	1421976	34.36	2.78	<0.005	56		
226.77	228.77	2.00	1421977	78.22	4.27	<0.005	92		
STD CU163			1421978	>10000.00	1366.11	4.578	>100000	1.082	103
228.77	229.60	0.83	1421979	84.31	3.85	<0.005	127		

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	412.70m	**Start Date:**	Aug 19, 2012	**Finish Date:**	Aug 24, 2012
Hole #:	TR12 -11	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608852E, 5931445N	**Core Size:**	HQ/NQ	**Logged By:**	Alannan Grande
Grid #:		**Angle & Direction:**	-45°/270°	**Elevation:**	1465m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			229.60	231.60	2.00	1421980	331.71	2.56	0.005	398		
			231.60	233.60	2.00	1421981	196.31	3.61	<0.005	418		
			233.60	235.60	2.00	1421982	82.48	4.52	<0.005	114		
			235.60	237.60	2.00	1421983	93.31	3.96	<0.005	101		
			237.60	239.60	2.00	1421984	160.09	9.18	<0.005	212		
			239.60	241.60	2.00	1421985	70.97	2.99	<0.005	80		
			241.60	243.60	2.00	1421986	82.81	3.7	<0.005	92		
			243.60	245.60	2.00	1421987	447.1	5.76	<0.005	534		
			245.60	247.60	2.00	1421988	68	9.84	<0.005	115		
			247.60	249.60	2.00	1421989	73.57	2.49	<0.005	115		
			249.60	251.60	2.00	1421990	68.51	1.79	<0.005	112		
			251.60	253.60	2.00	1421991	114.08	2.28	<0.005	235		
			253.60	255.60	2.00	1421992	256.29	2.45	<0.005	270		
			255.60	257.60	2.00	1421993	150.76	20.97	<0.005	179		
			257.60	259.60	2.00	1421994	70	3.2	<0.005	213		
			259.60	261.60	2.00	1421995	16.1	1.36	<0.005	33		
			261.60	263.60	2.00	1421996	9.46	1.18	<0.005	24		
			263.60	265.60	2.00	1421997	43.63	1.29	<0.005	40		
			265.60	267.60	2.00	1421998	72.56	3.18	<0.005	128		
			267.60	269.60	2.00	1421999	19.83	1.07	<0.005	39		
			269.60	271.60	2.00	1422000	40	1.76	<0.005	114		
			271.60	273.60	2.00	1422001	41.49	1.96	<0.005	74		
			273.60	275.60	2.00	1422002	49.13	1.93	<0.005	58		
			Blank			1422003	3.11	0.04	<0.005	16		
			275.60	277.60	2.00	1422004	191.34	1.37	<0.005	199		
			277.60	279.60	2.00	1422005	54.56	2.1	<0.005	95		
			279.60	281.60	2.00	1422006	61.56	1.12	<0.005	80		
			281.60	283.60	2.00	1422007	67	1.12	<0.005	107		
			283.60	285.60	2.00	1422008	156.35	1.63	<0.005	177		
			285.60	287.60	2.00	1422009	1752.27	1.51	0.007	2505		
			287.60	289.60	2.00	1422010	256.18	1.23	<0.005	398		
			289.60	291.60	2.00	1422011	79.27	1.1	<0.005	138		
			291.60	293.60	2.00	1422012	484.06	1.13	<0.005	604		
			STD CU163			1422013	>10000.00	1377.58	4.557	>100000	1.072	100

CALLINEX MINES INC.

DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	412.70m	**Start Date:**	Aug 19, 2012	**Finish Date:**	Aug 24, 2012
Hole #:	TR12 -11	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608852E, 5931445N	**Core Size:**	HQ/NQ	**Logged By:**	Alannan Grande
Grid #:		**Angle & Direction:**	-45°/270°	**Elevation:**	1465m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			293.60	295.60	2.00	1422014	780.98	3.98	0.008	1238		
			295.60	297.60	2.00	1422015	92.37	1.8	<0.005	145		
			297.60	299.60	2.00	1422016	15.16	1.77	<0.005	34		
			299.60	301.60	2.00	1422017	231.4	0.96	<0.005	292		
			301.60	303.60	2.00	1422018	147.94	47.61	<0.005	192		
			303.60	305.60	2.00	1422019	9.04	5.74	<0.005	18		
			305.60	307.60	2.00	1422020	111.03	3.77	<0.005	135		
			307.60	309.60	2.00	1422021	5.29	1.53	<0.005	21		
			309.60	312.72	3.12	1422022	41.7	3.47	<0.005	68		
			312.72	314.35	1.63	1422023	42.55	0.66	<0.005	48		
			314.35	316.35	2.00	1422024	57.1	3.05	<0.005	114		
			316.35	318.35	2.00	1422025	12.07	1.03	<0.005	31		
			318.35	320.35	2.00	1422026	16.81	1.12	<0.005	34		
			320.35	322.35	2.00	1422027	43.76	1.71	<0.005	110		
			322.35	324.35	2.00	1422028	26.82	1.42	<0.005	45		
			324.35	326.35	2.00	1422029	47.71	1.71	<0.005	106		
			326.35	329.48	3.13	1422030	40.88	1.84	<0.005	93		
			329.48	330.54	1.06	1422031	46.97	0.65	<0.005	51		
			330.54	332.54	2.00	1422032	105.48	1.63	<0.005	1055		
			332.54	334.54	2.00	1422033	225.2	1.81	0.007	999		
			334.54	336.54	2.00	1422034	132.8	1.58	<0.005	237		
			336.54	339.00	2.46	1422035	33.21	1.51	0.118	65		
			339.00	340.12	1.12	1422036	61.92	0.47	<0.005	66		
			340.12	342.12	2.00	1422037	172.64	2.37	<0.005	308		
			Blank			1422038	4.09	0.04	<0.005	13		
			342.12	344.12	2.00	1422039	15.2	1.46	<0.005	34		
			344.12	346.12	2.00	1422040	17.53	1.54	<0.005	29		
			346.12	348.12	2.00	1422041	10.6	1.41	<0.005	21		
			348.12	350.12	2.00	1422042	13.03	1.67	<0.005	28		
			350.12	352.12	2.00	1422043	13.38	1.5	<0.005	20		
			352.12	354.12	2.00	1422044	105.03	15.13	<0.005	162		
			354.12	356.12	2.00	1422045	129.67	9.73	0.008	303		
			356.12	358.12	2.00	1422046	67.83	2.2	<0.005	88		
			358.12	360.12	2.00	1422047	11.04	1.67	<0.005	30		

CALLINEX MINES INC.

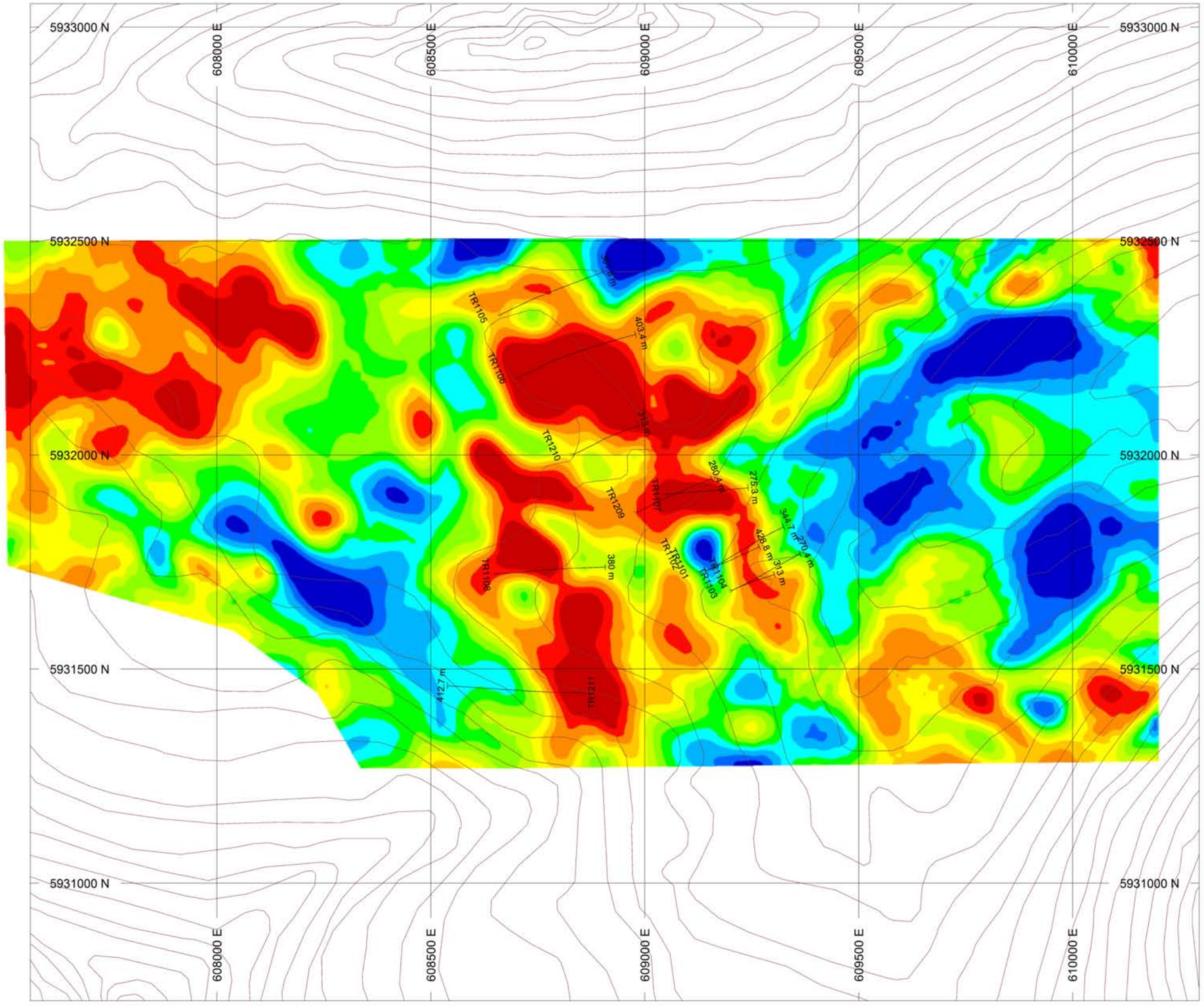
DIAMOND DRILL LOG

Project:	Troitsa	**Final Depth:**	412.70m	**Start Date:**	Aug 19, 2012	**Finish Date:**	Aug 24, 2012
Hole #:	TR12 -11	**Grid Coord:**		**Horizontal Length:**		**Drilled By:**	Cyr Drilling
Claim #:		**UTM Coord:**	608852E, 5931445N	**Core Size:**	HQ/NQ	**Logged By:**	Alannan Grande
Grid #:		**Angle & Direction:**	-45°/270°	**Elevation:**	1465m	**(Signature):**	

INTERVAL		DESCRIPTION	SAMPLE RECORD									
From	To		FROM	TO	WIDTH	SAMPLE	Cu ppm	Mo ppm	Au ppm	Ag ppb	Cu %	Ag g/t
			360.12	362.12	2.00	1422048	42.63	2.01	<0.005	70		
			362.12	364.12	2.00	1422049	345.01	43.02	<0.005	422		
			364.12	366.12	2.00	1422050	28.56	1.94	<0.005	48		
			366.12	368.12	2.00	1422051	14.39	1.79	<0.005	37		
			368.12	370.12	2.00	1422052	167.24	1.66	<0.005	117		
			370.12	372.12	2.00	1422053	109.46	1.05	<0.005	93		
			372.12	374.12	2.00	1422054	149.22	1.57	<0.005	192		
			374.12	376.12	2.00	1422055	55.81	2.87	<0.005	76		
			376.12	378.12	2.00	1422056	240.44	10.69	<0.005	301		
			378.12	380.12	2.00	1422057	152.93	2.11	<0.005	300		
			STD CU163			1422058	>10000.00	1154.69	4.507	>100000	1.052	94
			380.12	382.12	2.00	1422059	67.38	2.26	<0.005	101		
			382.12	384.12	2.00	1422060	274.16	2.53	<0.005	276		
			384.12	386.12	2.00	1422061	41.01	1.73	<0.005	81		
			386.12	388.12	2.00	1422062	41.49	1.77	<0.005	62		
			388.12	390.12	2.00	1422063	46.84	1.18	<0.005	56		
			390.12	392.12	2.00	1422064	41.8	0.96	<0.005	46		
			392.12	394.12	2.00	1422065	95.95	0.85	<0.005	98		
			394.12	396.12	2.00	1422066	14.33	0.96	<0.005	26		
			396.12	398.12	2.00	1422067	148.25	2.66	<0.005	199		
			398.12	400.12	2.00	1422068	105.29	1.98	<0.005	145		
			400.12	402.12	2.00	1422069	14.73	1.39	<0.005	32		
			402.12	404.12	2.00	1422070	26.6	1.14	<0.005	50		
			404.12	406.12	2.00	1422071	39.17	1.46	<0.005	58		
			406.12	408.12	2.00	1422072	38.97	2.71	<0.005	79		
			408.12	410.12	2.00	1422073	12.87	1.49	<0.005	30		
			410.12	412.70	2.58	1422074	8.03	1.64	<0.005	34		

Appendix E

Diamond Drill Plans



IP Chargeability RANGE

20
16
12
10
8
6
3

SCALE 1 : 10000

(m)

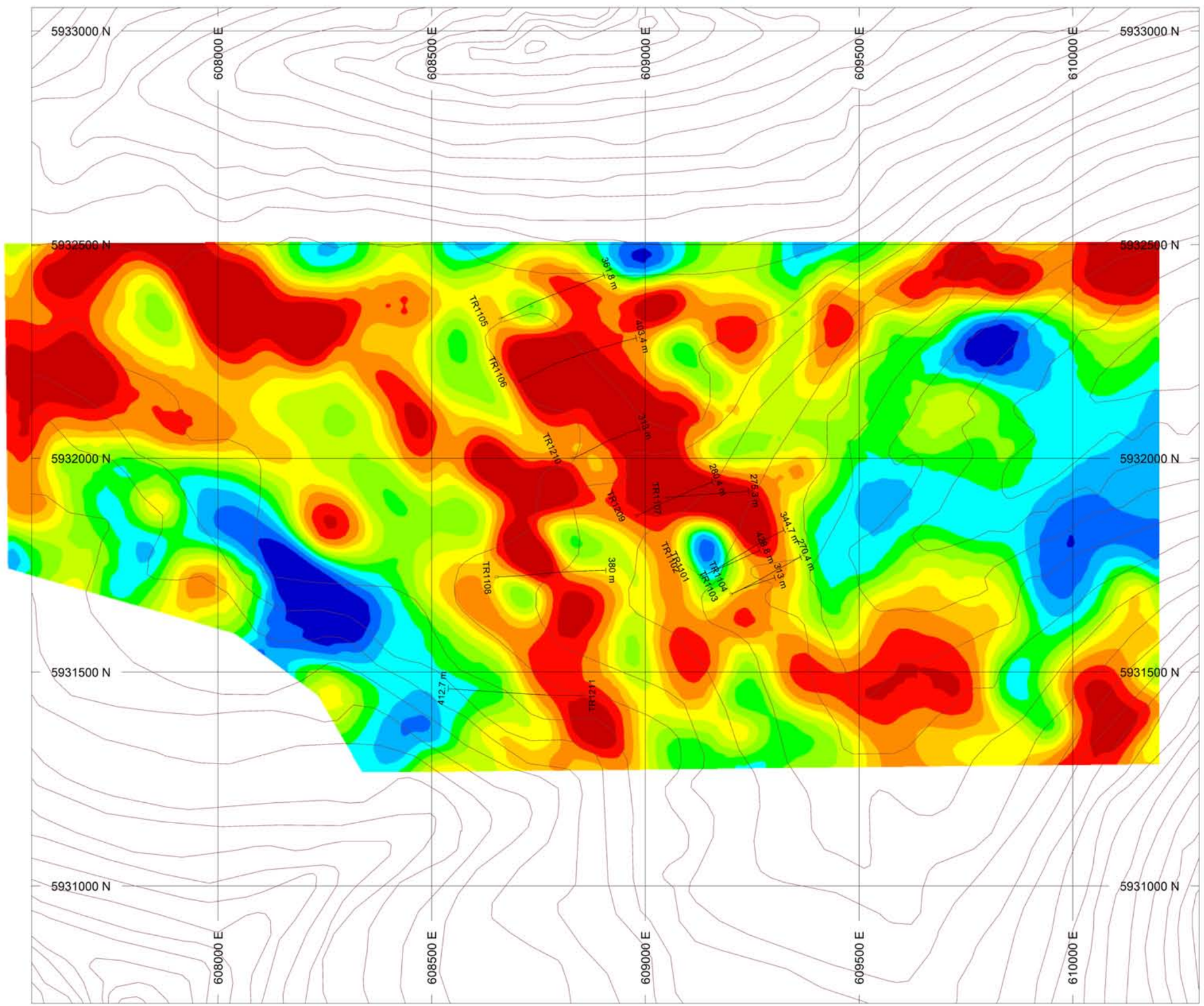
-100 0 100 200 300 400

NAD83 / UTM zone 9N

N
W E
S

Callinex Mines Inc.

Troitsa, BC
IP Chargeability at 50m
below Topography
20130415



IP Chargeability RANGE

20
16
12
10
8
6
3

SCALE 1 : 10000

(m)

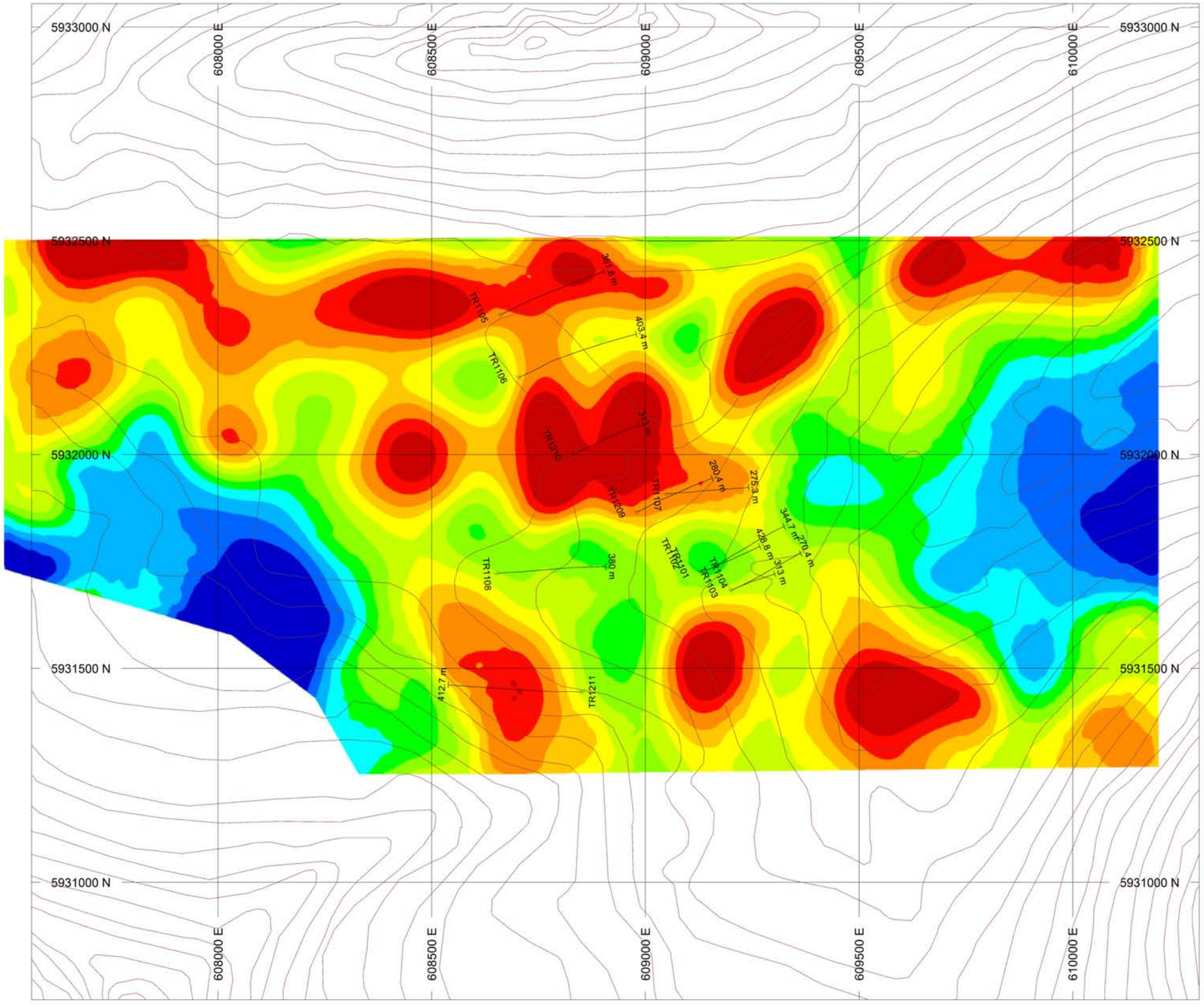
-100 0 100 200 300 400

NAD83 / UTM zone 9N

N
W E
S

Callinex Mines Inc.

Troitsa, BC
IP Chargeability at 100m below Topography
20130415



IP Chargeability RANGE

20
16
12
10
8
6
3

SCALE 1 : 10000

(m)

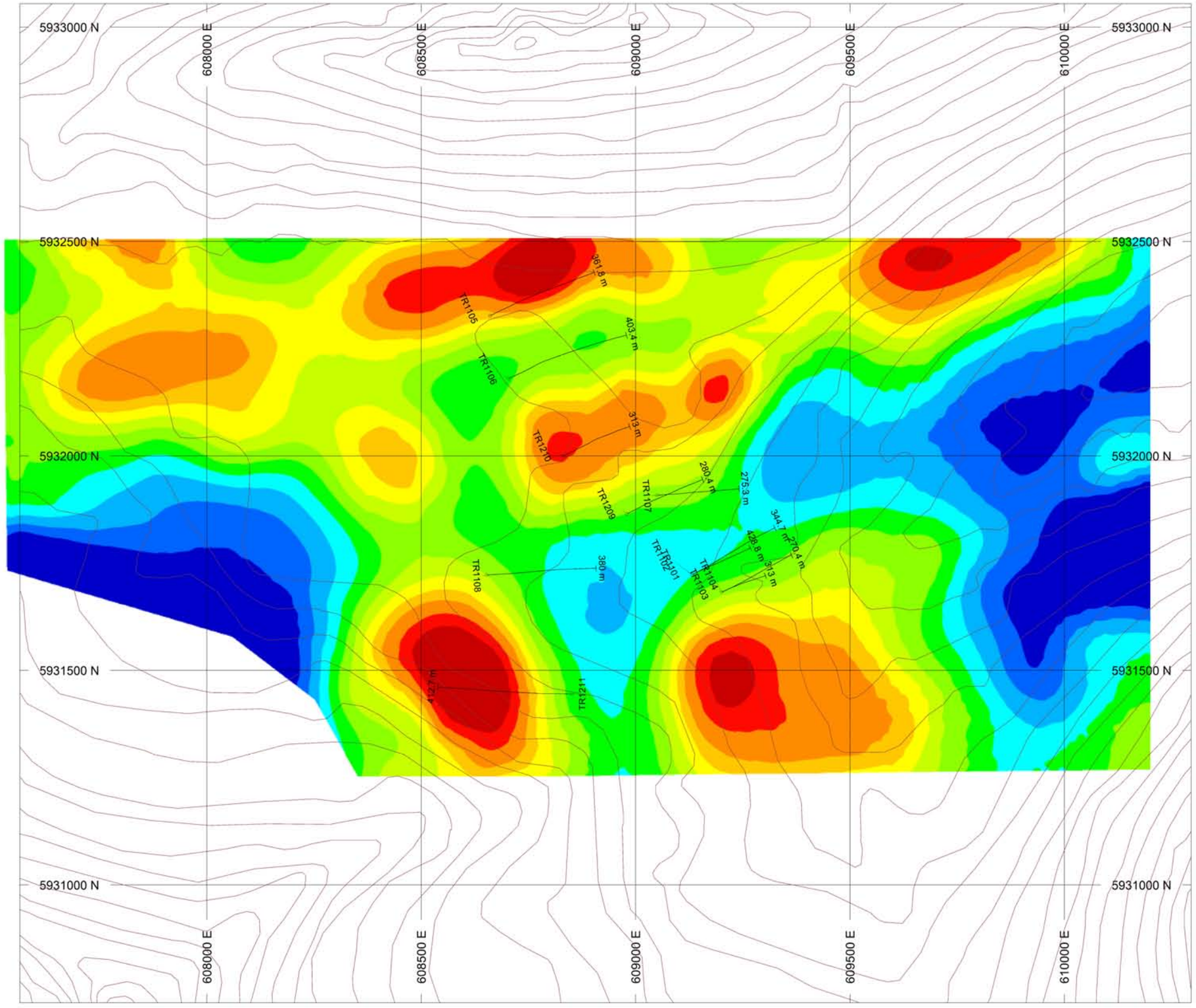
-100 0 100 200 300 400

NAD83 / UTM zone 9N

N
W E
S

Callinex Mines Inc.

Troitsa, BC
IP Chargeability at 200m below Topography
20130415



IP Chargeability RANGE

20
16
12
10
8
6
3

SCALE 1 : 10000

(m)

-100 0 100 200 300 400

NAD83 / UTM zone 9N

N
W E
S

Callinex Mines Inc.

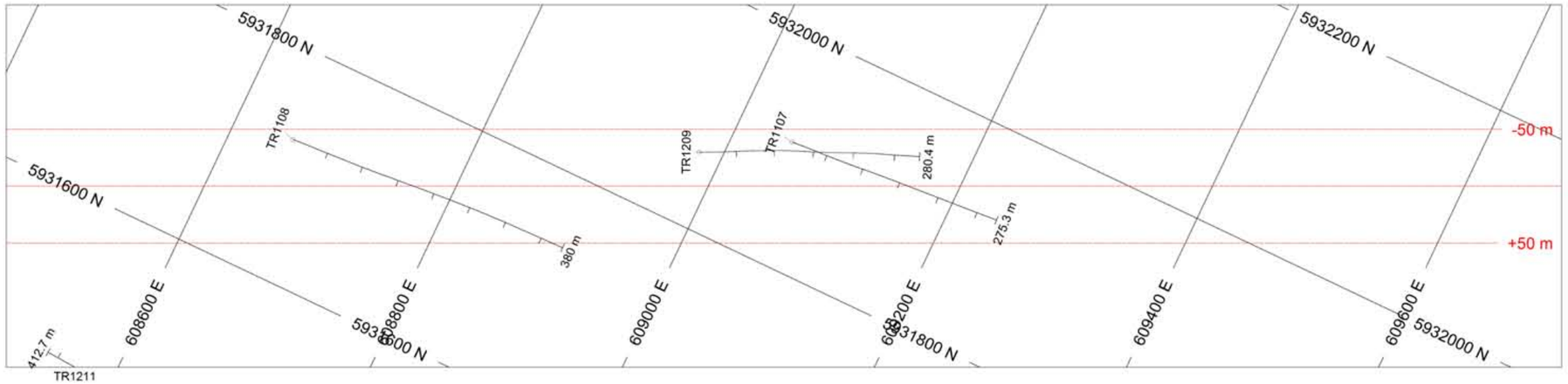
Troitsa, BC

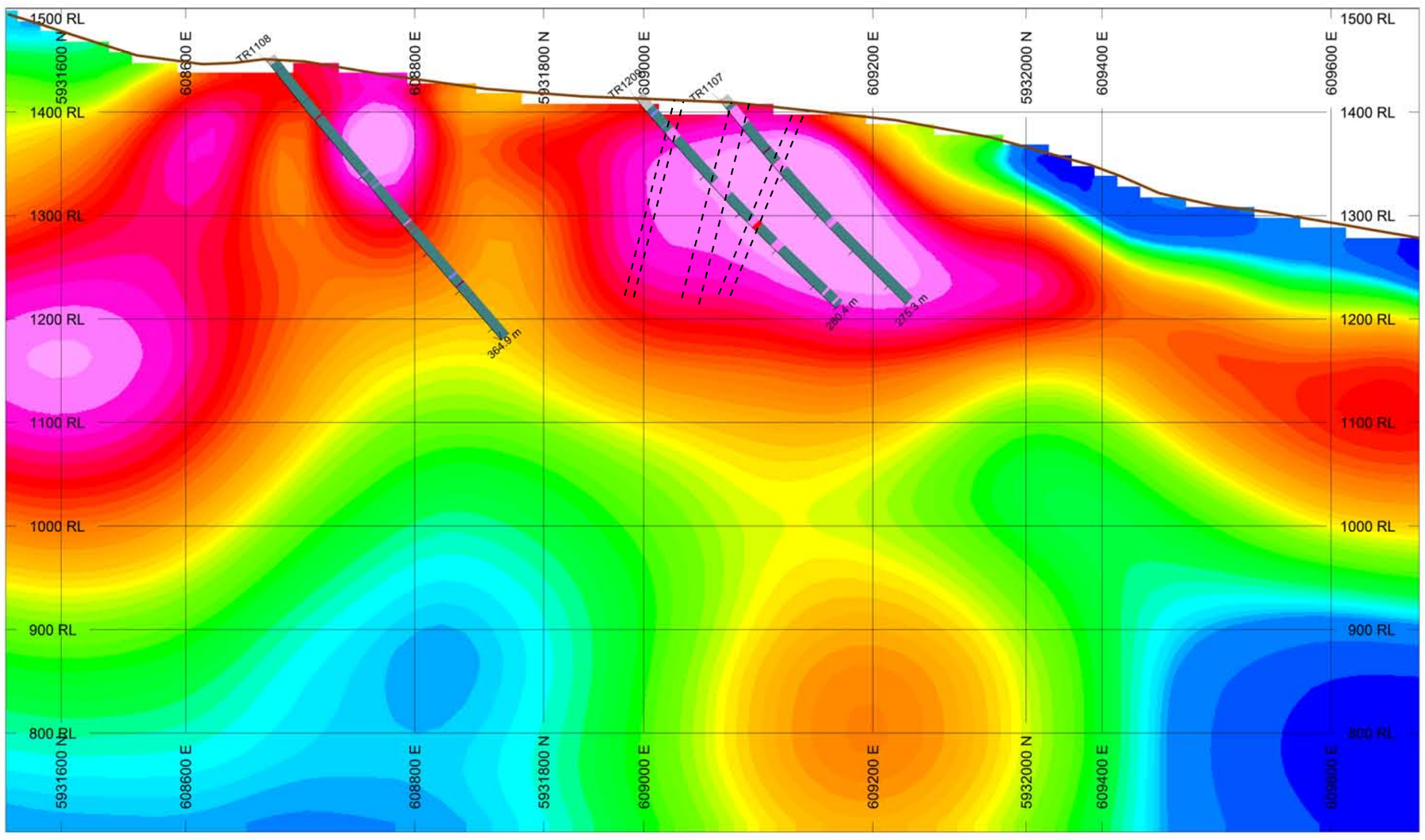
IP Chargeability at 300m below Topography

20130415

Appendix F

Diamond Drill Sections





Outline of Feldspar Porphyry dike

IP Chargeability

22
15
10
8
6
3

ROCK UNIT

- Fault
- Monzonite
- Porphyry
- Mafic Dike
- Basal Dike
- Dike
- Casing

SCALE 1 : 5000

(m)

-50 0 50 100 150 200

NAD83 / UTM zone 9N

AZIMUTH = 64.6°

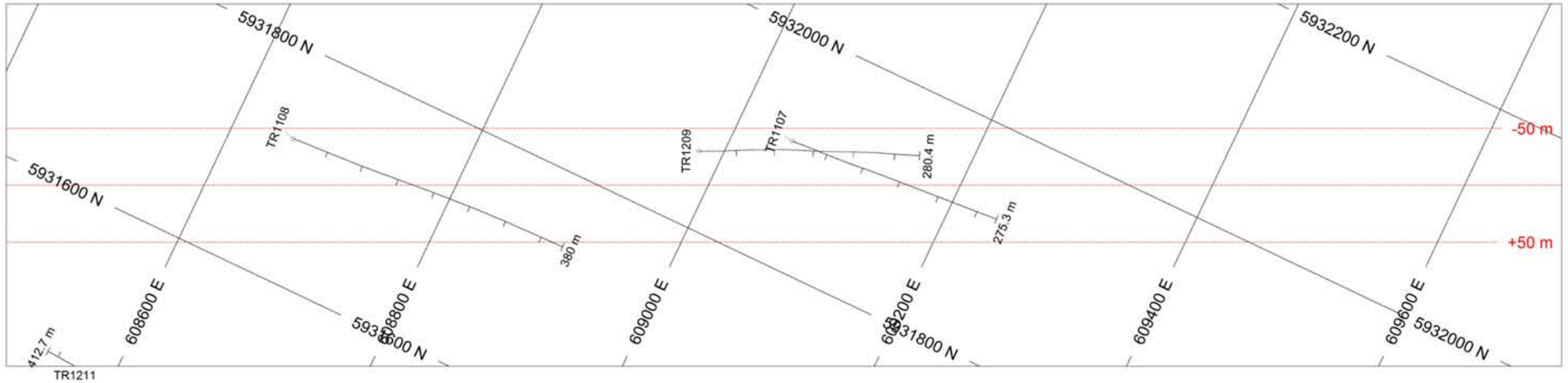
N W E S

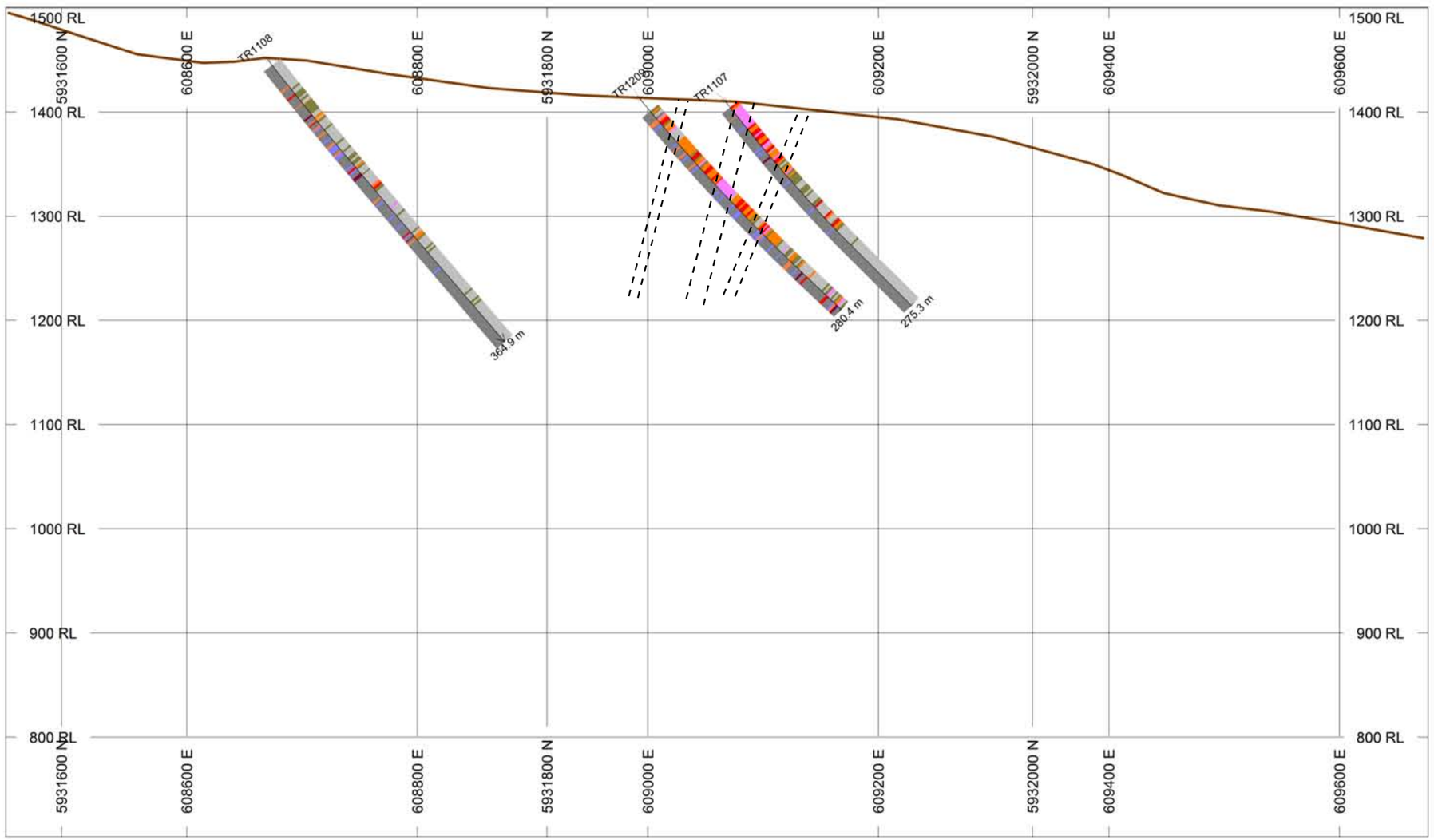
Callinex Mines Inc.

Troitsa, BC

2012 Exploration

20130430





Outline of Feldspar Porphyry dike

Cu ppm
- >3000
- <3000
- <2000
- <1000
- <500

Mo ppm
- >300
- <300
- <200
- <100
- <50

SCALE 1 : 5000

(m)

-50 0 50 100 150 200

NAD83 / UTM zone 9N

AZIMUTH = 64.6°

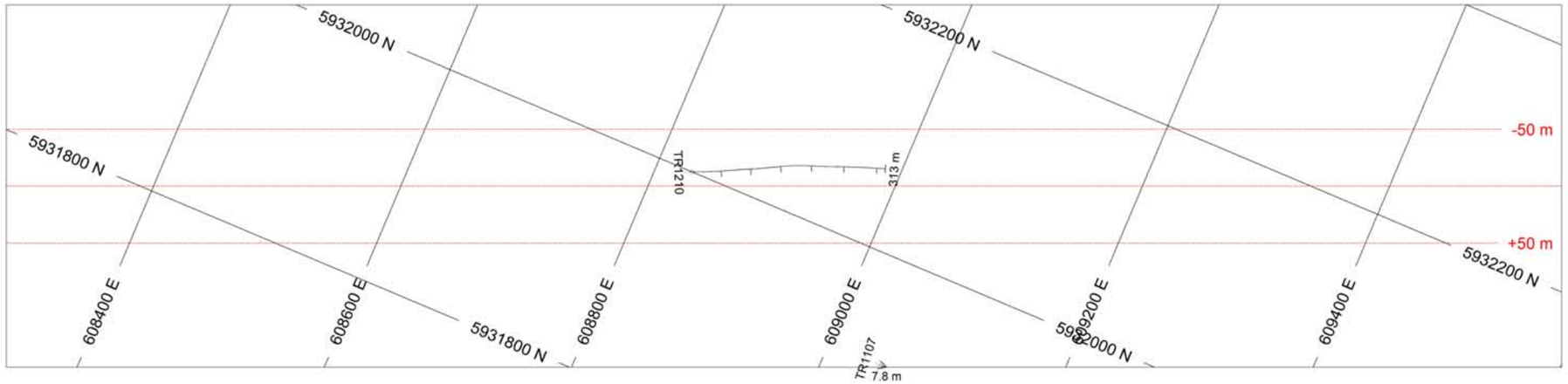
N W E S

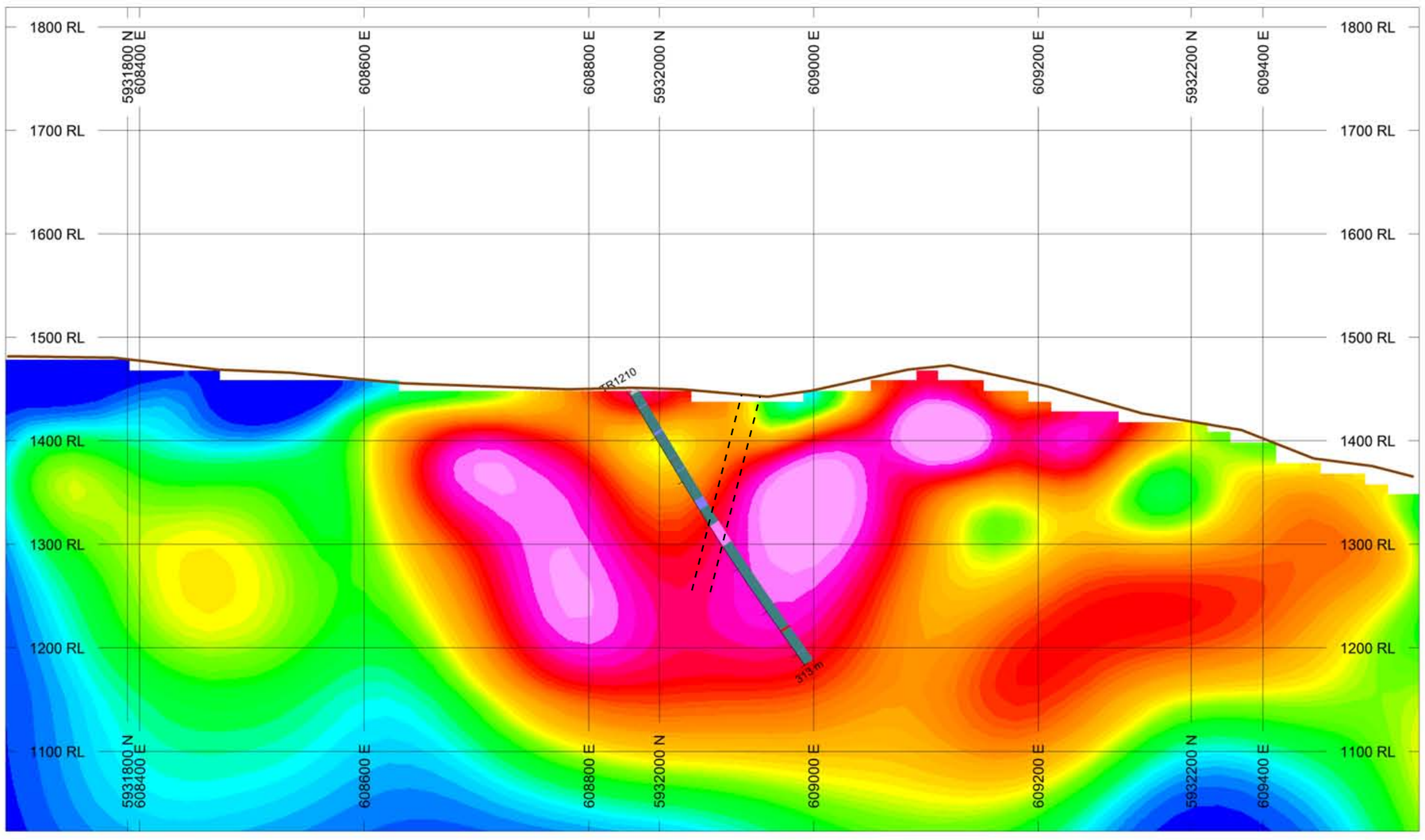
Callinex Mines Inc.

Troitsa, BC

2012 Exploration

20130430





Outline of Feldspar Porphyry dike

IP Chargeability

22
15
10
8
6
3

ROCK UNIT

- Fault
- Monzonite
- Porphyry
- Mafic Dike
- Basal Dike
- Dike
- Casing

SCALE 1 : 5000

(m)

-50 0 50 100 150 200

NAD83 / UTM zone 9N

AZIMUTH = 67.1°

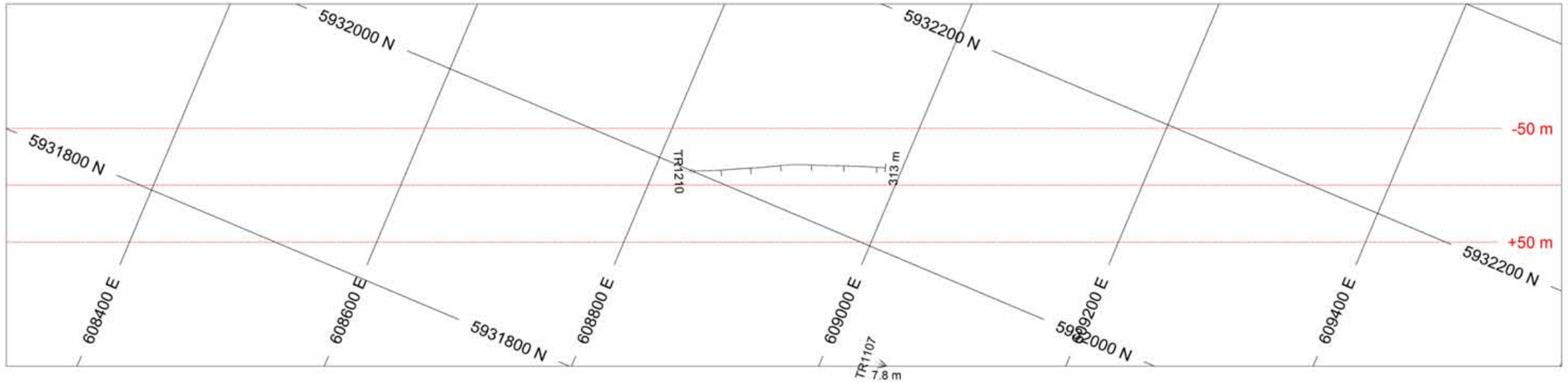
N W E S

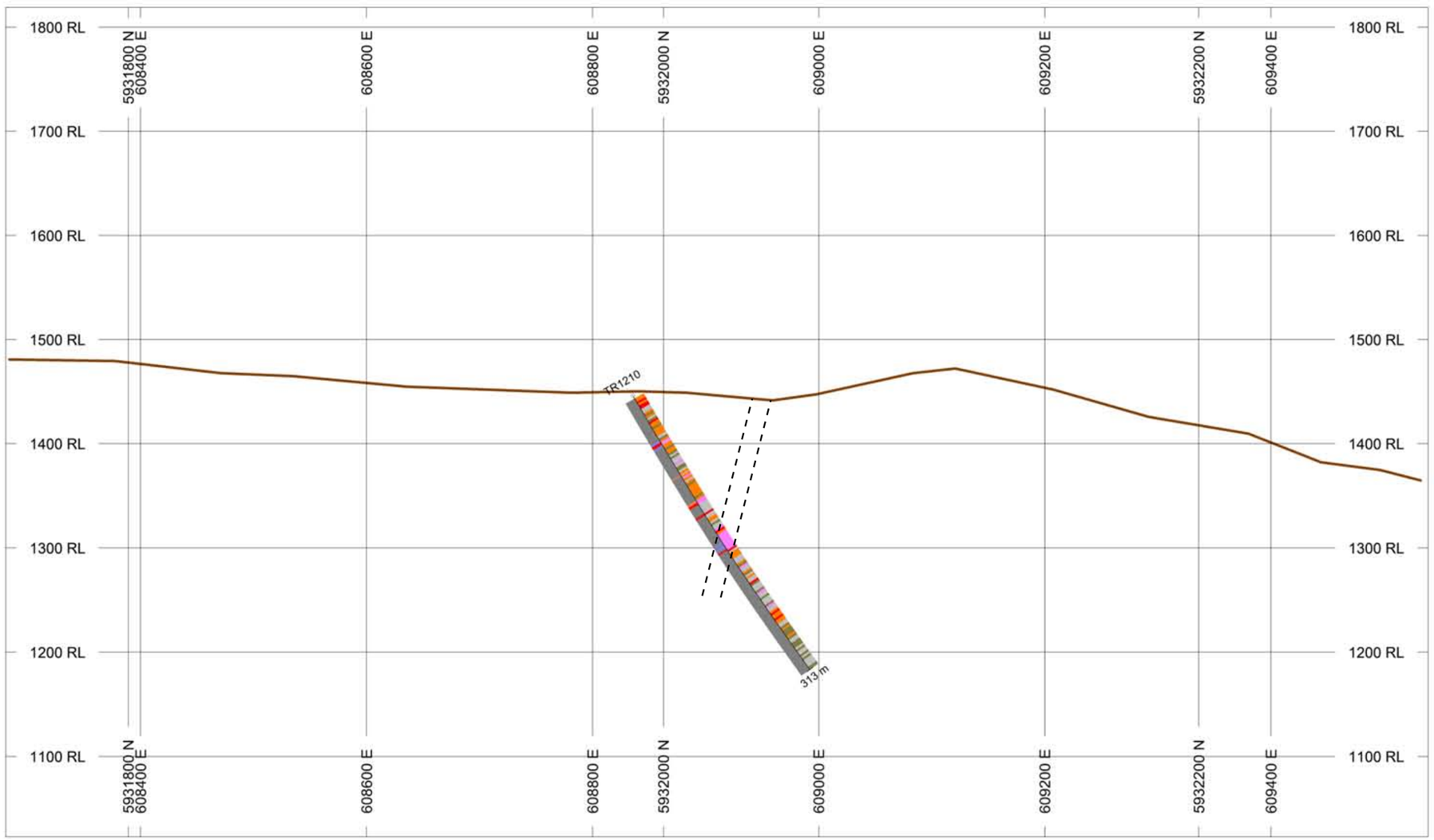
Callinex Mines Inc.

Troitsa, BC

2012 Exploration

20130430





Outline of Feldspar Porphyry dike

Cu ppm
- >3000
- <3000
- <2000
- <1000
- <500

Mo ppm
- >300
- <300
- <200
- <100
- <50

SCALE 1 : 5000

(m)

-50 0 50 100 150 200

NAD83 / UTM zone 9N

AZIMUTH = 67.1°

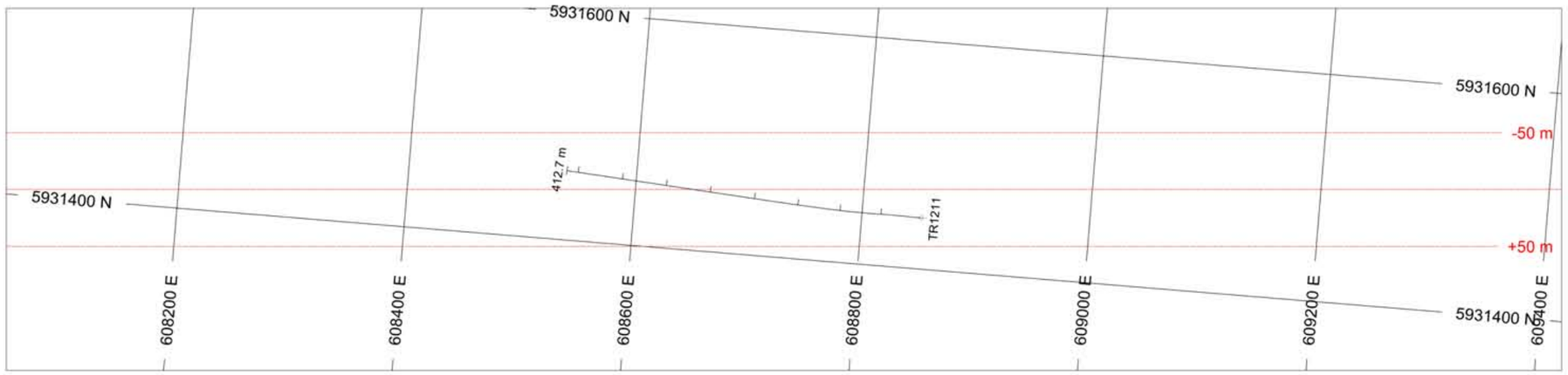
N W E S

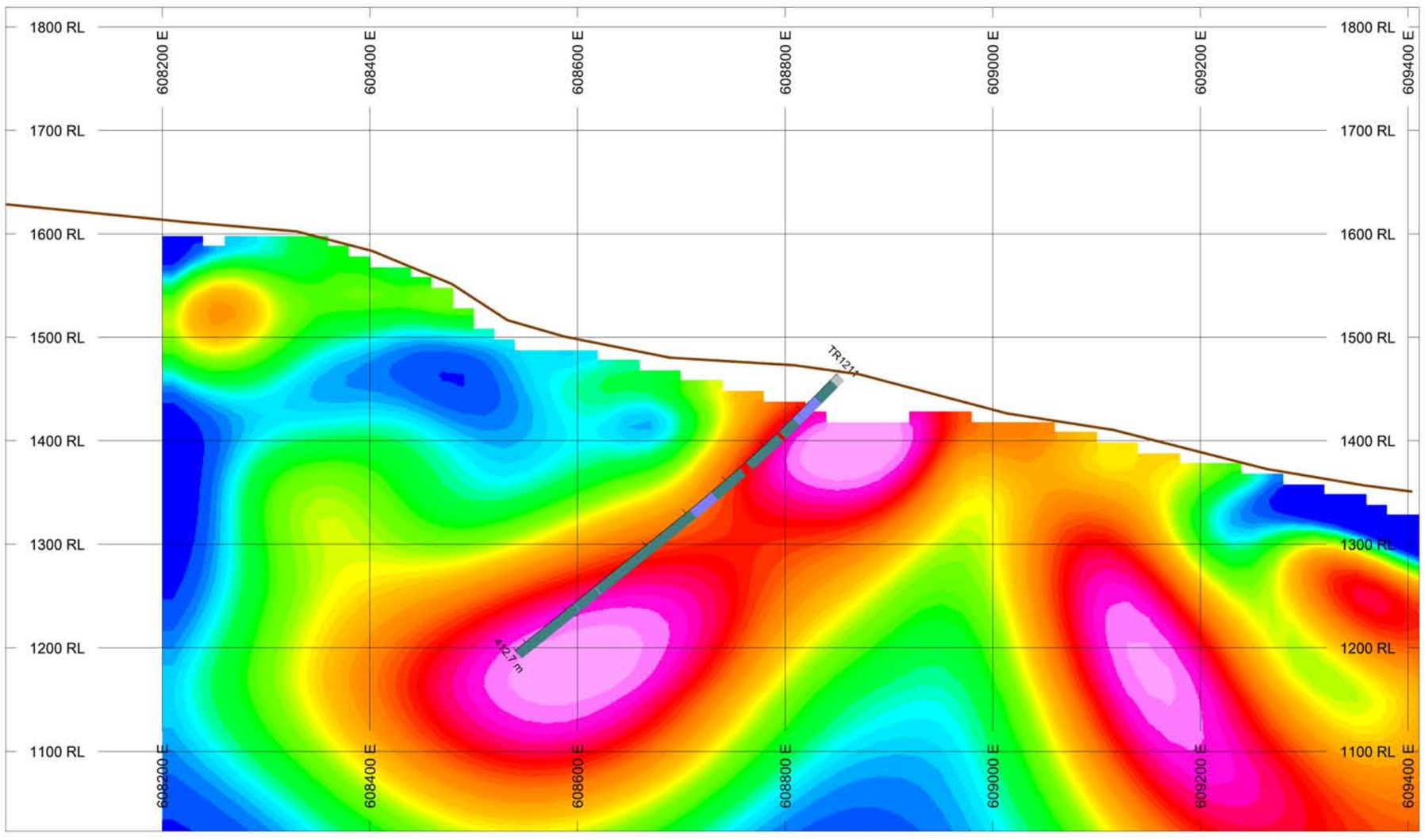
Callinex Mines Inc.

Troitsa, BC

2012 Exploration

20130430





IP Chargeability

22
15
10
8
6
3

ROCK UNIT

- Fault
- Monzonite
- Porphyry
- Mafic Dike
- Basal Dike
- Dike
- Casing

SCALE 1 : 5000

(m)

-50 0 50 100 150 200

NAD83 / UTM zone 9N

AZIMUTH = 85.3°

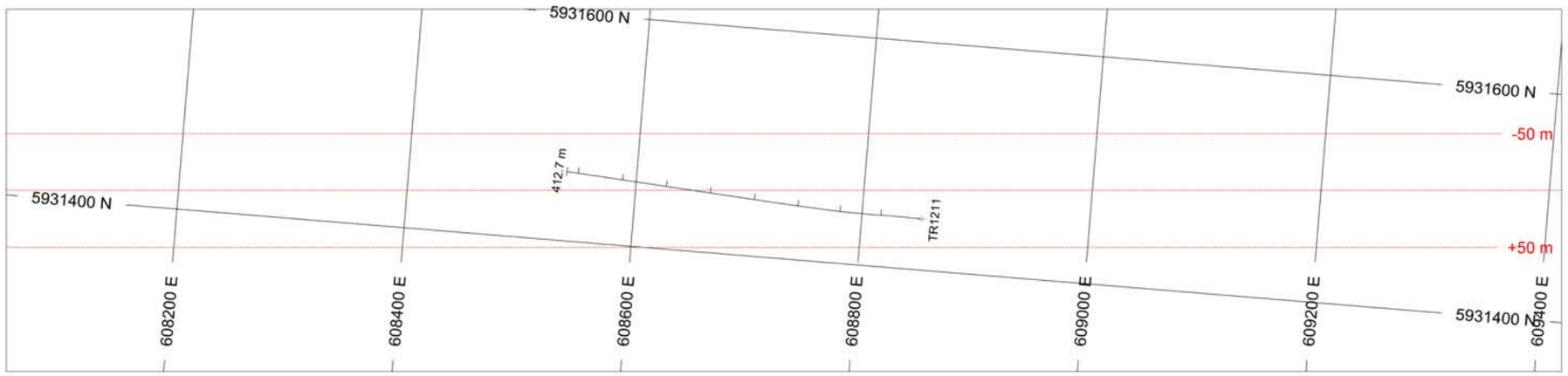
N W E S

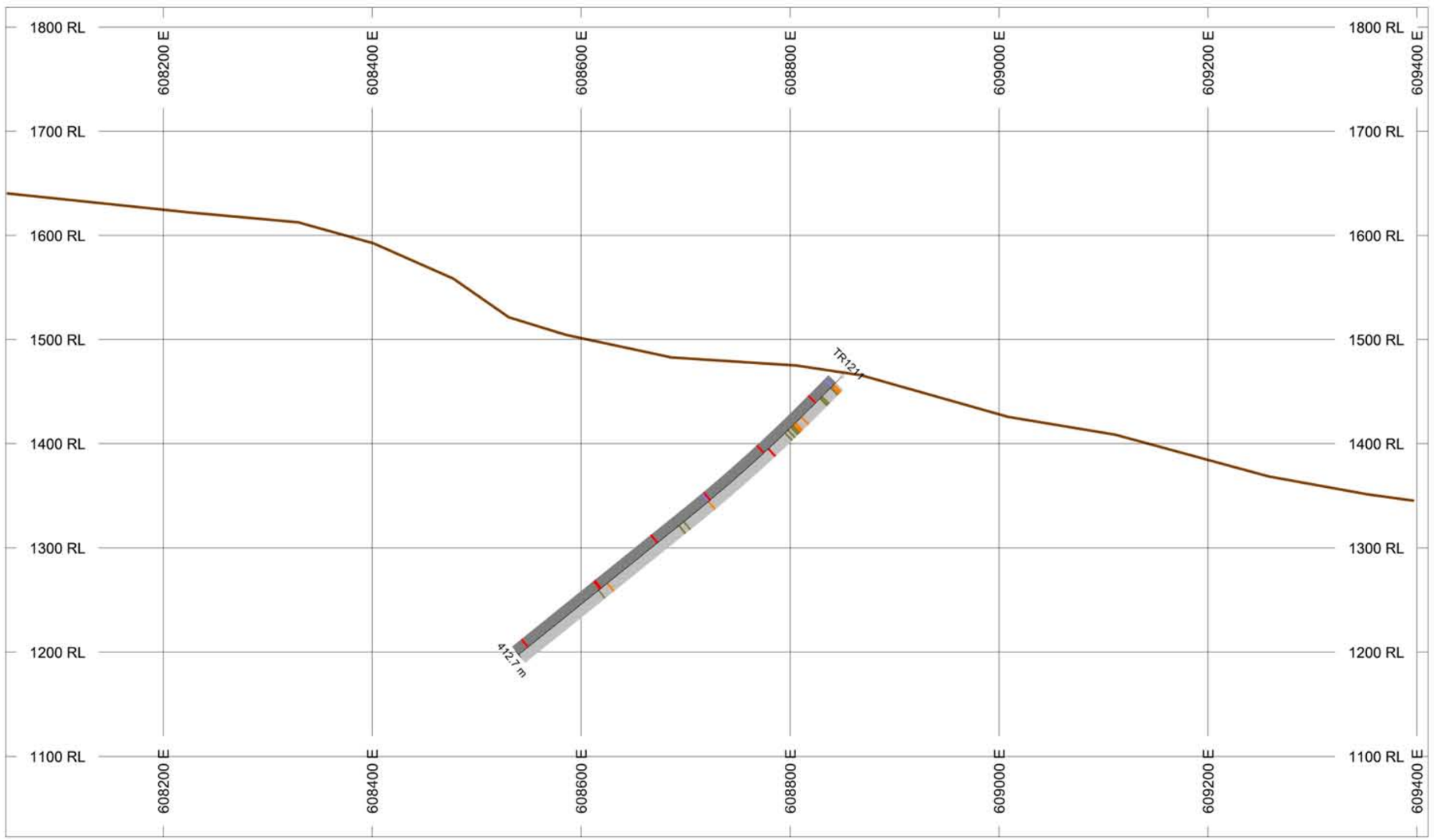
Callinex Mines Inc.

Troitsa, BC

2012 Exploration

20130430





Cu ppm

- >3000
- <3000
- <2000
- <1000
- <500

Mo ppm

- >300
- <300
- <200
- <100
- <50

SCALE 1 : 5000

(m)

-50 0 50 100 150 200

NAD83 / UTM zone 9N

AZIMUTH = 85.3°

N W E S

Callinex Mines Inc.

Troitsa, BC

2012 Exploration

20130430

Appendix G

Diamond Drill Assay Certificates

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By: Angie D'Amato
Receiving Lab: Canada-Smithers
Received: August 16, 2012
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

CLIENT JOB INFORMATION

Project: Troitsa
Shipment ID: TR-12-001
P.O. Number
Number of Samples: 144

SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage
DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	141	Crush, split and pulverize 250 g rock to 200 mesh			SMI
G601	144	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
1F05	144	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
G6Gr	2	Lead collection fire assay 30G fusion - Grav finish	30	Completed	VAN
7AR	3	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.
All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
G1-SMI	Prep Blank	<0.01	<0.005	0.20	11.54	3.73	117.6	20	3.0	4.3	593	19604	0.8	1.8	2.2	5.7	75.6	0.17	0.03	0.14	36
G1-SMI	Prep Blank	<0.01	<0.005	0.10	12.38	7.31	201.3	51	2.7	4.0	600	20073	0.9	1.7	5.1	5.5	64.2	0.33	0.04	0.08	37
1421551	Drill Core	1.30	0.005	1.27	29.26	5.64	95.0	61	4.6	15.2	611	43807	3.5	1.0	1.8	1.0	35.2	0.17	0.51	0.10	85
1421552	Drill Core	8.24	0.007	3.07	558.1	4.99	76.5	281	8.6	7.8	335	24759	1.6	4.2	5.6	12.7	24.2	0.19	0.39	0.11	59
1421553	Drill Core	6.43	0.008	13.05	1578	47.26	54.0	1786	8.4	8.4	348	22364	1.9	4.5	12.0	13.6	28.0	0.22	0.63	0.28	44
1421554	Drill Core	4.08	0.005	7.76	909.3	4.34	51.1	529	9.1	7.9	299	23614	0.8	4.4	7.0	12.4	34.6	0.13	0.46	0.65	46
1421555	Drill Core	8.85	<0.005	1.21	53.01	6.45	79.4	100	23.9	22.1	777	45773	1.4	0.7	1.1	0.7	133.0	0.14	0.44	0.18	88
1421556	Drill Core	6.42	<0.005	47.37	997.3	3.95	42.4	514	9.3	8.6	287	24009	1.6	3.9	5.8	10.4	39.9	0.10	0.52	0.53	48
1421557	Drill Core	7.38	0.028	190.9	>10000	16.04	124.2	3115	9.3	8.7	331	30146	20.8	5.9	36.3	11.0	37.3	1.18	1.20	5.67	45
1421558	Drill Core	7.93	0.005	163.1	1033	9.09	37.3	723	8.2	10.5	277	22267	0.5	5.1	8.4	11.2	33.9	0.16	0.23	2.11	47
1421559	Drill Core	8.26	0.013	8.00	2024	7.30	39.4	1083	8.2	8.3	281	22975	4.6	6.4	13.1	12.2	66.2	0.16	0.68	0.89	33
1421560	Drill Core	7.39	0.019	58.94	2007	7.02	43.3	1109	9.5	8.0	353	24457	2.3	6.2	9.6	12.3	88.8	0.14	0.55	0.60	42
1421561	Drill Core	7.13	0.006	30.45	578.2	2.07	29.6	346	8.1	6.5	326	23180	0.7	4.6	3.6	11.6	63.0	0.04	0.28	0.25	51
1421562	Drill Core	3.74	0.008	48.91	1376	75.60	51.8	854	7.4	7.3	411	23313	6.7	8.2	5.5	11.1	104.3	0.28	0.84	0.99	36
1421563	Drill Core	3.67	<0.005	1.59	11.21	12.40	76.2	264	1.5	10.8	732	33406	7.7	0.8	2.6	1.4	186.5	0.14	0.88	0.10	27
1421564	Drill Core	7.72	0.012	17.60	1427	18.16	46.1	731	7.6	9.1	413	23715	9.5	4.0	8.6	9.8	84.1	0.15	1.10	0.35	32
1421565	Drill Core	7.68	0.008	7.37	1416	2.81	36.9	838	8.9	9.1	309	23393	2.9	4.8	10.9	11.4	123.3	0.07	0.32	0.39	45
1421566	Drill Core	8.39	0.013	22.62	3370	30.68	58.1	2006	8.0	9.2	288	23093	1.7	6.4	12.2	11.1	132.1	0.51	0.76	0.51	37
1421567	Drill Core	5.22	<0.005	0.87	13.18	8.93	68.6	61	2.1	2.9	375	9681	0.9	0.9	3.0	2.7	175.9	0.72	0.37	0.03	3
1421568	Drill Core	4.99	<0.005	1.29	11.94	6.77	82.4	32	2.2	3.2	533	10948	2.8	1.8	0.8	2.6	101.6	0.70	0.34	<0.02	3
1421569	Drill Core	3.28	<0.005	1.69	10.44	5.95	65.2	21	1.7	2.8	324	8326	1.0	1.5	<0.2	2.5	109.7	0.61	0.23	0.05	3
1421570	Drill Core	3.30	<0.005	0.97	2.06	6.30	75.4	14	2.0	2.5	297	8441	0.7	1.1	0.4	2.6	133.5	0.74	0.18	0.02	3
1421571	Drill Core	3.00	<0.005	0.42	2.77	6.54	67.1	15	1.7	2.6	723	9469	0.8	1.1	1.7	2.6	143.4	0.64	0.22	<0.02	2
1421572	Drill Core	1.29	<0.005	3.85	16.60	10.28	58.6	148	2.3	4.0	949	10818	3.4	4.3	1.5	2.2	112.7	0.63	0.39	0.12	2
1421573	Drill Core	3.33	0.011	62.17	1777	8.54	39.4	1393	8.0	6.6	365	20557	2.4	5.8	7.2	13.7	246.1	0.18	0.46	0.36	36
1421574	Drill Core	3.28	<0.005	6.89	1252	1.93	30.7	650	8.7	8.2	315	22356	1.4	6.3	3.6	15.2	87.9	0.07	0.24	0.22	45
1421575	Drill Core	3.12	0.008	107.3	1382	4.60	33.5	744	8.8	9.0	306	21982	1.5	7.5	6.4	14.1	68.4	0.17	0.63	0.35	50
1421576	Drill Core	2.05	<0.005	3.97	1028	4.53	39.5	679	7.5	7.3	348	21036	2.9	4.6	6.0	14.7	70.8	0.30	0.38	0.26	39
1421577	Drill Core	3.47	0.007	7.19	1044	1.61	26.0	550	9.0	7.6	293	21282	0.7	4.5	5.2	15.5	38.2	0.46	0.24	0.31	48
1421578	Drill Core	3.33	0.007	13.10	1232	2.25	28.3	753	9.5	8.8	311	24549	1.2	5.9	8.3	14.3	40.4	0.06	0.25	0.27	54

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
G1-SMI	Prep Blank	5319	822	15.1	7.3	5172	181.5	1441	<1	9922	1081	5007	<0.1	2.4	0.33	226	0.021	<0.1	0.03	5.0	3.10
G1-SMI	Prep Blank	4907	766	13.4	7.7	5137	163.7	1365	<1	9318	848	4740	<0.1	2.3	0.33	374	0.030	<0.1	<0.02	4.8	3.03
1421551	Drill Core	13097	1792	21.7	5.2	15114	67.9	736	<1	18735	530	1690	0.2	5.2	0.05	1070	<0.005	<0.1	0.04	10.1	1.12
1421552	Drill Core	7250	671	13.6	21.2	7832	69.9	1187	<1	7962	769	2024	0.9	3.9	0.08	702	<0.005	<0.1	<0.02	5.3	1.28
1421553	Drill Core	8422	622	14.7	17.6	7492	61.6	726	2	8242	512	2139	2.4	2.8	0.09	2343	<0.005	0.7	0.06	5.0	1.77
1421554	Drill Core	8722	620	18.5	17.9	7241	54.6	48	<1	9014	558	1000	0.9	2.9	<0.02	2026	0.006	0.6	0.05	5.7	1.04
1421555	Drill Core	36909	1480	25.4	5.9	16367	131.2	49	2	25459	429	1873	0.2	5.9	0.05	641	<0.005	0.2	0.03	9.1	4.14
1421556	Drill Core	9120	683	17.6	18.0	7365	50.3	211	<1	8433	553	1131	0.4	3.0	0.03	2367	<0.005	0.9	0.10	5.5	1.27
1421557	Drill Core	11389	610	17.5	16.4	7150	40.5	256	2	8063	570	1234	10.4	2.9	0.04	11803	0.010	5.2	0.38	4.9	1.23
1421558	Drill Core	7226	612	13.3	18.0	7039	60.7	547	<1	7049	644	1772	0.7	3.0	0.07	2443	<0.005	0.7	0.97	4.6	1.15
1421559	Drill Core	10973	649	19.3	16.1	6558	106.9	165	<1	8230	375	1877	0.6	1.9	0.09	7182	0.016	1.0	0.33	4.5	2.54
1421560	Drill Core	18564	663	20.2	17.1	7163	57.3	144	<1	8511	432	1552	0.7	2.2	0.07	5063	0.009	0.9	0.15	5.1	1.74
1421561	Drill Core	11310	644	19.4	17.6	7466	44.7	144	<1	7974	611	1246	0.4	3.1	0.03	868	0.007	0.3	0.03	5.3	0.99
1421562	Drill Core	16190	729	19.0	14.6	6526	213.0	38	2	8946	434	1476	0.4	2.8	0.06	3258	0.024	0.5	0.07	4.8	2.24
1421563	Drill Core	32854	1804	27.7	1.1	8012	279.2	46	<1	13837	184	2590	0.1	3.1	0.11	5343	0.009	0.3	0.10	4.6	4.33
1421564	Drill Core	17127	729	19.8	13.2	7804	85.0	34	<1	8135	320	1563	0.5	2.4	0.06	4445	0.047	0.8	0.13	4.5	2.40
1421565	Drill Core	12130	665	17.6	17.8	7000	245.6	89	<1	8705	508	1449	0.7	2.6	0.06	2639	0.009	0.6	0.11	5.3	1.88
1421566	Drill Core	12617	665	16.2	14.7	6700	177.4	80	<1	8417	403	1629	6.8	2.6	0.08	3908	<0.005	1.3	0.09	4.9	2.66
1421567	Drill Core	22519	419	16.4	3.4	3022	779.7	<10	3	4253	190	2756	0.3	0.7	0.14	218	<0.005	<0.1	<0.02	1.3	3.19
1421568	Drill Core	22922	402	12.3	2.6	4932	262.7	<10	<1	3461	155	2904	0.2	0.7	0.16	465	0.008	<0.1	<0.02	1.1	2.73
1421569	Drill Core	18059	437	14.0	2.3	2900	691.6	<10	1	3226	135	2677	0.4	0.5	0.16	211	0.009	<0.1	<0.02	0.8	2.59
1421570	Drill Core	17387	391	14.1	2.1	4599	747.2	<10	2	3587	200	2895	0.4	0.7	0.15	221	0.021	<0.1	<0.02	1.1	2.90
1421571	Drill Core	21277	412	14.7	2.6	3050	483.0	<10	2	3441	167	2858	0.2	0.8	0.16	221	0.008	0.1	<0.02	1.1	3.01
1421572	Drill Core	18508	397	14.7	2.3	4725	256.1	<10	2	3137	113	2804	0.2	0.9	0.15	<200	0.010	<0.1	<0.02	1.0	2.85
1421573	Drill Core	16312	587	17.4	14.3	6969	178.4	192	<1	6624	402	1844	5.2	2.6	0.09	2257	0.013	0.9	0.12	3.9	2.18
1421574	Drill Core	11408	631	17.8	17.2	6610	225.8	359	1	7621	563	2258	1.6	2.8	0.11	1584	<0.005	0.4	0.07	4.7	1.96
1421575	Drill Core	10358	648	16.0	17.8	6631	197.0	718	<1	7005	572	3029	4.3	3.2	0.15	2175	0.005	0.5	0.09	4.6	2.10
1421576	Drill Core	12041	630	18.9	17.1	5452	156.6	375	<1	7570	538	2435	1.3	2.8	0.13	1201	<0.005	0.3	0.04	4.1	2.38
1421577	Drill Core	7712	647	15.9	19.0	6279	87.7	651	<1	6947	585	2425	3.9	2.8	0.11	1104	<0.005	0.3	0.02	4.5	1.66
1421578	Drill Core	8316	694	16.4	21.0	6875	114.3	853	<1	7567	701	2859	3.8	3.1	0.14	1484	0.008	1.0	0.06	5.0	1.87

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Ag	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	50	0.001
G1-SMI	Prep Blank	0.1	0.07	0.81	41.6	0.7	<0.05	1.3	6.03	28.4	0.02	<0.001	0.4	30.9	<0.01	<0.002		
G1-SMI	Prep Blank	0.2	0.09	0.53	41.5	0.5	<0.05	1.0	5.27	24.8	<0.02	<0.001	0.4	30.1	<0.01	<0.002		
1421551	Drill Core	0.1	0.09	0.02	9.7	0.4	<0.05	2.4	12.48	50.2	0.04	0.005	0.2	27.9	<0.01	<0.002		
1421552	Drill Core	0.2	0.09	0.21	16.0	0.6	<0.05	1.2	6.76	26.3	<0.02	0.002	0.3	7.7	<0.01	<0.002		
1421553	Drill Core	<0.1	0.03	0.15	18.5	0.5	<0.05	0.8	6.74	27.8	0.06	<0.001	0.5	7.1	<0.01	<0.002		
1421554	Drill Core	<0.1	<0.02	<0.02	5.3	0.5	<0.05	0.5	8.62	36.9	0.03	0.005	0.2	8.6	<0.01	<0.002		
1421555	Drill Core	<0.1	0.05	0.02	13.2	0.4	<0.05	1.8	12.13	51.3	0.03	<0.001	0.2	24.4	0.01	<0.002		
1421556	Drill Core	<0.1	0.03	0.07	7.6	0.5	<0.05	0.7	8.07	34.2	0.03	0.008	0.6	8.2	0.01	<0.002		
1421557	Drill Core	<0.1	0.04	0.10	8.9	1.0	<0.05	0.7	8.59	32.9	0.26	0.014	0.3	9.2	0.03	<0.002		1.095
1421558	Drill Core	<0.1	0.05	0.16	14.6	0.4	<0.05	0.8	6.00	24.3	0.02	0.015	0.6	7.8	0.03	<0.002		
1421559	Drill Core	<0.1	0.05	0.07	15.4	0.3	<0.05	0.7	8.70	35.9	0.06	<0.001	0.4	9.8	<0.01	<0.002		
1421560	Drill Core	<0.1	0.04	0.03	13.3	0.3	<0.05	0.6	9.92	38.8	0.07	0.005	0.2	10.8	0.01	<0.002		
1421561	Drill Core	<0.1	0.03	0.03	8.7	0.4	<0.05	0.5	10.29	39.3	0.03	0.007	<0.1	9.9	<0.01	<0.002		
1421562	Drill Core	<0.1	0.03	<0.02	10.8	0.4	<0.05	0.8	9.83	36.9	0.04	0.002	0.2	11.1	<0.01	<0.002		
1421563	Drill Core	<0.1	0.03	<0.02	13.5	0.3	<0.05	2.7	12.30	57.9	0.02	<0.001	1.0	14.3	<0.01	<0.002		
1421564	Drill Core	<0.1	0.04	<0.02	10.6	0.3	<0.05	0.9	8.69	37.1	0.06	<0.001	0.6	8.3	<0.01	<0.002		
1421565	Drill Core	<0.1	0.03	0.02	10.7	0.3	<0.05	0.5	8.64	33.2	0.06	0.003	0.3	9.5	<0.01	<0.002		
1421566	Drill Core	<0.1	0.03	0.02	12.0	0.4	<0.05	0.7	7.43	29.7	0.11	0.006	0.1	8.8	<0.01	<0.002		
1421567	Drill Core	<0.1	0.11	<0.02	21.2	<0.1	<0.05	4.3	1.89	30.0	<0.02	0.002	0.5	1.6	<0.01	<0.002		
1421568	Drill Core	<0.1	0.12	<0.02	18.5	<0.1	<0.05	5.2	2.40	22.4	<0.02	<0.001	0.3	2.3	<0.01	<0.002		
1421569	Drill Core	<0.1	0.12	<0.02	18.3	<0.1	<0.05	4.5	1.90	26.0	<0.02	0.003	0.2	1.1	<0.01	<0.002		
1421570	Drill Core	<0.1	0.12	0.02	19.4	<0.1	<0.05	5.1	1.96	26.6	<0.02	<0.001	0.3	1.2	<0.01	<0.002		
1421571	Drill Core	<0.1	0.08	<0.02	18.8	<0.1	<0.05	4.3	1.88	26.4	<0.02	0.001	0.5	1.1	<0.01	<0.002		
1421572	Drill Core	<0.1	0.10	<0.02	20.7	<0.1	<0.05	4.0	2.15	25.3	<0.02	0.002	0.4	1.5	<0.01	<0.002		
1421573	Drill Core	<0.1	0.03	0.05	15.4	0.2	<0.05	0.6	8.38	33.5	0.06	0.007	0.1	8.5	0.01	<0.002		
1421574	Drill Core	<0.1	0.02	0.08	20.1	0.3	<0.05	0.5	8.99	37.5	0.07	<0.001	0.2	9.1	<0.01	<0.002		
1421575	Drill Core	<0.1	0.03	0.17	28.5	0.4	<0.05	0.6	7.63	31.9	0.04	0.011	<0.1	8.3	0.02	<0.002		
1421576	Drill Core	<0.1	0.03	0.09	21.3	0.5	<0.05	0.7	9.43	37.8	0.05	0.001	0.2	9.2	<0.01	<0.002		
1421577	Drill Core	<0.1	0.04	0.16	22.5	0.5	<0.05	0.7	7.61	31.8	0.04	0.001	0.2	9.7	<0.01	<0.002		
1421578	Drill Core	<0.1	0.05	0.19	26.1	0.6	<0.05	0.9	7.81	30.3	0.04	<0.001	0.3	9.1	<0.01	<0.002		

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Suite 1110 - 555 W. Hastings St.
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Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421579	Drill Core	3.08	0.005	102.0	1569	2.11	26.9	844	10.5	9.4	292	24747	0.8	5.2	5.6	12.8	46.7	0.15	0.22	0.87	54
1421580	Drill Core	3.12	0.008	48.70	1204	2.27	24.7	579	8.2	7.8	283	22606	0.9	5.4	2.3	12.2	43.4	0.05	0.27	0.38	51
1421581	Drill Core	2.57	0.009	91.89	1234	1.90	26.9	627	9.6	8.9	298	24026	1.3	5.3	9.8	11.6	43.9	0.36	0.56	0.30	50
1421582	Drill Core	3.28	<0.005	8.97	960.5	2.54	24.3	494	8.1	9.0	262	22880	1.2	5.3	5.4	12.3	29.9	0.07	0.08	0.27	53
1421583	Drill Core	3.14	0.015	9.47	2015	2.13	26.2	950	8.9	8.5	275	23220	1.1	5.4	12.0	11.0	37.7	4.29	0.14	0.42	54
1421584	Drill Core	3.23	0.013	5.44	2034	6.87	26.8	924	8.4	8.7	275	22995	2.1	5.9	8.3	11.3	95.4	0.13	0.39	0.39	49
1421585	Drill Core	3.29	<0.005	3.79	984.2	2.32	28.4	438	9.7	9.5	308	22446	2.6	4.9	3.4	10.1	99.3	0.07	0.80	0.19	39
1421586	Drill Core	3.09	0.013	180.0	1905	7.25	28.6	997	8.4	9.4	242	23707	3.0	18.7	20.3	9.1	39.2	0.14	1.98	0.51	47
1421587	Drill Core	3.17	0.006	43.08	1595	2.31	25.6	773	7.9	7.8	231	20975	2.0	5.9	8.0	10.0	30.3	0.11	0.19	0.27	47
1421588	Drill Core	3.32	0.017	58.65	4737	2.41	51.3	1109	9.9	11.2	226	23953	4.7	6.6	16.2	10.8	23.1	0.28	0.10	0.47	49
1421589	Drill Core	2.67	<0.005	4.38	571.6	1.95	19.9	305	7.6	6.8	229	20309	1.4	4.4	3.3	10.4	25.2	0.04	0.11	0.12	48
1421590	Drill Core	3.62	0.012	16.93	1941	2.49	30.9	850	8.0	6.7	264	20177	2.0	6.5	6.2	11.1	37.9	0.12	0.37	0.33	37
1421591	Drill Core	2.62	0.006	11.05	1474	2.54	27.0	806	8.6	7.7	289	21472	1.8	6.5	4.1	10.6	66.8	0.10	0.19	0.30	42
1421592	Drill Core	3.20	0.009	11.31	2521	3.20	26.1	1500	6.7	7.0	275	20205	1.8	6.4	14.5	14.0	76.1	0.16	0.22	1.46	32
1421593	Drill Core	4.11	0.012	10.43	2264	3.43	36.4	864	8.2	7.5	256	21085	2.0	4.9	19.6	11.4	54.4	0.25	0.26	0.34	42
1421594	Drill Core	3.80	<0.005	20.03	1226	1.70	21.0	420	7.1	6.0	210	19057	3.8	4.8	0.7	10.7	25.9	0.05	0.11	0.17	41
1421595	Drill Core	3.99	<0.005	5.21	1093	3.09	19.7	650	7.2	6.3	208	19795	5.6	5.5	3.9	12.3	27.0	0.05	0.15	0.34	45
1421596	Drill Core	4.04	0.007	6.14	1459	5.16	26.4	1383	6.7	6.7	228	19178	2.2	5.0	7.5	11.3	53.3	0.17	0.67	1.09	41
1421597	Rock Pulp	0.10	4.700	1165	9981	85.09	92.3	>100000	12.2	11.7	577	28892	189.4	2.3	4679	2.1	13.1	8.19	117.5	3.16	27
1421598	Drill Core	3.99	0.018	37.23	2650	3.72	29.3	1886	7.9	10.4	272	22285	2.3	5.3	15.8	11.3	98.3	0.20	0.60	0.99	40
1421599	Drill Core	3.93	0.009	22.97	1320	1.71	22.1	696	7.7	7.6	224	21101	1.6	5.3	5.1	10.8	72.9	0.04	0.38	0.20	46
1421600	Drill Core	3.85	<0.005	6.42	1016	1.59	21.3	476	7.4	7.4	243	21453	1.8	4.3	5.0	10.1	86.1	0.06	0.27	0.22	46
1421601	Drill Core	1.92	0.011	40.05	2240	5.32	29.1	1376	8.8	15.4	326	25316	2.7	5.2	13.8	10.3	98.0	0.16	0.89	0.71	47
1421602	Drill Core	4.33	0.026	38.91	5694	47.29	62.1	3618	9.9	13.1	301	23870	5.8	3.7	33.4	9.3	71.9	0.66	1.34	2.29	17
1421603	Drill Core	4.18	0.033	13.09	3675	9.72	44.0	2524	7.0	8.3	283	21974	5.1	3.8	15.4	9.0	49.5	0.42	1.32	6.72	18
1421604	Drill Core	4.34	0.023	34.72	3320	4.70	45.8	2064	7.6	10.0	272	22551	7.2	3.4	25.5	9.6	46.2	0.23	0.42	1.72	20
1421605	Drill Core	4.69	0.019	91.98	4725	6.83	50.0	6608	8.8	16.9	279	22016	6.4	4.0	39.5	9.5	48.9	0.34	0.77	7.42	14
1421606	Drill Core	4.07	0.098	27.72	5534	9.66	49.5	3342	7.0	12.3	260	18425	4.7	5.4	31.4	9.5	40.9	0.51	1.63	4.57	10
1421607	Drill Core	4.43	0.052	21.31	5939	67.45	63.6	3201	6.3	11.0	428	18381	11.5	10.4	46.7	10.0	41.3	0.79	7.91	1.74	9
1421608	Drill Core	3.95	0.069	66.95	>10000	130.9	119.9	8312	10.4	14.6	481	28830	17.6	7.8	114.8	9.4	38.9	1.75	13.86	9.00	6

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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421579	Drill Core	7377	685	18.3	17.3	7348	137.9	681	<1	8056	570	2497	1.5	2.6	0.12	2255	0.009	0.7	0.07	5.5	1.75
1421580	Drill Core	7820	671	15.6	19.7	6063	100.2	855	<1	6519	676	2753	1.6	2.4	0.14	1519	<0.005	0.4	0.03	4.9	1.88
1421581	Drill Core	10741	673	19.0	18.3	7152	70.6	467	<1	7589	580	1988	1.1	2.7	0.08	1548	<0.005	0.4	0.03	5.4	1.58
1421582	Drill Core	5012	602	12.1	20.5	6819	88.4	1332	<1	7229	783	3678	2.4	2.5	0.18	1394	<0.005	0.5	0.07	5.0	2.23
1421583	Drill Core	7349	590	13.9	18.4	7118	82.6	1127	2	7705	619	3482	3.2	2.9	0.17	2390	<0.005	0.9	0.06	5.5	2.28
1421584	Drill Core	9453	658	14.2	17.6	6875	108.6	740	<1	7580	503	3064	1.7	2.8	0.15	2503	<0.005	0.3	0.10	4.6	2.02
1421585	Drill Core	14545	686	17.4	15.5	5262	90.2	239	4	8320	489	2090	3.8	3.2	0.09	1517	<0.005	0.4	0.03	4.2	2.96
1421586	Drill Core	7602	602	13.0	16.2	6541	83.7	828	1	7556	569	2677	3.4	2.6	0.13	3466	0.029	0.9	0.17	4.6	1.88
1421587	Drill Core	6695	605	11.8	15.7	6185	65.3	896	<1	6903	607	2753	4.5	2.7	0.13	1899	<0.005	0.7	0.10	4.2	1.68
1421588	Drill Core	6234	610	10.6	17.7	6533	59.4	1080	<1	7104	653	3232	4.1	2.8	0.14	5712	<0.005	1.7	0.15	4.5	1.75
1421589	Drill Core	7022	596	10.8	16.5	5497	62.8	831	<1	6373	705	2616	3.1	2.5	0.12	776	0.012	<0.1	0.07	3.7	1.45
1421590	Drill Core	11194	648	17.2	15.1	6022	49.3	274	<1	7757	439	1711	3.8	2.4	0.06	1710	<0.005	0.5	0.12	4.1	2.01
1421591	Drill Core	16637	593	15.8	14.7	5833	113.8	282	<1	7946	505	2051	10.6	2.9	0.09	1586	<0.005	0.3	0.17	4.1	2.11
1421592	Drill Core	12672	552	15.7	12.7	5414	90.6	192	<1	7226	440	1887	15.8	2.4	0.07	3212	<0.005	1.1	0.42	3.7	2.45
1421593	Drill Core	9709	610	14.5	15.8	5974	87.1	508	<1	6852	588	2361	6.6	3.0	0.09	2674	<0.005	0.5	0.10	4.1	1.99
1421594	Drill Core	6991	555	10.2	14.8	5541	54.9	700	<1	5998	531	2027	9.9	2.2	0.08	1296	<0.005	0.2	0.03	3.7	1.40
1421595	Drill Core	6529	544	11.2	16.0	6245	67.8	949	<1	6878	679	2740	8.8	2.2	0.10	1209	<0.005	0.3	0.03	4.1	1.44
1421596	Drill Core	9024	569	13.7	14.1	5689	116.4	627	2	6536	459	2360	4.8	2.3	0.10	1490	0.020	0.2	0.04	3.7	1.95
1421597	Rock Pulp	5620	526	6.5	11.4	3946	137.4	56	4	7637	495	1808	10.9	3.5	0.08	10174	0.586	3.5	0.77	2.5	0.70
1421598	Drill Core	13087	607	18.5	13.8	6445	141.0	144	<1	8293	381	1774	2.7	2.7	0.07	3286	0.009	1.0	0.24	4.4	1.88
1421599	Drill Core	7888	583	16.5	16.8	6728	152.6	514	<1	7007	462	2437	5.9	3.1	0.11	1374	0.008	0.6	0.08	4.2	1.65
1421600	Drill Core	8771	595	13.9	16.1	6697	224.4	627	3	6793	609	2626	2.7	2.9	0.11	1037	<0.005	0.1	0.11	4.1	1.97
1421601	Drill Core	14730	676	14.4	15.6	7182	196.2	154	<1	8900	423	2139	5.5	3.0	0.08	4104	<0.005	0.9	0.43	4.6	2.51
1421602	Drill Core	20008	700	10.2	8.2	7003	125.1	12	<1	6976	276	1770	1.3	2.3	0.08	6850	0.033	2.3	0.22	2.7	1.35
1421603	Drill Core	15664	653	9.9	8.7	6783	186.0	12	<1	6147	377	2168	1.7	2.2	0.10	4095	0.033	1.0	0.21	2.4	1.32
1421604	Drill Core	15020	729	11.4	10.0	6993	134.4	15	<1	6538	352	2000	1.6	2.1	0.08	3649	0.019	1.2	0.24	2.8	1.43
1421605	Drill Core	15710	736	11.7	7.6	7333	157.2	<10	2	6054	337	2385	1.0	2.2	0.12	7313	0.010	2.6	3.20	2.4	1.37
1421606	Drill Core	14399	671	10.2	7.0	6730	163.4	28	<1	4345	302	2048	14.7	2.0	0.13	6452	<0.005	2.8	0.47	1.8	1.30
1421607	Drill Core	14162	659	12.2	6.1	6548	180.6	13	2	4558	275	2277	26.9	2.3	0.14	6660	<0.005	2.4	0.22	1.8	1.18
1421608	Drill Core	14301	648	8.5	5.8	5963	90.5	16	<1	3853	217	2050	11.7	1.9	0.11	17805	0.066	8.1	3.83	1.3	1.35

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Ag	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	50	0.001
1421579	Drill Core	<0.1	0.03	0.14	23.9	0.6	<0.05	0.8	8.57	35.0	0.06	0.041	0.3	10.5	<0.01	<0.002		
1421580	Drill Core	<0.1	0.03	0.18	27.0	0.7	<0.05	0.8	7.03	28.7	0.05	0.012	0.2	9.4	<0.01	<0.002		
1421581	Drill Core	<0.1	0.03	0.08	18.4	0.5	<0.05	0.5	9.00	37.2	0.03	0.027	0.2	9.6	<0.01	<0.002		
1421582	Drill Core	<0.1	0.03	0.26	34.1	0.7	<0.05	0.8	5.12	22.2	0.04	<0.001	0.4	10.7	<0.01	<0.002		
1421583	Drill Core	<0.1	0.03	0.21	35.3	0.6	<0.05	0.6	6.65	24.7	0.08	0.002	0.4	9.5	<0.01	<0.002		
1421584	Drill Core	0.1	<0.02	0.16	27.2	0.5	<0.05	0.5	7.41	27.1	0.08	0.006	0.3	10.1	<0.01	<0.002		
1421585	Drill Core	0.2	0.03	0.07	15.8	0.3	<0.05	0.6	8.13	31.9	0.05	0.002	0.5	10.6	<0.01	<0.002		
1421586	Drill Core	0.1	0.05	0.22	22.8	0.5	<0.05	0.8	6.97	23.4	0.05	0.007	0.3	9.4	0.04	<0.002		
1421587	Drill Core	<0.1	0.03	0.25	23.0	0.4	<0.05	0.7	5.47	21.8	0.07	0.011	0.3	8.8	<0.01	<0.002		
1421588	Drill Core	0.1	0.04	0.25	27.2	0.7	<0.05	0.7	4.83	19.0	0.12	0.001	0.2	9.2	<0.01	<0.002		
1421589	Drill Core	<0.1	0.04	0.29	20.7	0.3	<0.05	0.8	4.63	19.8	0.04	0.002	0.5	7.6	<0.01	<0.002		
1421590	Drill Core	0.1	0.04	0.10	12.7	0.3	<0.05	0.7	7.09	30.0	0.07	<0.001	0.5	11.4	<0.01	<0.002		
1421591	Drill Core	<0.1	<0.02	0.08	15.2	0.3	<0.05	0.7	8.29	30.0	0.03	0.002	0.3	9.7	<0.01	<0.002		
1421592	Drill Core	<0.1	0.03	0.08	13.9	0.4	<0.05	0.7	7.02	29.7	0.10	<0.001	0.2	10.8	<0.01	<0.002		
1421593	Drill Core	<0.1	0.03	0.16	19.1	0.3	<0.05	0.7	6.98	26.9	0.10	0.002	0.3	9.7	<0.01	0.002		
1421594	Drill Core	<0.1	0.06	0.27	16.1	0.4	<0.05	0.7	4.14	17.9	0.05	0.001	0.2	8.3	<0.01	<0.002		
1421595	Drill Core	0.1	0.05	0.31	22.1	0.4	<0.05	0.9	4.68	20.6	0.04	0.002	0.3	11.3	<0.01	<0.002		
1421596	Drill Core	<0.1	0.05	0.22	19.7	0.5	<0.05	0.8	5.77	24.9	0.06	0.002	0.2	9.2	<0.01	<0.002		
1421597	Rock Pulp	<0.1	0.07	0.07	6.0	1.0	<0.05	2.6	5.89	12.5	<0.02	0.105	0.2	2.7	*	0.002	95	
1421598	Drill Core	<0.1	0.02	0.03	14.4	0.6	<0.05	0.6	8.54	34.9	0.11	0.006	0.1	11.4	<0.01	<0.002		
1421599	Drill Core	0.2	0.03	0.17	20.8	0.5	<0.05	0.8	7.87	33.1	0.06	0.002	0.2	9.6	<0.01	<0.002		
1421600	Drill Core	<0.1	0.03	0.15	21.4	0.4	<0.05	0.9	6.71	27.2	0.04	<0.001	0.2	7.7	<0.01	<0.002		
1421601	Drill Core	<0.1	0.03	0.03	16.6	0.3	<0.05	1.1	7.35	26.4	0.07	0.002	0.4	7.8	<0.01	<0.002		
1421602	Drill Core	<0.1	0.06	<0.02	13.4	<0.1	<0.05	2.4	3.82	17.2	0.21	0.005	0.3	5.5	<0.01	<0.002		
1421603	Drill Core	<0.1	0.07	<0.02	16.2	<0.1	<0.05	1.8	3.21	16.9	0.14	0.002	0.3	3.5	<0.01	0.002		
1421604	Drill Core	<0.1	0.07	<0.02	14.5	<0.1	<0.05	2.0	3.07	19.9	0.11	0.003	0.3	4.1	<0.01	<0.002		
1421605	Drill Core	<0.1	0.09	<0.02	18.1	0.2	<0.05	2.2	3.18	19.2	0.15	0.004	0.2	2.4	0.01	<0.002		
1421606	Drill Core	<0.1	0.04	0.02	15.4	0.1	<0.05	1.8	3.26	17.1	0.18	0.003	0.2	1.9	<0.01	<0.002		
1421607	Drill Core	<0.1	0.07	<0.02	17.1	<0.1	<0.05	2.2	3.30	18.4	0.18	0.003	0.2	1.4	<0.01	<0.002		
1421608	Drill Core	<0.1	0.06	<0.02	16.6	0.8	<0.05	2.0	3.07	14.1	0.46	0.002	0.2	1.4	<0.01	0.003		1.711

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Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421609	Drill Core	4.48	0.066	43.82	6345	57.18	104.8	5497	8.1	13.0	373	20570	25.6	4.7	41.2	9.5	40.7	1.94	18.42	2.18	10
1421610	Drill Core	4.36	0.068	47.44	5900	8.67	44.7	5028	9.1	15.8	274	21241	9.5	6.1	42.0	9.6	40.4	0.30	0.82	2.38	15
1421611	Drill Core	3.41	0.065	44.82	6951	411.8	320.9	9570	7.6	13.7	520	21538	94.0	6.2	51.9	9.1	49.4	5.87	54.51	5.17	14
1421612	Rock	0.40	<0.005	0.20	31.12	2.23	36.8	44	2.4	2.8	161	11297	0.6	2.0	<0.2	4.7	72.8	0.02	0.07	0.03	12
1421613	Drill Core	3.95	0.014	10.17	1867	2.64	25.1	950	7.8	9.0	237	23221	2.1	4.5	13.1	9.2	88.1	0.06	0.16	0.26	53
1421614	Drill Core	4.31	0.007	15.91	1827	2.11	25.0	922	8.2	8.4	211	21858	1.8	4.9	16.7	9.3	47.5	0.09	0.05	0.24	48
1421615	Drill Core	3.86	0.009	18.94	1601	2.79	33.3	721	9.6	9.6	283	20996	1.8	4.5	5.3	9.5	99.4	0.11	0.10	0.27	47
1421616	Drill Core	4.74	0.006	78.66	1652	2.12	24.7	739	8.3	9.0	249	22847	1.5	4.9	5.3	10.3	272.5	0.10	0.44	0.21	53
1421617	Drill Core	4.82	0.013	19.37	2229	5.30	28.8	1476	7.9	8.1	288	21714	1.5	5.0	13.4	10.0	52.0	0.16	0.59	0.52	44
1421618	Drill Core	3.39	0.018	8.78	2991	2.55	24.3	1898	7.6	11.1	363	21964	0.8	4.8	21.3	10.0	48.1	0.10	0.09	1.06	40
1421619	Drill Core	5.05	0.008	17.56	1228	2.67	21.8	873	7.4	6.9	183	20479	2.1	4.2	6.5	9.0	98.5	0.09	0.07	0.64	48
1421620	Drill Core	4.47	0.008	87.77	2550	1.88	25.1	942	7.0	7.4	188	21101	2.7	5.4	11.9	9.6	82.1	0.14	0.12	0.42	47
1421621	Drill Core	4.72	0.012	79.53	2307	2.38	24.1	1870	7.8	17.7	199	22404	4.3	5.4	12.0	8.8	30.2	0.19	0.07	1.45	50
1421622	Drill Core	4.62	0.009	46.95	1984	2.71	28.3	812	9.8	8.7	241	26962	4.0	6.0	12.0	11.4	68.4	0.09	0.08	0.46	64
1421623	Drill Core	3.16	<0.005	41.80	1791	7.10	37.8	917	8.9	9.1	289	25464	3.0	7.3	6.7	12.4	75.4	0.35	0.30	0.40	51
1421624	Drill Core	3.75	0.013	39.13	2290	3.59	29.8	1459	8.2	8.6	345	25613	1.8	5.4	13.1	12.0	73.7	0.07	0.19	0.52	52
1421625	Drill Core	4.90	0.008	19.15	1727	1.95	24.2	814	7.7	8.0	225	22422	1.0	4.1	9.4	8.6	62.9	0.09	0.13	0.36	51
1421626	Drill Core	4.26	<0.005	21.00	1521	1.54	23.3	945	7.0	6.5	233	20698	0.8	4.8	8.1	10.1	206.0	0.08	0.13	0.33	49
1421627	Drill Core	4.50	<0.005	44.57	992.8	2.41	35.6	841	6.9	7.2	332	18520	1.8	4.4	15.5	9.8	157.9	0.14	0.54	0.39	33
1421628	Drill Core	3.95	<0.005	17.25	1857	1.71	27.2	970	7.5	7.4	227	21185	0.6	4.4	20.5	8.3	274.4	0.08	0.14	0.26	51
1421629	Drill Core	4.84	<0.005	22.43	526.0	3.27	33.0	404	9.9	6.6	263	19121	1.3	3.0	2.5	8.3	132.6	0.08	0.15	0.21	51
1421630	Drill Core	3.43	<0.005	3.30	466.5	2.61	40.1	232	16.0	8.3	358	23550	1.2	2.2	1.7	6.3	195.2	0.06	0.46	0.15	63
1421631	Drill Core	5.54	<0.005	18.66	359.1	3.91	41.8	198	11.7	8.4	407	20724	1.4	2.8	1.1	7.7	81.3	0.09	0.32	0.15	52
1421632	Drill Core	4.19	0.009	39.66	1177	147.5	72.1	2822	8.2	7.3	1027	20153	5.2	4.0	9.4	6.0	120.8	1.31	1.03	0.46	28
1421633	Drill Core	4.29	0.011	74.17	2043	125.8	132.7	5104	5.3	7.2	2170	22187	21.4	10.7	16.2	10.4	129.9	2.47	1.99	0.56	7
1421634	Drill Core	1.47	0.008	52.33	2064	77.01	57.3	2966	7.3	8.3	620	21757	3.2	7.7	8.2	16.3	87.2	0.94	2.75	0.52	29
1421635	Rock Pulp	0.10	4.496	1120	8645	73.50	86.4	84937	10.2	9.6	497	25304	186.7	2.1	4275	2.0	15.0	9.59	116.4	3.30	26
1421636	Drill Core	3.37	<0.005	0.88	20.81	7.58	81.3	50	0.6	8.5	895	31057	1.4	0.6	<0.2	0.9	161.4	0.17	0.43	<0.02	27
1421637	Drill Core	4.91	0.007	58.61	2241	222.1	124.1	5626	4.4	5.9	1259	16374	9.9	5.3	7.4	10.5	99.8	4.16	1.86	0.53	9
1421638	Drill Core	4.37	0.008	169.3	3391	14.80	46.0	3262	6.8	7.0	484	18533	8.1	6.2	8.8	10.1	99.3	0.63	0.99	0.78	15

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CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421609	Drill Core	15311	680	10.0	7.2	6978	132.1	<10	3	4464	277	2159	43.1	2.0	0.11	7601	<0.005	2.9	0.35	1.8	1.39
1421610	Drill Core	13379	646	10.4	9.2	7005	107.4	15	2	4820	302	1910	30.6	2.2	0.09	8549	<0.005	3.3	0.57	2.4	1.09
1421611	Drill Core	15146	683	10.6	8.3	6904	129.4	15	<1	5468	278	2105	40.6	2.5	0.10	9182	0.059	3.3	0.52	2.4	1.32
1421612	Rock	2888	313	20.4	8.3	3362	77.9	383	6	5823	494	2738	0.2	1.1	0.09	<200	<0.005	<0.1	<0.02	3.1	0.25
1421613	Drill Core	6432	629	10.0	18.6	7521	83.4	1169	1	8149	720	3804	13.1	3.0	0.18	2532	<0.005	0.4	0.15	5.2	2.05
1421614	Drill Core	5554	606	9.9	18.0	6875	72.3	1189	<1	7198	668	3725	8.6	2.4	0.17	2654	<0.005	0.3	0.06	4.4	1.74
1421615	Drill Core	7745	716	11.9	20.0	6535	96.6	551	<1	6624	640	1952	6.3	2.5	0.07	2001	<0.005	0.5	0.14	4.2	1.10
1421616	Drill Core	7245	607	12.7	17.9	7647	123.7	1034	<1	7659	567	4111	2.1	2.9	0.20	2295	0.013	0.7	0.10	4.8	2.33
1421617	Drill Core	13333	625	15.9	14.7	6061	96.8	644	2	7292	461	3127	2.0	2.6	0.15	2868	0.013	0.9	0.19	4.1	2.20
1421618	Drill Core	13216	572	12.0	13.6	6279	149.9	477	<1	7237	367	2886	4.7	2.7	0.15	3973	<0.005	1.1	0.19	4.4	2.27
1421619	Drill Core	5311	568	10.5	17.3	6001	75.0	1228	1	6624	646	3603	5.7	2.9	0.16	1589	<0.005	0.4	0.08	4.3	1.95
1421620	Drill Core	4503	577	11.1	12.8	6556	66.9	1169	<1	7044	629	3498	18.1	3.2	0.16	2614	<0.005	0.9	0.09	4.1	1.88
1421621	Drill Core	4709	588	10.7	18.6	6604	73.4	1350	<1	7520	666	3528	12.5	2.9	0.15	3602	<0.005	1.2	0.62	4.6	1.81
1421622	Drill Core	7033	786	14.5	17.4	8026	92.8	1734	1	8748	697	4201	22.8	3.2	0.21	2063	<0.005	0.8	0.16	5.9	2.63
1421623	Drill Core	11545	735	18.9	18.2	6993	117.1	644	<1	8655	569	3129	8.4	3.8	0.15	2075	<0.005	0.8	0.11	5.4	2.60
1421624	Drill Core	13938	745	18.2	14.7	7454	117.2	755	<1	8516	492	3397	1.1	3.8	0.19	2483	0.007	1.2	0.16	5.4	2.89
1421625	Drill Core	7239	620	13.7	19.1	6817	104.5	722	<1	7600	613	3353	1.1	3.5	0.17	2143	<0.005	0.6	0.10	5.2	1.94
1421626	Drill Core	6781	645	12.7	15.0	6673	142.6	858	<1	6861	530	3075	4.6	3.3	0.15	1792	<0.005	0.7	0.10	4.3	1.90
1421627	Drill Core	12275	707	16.2	11.4	5582	264.3	395	2	7465	351	2553	0.6	2.8	0.12	1727	<0.005	0.3	0.16	4.0	2.26
1421628	Drill Core	5669	630	13.2	14.7	6927	119.8	1021	<1	7204	641	3810	3.7	3.2	0.18	2200	<0.005	0.7	0.11	4.8	2.25
1421629	Drill Core	6763	862	11.2	24.0	5661	101.5	777	<1	6019	813	1454	1.0	2.7	0.04	847	<0.005	<0.1	0.07	3.9	0.77
1421630	Drill Core	11938	1121	14.4	35.0	6633	117.6	463	1	7770	650	1021	0.8	3.8	0.03	549	<0.005	0.1	0.03	4.7	3.22
1421631	Drill Core	16410	916	14.1	23.5	5311	140.5	341	1	6590	538	1289	1.0	3.4	0.04	436	<0.005	<0.1	<0.02	3.9	1.37
1421632	Drill Core	30448	760	11.7	11.0	8381	124.8	46	1	6322	148	1494	0.9	3.2	0.07	3060	0.012	0.3	0.11	2.6	2.85
1421633	Drill Core	32388	566	12.8	4.6	7620	251.0	<10	2	3970	107	2458	1.0	1.5	0.15	6694	0.044	0.9	0.27	1.3	3.49
1421634	Drill Core	15331	849	23.0	10.3	5948	335.4	23	2	9859	234	1712	1.1	2.8	0.09	2371	0.017	1.0	0.10	4.7	4.79
1421635	Rock Pulp	4791	569	6.5	10.7	3341	121.5	59	4	7629	439	1708	10.9	3.5	0.08	8847	0.584	3.8	0.75	2.5	0.69
1421636	Drill Core	29747	2511	20.5	0.6	8164	267.0	60	2	16012	239	3200	0.4	4.4	0.12	699	<0.005	<0.1	<0.02	5.0	5.66
1421637	Drill Core	19764	579	13.1	3.7	3990	222.7	<10	3	6267	110	2423	0.6	1.6	0.12	5233	0.020	0.7	0.12	1.8	4.12
1421638	Drill Core	18565	581	12.6	8.0	4813	100.0	15	2	8074	197	1944	0.8	1.9	0.10	7849	0.008	1.4	0.25	3.0	3.48

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Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Ag	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	50	0.001
1421609	Drill Core	<0.1	0.07	<0.02	17.9	0.1	<0.05	1.9	3.07	17.3	0.20	0.001	0.1	1.5	<0.01	<0.002		
1421610	Drill Core	<0.1	0.08	<0.02	14.6	0.2	<0.05	2.1	2.81	16.7	0.22	0.004	<0.1	2.1	<0.01	<0.002		
1421611	Drill Core	0.1	0.06	<0.02	16.5	0.2	<0.05	2.0	3.37	17.8	0.23	0.001	<0.1	2.4	<0.01	<0.002		
1421612	Rock	<0.1	0.44	0.16	12.3	0.4	<0.05	13.3	4.29	42.4	<0.02	<0.001	0.1	14.4	<0.01	<0.002		
1421613	Drill Core	<0.1	0.03	0.33	33.3	0.4	<0.05	1.0	4.90	19.1	0.09	0.001	0.2	10.5	<0.01	<0.002		
1421614	Drill Core	0.2	0.03	0.33	33.0	0.5	<0.05	0.8	4.34	18.6	0.06	0.002	0.2	9.0	<0.01	<0.002		
1421615	Drill Core	<0.1	0.03	0.15	14.4	0.3	<0.05	0.9	5.03	23.3	0.07	0.001	0.3	8.3	<0.01	<0.002		
1421616	Drill Core	0.1	0.02	0.18	36.4	0.5	<0.05	0.6	5.93	25.2	0.03	0.006	<0.1	8.9	<0.01	<0.002		
1421617	Drill Core	<0.1	<0.02	0.22	28.2	0.4	<0.05	0.6	8.10	32.3	0.10	0.004	0.3	7.4	<0.01	<0.002		
1421618	Drill Core	<0.1	<0.02	0.16	27.1	0.4	<0.05	0.5	7.50	24.7	0.16	0.002	0.2	8.0	<0.01	<0.002		
1421619	Drill Core	0.1	0.05	0.28	34.9	0.5	<0.05	0.8	5.47	21.9	0.08	0.003	0.3	8.9	<0.01	<0.002		
1421620	Drill Core	<0.1	0.04	0.30	32.6	0.6	<0.05	0.7	5.88	22.0	0.07	0.015	0.2	9.5	0.02	<0.002		
1421621	Drill Core	<0.1	0.04	0.31	32.9	0.6	<0.05	0.9	5.15	20.6	0.08	0.006	0.3	8.9	0.01	<0.002		
1421622	Drill Core	0.1	0.07	0.24	43.7	0.6	<0.05	1.1	6.33	26.8	0.07	0.009	0.4	11.8	<0.01	<0.002		
1421623	Drill Core	<0.1	0.03	0.10	29.9	0.5	<0.05	0.8	9.68	36.8	0.05	0.010	0.2	9.9	<0.01	<0.002		
1421624	Drill Core	<0.1	0.04	0.13	36.4	0.6	<0.05	0.6	9.52	36.2	0.08	<0.001	0.4	9.1	<0.01	<0.002		
1421625	Drill Core	<0.1	0.02	0.17	30.0	0.5	<0.05	0.5	7.48	29.0	0.06	0.002	0.2	8.0	<0.01	<0.002		
1421626	Drill Core	<0.1	0.04	0.19	29.9	0.5	<0.05	0.7	6.65	24.6	0.05	0.003	0.2	7.5	<0.01	<0.002		
1421627	Drill Core	<0.1	0.02	0.10	23.7	0.3	<0.05	0.7	6.61	31.0	0.06	0.003	0.3	7.7	<0.01	<0.002		
1421628	Drill Core	<0.1	0.04	0.17	38.1	0.6	<0.05	0.6	6.39	27.2	0.08	<0.001	0.1	8.3	<0.01	<0.002		
1421629	Drill Core	<0.1	0.13	0.12	7.4	0.3	<0.05	2.6	4.41	22.8	<0.02	0.003	0.3	8.0	<0.01	<0.002		
1421630	Drill Core	<0.1	0.08	0.06	8.5	0.5	<0.05	1.8	5.69	29.8	0.03	<0.001	0.4	10.2	<0.01	<0.002		
1421631	Drill Core	<0.1	0.09	0.05	7.4	0.4	<0.05	2.0	6.44	29.3	0.03	0.001	0.2	8.8	<0.01	<0.002		
1421632	Drill Core	<0.1	0.05	<0.02	11.4	0.2	<0.05	1.6	6.49	23.8	0.04	0.002	0.4	10.6	<0.01	<0.002		
1421633	Drill Core	<0.1	<0.02	<0.02	21.3	<0.1	<0.05	0.6	7.08	21.9	0.08	0.002	0.5	7.4	<0.01	<0.002		
1421634	Drill Core	<0.1	0.04	<0.02	13.4	0.4	<0.05	0.9	9.02	42.8	0.09	0.004	0.5	15.2	<0.01	<0.002		
1421635	Rock Pulp	<0.1	0.07	0.06	6.4	1.2	<0.05	2.7	5.59	14.2	<0.02	0.100	0.3	2.8	*	<0.002		
1421636	Drill Core	<0.1	0.06	0.02	23.2	0.3	<0.05	3.4	14.75	46.1	0.03	<0.001	0.4	20.4	<0.01	<0.002		
1421637	Drill Core	<0.1	0.03	<0.02	19.0	0.1	<0.05	0.6	6.60	25.8	0.08	0.014	0.5	12.7	<0.01	<0.002		
1421638	Drill Core	<0.1	<0.02	<0.02	12.7	0.3	<0.05	0.5	7.40	23.9	0.09	0.005	0.3	13.6	0.02	<0.002		

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Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421639	Drill Core	4.53	0.008	64.69	1589	9.58	31.6	797	7.6	6.6	283	18215	1.0	5.4	22.9	10.6	84.6	0.37	0.23	0.56	31
1421640	Drill Core	4.46	0.307	3.89	609.2	2.31	20.4	264	6.6	5.5	290	18240	0.8	3.9	3.3	10.0	152.0	0.06	0.10	0.16	42
1421641	Drill Core	4.12	0.239	13.75	1377	2.48	27.8	639	7.6	7.1	310	19533	0.5	4.6	4.7	10.4	90.1	0.09	0.09	0.28	44
1421642	Drill Core	4.28	0.023	25.28	1045	3.10	26.2	601	7.4	10.0	273	19603	0.5	6.2	4.8	10.0	99.1	0.16	0.12	0.42	43
1421643	Drill Core	4.35	0.020	35.33	1583	58.28	40.7	983	8.6	7.7	280	16733	1.2	8.1	15.4	11.0	59.4	1.50	0.20	0.65	23
1421644	Drill Core	4.51	0.014	39.34	1192	4.75	30.2	668	7.2	5.6	284	18152	0.8	4.5	5.3	11.5	68.8	0.21	0.17	0.39	31
1421645	Drill Core	4.62	0.008	73.12	1936	2.34	22.5	886	6.9	6.9	218	19392	0.6	7.9	19.5	10.8	66.7	0.11	0.08	0.32	46
1421646	Drill Core	3.58	<0.005	30.63	1656	3.51	27.2	913	7.2	7.7	296	20313	1.2	10.6	4.7	9.0	116.2	0.15	0.14	0.26	41
1421647	Drill Core	4.62	<0.005	3.68	571.5	4.80	37.6	544	9.9	8.5	345	20122	0.9	3.7	3.1	7.6	47.1	0.15	0.10	0.82	49
1421648	Drill Core	4.81	<0.005	5.45	377.7	4.84	37.3	258	9.2	5.7	195	18306	1.3	3.0	2.3	7.5	25.3	0.05	0.08	0.16	51
1421649	Rock	0.39	<0.005	0.19	6.52	2.21	33.0	27	2.6	2.4	161	8789	0.3	1.9	1.2	3.5	52.2	0.02	0.03	0.04	10
1421650	Drill Core	4.35	<0.005	2.80	318.3	3.97	35.5	188	10.7	7.3	300	20446	1.2	2.9	1.9	7.0	31.9	0.06	0.08	0.18	59
1421651	Drill Core	4.70	<0.005	2.33	237.6	4.10	30.9	158	9.0	6.1	256	18376	1.1	2.9	0.6	8.0	37.3	0.05	0.08	0.20	50
1421652	Drill Core	2.89	0.005	59.86	4532	3.66	43.1	1873	9.6	8.3	265	22456	0.6	6.1	10.0	7.4	63.3	0.18	0.11	1.41	47
1421653	Drill Core	4.50	<0.005	7.23	384.4	3.02	23.5	284	6.4	5.8	290	18209	4.1	3.9	2.7	10.0	100.7	0.07	0.14	0.12	40
1421654	Drill Core	4.61	<0.005	43.89	924.4	3.79	26.7	699	7.8	6.9	293	20427	1.3	5.3	5.4	12.3	116.9	0.05	0.16	0.69	43
1421655	Drill Core	4.79	<0.005	20.98	585.1	4.29	28.5	499	7.9	7.2	344	20687	5.6	7.0	5.8	13.4	140.3	0.07	0.26	0.24	36
1421656	Drill Core	4.61	<0.005	3.73	463.5	9.81	52.0	759	6.5	6.4	600	18756	8.4	3.6	4.2	10.3	142.3	0.46	0.70	0.23	10
1421657	Drill Core	4.55	<0.005	17.10	1011	5.32	51.0	1059	7.3	9.3	397	20004	1.6	4.6	3.3	12.3	145.9	0.57	0.46	0.41	22
1421658	Drill Core	4.59	<0.005	127.6	1669	4.90	29.6	2096	6.7	7.7	372	21091	1.9	7.9	6.2	12.7	161.8	0.07	0.27	0.57	34
1421659	Drill Core	4.72	0.005	105.8	868.7	3.12	28.4	834	7.7	7.9	300	22171	0.5	6.7	22.1	12.5	100.2	0.06	0.10	0.33	52
1421660	Drill Core	4.83	<0.005	6.62	534.2	3.44	20.8	268	7.1	7.6	211	19413	0.8	7.1	6.5	12.2	30.4	0.03	0.10	0.22	49
1421661	Drill Core	4.95	<0.005	7.86	370.2	4.21	20.9	192	7.4	6.4	224	19485	0.8	6.1	4.2	11.9	26.8	0.03	0.07	0.16	51
1421662	Drill Core	4.69	<0.005	15.17	643.9	3.82	21.5	352	7.6	6.9	241	19893	0.6	6.8	4.1	12.5	30.1	0.04	0.09	0.18	48
1421663	Drill Core	4.97	<0.005	87.10	1043	4.49	21.8	806	8.2	7.6	234	21309	1.2	7.7	3.7	11.9	37.9	0.02	0.09	1.17	52
1421664	Drill Core	4.01	<0.005	29.21	496.8	3.40	21.2	315	7.4	7.3	235	19573	0.9	23.3	3.3	13.2	56.2	0.02	0.10	0.69	47
1421665	Drill Core	5.41	<0.005	6.40	250.0	3.15	28.3	113	9.3	7.7	287	22072	1.9	5.2	1.6	12.4	96.8	0.02	0.11	0.15	57
1421666	Drill Core	4.85	<0.005	216.9	380.4	3.89	34.1	245	11.2	9.1	397	24215	4.9	5.1	2.0	12.6	71.6	<0.01	0.23	0.27	58
1421667	Drill Core	4.84	<0.005	5.07	122.4	3.89	25.4	69	7.4	6.5	235	20340	1.3	5.6	1.3	13.3	73.9	0.02	0.11	0.12	51
1421668	Drill Core	4.78	<0.005	6.16	66.92	3.91	28.1	53	7.7	7.2	255	20138	0.8	5.0	0.9	12.6	45.8	0.03	0.10	0.11	52

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421639	Drill Core	12709	680	16.7	13.6	4756	143.2	82	<1	7559	411	1698	8.3	2.9	0.07	1770	<0.005	0.5	0.14	4.1	2.17
1421640	Drill Core	9430	625	13.5	12.2	5251	82.7	494	<1	6131	516	1801	1.4	2.9	0.06	686	<0.005	0.2	0.04	3.5	1.41
1421641	Drill Core	8459	672	13.3	17.5	6224	68.0	548	1	6811	595	1711	7.9	3.3	0.06	1589	<0.005	0.4	0.07	4.4	1.16
1421642	Drill Core	8878	600	13.2	12.8	5566	67.6	373	<1	6377	524	1526	6.3	3.4	0.05	1673	0.005	0.4	0.16	4.3	1.17
1421643	Drill Core	13000	627	18.8	10.3	4488	49.4	35	1	7779	376	1661	1.9	2.6	0.05	1865	0.009	0.7	0.16	3.8	2.51
1421644	Drill Core	13200	661	17.1	10.4	4766	101.6	61	<1	7336	373	1381	3.8	3.4	0.04	1285	<0.005	0.3	0.08	4.3	1.91
1421645	Drill Core	6937	619	11.6	17.0	5182	72.0	833	1	5809	619	2271	60.4	2.7	0.09	2935	<0.005	0.9	0.08	4.0	1.29
1421646	Drill Core	12085	719	14.0	13.8	5372	96.8	191	<1	7021	440	1530	16.9	3.1	0.06	2609	<0.005	0.6	0.10	4.2	1.65
1421647	Drill Core	11134	941	11.8	24.0	5935	97.7	597	<1	6795	624	1445	5.7	2.7	0.05	1230	<0.005	0.1	0.08	3.8	1.17
1421648	Drill Core	5631	899	10.6	21.3	4504	83.5	896	2	4873	815	1398	4.8	1.8	0.03	607	<0.005	<0.1	<0.02	3.8	0.47
1421649	Rock	2770	314	17.9	7.6	2653	76.8	401	8	4836	705	2677	<0.1	1.1	0.09	<200	<0.005	<0.1	<0.02	2.5	0.46
1421650	Drill Core	7601	1060	11.8	26.7	7009	80.6	983	<1	7004	807	1308	5.4	2.9	0.03	514	<0.005	<0.1	<0.02	4.1	0.67
1421651	Drill Core	7044	945	11.8	23.5	5370	102.5	763	<1	5712	663	1302	0.6	2.3	0.03	596	<0.005	<0.1	0.05	3.4	0.75
1421652	Drill Core	8301	906	10.3	19.0	5497	107.5	665	<1	5984	631	1298	13.4	2.6	0.04	6413	0.006	2.5	0.57	3.7	0.94
1421653	Drill Core	12116	686	14.0	15.2	5032	117.7	582	1	6038	504	2136	0.3	2.4	0.09	1633	<0.005	<0.1	<0.02	3.9	1.89
1421654	Drill Core	11638	629	15.4	17.0	5939	125.9	504	2	7472	493	2093	2.8	2.4	0.09	1554	<0.005	0.3	0.04	4.2	1.92
1421655	Drill Core	16817	669	17.4	16.1	5490	153.4	203	2	8273	374	2040	6.7	2.9	0.09	3265	<0.005	0.3	0.03	4.4	2.95
1421656	Drill Core	36294	623	13.7	6.4	4906	107.7	<10	4	9880	109	2131	0.4	1.8	0.11	4803	0.005	<0.1	0.04	2.5	5.44
1421657	Drill Core	20755	687	18.1	10.6	5097	173.6	36	4	9338	216	2178	0.6	2.8	0.11	2818	<0.005	0.3	0.10	3.4	4.59
1421658	Drill Core	21216	636	17.4	13.5	6447	190.1	97	2	8851	327	1778	0.8	2.4	0.08	2896	0.008	0.6	0.11	4.6	2.56
1421659	Drill Core	9621	653	16.1	17.8	6335	89.7	926	2	7384	697	2907	1.8	3.1	0.13	1827	<0.005	0.2	0.06	4.7	2.03
1421660	Drill Core	5456	629	12.7	17.7	5660	81.3	1376	1	6060	708	3309	1.2	1.8	0.14	1451	0.006	0.1	<0.02	4.0	1.41
1421661	Drill Core	5703	627	13.7	17.5	5303	78.0	1387	<1	6089	903	3418	4.9	1.7	0.15	714	0.006	0.2	<0.02	3.9	1.32
1421662	Drill Core	6376	622	14.2	18.1	5718	72.1	1202	1	6026	703	2795	0.6	2.2	0.12	994	<0.005	0.3	<0.02	4.1	1.27
1421663	Drill Core	6427	661	14.0	19.4	5748	92.9	1398	<1	6477	856	3389	5.1	2.1	0.15	1978	0.006	0.5	0.08	4.3	1.41
1421664	Drill Core	6567	610	14.7	16.8	5668	75.9	1126	1	6231	703	2768	32.8	2.0	0.11	1369	<0.005	0.3	0.14	3.9	1.27
1421665	Drill Core	8432	802	15.6	23.6	6050	112.3	885	<1	6592	821	2188	1.2	2.6	0.09	391	<0.005	<0.1	<0.02	4.4	1.19
1421666	Drill Core	14695	919	18.7	25.3	6761	95.2	540	2	7896	554	1747	0.5	3.6	0.08	959	0.007	0.2	0.04	5.2	1.55
1421667	Drill Core	6850	629	15.4	16.8	5148	81.3	1054	<1	6257	749	2850	0.5	2.0	0.12	216	0.005	<0.1	<0.02	4.0	1.27
1421668	Drill Core	6172	673	14.0	19.4	6128	71.3	1274	<1	6295	746	2743	1.9	2.1	0.12	<200	<0.005	<0.1	<0.02	4.4	1.38

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Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Ag	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	50	0.001
1421639	Drill Core	<0.1	0.03	0.03	11.6	0.3	<0.05	0.6	8.23	35.0	0.07	<0.001	0.5	12.1	0.01	<0.002		
1421640	Drill Core	<0.1	0.05	0.14	14.0	0.4	<0.05	0.9	6.56	25.9	0.03	<0.001	0.3	10.6	<0.01	<0.002		
1421641	Drill Core	<0.1	0.06	0.14	13.2	0.5	<0.05	0.9	6.62	24.3	0.06	<0.001	0.2	11.5	<0.01	<0.002		
1421642	Drill Core	<0.1	0.04	0.14	11.1	0.5	<0.05	0.8	6.93	25.5	0.04	<0.001	0.1	10.5	<0.01	<0.002		
1421643	Drill Core	<0.1	0.03	0.02	11.5	0.5	<0.05	0.8	8.24	35.7	0.06	<0.001	0.4	13.0	<0.01	<0.002		
1421644	Drill Core	<0.1	0.03	<0.02	9.4	0.5	<0.05	0.5	8.29	32.7	0.04	<0.001	0.4	13.3	<0.01	<0.002		
1421645	Drill Core	<0.1	0.06	0.28	17.9	0.6	<0.05	1.1	5.54	22.5	0.06	<0.001	0.2	8.7	<0.01	<0.002		
1421646	Drill Core	<0.1	0.03	0.08	11.8	0.4	<0.05	0.7	7.83	27.3	0.06	0.001	0.2	11.1	<0.01	<0.002		
1421647	Drill Core	<0.1	0.11	0.09	8.4	0.4	<0.05	2.6	4.96	24.3	0.03	<0.001	0.2	10.7	<0.01	<0.002		
1421648	Drill Core	<0.1	0.12	0.17	6.6	0.3	<0.05	2.7	3.45	21.0	<0.02	<0.001	0.1	7.1	<0.01	<0.002		
1421649	Rock	<0.1	0.38	0.18	12.6	0.4	<0.05	11.6	4.42	38.7	<0.02	<0.001	0.2	14.2	<0.01	<0.002		
1421650	Drill Core	<0.1	0.12	0.12	7.2	0.4	<0.05	3.2	4.21	23.3	0.02	<0.001	0.2	10.4	<0.01	<0.002		
1421651	Drill Core	<0.1	0.12	0.11	6.5	0.3	<0.05	2.5	3.97	24.7	<0.02	<0.001	0.2	8.3	<0.01	<0.002		
1421652	Drill Core	<0.1	0.12	0.13	7.3	0.7	<0.05	2.5	4.26	20.6	0.15	<0.001	0.3	9.3	<0.01	<0.002		
1421653	Drill Core	<0.1	0.05	0.14	17.1	0.4	<0.05	0.9	6.26	25.4	0.04	0.001	0.2	8.9	<0.01	<0.002		
1421654	Drill Core	<0.1	0.03	0.11	16.6	0.4	<0.05	0.8	7.75	30.8	0.06	0.009	0.3	11.3	<0.01	<0.002		
1421655	Drill Core	<0.1	0.03	0.06	15.3	0.2	<0.05	0.6	8.77	34.2	0.04	<0.001	0.7	13.5	<0.01	<0.002		
1421656	Drill Core	<0.1	<0.02	<0.02	15.8	0.2	<0.05	0.4	7.60	26.0	0.02	<0.001	0.7	16.2	<0.01	<0.002		
1421657	Drill Core	<0.1	<0.02	<0.02	16.4	<0.1	<0.05	0.4	8.61	35.5	0.05	0.001	0.6	14.5	<0.01	<0.002		
1421658	Drill Core	<0.1	0.02	0.03	13.8	0.2	<0.05	0.4	8.69	33.8	0.05	0.006	0.3	14.5	0.02	<0.002		
1421659	Drill Core	<0.1	0.05	0.21	25.2	0.4	<0.05	0.8	7.82	31.5	0.02	0.004	0.2	10.0	0.01	<0.002		
1421660	Drill Core	<0.1	0.05	0.33	28.7	0.4	<0.05	1.0	5.16	23.9	0.02	<0.001	0.2	8.9	<0.01	<0.002		
1421661	Drill Core	<0.1	0.06	0.32	28.4	0.4	<0.05	1.2	5.68	26.2	<0.02	0.001	<0.1	8.5	<0.01	<0.002		
1421662	Drill Core	<0.1	0.06	0.32	25.1	0.3	<0.05	1.0	5.95	27.1	0.03	<0.001	0.1	8.7	<0.01	<0.002		
1421663	Drill Core	<0.1	0.06	0.40	28.9	0.3	<0.05	1.2	6.13	25.7	<0.02	0.001	0.1	8.9	0.01	<0.002		
1421664	Drill Core	<0.1	0.06	0.27	22.8	0.4	<0.05	1.0	6.58	27.5	0.02	<0.001	0.2	8.4	<0.01	<0.002		
1421665	Drill Core	<0.1	0.04	0.14	17.6	0.3	<0.05	0.9	6.55	30.1	0.02	<0.001	0.2	8.4	<0.01	<0.002		
1421666	Drill Core	<0.1	0.04	0.07	14.2	0.3	<0.05	0.6	8.20	35.3	<0.02	0.021	0.3	12.1	*	<0.002		
1421667	Drill Core	<0.1	0.05	0.25	21.9	0.2	<0.05	1.1	6.19	28.5	<0.02	<0.001	0.2	8.9	<0.01	<0.002		
1421668	Drill Core	<0.1	0.08	0.29	22.6	0.4	<0.05	1.2	5.73	25.1	0.02	<0.001	0.2	9.7	<0.01	<0.002		

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	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421669	Rock Pulp	0.06	4.708	1415	>10000	96.57	102.1	>100000	12.7	12.9	629	30465	205.3	2.9	5181	2.5	16.8	9.27	135.3	3.87	30
1421670	Drill Core	4.57	<0.005	326.0	478.4	3.30	30.1	256	10.8	8.4	270	23194	0.9	6.9	5.2	15.1	38.5	<0.01	0.08	0.35	57
1421671	Drill Core	4.72	0.005	20.14	1222	3.54	27.3	706	8.6	7.4	265	21462	0.7	6.6	3.8	12.9	55.9	0.04	0.12	0.85	51
1421672	Drill Core	4.26	<0.005	7.25	124.1	3.25	25.4	160	9.3	6.8	276	21058	2.8	4.9	3.6	11.1	114.0	0.02	0.16	0.19	49
1421673	Drill Core	4.97	<0.005	4.46	122.2	2.61	29.0	79	9.8	7.1	352	20870	0.7	5.6	2.8	13.0	53.4	0.03	0.15	0.18	47
1421674	Drill Core	3.95	<0.005	6.41	84.98	4.10	32.6	95	9.9	7.3	312	20723	0.9	4.7	2.2	14.6	33.8	0.04	0.16	0.16	48
1421675	Drill Core	4.61	<0.005	31.65	145.0	2.52	26.6	151	10.1	7.5	305	22148	1.0	5.3	1.5	12.6	34.5	<0.01	0.14	0.27	52
1421676	Drill Core	5.00	<0.005	18.17	81.98	2.29	23.8	59	8.5	6.6	249	19877	1.3	5.1	1.7	12.8	46.8	0.01	0.09	0.16	48
1421677	Drill Core	4.83	<0.005	9.88	61.94	3.58	29.0	98	10.0	7.4	274	21656	1.7	4.9	0.9	11.9	39.4	0.02	0.08	0.13	52
1421678	Drill Core	4.85	<0.005	2.26	32.50	3.76	22.7	36	7.4	5.1	169	17626	0.6	5.3	0.6	12.8	22.5	0.02	0.05	0.11	44
1421679	Drill Core	5.04	<0.005	5.55	230.1	4.26	24.8	160	8.7	6.4	208	19745	0.8	6.2	1.6	14.1	29.3	0.03	0.06	0.16	48
1421680	Drill Core	5.06	<0.005	12.57	568.5	5.01	28.5	449	7.6	5.6	177	18351	0.5	5.4	1.6	10.0	23.7	0.04	0.06	0.26	45
1421681	Drill Core	4.91	<0.005	4.34	348.3	4.23	25.1	345	7.4	5.4	197	17787	0.5	6.2	1.2	14.6	28.1	0.04	0.06	0.16	44
1421682	Drill Core	5.91	<0.005	6.48	841.4	4.15	26.6	345	7.6	5.7	200	18352	0.7	7.4	2.2	15.2	24.9	0.05	0.06	0.24	44
1421683	Drill Core	2.54	0.035	663.8	8648	3.34	49.5	3929	17.6	24.4	386	32719	0.3	13.3	58.2	3.6	125.3	<0.01	0.10	1.92	70
1421684	Drill Core	3.87	0.018	340.2	4136	3.03	38.1	2121	12.7	13.1	341	24170	0.7	9.4	19.4	7.7	80.6	0.02	0.10	0.81	48
1421685	Rock	0.32	<0.005	1.65	34.18	2.01	37.4	53	2.7	2.9	167	9469	<0.1	2.3	<0.2	5.3	59.4	<0.01	0.03	0.10	12
1421686	Drill Core	4.73	<0.005	33.03	489.6	3.34	28.2	239	8.7	6.9	270	19941	0.5	5.4	3.3	12.4	32.8	0.05	0.08	0.22	46
1421687	Drill Core	5.12	<0.005	29.16	850.3	4.35	30.9	499	10.3	7.4	284	21487	0.7	5.8	3.4	10.9	70.0	0.03	0.09	0.50	50
1421688	Drill Core	3.79	<0.005	14.77	476.2	3.90	30.9	261	9.8	8.2	267	20291	0.7	6.5	1.8	13.1	55.6	0.02	0.11	0.24	48
1421689	Drill Core	4.75	0.006	93.40	723.0	3.27	26.5	430	8.3	7.1	211	20393	0.7	6.8	3.9	11.7	34.4	0.19	0.05	0.25	54
1421690	Drill Core	6.16	0.009	181.8	1446	3.07	35.3	733	10.0	9.6	368	23062	0.2	6.3	7.8	10.5	58.3	0.29	0.06	0.22	55
1421691	Drill Core	5.60	0.011	200.5	5228	2.72	53.3	3412	14.8	18.6	480	30547	0.3	9.5	7.6	5.0	76.4	0.33	0.35	1.34	57
1421692	Rock	0.41	<0.005	0.73	11.36	2.93	22.4	37	1.2	2.0	192	7408	<0.1	1.3	0.2	3.6	85.5	0.02	<0.02	0.10	5
1421693	Drill Core	4.51	<0.005	3.42	232.4	3.62	29.0	142	8.3	6.0	241	20011	0.4	5.2	0.4	12.2	32.9	0.03	0.04	0.11	55
1421694	Drill Core	5.47	<0.005	3.13	524.1	3.35	26.5	350	7.9	7.0	198	18947	0.8	5.3	0.8	12.2	26.2	0.04	0.03	0.23	51

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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421669	Rock Pulp	5828	638	8.1	13.2	4388	140.6	78	5	8951	520	1991	13.0	4.1	0.10	9999	0.732	3.9	0.94	3.0	0.79
1421670	Drill Core	7524	795	19.8	23.4	6456	86.4	1390	<1	6916	673	2660	2.1	2.5	0.13	879	<0.005	0.3	0.04	5.0	1.65
1421671	Drill Core	8044	690	18.1	19.1	6224	72.8	1152	<1	6933	764	2494	1.3	2.3	0.11	1279	0.008	0.4	0.14	4.8	1.34
1421672	Drill Core	7398	773	13.9	21.7	6193	98.5	833	<1	6455	656	2021	0.7	2.3	0.09	392	<0.005	<0.1	<0.02	3.9	1.25
1421673	Drill Core	11793	820	15.4	20.6	5850	109.1	527	<1	6880	689	1850	0.8	3.1	0.08	201	<0.005	<0.1	<0.02	4.3	1.77
1421674	Drill Core	7905	833	13.9	22.4	6100	103.5	817	<1	6461	748	1809	0.6	2.6	0.08	279	<0.005	<0.1	<0.02	4.5	0.94
1421675	Drill Core	8771	814	15.0	22.6	5856	100.8	951	<1	6703	840	2365	0.6	2.6	0.10	601	<0.005	<0.1	<0.02	4.5	1.64
1421676	Drill Core	6471	842	13.0	22.9	5417	98.2	969	<1	5641	679	1862	0.8	2.1	0.08	<200	<0.005	<0.1	0.04	4.1	1.08
1421677	Drill Core	8688	859	15.2	24.3	6140	123.8	1063	<1	6606	779	2315	0.5	2.1	0.10	550	<0.005	<0.1	<0.02	4.3	1.28
1421678	Drill Core	3883	740	13.6	21.5	3951	89.6	1077	<1	4566	887	2316	0.6	1.1	0.10	<200	<0.005	0.1	<0.02	3.5	0.94
1421679	Drill Core	7103	764	14.6	21.4	4988	87.3	1077	1	6193	838	2079	0.8	1.7	0.09	288	<0.005	<0.1	<0.02	4.2	1.11
1421680	Drill Core	3996	723	11.6	22.5	4060	107.5	1012	<1	4584	923	2463	7.6	1.2	0.12	615	0.005	0.2	<0.02	3.4	1.04
1421681	Drill Core	5627	668	12.5	20.4	4019	93.5	933	1	4913	906	2161	0.7	1.4	0.09	534	<0.005	<0.1	<0.02	3.6	0.97
1421682	Drill Core	5277	770	12.6	20.7	4549	79.8	1068	<1	5525	835	1870	23.3	1.7	0.09	826	<0.005	0.3	0.03	3.9	1.01
1421683	Drill Core	22332	1326	9.7	25.8	14664	19.9	1634	2	14545	565	823	14.3	4.9	0.04	22256	<0.005	4.1	0.54	10.0	0.90
1421684	Drill Core	18598	1106	12.0	22.4	11086	27.2	1186	2	11491	489	935	41.1	3.0	0.05	11701	0.009	1.6	0.19	7.8	1.59
1421685	Rock	2627	292	15.7	7.4	3257	66.3	504	10	6136	556	3008	<0.1	1.3	0.09	<200	<0.005	<0.1	<0.02	3.6	0.30
1421686	Drill Core	8888	811	13.3	21.8	5040	47.3	866	<1	6129	735	1199	32.6	2.1	0.05	788	<0.005	0.2	0.05	4.3	0.96
1421687	Drill Core	10882	797	13.3	23.3	6158	76.7	916	2	7566	706	1837	2.8	2.4	0.09	1067	<0.005	0.3	0.03	5.2	1.53
1421688	Drill Core	8787	861	13.8	22.3	5680	91.7	782	2	6408	734	1610	0.8	2.3	0.07	849	<0.005	0.2	<0.02	4.6	1.16
1421689	Drill Core	6804	846	11.8	23.9	5214	85.4	1062	2	6789	833	1883	1.6	1.9	0.09	1158	<0.005	0.3	0.04	4.7	0.97
1421690	Drill Core	13139	916	16.7	23.3	7338	81.1	487	1	8288	573	1529	0.9	3.1	0.09	1914	<0.005	0.7	0.05	5.4	1.38
1421691	Drill Core	18779	1404	13.4	24.8	12622	168.9	34	2	15202	544	1980	1.2	2.8	0.12	8499	0.005	2.6	0.19	9.3	2.67
1421692	Rock	11359	396	22.2	6.5	1648	72.9	32	4	4457	538	2166	<0.1	0.6	0.05	<200	<0.005	<0.1	<0.02	2.1	0.18
1421693	Drill Core	6557	834	14.8	22.8	5214	84.3	943	<1	6051	952	2168	8.3	2.1	0.11	297	<0.005	<0.1	<0.02	4.2	1.08
1421694	Drill Core	5551	785	13.3	23.9	4775	86.3	1021	1	5465	711	1841	1.0	1.5	0.09	719	<0.005	<0.1	0.08	4.1	1.00

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Suite 1110 - 555 W. Hastings St.
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Project: Troitsa
Report Date: September 25, 2012

CERTIFICATE OF ANALYSIS SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Ag	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	50	0.001
1421669	Rock Pulp	<0.1	0.07	0.06	7.1	1.3	<0.05	3.3	6.96	16.8	<0.02	0.111	0.3	3.1	*	<0.002	86	1.029
1421670	Drill Core	0.1	0.11	0.31	24.3	0.4	<0.05	1.5	5.63	35.5	<0.02	0.036	<0.1	9.8	*	<0.002		
1421671	Drill Core	<0.1	0.06	0.25	20.7	0.4	<0.05	1.4	6.72	34.3	0.04	<0.001	0.1	10.6	<0.01	<0.002		
1421672	Drill Core	<0.1	0.06	0.18	16.7	0.4	<0.05	1.0	4.81	25.4	<0.02	<0.001	0.2	8.9	<0.01	<0.002		
1421673	Drill Core	<0.1	0.06	0.11	14.7	0.3	<0.05	0.9	6.91	30.0	<0.02	<0.001	0.1	10.3	<0.01	<0.002		
1421674	Drill Core	<0.1	0.08	0.17	14.5	0.3	<0.05	1.1	5.32	25.1	<0.02	0.002	0.3	9.6	<0.01	<0.002		
1421675	Drill Core	<0.1	0.07	0.16	20.3	0.3	<0.05	1.2	5.09	27.0	<0.02	0.002	0.2	10.9	<0.01	<0.002		
1421676	Drill Core	<0.1	0.08	0.18	16.4	0.2	<0.05	1.0	4.01	21.4	<0.02	0.005	<0.1	9.4	<0.01	<0.002		
1421677	Drill Core	<0.1	0.07	0.15	19.1	0.3	<0.05	1.1	4.13	23.2	<0.02	0.002	0.2	10.1	<0.01	<0.002		
1421678	Drill Core	<0.1	0.08	0.40	19.3	0.3	<0.05	1.1	3.52	21.6	<0.02	<0.001	0.1	7.8	<0.01	<0.002		
1421679	Drill Core	<0.1	0.09	0.29	17.3	0.3	<0.05	1.1	3.99	24.6	<0.02	0.002	0.2	8.6	<0.01	<0.002		
1421680	Drill Core	<0.1	0.06	0.24	20.8	0.2	<0.05	0.8	3.23	16.8	0.03	<0.001	<0.1	7.3	<0.01	<0.002		
1421681	Drill Core	<0.1	0.07	0.24	17.3	0.2	<0.05	1.1	3.97	20.1	<0.02	<0.001	0.2	6.5	<0.01	<0.002		
1421682	Drill Core	<0.1	0.09	0.26	16.5	0.3	<0.05	1.3	4.19	21.6	0.03	<0.001	0.3	7.9	<0.01	<0.002		
1421683	Drill Core	<0.1	0.03	0.14	10.9	0.4	<0.05	1.5	7.50	17.2	0.12	0.018	0.3	22.5	*	<0.002		
1421684	Drill Core	0.1	0.05	0.12	11.2	0.3	<0.05	1.7	6.14	20.3	0.05	0.007	0.4	18.0	*	<0.002		
1421685	Rock	<0.1	0.53	0.23	13.4	0.4	<0.05	15.1	3.61	32.2	<0.02	<0.001	0.1	18.0	<0.01	<0.002		
1421686	Drill Core	<0.1	0.05	0.25	9.4	0.3	<0.05	0.9	4.96	23.6	0.03	0.002	0.1	9.8	<0.01	<0.002		
1421687	Drill Core	<0.1	0.05	0.14	16.0	0.3	<0.05	0.8	5.38	21.2	0.03	<0.001	0.4	11.3	<0.01	<0.002		
1421688	Drill Core	<0.1	0.06	0.18	14.1	0.2	<0.05	0.9	5.38	23.2	<0.02	0.002	0.3	9.2	<0.01	<0.002		
1421689	Drill Core	<0.1	0.07	0.21	15.6	0.3	<0.05	0.9	4.53	21.5	0.04	0.003	0.3	8.6	0.02	<0.002		
1421690	Drill Core	<0.1	0.05	0.09	14.1	0.3	<0.05	0.6	7.09	31.1	0.06	0.009	0.3	13.8	0.03	<0.002		
1421691	Drill Core	<0.1	0.08	<0.02	19.8	0.1	<0.05	3.6	7.57	27.6	0.10	0.001	0.4	17.2	*	<0.002		
1421692	Rock	<0.1	0.23	<0.02	7.2	0.1	<0.05	9.6	4.59	45.5	<0.02	<0.001	0.2	8.5	<0.01	<0.002		
1421693	Drill Core	0.1	0.10	0.20	18.8	0.4	<0.05	1.3	4.87	27.9	<0.02	<0.001	0.2	7.5	<0.01	<0.002		
1421694	Drill Core	<0.1	0.11	0.24	16.5	0.4	<0.05	1.2	3.54	22.0	0.02	<0.001	0.3	8.5	<0.01	<0.002		

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Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
Pulp Duplicates																					
1421552	Drill Core	8.24	0.007	3.07	558.1	4.99	76.5	281	8.6	7.8	335	24759	1.6	4.2	5.6	12.7	24.2	0.19	0.39	0.11	59
REP 1421552	QC			3.15	547.0	4.87	74.6	281	9.2	7.7	326	24622	1.9	4.1	6.1	12.4	24.6	0.19	0.40	0.10	58
1421553	Drill Core	6.43	0.008	13.05	1578	47.26	54.0	1786	8.4	8.4	348	22364	1.9	4.5	12.0	13.6	28.0	0.22	0.63	0.28	44
REP 1421553	QC		0.010																		
1421557	Drill Core	7.38	0.028	190.9	>10000	16.04	124.2	3115	9.3	8.7	331	30146	20.8	5.9	36.3	11.0	37.3	1.18	1.20	5.67	45
REP 1421557	QC			185.9	>10000	16.01	129.0	3193	9.8	8.3	326	29494	21.1	6.0	41.8	11.3	35.6	1.31	1.17	5.77	44
1421578	Drill Core	3.33	0.007	13.10	1232	2.25	28.3	753	9.5	8.8	311	24549	1.2	5.9	8.3	14.3	40.4	0.06	0.25	0.27	54
REP 1421578	QC			12.29	1211	2.24	26.1	678	9.4	8.1	298	24117	1.1	5.7	9.3	14.0	39.8	0.08	0.23	0.29	53
1421583	Drill Core	3.14	0.015	9.47	2015	2.13	26.2	950	8.9	8.5	275	23220	1.1	5.4	12.0	11.0	37.7	4.29	0.14	0.42	54
REP 1421583	QC		0.005																		
1421586	Drill Core	3.09	0.013	180.0	1905	7.25	28.6	997	8.4	9.4	242	23707	3.0	18.7	20.3	9.1	39.2	0.14	1.98	0.51	47
REP 1421586	QC		0.020																		
1421612	Rock	0.40	<0.005	0.20	31.12	2.23	36.8	44	2.4	2.8	161	11297	0.6	2.0	<0.2	4.7	72.8	0.02	0.07	0.03	12
REP 1421612	QC			0.31	32.66	2.28	40.3	48	2.6	3.2	164	11489	0.5	2.0	0.6	4.7	72.6	0.03	0.07	0.10	12
1421616	Drill Core	4.74	0.006	78.66	1652	2.12	24.7	739	8.3	9.0	249	22847	1.5	4.9	5.3	10.3	272.5	0.10	0.44	0.21	53
REP 1421616	QC			77.79	1646	2.18	25.5	752	9.1	9.0	244	22505	1.7	4.9	8.1	10.4	270.8	0.07	0.46	0.22	52
1421620	Drill Core	4.47	0.008	87.77	2550	1.88	25.1	942	7.0	7.4	188	21101	2.7	5.4	11.9	9.6	82.1	0.14	0.12	0.42	47
REP 1421620	QC		0.009																		
REP 1421634	QC			50.40	2079	76.59	56.6	2924	7.7	8.5	647	22301	3.2	7.6	13.6	16.0	88.8	0.90	2.74	0.49	30
1421651	Drill Core	4.70	<0.005	2.33	237.6	4.10	30.9	158	9.0	6.1	256	18376	1.1	2.9	0.6	8.0	37.3	0.05	0.08	0.20	50
REP 1421651	QC			2.41	244.7	4.03	34.0	163	9.1	6.8	256	18343	1.2	2.9	1.2	8.2	37.0	0.06	0.08	0.19	51
1421654	Drill Core	4.61	<0.005	43.89	924.4	3.79	26.7	699	7.8	6.9	293	20427	1.3	5.3	5.4	12.3	116.9	0.05	0.16	0.69	43
REP 1421654	QC		0.006																		
1421686	Drill Core	4.73	<0.005	33.03	489.6	3.34	28.2	239	8.7	6.9	270	19941	0.5	5.4	3.3	12.4	32.8	0.05	0.08	0.22	46
REP 1421686	QC			33.25	495.5	3.36	29.5	258	9.0	7.1	278	20620	0.6	5.5	5.1	12.5	33.9	0.04	0.09	0.21	48
1421688	Drill Core	3.79	<0.005	14.77	476.2	3.90	30.9	261	9.8	8.2	267	20291	0.7	6.5	1.8	13.1	55.6	0.02	0.11	0.24	48
REP 1421688	QC		<0.005																		
1421694	Drill Core	5.47	<0.005	3.13	524.1	3.35	26.5	350	7.9	7.0	198	18947	0.8	5.3	0.8	12.2	26.2	0.04	0.03	0.23	51

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Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
Pulp Duplicates																					
1421552	Drill Core	7250	671	13.6	21.2	7832	69.9	1187	<1	7962	769	2024	0.9	3.9	0.08	702	<0.005	<0.1	<0.02	5.3	1.28
REP 1421552	QC	7180	663	13.3	20.7	7699	69.0	1152	<1	7905	776	2004	0.8	3.7	0.09	703	0.019	0.2	0.05	5.2	1.23
1421553	Drill Core	8422	622	14.7	17.6	7492	61.6	726	2	8242	512	2139	2.4	2.8	0.09	2343	<0.005	0.7	0.06	5.0	1.77
REP 1421553	QC																				
1421557	Drill Core	11389	610	17.5	16.4	7150	40.5	256	2	8063	570	1234	10.4	2.9	0.04	11803	0.010	5.2	0.38	4.9	1.23
REP 1421557	QC	11194	612	17.6	16.5	6953	42.3	248	<1	7794	557	1204	10.1	3.1	0.04	11259	0.010	5.1	0.34	5.0	1.19
1421578	Drill Core	8316	694	16.4	21.0	6875	114.3	853	<1	7567	701	2859	3.8	3.1	0.14	1484	0.008	1.0	0.06	5.0	1.87
REP 1421578	QC	8257	651	15.7	19.7	6765	106.3	773	<1	7371	697	2836	3.5	2.8	0.14	1477	<0.005	0.6	0.07	5.1	1.77
1421583	Drill Core	7349	590	13.9	18.4	7118	82.6	1127	2	7705	619	3482	3.2	2.9	0.17	2390	<0.005	0.9	0.06	5.5	2.28
REP 1421583	QC																				
1421586	Drill Core	7602	602	13.0	16.2	6541	83.7	828	1	7556	569	2677	3.4	2.6	0.13	3466	0.029	0.9	0.17	4.6	1.88
REP 1421586	QC																				
1421612	Rock	2888	313	20.4	8.3	3362	77.9	383	6	5823	494	2738	0.2	1.1	0.09	<200	<0.005	<0.1	<0.02	3.1	0.25
REP 1421612	QC	2925	317	20.8	8.1	3677	76.4	391	6	5920	501	2765	0.1	1.3	0.09	<200	<0.005	0.3	0.05	3.5	0.24
1421616	Drill Core	7245	607	12.7	17.9	7647	123.7	1034	<1	7659	567	4111	2.1	2.9	0.20	2295	0.013	0.7	0.10	4.8	2.33
REP 1421616	QC	7170	615	12.6	17.2	7540	121.8	1032	<1	7557	565	4084	2.0	3.1	0.21	2297	0.007	0.7	0.10	4.8	2.34
1421620	Drill Core	4503	577	11.1	12.8	6556	66.9	1169	<1	7044	629	3498	18.1	3.2	0.16	2614	<0.005	0.9	0.09	4.1	1.88
REP 1421620	QC																				
REP 1421634	QC	15530	830	23.2	10.8	5999	339.0	23	3	9994	244	1750	1.0	2.9	0.09	2443	0.013	1.2	0.12	4.6	4.69
1421651	Drill Core	7044	945	11.8	23.5	5370	102.5	763	<1	5712	663	1302	0.6	2.3	0.03	596	<0.005	<0.1	0.05	3.4	0.75
REP 1421651	QC	7111	892	11.0	25.0	5350	99.5	770	<1	5525	651	1287	0.6	2.4	0.03	598	<0.005	<0.1	0.06	3.4	0.73
1421654	Drill Core	11638	629	15.4	17.0	5939	125.9	504	2	7472	493	2093	2.8	2.4	0.09	1554	<0.005	0.3	0.04	4.2	1.92
REP 1421654	QC																				
1421686	Drill Core	8888	811	13.3	21.8	5040	47.3	866	<1	6129	735	1199	32.6	2.1	0.05	788	<0.005	0.2	0.05	4.3	0.96
REP 1421686	QC	9025	806	13.6	22.8	5134	49.8	923	1	6300	734	1199	33.4	2.1	0.05	795	<0.005	0.2	0.04	4.5	0.97
1421688	Drill Core	8787	861	13.8	22.3	5680	91.7	782	2	6408	734	1610	0.8	2.3	0.07	849	<0.005	0.2	<0.02	4.6	1.16
REP 1421688	QC																				
1421694	Drill Core	5551	785	13.3	23.9	4775	86.3	1021	1	5465	711	1841	1.0	1.5	0.09	719	<0.005	<0.1	0.08	4.1	1.00

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	G6Gr	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Ag	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	gm/t	%
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	50	0.001
Pulp Duplicates																		
1421552	Drill Core	0.2	0.09	0.21	16.0	0.6	<0.05	1.2	6.76	26.3	<0.02	0.002	0.3	7.7	<0.01	<0.002		
REP 1421552	QC	0.2	0.09	0.20	15.7	0.5	<0.05	1.2	6.46	26.2	0.02	<0.001	0.4	7.6	<0.01	<0.002		
1421553	Drill Core	<0.1	0.03	0.15	18.5	0.5	<0.05	0.8	6.74	27.8	0.06	<0.001	0.5	7.1	<0.01	<0.002		
REP 1421553	QC																	
1421557	Drill Core	<0.1	0.04	0.10	8.9	1.0	<0.05	0.7	8.59	32.9	0.26	0.014	0.3	9.2	0.03	<0.002		1.095
REP 1421557	QC	<0.1	0.05	0.11	8.6	1.0	<0.05	0.7	8.18	31.8	0.26	0.014	0.3	8.9	0.03	<0.002		
1421578	Drill Core	<0.1	0.05	0.19	26.1	0.6	<0.05	0.9	7.81	30.3	0.04	<0.001	0.3	9.1	<0.01	<0.002		
REP 1421578	QC	<0.1	0.04	0.15	25.1	0.5	<0.05	0.7	7.66	31.1	0.04	0.001	0.5	9.4	<0.01	<0.002		
1421583	Drill Core	<0.1	0.03	0.21	35.3	0.6	<0.05	0.6	6.65	24.7	0.08	0.002	0.4	9.5	<0.01	<0.002		
REP 1421583	QC																	
1421586	Drill Core	0.1	0.05	0.22	22.8	0.5	<0.05	0.8	6.97	23.4	0.05	0.007	0.3	9.4	0.04	<0.002		
REP 1421586	QC																	
1421612	Rock	<0.1	0.44	0.16	12.3	0.4	<0.05	13.3	4.29	42.4	<0.02	<0.001	0.1	14.4	<0.01	<0.002		
REP 1421612	QC	<0.1	0.50	0.16	12.9	0.5	<0.05	13.2	4.48	44.3	<0.02	<0.001	0.3	15.5	0.01	<0.002		
1421616	Drill Core	0.1	0.02	0.18	36.4	0.5	<0.05	0.6	5.93	25.2	0.03	0.006	<0.1	8.9	<0.01	<0.002		
REP 1421616	QC	<0.1	0.03	0.25	38.0	0.6	<0.05	0.6	6.35	24.9	0.05	0.006	0.2	9.9	0.01	<0.002		
1421620	Drill Core	<0.1	0.04	0.30	32.6	0.6	<0.05	0.7	5.88	22.0	0.07	0.015	0.2	9.5	0.02	<0.002		
REP 1421620	QC																	
REP 1421634	QC	<0.1	0.04	<0.02	13.9	0.4	<0.05	0.8	9.11	44.8	0.07	0.004	0.5	17.0	<0.01	<0.002		
1421651	Drill Core	<0.1	0.12	0.11	6.5	0.3	<0.05	2.5	3.97	24.7	<0.02	<0.001	0.2	8.3	<0.01	<0.002		
REP 1421651	QC	<0.1	0.11	0.12	6.7	0.3	<0.05	2.7	4.13	21.5	<0.02	<0.001	0.2	9.0	<0.01	<0.002		
1421654	Drill Core	<0.1	0.03	0.11	16.6	0.4	<0.05	0.8	7.75	30.8	0.06	0.009	0.3	11.3	<0.01	<0.002		
REP 1421654	QC																	
1421686	Drill Core	<0.1	0.05	0.25	9.4	0.3	<0.05	0.9	4.96	23.6	0.03	0.002	0.1	9.8	<0.01	<0.002		
REP 1421686	QC	<0.1	0.08	0.23	9.7	0.3	<0.05	1.0	4.99	24.1	0.02	0.002	0.3	9.8	<0.01	<0.002		
1421688	Drill Core	<0.1	0.06	0.18	14.1	0.2	<0.05	0.9	5.38	23.2	<0.02	0.002	0.3	9.2	<0.01	<0.002		
REP 1421688	QC																	
1421694	Drill Core	<0.1	0.11	0.24	16.5	0.4	<0.05	1.2	3.54	22.0	0.02	<0.001	0.3	8.5	<0.01	<0.002		

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Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
REP 1421694	QC			3.15	530.2	3.34	26.1	368	8.1	6.9	196	19130	0.8	5.3	2.2	12.2	27.4	0.05	0.03	0.23	52
Core Reject Duplicates																					
1421566	Drill Core	8.39	0.013	22.62	3370	30.68	58.1	2006	8.0	9.2	288	23093	1.7	6.4	12.2	11.1	132.1	0.51	0.76	0.51	37
DUP 1421566	QC		0.017	25.85	3348	29.57	56.2	2011	8.8	9.8	287	23391	1.8	6.8	14.3	11.5	139.9	0.48	0.78	0.54	39
1421600	Drill Core	3.85	<0.005	6.42	1016	1.59	21.3	476	7.4	7.4	243	21453	1.8	4.3	5.0	10.1	86.1	0.06	0.27	0.22	46
DUP 1421600	QC		0.033	6.55	1020	1.67	23.1	538	8.4	7.9	254	23005	1.8	4.4	8.2	10.7	92.0	0.05	0.33	0.19	50
1421634	Drill Core	1.47	0.008	52.33	2064	77.01	57.3	2966	7.3	8.3	620	21757	3.2	7.7	8.2	16.3	87.2	0.94	2.75	0.52	29
DUP 1421634	QC	<0.01	0.006	50.85	1829	47.83	51.1	2441	7.9	8.5	638	21763	2.9	7.9	8.6	15.9	88.2	0.54	2.30	0.46	29
1421668	Drill Core	4.78	<0.005	6.16	66.92	3.91	28.1	53	7.7	7.2	255	20138	0.8	5.0	0.9	12.6	45.8	0.03	0.10	0.11	52
DUP 1421668	QC		<0.005	5.90	69.20	4.00	28.1	53	8.0	6.7	256	20163	0.7	5.0	1.1	12.8	49.4	0.02	0.08	0.11	52
Reference Materials																					
STD AGPROOF	Standard																				
STD DS9	Standard			12.29	114.4	131.5	331.5	1981	40.5	7.5	583	22146	26.5	2.7	126.0	6.1	71.3	2.40	5.90	7.12	37
STD DS9	Standard			13.22	115.4	122.9	318.9	1900	41.6	8.5	598	22870	26.7	3.1	132.5	7.0	75.3	2.43	6.63	6.64	38
STD DS9	Standard			13.09	117.1	122.0	289.9	1786	39.5	7.8	569	22363	23.8	2.7	110.6	6.1	64.3	2.16	5.29	5.99	37
STD DS9	Standard			13.14	107.8	124.2	315.0	1959	38.4	6.9	587	22510	24.8	2.8	113.7	6.6	67.2	2.33	5.64	6.58	42
STD DS9	Standard			13.40	114.4	133.8	333.9	1841	42.0	7.7	602	23776	27.4	3.3	119.2	7.4	81.6	2.59	6.84	7.74	40
STD DS9	Standard			14.17	114.5	125.9	335.7	1950	44.6	8.1	561	23935	27.7	3.0	123.6	7.1	75.9	2.58	6.40	6.87	40
STD DS9	Standard			12.99	110.1	121.2	314.8	1898	40.8	7.8	591	23331	26.0	2.7	119.5	5.9	73.8	2.34	5.61	6.47	39
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard		0.957																		
STD OXG99	Standard		0.976																		
STD OXG99	Standard		0.908																		
STD OXG99	Standard		0.937																		
STD OXG99	Standard		0.912																		
STD OXG99	Standard		0.973																		
STD OXK94	Standard		3.739																		
STD OXK94	Standard		3.912																		

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
REP 1421694	QC	5617	779	13.3	23.3	4743	87.6	1080	1	5594	739	1864	1.1	1.5	0.10	725	<0.005	0.2	0.08	4.1	1.00
Core Reject Duplicates																					
1421566	Drill Core	12617	665	16.2	14.7	6700	177.4	80	<1	8417	403	1629	6.8	2.6	0.08	3908	<0.005	1.3	0.09	4.9	2.66
DUP 1421566	QC	12623	633	16.5	15.0	6800	194.3	77	1	8799	471	1821	7.7	2.7	0.09	3998	<0.005	1.7	0.15	5.0	2.75
1421600	Drill Core	8771	595	13.9	16.1	6697	224.4	627	3	6793	609	2626	2.7	2.9	0.11	1037	<0.005	0.1	0.11	4.1	1.97
DUP 1421600	QC	8968	655	14.6	17.8	7155	247.1	729	<1	7295	626	2764	4.7	2.8	0.12	1028	0.015	0.3	0.07	4.3	2.14
1421634	Drill Core	15331	849	23.0	10.3	5948	335.4	23	2	9859	234	1712	1.1	2.8	0.09	2371	0.017	1.0	0.10	4.7	4.79
DUP 1421634	QC	15542	823	23.5	11.0	5904	357.3	23	<1	10167	270	1880	1.1	2.9	0.09	2152	0.013	1.1	0.10	4.7	4.49
1421668	Drill Core	6172	673	14.0	19.4	6128	71.3	1274	<1	6295	746	2743	1.9	2.1	0.12	<200	<0.005	<0.1	<0.02	4.4	1.38
DUP 1421668	QC	6193	677	14.6	19.6	6052	74.6	1288	1	6378	810	2775	0.7	2.0	0.12	<200	<0.005	<0.1	<0.02	4.3	1.41
Reference Materials																					
STD AGPROOF	Standard																				
STD DS9	Standard	6604	815	12.6	111.8	5893	300.8	1073	2	8742	791	3829	3.0	1.9	5.60	1621	0.195	5.4	5.37	4.7	2.54
STD DS9	Standard	7176	880	14.4	118.6	6156	313.1	1232	3	9367	810	3944	3.2	2.3	5.63	1596	0.219	5.4	5.26	4.7	2.45
STD DS9	Standard	6872	737	11.8	111.1	6011	274.6	1014	2	9054	821	3937	2.8	2.1	5.17	1486	0.194	5.0	4.86	4.1	2.24
STD DS9	Standard	7372	830	14.8	113.3	6173	305.2	1099	2	9559	791	3828	3.3	2.4	5.75	1644	0.220	5.3	5.49	5.1	2.56
STD DS9	Standard	7420	836	15.4	118.5	6311	331.6	1240	2	9736	859	4086	3.3	2.6	5.91	1518	0.219	5.9	5.72	4.7	2.58
STD DS9	Standard	7402	868	14.9	118.8	6344	316.5	1152	<1	9642	840	4083	3.3	2.7	5.84	1540	0.217	6.3	5.74	4.7	2.62
STD DS9	Standard	7312	828	13.4	116.9	6306	306.5	1173	3	9554	841	4083	2.8	2.3	5.29	1603	0.199	4.9	4.97	4.8	2.28
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
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Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	G6Gr Ag gm/t 50	7AR Cu % 0.001
REP 1421694	QC	<0.1	0.11	0.25	16.7	0.4	<0.05	1.4	3.70	22.8	0.03	<0.001	0.2	8.5	<0.01	<0.002		
Core Reject Duplicates																		
1421566	Drill Core	<0.1	0.03	0.02	12.0	0.4	<0.05	0.7	7.43	29.7	0.11	0.006	0.1	8.8	<0.01	<0.002		
DUP 1421566	QC	<0.1	0.03	<0.02	13.8	0.3	<0.05	0.8	7.85	31.4	0.09	0.004	0.5	8.7	<0.01	<0.002		
1421600	Drill Core	<0.1	0.03	0.15	21.4	0.4	<0.05	0.9	6.71	27.2	0.04	<0.001	0.2	7.7	<0.01	<0.002		
DUP 1421600	QC	0.1	0.05	0.16	23.0	0.4	<0.05	1.1	7.21	28.9	0.03	0.001	0.2	8.1	<0.01	<0.002		
1421634	Drill Core	<0.1	0.04	<0.02	13.4	0.4	<0.05	0.9	9.02	42.8	0.09	0.004	0.5	15.2	<0.01	<0.002		
DUP 1421634	QC	<0.1	0.04	<0.02	14.4	0.4	<0.05	0.9	8.98	44.0	0.06	0.004	0.5	15.6	<0.01	<0.002		
1421668	Drill Core	<0.1	0.08	0.29	22.6	0.4	<0.05	1.2	5.73	25.1	0.02	<0.001	0.2	9.7	<0.01	<0.002		
DUP 1421668	QC	<0.1	0.06	0.26	23.4	0.3	<0.05	1.2	5.80	25.9	<0.02	<0.001	<0.1	10.7	<0.01	<0.002		
Reference Materials																		
STD AGPROOF	Standard																94	
STD DS9	Standard	<0.1	0.06	1.59	34.8	6.7	<0.05	1.7	5.04	23.3	2.35	0.068	5.6	25.5	0.12	0.368		
STD DS9	Standard	0.1	0.06	1.59	34.2	6.6	<0.05	2.0	6.01	26.9	2.35	0.054	5.7	25.8	0.10	0.344		
STD DS9	Standard	0.1	0.08	1.24	31.6	6.4	<0.05	1.7	4.98	22.1	2.11	0.074	6.4	24.2	0.10	0.340		
STD DS9	Standard	0.1	0.08	1.46	34.3	6.5	<0.05	2.0	6.18	29.1	2.31	0.056	5.6	24.6	0.11	0.377		
STD DS9	Standard	0.2	0.10	1.46	36.4	8.4	<0.05	2.2	6.36	29.2	2.69	0.054	5.2	27.3	0.11	0.368		
STD DS9	Standard	0.1	0.07	1.52	37.1	7.4	<0.05	2.2	6.09	28.4	2.39	0.073	4.5	23.7	0.13	0.400		
STD DS9	Standard	0.1	0.09	1.41	33.4	6.5	<0.05	1.9	5.74	25.3	2.09	0.056	5.6	25.7	0.13	0.349		
STD GC-7	Standard																	0.578
STD GC-7	Standard																	0.563
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	

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AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
STD OXK94	Standard		3.658																		
STD OXK94	Standard		3.855																		
STD OXK94	Standard		3.751																		
STD SP49	Standard																				
STD OXK94 Expected			3.562																		
STD OXG99 Expected			0.932																		
STD SP49 Expected																					
STD AGPROOF Expected																					
STD GC-7 Expected																					
STD DS9 Expected				12.84	108	126	317	1830	40.3	7.6	575	23300	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			<0.01	0.05	<0.01	<0.1	3	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			<0.01	0.10	<0.01	<0.1	<2	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	0.03	<2
BLK	Blank			0.11	17.23	0.16	0.3	9	<0.1	<0.1	<1	<100	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	0.05	<0.02	<2
BLK	Blank			<0.01	0.03	<0.01	<0.1	3	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
BLK	Blank																				
BLK	Blank			<0.01	0.45	<0.01	<0.1	3	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD SP49	Standard																				
STD OXK94 Expected																					
STD OXG99 Expected																					
STD SP49 Expected																					
STD AGPROOF Expected																					
STD GC-7 Expected																					
STD DS9 Expected		7201	819	13.3	121	6165	295	1108		9577	853	3950	2.89	2.5	5.3	1615	0.2	5.2	5.02	4.59	2.37
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	0.007	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	0.6	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	G6Gr Ag gm/t 50	7AR Cu % 0.001
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD SP49	Standard																59	
STD OXK94 Expected																		
STD OXG99 Expected																		
STD SP49 Expected																	60.2	
STD AGPROOF Expected																	94	
STD GC-7 Expected																		0.555
STD DS9 Expected		0.1	0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	0.061	5.4	25.2	0.12	0.35		
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																<50	
BLK	Blank																<50	
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																	<0.001

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
BLK	Blank			<0.01	0.46	0.02	<0.1	<2	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			<0.01	0.13	<0.01	<0.1	2	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			<0.01	0.38	<0.01	<0.1	<2	<0.1	<0.1	<1	<100	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
Prep Wash																					
G1-SMI	Prep Blank	<0.01	<0.005	0.20	11.54	3.73	117.6	20	3.0	4.3	593	19604	0.8	1.8	2.2	5.7	75.6	0.17	0.03	0.14	36
G1-SMI	Prep Blank	<0.01	<0.005	0.10	12.38	7.31	201.3	51	2.7	4.0	600	20073	0.9	1.7	5.1	5.5	64.2	0.33	0.04	0.08	37

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 25, 2012

QUALITY CONTROL REPORT SMI12000222.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
Prep Wash																					
G1-SMI	Prep Blank	5319	822	15.1	7.3	5172	181.5	1441	<1	9922	1081	5007	<0.1	2.4	0.33	226	0.021	<0.1	0.03	5.0	3.10
G1-SMI	Prep Blank	4907	766	13.4	7.7	5137	163.7	1365	<1	9318	848	4740	<0.1	2.3	0.33	374	0.030	<0.1	<0.02	4.8	3.03

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QUALITY CONTROL REPORT SMI12000222.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	G6Gr Ag gm/t 50	7AR Cu % 0.001
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
Prep Wash																		
G1-SMI	Prep Blank	0.1	0.07	0.81	41.6	0.7	<0.05	1.3	6.03	28.4	0.02	<0.001	0.4	30.9	<0.01	<0.002		
G1-SMI	Prep Blank	0.2	0.09	0.53	41.5	0.5	<0.05	1.0	5.27	24.8	<0.02	<0.001	0.4	30.1	<0.01	<0.002		

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By:	Email Distribution List
Receiving Lab:	Canada-Smithers
Received:	August 23, 2012
Report Date:	September 18, 2012
Page:	1 of 7

CERTIFICATE OF ANALYSIS SMI12000266.1

CLIENT JOB INFORMATION

Project:	Troitsa
Shipment ID:	
P.O. Number	
Number of Samples:	167

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	160	Crush, split and pulverize 250 g rock to 200 mesh			SMI
G601	166	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
1F05	166	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
7AR	13	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
G1-SMI	Prep Blank	<0.01	<0.005	0.06	2.46	2.85	43.9	12	2.5	3.8	573	18681	0.6	1.5	1.2	5.0	67.6	<0.01	<0.02	0.05	34
G1-SMI	Prep Blank	<0.01	<0.005	0.13	2.24	3.03	48.5	13	2.4	4.3	596	19650	0.7	1.6	1.3	5.6	67.3	0.02	<0.02	0.04	36
1421695	Drill Core	4.53	0.013	6.76	1794	5.63	43.2	698	9.6	8.7	383	23163	1.8	2.9	17.2	9.1	22.3	0.11	0.12	0.66	54
1421696	Drill Core	8.34	<0.005	3.81	1295	4.46	44.7	550	9.8	9.3	301	25820	1.7	3.6	12.1	12.7	25.9	0.11	0.13	0.33	62
1421697	Drill Core	7.50	0.017	2.24	2028	2.13	39.9	812	9.9	10.1	271	25411	1.0	4.0	10.1	13.4	30.3	0.10	0.12	0.17	60
1421698	Drill Core	7.41	<0.005	2.48	1401	4.61	42.4	802	10.4	9.4	371	26787	5.8	6.2	17.5	12.2	56.4	0.12	0.23	0.29	50
1421699	Drill Core	7.97	<0.005	85.80	2470	8.08	39.8	1653	8.1	10.8	627	22760	7.4	5.4	3.5	10.2	84.6	0.23	0.43	0.63	19
1421700	Drill Core	7.46	<0.005	43.46	2377	6.32	34.1	1125	8.4	17.8	363	22032	8.8	6.1	3.9	13.4	67.4	0.10	0.30	1.44	18
1421701	Drill Core	8.32	<0.005	9.00	385.3	3.81	29.8	210	8.5	7.2	287	22568	1.1	4.5	2.8	11.9	45.6	0.04	0.11	0.14	48
1421702	Drill Core	2.18	<0.005	2.23	178.5	5.43	42.6	181	11.4	6.7	374	26464	1.2	1.3	0.6	3.3	51.5	0.14	0.10	2.23	68
1421703	Rock Pulp	0.10	4.694	1310	9981	87.02	95.0	>100000	12.2	11.8	573	30602	198.0	2.6	4986	2.2	14.4	8.01	119.1	3.46	24
1421704	Drill Core	7.49	<0.005	4.43	196.6	4.12	25.4	98	7.8	7.1	245	22051	0.9	4.5	2.1	12.8	26.3	0.05	0.09	0.06	53
1421705	Drill Core	8.10	0.010	18.05	1367	4.11	30.0	502	9.0	7.6	268	22881	0.8	4.8	5.2	12.7	24.7	0.05	0.06	0.12	52
1421706	Drill Core	7.42	0.007	3.10	690.8	3.16	27.9	292	8.4	8.1	286	22285	1.3	4.2	3.1	12.0	27.1	0.06	0.06	0.05	51
1421707	Drill Core	7.27	<0.005	15.54	1066	2.85	28.1	493	8.1	7.9	236	22673	1.0	4.7	3.2	12.1	25.3	0.03	0.05	0.42	52
1421708	Drill Core	7.78	<0.005	28.61	391.3	2.89	27.6	171	9.1	7.8	244	22709	1.1	3.7	6.3	9.9	29.1	<0.01	0.05	0.04	54
1421709	Drill Core	8.06	<0.005	7.34	698.2	3.18	28.3	325	8.5	8.9	260	21899	1.5	4.9	2.2	12.4	26.1	0.04	0.07	0.11	49
1421710	Drill Core	8.08	<0.005	31.88	2289	5.97	31.8	1337	8.3	7.5	323	23319	1.6	4.5	11.9	12.1	37.8	0.07	0.09	21.69	49
1421711	Drill Core	7.09	<0.005	11.55	1764	3.28	34.3	865	8.9	8.6	323	23337	2.0	4.6	6.0	11.3	40.9	0.05	0.11	0.42	46
1421712	Drill Core	7.01	<0.005	2.47	1315	3.65	30.8	629	8.9	8.6	315	24151	2.1	4.5	4.8	12.0	40.2	0.07	0.12	0.33	50
1421713	Drill Core	7.45	<0.005	15.02	919.9	3.17	31.3	465	8.7	8.1	279	22598	2.0	4.1	2.9	10.6	38.2	0.03	0.13	0.14	45
1421714	Drill Core	7.63	0.009	43.81	1005	3.71	31.8	535	8.8	8.6	283	22341	2.0	4.6	6.4	12.0	33.5	0.05	0.12	0.13	49
1421715	Drill Core	9.38	0.007	28.47	1483	5.11	38.5	704	8.2	8.3	308	20713	1.5	4.9	8.0	12.5	38.7	0.09	0.17	0.18	44
1421716	Drill Core	7.33	0.009	46.05	1401	4.76	31.0	731	7.5	7.3	276	19715	1.8	5.8	4.5	13.0	46.7	0.07	0.14	0.18	38
1421717	Drill Core	4.75	<0.005	21.27	1425	7.50	35.0	703	5.0	7.0	333	17599	1.4	6.5	5.9	15.8	77.8	0.15	0.40	0.24	22
1421718	Drill Core	8.61	<0.005	13.41	127.6	15.26	83.1	236	1.9	13.4	721	33343	13.9	2.6	11.0	1.9	227.5	0.10	0.62	0.10	23
1421719	Drill Core	8.82	<0.005	16.72	836.8	3.78	35.0	385	10.7	8.9	457	23976	4.1	5.0	4.1	10.6	83.1	0.06	0.28	0.11	48
1421720	Drill Core	7.77	<0.005	74.75	1263	76.33	66.6	879	9.1	8.2	498	22104	9.4	5.9	7.3	11.5	135.0	0.54	0.54	0.54	34
1421721	Drill Core	10.11	0.032	217.3	3175	563.0	164.5	40381	12.2	11.2	499	27269	29.9	5.9	36.3	11.1	114.8	4.43	3.92	0.33	46
1421722	Rock	0.58	<0.005	0.32	7.19	1.99	42.5	25	2.8	3.2	185	10420	0.5	1.8	<0.2	3.5	42.9	<0.01	0.03	<0.02	9

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
G1-SMI	Prep Blank	4717	720	12.3	9.8	4797	150.3	1123	<1	8306	817	4397	<0.1	2.3	0.31	<200	0.016	<0.1	0.08	4.4	2.70
G1-SMI	Prep Blank	4934	795	13.4	8.8	4931	221.6	1189	3	8836	818	4606	<0.1	2.3	0.35	<200	<0.005	0.2	<0.02	4.9	2.85
1421695	Drill Core	4373	671	14.8	21.3	7300	79.1	798	<1	7822	641	3423	0.5	3.4	0.15	1849	<0.005	0.2	0.05	4.5	1.69
1421696	Drill Core	4929	693	13.7	21.5	7988	84.2	1054	<1	8380	765	3883	2.6	3.6	0.19	1490	<0.005	0.3	0.07	5.3	1.66
1421697	Drill Core	6083	667	13.6	23.2	8227	72.5	848	<1	8762	760	3742	0.1	3.8	0.16	2406	<0.005	0.7	0.04	5.5	1.75
1421698	Drill Core	12320	733	18.4	19.7	7666	224.2	109	1	9914	421	1664	<0.1	3.2	0.08	2456	0.013	0.3	0.10	5.8	2.12
1421699	Drill Core	21812	732	16.3	13.3	7295	72.8	29	<1	11462	337	2631	0.4	2.0	0.12	4657	<0.005	0.4	0.08	4.2	3.68
1421700	Drill Core	18640	656	16.6	11.8	5839	65.8	30	<1	9703	352	2139	0.3	2.1	0.10	4998	0.014	0.4	0.13	3.8	3.60
1421701	Drill Core	10054	688	15.3	19.9	6453	89.8	599	<1	7463	689	2851	0.2	3.2	0.13	485	<0.005	<0.1	<0.02	4.1	1.81
1421702	Drill Core	11540	1315	11.4	30.3	8125	43.4	422	<1	8391	1050	1046	0.5	3.5	0.03	286	0.005	<0.1	0.04	4.3	1.51
1421703	Rock Pulp	5764	630	6.7	12.0	4083	102.7	56	3	8635	514	1966	11.4	3.7	0.08	10232	0.696	3.3	0.87	2.4	0.71
1421704	Drill Core	5154	620	12.6	22.7	6448	72.4	1279	<1	7056	1148	4174	0.2	2.9	0.18	206	<0.005	<0.1	<0.02	4.0	1.45
1421705	Drill Core	5730	654	11.4	20.1	6734	58.6	1097	<1	7192	979	3918	0.5	3.2	0.16	1545	<0.005	0.2	0.04	4.2	1.51
1421706	Drill Core	7283	667	11.5	21.7	6800	53.9	984	<1	7427	938	3195	1.6	3.7	0.13	744	<0.005	<0.1	0.09	4.1	1.09
1421707	Drill Core	5723	636	12.1	19.6	6456	61.3	1100	<1	6835	919	3831	0.5	2.9	0.16	1251	<0.005	<0.1	0.03	3.8	1.39
1421708	Drill Core	5555	593	11.8	23.3	6726	64.0	1137	<1	7279	1035	4089	1.0	3.0	0.15	405	<0.005	<0.1	<0.02	4.2	1.29
1421709	Drill Core	5976	694	12.4	19.7	6370	56.4	976	<1	6647	779	3410	1.9	3.1	0.15	1222	0.006	<0.1	0.03	4.0	1.53
1421710	Drill Core	7811	678	12.1	22.3	6860	57.9	880	<1	6920	865	3047	0.4	3.1	0.12	2602	0.009	0.6	0.15	3.9	1.23
1421711	Drill Core	9278	686	14.6	19.1	7254	50.0	313	<1	8170	650	1725	0.3	3.1	0.06	1959	<0.005	0.3	0.04	4.5	1.15
1421712	Drill Core	9820	728	14.2	23.8	7262	46.2	468	<1	8293	702	2299	1.0	3.3	0.09	1725	0.006	0.3	0.06	5.0	1.38
1421713	Drill Core	8490	683	12.4	18.5	7038	43.9	492	<1	7992	609	2261	0.3	3.2	0.08	1521	<0.005	<0.1	0.06	4.3	1.41
1421714	Drill Core	7126	654	12.8	20.7	7275	56.1	756	<1	7720	813	3151	0.1	3.6	0.13	1696	<0.005	<0.1	<0.02	4.6	1.30
1421715	Drill Core	8646	618	13.5	18.0	6930	58.7	545	<1	7429	664	2338	0.2	3.2	0.10	1850	<0.005	0.2	0.03	4.2	1.28
1421716	Drill Core	8228	547	13.7	18.8	5821	56.3	498	<1	6494	699	2203	0.3	2.6	0.08	1870	<0.005	<0.1	0.05	3.8	1.25
1421717	Drill Core	12010	559	15.3	10.6	5109	91.6	48	<1	7496	452	1651	0.1	1.9	0.07	3046	<0.005	0.3	0.05	3.2	2.06
1421718	Drill Core	27538	1917	26.9	1.6	13050	203.1	69	<1	20129	108	3445	<0.1	3.2	0.16	6757	0.014	<0.1	0.03	5.3	5.09
1421719	Drill Core	15837	827	16.3	20.5	7563	119.8	60	<1	9425	556	1351	<0.1	3.4	0.04	2130	<0.005	<0.1	0.08	4.4	1.68
1421720	Drill Core	19460	736	19.6	15.9	6809	153.1	21	<1	9780	335	1604	0.2	2.3	0.07	3769	0.018	0.3	0.10	4.5	2.20
1421721	Drill Core	19611	836	21.7	22.0	7825	114.1	205	<1	10025	428	2175	0.2	3.1	0.09	8098	0.020	0.8	0.27	4.6	2.32
1421722	Rock	3974	358	21.3	7.7	3216	73.0	420	8	4952	656	3181	<0.1	0.9	0.11	<200	<0.005	<0.1	<0.02	2.4	0.58

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
G1-SMI	Prep Blank	<0.1	0.08	0.55	43.0	0.4	<0.05	1.2	5.07	22.3	<0.02	<0.001	0.3	28.2	<0.01	<0.002		
G1-SMI	Prep Blank	0.2	0.09	0.55	45.6	0.4	<0.05	1.2	5.53	25.0	<0.02	<0.001	0.3	29.7	<0.01	<0.002		
1421695	Drill Core	<0.1	0.03	0.12	25.5	0.4	<0.05	0.7	7.50	31.0	0.10	<0.001	0.2	10.4	<0.01	<0.002		
1421696	Drill Core	0.1	0.06	0.15	32.0	0.8	<0.05	1.0	8.47	29.4	0.07	0.005	0.3	10.5	<0.01	0.002		
1421697	Drill Core	<0.1	0.03	0.12	31.0	0.6	<0.05	0.8	8.89	30.6	0.11	0.002	0.3	11.0	<0.01	<0.002		
1421698	Drill Core	<0.1	0.05	0.02	13.5	0.5	<0.05	0.7	10.66	39.0	0.05	<0.001	0.4	16.7	<0.01	<0.002		
1421699	Drill Core	<0.1	0.04	<0.02	17.7	0.3	<0.05	1.5	8.64	31.5	0.05	0.009	0.4	15.5	0.01	<0.002		
1421700	Drill Core	<0.1	0.02	0.02	14.4	0.3	<0.05	0.8	9.64	31.1	0.04	0.015	0.6	14.1	<0.01	<0.002		
1421701	Drill Core	<0.1	0.04	0.14	23.1	0.5	<0.05	0.8	8.22	29.8	0.02	0.001	0.5	11.2	<0.01	<0.002		
1421702	Drill Core	<0.1	0.10	0.08	6.4	0.4	<0.05	2.6	5.22	26.0	0.02	<0.001	0.5	19.4	<0.01	<0.002		
1421703	Rock Pulp	<0.1	0.09	0.06	6.1	1.3	<0.05	3.0	6.17	13.3	<0.02	0.117	0.4	2.9	*	<0.002	1.084	104
1421704	Drill Core	<0.1	0.07	0.47	35.3	0.5	<0.05	1.3	6.03	23.7	0.03	0.002	0.2	8.8	<0.01	<0.002		
1421705	Drill Core	0.1	0.04	0.37	32.9	0.5	<0.05	1.1	6.26	22.4	0.04	0.010	0.4	8.7	<0.01	<0.002		
1421706	Drill Core	<0.1	0.07	0.30	24.9	0.5	<0.05	1.2	6.83	23.4	0.05	0.002	0.3	10.6	<0.01	<0.002		
1421707	Drill Core	0.1	0.05	0.29	32.1	0.5	<0.05	1.0	5.73	24.2	0.04	0.003	0.1	8.4	<0.01	<0.002		
1421708	Drill Core	<0.1	0.04	0.27	30.9	0.4	<0.05	0.9	5.92	23.5	0.03	0.011	0.3	9.2	<0.01	<0.002		
1421709	Drill Core	<0.1	0.05	0.28	30.5	0.5	<0.05	1.0	6.32	24.8	0.04	0.002	0.2	9.2	<0.01	<0.002		
1421710	Drill Core	0.1	0.06	0.28	23.7	0.5	<0.05	1.0	6.20	23.7	0.07	<0.001	0.2	11.1	<0.01	<0.002		
1421711	Drill Core	<0.1	0.05	0.09	11.6	0.3	<0.05	0.8	8.15	28.0	0.05	<0.001	0.3	13.9	<0.01	<0.002		
1421712	Drill Core	<0.1	0.04	0.10	17.1	0.4	<0.05	0.7	8.28	28.6	0.06	<0.001	0.2	11.7	<0.01	<0.002		
1421713	Drill Core	<0.1	0.02	0.12	17.6	0.3	<0.05	0.6	7.70	25.1	0.05	0.005	0.2	11.9	<0.01	<0.002		
1421714	Drill Core	<0.1	0.02	0.21	24.3	0.5	<0.05	0.7	7.60	26.5	0.05	0.019	0.2	9.7	<0.01	<0.002		
1421715	Drill Core	<0.1	0.04	0.15	18.1	0.4	<0.05	0.8	7.45	27.2	0.05	0.001	0.2	10.4	<0.01	0.003		
1421716	Drill Core	<0.1	0.04	0.18	16.7	0.3	<0.05	1.1	7.31	26.6	0.03	0.004	0.4	10.2	<0.01	<0.002		
1421717	Drill Core	<0.1	0.04	0.03	10.4	0.2	<0.05	1.5	7.25	31.0	0.05	0.007	0.1	10.7	<0.01	<0.002		
1421718	Drill Core	<0.1	0.08	<0.02	19.7	0.2	<0.05	2.9	12.66	57.2	<0.02	0.003	1.0	30.2	<0.01	<0.002		
1421719	Drill Core	<0.1	0.02	<0.02	7.4	0.2	<0.05	0.7	7.50	31.7	0.03	0.004	0.1	16.1	<0.01	<0.002		
1421720	Drill Core	<0.1	<0.02	<0.02	9.9	0.3	<0.05	0.6	9.34	36.8	0.06	0.009	0.5	15.1	0.01	<0.002		
1421721	Drill Core	<0.1	0.03	0.03	14.2	0.3	<0.05	0.7	9.99	42.3	0.08	0.021	0.4	16.8	<0.01	<0.002		
1421722	Rock	<0.1	0.32	0.18	14.6	0.3	<0.05	11.8	4.85	43.8	<0.02	0.001	0.1	14.5	<0.01	<0.002		

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	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421723	Drill Core	2.25	0.007	4.28	138.2	40.36	90.7	1620	6.0	15.6	887	35554	53.8	1.1	10.2	1.1	226.3	0.24	1.99	0.08	36
1421724	Drill Core	6.66	0.013	13.90	1046	63.27	72.8	3682	8.7	8.4	297	22331	2.9	6.0	7.9	13.2	218.7	2.06	1.48	0.30	47
1421725	Drill Core	7.61	<0.005	28.61	1270	4.57	51.0	666	17.9	13.9	683	31408	8.0	5.2	11.2	8.5	260.7	0.07	0.33	0.14	81
1421726	Drill Core	6.68	<0.005	25.06	961.1	3.06	29.4	354	8.6	7.8	280	22062	0.8	5.8	6.1	13.0	147.3	0.02	0.17	0.07	47
1421727	Drill Core	7.60	0.005	18.59	1378	3.54	31.0	667	7.5	7.9	310	22005	2.0	6.8	5.5	13.2	92.5	0.04	0.22	0.24	43
1421728	Drill Core	7.60	<0.005	12.84	1510	3.86	36.1	641	9.3	7.3	313	23576	2.4	5.9	7.3	12.2	53.3	0.08	0.25	0.24	52
1421729	Drill Core	7.56	0.044	50.23	896.6	3.63	31.5	393	9.3	9.2	356	23983	2.3	5.5	5.9	12.0	48.1	<0.01	0.27	0.17	51
1421730	Drill Core	7.21	<0.005	62.76	397.6	3.39	27.6	166	8.5	7.7	295	22418	4.1	5.5	5.7	12.8	47.8	<0.01	0.17	0.12	50
1421731	Drill Core	8.03	<0.005	37.07	530.4	4.74	31.7	327	9.0	8.1	383	25334	7.1	5.4	6.8	13.0	461.8	0.05	0.44	0.13	51
1421732	Drill Core	10.48	<0.005	11.92	401.6	13.33	56.3	377	9.1	8.4	337	23767	10.9	5.5	10.6	14.1	113.0	0.67	0.37	0.18	46
1421733	Drill Core	1.36	<0.005	5.30	169.7	26.44	101.8	571	12.3	14.8	1009	36749	26.0	1.5	7.7	3.4	167.9	0.27	0.84	0.10	41
1421734	Drill Core	7.95	<0.005	8.55	345.5	4.11	32.1	273	9.7	8.8	416	23286	3.8	4.3	3.4	12.4	57.6	0.08	0.19	0.06	48
1421735	Drill Core	7.31	0.026	34.34	4199	10.39	37.0	3007	9.9	8.7	446	27768	8.7	5.6	18.8	11.3	70.6	0.17	0.48	0.23	46
1421736	Drill Core	7.21	<0.005	6.43	460.5	5.02	32.6	261	9.3	8.3	350	24625	1.2	5.8	12.4	12.3	83.6	0.07	0.18	0.07	56
1421737	Drill Core	3.73	0.017	9.66	530.6	3.81	31.1	234	8.8	8.6	347	26017	1.6	6.4	19.9	11.8	116.2	0.03	0.16	0.08	59
1421738	Rock Pulp	0.10	4.259	1362	>10000	90.84	103.9	>100000	13.6	13.0	611	31706	204.5	2.6	5460	2.3	14.2	7.80	122.8	3.54	31
1421739	Drill Core	4.55	0.018	17.87	574.0	4.17	30.5	252	8.4	8.4	338	22910	2.3	5.2	7.9	11.4	72.8	0.06	0.15	0.07	49
1421740	Drill Core	4.12	<0.005	6.10	317.7	3.31	29.4	132	9.4	8.0	324	24098	1.3	4.8	7.5	12.2	68.8	0.05	0.12	0.03	55
1421741	Drill Core	4.95	0.016	11.70	1051	5.25	35.7	884	11.0	9.5	407	23959	5.7	4.5	12.4	10.9	80.7	0.09	0.37	0.51	39
1421742	Drill Core	2.19	0.012	12.06	487.1	101.5	90.0	4113	23.6	21.9	981	38286	27.4	1.0	13.5	1.8	169.6	0.43	0.83	0.07	61
1421743	Drill Core	4.24	0.046	8.26	1905	5.14	33.5	971	12.0	11.1	386	22644	13.9	4.7	60.7	11.4	100.4	0.13	0.43	0.24	29
1421744	Drill Core	4.35	0.050	149.3	3261	3.99	33.3	1537	10.1	9.9	349	23329	3.7	7.9	75.7	11.6	87.8	<0.01	0.39	0.33	41
1421745	Drill Core	4.43	0.033	13.49	1932	5.31	42.0	791	13.4	11.4	356	26913	1.1	4.8	48.8	11.2	52.5	0.10	0.25	0.16	68
1421746	Drill Core	4.46	0.007	10.77	478.7	5.58	33.3	232	12.6	9.4	384	27482	3.6	3.2	11.6	8.8	44.0	0.07	0.23	0.09	76
1421747	Drill Core	4.27	0.026	16.75	1148	5.80	39.4	508	12.1	10.9	320	27830	3.1	4.4	31.0	12.0	36.4	0.08	0.21	0.11	76
1421748	Drill Core	4.24	0.007	20.19	511.6	4.68	36.4	253	12.8	10.7	363	29908	2.5	4.6	10.9	10.9	42.9	0.06	0.17	0.10	85
1421749	Drill Core	4.33	0.039	37.91	1702	3.25	40.6	871	10.3	10.3	460	25439	3.5	5.9	28.1	11.5	56.2	0.05	0.44	0.20	57
1421750	Drill Core	4.39	<0.005	7.89	1393	2.83	38.1	659	9.9	8.8	376	24542	2.8	6.5	8.2	14.2	50.5	0.08	0.50	0.08	50
1421751	Rock Pulp	0.28	<0.005	0.19	14.82	2.16	35.0	37	2.4	2.9	134	8551	0.8	1.9	0.7	3.5	58.7	<0.01	0.02	0.05	9
1421752	Drill Core	3.66	<0.005	48.59	1300	4.95	34.5	788	10.0	9.5	341	25930	5.9	5.8	9.4	13.5	55.6	0.04	0.32	0.19	55

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421723	Drill Core	35517	1960	21.5	1.8	7644	67.4	105	<1	17493	248	3614	<0.1	3.3	0.16	5409	0.025	<0.1	<0.02	5.3	5.01
1421724	Drill Core	7556	626	13.7	20.0	6918	150.7	559	<1	7759	680	2712	0.2	3.2	0.11	1746	0.009	<0.1	0.08	4.0	1.47
1421725	Drill Core	17547	1123	17.1	37.0	13433	202.5	863	<1	12726	587	3237	0.2	5.4	0.13	3026	0.010	<0.1	0.05	5.8	2.04
1421726	Drill Core	7107	659	14.4	20.1	7652	252.5	598	<1	8033	624	2741	0.2	3.1	0.11	1325	<0.005	0.2	<0.02	4.5	1.38
1421727	Drill Core	9802	660	16.4	17.4	7119	143.0	301	<1	8068	631	1853	0.3	2.7	0.07	2025	<0.005	0.2	0.03	4.7	1.14
1421728	Drill Core	8183	642	13.2	20.1	7473	59.6	616	1	7708	596	2048	0.5	3.3	0.09	1846	<0.005	0.1	0.03	4.3	1.16
1421729	Drill Core	11557	697	15.7	20.3	7912	42.8	354	1	8824	511	1649	0.1	2.8	0.06	1667	<0.005	0.2	0.03	4.8	1.17
1421730	Drill Core	8570	642	14.4	16.6	6989	82.2	614	<1	7488	505	2217	0.3	3.0	0.10	1744	<0.005	<0.1	0.03	4.2	1.55
1421731	Drill Core	11502	714	16.8	18.9	7429	151.2	249	1	8810	504	1703	0.1	2.9	0.06	4644	0.006	0.2	0.06	4.1	1.93
1421732	Drill Core	10360	648	17.9	18.5	7031	75.4	258	1	8453	464	1594	0.1	3.1	0.07	3897	<0.005	<0.1	0.10	4.3	1.43
1421733	Drill Core	32475	1594	29.0	3.9	10215	395.5	51	1	17509	156	2888	<0.1	3.8	0.13	2580	<0.005	<0.1	0.08	5.8	4.04
1421734	Drill Core	12743	695	16.7	19.4	7510	56.0	377	<1	8738	488	1796	0.1	3.1	0.07	977	<0.005	<0.1	0.10	4.5	1.46
1421735	Drill Core	18494	622	16.8	17.6	6819	43.8	187	<1	8501	424	1500	0.2	3.2	0.08	8153	<0.005	1.4	0.12	4.2	1.33
1421736	Drill Core	12586	679	17.5	22.3	7179	80.1	468	3	8135	512	1976	0.2	3.3	0.08	1119	<0.005	<0.1	0.08	4.5	1.21
1421737	Drill Core	10108	728	17.2	23.6	7652	94.5	827	<1	8184	675	2808	0.3	3.8	0.12	918	<0.005	<0.1	0.08	4.7	1.51
1421738	Rock Pulp	5894	643	7.6	13.0	4538	106.5	72	4	8773	528	2009	12.6	4.0	0.09	10946	0.760	4.1	0.98	2.8	0.78
1421739	Drill Core	10774	650	15.6	20.4	6382	107.5	580	<1	7689	569	2232	0.2	3.3	0.10	992	<0.005	<0.1	0.06	4.2	1.52
1421740	Drill Core	10577	660	16.7	23.1	6723	106.1	480	<1	8040	707	2002	<0.1	3.7	0.06	525	<0.005	<0.1	0.06	4.7	1.10
1421741	Drill Core	16685	690	20.3	17.3	6246	130.2	39	<1	10731	349	1642	0.7	2.6	0.07	1816	<0.005	<0.1	0.15	4.8	2.45
1421742	Drill Core	42142	1387	23.8	6.2	8307	315.2	54	<1	17814	222	3337	<0.1	4.0	0.15	4605	<0.005	<0.1	0.09	5.0	3.87
1421743	Drill Core	12614	711	21.0	17.3	6021	219.5	34	2	10579	393	1844	0.5	2.5	0.16	3809	<0.005	0.4	0.11	4.5	2.84
1421744	Drill Core	11715	693	22.9	21.4	7035	79.5	71	2	10023	466	1654	0.5	2.3	0.08	4690	<0.005	0.7	0.14	4.6	1.90
1421745	Drill Core	8623	867	14.9	25.6	9063	59.9	954	<1	9043	722	2911	0.4	3.4	0.11	2788	<0.005	0.3	0.05	5.1	1.42
1421746	Drill Core	8987	910	13.8	29.4	9204	70.8	1266	<1	8845	921	2774	0.7	3.8	0.11	1085	<0.005	<0.1	0.08	5.2	1.21
1421747	Drill Core	6772	853	13.8	27.4	8430	83.3	1636	<1	8588	1067	3924	0.9	3.5	0.16	1703	<0.005	0.1	0.08	5.0	1.39
1421748	Drill Core	8113	1057	14.8	32.0	8370	98.2	1559	<1	8392	1053	3930	0.8	3.4	0.16	909	<0.005	<0.1	0.06	5.0	1.68
1421749	Drill Core	11500	733	14.8	24.0	9073	72.6	669	<1	10237	546	2171	0.7	3.5	0.10	2316	<0.005	0.5	0.09	5.2	1.95
1421750	Drill Core	10775	694	15.8	23.7	7911	43.4	413	<1	9232	525	1922	0.3	2.9	0.07	1864	<0.005	0.4	0.06	5.2	1.57
1421751	Rock Pulp	3329	333	20.4	8.4	3057	74.4	524	7	5406	580	3299	<0.1	0.8	0.12	<200	<0.005	<0.1	<0.02	2.2	0.60
1421752	Drill Core	9169	718	15.1	23.9	8102	64.3	502	<1	9498	664	1886	0.4	3.3	0.07	2584	<0.005	0.2	0.17	5.4	1.31

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421723	Drill Core	<0.1	0.06	0.03	21.1	0.2	<0.05	3.2	12.20	48.6	0.02	0.001	1.1	23.0	<0.01	<0.002		
1421724	Drill Core	<0.1	0.03	0.13	19.0	0.4	<0.05	0.7	8.46	29.0	0.04	0.010	0.4	10.6	<0.01	<0.002		
1421725	Drill Core	<0.1	0.02	0.09	22.6	0.4	<0.05	0.6	9.26	33.6	0.06	0.010	0.3	22.8	<0.01	<0.002		
1421726	Drill Core	<0.1	<0.02	0.17	21.3	0.4	<0.05	0.5	8.91	32.0	0.04	0.018	0.3	11.4	<0.01	<0.002		
1421727	Drill Core	<0.1	<0.02	0.09	13.0	0.3	<0.05	0.5	9.19	33.4	0.05	0.010	0.3	11.4	<0.01	<0.002		
1421728	Drill Core	<0.1	0.04	0.18	15.6	0.5	<0.05	0.8	7.10	25.5	0.07	0.007	0.3	11.3	<0.01	<0.002		
1421729	Drill Core	<0.1	0.03	0.07	11.8	0.4	<0.05	0.8	8.92	30.3	0.04	0.016	0.3	13.8	<0.01	<0.002		
1421730	Drill Core	<0.1	0.05	0.15	18.4	0.3	<0.05	0.9	8.07	28.0	<0.02	0.066	0.3	11.6	<0.01	<0.002		
1421731	Drill Core	<0.1	0.04	0.06	11.6	0.3	<0.05	1.0	8.51	35.0	0.03	0.017	0.3	14.5	<0.01	<0.002		
1421732	Drill Core	<0.1	0.04	0.06	11.7	0.2	<0.05	0.8	8.11	34.7	0.02	0.005	0.1	13.5	<0.01	<0.002		
1421733	Drill Core	<0.1	0.04	0.02	21.1	0.3	<0.05	1.8	13.05	58.6	<0.02	<0.001	1.2	24.7	<0.01	<0.002		
1421734	Drill Core	<0.1	0.04	0.07	13.2	0.3	<0.05	0.9	8.63	32.7	0.03	<0.001	0.4	14.4	<0.01	<0.002		
1421735	Drill Core	<0.1	0.03	0.04	11.7	0.5	<0.05	0.8	9.36	33.6	0.08	0.014	0.4	11.8	<0.01	<0.002		
1421736	Drill Core	<0.1	0.04	0.10	16.4	0.3	<0.05	0.8	8.90	34.1	0.03	0.007	0.2	12.5	<0.01	<0.002		
1421737	Drill Core	<0.1	0.06	0.16	24.2	0.4	<0.05	1.1	8.69	33.5	0.04	0.014	0.2	12.1	<0.01	<0.002		
1421738	Rock Pulp	<0.1	0.09	0.06	6.9	1.2	<0.05	3.3	6.26	14.8	<0.02	0.121	0.3	3.4	*	<0.002	1.030	95
1421739	Drill Core	<0.1	0.05	0.12	18.8	0.3	<0.05	0.9	7.78	31.2	0.03	0.004	0.3	10.1	<0.01	<0.002		
1421740	Drill Core	<0.1	0.04	0.10	15.1	0.3	<0.05	0.8	8.98	34.5	0.02	<0.001	0.2	10.9	<0.01	<0.002		
1421741	Drill Core	<0.1	0.03	<0.02	11.2	0.3	<0.05	0.7	8.82	38.8	0.05	0.007	0.3	12.7	<0.01	<0.002		
1421742	Drill Core	<0.1	0.04	<0.02	22.8	0.2	<0.05	1.6	9.96	48.1	0.03	0.003	0.8	20.4	<0.01	<0.002		
1421743	Drill Core	<0.1	0.04	<0.02	12.7	0.2	<0.05	0.6	8.80	39.0	0.04	0.005	0.6	12.0	<0.01	<0.002		
1421744	Drill Core	<0.1	<0.02	0.02	11.3	0.3	<0.05	0.8	9.43	42.3	0.08	0.048	0.3	10.5	0.02	<0.002		
1421745	Drill Core	0.2	0.04	0.15	22.5	0.5	<0.05	0.7	7.64	28.5	0.07	0.003	0.3	10.6	<0.01	<0.002		
1421746	Drill Core	<0.1	0.05	0.17	20.8	0.6	<0.05	0.9	6.30	25.8	0.04	0.010	0.4	11.8	<0.01	<0.002		
1421747	Drill Core	0.2	0.08	0.27	29.9	0.5	<0.05	1.3	6.42	26.3	0.05	0.025	0.3	8.9	<0.01	<0.002		
1421748	Drill Core	<0.1	0.05	0.20	32.3	0.4	<0.05	1.1	6.41	29.9	<0.02	0.018	0.4	8.8	<0.01	<0.002		
1421749	Drill Core	<0.1	0.06	0.16	20.4	0.5	<0.05	0.9	7.65	29.2	0.05	0.007	0.4	13.2	<0.01	<0.002		
1421750	Drill Core	<0.1	0.06	0.10	17.0	0.4	<0.05	1.0	7.86	30.5	0.07	0.008	0.3	13.0	<0.01	<0.002		
1421751	Rock Pulp	<0.1	0.39	0.29	16.3	0.5	<0.05	13.5	4.94	41.6	<0.02	<0.001	<0.1	13.9	<0.01	<0.002		
1421752	Drill Core	<0.1	0.06	0.12	14.9	0.5	<0.05	1.3	7.35	29.7	0.06	0.032	0.3	13.8	<0.01	<0.002		

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Project: Troitsa
Report Date: September 18, 2012

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	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421753	Drill Core	4.23	0.009	51.96	1007	8.23	36.5	847	9.3	9.5	342	24042	12.3	5.7	19.0	11.6	209.6	0.06	0.86	0.56	50
1421754	Drill Core	3.86	0.013	47.16	1899	15.44	46.1	2007	8.8	9.6	452	25268	14.5	8.8	20.4	13.4	108.0	0.12	1.49	0.34	44
1421755	Drill Core	4.40	0.010	46.85	1520	15.71	35.8	1644	9.3	11.1	372	24539	7.1	6.1	10.4	10.7	74.8	0.19	1.73	0.48	50
1421756	Drill Core	3.98	<0.005	6.90	684.3	2.45	29.5	514	9.1	8.7	345	24982	2.4	4.4	6.7	11.7	162.5	0.02	0.43	0.23	54
1421757	Drill Core	4.43	<0.005	44.75	1180	5.15	37.9	1093	8.9	8.3	386	23938	1.1	6.4	7.9	12.6	130.2	0.01	0.26	2.16	50
1421758	Drill Core	4.30	0.015	191.4	4250	119.7	212.5	9187	8.0	10.6	931	22134	16.1	11.2	22.9	9.2	122.1	3.41	1.90	1.93	18
1421759	Drill Core	5.00	0.019	223.7	3936	354.0	449.8	8559	8.4	11.0	556	22512	11.3	13.3	40.0	12.7	140.5	8.49	18.10	0.85	21
1421760	Drill Core	4.17	<0.005	2.86	20.08	44.60	69.5	254	1.7	2.8	487	8935	1.9	1.0	2.5	2.8	112.1	0.66	0.53	0.13	3
1421761	Drill Core	4.46	<0.005	0.47	7.64	9.40	73.0	75	1.4	2.7	283	8350	1.7	1.0	1.2	3.0	144.8	0.76	0.23	<0.02	3
1421762	Drill Core	4.34	<0.005	0.21	2.89	12.42	76.9	50	1.8	2.9	272	9120	4.1	1.1	1.2	2.9	116.2	0.73	0.22	<0.02	4
1421763	Drill Core	4.32	<0.005	0.11	2.08	9.32	73.4	14	1.8	2.7	264	8744	1.0	1.1	2.5	2.2	128.0	0.63	0.14	0.04	<2
1421764	Drill Core	4.42	<0.005	0.55	3.45	8.38	73.2	23	1.7	3.3	248	9339	0.4	1.4	2.1	2.3	203.1	0.63	0.25	0.07	<2
1421765	Drill Core	4.54	0.016	218.8	2094	334.5	639.0	2485	8.2	9.1	300	21937	9.1	5.2	8.9	10.4	326.3	8.57	10.95	1.45	34
1421766	Drill Core	4.32	<0.005	4.15	295.9	2.40	23.0	160	8.0	6.5	261	21319	0.8	4.0	1.4	10.7	45.9	0.04	0.07	0.37	47
1421767	Drill Core	4.40	0.008	6.42	392.4	3.35	24.3	214	7.8	7.5	287	21961	1.5	4.4	1.1	11.3	64.1	0.03	0.12	0.30	47
1421768	Drill Core	4.35	0.011	21.20	1744	2.25	31.3	892	9.8	9.8	331	23451	1.4	4.3	12.3	10.0	405.1	0.09	0.27	0.32	47
1421769	Drill Core	4.65	<0.005	38.21	1481	2.40	29.3	1036	8.1	8.5	311	21909	0.7	4.8	9.9	12.0	168.3	0.04	0.18	0.27	43
1421770	Rock Pulp	0.10	4.129	1266	>10000	92.42	104.0	>100000	12.3	12.4	631	30778	205.8	2.3	5069	2.1	13.8	9.10	116.0	3.80	23
1421771	Drill Core	4.41	<0.005	8.13	199.5	3.02	24.3	133	7.3	6.3	285	21120	1.3	4.8	4.5	12.2	132.9	0.03	0.14	0.08	45
1421772	Drill Core	4.12	0.009	14.15	971.4	32.79	63.8	943	9.7	8.1	395	23140	3.5	3.7	8.6	9.6	94.2	0.57	0.21	0.50	37
1421773	Drill Core	4.57	<0.005	7.34	399.9	2.69	31.0	204	9.7	8.6	392	23341	0.7	4.9	2.8	10.3	266.9	0.04	0.10	0.15	44
1421774	Drill Core	5.69	0.007	11.49	421.1	2.34	23.6	212	7.7	6.5	279	20406	0.8	4.5	2.4	10.9	158.3	0.04	0.07	0.12	46
1421775	Drill Core	7.01	0.022	4.53	4876	14.71	66.9	3001	10.2	15.2	363	24114	1.8	3.7	17.1	7.5	114.6	0.55	0.65	2.48	24
1421776	Drill Core	4.00	<0.005	7.49	2292	4.41	52.9	1427	8.8	11.5	317	24444	1.9	3.1	10.3	7.7	79.3	0.23	0.26	2.57	23
1421777	Drill Core	2.54	0.024	7.13	1896	4.19	48.4	1515	7.9	7.8	261	21902	1.0	3.3	49.2	8.0	77.7	0.27	0.28	0.92	21
1421778	Drill Core	4.80	0.019	5.61	5489	10.74	69.5	4173	9.8	16.3	338	26986	0.9	2.6	24.4	4.5	57.8	0.39	0.21	3.40	26
1421779	Drill Core	4.50	0.072	28.40	>10000	26.69	94.1	7557	14.2	26.2	286	31031	0.5	6.1	91.9	3.7	74.2	0.68	0.52	2.83	15
1421780	Drill Core	4.55	0.045	40.09	>10000	26.02	99.6	6441	10.8	20.6	323	25753	0.5	8.4	63.3	4.5	41.8	1.09	0.20	2.64	9
1421781	Drill Core	4.61	0.038	13.29	>10000	34.00	132.9	5398	11.9	22.3	351	26197	2.5	8.2	67.1	5.3	37.0	1.69	0.54	1.50	8
1421782	Drill Core	4.40	0.074	1.92	>10000	51.64	157.4	4737	11.7	21.8	449	25468	2.9	6.6	108.2	4.8	36.9	2.11	0.30	2.09	7

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421753	Drill Core	10162	687	17.2	20.6	7437	60.2	393	<1	9037	569	1862	0.3	3.3	0.08	3029	<0.005	0.2	0.06	4.9	1.48
1421754	Drill Core	14252	788	19.0	20.3	7673	284.4	58	2	10452	403	1650	0.3	3.0	0.08	4661	0.006	0.3	0.15	5.0	2.06
1421755	Drill Core	11346	702	17.8	19.6	7850	100.8	545	2	8930	494	2654	0.7	3.5	0.13	3213	<0.005	0.5	0.10	5.0	2.41
1421756	Drill Core	11931	704	19.1	23.0	8185	126.2	335	<1	9291	499	2159	0.3	3.5	0.08	1182	<0.005	0.1	0.03	4.9	2.46
1421757	Drill Core	15150	699	20.6	19.4	7478	226.0	130	1	9934	403	1867	0.2	3.2	0.09	1944	<0.005	0.3	0.26	5.1	2.91
1421758	Drill Core	21006	705	16.8	12.0	6924	228.0	17	2	10477	249	2519	0.7	2.0	0.15	7825	0.012	1.5	0.43	3.3	3.21
1421759	Drill Core	19765	706	18.0	10.6	6662	305.0	16	3	10548	239	2341	0.9	2.7	0.14	5620	0.017	1.3	0.21	3.4	3.40
1421760	Drill Core	22086	472	19.1	3.7	3526	188.0	<10	3	6193	89	3499	0.2	1.0	0.20	<200	0.008	<0.1	0.05	1.5	3.07
1421761	Drill Core	22316	463	15.7	2.4	2575	337.2	<10	2	5843	137	3446	0.2	1.0	0.19	451	<0.005	<0.1	0.03	1.4	2.78
1421762	Drill Core	22942	457	14.3	3.2	2590	286.9	<10	3	5254	232	3320	0.2	1.1	0.17	629	<0.005	<0.1	<0.02	1.4	2.53
1421763	Drill Core	20572	478	12.6	2.5	2596	387.0	<10	3	3818	244	2438	<0.1	1.1	0.11	218	0.006	<0.1	<0.02	1.0	2.23
1421764	Drill Core	21073	459	15.2	2.0	3132	929.4	13	3	3950	244	2679	<0.1	1.1	0.14	256	<0.005	<0.1	0.04	1.0	2.83
1421765	Drill Core	15247	665	17.1	13.4	6428	339.0	407	2	7546	421	2426	4.2	2.9	0.13	3602	0.025	0.5	0.10	3.9	2.42
1421766	Drill Core	7313	690	11.0	17.2	6519	77.9	852	2	6687	612	2571	1.2	2.5	0.10	358	<0.005	<0.1	<0.02	4.2	1.59
1421767	Drill Core	9071	689	12.6	16.5	6416	80.1	708	2	6916	558	2160	1.4	2.4	0.10	725	<0.005	<0.1	<0.02	4.5	1.48
1421768	Drill Core	9188	754	12.9	18.5	7284	207.7	577	2	7853	523	2107	7.2	2.8	0.09	2736	<0.005	0.3	0.11	4.8	1.58
1421769	Drill Core	9913	698	15.0	16.8	6140	177.3	495	2	7023	499	2295	10.7	2.8	0.11	1900	<0.005	0.4	0.10	4.4	1.67
1421770	Rock Pulp	5731	633	6.6	12.6	4268	126.0	58	4	8125	498	1843	11.4	3.8	0.10	10228	0.736	4.2	1.00	2.6	0.71
1421771	Drill Core	9569	668	12.9	16.3	6164	188.8	622	<1	6798	486	2360	0.7	2.6	0.09	505	0.022	<0.1	<0.02	4.1	1.51
1421772	Drill Core	16233	720	16.1	15.4	7057	197.5	169	<1	8953	361	1870	0.7	2.5	0.09	2399	<0.005	<0.1	0.06	5.1	2.50
1421773	Drill Core	13906	724	14.0	16.9	7401	174.0	394	<1	8224	447	2125	0.3	3.2	0.07	1064	<0.005	<0.1	0.04	4.9	2.04
1421774	Drill Core	6414	624	12.1	15.8	6098	87.1	795	1	6197	557	2731	38.3	2.8	0.11	672	<0.005	<0.1	<0.02	4.6	1.52
1421775	Drill Core	20041	945	13.1	12.9	7993	199.8	15	2	9662	298	1785	6.7	2.5	0.10	6135	0.015	1.5	0.29	5.0	1.54
1421776	Drill Core	17418	796	9.1	12.8	8105	130.5	16	1	10979	248	1840	0.8	2.2	0.10	3649	0.012	0.8	0.15	4.7	1.44
1421777	Drill Core	15283	756	10.7	10.1	7240	211.1	15	1	9876	273	1818	1.8	1.9	0.09	2250	0.016	0.3	0.03	4.5	1.44
1421778	Drill Core	17319	1117	10.1	12.7	9221	179.4	15	2	9318	285	1939	19.2	2.5	0.10	6377	0.012	1.4	0.25	4.5	1.64
1421779	Drill Core	16254	1275	9.9	9.3	8604	71.4	17	1	9136	258	1781	36.0	2.8	0.09	15482	0.013	5.4	0.76	3.7	1.71
1421780	Drill Core	15531	1037	10.1	7.8	8369	91.7	11	1	6013	243	1840	54.6	2.5	0.11	12609	<0.005	4.6	0.42	2.8	1.39
1421781	Drill Core	15960	1131	12.7	7.7	9668	97.9	12	1	6035	254	2089	>100	2.7	0.12	12594	<0.005	4.8	0.31	2.5	1.57
1421782	Drill Core	16780	1234	11.4	7.7	10397	143.1	12	3	6141	201	1897	16.9	2.8	0.11	10666	0.028	4.7	0.70	2.7	1.98

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421753	Drill Core	<0.1	0.05	0.13	14.5	0.5	<0.05	1.0	8.49	34.4	0.06	0.013	0.3	13.0	<0.01	<0.002		
1421754	Drill Core	<0.1	<0.02	<0.02	12.7	0.3	<0.05	0.8	8.95	35.9	0.09	0.023	0.3	14.8	<0.01	<0.002		
1421755	Drill Core	<0.1	<0.02	0.09	22.2	0.4	<0.05	0.8	8.04	33.8	0.06	0.011	0.3	12.1	0.01	<0.002		
1421756	Drill Core	<0.1	0.02	0.08	17.9	0.3	<0.05	0.6	9.28	38.3	0.04	0.003	0.3	11.7	<0.01	<0.002		
1421757	Drill Core	<0.1	<0.02	0.04	15.2	0.2	<0.05	0.5	9.16	39.0	0.04	0.020	0.5	12.6	<0.01	<0.002		
1421758	Drill Core	<0.1	0.02	<0.02	17.5	0.1	<0.05	0.8	8.21	29.3	0.11	0.025	0.5	10.1	0.01	<0.002		
1421759	Drill Core	<0.1	<0.02	<0.02	16.0	0.2	<0.05	0.9	8.65	33.5	0.12	0.042	0.4	9.5	*	<0.002		
1421760	Drill Core	<0.1	0.12	<0.02	24.9	<0.1	<0.05	3.8	1.93	34.8	<0.02	<0.001	0.7	2.3	<0.01	<0.002		
1421761	Drill Core	<0.1	0.13	<0.02	23.6	<0.1	<0.05	4.8	1.95	29.3	<0.02	<0.001	0.3	2.2	<0.01	<0.002		
1421762	Drill Core	<0.1	0.13	<0.02	20.0	<0.1	<0.05	5.8	1.97	27.7	<0.02	<0.001	0.3	2.1	<0.01	<0.002		
1421763	Drill Core	<0.1	0.11	<0.02	12.9	<0.1	<0.05	4.4	1.73	23.3	<0.02	<0.001	0.6	2.1	<0.01	<0.002		
1421764	Drill Core	<0.1	0.10	<0.02	16.2	<0.1	<0.05	4.0	1.76	28.0	<0.02	<0.001	0.3	1.3	<0.01	<0.002		
1421765	Drill Core	<0.1	0.04	0.10	18.4	0.3	<0.05	1.3	7.49	32.2	0.08	0.038	0.3	7.4	<0.01	<0.002		
1421766	Drill Core	<0.1	0.09	0.14	20.6	0.3	<0.05	1.3	5.23	20.9	<0.02	0.002	0.3	11.1	<0.01	<0.002		
1421767	Drill Core	0.1	0.09	0.13	17.3	0.3	<0.05	1.3	5.79	24.5	0.03	0.003	0.4	11.2	<0.01	<0.002		
1421768	Drill Core	<0.1	0.04	0.10	16.4	0.3	<0.05	1.0	7.75	26.9	0.06	0.008	0.2	11.8	<0.01	<0.002		
1421769	Drill Core	<0.1	0.05	0.09	18.2	0.3	<0.05	1.1	8.10	32.1	0.05	0.007	0.4	9.5	<0.01	0.002		
1421770	Rock Pulp	<0.1	0.08	0.06	6.2	1.2	<0.05	3.1	6.47	13.7	<0.02	0.100	0.4	3.2	*	<0.002	1.095	100
1421771	Drill Core	<0.1	0.05	0.11	17.4	0.3	<0.05	0.7	6.91	26.3	0.03	0.010	0.3	10.1	<0.01	<0.002		
1421772	Drill Core	<0.1	0.05	0.03	13.2	0.3	<0.05	1.2	8.45	30.0	0.04	0.001	0.4	12.1	<0.01	<0.002		
1421773	Drill Core	<0.1	0.04	0.05	15.2	0.2	<0.05	0.8	8.16	28.0	0.03	0.007	0.4	11.8	<0.01	<0.002		
1421774	Drill Core	<0.1	0.08	0.17	24.2	0.2	<0.05	1.2	5.59	22.9	0.02	0.007	0.3	9.0	<0.01	<0.002		
1421775	Drill Core	<0.1	0.08	<0.02	16.2	<0.1	<0.05	3.1	5.79	23.9	0.12	<0.001	0.4	9.2	<0.01	0.005		
1421776	Drill Core	<0.1	0.11	<0.02	15.9	<0.1	<0.05	3.0	4.72	16.2	0.08	<0.001	0.3	11.8	<0.01	0.003		
1421777	Drill Core	<0.1	0.10	<0.02	14.9	<0.1	<0.05	2.9	4.66	18.3	0.06	<0.001	0.3	8.6	<0.01	<0.002		
1421778	Drill Core	<0.1	0.08	<0.02	16.4	<0.1	<0.05	2.6	4.99	19.3	0.16	0.002	0.3	6.7	<0.01	<0.002		
1421779	Drill Core	<0.1	0.08	<0.02	14.4	0.1	<0.05	3.2	6.20	18.9	0.41	0.002	0.3	8.5	<0.01	<0.002	1.458	9
1421780	Drill Core	<0.1	0.09	<0.02	16.1	<0.1	<0.05	2.8	4.96	19.0	0.31	0.007	0.1	4.1	<0.01	<0.002	1.167	7
1421781	Drill Core	<0.1	0.09	<0.02	17.5	<0.1	<0.05	2.8	4.86	24.2	0.30	<0.001	0.2	4.1	<0.01	0.003	1.089	8
1421782	Drill Core	<0.1	0.09	<0.02	16.7	<0.1	<0.05	2.8	4.92	22.5	0.33	<0.001	<0.1	4.0	<0.01	<0.002	1.101	4

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	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421783	Drill Core	4.39	0.034	2.33	>10000	48.82	130.1	5295	11.8	16.1	440	25391	2.9	7.1	85.9	4.0	38.9	1.45	0.45	2.05	8
1421784	Drill Core	4.11	0.035	3.09	>10000	53.19	129.0	5600	12.3	19.1	437	25071	3.2	7.9	107.9	4.9	35.1	1.49	0.47	2.59	7
1421785	Drill Core	3.98	0.049	2.38	8002	31.52	109.1	4725	9.7	14.6	356	23265	2.8	4.7	56.8	7.6	68.3	1.32	0.82	2.03	16
1421786	Drill Core	2.60	0.028	122.2	6939	333.6	262.1	9246	11.3	13.4	430	27339	1.8	3.3	30.8	4.6	135.1	4.78	1.11	1.83	31
1421787	Rock	0.47	<0.005	<0.01	38.58	2.29	37.5	88	2.1	2.5	156	8440	0.2	1.5	1.5	3.8	37.8	<0.01	0.03	0.07	6
1421788	Drill Core	4.32	0.012	19.78	2233	2.95	28.3	2281	8.4	8.6	347	22120	1.5	5.1	100.5	11.7	261.5	0.11	0.36	1.31	42
1421789	Drill Core	4.07	<0.005	2.97	392.0	3.83	22.4	254	7.3	6.4	219	21017	1.0	4.7	4.2	12.3	20.0	0.03	0.06	0.20	49
1421790	Drill Core	4.25	<0.005	13.82	1616	4.08	27.7	857	8.2	6.8	226	21107	0.9	4.9	9.9	14.3	21.7	0.06	0.10	2.47	45
1421791	Drill Core	4.48	<0.005	5.86	1188	3.42	23.6	1629	6.9	7.3	228	20729	1.1	4.3	5.4	12.1	23.2	0.05	0.15	0.48	46
1421792	Drill Core	4.39	<0.005	140.3	1486	35.17	42.6	2146	8.5	7.5	481	23126	1.5	4.8	4.4	11.6	64.8	0.28	1.89	0.96	39
1421793	Drill Core	4.58	<0.005	5.20	146.9	3.22	22.4	126	8.0	7.3	301	22028	0.8	4.2	1.2	10.2	52.1	0.04	0.19	0.29	49
1421794	Drill Core	4.52	<0.005	2.47	351.6	3.56	21.7	203	7.1	6.0	207	19218	0.8	4.6	0.2	10.5	20.7	0.06	0.08	0.09	47
1421795	Drill Core	4.42	<0.005	15.15	243.9	3.66	21.2	122	7.3	5.8	198	19437	0.5	4.2	<0.2	9.3	22.1	0.02	0.06	0.08	47
1421796	Drill Core	4.45	<0.005	39.85	1490	3.39	23.2	989	7.4	6.4	225	19813	0.7	4.0	9.3	9.3	24.6	0.04	0.07	0.80	43
1421797	Drill Core	4.62	<0.005	4.19	708.1	3.69	21.9	385	6.8	6.4	236	20245	0.8	4.5	1.4	10.5	23.2	0.03	0.07	2.15	45
1421798	Drill Core	4.52	0.026	60.61	>10000	2.91	69.0	8159	9.2	11.1	255	32206	<0.1	4.7	69.6	11.1	24.3	0.52	0.11	2.06	44
1421799	Drill Core	4.58	<0.005	5.81	453.9	3.16	21.1	274	7.8	6.7	247	20177	0.7	3.7	3.4	9.0	24.1	0.05	0.12	0.25	49
1421800	Drill Core	4.32	<0.005	7.60	468.7	3.14	21.5	215	7.8	6.6	214	19630	1.5	3.6	1.5	9.5	22.2	0.06	0.07	0.18	50
1421801	Drill Core	4.37	0.012	130.9	1335	2.58	24.3	816	7.4	7.3	247	20408	1.2	4.3	8.0	8.9	26.0	0.22	0.12	0.32	48
1421802	Drill Core	4.36	<0.005	15.69	682.9	3.22	26.4	477	8.6	8.1	407	22431	1.1	4.0	7.6	10.3	30.8	0.08	0.21	0.39	50
1421803	Drill Core	4.46	<0.005	4.11	410.7	2.82	26.6	193	8.9	7.4	439	21842	0.5	4.0	1.2	10.6	31.9	0.02	0.22	0.12	52
1421804	Drill Core	4.47	0.125	22.85	1081	2.92	27.8	533	7.2	8.6	299	20110	1.1	4.5	11.4	10.4	32.7	0.12	0.12	0.29	47
1421805	Rock Pulp	0.10	4.951	1383	9293	80.57	96.0	>100000	10.6	11.7	607	28729	197.8	2.3	4724	1.9	14.4	11.00	112.3	3.42	29
1421806	Drill Core	4.12	0.018	15.32	441.3	2.71	23.6	247	6.8	6.5	218	18477	0.7	3.7	1.8	8.9	23.8	0.05	0.08	0.07	48
1421807	Drill Core	4.50	<0.005	2.01	104.5	3.26	24.0	53	6.6	5.2	193	17210	0.9	3.6	0.9	8.3	20.8	0.05	0.04	0.03	43
1421808	Drill Core	4.53	0.006	23.70	2434	4.32	32.1	780	6.9	8.9	258	20095	0.3	4.3	4.6	9.2	26.7	0.21	0.06	0.97	42
1421809	Drill Core	4.36	<0.005	9.74	898.1	2.95	33.3	413	7.1	9.6	282	20899	0.9	4.2	3.9	10.5	27.5	0.21	0.06	0.47	51
1421810	Drill Core	4.19	<0.005	4.09	278.6	3.97	22.1	82	5.7	5.3	190	17792	0.4	3.7	1.2	9.3	19.5	0.04	0.05	0.11	46
1421811	Drill Core	4.39	<0.005	1.66	69.66	5.34	24.3	54	5.8	5.2	182	16370	1.0	5.3	1.1	11.4	19.0	0.04	0.09	0.12	41
1421812	Drill Core	4.31	<0.005	14.62	217.4	3.54	22.1	108	6.0	5.8	189	17931	0.7	4.4	1.2	11.5	18.6	0.03	0.04	0.10	44

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421783	Drill Core	15957	1284	12.0	8.2	10004	107.1	13	2	5770	226	1858	34.9	3.2	0.10	11582	0.050	4.2	0.45	2.6	1.67
1421784	Drill Core	16380	1129	11.5	8.3	10080	117.1	10	2	5812	217	1789	>100	2.8	0.09	10329	<0.005	4.9	0.36	2.6	1.61
1421785	Drill Core	17694	853	12.0	8.5	8814	85.9	11	2	7549	223	1852	32.5	2.4	0.10	8300	0.035	3.0	0.28	3.2	1.77
1421786	Drill Core	22923	974	15.4	16.2	9214	125.7	20	<1	10746	275	1774	2.5	2.4	0.11	8481	0.029	2.2	0.12	5.2	2.32
1421787	Rock	1633	272	17.6	7.8	2715	44.8	76	5	4451	512	1411	0.3	0.7	<0.02	<200	<0.005	<0.1	<0.02	2.7	0.12
1421788	Drill Core	11904	705	14.2	16.8	6904	165.9	606	<1	7148	472	2050	4.2	3.0	0.09	3228	<0.005	0.9	0.67	4.5	1.81
1421789	Drill Core	5577	703	11.8	17.8	5273	74.4	1136	2	6499	741	2375	1.6	1.7	0.10	660	0.010	<0.1	0.03	4.3	1.10
1421790	Drill Core	5723	668	11.1	18.8	4742	77.6	989	2	5698	685	2228	2.3	1.6	0.09	1843	<0.005	0.5	0.09	4.2	0.97
1421791	Drill Core	5731	625	10.3	16.5	5215	74.8	975	<1	5837	669	2235	2.5	1.7	0.08	1455	<0.005	<0.1	0.16	4.5	1.06
1421792	Drill Core	12042	709	12.6	16.1	6504	103.2	548	1	7547	430	1802	18.2	2.6	0.08	2761	<0.005	0.3	0.12	4.3	1.95
1421793	Drill Core	7842	667	11.9	17.4	5762	101.3	841	<1	6261	673	2236	<0.1	2.5	0.08	855	<0.005	<0.1	0.11	4.2	1.25
1421794	Drill Core	5451	598	10.1	17.6	4517	66.8	978	<1	5586	695	2306	0.9	1.7	0.09	554	<0.005	0.1	0.04	4.1	1.06
1421795	Drill Core	5610	602	10.1	16.7	4488	69.5	959	2	5743	749	2455	1.6	1.5	0.10	593	<0.005	<0.1	0.04	4.1	1.06
1421796	Drill Core	6445	665	10.5	18.0	4855	71.1	928	<1	5563	620	2203	1.8	1.6	0.11	2030	<0.005	<0.1	0.07	3.7	1.18
1421797	Drill Core	6984	665	10.6	17.4	5420	73.1	885	2	6362	647	1917	5.0	1.8	0.08	1327	0.008	0.4	<0.02	4.5	0.99
1421798	Drill Core	6549	601	11.2	16.1	5282	59.3	867	1	6688	569	1742	6.3	2.0	0.08	18057	<0.005	6.6	0.71	3.9	0.93
1421799	Drill Core	7454	564	10.9	17.7	5385	63.1	971	<1	6910	692	1739	1.9	2.2	0.06	816	0.010	0.2	0.07	4.2	0.98
1421800	Drill Core	6260	642	10.6	18.7	4740	67.8	1078	<1	6668	718	1952	1.2	2.3	0.07	909	0.005	<0.1	0.09	4.1	0.94
1421801	Drill Core	8030	646	11.3	17.4	5888	62.1	1078	<1	7088	614	2061	1.9	3.2	0.09	3256	<0.005	0.7	0.13	4.4	1.11
1421802	Drill Core	11125	680	13.4	20.5	6962	77.7	863	1	8337	527	1578	1.7	3.1	0.07	1329	0.011	<0.1	0.04	4.8	1.47
1421803	Drill Core	9863	700	13.2	17.9	6348	76.6	850	1	6867	603	1773	2.1	3.2	0.07	788	<0.005	<0.1	0.05	4.2	1.38
1421804	Drill Core	7960	636	12.0	18.7	5882	69.4	916	<1	7018	595	2383	25.6	2.7	0.13	2842	<0.005	0.4	0.10	4.4	1.57
1421805	Rock Pulp	5508	571	6.5	11.7	3994	97.9	67	3	8762	499	1858	10.9	4.4	0.09	10148	0.704	4.3	0.75	2.6	0.71
1421806	Drill Core	6541	569	9.6	16.9	5404	76.6	1156	1	6489	729	3357	1.8	2.6	0.15	2080	0.005	<0.1	<0.02	3.8	1.49
1421807	Drill Core	5004	517	9.9	15.9	4463	69.1	1078	<1	4992	795	3112	1.1	2.2	0.13	1193	0.011	<0.1	0.06	3.6	1.31
1421808	Drill Core	6145	615	11.6	16.8	4409	75.7	923	<1	5664	681	2087	0.8	2.4	0.08	3662	0.008	0.7	0.30	3.6	1.11
1421809	Drill Core	7578	640	12.6	19.0	5554	81.7	1043	<1	6983	720	2409	2.4	2.8	0.11	2333	<0.005	0.3	0.13	4.2	1.41
1421810	Drill Core	4332	564	10.3	16.0	3714	70.6	933	<1	4601	816	2540	0.2	1.8	0.10	605	<0.005	0.2	0.05	3.6	1.22
1421811	Drill Core	3113	497	10.7	16.0	3496	74.9	905	<1	4168	875	2672	0.9	1.8	0.12	208	<0.005	<0.1	<0.02	3.2	1.27
1421812	Drill Core	4261	571	9.9	16.5	3823	71.9	960	<1	4839	784	2316	1.3	1.7	0.10	521	0.005	<0.1	0.03	3.6	0.90

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421783	Drill Core	<0.1	0.08	<0.02	14.9	<0.1	<0.05	2.6	5.19	23.6	0.36	<0.001	0.2	4.1	<0.01	<0.002	1.273	5
1421784	Drill Core	<0.1	0.06	<0.02	14.5	<0.1	<0.05	2.6	4.91	21.7	0.32	0.002	0.2	4.2	<0.01	<0.002	1.187	5
1421785	Drill Core	<0.1	0.05	<0.02	15.0	<0.1	<0.05	2.1	5.52	23.1	0.24	0.004	0.4	7.2	<0.01	<0.002		
1421786	Drill Core	<0.1	0.05	<0.02	15.1	0.2	<0.05	1.6	6.14	30.5	0.18	0.005	0.6	12.4	<0.01	<0.002		
1421787	Rock	<0.1	0.21	0.05	3.7	0.2	<0.05	8.3	3.88	36.2	<0.02	<0.001	0.1	19.0	<0.01	<0.002		
1421788	Drill Core	<0.1	0.06	0.13	17.1	0.3	<0.05	1.2	7.55	28.2	0.06	0.005	0.7	9.8	<0.01	<0.002		
1421789	Drill Core	<0.1	0.11	0.23	19.9	0.3	<0.05	1.7	4.53	22.0	0.02	0.002	0.2	8.8	<0.01	<0.002		
1421790	Drill Core	<0.1	0.08	0.22	18.7	0.4	<0.05	1.3	4.34	19.8	0.06	<0.001	0.3	7.6	<0.01	<0.002		
1421791	Drill Core	<0.1	0.06	0.20	18.8	0.3	<0.05	1.0	3.87	18.2	0.06	<0.001	0.3	8.6	<0.01	<0.002		
1421792	Drill Core	<0.1	0.06	0.10	15.3	0.3	<0.05	0.8	5.77	22.5	0.04	0.008	0.6	11.4	0.03	<0.002		
1421793	Drill Core	<0.1	0.05	0.15	18.5	0.2	<0.05	0.8	5.05	21.2	<0.02	0.002	<0.1	9.0	<0.01	<0.002		
1421794	Drill Core	<0.1	0.06	0.19	20.9	0.3	<0.05	1.0	3.63	17.5	<0.02	<0.001	0.2	8.0	<0.01	<0.002		
1421795	Drill Core	<0.1	0.05	0.18	20.6	0.2	<0.05	0.9	3.73	17.0	<0.02	0.005	0.1	8.0	<0.01	0.004		
1421796	Drill Core	<0.1	0.06	0.19	20.6	0.3	<0.05	0.8	3.78	17.1	0.04	0.029	0.2	8.1	<0.01	0.002		
1421797	Drill Core	<0.1	0.04	0.15	16.3	0.2	<0.05	0.9	4.05	17.6	0.02	0.003	0.2	9.2	<0.01	<0.002		
1421798	Drill Core	0.2	0.09	0.28	14.5	1.9	<0.05	1.1	4.24	19.6	0.39	0.002	0.3	7.7	0.04	<0.002	1.793	10
1421799	Drill Core	0.1	0.05	0.19	13.4	0.3	<0.05	0.9	4.31	19.0	<0.02	<0.001	0.7	8.4	<0.01	<0.002		
1421800	Drill Core	0.1	0.04	0.23	14.9	0.3	<0.05	0.9	4.14	19.2	0.02	<0.001	0.3	7.1	<0.01	<0.002		
1421801	Drill Core	0.1	0.03	0.26	17.4	0.3	<0.05	0.8	4.80	20.5	0.04	0.044	0.2	8.7	0.07	<0.002		
1421802	Drill Core	0.1	0.05	0.15	14.1	0.3	<0.05	1.0	5.99	23.9	0.02	0.003	0.2	12.1	<0.01	<0.002		
1421803	Drill Core	0.1	0.08	0.19	15.3	0.3	<0.05	1.0	5.85	24.0	<0.02	<0.001	0.3	9.7	<0.01	<0.002		
1421804	Drill Core	0.2	0.05	0.26	23.4	0.3	<0.05	0.7	5.56	22.6	0.04	0.005	0.3	9.2	0.01	<0.002		
1421805	Rock Pulp	<0.1	0.09	0.06	5.8	1.1	<0.05	2.9	5.87	13.6	<0.02	0.101	0.1	2.8	*	0.003	1.096	103
1421806	Drill Core	0.1	0.03	0.31	28.6	0.4	<0.05	0.6	3.93	17.4	<0.02	<0.001	0.3	6.9	0.01	<0.002		
1421807	Drill Core	<0.1	0.03	0.32	25.7	0.3	<0.05	0.7	3.71	16.2	0.03	<0.001	<0.1	6.9	<0.01	<0.002		
1421808	Drill Core	0.2	0.06	0.35	18.6	0.3	<0.05	0.8	4.35	20.5	0.07	<0.001	0.1	6.7	0.01	<0.002		
1421809	Drill Core	<0.1	0.05	0.23	22.1	0.3	<0.05	0.8	4.68	21.6	0.03	0.004	0.3	8.3	<0.01	<0.002		
1421810	Drill Core	<0.1	0.07	0.27	20.8	0.3	<0.05	0.7	3.63	17.8	<0.02	0.002	0.2	6.7	0.01	<0.002		
1421811	Drill Core	0.1	0.07	0.35	23.5	0.4	<0.05	0.9	3.85	19.3	0.03	<0.001	0.4	6.7	<0.01	<0.002		
1421812	Drill Core	0.1	0.05	0.29	18.6	0.3	<0.05	0.9	3.62	18.2	<0.02	0.011	0.2	6.7	<0.01	<0.002		

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421813	Drill Core	4.20	<0.005	15.56	716.4	2.43	24.0	281	6.1	5.4	221	18130	0.9	3.9	1.9	10.5	22.7	0.04	0.09	0.64	43
1421814	Drill Core	4.49	0.047	388.1	>10000	6.12	67.2	5169	9.8	16.9	271	30548	1.0	4.2	60.1	10.6	30.6	1.18	0.28	2.02	45
1421815	Drill Core	4.51	<0.005	1.72	108.0	3.33	26.5	63	6.0	6.5	252	19146	1.2	3.7	0.2	9.7	24.1	0.06	0.11	0.08	47
1421816	Drill Core	4.23	0.005	4.63	342.9	4.45	26.1	149	6.9	6.9	244	19444	1.2	4.0	<0.2	11.0	19.7	0.05	0.18	0.09	44
1421817	Drill Core	4.46	<0.005	9.56	557.0	3.73	23.2	246	6.5	6.5	261	19779	1.3	4.3	0.3	10.2	19.0	0.07	0.34	0.13	49
1421818	Drill Core	4.25	<0.005	2.99	54.82	3.70	19.2	32	6.3	4.7	193	17427	0.9	3.3	0.9	9.2	18.0	0.04	0.14	0.04	45
1421819	Drill Core	4.07	0.176	2.19	161.3	4.34	22.5	96	6.3	5.9	199	17770	0.8	3.7	0.4	10.1	18.4	0.06	0.20	0.04	45
1421820	Drill Core	3.96	<0.005	2.87	187.0	3.47	25.5	130	7.5	6.0	293	18216	1.1	3.5	<0.2	9.6	19.7	0.04	0.40	0.07	44
1421821	Drill Core	4.20	<0.005	67.06	605.3	3.57	24.9	228	6.8	6.1	289	19393	0.8	4.7	0.7	11.0	22.8	0.12	0.53	0.56	45
1421822	Drill Core	4.36	<0.005	68.14	3152	5.47	26.2	1744	6.6	8.0	248	20733	1.2	3.7	27.4	10.5	22.4	0.28	0.75	1.43	42
1421823	Rock	0.38	<0.005	0.44	11.69	2.22	36.9	40	2.7	2.3	148	8337	0.3	2.1	<0.2	3.2	69.0	0.03	0.03	<0.02	8
1421824	Drill Core	4.23	<0.005	2.91	200.6	5.65	27.3	145	6.2	5.0	243	16842	1.3	4.1	<0.2	12.2	19.4	0.05	1.57	0.17	42
1421825	Drill Core	4.19	<0.005	83.38	381.4	33.19	49.7	2107	6.5	6.7	812	20601	4.1	4.3	1.1	12.2	36.8	0.76	24.05	0.25	41
1421826	Drill Core	4.13	<0.005	16.65	1546	3.28	23.3	550	6.5	5.6	231	17821	1.2	5.9	1.5	11.9	21.5	0.08	0.25	0.24	39
1421827	Drill Core	4.18	0.010	485.2	2183	3.07	32.1	420	7.1	8.3	218	18558	0.4	6.5	12.7	13.3	32.2	0.78	0.13	0.25	45
1421828	Drill Core	5.23	<0.005	52.82	1354	1.91	26.6	576	6.2	12.2	259	18932	0.8	6.8	8.2	12.1	59.7	0.11	0.20	0.70	41
1421829	Drill Core	3.63	0.005	23.55	1895	2.30	29.8	982	7.0	10.3	271	21779	0.9	5.8	4.2	13.1	22.9	0.15	0.28	1.05	44
1421830	Drill Core	4.07	<0.005	21.72	2082	3.23	26.6	893	6.9	7.7	300	20263	0.7	7.8	6.9	13.7	30.1	0.16	0.50	0.31	38
1421831	Drill Core	3.99	<0.005	66.06	1770	3.45	30.7	732	7.7	11.2	375	21042	1.2	5.2	9.7	13.5	33.5	0.16	0.18	1.03	40
1421832	Drill Core	4.49	<0.005	46.31	1688	1.91	26.4	865	7.2	6.9	322	19248	0.2	5.9	5.0	14.8	34.4	0.14	0.13	0.91	36
1421833	Drill Core	4.39	<0.005	2.84	252.7	3.89	21.8	137	7.0	6.0	218	19081	0.5	3.9	1.0	10.6	103.3	0.04	0.07	0.15	48
1421834	Drill Core	4.31	<0.005	29.67	263.9	2.96	23.2	137	7.2	6.6	254	20229	0.5	5.7	1.2	14.8	50.8	0.02	0.12	0.16	49
1421835	Drill Core	4.41	<0.005	59.63	827.6	20.17	63.4	1277	8.8	8.8	386	21919	1.2	6.4	4.7	12.8	81.5	0.84	1.23	0.46	41
1421836	Drill Core	4.25	<0.005	9.14	1290	3.45	24.4	704	7.7	9.2	304	21306	1.4	6.0	6.7	12.1	71.5	0.09	0.24	0.49	42
1421837	Drill Core	4.32	<0.005	17.90	982.0	2.72	28.0	538	8.5	7.3	338	22557	1.8	5.4	1.3	12.6	90.9	0.04	0.23	0.21	48
1421838	Drill Core	5.68	<0.005	25.20	793.5	4.66	30.7	583	8.1	7.8	398	20957	3.8	4.9	1.5	12.3	107.2	0.07	0.35	0.56	28
1421839	Drill Core	4.89	<0.005	43.52	960.1	10.87	26.0	1561	7.3	6.9	655	20236	14.9	4.5	0.8	10.1	145.0	0.12	0.36	0.89	15
1421840	Rock Pulp	0.10	4.861	1308	>10000	89.26	102.0	>100000	12.1	11.6	587	30030	198.7	2.6	4821	2.2	13.4	7.27	122.1	3.52	29
1421841	Drill Core	4.65	<0.005	71.67	1161	19.40	31.0	752	8.6	8.5	347	21308	2.1	5.8	5.4	12.1	74.6	0.07	0.18	0.14	34
1421842	Drill Core	4.91	<0.005	28.14	851.9	11.84	29.9	635	9.8	8.3	344	23594	0.6	4.4	4.4	11.8	69.9	0.05	0.11	0.67	51

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	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421813	Drill Core	5986	542	9.5	15.4	4713	66.9	907	<1	5580	662	2576	0.6	2.5	0.11	1679	<0.005	0.4	0.04	4.0	1.26
1421814	Drill Core	7443	560	11.8	15.4	5310	61.4	952	<1	6352	672	2286	1.3	2.7	0.10	14995	0.022	6.6	0.30	4.2	1.32
1421815	Drill Core	5346	593	9.9	16.8	5764	78.8	1151	2	6207	764	3295	0.2	2.6	0.14	802	<0.005	<0.1	<0.02	4.3	1.47
1421816	Drill Core	4183	503	9.7	15.0	5352	65.6	1095	<1	6031	774	3106	0.3	2.5	0.12	732	<0.005	<0.1	<0.02	4.0	1.38
1421817	Drill Core	5302	535	10.3	16.3	5361	62.6	978	<1	5606	719	2119	1.1	2.4	0.10	818	<0.005	0.3	<0.02	4.1	1.05
1421818	Drill Core	3779	550	9.3	15.0	4007	64.6	970	<1	4699	788	2410	0.2	1.7	0.09	<200	<0.005	<0.1	<0.02	3.2	0.97
1421819	Drill Core	3468	627	9.4	16.0	4218	68.4	976	<1	4753	807	2324	0.5	1.7	0.10	<200	<0.005	<0.1	<0.02	3.4	0.97
1421820	Drill Core	5972	623	10.8	16.0	5248	58.3	759	1	4923	620	1601	0.6	2.3	0.06	271	<0.005	<0.1	0.11	3.8	0.93
1421821	Drill Core	6554	569	10.9	14.7	4962	69.1	828	<1	5583	716	1968	0.4	2.2	0.07	680	0.008	<0.1	0.04	3.6	0.96
1421822	Drill Core	6214	576	11.0	16.1	4769	72.8	879	1	5632	652	2037	2.4	2.4	0.08	4377	0.029	1.7	0.70	3.6	1.01
1421823	Rock	3744	292	20.0	7.9	2736	70.0	468	6	4977	665	2632	<0.1	1.0	0.10	<200	0.006	<0.1	<0.02	2.5	0.45
1421824	Drill Core	4775	489	10.6	14.1	4634	70.3	796	<1	4976	743	2231	0.7	1.9	0.09	307	0.020	<0.1	0.03	3.4	0.95
1421825	Drill Core	8530	553	11.2	12.9	4891	72.4	730	1	6671	594	2278	1.0	2.5	0.09	855	0.047	0.2	0.04	3.6	1.28
1421826	Drill Core	5416	570	11.2	14.3	4734	71.7	791	<1	5329	675	2180	2.8	2.0	0.10	1660	0.009	0.7	0.08	3.6	0.92
1421827	Drill Core	5049	511	9.9	14.9	6194	82.9	1380	1	6872	818	4559	0.5	3.7	0.20	5387	0.006	0.9	0.17	4.2	1.85
1421828	Drill Core	6175	568	12.7	15.0	6876	72.7	738	1	7087	523	2846	5.1	2.8	0.12	3242	<0.005	0.5	0.26	4.3	1.72
1421829	Drill Core	5745	524	13.6	14.9	6727	85.6	848	<1	7296	687	3212	75.5	3.0	0.14	3404	<0.005	0.9	0.47	4.5	1.77
1421830	Drill Core	8293	569	14.7	14.6	6460	86.7	328	<1	7381	533	1779	3.9	2.3	0.07	3020	0.006	1.1	0.14	4.3	1.43
1421831	Drill Core	11518	617	14.9	15.2	6296	75.9	342	<1	7797	543	1934	42.4	2.6	0.08	2400	<0.005	0.3	0.09	4.3	1.78
1421832	Drill Core	8767	527	15.0	13.0	6495	60.5	199	2	7588	510	1587	0.8	2.7	0.07	2273	<0.005	0.3	0.10	4.1	1.85
1421833	Drill Core	4658	589	11.2	15.6	5518	86.8	905	<1	5540	844	3098	0.3	2.3	0.13	400	<0.005	<0.1	0.06	3.4	1.24
1421834	Drill Core	6483	623	13.5	13.5	6076	95.6	811	<1	5962	688	2893	0.5	2.8	0.11	808	<0.005	<0.1	0.04	3.9	1.37
1421835	Drill Core	15980	675	18.8	15.1	6247	82.0	241	<1	8056	474	2077	0.4	3.1	0.11	1948	0.017	0.3	0.22	4.3	2.78
1421836	Drill Core	13103	613	15.8	11.8	6663	148.0	390	<1	7325	540	2166	3.6	3.0	0.10	2568	<0.005	0.7	0.14	4.1	1.67
1421837	Drill Core	13839	653	19.0	17.3	6610	132.1	292	<1	7610	640	1768	0.2	3.4	0.06	1260	<0.005	0.3	0.09	4.8	1.17
1421838	Drill Core	19802	696	19.6	10.0	6575	69.4	24	<1	9523	474	1678	0.7	2.5	0.07	1951	<0.005	0.1	0.09	4.2	2.52
1421839	Drill Core	57863	589	10.5	6.5	10231	86.1	<10	<1	4928	388	1876	0.2	1.7	0.07	7577	<0.005	0.4	0.13	1.8	2.95
1421840	Rock Pulp	5653	603	6.7	12.2	4389	125.4	57	4	8594	503	1936	12.0	3.7	0.10	10123	0.674	4.3	0.79	2.5	0.76
1421841	Drill Core	18908	640	17.5	11.0	6054	200.7	45	<1	8715	504	1491	0.2	2.6	0.05	2290	0.009	0.3	0.04	4.3	3.31
1421842	Drill Core	14163	721	19.1	17.0	6931	172.5	302	<1	8683	802	1945	0.8	3.6	0.08	1395	<0.005	<0.1	0.06	4.7	1.96

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	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421813	Drill Core	0.1	0.03	0.31	21.6	0.3	<0.05	0.6	3.92	17.6	<0.02	<0.001	0.2	7.3	<0.01	0.005		
1421814	Drill Core	<0.1	0.06	0.31	19.2	1.4	<0.05	0.8	4.83	21.6	0.26	0.016	<0.1	8.3	*	<0.002	1.291	6
1421815	Drill Core	0.2	0.05	0.36	29.6	0.3	<0.05	0.5	4.36	18.1	0.02	<0.001	<0.1	9.4	<0.01	<0.002		
1421816	Drill Core	0.2	0.07	0.23	24.9	0.3	<0.05	0.7	3.86	17.5	0.03	<0.001	0.1	9.4	<0.01	<0.002		
1421817	Drill Core	0.1	0.09	0.24	17.7	0.4	<0.05	0.8	4.03	18.0	0.02	<0.001	0.1	9.2	<0.01	<0.002		
1421818	Drill Core	0.1	0.04	0.25	19.2	0.3	<0.05	0.8	3.38	16.4	<0.02	0.004	<0.1	7.1	<0.01	<0.002		
1421819	Drill Core	0.1	0.05	0.34	19.3	0.3	<0.05	1.0	3.52	16.7	<0.02	0.002	0.3	7.5	<0.01	0.003		
1421820	Drill Core	<0.1	0.05	0.24	12.5	0.2	<0.05	0.8	4.37	18.0	<0.02	<0.001	0.1	9.5	<0.01	<0.002		
1421821	Drill Core	0.1	0.09	0.37	15.2	0.3	<0.05	1.0	4.51	20.1	0.03	0.012	<0.1	8.8	0.03	<0.002		
1421822	Drill Core	0.1	0.07	0.28	16.0	0.5	<0.05	1.1	4.84	20.8	0.07	0.002	0.5	6.8	0.05	0.002		
1421823	Rock	<0.1	0.45	0.30	13.6	0.4	<0.05	14.6	5.28	39.9	<0.02	<0.001	0.1	12.9	<0.01	<0.002		
1421824	Drill Core	0.2	0.07	0.27	18.7	0.3	<0.05	0.9	4.12	18.7	0.02	0.003	0.1	6.2	<0.01	<0.002		
1421825	Drill Core	0.2	0.07	0.20	18.1	0.3	<0.05	1.2	4.97	21.1	<0.02	0.024	0.1	7.7	0.06	<0.002		
1421826	Drill Core	0.1	0.06	0.28	17.5	0.3	<0.05	1.1	4.00	18.9	0.04	0.002	0.3	6.7	0.01	<0.002		
1421827	Drill Core	0.1	0.04	0.40	39.5	0.3	<0.05	0.7	5.28	18.1	<0.02	0.096	0.2	8.5	*	<0.002		
1421828	Drill Core	0.1	0.05	0.22	22.6	0.3	<0.05	0.6	6.95	23.6	0.03	0.030	0.2	10.2	0.02	0.002		
1421829	Drill Core	0.2	0.07	0.19	28.3	0.4	<0.05	0.9	6.48	25.6	0.08	0.002	0.4	10.0	0.02	<0.002		
1421830	Drill Core	<0.1	0.04	0.08	14.8	0.3	<0.05	0.8	7.24	28.3	0.06	0.005	0.1	11.4	<0.01	<0.002		
1421831	Drill Core	<0.1	0.04	0.11	16.6	0.3	<0.05	0.8	7.98	28.1	0.04	0.011	0.4	10.8	0.05	<0.002		
1421832	Drill Core	0.2	0.04	0.04	12.9	0.4	<0.05	0.6	7.28	28.6	0.04	0.002	0.3	12.8	0.02	<0.002		
1421833	Drill Core	<0.1	0.07	0.23	24.8	0.3	<0.05	0.8	4.60	20.7	<0.02	<0.001	0.2	8.8	<0.01	<0.002		
1421834	Drill Core	<0.1	0.06	0.19	25.2	0.2	<0.05	0.7	6.22	27.5	<0.02	0.004	0.4	10.9	<0.01	<0.002		
1421835	Drill Core	<0.1	0.03	0.07	15.9	0.3	<0.05	0.5	8.71	36.9	0.04	0.003	0.3	15.4	<0.01	<0.002		
1421836	Drill Core	<0.1	0.02	0.08	17.6	0.3	<0.05	0.5	7.75	32.0	0.02	0.008	0.3	12.1	<0.01	<0.002		
1421837	Drill Core	<0.1	0.02	0.07	12.7	0.3	<0.05	0.6	9.12	38.4	0.04	0.009	0.3	13.6	<0.01	<0.002		
1421838	Drill Core	<0.1	0.02	<0.02	9.9	0.2	<0.05	0.5	9.45	37.5	<0.02	0.017	0.1	14.0	<0.01	<0.002		
1421839	Drill Core	<0.1	<0.02	<0.02	10.8	<0.1	<0.05	0.6	8.54	19.9	0.03	0.004	0.4	9.1	<0.01	<0.002		
1421840	Rock Pulp	<0.1	0.07	0.06	6.2	1.1	<0.05	3.1	6.40	14.6	<0.02	0.094	0.6	2.7	*	<0.002	1.066	100
1421841	Drill Core	<0.1	0.02	<0.02	10.2	0.2	<0.05	0.6	9.07	34.4	0.03	0.029	0.1	16.0	<0.01	<0.002		
1421842	Drill Core	<0.1	<0.02	0.03	15.1	0.3	<0.05	0.5	9.77	41.1	<0.02	0.001	0.4	13.4	<0.01	<0.002		

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421843	Drill Core	4.60	<0.005	3.43	251.5	3.35	21.5	233	8.1	7.9	327	21299	0.6	3.4	3.6	9.1	67.5	0.04	0.11	0.50	45
1421844	Drill Core	4.92	<0.005	5.40	375.8	2.31	23.0	361	8.7	7.4	268	21508	0.4	3.1	3.8	7.6	48.8	0.03	0.09	0.05	52
1421845	Drill Core	4.67	<0.005	72.00	761.5	2.93	26.3	570	9.9	9.3	327	24303	0.6	4.1	6.6	8.6	71.0	<0.01	0.13	0.48	55
1421846	Drill Core	4.50	0.005	5.33	712.0	2.40	26.3	404	9.2	8.5	338	24777	0.6	3.3	2.5	8.5	49.9	0.05	0.21	0.20	52
1421847	Drill Core	4.52	<0.005	23.06	983.3	2.64	25.7	623	9.4	10.0	306	23018	0.9	5.5	5.0	9.1	51.8	0.07	0.67	0.99	52
1421848	Drill Core	4.81	<0.005	3.25	455.1	2.38	24.5	276	9.8	7.9	320	24409	0.3	4.1	4.0	9.8	40.2	0.05	0.06	0.13	56
1421849	Drill Core	4.89	<0.005	3.53	899.3	2.40	25.7	562	8.1	7.9	356	21696	0.6	4.3	3.4	9.6	55.3	0.04	0.08	0.12	49
1421850	Drill Core	4.06	<0.005	4.39	342.7	2.98	21.6	169	7.4	6.7	239	20708	0.6	4.8	0.6	9.1	59.6	0.03	0.09	0.06	51
1421851	Drill Core	4.37	<0.005	1.43	252.9	2.78	23.0	126	7.8	7.4	307	22886	0.5	3.8	0.6	10.1	40.7	0.03	0.11	0.06	54
1421852	Drill Core	4.58	<0.005	5.44	664.2	2.90	32.1	416	8.6	7.4	562	22009	1.0	4.2	0.7	9.7	54.5	0.08	0.44	0.07	45
1421853	Drill Core	3.45	<0.005	4.61	48.02	3.02	26.5	68	9.5	8.3	449	23730	0.5	3.7	<0.2	9.2	73.2	0.03	0.19	<0.02	54
1421854	Drill Core	1.57	<0.005	5.24	111.3	5.90	43.4	233	2.1	9.8	597	24284	7.8	1.3	<0.2	3.1	117.6	0.08	0.33	0.09	21
1421855	Drill Core	4.63	<0.005	14.00	782.5	2.37	24.7	278	7.5	8.1	306	21265	0.2	6.2	2.7	13.3	66.2	0.04	0.14	0.15	44
1421856	Drill Core	4.26	<0.005	12.69	492.2	2.88	29.2	185	9.8	8.5	269	23443	0.6	4.7	6.9	12.0	130.7	0.03	0.05	0.04	57
1421857	Drill Core	4.16	<0.005	18.92	289.3	3.36	25.3	237	8.4	8.4	235	22669	0.3	4.0	26.7	10.2	46.8	<0.01	0.04	0.16	56
1421858	Drill Core	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
1421859	Drill Core	4.56	<0.005	22.61	357.7	3.39	23.4	168	8.0	6.9	212	21398	0.4	5.0	1.1	12.5	36.3	0.03	0.04	0.08	52
1421860	Drill Core	4.22	<0.005	3.98	394.4	3.09	20.8	204	7.1	7.5	182	20993	0.6	4.5	3.7	10.7	23.8	0.03	0.04	0.18	51
1421861	Drill Core	6.62	<0.005	5.58	620.0	2.27	21.1	245	7.3	6.6	220	19966	0.4	4.8	1.8	11.3	39.1	0.03	0.07	0.07	48

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421843	Drill Core	13371	643	16.6	12.4	5777	134.0	380	<1	6742	622	1966	0.1	3.3	0.07	667	<0.005	<0.1	0.11	4.0	1.77
1421844	Drill Core	9436	672	17.1	17.3	5832	118.9	491	<1	6500	762	2285	0.1	3.4	0.10	599	<0.005	<0.1	0.08	4.1	1.47
1421845	Drill Core	10633	684	17.4	15.2	7838	153.4	515	<1	7673	766	2254	0.2	3.8	0.08	1483	<0.005	0.1	0.09	4.8	1.67
1421846	Drill Core	14257	708	18.0	17.6	8542	51.6	246	1	8533	774	1702	0.2	3.4	0.07	1054	<0.005	0.1	0.04	4.8	1.48
1421847	Drill Core	9384	651	16.0	14.7	7160	116.3	621	<1	7193	704	2474	0.3	3.4	0.14	1632	<0.005	0.4	0.12	4.9	1.54
1421848	Drill Core	9614	645	15.6	17.2	8628	73.0	504	1	9748	933	2549	0.3	3.2	0.10	832	<0.005	0.2	0.08	5.9	2.10
1421849	Drill Core	11505	670	16.8	14.1	6849	159.4	558	<1	6948	781	2374	0.3	3.3	0.10	1305	<0.005	0.1	0.04	4.5	1.25
1421850	Drill Core	6499	614	12.8	17.2	5647	99.3	822	<1	5990	825	2526	0.2	2.2	0.09	512	<0.005	<0.1	0.05	4.0	1.37
1421851	Drill Core	9165	640	15.2	14.7	6448	103.4	661	<1	6542	840	2426	0.3	3.2	0.09	512	<0.005	0.1	0.04	4.3	1.12
1421852	Drill Core	10180	650	16.0	16.2	6130	101.3	458	<1	6965	645	2285	0.2	2.9	0.09	858	<0.005	<0.1	0.03	3.8	1.50
1421853	Drill Core	17366	694	18.3	15.2	7183	108.4	441	<1	8015	769	2236	<0.1	3.7	0.08	<200	<0.005	<0.1	<0.02	4.5	2.77
1421854	Drill Core	35051	2206	20.8	2.5	10227	79.8	22	3	13951	803	3308	0.2	2.6	0.10	2276	<0.005	<0.1	0.08	3.5	9.05
1421855	Drill Core	10919	578	17.2	12.2	6518	93.5	310	<1	7314	626	1673	0.8	2.8	0.06	1224	<0.005	<0.1	0.10	4.2	1.19
1421856	Drill Core	6984	627	14.5	17.9	7496	122.1	993	<1	7282	759	3383	0.2	3.1	0.14	1057	<0.005	0.1	0.04	4.7	1.65
1421857	Drill Core	6209	597	12.7	14.2	6077	93.3	1090	<1	6403	937	3244	4.4	2.4	0.13	1036	<0.005	<0.1	0.08	4.1	1.40
1421858	Drill Core	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
1421859	Drill Core	5748	567	12.3	18.4	5487	87.3	1053	<1	6030	840	3062	0.2	1.9	0.13	712	<0.005	<0.1	0.06	3.8	1.30
1421860	Drill Core	4740	587	11.1	15.7	5070	88.4	1195	<1	5897	864	3227	1.3	1.6	0.13	1981	<0.005	<0.1	0.09	3.9	1.13
1421861	Drill Core	6521	569	12.6	17.2	6063	79.2	1129	<1	6319	725	3538	1.2	2.4	0.16	2157	<0.005	0.2	0.02	4.0	1.35

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Project: Troitsa
Report Date: September 18, 2012

CERTIFICATE OF ANALYSIS SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421843	Drill Core	0.1	0.02	0.08	15.2	0.3	<0.05	0.6	8.60	34.1	<0.02	<0.001	0.3	10.0	<0.01	<0.002		
1421844	Drill Core	<0.1	<0.02	0.10	19.2	0.3	<0.05	0.4	8.20	34.8	0.03	<0.001	<0.1	10.1	<0.01	<0.002		
1421845	Drill Core	<0.1	<0.02	0.06	19.2	0.3	<0.05	0.5	9.97	38.3	0.04	0.004	0.2	13.1	<0.01	<0.002		
1421846	Drill Core	<0.1	<0.02	<0.02	12.9	0.3	<0.05	0.4	9.59	36.2	0.03	0.001	0.3	13.7	<0.01	<0.002		
1421847	Drill Core	<0.1	0.03	0.12	21.6	0.3	<0.05	0.4	7.63	30.6	0.02	0.001	0.1	10.7	<0.01	<0.002		
1421848	Drill Core	<0.1	<0.02	0.05	22.5	0.3	<0.05	0.4	7.67	31.3	<0.02	<0.001	0.3	14.2	<0.01	<0.002		
1421849	Drill Core	0.1	0.02	0.10	20.2	0.4	<0.05	0.5	8.63	32.2	0.04	0.002	0.2	10.3	<0.01	<0.002		
1421850	Drill Core	<0.1	0.06	0.20	20.5	0.3	<0.05	0.8	5.73	25.2	0.02	<0.001	0.2	9.0	<0.01	<0.002		
1421851	Drill Core	<0.1	0.04	0.14	20.3	0.4	<0.05	0.6	7.60	29.4	<0.02	0.004	0.1	9.7	<0.01	<0.002		
1421852	Drill Core	<0.1	0.03	0.08	19.1	0.4	<0.05	0.6	8.25	33.0	0.02	<0.001	<0.1	8.3	<0.01	<0.002		
1421853	Drill Core	0.1	<0.02	0.05	18.1	0.4	<0.05	0.5	9.75	39.0	<0.02	0.003	0.3	10.5	<0.01	<0.002		
1421854	Drill Core	<0.1	0.03	<0.02	19.7	0.1	<0.05	1.3	13.84	45.8	<0.02	<0.001	1.0	29.8	<0.01	<0.002		
1421855	Drill Core	<0.1	0.04	0.07	12.5	0.3	<0.05	0.5	7.71	32.7	0.03	0.010	0.3	10.9	<0.01	<0.002		
1421856	Drill Core	<0.1	0.02	0.18	30.2	0.4	<0.05	0.6	6.64	27.4	0.04	0.001	0.2	9.9	<0.01	0.002		
1421857	Drill Core	<0.1	0.05	0.20	26.9	0.4	<0.05	0.8	5.17	22.9	<0.02	0.005	0.2	9.6	<0.01	<0.002		
1421858	Drill Core	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.		
1421859	Drill Core	0.1	0.06	0.21	26.6	0.3	<0.05	0.7	4.92	22.9	0.02	0.003	0.2	8.7	<0.01	<0.002		
1421860	Drill Core	<0.1	0.04	0.28	27.5	0.3	<0.05	0.7	4.38	20.2	0.03	<0.001	<0.1	7.2	<0.01	<0.002		
1421861	Drill Core	<0.1	0.03	0.25	31.0	0.4	<0.05	0.5	5.61	23.3	<0.02	0.001	0.2	8.0	<0.01	<0.002		

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Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
Pulp Duplicates																					
1421708	Drill Core	7.78	<0.005	28.61	391.3	2.89	27.6	171	9.1	7.8	244	22709	1.1	3.7	6.3	9.9	29.1	<0.01	0.05	0.04	54
REP 1421708	QC		<0.005																		
REP 1421712	QC			4.70	1323	7.77	32.6	946	8.9	8.3	312	24485	2.0	4.5	5.1	11.7	41.6	0.11	0.18	0.31	50
1421725	Drill Core	7.61	<0.005	28.61	1270	4.57	51.0	666	17.9	13.9	683	31408	8.0	5.2	11.2	8.5	260.7	0.07	0.33	0.14	81
REP 1421725	QC			28.52	1293	4.92	53.7	688	18.1	13.8	712	32311	8.1	5.5	11.6	9.0	268.5	0.05	0.32	0.13	83
REP 1421746	QC			10.79	486.8	5.75	35.8	246	13.2	9.6	386	28253	3.9	3.4	13.7	9.4	46.3	0.08	0.26	0.08	78
1421760	Drill Core	4.17	<0.005	2.86	20.08	44.60	69.5	254	1.7	2.8	487	8935	1.9	1.0	2.5	2.8	112.1	0.66	0.53	0.13	3
REP 1421760	QC			2.73	18.58	43.26	67.9	227	2.1	2.8	485	8997	1.8	1.0	1.1	2.8	110.7	0.59	0.54	0.07	3
1421776	Drill Core	4.00	<0.005	7.49	2292	4.41	52.9	1427	8.8	11.5	317	24444	1.9	3.1	10.3	7.7	79.3	0.23	0.26	2.57	23
REP 1421776	QC		<0.005																		
1421781	Drill Core	4.61	0.038	13.29	>10000	34.00	132.9	5398	11.9	22.3	351	26197	2.5	8.2	67.1	5.3	37.0	1.69	0.54	1.50	8
REP 1421781	QC			13.75	>10000	33.12	137.4	5469	12.1	23.3	365	25783	2.6	8.0	43.3	5.0	36.4	1.72	0.54	1.39	8
1421795	Drill Core	4.42	<0.005	15.15	243.9	3.66	21.2	122	7.3	5.8	198	19437	0.5	4.2	<0.2	9.3	22.1	0.02	0.06	0.08	47
REP 1421795	QC			16.02	246.7	3.65	22.3	136	6.9	5.9	206	19126	0.5	4.2	1.7	9.3	22.0	0.03	0.04	0.06	46
1421810	Drill Core	4.19	<0.005	4.09	278.6	3.97	22.1	82	5.7	5.3	190	17792	0.4	3.7	1.2	9.3	19.5	0.04	0.05	0.11	46
REP 1421810	QC		<0.005																		
1421816	Drill Core	4.23	0.005	4.63	342.9	4.45	26.1	149	6.9	6.9	244	19444	1.2	4.0	<0.2	11.0	19.7	0.05	0.18	0.09	44
REP 1421816	QC			4.61	340.0	4.43	26.4	148	7.3	7.6	256	19692	1.0	4.1	<0.2	11.2	20.1	0.07	0.17	0.08	46
1421830	Drill Core	4.07	<0.005	21.72	2082	3.23	26.6	893	6.9	7.7	300	20263	0.7	7.8	6.9	13.7	30.1	0.16	0.50	0.31	38
REP 1421830	QC			20.71	2101	3.19	24.4	882	6.9	7.6	294	20140	0.6	7.3	8.0	13.1	29.7	0.08	0.46	0.30	36
1421844	Drill Core	4.92	<0.005	5.40	375.8	2.31	23.0	361	8.7	7.4	268	21508	0.4	3.1	3.8	7.6	48.8	0.03	0.09	0.05	52
REP 1421844	QC		<0.005																		
1421854	Drill Core	1.57	<0.005	5.24	111.3	5.90	43.4	233	2.1	9.8	597	24284	7.8	1.3	<0.2	3.1	117.6	0.08	0.33	0.09	21
REP 1421854	QC			5.63	108.6	5.93	45.4	234	1.9	9.4	613	24245	8.0	1.3	1.4	3.2	116.1	0.08	0.36	0.09	20
Core Reject Duplicates																					
1421712	Drill Core	7.01	<0.005	2.47	1315	3.65	30.8	629	8.9	8.6	315	24151	2.1	4.5	4.8	12.0	40.2	0.07	0.12	0.33	50
DUP 1421712	QC	<0.01	<0.005	3.25	1341	5.88	35.3	893	8.9	8.3	310	24002	2.0	4.5	4.7	11.6	38.8	0.09	0.13	0.26	49
1421746	Drill Core	4.46	0.007	10.77	478.7	5.58	33.3	232	12.6	9.4	384	27482	3.6	3.2	11.6	8.8	44.0	0.07	0.23	0.09	76

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
Pulp Duplicates																					
1421708	Drill Core	5555	593	11.8	23.3	6726	64.0	1137	<1	7279	1035	4089	1.0	3.0	0.15	405	<0.005	<0.1	<0.02	4.2	1.29
REP 1421708	QC																				
REP 1421712	QC	9968	686	14.1	23.2	7345	48.6	466	<1	8378	707	2308	1.0	3.5	0.09	1735	0.009	<0.1	0.12	4.7	1.39
1421725	Drill Core	17547	1123	17.1	37.0	13433	202.5	863	<1	12726	587	3237	0.2	5.4	0.13	3026	0.010	<0.1	0.05	5.8	2.04
REP 1421725	QC	17883	1126	18.1	38.7	13918	206.5	864	<1	13200	605	3309	0.2	5.6	0.14	3045	0.014	<0.1	0.02	5.7	2.12
REP 1421746	QC	9157	998	13.7	31.7	9503	74.6	1522	<1	9356	970	2908	0.9	4.1	0.11	1117	<0.005	<0.1	0.09	5.3	1.22
1421760	Drill Core	22086	472	19.1	3.7	3526	188.0	<10	3	6193	89	3499	0.2	1.0	0.20	<200	0.008	<0.1	0.05	1.5	3.07
REP 1421760	QC	22082	465	18.8	3.2	3557	184.0	<10	3	6129	87	3459	0.2	1.1	0.20	<200	<0.005	<0.1	0.11	1.3	3.10
1421776	Drill Core	17418	796	9.1	12.8	8105	130.5	16	1	10979	248	1840	0.8	2.2	0.10	3649	0.012	0.8	0.15	4.7	1.44
REP 1421776	QC																				
1421781	Drill Core	15960	1131	12.7	7.7	9668	97.9	12	1	6035	254	2089	>100	2.7	0.12	12594	<0.005	4.8	0.31	2.5	1.57
REP 1421781	QC	15779	1141	12.5	7.8	9482	96.8	12	3	5943	252	2060	>100	2.6	0.12	12310	<0.005	4.4	0.32	2.6	1.52
1421795	Drill Core	5610	602	10.1	16.7	4488	69.5	959	2	5743	749	2455	1.6	1.5	0.10	593	<0.005	<0.1	0.04	4.1	1.06
REP 1421795	QC	5678	615	10.5	16.8	4478	76.2	988	<1	5674	759	2466	1.5	1.6	0.10	593	<0.005	<0.1	<0.02	3.8	1.08
1421810	Drill Core	4332	564	10.3	16.0	3714	70.6	933	<1	4601	816	2540	0.2	1.8	0.10	605	<0.005	0.2	0.05	3.6	1.22
REP 1421810	QC																				
1421816	Drill Core	4183	503	9.7	15.0	5352	65.6	1095	<1	6031	774	3106	0.3	2.5	0.12	732	<0.005	<0.1	<0.02	4.0	1.38
REP 1421816	QC	4516	512	10.1	16.6	5565	73.0	1128	<1	6153	801	3130	0.4	2.4	0.14	746	<0.005	<0.1	0.04	4.5	1.39
1421830	Drill Core	8293	569	14.7	14.6	6460	86.7	328	<1	7381	533	1779	3.9	2.3	0.07	3020	0.006	1.1	0.14	4.3	1.43
REP 1421830	QC	8130	563	14.7	14.3	6306	80.1	325	<1	7287	534	1746	4.7	2.4	0.07	3004	<0.005	0.9	0.17	4.3	1.44
1421844	Drill Core	9436	672	17.1	17.3	5832	118.9	491	<1	6500	762	2285	0.1	3.4	0.10	599	<0.005	<0.1	0.08	4.1	1.47
REP 1421844	QC																				
1421854	Drill Core	35051	2206	20.8	2.5	10227	79.8	22	3	13951	803	3308	0.2	2.6	0.10	2276	<0.005	<0.1	0.08	3.5	9.05
REP 1421854	QC	34883	2080	21.3	2.1	10136	77.4	22	4	13474	797	3217	0.2	2.6	0.09	2267	<0.005	<0.1	0.06	3.6	8.97
Core Reject Duplicates																					
1421712	Drill Core	9820	728	14.2	23.8	7262	46.2	468	<1	8293	702	2299	1.0	3.3	0.09	1725	0.006	0.3	0.06	5.0	1.38
DUP 1421712	QC	9909	717	13.9	23.0	7249	45.8	462	<1	8172	666	2266	0.9	3.6	0.09	1766	<0.005	<0.1	0.10	4.4	1.32
1421746	Drill Core	8987	910	13.8	29.4	9204	70.8	1266	<1	8845	921	2774	0.7	3.8	0.11	1085	<0.005	<0.1	0.08	5.2	1.21

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Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
Pulp Duplicates																		
1421708	Drill Core	<0.1	0.04	0.27	30.9	0.4	<0.05	0.9	5.92	23.5	0.03	0.011	0.3	9.2	<0.01	<0.002		
REP 1421708	QC																	
REP 1421712	QC	<0.1	<0.02	0.08	17.3	0.3	<0.05	0.9	8.27	28.5	0.06	<0.001	0.3	11.4	<0.01	<0.002		
1421725	Drill Core	<0.1	0.02	0.09	22.6	0.4	<0.05	0.6	9.26	33.6	0.06	0.010	0.3	22.8	<0.01	<0.002		
REP 1421725	QC	<0.1	<0.02	0.09	24.9	0.4	<0.05	0.6	9.58	35.1	0.06	0.004	0.4	23.5	<0.01	<0.002		
REP 1421746	QC	0.1	0.08	0.24	22.8	0.5	<0.05	1.2	6.51	26.6	0.03	0.003	0.4	12.3	<0.01	<0.002		
1421760	Drill Core	<0.1	0.12	<0.02	24.9	<0.1	<0.05	3.8	1.93	34.8	<0.02	<0.001	0.7	2.3	<0.01	<0.002		
REP 1421760	QC	<0.1	0.08	<0.02	23.8	0.1	<0.05	3.9	1.97	35.5	<0.02	<0.001	0.8	2.7	<0.01	<0.002		
1421776	Drill Core	<0.1	0.11	<0.02	15.9	<0.1	<0.05	3.0	4.72	16.2	0.08	<0.001	0.3	11.8	<0.01	0.003		
REP 1421776	QC																	
1421781	Drill Core	<0.1	0.09	<0.02	17.5	<0.1	<0.05	2.8	4.86	24.2	0.30	<0.001	0.2	4.1	<0.01	0.003	1.089	8
REP 1421781	QC	<0.1	0.08	<0.02	17.6	0.1	<0.05	2.9	4.90	23.0	0.31	0.004	0.3	3.8	<0.01	<0.002		
1421795	Drill Core	<0.1	0.05	0.18	20.6	0.2	<0.05	0.9	3.73	17.0	<0.02	0.005	0.1	8.0	<0.01	0.004		
REP 1421795	QC	<0.1	0.06	0.20	21.9	0.3	<0.05	0.9	3.80	16.8	<0.02	0.011	0.3	8.1	<0.01	<0.002		
1421810	Drill Core	<0.1	0.07	0.27	20.8	0.3	<0.05	0.7	3.63	17.8	<0.02	0.002	0.2	6.7	0.01	<0.002		
REP 1421810	QC																	
1421816	Drill Core	0.2	0.07	0.23	24.9	0.3	<0.05	0.7	3.86	17.5	0.03	<0.001	0.1	9.4	<0.01	<0.002		
REP 1421816	QC	<0.1	0.03	0.25	25.9	0.2	<0.05	0.8	4.03	16.7	0.02	<0.001	0.1	9.3	<0.01	<0.002		
1421830	Drill Core	<0.1	0.04	0.08	14.8	0.3	<0.05	0.8	7.24	28.3	0.06	0.005	0.1	11.4	<0.01	<0.002		
REP 1421830	QC	0.1	0.05	0.09	14.3	0.3	<0.05	0.7	7.31	27.3	0.05	0.007	0.2	10.1	0.01	<0.002		
1421844	Drill Core	<0.1	<0.02	0.10	19.2	0.3	<0.05	0.4	8.20	34.8	0.03	<0.001	<0.1	10.1	<0.01	<0.002		
REP 1421844	QC																	
1421854	Drill Core	<0.1	0.03	<0.02	19.7	0.1	<0.05	1.3	13.84	45.8	<0.02	<0.001	1.0	29.8	<0.01	<0.002		
REP 1421854	QC	<0.1	0.03	<0.02	19.4	<0.1	<0.05	1.5	14.17	44.8	0.02	<0.001	0.7	30.3	<0.01	0.002		
Core Reject Duplicates																		
1421712	Drill Core	<0.1	0.04	0.10	17.1	0.4	<0.05	0.7	8.28	28.6	0.06	<0.001	0.2	11.7	<0.01	<0.002		
DUP 1421712	QC	<0.1	<0.02	0.13	16.9	0.5	<0.05	0.8	8.37	28.8	0.04	<0.001	0.2	12.1	<0.01	<0.002		
1421746	Drill Core	<0.1	0.05	0.17	20.8	0.6	<0.05	0.9	6.30	25.8	0.04	0.010	0.4	11.8	<0.01	<0.002		

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Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
DUP 1421746	QC	<0.01	0.011	10.03	477.9	5.54	36.9	232	12.8	10.1	381	26961	3.8	3.3	10.0	8.9	43.7	0.06	0.23	0.09	75
1421780	Drill Core	4.55	0.045	40.09	>10000	26.02	99.6	6441	10.8	20.6	323	25753	0.5	8.4	63.3	4.5	41.8	1.09	0.20	2.64	9
DUP 1421780	QC	<0.01	0.052	37.72	>10000	29.89	103.6	6938	10.9	26.0	338	27034	0.7	9.2	66.0	4.7	43.0	1.11	0.24	3.55	10
1421814	Drill Core	4.49	0.047	388.1	>10000	6.12	67.2	5169	9.8	16.9	271	30548	1.0	4.2	60.1	10.6	30.6	1.18	0.28	2.02	45
DUP 1421814	QC	<0.01	0.024	386.0	>10000	5.60	67.7	5253	10.5	16.7	276	29799	0.3	4.4	43.6	10.1	31.1	1.18	0.26	2.33	44
1421848	Drill Core	4.81	<0.005	3.25	455.1	2.38	24.5	276	9.8	7.9	320	24409	0.3	4.1	4.0	9.8	40.2	0.05	0.06	0.13	56
DUP 1421848	QC	<0.01	<0.005	3.40	472.7	2.38	25.8	261	10.0	8.6	323	23507	0.6	4.1	3.2	9.6	38.9	0.03	0.07	0.12	54
Reference Materials																					
STD DS9	Standard			12.34	112.0	123.6	303.8	1839	39.4	7.6	558	22393	24.9	2.7	117.1	6.1	66.2	2.31	5.40	6.15	34
STD DS9	Standard			14.36	119.6	133.7	315.8	2003	41.1	7.8	589	24222	25.6	2.9	128.5	7.1	72.8	2.31	5.69	6.68	41
STD DS9	Standard			13.16	113.2	124.7	311.5	1845	41.9	7.7	576	23185	25.0	2.8	126.7	6.3	67.9	2.24	5.62	6.46	39
STD DS9	Standard			11.63	107.1	122.6	297.7	1816	38.7	7.3	571	22960	24.9	2.6	114.8	5.8	65.5	2.33	5.42	6.52	34
STD DS9	Standard			12.81	105.8	118.0	292.7	1726	38.0	7.5	628	22017	25.9	2.5	116.6	6.3	73.4	2.31	5.47	6.33	37
STD DS9	Standard			13.63	108.6	124.5	314.3	1800	40.8	7.8	593	23224	25.5	2.8	112.6	6.4	68.6	2.48	6.03	6.24	40
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard		0.968																		
STD OXG99	Standard		0.970																		
STD OXG99	Standard		0.941																		
STD OXG99	Standard		1.000																		
STD OXG99	Standard		0.886																		
STD OXG99	Standard		0.989																		
STD OXG99	Standard		0.921																		
STD OXK94	Standard		3.845																		

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QUALITY CONTROL REPORT SMI12000266.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
DUP 1421746	QC	8895	932	13.4	30.8	9180	71.1	1419	2	9105	1007	2886	0.8	3.7	0.10	1080	<0.005	<0.1	0.05	4.9	1.23
1421780	Drill Core	15531	1037	10.1	7.8	8369	91.7	11	1	6013	243	1840	54.6	2.5	0.11	12609	<0.005	4.6	0.42	2.8	1.39
DUP 1421780	QC	16061	1079	10.5	8.1	8643	106.0	11	2	6238	253	1932	48.4	2.5	0.10	13088	0.029	5.3	0.47	3.0	1.42
1421814	Drill Core	7443	560	11.8	15.4	5310	61.4	952	<1	6352	672	2286	1.3	2.7	0.10	14995	0.022	6.6	0.30	4.2	1.32
DUP 1421814	QC	7317	540	11.2	15.1	4841	59.7	902	<1	6064	616	2218	1.0	2.6	0.10	14627	0.029	7.0	0.42	3.5	1.32
1421848	Drill Core	9614	645	15.6	17.2	8628	73.0	504	1	9748	933	2549	0.3	3.2	0.10	832	<0.005	0.2	0.08	5.9	2.10
DUP 1421848	QC	9612	669	15.7	17.5	8521	70.7	506	<1	9363	862	2483	0.4	3.1	0.11	827	<0.005	<0.1	0.04	5.5	2.13
Reference Materials																					
STD DS9	Standard	6956	822	12.4	109.2	5975	309.4	1060	2	9307	883	3917	2.7	2.2	5.33	1578	0.208	4.7	4.97	4.3	2.29
STD DS9	Standard	7469	840	14.6	122.6	6441	300.9	1163	3	9854	910	4127	3.2	2.5	5.63	1702	0.217	5.1	5.43	4.4	2.40
STD DS9	Standard	7147	779	13.0	117.5	6181	281.3	1103	3	9403	856	3941	3.0	2.3	5.32	1617	0.207	5.3	5.02	4.7	2.35
STD DS9	Standard	6840	844	11.4	109.9	5978	280.7	1022	3	9246	810	3931	2.9	2.4	5.53	1610	0.237	5.5	4.94	4.4	2.45
STD DS9	Standard	7140	749	13.6	108.0	6175	287.9	1113	2	9549	865	3934	2.8	2.9	5.24	1626	0.225	5.4	5.25	4.7	2.33
STD DS9	Standard	7058	769	13.4	116.2	6218	297.5	1131	3	9267	798	3880	3.0	2.5	5.28	1661	0.218	5.7	4.94	4.5	2.36
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
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STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OXG99	Standard																				
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STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXK94	Standard																				

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Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Cu % 0.001	7AR Ag gm/t 2
DUP 1421746	QC	0.1	0.06	0.19	22.7	0.6	<0.05	1.0	6.06	25.5	0.03	0.009	0.3	12.4	<0.01	<0.002		
1421780	Drill Core	<0.1	0.09	<0.02	16.1	<0.1	<0.05	2.8	4.96	19.0	0.31	0.007	0.1	4.1	<0.01	<0.002	1.167	7
DUP 1421780	QC	<0.1	0.08	<0.02	17.3	<0.1	<0.05	2.9	5.10	20.2	0.30	<0.001	0.3	3.9	<0.01	<0.002	1.190	7
1421814	Drill Core	<0.1	0.06	0.31	19.2	1.4	<0.05	0.8	4.83	21.6	0.26	0.016	<0.1	8.3	*	<0.002	1.291	6
DUP 1421814	QC	0.2	0.03	0.38	18.4	1.3	<0.05	0.7	4.89	20.4	0.25	0.023	0.4	8.2	*	0.003	1.263	7
1421848	Drill Core	<0.1	<0.02	0.05	22.5	0.3	<0.05	0.4	7.67	31.3	<0.02	<0.001	0.3	14.2	<0.01	<0.002		
DUP 1421848	QC	<0.1	<0.02	0.08	21.3	0.3	<0.05	0.3	7.60	30.8	0.04	<0.001	0.3	14.1	<0.01	<0.002		
Reference Materials																		
STD DS9	Standard	<0.1	0.05	1.39	33.5	6.3	<0.05	1.7	5.31	23.1	2.12	0.064	5.8	25.8	0.09	0.343		
STD DS9	Standard	0.2	0.07	1.55	34.3	6.7	<0.05	1.9	5.86	26.4	2.21	0.074	5.2	24.9	0.13	0.400		
STD DS9	Standard	0.1	0.04	1.47	33.4	6.3	<0.05	1.9	5.38	24.5	2.17	0.051	5.1	25.8	0.11	0.349		
STD DS9	Standard	0.2	0.07	1.11	33.0	6.6	<0.05	1.8	5.29	21.7	2.32	0.061	6.2	25.1	0.11	0.375		
STD DS9	Standard	<0.1	0.08	1.36	31.3	6.1	<0.05	2.0	5.48	25.1	2.01	0.043	4.6	24.9	0.09	0.374		
STD DS9	Standard	0.1	0.07	1.43	34.0	6.4	<0.05	2.0	5.97	24.7	2.15	0.052	6.7	25.1	0.12	0.338		
STD GC-7	Standard																0.577	>300
STD GC-7	Standard																0.556	>300
STD GC-7	Standard																0.569	>300
STD GC-7	Standard																0.563	>300
STD GC-7	Standard																0.564	>300
STD GC-7	Standard																0.550	>300
STD GC-7	Standard																0.582	>300
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXK94	Standard																	

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AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
STD OXK94	Standard		3.799																		
STD OXK94	Standard		3.653																		
STD OXK94	Standard		3.879																		
STD OXK94	Standard		3.443																		
STD OXK94	Standard		3.543																		
STD GC-7 Expected																					
STD OXK94 Expected			3.562																		
STD OXG99 Expected			0.932																		
STD DS9 Expected				12.84	108	126	317	1830	40.3	7.6	575	23300	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40
BLK	Blank			<0.01	0.05	<0.01	<0.1	<2	<0.1	<0.1	1	<100	0.4	<0.1	<0.2	<0.1	<0.5	0.01	<0.02	<0.02	<2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			0.11	1.14	<0.01	<0.1	7	<0.1	<0.1	<1	<100	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			0.10	0.56	<0.01	<0.1	5	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			<0.01	0.06	<0.01	<0.1	<2	<0.1	<0.1	<1	<100	0.3	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank			0.02	0.12	<0.01	<0.1	3	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD GC-7 Expected																					
STD OXK94 Expected																					
STD OXG99 Expected																					
STD DS9 Expected		7201	819	13.3	121	6165	295	1108		9577	853	3950	2.89	2.5	5.3	1615	0.2	5.2	5.02	4.59	2.37
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	0.4	<0.02	<200	<0.005	<0.1	0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				

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Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Cu % 0.001	7AR Ag gm/t 2
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD GC-7 Expected																	0.555	619
STD OXK94 Expected																		
STD OXG99 Expected																		
STD DS9 Expected		0.1	0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	0.061	5.4	25.2	0.12	0.35		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	0.03	<0.1	<0.02	<0.001	0.1	<0.1	<0.01	<0.002		
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	0.004	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																<0.001	<2
BLK	Blank																<0.001	<2
BLK	Blank																<0.001	<2
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																	
BLK	Blank																	

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Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
BLK	Blank																				
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			<0.01	<0.01	0.02	<0.1	5	<0.1	<0.1	3	<100	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
Prep Wash																					
G1-SMI	Prep Blank	<0.01	<0.005	0.06	2.46	2.85	43.9	12	2.5	3.8	573	18681	0.6	1.5	1.2	5.0	67.6	<0.01	<0.02	0.05	34
G1-SMI	Prep Blank	<0.01	<0.005	0.13	2.24	3.03	48.5	13	2.4	4.3	596	19650	0.7	1.6	1.3	5.6	67.3	0.02	<0.02	0.04	36

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Project: Troitsa
Report Date: September 18, 2012

QUALITY CONTROL REPORT SMI12000266.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	0.008	<0.1	0.04	<0.1	<0.02
Prep Wash																					
G1-SMI	Prep Blank	4717	720	12.3	9.8	4797	150.3	1123	<1	8306	817	4397	<0.1	2.3	0.31	<200	0.016	<0.1	0.08	4.4	2.70
G1-SMI	Prep Blank	4934	795	13.4	8.8	4931	221.6	1189	3	8836	818	4606	<0.1	2.3	0.35	<200	<0.005	0.2	<0.02	4.9	2.85

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QUALITY CONTROL REPORT SMI12000266.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Cu % 0.001	7AR Ag gm/t 2
BLK	Blank																<0.001	3
BLK	Blank																	
BLK	Blank																	
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
Prep Wash																		
G1-SMI	Prep Blank	<0.1	0.08	0.55	43.0	0.4	<0.05	1.2	5.07	22.3	<0.02	<0.001	0.3	28.2	<0.01	<0.002		
G1-SMI	Prep Blank	0.2	0.09	0.55	45.6	0.4	<0.05	1.2	5.53	25.0	<0.02	<0.001	0.3	29.7	<0.01	<0.002		

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By:	Email Distribution List
Receiving Lab:	Canada-Smithers
Received:	August 31, 2012
Report Date:	October 01, 2012
Page:	1 of 5

CERTIFICATE OF ANALYSIS SMI12000318.1

CLIENT JOB INFORMATION

Project:	Troitsa
Shipment ID:	TR-12-003
P.O. Number	
Number of Samples:	89

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	86	Crush, split and pulverize 250 g rock to 200 mesh			SMI
G601	89	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
1F05	89	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
7AR	3	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	2	0.1	0.5	0.01	0.02	0.02	2
G1	Prep Blank	<0.01	<0.005	0.10	2.61	2.74	48.9	18	2.8	4.1	570	18361	0.3	1.5	3	5.3	71.5	0.03	0.05	0.03	34
G1	Prep Blank	<0.01	<0.005	0.20	20.40	2.72	46.0	46	2.7	4.4	587	19073	0.1	1.5	3	5.0	57.2	0.14	0.02	<0.02	36
1421862	Drill Core	7.34	<0.005	2.22	118.2	2.16	27.5	109	12.7	8.2	433	25912	1.8	1.4	<2	8.6	93.2	0.03	0.10	0.12	53
1421863	Drill Core	7.53	<0.005	1.91	1287	2.83	35.5	1112	13.3	8.6	475	25924	4.1	2.5	4	8.0	82.5	0.14	0.18	0.41	44
1421864	Drill Core	7.60	<0.005	80.59	1903	1.72	35.7	1826	13.7	18.6	358	27774	0.7	2.6	5	8.4	49.6	0.15	0.12	1.67	59
1421865	Drill Core	7.09	0.005	9.99	628.4	1.49	31.4	520	12.3	10.2	365	26207	1.4	2.0	6	9.1	52.5	0.07	0.13	0.34	60
1421866	Drill Core	7.69	<0.005	5.64	289.6	1.86	26.6	289	13.5	9.6	386	25483	3.0	1.9	3	9.3	64.9	0.02	0.18	0.18	59
1421867	Drill Core	6.70	<0.005	3.07	203.2	1.50	28.0	153	13.7	9.5	387	26918	2.1	2.0	2	8.6	50.8	0.07	0.11	0.22	62
1421868	Drill Core	7.30	<0.005	6.09	311.5	0.80	22.6	258	12.3	9.8	315	23078	0.7	1.4	23	8.7	36.7	0.02	0.06	0.13	58
1421869	Drill Core	8.12	<0.005	12.13	148.6	1.38	23.4	114	12.1	8.4	420	24900	1.6	3.4	<2	9.9	78.2	0.03	0.12	0.07	57
1421870	Drill Core	7.34	0.033	12.33	407.5	1.91	22.4	465	12.4	8.5	389	25073	3.0	3.4	3	10.3	73.1	0.02	0.12	0.16	55
1421871	Drill Core	7.79	<0.005	1.81	819.9	1.60	21.4	776	12.8	9.4	316	24161	1.6	2.0	7	8.9	33.4	0.06	0.09	0.17	56
1421872	Drill Core	8.93	<0.005	34.12	738.7	3.05	25.9	561	10.7	9.4	376	22277	1.3	2.2	4	8.0	45.2	0.07	0.39	0.17	49
1421873	Drill Core	8.25	<0.005	1.45	18.26	14.22	107.0	100	3.1	23.7	991	51533	3.6	2.0	<2	1.0	135.8	0.12	0.33	0.21	78
1421874	Drill Core	7.73	<0.005	0.64	13.72	10.99	115.7	83	2.4	21.1	781	50810	0.6	1.2	<2	0.9	128.5	0.09	0.27	0.15	71
1421875	Rock Pulp	0.10	4.595	1273	>10000	87.66	99.5	>100000	12.1	12.6	592	30773	199.9	2.4	5032	2.1	13.6	9.64	124.6	3.47	30
1421876	Drill Core	6.81	<0.005	2.04	16.12	8.10	109.4	85	2.3	21.3	894	50007	0.6	1.0	<2	1.0	119.5	0.10	0.34	0.09	72
1421877	Drill Core	5.95	<0.005	0.30	2.54	6.93	38.0	26	0.5	3.2	366	9386	0.4	1.6	<2	2.9	99.3	0.11	0.08	0.03	3
1421878	Drill Core	7.97	<0.005	0.36	5.47	9.38	46.9	42	0.6	1.4	582	8470	0.2	1.5	<2	3.6	81.6	0.10	0.09	0.04	<2
1421879	Drill Core	6.09	<0.005	0.25	8.78	11.84	44.2	89	0.6	1.2	454	7485	0.6	2.2	<2	3.2	71.3	0.10	0.19	0.05	<2
1421880	Drill Core	7.53	<0.005	0.29	6.63	10.81	41.6	40	0.7	1.3	388	7627	<0.1	2.7	<2	3.5	70.3	0.10	0.12	0.07	<2
1421881	Drill Core	6.60	<0.005	1.71	5.09	9.06	43.7	37	0.6	2.8	393	9077	0.1	3.8	3	3.7	75.9	0.07	0.14	0.06	2
1421882	Drill Core	7.40	<0.005	1.73	10.42	9.68	90.9	63	2.5	15.0	1044	37572	1.6	0.8	2	1.1	169.7	0.11	0.50	0.07	68
1421883	Drill Core	7.79	<0.005	1.47	11.03	6.46	90.6	56	2.3	22.2	1155	50444	1.3	0.6	<2	0.8	206.1	0.11	0.57	0.04	104
1421884	Drill Core	10.32	<0.005	0.93	12.76	6.62	97.9	52	2.1	19.7	1188	47316	1.0	0.8	<2	0.9	233.6	0.11	0.61	0.04	102
1421885	Drill Core	2.64	<0.005	35.80	1568	2.52	33.8	1410	11.3	12.3	376	29734	1.2	2.0	15	8.2	66.7	0.16	0.23	0.49	63
1421886	Drill Core	7.13	<0.005	1.46	162.6	10.45	89.9	243	2.8	21.8	1031	48277	1.9	0.8	<2	1.1	191.6	0.18	0.50	0.19	78
1421887	Drill Core	7.61	<0.005	2.63	5.87	13.73	47.4	78	1.1	6.1	515	13917	10.9	8.7	<2	2.5	118.6	0.08	0.53	0.10	11
1421888	Drill Core	7.69	<0.005	1.76	24.65	14.12	99.7	105	3.5	16.7	1067	38303	1.0	5.4	<2	1.8	191.8	0.14	0.38	0.14	49
1421889	Drill Core	7.21	<0.005	10.95	1881	2.04	25.7	1445	12.8	12.8	339	26476	0.6	1.7	5	7.0	62.6	0.07	0.16	0.37	51

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
G1	Prep Blank	4765	770	11.6	6.2	4829	156.7	974	1	9138	978	4888	<0.1	2.3	0.34	<200	<0.005	<0.1	<0.02	4.8	2.90
G1	Prep Blank	4451	762	11.3	7.0	4818	158.0	1004	1	9103	1095	5142	0.4	2.4	0.33	<200	<0.005	<0.1	<0.02	4.8	3.14
1421862	Drill Core	16247	992	17.6	26.2	8568	158.7	39	<1	10234	398	1202	0.6	3.1	0.04	456	<0.005	<0.1	<0.02	5.9	1.42
1421863	Drill Core	21139	934	18.0	22.5	7918	103.6	51	<1	10473	365	1597	0.6	2.8	0.07	4254	<0.005	0.2	0.04	5.0	2.47
1421864	Drill Core	11131	964	15.3	24.2	10026	169.9	209	<1	11099	479	1182	3.1	3.5	0.04	3230	<0.005	0.7	0.14	6.0	1.29
1421865	Drill Core	11699	969	15.2	25.3	9714	198.9	210	<1	10202	494	1279	14.1	3.6	0.05	1119	<0.005	<0.1	<0.02	5.7	1.35
1421866	Drill Core	13338	1010	14.6	25.2	8874	254.3	380	<1	8933	387	1508	2.7	3.4	0.05	1085	<0.005	0.2	<0.02	5.5	1.84
1421867	Drill Core	14103	990	15.0	25.3	9750	113.7	466	1	9766	477	1740	0.9	3.5	0.08	1581	<0.005	<0.1	<0.02	5.8	2.00
1421868	Drill Core	8067	873	11.3	23.9	8582	170.6	667	<1	8177	682	1882	11.4	3.3	0.07	424	<0.005	<0.1	<0.02	5.1	1.01
1421869	Drill Core	18756	942	15.6	23.8	8666	147.2	171	<1	9189	404	1184	1.1	3.4	0.04	983	<0.005	0.1	0.03	5.4	1.95
1421870	Drill Core	16732	970	16.2	24.6	8286	134.5	161	<1	9025	368	1084	15.4	3.4	0.03	1669	<0.005	<0.1	0.03	5.1	1.89
1421871	Drill Core	8243	900	12.3	22.2	7999	93.3	737	1	7986	501	1414	14.0	2.4	0.04	1652	<0.005	0.7	<0.02	5.2	1.35
1421872	Drill Core	12894	874	12.1	21.2	7858	113.0	520	<1	8125	483	1335	5.6	2.8	0.05	1203	0.008	<0.1	0.06	4.8	1.62
1421873	Drill Core	34309	1738	23.0	<0.5	15915	321.0	48	<1	27539	293	2777	0.5	5.1	0.07	1816	<0.005	<0.1	<0.02	8.2	7.51
1421874	Drill Core	30935	1850	21.7	0.5	13414	148.7	39	<1	22944	233	2757	0.2	4.4	0.08	<200	<0.005	0.1	0.04	7.0	6.85
1421875	Rock Pulp	5660	635	6.8	12.0	4143	122.0	58	3	8399	504	1926	11.3	3.9	0.09	10319	0.644	3.6	0.95	2.8	0.73
1421876	Drill Core	27534	1818	21.8	0.7	12316	237.7	51	<1	21483	371	2719	0.1	4.4	0.06	<200	<0.005	<0.1	<0.02	7.1	6.68
1421877	Drill Core	11971	287	26.6	1.7	3834	718.3	17	<1	6789	213	2027	<0.1	0.7	0.05	202	<0.005	<0.1	<0.02	2.3	3.03
1421878	Drill Core	14675	208	32.4	1.8	4524	233.0	13	<1	7399	166	2313	0.2	0.7	0.06	<200	<0.005	<0.1	<0.02	2.4	3.83
1421879	Drill Core	13424	225	32.2	1.3	4110	52.4	<10	1	7066	166	2076	0.2	0.6	0.06	<200	<0.005	<0.1	<0.02	2.1	3.30
1421880	Drill Core	12821	196	32.2	1.5	3596	84.9	11	<1	6655	219	2125	0.2	0.6	0.07	<200	<0.005	0.1	<0.02	2.2	2.98
1421881	Drill Core	13186	284	29.1	1.4	3490	197.1	20	<1	6604	244	2177	0.2	0.9	0.06	<200	<0.005	0.3	<0.02	2.4	3.23
1421882	Drill Core	38812	1496	20.5	0.7	8054	251.6	52	<1	17562	665	2528	0.1	5.3	0.07	243	<0.005	0.1	0.03	6.2	5.96
1421883	Drill Core	40723	1741	18.4	0.5	11473	298.0	61	1	22873	810	1984	<0.1	6.9	0.05	<200	<0.005	0.2	0.03	7.5	7.13
1421884	Drill Core	42959	1783	18.7	<0.5	10090	793.9	68	<1	21457	879	1979	<0.1	7.5	0.05	295	<0.005	0.2	<0.02	7.4	7.37
1421885	Drill Core	14006	995	17.0	21.2	8494	87.8	78	<1	10792	410	1050	0.9	4.3	0.03	1702	<0.005	0.4	0.07	5.6	2.60
1421886	Drill Core	46259	1684	21.1	0.8	11254	121.4	45	<1	22298	242	2613	0.2	5.1	0.10	459	<0.005	0.4	0.03	7.2	7.44
1421887	Drill Core	23968	583	24.2	1.2	4469	90.3	16	<1	8405	63	2310	0.3	1.6	0.10	1352	<0.005	<0.1	0.05	2.5	5.14
1421888	Drill Core	47377	1610	24.1	1.5	10666	128.2	42	<1	20843	145	3201	0.9	5.3	0.11	272	<0.005	0.3	0.05	5.7	7.14
1421889	Drill Core	13854	859	15.4	22.6	8592	113.3	37	<1	10119	462	950	20.3	2.8	0.03	3011	0.007	0.9	0.11	5.9	1.00

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
G1	Prep Blank	0.1	0.05	0.46	44.5	0.4	<0.05	0.7	4.34	20.0	0.04	0.001	0.1	33.2	<0.01	<0.002		
G1	Prep Blank	0.1	0.03	0.46	43.5	0.5	<0.05	0.8	4.48	20.2	0.02	0.001	0.2	29.4	<0.01	<0.002		
1421862	Drill Core	<0.1	0.03	0.07	7.3	0.3	<0.05	0.9	7.41	34.0	<0.02	0.002	0.2	14.1	<0.01	<0.002		
1421863	Drill Core	<0.1	0.04	<0.02	10.7	0.2	<0.05	0.9	7.03	33.2	0.05	0.004	0.2	15.8	<0.01	<0.002		
1421864	Drill Core	0.1	0.06	0.03	7.5	0.2	<0.05	1.1	6.28	29.5	0.06	0.011	0.4	17.3	0.02	<0.002		
1421865	Drill Core	<0.1	0.05	0.03	8.9	0.2	<0.05	1.1	6.73	30.7	0.03	0.010	0.2	13.6	<0.01	<0.002		
1421866	Drill Core	0.1	0.06	0.07	10.0	0.2	<0.05	1.7	5.49	26.5	0.03	0.004	0.3	11.4	<0.01	<0.002		
1421867	Drill Core	<0.1	0.07	0.06	11.9	0.3	<0.05	1.8	5.65	28.4	<0.02	<0.001	0.4	14.0	<0.01	<0.002		
1421868	Drill Core	<0.1	0.05	0.09	12.4	0.3	<0.05	1.2	3.89	21.2	<0.02	<0.001	0.2	10.3	<0.01	0.002		
1421869	Drill Core	<0.1	0.06	0.05	6.7	0.2	<0.05	1.3	6.53	29.8	<0.02	0.002	0.2	14.5	<0.01	<0.002		
1421870	Drill Core	<0.1	0.07	0.03	6.5	0.3	<0.05	1.4	6.14	30.8	0.02	<0.001	0.3	12.6	<0.01	<0.002		
1421871	Drill Core	<0.1	0.09	0.12	7.9	0.3	<0.05	1.8	4.00	22.1	0.04	0.002	0.2	9.6	<0.01	<0.002		
1421872	Drill Core	<0.1	0.06	0.10	7.7	0.3	<0.05	1.2	4.50	22.7	0.03	0.013	0.4	11.8	<0.01	<0.002		
1421873	Drill Core	0.1	0.06	0.02	13.7	0.4	<0.05	1.6	14.66	47.2	0.03	<0.001	0.9	45.8	<0.01	<0.002		
1421874	Drill Core	<0.1	0.02	<0.02	14.3	0.3	<0.05	2.3	14.35	45.1	0.03	<0.001	0.9	38.0	<0.01	<0.002		
1421875	Rock Pulp	<0.1	0.08	0.06	6.3	1.3	<0.05	2.9	6.19	13.5	<0.02	0.093	0.5	2.8	*	<0.002	1.090	100
1421876	Drill Core	<0.1	0.05	<0.02	13.9	0.3	<0.05	2.0	14.07	46.3	<0.02	<0.001	1.3	35.3	<0.01	<0.002		
1421877	Drill Core	<0.1	0.09	0.03	10.3	0.2	<0.05	4.2	7.86	53.4	<0.02	0.001	0.7	9.8	<0.01	<0.002		
1421878	Drill Core	<0.1	0.06	0.02	12.3	0.2	<0.05	4.4	7.68	61.4	<0.02	0.001	0.4	10.3	<0.01	<0.002		
1421879	Drill Core	<0.1	0.08	<0.02	10.0	0.1	<0.05	3.3	6.77	61.4	<0.02	<0.001	0.7	9.8	<0.01	<0.002		
1421880	Drill Core	<0.1	0.15	<0.02	10.9	0.1	<0.05	4.9	7.03	61.5	<0.02	0.002	0.8	9.7	<0.01	<0.002		
1421881	Drill Core	<0.1	0.13	0.03	11.4	0.2	<0.05	5.0	7.73	57.4	<0.02	0.003	0.6	8.9	<0.01	<0.002		
1421882	Drill Core	<0.1	0.06	0.02	13.6	0.3	<0.05	3.3	12.69	43.6	0.03	0.003	0.7	26.5	<0.01	<0.002		
1421883	Drill Core	<0.1	0.06	0.02	10.8	0.4	<0.05	3.6	13.62	39.5	0.03	<0.001	1.2	37.2	<0.01	<0.002		
1421884	Drill Core	<0.1	0.09	<0.02	11.3	0.4	<0.05	3.0	13.64	41.5	0.04	<0.001	0.6	35.9	<0.01	<0.002		
1421885	Drill Core	<0.1	0.04	0.02	7.4	0.3	<0.05	1.7	8.45	34.5	0.09	<0.001	0.5	16.9	<0.01	<0.002		
1421886	Drill Core	<0.1	0.05	<0.02	15.6	0.4	<0.05	2.0	14.70	43.6	0.04	<0.001	1.3	31.9	<0.01	<0.002		
1421887	Drill Core	<0.1	0.05	<0.02	12.8	0.2	<0.05	3.1	7.74	46.6	<0.02	0.003	0.7	14.0	<0.01	<0.002		
1421888	Drill Core	<0.1	0.08	0.02	17.2	0.3	<0.05	4.7	15.41	48.4	0.03	0.002	1.6	29.2	0.01	<0.002		
1421889	Drill Core	<0.1	0.05	<0.02	6.1	0.3	<0.05	1.4	6.88	30.1	0.09	<0.001	0.2	16.6	<0.01	<0.002		

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	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	2	0.1	0.5	0.01	0.02	0.02	2
1421890	Drill Core	6.07	<0.005	7.13	1007	1.53	25.8	760	13.6	10.9	330	25989	1.0	1.7	6	7.2	53.2	0.06	0.14	0.28	54
1421891	Drill Core	7.57	<0.005	6.49	600.1	1.41	24.3	425	13.0	8.9	333	24505	0.6	1.9	3	8.1	43.7	0.01	0.12	0.18	54
1421892	Drill Core	7.50	<0.005	7.06	809.2	1.64	27.3	773	13.1	9.4	371	25828	1.9	2.2	4	8.7	60.0	0.05	0.18	1.28	55
1421893	Drill Core	6.44	<0.005	7.09	484.7	3.13	21.3	797	9.5	7.5	397	20587	15.1	2.4	11	8.6	85.3	0.05	0.64	0.87	37
1421894	Drill Core	6.28	<0.005	8.38	540.3	1.94	22.5	671	12.7	8.6	399	26613	2.2	2.1	3	8.2	75.5	0.05	0.18	1.04	58
1421895	Drill Core	4.77	<0.005	15.48	445.7	3.55	26.9	1039	13.8	9.8	400	26618	3.8	2.0	6	8.2	79.2	0.11	0.34	1.32	60
1421896	Drill Core	8.03	<0.005	8.01	618.2	18.07	42.2	991	14.3	8.9	465	28764	3.2	3.0	3	8.7	83.5	0.21	0.19	1.74	54
1421897	Drill Core	7.10	<0.005	5.68	223.7	3.29	34.6	389	13.3	8.2	516	25865	10.0	2.7	<2	7.9	103.4	0.06	0.31	1.33	42
1421898	Rock	0.26	<0.005	0.17	6.56	2.61	33.3	33	2.6	2.4	145	10085	0.3	2.0	<2	4.5	45.5	0.02	0.04	0.06	10
1421899	Drill Core	5.85	<0.005	8.17	393.2	4.15	31.6	523	12.2	8.2	408	23443	22.6	5.5	<2	9.0	116.8	0.10	0.42	0.51	27
1421900	Drill Core	6.64	<0.005	4.68	431.2	8.20	32.0	1303	12.9	8.5	542	24526	13.3	13.4	<2	7.6	120.9	0.09	0.69	6.67	21
1421901	Drill Core	8.45	<0.005	4.09	282.2	2.00	31.9	370	14.7	10.5	396	25460	0.5	3.2	<2	9.3	163.2	0.04	0.25	0.89	50
1421902	Drill Core	7.72	<0.005	9.27	336.6	54.55	35.0	876	11.4	10.2	772	25200	2.4	5.4	10	8.5	128.1	0.23	0.54	1.41	32
1421903	Drill Core	7.70	<0.005	2.82	281.6	8.83	32.1	374	13.6	8.1	583	26093	1.4	3.1	<2	10.0	96.8	0.06	0.27	0.79	43
1421904	Drill Core	7.71	<0.005	4.06	96.54	3.67	23.7	145	12.6	8.0	511	25909	4.3	2.5	<2	9.2	102.4	0.05	0.36	0.33	42
1421905	Drill Core	8.39	<0.005	2.13	161.5	3.90	24.9	315	11.4	7.8	729	23202	9.6	3.1	<2	8.7	117.4	0.04	1.24	0.21	37
1421906	Drill Core	7.93	<0.005	4.39	430.9	11.83	27.1	791	11.4	9.4	541	25161	8.2	3.4	<2	8.4	107.2	0.08	1.05	1.03	31
1421907	Drill Core	8.97	<0.005	13.13	2710	3.03	25.1	2137	13.0	12.9	513	26479	4.6	3.0	5	8.4	102.0	0.06	0.68	0.65	43
1421908	Drill Core	7.85	<0.005	16.00	431.1	2.42	25.5	405	13.7	9.5	506	27562	1.2	3.0	<2	8.5	98.7	0.06	0.16	0.21	54
1421909	Drill Core	7.97	<0.005	3.63	269.4	5.17	28.1	524	13.7	11.8	432	25959	2.1	3.5	<2	9.0	109.3	0.08	0.15	0.66	44
1421910	Rock Pulp	0.10	4.894	1403	>10000	89.40	100.0	>100000	13.0	13.4	642	31636	203.9	2.3	5057	2.2	15.0	9.67	128.9	3.64	32
1421911	Drill Core	8.25	<0.005	2.38	312.7	1.92	25.2	343	13.7	9.1	380	25541	0.7	3.1	<2	8.7	603.7	0.02	0.12	0.14	59
1421912	Drill Core	8.07	<0.005	2.20	241.1	2.00	22.6	348	13.4	8.9	398	25568	3.1	3.2	2	8.9	104.5	0.05	0.13	0.19	54
1421913	Drill Core	8.33	<0.005	17.76	252.8	2.25	20.7	308	11.6	8.1	318	23993	1.4	2.7	<2	8.1	72.4	0.05	0.10	0.72	55
1421914	Drill Core	8.32	<0.005	6.87	405.5	2.78	24.1	524	12.9	8.4	372	24867	0.8	2.8	<2	8.5	73.4	0.04	0.09	4.95	53
1421915	Drill Core	3.75	0.024	2.41	76.26	1.90	22.9	131	12.5	8.0	401	25752	2.7	2.8	<2	8.5	78.3	0.03	0.10	0.33	54
1421916	Drill Core	4.94	<0.005	5.77	151.3	1.97	25.7	227	13.0	9.0	454	24730	2.1	3.0	<2	8.4	96.2	0.03	0.09	0.75	53
1421917	Drill Core	4.75	<0.005	15.65	196.9	1.75	23.8	305	12.7	8.5	413	25178	0.9	3.8	<2	9.8	60.8	0.04	0.08	0.77	59
1421918	Drill Core	4.82	<0.005	26.28	98.07	32.50	32.4	1660	12.9	8.8	469	24350	2.4	5.1	<2	12.3	74.7	0.31	0.15	5.11	51
1421919	Drill Core	4.75	<0.005	2.58	35.06	2.25	22.7	74	12.7	7.3	395	24396	1.6	3.0	<2	11.3	67.5	0.05	0.16	0.23	57

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421890	Drill Core	12376	896	13.9	23.2	9633	72.4	148	1	10118	536	1012	9.3	3.5	0.03	1349	<0.005	0.4	0.07	6.1	0.86
1421891	Drill Core	11115	897	13.0	22.9	9459	59.0	420	<1	9168	535	1080	9.6	3.1	0.03	711	<0.005	0.3	0.05	5.7	0.98
1421892	Drill Core	12421	933	13.7	24.2	8988	143.8	302	<1	8864	492	1406	6.5	3.3	0.06	1464	<0.005	0.4	0.04	5.5	1.59
1421893	Drill Core	16398	914	14.7	16.9	5996	76.5	114	<1	5695	227	1593	3.3	2.9	0.09	2643	<0.005	0.3	<0.02	3.1	3.44
1421894	Drill Core	14960	929	15.0	25.4	8914	198.7	414	<1	9017	509	1573	2.8	3.3	0.06	1299	0.008	0.1	0.15	5.3	1.51
1421895	Drill Core	14910	946	16.2	27.0	7689	153.6	380	3	8215	411	1618	1.7	4.2	0.08	1599	<0.005	<0.1	0.13	5.0	1.53
1421896	Drill Core	15454	867	14.7	25.3	8323	217.3	182	5	9799	430	1619	0.8	3.8	0.08	4220	<0.005	0.1	0.24	5.2	2.23
1421897	Drill Core	18099	875	15.1	21.0	8295	221.0	49	3	11134	335	1798	0.6	3.6	0.09	2776	<0.005	<0.1	0.05	5.1	2.80
1421898	Rock	2175	286	16.8	5.3	2934	69.4	227	11	5495	588	2642	<0.1	0.9	0.07	<200	<0.005	<0.1	<0.02	2.8	0.25
1421899	Drill Core	19891	889	18.2	16.2	7642	51.6	32	2	11756	292	1971	1.4	2.6	0.11	1898	0.006	<0.1	0.06	4.7	4.36
1421900	Drill Core	26552	850	17.5	11.4	8621	33.2	24	2	11542	243	2159	0.5	2.1	0.11	2669	0.021	0.3	0.46	4.3	4.94
1421901	Drill Core	13504	904	15.5	23.8	9243	717.9	93	2	11579	431	1440	0.2	3.6	0.06	591	<0.005	<0.1	0.25	5.8	2.36
1421902	Drill Core	24582	855	15.7	16.8	8185	173.0	27	4	11382	284	2070	0.4	2.8	0.10	2670	0.015	0.2	0.08	4.5	3.74
1421903	Drill Core	20899	889	18.4	22.3	8601	72.7	29	2	9665	362	1638	0.7	3.3	0.08	380	0.005	<0.1	0.04	5.0	2.14
1421904	Drill Core	21127	949	19.2	21.9	7937	43.7	17	<1	6199	385	1652	1.4	3.0	0.07	453	<0.005	<0.1	0.03	2.8	2.06
1421905	Drill Core	27512	838	18.3	16.9	8382	41.1	14	<1	4125	282	1565	0.7	3.0	0.09	868	0.014	<0.1	<0.02	1.8	2.55
1421906	Drill Core	21714	872	17.2	14.0	8048	39.4	14	<1	4131	308	1871	0.6	2.5	0.09	1861	0.028	<0.1	0.10	1.7	3.02
1421907	Drill Core	20430	876	18.7	19.7	10922	115.6	23	2	8248	327	1404	6.5	3.0	0.07	3325	0.017	0.6	0.09	4.5	1.86
1421908	Drill Core	22927	942	19.0	26.3	9598	103.3	58	<1	10688	426	1462	1.2	3.5	0.06	616	0.008	<0.1	0.04	5.9	1.71
1421909	Drill Core	18729	897	17.2	22.5	9432	102.1	105	1	10589	356	1660	0.5	2.8	0.07	2971	0.009	<0.1	0.12	5.3	2.82
1421910	Rock Pulp	5841	623	7.6	13.8	4738	126.4	72	4	9080	513	2088	12.1	4.1	0.11	10478	0.663	4.0	0.87	2.9	0.80
1421911	Drill Core	13657	876	16.1	25.7	9039	159.3	416	<1	9144	596	1472	0.7	4.0	0.06	673	<0.005	<0.1	0.04	5.3	1.10
1421912	Drill Core	18120	895	18.8	26.2	8413	56.6	156	<1	9419	436	1241	0.4	3.7	0.04	1132	<0.005	<0.1	0.04	5.5	1.53
1421913	Drill Core	13014	861	13.9	24.3	7532	80.0	489	<1	7863	497	1186	0.5	2.9	0.04	526	<0.005	<0.1	0.05	5.2	1.70
1421914	Drill Core	15003	873	14.8	25.1	8925	55.7	278	<1	9342	507	1219	0.4	3.4	0.04	1332	0.006	<0.1	0.18	5.3	1.18
1421915	Drill Core	15440	848	15.0	25.8	8605	100.2	315	<1	9244	503	1430	0.3	3.1	0.05	2316	<0.005	<0.1	0.06	5.3	1.33
1421916	Drill Core	19327	862	15.2	24.3	8769	109.1	121	<1	9557	402	1145	0.4	3.4	0.04	1094	<0.005	<0.1	0.05	5.5	1.57
1421917	Drill Core	12401	851	15.0	24.8	8034	44.3	216	<1	8471	588	1116	0.2	3.5	0.03	627	0.007	<0.1	<0.02	5.4	0.94
1421918	Drill Core	16179	855	15.5	23.7	6356	67.8	293	<1	8010	480	1484	0.2	3.5	0.05	2701	<0.005	<0.1	0.46	4.4	1.65
1421919	Drill Core	12639	878	15.2	26.2	7048	104.4	408	<1	8229	610	1440	0.2	3.7	0.08	285	<0.005	<0.1	0.04	4.9	1.34

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421890	Drill Core	<0.1	0.07	0.04	6.8	0.3	<0.05	1.6	6.06	27.0	0.05	0.003	0.2	18.0	<0.01	<0.002		
1421891	Drill Core	<0.1	0.08	0.07	7.1	0.3	<0.05	1.5	5.43	24.8	0.03	0.001	0.2	13.9	<0.01	<0.002		
1421892	Drill Core	<0.1	0.08	0.04	10.4	0.3	<0.05	1.7	5.88	26.3	0.06	<0.001	0.4	10.3	<0.01	<0.002		
1421893	Drill Core	<0.1	0.05	0.08	10.6	0.4	<0.05	2.5	5.60	27.0	0.04	0.001	0.4	6.4	<0.01	<0.002		
1421894	Drill Core	<0.1	0.10	0.05	11.2	0.3	<0.05	2.2	5.98	27.0	0.04	<0.001	0.5	10.3	<0.01	<0.002		
1421895	Drill Core	<0.1	0.08	0.06	12.4	0.3	<0.05	2.8	6.45	31.8	0.05	0.002	0.3	8.0	<0.01	<0.002		
1421896	Drill Core	<0.1	0.07	0.03	12.1	0.3	<0.05	1.5	6.27	29.2	0.06	<0.001	0.4	12.8	<0.01	<0.002		
1421897	Drill Core	0.1	0.05	<0.02	12.9	0.1	<0.05	1.8	6.65	28.9	0.03	0.001	0.2	16.4	<0.01	<0.002		
1421898	Rock	<0.1	0.43	0.12	10.2	0.4	<0.05	13.0	3.95	35.2	<0.02	<0.001	<0.1	15.8	<0.01	<0.002		
1421899	Drill Core	<0.1	0.06	<0.02	12.9	0.2	<0.05	1.7	6.88	35.9	0.02	0.005	0.3	17.5	<0.01	<0.002		
1421900	Drill Core	<0.1	0.04	<0.02	13.9	0.1	0.05	0.9	8.01	34.2	<0.02	<0.001	0.6	20.2	<0.01	<0.002		
1421901	Drill Core	<0.1	0.05	<0.02	9.6	0.1	<0.05	1.1	6.95	31.6	<0.02	<0.001	0.2	18.1	<0.01	<0.002		
1421902	Drill Core	<0.1	0.03	<0.02	14.9	0.2	<0.05	1.2	7.10	30.3	0.03	0.003	0.4	18.4	<0.01	<0.002		
1421903	Drill Core	<0.1	0.05	<0.02	11.4	0.2	<0.05	1.0	7.25	35.5	0.03	<0.001	0.3	13.0	<0.01	<0.002		
1421904	Drill Core	<0.1	0.03	<0.02	10.6	0.2	<0.05	0.9	7.61	37.8	<0.02	<0.001	0.2	6.4	<0.01	<0.002		
1421905	Drill Core	<0.1	0.02	<0.02	9.2	0.2	<0.05	0.6	7.85	36.6	<0.02	<0.001	0.3	3.3	<0.01	<0.002		
1421906	Drill Core	<0.1	0.02	<0.02	12.1	0.1	<0.05	0.5	6.82	34.0	0.03	<0.001	0.3	4.1	<0.01	<0.002		
1421907	Drill Core	<0.1	<0.02	<0.02	9.5	0.2	<0.05	0.4	7.62	35.5	0.14	0.003	0.5	12.1	<0.01	<0.002		
1421908	Drill Core	<0.1	0.02	<0.02	9.9	0.3	<0.05	0.5	8.24	36.8	0.03	0.003	0.3	15.1	<0.01	<0.002		
1421909	Drill Core	<0.1	0.02	0.03	11.0	0.2	<0.05	0.6	7.30	33.4	<0.02	<0.001	0.2	16.1	<0.01	<0.002		
1421910	Rock Pulp	<0.1	0.08	0.07	7.2	1.4	<0.05	3.2	6.80	15.5	<0.02	0.102	0.4	3.6	*	0.002	1.082	97
1421911	Drill Core	<0.1	0.04	0.07	10.1	0.3	<0.05	0.8	6.48	31.6	0.03	<0.001	0.5	13.9	<0.01	<0.002		
1421912	Drill Core	<0.1	0.04	0.03	7.7	0.3	<0.05	0.7	7.51	37.8	0.02	<0.001	0.1	14.0	<0.01	<0.002		
1421913	Drill Core	<0.1	0.07	0.13	6.8	0.4	<0.05	1.2	5.13	26.9	<0.02	0.002	0.1	11.2	<0.01	<0.002		
1421914	Drill Core	<0.1	0.04	0.04	8.1	0.3	<0.05	0.9	6.28	27.3	0.02	<0.001	0.3	15.3	<0.01	<0.002		
1421915	Drill Core	<0.1	0.04	0.06	8.9	0.3	<0.05	1.0	6.43	28.1	<0.02	<0.001	0.3	14.0	<0.01	<0.002		
1421916	Drill Core	<0.1	0.05	0.03	6.8	0.3	<0.05	0.7	7.24	29.9	<0.02	0.001	0.4	15.5	<0.01	<0.002		
1421917	Drill Core	<0.1	0.05	0.07	6.5	0.2	<0.05	0.9	7.21	31.8	0.02	0.003	0.3	14.0	<0.01	<0.002		
1421918	Drill Core	<0.1	0.04	0.07	8.8	0.3	<0.05	1.0	7.24	31.3	0.02	0.012	0.3	13.1	<0.01	<0.002		
1421919	Drill Core	<0.1	0.06	0.11	8.0	0.4	<0.05	1.0	6.23	29.9	0.03	<0.001	0.1	12.3	<0.01	0.003		

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Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	2	0.1	0.5	0.01	0.02	0.02	2
1421920	Drill Core	3.89	<0.005	4.31	104.1	1.67	23.1	107	12.3	7.8	353	23321	1.7	2.0	<2	10.0	61.7	0.03	0.09	0.39	54
1421921	Drill Core	4.29	<0.005	3.02	59.28	1.82	21.0	100	12.1	7.1	326	23586	2.1	3.6	<2	10.4	48.0	0.02	0.09	0.28	55
1421922	Drill Core	4.59	<0.005	4.63	120.1	1.99	20.5	164	11.8	7.8	505	23503	5.7	3.3	<2	9.7	101.0	0.04	0.21	0.23	50
1421923	Drill Core	4.43	<0.005	3.13	128.5	1.63	22.8	196	12.9	7.6	391	24747	2.4	3.7	<2	9.4	70.0	0.04	0.13	0.82	55
1421924	Drill Core	4.12	<0.005	3.82	92.80	1.28	24.0	108	13.0	7.7	418	23911	1.8	3.2	<2	9.3	94.3	0.03	0.13	0.17	55
1421925	Drill Core	4.66	<0.005	2.87	402.7	11.39	25.4	1170	13.3	8.4	374	24513	1.2	3.4	<2	8.9	95.3	0.08	0.10	3.54	54
1421926	Drill Core	4.80	<0.005	19.42	425.2	2.86	21.0	491	12.0	8.1	343	23127	1.3	3.2	<2	10.3	96.5	0.04	0.11	10.33	53
1421927	Drill Core	4.27	<0.005	5.20	107.3	2.25	16.1	143	10.2	6.4	265	21717	0.6	2.3	<2	9.1	33.3	0.04	0.06	0.65	54
1421928	Drill Core	4.27	<0.005	5.71	84.08	1.76	19.1	80	11.4	6.7	301	21528	1.1	3.0	<2	10.2	47.6	0.03	0.08	0.42	53
1421929	Drill Core	4.53	<0.005	3.51	236.3	1.56	21.9	318	11.6	7.5	363	23383	1.5	3.4	<2	10.4	62.2	0.03	0.11	0.43	53
1421930	Drill Core	4.60	<0.005	3.09	274.9	1.37	20.3	261	12.1	7.8	342	23015	1.2	3.5	<2	9.8	53.3	0.05	0.10	0.22	54
1421931	Drill Core	4.48	<0.005	2.60	63.02	2.16	22.6	79	12.6	8.2	447	23912	3.0	3.8	<2	10.7	110.4	0.03	0.15	0.12	53
1421932	Drill Core	4.66	<0.005	1.77	223.4	1.50	23.8	183	13.7	8.7	402	25174	4.6	3.8	3	10.3	82.2	0.04	0.15	0.08	57
1421933	Rock	0.45	<0.005	0.07	11.57	2.04	28.8	15	2.4	2.2	121	8660	0.3	1.6	<2	3.4	34.6	0.02	0.02	<0.02	10
1421934	Drill Core	5.03	<0.005	20.09	196.5	3.28	28.6	331	13.4	8.6	601	25493	6.7	3.3	4	10.1	98.4	0.05	0.25	0.34	48
1421935	Drill Core	3.64	<0.005	15.92	23.41	2.67	22.9	47	13.1	8.1	491	25936	5.4	3.9	<2	10.8	80.0	<0.01	0.13	0.07	52
1421936	Drill Core	4.08	<0.005	2.48	95.36	1.14	23.5	84	13.1	8.2	423	26394	0.8	2.0	<2	11.1	59.4	0.02	0.09	0.16	61
1421937	Drill Core	4.00	<0.005	9.00	450.6	2.01	23.2	557	13.2	9.5	416	25814	1.3	2.2	2	9.9	48.1	0.04	0.15	0.28	59
1421938	Drill Core	4.68	<0.005	4.55	199.0	1.51	22.8	248	12.9	8.8	387	25026	1.4	2.5	<2	11.1	46.2	0.04	0.12	0.36	58
1421939	Drill Core	4.36	<0.005	6.54	185.5	1.36	25.2	304	13.8	9.8	434	26451	0.8	2.2	<2	10.4	55.6	0.02	0.10	0.54	59
1421940	Drill Core	4.30	<0.005	4.84	174.1	3.13	26.1	267	12.5	9.7	446	25382	4.5	2.0	<2	10.6	68.8	0.03	0.21	0.58	55
1421941	Drill Core	4.43	<0.005	3.70	226.4	1.93	26.0	337	13.5	9.6	541	26224	7.3	2.3	<2	9.7	77.3	0.02	0.18	0.15	57
1421942	Drill Core	4.40	<0.005	3.10	66.18	1.49	25.1	99	13.4	8.9	525	27405	3.8	2.0	<2	9.4	67.9	0.03	0.14	0.12	62
1421943	Drill Core	4.40	<0.005	24.08	226.5	1.22	25.1	272	13.8	9.5	454	26545	1.0	1.7	<2	9.5	55.0	0.02	0.14	0.79	61
1421944	Drill Core	4.35	<0.005	2.95	153.7	1.62	23.8	171	12.7	9.0	435	25400	1.8	2.4	<2	9.0	62.1	0.04	0.11	0.06	56
1421945	Rock Pulp	0.10	4.783	1339	>10000	91.51	101.3	>100000	13.0	13.0	622	31198	202.8	2.5	4514	2.5	14.7	8.58	120.8	3.64	30
1421946	Drill Core	2.32	0.009	81.56	1445	87.38	35.4	2891	11.4	15.1	616	31669	38.5	5.0	6	9.9	106.9	0.64	8.12	11.42	36
1421947	Drill Core	4.23	<0.005	1.05	18.46	13.76	116.2	207	4.9	20.6	1126	49029	11.2	8.2	<2	1.2	183.9	0.18	0.58	0.64	71
1421948	Drill Core	3.85	<0.005	0.61	6.34	19.03	65.7	102	1.6	6.5	739	16043	2.2	1.7	4	2.1	137.1	0.17	0.15	0.29	7
1421949	Drill Core	4.32	<0.005	0.85	3.40	13.19	30.5	74	0.5	2.9	576	8313	1.2	1.0	2	2.9	101.4	0.10	0.30	0.15	<2

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421920	Drill Core	10927	816	13.7	23.6	8022	242.4	633	<1	8001	478	1717	0.4	2.9	0.06	462	<0.005	<0.1	<0.02	5.2	1.52
1421921	Drill Core	9865	840	13.2	25.1	6753	105.9	671	<1	7088	641	1450	0.3	2.4	0.05	525	<0.005	<0.1	<0.02	4.9	1.16
1421922	Drill Core	19463	816	15.9	22.6	8154	65.6	248	<1	6767	414	1303	0.4	3.0	0.04	500	0.012	<0.1	<0.02	4.4	1.88
1421923	Drill Core	13232	856	15.5	23.8	7316	84.8	386	<1	7829	514	1607	2.0	3.7	0.06	550	<0.005	<0.1	<0.02	4.9	2.31
1421924	Drill Core	14259	857	15.8	23.8	7781	98.5	333	<1	7923	430	1698	0.2	3.9	0.07	274	<0.005	<0.1	<0.02	4.8	1.78
1421925	Drill Core	12314	824	16.9	23.7	7530	105.3	471	<1	7844	547	2019	0.8	3.5	0.08	735	<0.005	0.1	0.10	5.0	1.32
1421926	Drill Core	10684	868	17.3	23.5	5721	84.7	426	<1	7072	530	1526	1.0	3.4	0.06	1245	<0.005	0.2	0.33	4.4	1.10
1421927	Drill Core	6591	799	12.0	23.4	5819	85.2	806	<1	6192	736	1457	0.7	1.8	0.05	<200	0.007	<0.1	0.02	4.0	0.65
1421928	Drill Core	8364	852	14.1	24.4	5868	73.4	616	<1	6498	667	1269	0.3	2.3	0.04	<200	<0.005	<0.1	<0.02	4.4	0.87
1421929	Drill Core	11725	857	15.3	23.6	6296	60.1	353	<1	7087	605	1330	1.1	2.7	0.05	477	<0.005	0.1	0.03	4.7	1.35
1421930	Drill Core	10558	880	13.9	22.5	6332	105.1	523	1	6701	488	1066	1.5	2.7	0.03	335	<0.005	0.2	0.03	4.6	0.97
1421931	Drill Core	21577	925	16.9	28.5	6437	113.4	410	1	6897	368	1492	0.5	2.9	0.05	<200	<0.005	0.1	<0.02	4.6	2.60
1421932	Drill Core	12877	965	15.5	24.5	7065	193.7	363	1	6962	388	1217	0.3	3.8	0.04	330	<0.005	<0.1	0.04	4.7	1.52
1421933	Rock	1577	244	17.1	9.0	2773	48.6	224	8	4749	472	1996	<0.1	0.7	0.03	<200	<0.005	<0.1	<0.02	2.6	0.26
1421934	Drill Core	24844	913	17.8	21.3	7436	200.3	102	1	8922	270	1131	0.8	3.2	0.04	932	<0.005	<0.1	<0.02	5.1	2.64
1421935	Drill Core	17561	945	18.4	27.2	8147	142.1	121	1	9528	352	1199	0.2	3.2	0.04	219	<0.005	<0.1	<0.02	5.6	2.19
1421936	Drill Core	12949	927	16.0	24.2	8977	189.4	466	<1	8450	456	906	0.3	3.7	<0.02	<200	<0.005	<0.1	<0.02	5.3	0.91
1421937	Drill Core	11779	912	15.4	25.9	7766	166.8	705	<1	8391	470	1325	0.5	3.2	0.04	908	<0.005	0.3	0.10	5.0	1.28
1421938	Drill Core	11201	925	15.2	24.0	7977	110.0	702	<1	7710	467	1105	1.0	3.0	0.03	336	<0.005	<0.1	<0.02	5.4	0.87
1421939	Drill Core	13888	885	15.5	27.5	9159	101.3	326	<1	8958	515	1074	1.1	3.3	0.03	256	<0.005	<0.1	0.07	5.8	0.90
1421940	Drill Core	14039	904	15.0	22.5	8017	302.9	411	<1	8789	308	1612	0.3	3.1	0.06	698	<0.005	<0.1	<0.02	5.3	2.42
1421941	Drill Core	18200	963	17.0	27.4	7887	132.9	253	2	8913	325	1707	0.8	3.9	0.05	611	0.006	<0.1	<0.02	5.3	2.78
1421942	Drill Core	16230	976	17.7	25.3	8743	135.9	399	<1	8752	411	1330	0.1	4.1	0.04	<200	<0.005	<0.1	<0.02	5.5	1.42
1421943	Drill Core	13677	909	16.0	27.7	8746	124.7	436	<1	8770	500	1137	0.3	3.8	0.03	350	<0.005	<0.1	<0.02	5.4	0.86
1421944	Drill Core	15455	954	16.0	23.5	7943	134.9	370	<1	8703	298	1109	0.6	3.6	0.03	253	<0.005	<0.1	0.04	5.3	1.52
1421945	Rock Pulp	5799	615	7.5	12.1	4181	114.8	68	4	8902	511	2009	11.4	4.0	0.08	10592	0.717	3.9	0.80	2.7	0.74
1421946	Drill Core	25829	979	18.8	18.1	5248	146.5	32	2	9495	225	1589	0.5	3.1	0.09	12922	0.067	0.1	0.36	4.6	3.75
1421947	Drill Core	38869	1726	24.6	<0.5	9399	100.3	67	<1	20808	265	2782	0.7	6.1	0.09	887	<0.005	<0.1	0.04	6.5	6.79
1421948	Drill Core	25667	606	29.9	1.1	3509	265.4	29	2	7147	181	2470	0.1	1.6	0.09	<200	<0.005	<0.1	0.05	2.4	3.19
1421949	Drill Core	19826	301	31.7	<0.5	2020	50.1	10	<1	3391	143	2074	0.1	0.9	0.06	<200	0.008	<0.1	<0.02	1.0	2.94

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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421920	Drill Core	<0.1	0.04	0.11	10.5	0.4	<0.05	1.2	5.04	26.2	<0.02	<0.001	0.3	10.8	<0.01	<0.002		
1421921	Drill Core	0.1	0.08	0.15	8.7	0.4	<0.05	1.3	4.57	24.4	<0.02	<0.001	0.2	9.9	<0.01	<0.002		
1421922	Drill Core	<0.1	0.04	0.06	7.6	0.4	<0.05	1.0	6.26	30.5	<0.02	<0.001	0.2	8.3	<0.01	<0.002		
1421923	Drill Core	<0.1	0.04	0.07	11.0	0.3	<0.05	0.9	6.13	29.7	<0.02	<0.001	0.3	10.3	<0.01	<0.002		
1421924	Drill Core	<0.1	0.03	0.05	11.3	0.3	<0.05	0.6	6.96	31.6	<0.02	0.002	0.4	11.4	<0.01	<0.002		
1421925	Drill Core	<0.1	0.02	0.07	14.4	0.4	<0.05	0.6	6.27	33.2	0.03	0.002	0.3	8.7	<0.01	<0.002		
1421926	Drill Core	<0.1	0.05	0.08	10.5	0.4	<0.05	0.9	6.08	33.9	0.05	0.004	0.3	7.0	<0.01	<0.002		
1421927	Drill Core	<0.1	0.06	0.23	7.8	0.3	<0.05	1.0	3.25	21.1	<0.02	<0.001	0.2	7.8	<0.01	<0.002		
1421928	Drill Core	<0.1	0.05	0.15	7.2	0.3	<0.05	1.0	4.66	27.3	<0.02	0.002	0.1	7.2	<0.01	<0.002		
1421929	Drill Core	<0.1	0.04	0.09	8.7	0.4	<0.05	0.8	6.12	29.6	<0.02	<0.001	0.2	8.8	<0.01	<0.002		
1421930	Drill Core	<0.1	0.05	0.12	6.8	0.4	<0.05	0.9	4.97	25.6	0.02	<0.001	0.1	8.7	<0.01	<0.002		
1421931	Drill Core	<0.1	0.03	0.08	9.5	0.5	<0.05	0.9	6.64	31.6	<0.02	<0.001	0.2	8.9	<0.01	<0.002		
1421932	Drill Core	<0.1	0.03	0.04	8.6	0.3	<0.05	0.7	6.68	30.2	<0.02	<0.001	0.4	9.7	<0.01	<0.002		
1421933	Rock	<0.1	0.38	0.11	6.7	0.2	<0.05	11.4	3.95	36.2	<0.02	<0.001	<0.1	18.5	0.01	<0.002		
1421934	Drill Core	<0.1	0.04	<0.02	8.5	0.3	<0.05	0.9	7.57	32.9	<0.02	<0.001	0.4	13.8	<0.01	<0.002		
1421935	Drill Core	<0.1	0.05	<0.02	7.4	0.2	<0.05	1.1	7.39	35.8	<0.02	0.005	0.3	14.8	<0.01	<0.002		
1421936	Drill Core	<0.1	0.08	0.10	5.8	0.4	<0.05	1.3	6.65	31.0	<0.02	<0.001	0.3	13.0	<0.01	<0.002		
1421937	Drill Core	<0.1	0.07	0.09	8.8	0.3	<0.05	1.4	5.57	30.1	0.03	0.004	0.2	11.5	<0.01	<0.002		
1421938	Drill Core	0.1	0.10	0.10	7.2	0.3	<0.05	1.5	5.59	28.3	<0.02	<0.001	0.3	10.6	<0.01	<0.002		
1421939	Drill Core	<0.1	0.06	0.04	6.9	0.3	<0.05	1.2	6.93	30.0	<0.02	0.001	0.2	12.6	<0.01	<0.002		
1421940	Drill Core	<0.1	0.05	0.06	10.2	0.3	<0.05	1.1	6.07	29.6	0.02	<0.001	0.2	10.5	<0.01	<0.002		
1421941	Drill Core	<0.1	0.05	0.04	10.1	0.3	<0.05	1.1	7.24	34.1	0.03	<0.001	0.1	11.6	<0.01	<0.002		
1421942	Drill Core	<0.1	0.06	0.05	9.0	0.4	<0.05	1.4	7.46	35.3	0.02	<0.001	0.2	12.2	<0.01	<0.002		
1421943	Drill Core	<0.1	0.08	0.07	7.7	0.3	<0.05	1.3	6.54	30.6	0.03	0.009	0.2	12.1	<0.01	<0.002		
1421944	Drill Core	<0.1	0.08	0.06	7.0	0.3	<0.05	1.3	6.42	30.7	0.02	0.001	0.3	12.3	<0.01	<0.002		
1421945	Rock Pulp	<0.1	0.07	0.05	6.5	1.1	<0.05	2.9	6.52	15.8	<0.02	0.111	0.4	3.0	*	<0.002	1.053	94
1421946	Drill Core	<0.1	0.03	<0.02	11.5	0.4	<0.05	1.2	8.25	37.2	0.15	0.017	0.5	14.4	0.01	<0.002		
1421947	Drill Core	<0.1	0.03	0.02	15.6	0.2	<0.05	5.4	14.09	52.0	0.03	<0.001	0.9	27.9	<0.01	<0.002		
1421948	Drill Core	<0.1	0.08	0.02	13.8	0.2	<0.05	3.5	9.39	60.3	<0.02	<0.001	0.5	10.0	<0.01	<0.002		
1421949	Drill Core	<0.1	0.07	<0.02	10.7	0.2	<0.05	3.1	7.22	62.1	<0.02	<0.001	0.5	2.8	<0.01	<0.002		

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Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000318.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	2	0.1	0.5	0.01	0.02	0.02	2
1421950	Drill Core	4.28	<0.005	1.23	2.71	19.56	34.3	69	0.6	2.1	480	7848	1.6	5.9	<2	3.1	93.8	0.08	0.26	0.10	<2

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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421950	Drill Core	15789	218	32.9	1.7	2206	38.2	<10	2	2835	140	2150	<0.1	0.5	0.07	569	0.011	<0.1	<0.02	0.8	2.47

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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421950	Drill Core	<0.1	0.10	<0.02	11.1	<0.1	<0.05	3.5	6.02	62.4	<0.02	<0.001	0.6	3.1	<0.01	<0.002		

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QUALITY CONTROL REPORT SMI12000318.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	2	0.1	0.5	0.01	0.02	0.02	2
Pulp Duplicates																					
1421876	Drill Core	6.81	<0.005	2.04	16.12	8.10	109.4	85	2.3	21.3	894	50007	0.6	1.0	<2	1.0	119.5	0.10	0.34	0.09	72
REP 1421876	QC			1.83	14.34	7.74	109.4	75	2.3	20.6	875	49369	0.6	1.0	<2	0.9	114.9	0.07	0.31	0.10	70
1421886	Drill Core	7.13	<0.005	1.46	162.6	10.45	89.9	243	2.8	21.8	1031	48277	1.9	0.8	<2	1.1	191.6	0.18	0.50	0.19	78
REP 1421886	QC		<0.005	1.59	162.9	10.87	88.9	244	3.3	22.7	1034	49144	2.2	0.8	<2	1.2	192.8	0.15	0.60	0.20	80
1421910	Rock Pulp	0.10	4.894	1403	>10000	89.40	100.0	>100000	13.0	13.4	642	31636	203.9	2.3	5057	2.2	15.0	9.67	128.9	3.64	32
REP 1421910	QC																				
1421911	Drill Core	8.25	<0.005	2.38	312.7	1.92	25.2	343	13.7	9.1	380	25541	0.7	3.1	<2	8.7	603.7	0.02	0.12	0.14	59
REP 1421911	QC			2.00	318.5	1.58	26.1	336	13.4	9.4	387	25976	0.6	3.2	3	8.9	599.9	0.06	0.09	0.14	60
1421920	Drill Core	3.89	<0.005	4.31	104.1	1.67	23.1	107	12.3	7.8	353	23321	1.7	2.0	<2	10.0	61.7	0.03	0.09	0.39	54
REP 1421920	QC		<0.005																		
1421921	Drill Core	4.29	<0.005	3.02	59.28	1.82	21.0	100	12.1	7.1	326	23586	2.1	3.6	<2	10.4	48.0	0.02	0.09	0.28	55
REP 1421921	QC			3.07	59.04	1.86	21.3	92	11.2	7.1	328	23551	2.1	3.6	<2	10.7	49.5	0.03	0.10	0.29	55
1421931	Drill Core	4.48	<0.005	2.60	63.02	2.16	22.6	79	12.6	8.2	447	23912	3.0	3.8	<2	10.7	110.4	0.03	0.15	0.12	53
REP 1421931	QC			2.44	61.36	2.14	22.4	73	11.8	8.3	450	24299	3.3	3.9	<2	10.5	111.1	0.04	0.15	0.10	53
1421937	Drill Core	4.00	<0.005	9.00	450.6	2.01	23.2	557	13.2	9.5	416	25814	1.3	2.2	2	9.9	48.1	0.04	0.15	0.28	59
REP 1421937	QC			8.87	450.2	2.02	24.6	629	13.5	9.9	433	27032	1.5	2.3	<2	9.8	49.8	0.05	0.16	0.28	59
1421945	Rock Pulp	0.10	4.783	1339	>10000	91.51	101.3	>100000	13.0	13.0	622	31198	202.8	2.5	4514	2.5	14.7	8.58	120.8	3.64	30
REP 1421945	QC																				
Core Reject Duplicates																					
1421894	Drill Core	6.28	<0.005	8.38	540.3	1.94	22.5	671	12.7	8.6	399	26613	2.2	2.1	3	8.2	75.5	0.05	0.18	1.04	58
DUP 1421894	QC	<0.01	<0.005	7.26	527.2	2.08	23.9	658	13.0	9.1	394	25114	2.1	2.1	3	8.6	75.4	0.04	0.17	1.17	56
1421928	Drill Core	4.27	<0.005	5.71	84.08	1.76	19.1	80	11.4	6.7	301	21528	1.1	3.0	<2	10.2	47.6	0.03	0.08	0.42	53
DUP 1421928	QC	<0.01	<0.005	7.91	85.42	1.71	18.5	79	11.8	6.9	317	23161	1.1	3.1	<2	10.4	49.7	0.08	0.09	0.35	56
Reference Materials																					
STD DS9	Standard			12.34	107.4	116.5	299.4	1713	38.6	7.2	578	23181	25.0	2.5	116	5.9	68.9	2.34	5.78	6.35	39
STD DS9	Standard			13.67	113.1	123.8	313.3	1847	42.5	7.8	595	23608	25.6	2.8	116	6.7	74.0	2.27	5.89	6.37	40
STD DS9	Standard			14.03	115.8	135.6	325.8	1898	43.4	7.9	629	23609	26.5	3.1	123	6.9	76.0	2.45	5.89	6.63	39
STD GC-7	Standard																				

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Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000318.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
Pulp Duplicates																					
1421876	Drill Core	27534	1818	21.8	0.7	12316	237.7	51	<1	21483	371	2719	0.1	4.4	0.06	<200	<0.005	<0.1	<0.02	7.1	6.68
REP 1421876	QC	27086	1712	21.4	0.5	12233	234.2	43	<1	21166	335	2598	0.1	4.0	0.07	<200	<0.005	<0.1	<0.02	7.1	6.83
1421886	Drill Core	46259	1684	21.1	0.8	11254	121.4	45	<1	22298	242	2613	0.2	5.1	0.10	459	<0.005	0.4	0.03	7.2	7.44
REP 1421886	QC	47064	1748	21.4	1.0	11308	119.7	48	2	22359	249	2693	0.2	5.5	0.11	472	<0.005	0.3	0.06	7.1	7.59
1421910	Rock Pulp	5841	623	7.6	13.8	4738	126.4	72	4	9080	513	2088	12.1	4.1	0.11	10478	0.663	4.0	0.87	2.9	0.80
REP 1421910	QC																				
1421911	Drill Core	13657	876	16.1	25.7	9039	159.3	416	<1	9144	596	1472	0.7	4.0	0.06	673	<0.005	<0.1	0.04	5.3	1.10
REP 1421911	QC	13717	875	16.2	26.1	9178	158.7	420	1	9268	584	1464	0.7	3.9	0.05	675	<0.005	<0.1	<0.02	5.4	1.08
1421920	Drill Core	10927	816	13.7	23.6	8022	242.4	633	<1	8001	478	1717	0.4	2.9	0.06	462	<0.005	<0.1	<0.02	5.2	1.52
REP 1421920	QC																				
1421921	Drill Core	9865	840	13.2	25.1	6753	105.9	671	<1	7088	641	1450	0.3	2.4	0.05	525	<0.005	<0.1	<0.02	4.9	1.16
REP 1421921	QC	9912	850	13.3	25.4	6762	107.3	688	<1	7168	631	1440	0.3	2.5	0.05	532	<0.005	<0.1	<0.02	4.7	1.14
1421931	Drill Core	21577	925	16.9	28.5	6437	113.4	410	1	6897	368	1492	0.5	2.9	0.05	<200	<0.005	0.1	<0.02	4.6	2.60
REP 1421931	QC	21700	891	17.1	28.3	6429	109.9	401	<1	6994	366	1510	0.6	2.8	0.05	<200	<0.005	<0.1	<0.02	4.4	2.58
1421937	Drill Core	11779	912	15.4	25.9	7766	166.8	705	<1	8391	470	1325	0.5	3.2	0.04	908	<0.005	0.3	0.10	5.0	1.28
REP 1421937	QC	11857	952	15.6	27.2	7839	170.9	732	<1	8376	468	1322	0.5	3.1	0.04	899	<0.005	<0.1	0.08	5.3	1.29
1421945	Rock Pulp	5799	615	7.5	12.1	4181	114.8	68	4	8902	511	2009	11.4	4.0	0.08	10592	0.717	3.9	0.80	2.7	0.74
REP 1421945	QC																				
Core Reject Duplicates																					
1421894	Drill Core	14960	929	15.0	25.4	8914	198.7	414	<1	9017	509	1573	2.8	3.3	0.06	1299	0.008	0.1	0.15	5.3	1.51
DUP 1421894	QC	15426	903	15.1	24.8	8703	185.8	380	<1	8510	403	1356	4.5	3.3	0.08	1303	<0.005	0.5	0.13	5.1	1.54
1421928	Drill Core	8364	852	14.1	24.4	5868	73.4	616	<1	6498	667	1269	0.3	2.3	0.04	<200	<0.005	<0.1	<0.02	4.4	0.87
DUP 1421928	QC	8684	845	15.0	25.6	5991	76.3	707	<1	6980	791	1419	0.3	2.4	0.04	<200	<0.005	<0.1	<0.02	4.8	0.93
Reference Materials																					
STD DS9	Standard	7114	781	12.0	113.4	6079	283.7	1064	4	9414	905	4022	2.8	2.4	5.30	1683	0.220	5.1	5.20	4.3	2.31
STD DS9	Standard	7397	787	14.8	118.0	6189	294.9	1200	2	9768	911	4062	2.9	2.6	5.50	1667	0.214	5.4	5.02	4.8	2.41
STD DS9	Standard	7643	846	15.5	118.7	6475	318.6	1202	4	10190	898	4168	3.0	2.7	5.49	1617	0.242	5.4	4.94	4.9	2.52
STD GC-7	Standard																				

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QUALITY CONTROL REPORT SMI12000318.1

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	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
Pulp Duplicates																		
1421876	Drill Core	<0.1	0.05	<0.02	13.9	0.3	<0.05	2.0	14.07	46.3	<0.02	<0.001	1.3	35.3	<0.01	<0.002		
REP 1421876	QC	0.2	0.06	<0.02	14.1	0.3	<0.05	1.9	13.67	45.8	0.02	<0.001	0.9	35.4	<0.01	<0.002		
1421886	Drill Core	<0.1	0.05	<0.02	15.6	0.4	<0.05	2.0	14.70	43.6	0.04	<0.001	1.3	31.9	<0.01	<0.002		
REP 1421886	QC	0.1	0.07	0.03	16.2	0.3	<0.05	2.3	14.83	45.3	0.06	<0.001	1.6	34.4	<0.01	<0.002		
1421910	Rock Pulp	<0.1	0.08	0.07	7.2	1.4	<0.05	3.2	6.80	15.5	<0.02	0.102	0.4	3.6	*	0.002	1.082	97
REP 1421910	QC																1.098	106
1421911	Drill Core	<0.1	0.04	0.07	10.1	0.3	<0.05	0.8	6.48	31.6	0.03	<0.001	0.5	13.9	<0.01	<0.002		
REP 1421911	QC	<0.1	0.05	0.07	9.8	0.3	<0.05	0.8	6.40	32.5	<0.02	<0.001	0.2	13.7	<0.01	<0.002		
1421920	Drill Core	<0.1	0.04	0.11	10.5	0.4	<0.05	1.2	5.04	26.2	<0.02	<0.001	0.3	10.8	<0.01	<0.002		
REP 1421920	QC																	
1421921	Drill Core	0.1	0.08	0.15	8.7	0.4	<0.05	1.3	4.57	24.4	<0.02	<0.001	0.2	9.9	<0.01	<0.002		
REP 1421921	QC	0.1	0.06	0.17	8.6	0.4	<0.05	1.4	4.57	23.8	<0.02	<0.001	0.3	9.5	<0.01	<0.002		
1421931	Drill Core	<0.1	0.03	0.08	9.5	0.5	<0.05	0.9	6.64	31.6	<0.02	<0.001	0.2	8.9	<0.01	<0.002		
REP 1421931	QC	<0.1	0.04	0.09	9.6	0.5	<0.05	0.8	6.84	30.9	<0.02	<0.001	0.4	8.9	<0.01	<0.002		
1421937	Drill Core	<0.1	0.07	0.09	8.8	0.3	<0.05	1.4	5.57	30.1	0.03	0.004	0.2	11.5	<0.01	<0.002		
REP 1421937	QC	<0.1	0.08	0.08	8.7	0.3	<0.05	1.5	5.69	30.7	0.03	0.002	0.3	11.5	<0.01	<0.002		
1421945	Rock Pulp	<0.1	0.07	0.05	6.5	1.1	<0.05	2.9	6.52	15.8	<0.02	0.111	0.4	3.0	*	<0.002	1.053	94
REP 1421945	QC																1.051	95
Core Reject Duplicates																		
1421894	Drill Core	<0.1	0.10	0.05	11.2	0.3	<0.05	2.2	5.98	27.0	0.04	<0.001	0.5	10.3	<0.01	<0.002		
DUP 1421894	QC	<0.1	0.11	0.05	9.9	0.3	<0.05	2.2	6.02	28.4	0.03	0.003	0.3	10.2	<0.01	<0.002		
1421928	Drill Core	<0.1	0.05	0.15	7.2	0.3	<0.05	1.0	4.66	27.3	<0.02	0.002	0.1	7.2	<0.01	<0.002		
DUP 1421928	QC	<0.1	0.08	0.17	8.3	0.4	<0.05	1.2	5.18	28.4	<0.02	0.002	0.2	7.3	<0.01	<0.002		
Reference Materials																		
STD DS9	Standard	<0.1	0.06	1.44	31.5	6.3	<0.05	1.8	5.33	22.6	2.25	0.051	5.7	24.4	0.11	0.332		
STD DS9	Standard	0.1	0.06	1.65	34.4	6.7	<0.05	2.0	6.28	28.4	2.20	0.057	5.5	26.5	0.12	0.344		
STD DS9	Standard	<0.1	0.09	1.61	35.2	7.0	<0.05	2.1	6.38	28.6	2.15	0.058	5.2	26.3	0.10	0.365		
STD GC-7	Standard																0.575	>300

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Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000318.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	2	0.1	0.5	0.01	0.02	0.02	2
STD GC-7	Standard																				
STD OREAS133B	Standard																				
STD OREAS133B	Standard																				
STD OXG99	Standard		0.965																		
STD OXG99	Standard		0.995																		
STD OXG99	Standard		0.951																		
STD OXG99	Standard		0.982																		
STD OXG99	Standard		0.945																		
STD OXK94	Standard		3.835																		
STD OXK94	Standard		3.677																		
STD OXK94	Standard		3.829																		
STD OXK94	Standard		3.673																		
STD DS9 Expected				12.84	108	126	317	1830	40.3	7.6	575	23300	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40
STD OXK94 Expected			3.562																		
STD OXG99 Expected			0.932																		
STD OREAS133B Expected																					
STD GC-7 Expected																					
BLK	Blank			<0.01	0.07	0.02	<0.1	<2	<0.1	<0.1	<1	<100	<0.1	<0.1	<2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			0.02	0.54	0.04	<0.1	<2	<0.1	<0.1	1	<100	0.3	<0.1	<2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			<0.01	0.02	0.02	<0.1	4	<0.1	<0.1	<1	<100	0.1	<0.1	<2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				

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AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000318.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
STD GC-7	Standard																				
STD OREAS133B	Standard																				
STD OREAS133B	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD DS9 Expected		7201	819	13.3	121	6165	295	1108		9577	853	3950	2.89	2.5	5.3	1615	0.2	5.2	5.02	4.59	2.37
STD OXK94 Expected																					
STD OXG99 Expected																					
STD OREAS133B Expected																					
STD GC-7 Expected																					
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	0.1	0.03	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	0.04	<0.1	<0.02
BLK	Blank																				

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000318.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Cu % 0.001	7AR Ag gm/t 2
STD GC-7	Standard																0.563	>300
STD OREAS133B	Standard																0.033	109
STD OREAS133B	Standard																0.032	106
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD DS9 Expected		0.1	0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	0.061	5.4	25.2	0.12	0.35		
STD OXK94 Expected																		
STD OXG99 Expected																		
STD OREAS133B Expected																	0.0332	100
STD GC-7 Expected																	0.555	619
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																<0.001	<2

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Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000318.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	2	0.1	0.5	0.01	0.02	0.02	2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	<0.01	<0.005	0.10	2.61	2.74	48.9	18	2.8	4.1	570	18361	0.3	1.5	3	5.3	71.5	0.03	0.05	0.03	34
G1	Prep Blank	<0.01	<0.005	0.20	20.40	2.72	46.0	46	2.7	4.4	587	19073	0.1	1.5	3	5.0	57.2	0.14	0.02	<0.02	36

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Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000318.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	4765	770	11.6	6.2	4829	156.7	974	1	9138	978	4888	<0.1	2.3	0.34	<200	<0.005	<0.1	<0.02	4.8	2.90
G1	Prep Blank	4451	762	11.3	7.0	4818	158.0	1004	1	9103	1095	5142	0.4	2.4	0.33	<200	<0.005	<0.1	<0.02	4.8	3.14

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Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000318.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Cu % 0.001	7AR Ag gm/t 2
BLK	Blank																	
BLK	Blank																	
BLK	Blank																<0.001	<2
Prep Wash																		
G1	Prep Blank	0.1	0.05	0.46	44.5	0.4	<0.05	0.7	4.34	20.0	0.04	0.001	0.1	33.2	<0.01	<0.002		
G1	Prep Blank	0.1	0.03	0.46	43.5	0.5	<0.05	0.8	4.48	20.2	0.02	0.001	0.2	29.4	<0.01	<0.002		

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Submitted By:	Email Distribution List
Receiving Lab:	Canada-Smithers
Received:	August 31, 2012
Report Date:	October 01, 2012
Page:	1 of 6

CERTIFICATE OF ANALYSIS SMI12000317.1

CLIENT JOB INFORMATION

Project:	Troitsa
Shipment ID:	TR-12-003
P.O. Number	
Number of Samples:	124

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	121	Crush, split and pulverize 250 g rock to 200 mesh			SMI
G601	124	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
1F05	124	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
7AR	3	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Callinex Mines Inc.
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4
Canada

CC: Ken Galambos

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
G1-SMI	Prep Blank	<0.01	<0.005	0.11	3.09	2.99	46.6	18	2.3	4.2	584	19253	0.4	1.7	3.7	6.1	68.7	0.07	0.04	0.10	37
G1-SMI	Prep Blank	<0.01	<0.005	0.12	2.73	3.05	50.2	5	2.6	4.4	636	20824	0.6	2.0	1.0	6.7	73.8	0.04	<0.02	0.08	39
1421951	Drill Core	4.65	<0.005	3.91	1.37	14.76	39.4	52	0.8	2.5	460	8542	5.8	24.4	2.7	3.1	112.8	0.10	0.27	0.12	<2
1421952	Drill Core	4.01	<0.005	4.09	17.60	14.17	39.5	189	0.9	1.7	736	7565	3.1	2.5	6.9	2.9	167.8	0.18	0.43	0.14	<2
1421953	Drill Core	3.58	<0.005	1.33	2.52	14.62	43.5	71	0.5	1.4	521	6500	4.3	4.9	2.4	3.0	92.0	0.13	0.29	0.14	<2
1421954	Drill Core	3.44	<0.005	0.50	1.07	14.08	42.0	46	0.7	1.2	548	6449	1.5	5.4	<0.2	2.9	97.2	0.07	0.12	0.08	<2
1421955	Drill Core	4.59	<0.005	0.77	1.29	15.46	49.6	40	0.7	1.5	518	6733	1.5	6.1	0.4	3.6	87.7	0.07	0.14	0.07	<2
1421956	Drill Core	3.37	<0.005	1.84	1.39	15.09	40.9	37	0.4	1.3	487	5741	0.7	15.3	0.6	3.5	78.6	0.09	0.12	0.07	<2
1421957	Drill Core	3.68	<0.005	2.28	3.64	12.19	39.4	63	1.3	2.0	397	8677	0.6	5.9	1.5	4.6	78.3	0.10	0.16	0.09	<2
1421958	Drill Core	4.93	<0.005	1.04	3.33	10.45	41.5	49	1.2	3.5	388	10563	0.6	2.5	0.6	4.4	92.0	0.10	0.15	0.09	4
1421959	Drill Core	4.98	<0.005	2.85	21.77	8.88	90.1	133	4.4	18.5	1086	46003	7.2	2.0	0.9	1.3	172.2	0.18	1.55	0.32	64
1421960	Drill Core	5.64	<0.005	19.13	425.0	18.71	56.8	1688	11.4	18.0	892	29143	18.3	5.1	5.3	7.5	122.6	0.79	9.03	1.78	29
1421961	Drill Core	4.22	<0.005	1.94	537.3	31.79	44.1	1567	12.5	14.1	806	27930	18.6	2.0	6.1	8.4	112.5	0.23	5.19	5.49	49
1421962	Drill Core	4.61	<0.005	1.25	374.8	3.89	28.8	536	13.3	9.1	547	27062	11.7	3.9	4.0	10.0	98.6	0.10	2.42	1.98	58
1421963	Drill Core	4.08	<0.005	1.82	130.5	2.28	28.5	153	13.2	8.5	414	26813	3.8	2.6	1.6	8.8	79.7	0.23	0.20	0.40	65
1421964	Drill Core	4.21	0.013	3.41	672.0	20.14	28.1	1274	14.2	11.8	445	28191	3.1	2.8	26.5	9.0	211.2	0.13	0.32	1.52	65
1421965	Drill Core	4.15	<0.005	3.90	211.5	1.30	25.2	224	13.4	9.1	357	27624	1.2	2.3	3.3	9.1	490.6	0.05	0.11	0.22	68
1421966	Drill Core	2.92	<0.005	2.53	251.9	1.77	24.1	307	12.7	9.2	376	27034	3.1	2.3	1.8	8.9	67.0	0.05	0.16	0.25	65
1421967	Drill Core	3.95	<0.005	8.39	80.03	1.43	22.1	129	12.7	8.5	344	25458	1.3	2.5	1.5	10.8	53.3	0.03	0.07	0.25	66
1421968	Rock	0.51	<0.005	0.09	5.02	2.45	40.2	35	2.6	3.1	172	10304	0.5	2.2	<0.2	4.7	53.8	0.02	0.02	0.03	14
1421969	Drill Core	4.16	<0.005	1.38	22.12	1.74	20.4	40	10.5	7.2	362	23898	2.0	2.2	0.6	13.1	106.5	0.03	0.10	0.09	62
1421970	Drill Core	4.25	<0.005	1.26	60.93	1.67	17.3	59	12.0	7.4	318	23053	0.9	2.0	0.3	12.3	42.1	0.02	0.08	0.05	63
1421971	Drill Core	4.09	<0.005	1.21	49.97	1.78	17.8	45	10.4	6.6	279	23838	1.0	2.5	0.4	12.5	37.4	0.03	0.08	0.06	62
1421972	Drill Core	4.24	<0.005	2.46	49.21	2.17	18.9	62	11.2	8.0	331	23629	1.0	2.7	0.3	12.2	33.8	0.04	0.07	0.11	60
1421973	Drill Core	4.25	<0.005	2.74	335.5	17.31	78.1	911	12.9	8.7	424	26445	1.2	2.8	2.2	12.3	43.7	0.61	0.07	1.36	65
1421974	Drill Core	4.60	<0.005	2.35	44.92	1.63	18.0	72	11.1	7.0	278	22923	0.5	2.8	0.9	12.7	35.8	0.03	0.06	0.08	61
1421975	Drill Core	4.30	<0.005	2.36	37.89	1.70	16.7	88	11.6	7.2	233	23446	0.9	2.4	1.1	12.3	33.1	0.03	0.05	0.11	63
1421976	Drill Core	4.26	<0.005	2.78	34.36	1.71	15.7	56	10.1	6.4	250	22663	1.1	2.5	1.4	11.3	31.7	0.01	0.05	0.16	61
1421977	Drill Core	4.57	<0.005	4.27	78.22	1.68	17.0	92	10.9	7.6	252	23813	1.1	2.8	0.6	10.6	34.8	0.04	0.11	0.22	59
1421978	Rock Pulp	0.06	4.578	1366	>10000	91.13	106.5	>100000	13.1	12.5	616	32235	205.4	2.9	5139	2.3	15.9	9.30	125.0	3.78	32

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
G1-SMI	Prep Blank	5183	812	13.4	7.7	5034	168.7	1244	2	10327	1359	5369	0.1	2.5	0.34	<200	<0.005	0.2	0.10	5.2	2.86
G1-SMI	Prep Blank	5558	881	16.1	8.5	5188	180.3	1380	2	11407	1653	5731	<0.1	2.8	0.37	<200	<0.005	<0.1	0.05	5.1	3.04
1421951	Drill Core	17620	235	32.6	2.1	1954	34.9	<10	3	3510	130	2373	0.2	0.5	0.09	2546	0.021	<0.1	0.05	0.8	2.47
1421952	Drill Core	34631	218	28.5	2.1	3555	152.4	11	2	3859	169	2470	0.1	0.5	0.11	2571	0.009	<0.1	0.04	1.0	2.45
1421953	Drill Core	17748	219	28.0	1.3	1954	59.5	<10	<1	4383	156	2439	<0.1	0.5	0.11	2199	0.011	<0.1	0.05	1.2	2.68
1421954	Drill Core	18520	209	33.7	1.6	1425	101.0	<10	<1	5181	221	2670	0.1	0.6	0.11	979	0.008	0.1	<0.02	1.7	2.34
1421955	Drill Core	15091	290	34.2	1.8	2380	54.9	12	<1	6347	233	2880	<0.1	0.9	0.10	216	<0.005	<0.1	<0.02	2.3	2.81
1421956	Drill Core	15037	233	35.6	1.4	2102	38.8	11	<1	5604	220	2393	<0.1	0.5	0.09	<200	<0.005	<0.1	<0.02	1.9	2.79
1421957	Drill Core	10740	228	33.9	2.6	3006	337.0	35	1	6854	346	2691	0.1	0.8	0.09	<200	<0.005	<0.1	0.03	2.5	3.28
1421958	Drill Core	11296	294	31.1	1.8	3157	692.2	45	2	6792	331	2618	<0.1	0.9	0.10	<200	<0.005	0.1	0.05	2.6	3.34
1421959	Drill Core	37275	1657	22.5	0.7	6950	121.1	49	2	14102	454	3469	0.3	5.5	0.12	547	<0.005	0.2	0.02	4.7	7.25
1421960	Drill Core	35159	922	15.8	9.5	10115	62.7	32	<1	4845	266	2293	0.3	2.7	0.11	4036	0.055	0.5	0.78	1.9	6.32
1421961	Drill Core	33080	886	15.7	17.1	10889	89.8	49	2	7544	364	1668	0.2	4.1	0.08	2352	0.072	<0.1	0.22	3.4	2.64
1421962	Drill Core	20876	953	16.7	22.3	8621	96.5	314	<1	6846	472	2064	0.3	4.8	0.10	649	0.026	<0.1	0.07	3.8	3.75
1421963	Drill Core	13631	934	16.3	27.5	7928	162.4	842	<1	7431	765	2535	0.2	4.3	0.11	321	<0.005	0.2	0.05	4.6	1.76
1421964	Drill Core	14054	981	15.0	29.3	8763	224.3	619	1	9571	694	2218	1.1	4.4	0.09	1835	<0.005	0.5	0.18	5.5	1.76
1421965	Drill Core	10753	970	13.0	29.4	8346	157.6	1177	2	9541	1110	3114	3.0	3.7	0.13	377	<0.005	0.1	0.08	5.4	1.58
1421966	Drill Core	12076	984	15.3	28.5	8112	202.3	1066	2	8744	717	2824	1.2	3.6	0.13	775	<0.005	0.3	0.02	5.7	1.92
1421967	Drill Core	9460	930	15.0	28.6	7271	151.0	1141	<1	8763	1313	2978	1.9	3.5	0.11	<200	<0.005	<0.1	0.05	5.1	1.01
1421968	Rock	2711	344	19.8	13.4	3376	81.0	572	6	5930	581	3170	<0.1	1.2	0.12	<200	<0.005	<0.1	<0.02	3.1	0.46
1421969	Drill Core	9300	927	15.2	28.8	6615	133.2	1111	<1	7877	1117	2350	0.3	2.6	0.07	<200	<0.005	<0.1	0.04	4.6	0.72
1421970	Drill Core	7464	974	13.5	31.2	6131	142.5	1230	1	7237	1150	2473	0.3	2.4	0.08	<200	<0.005	<0.1	0.04	4.8	0.71
1421971	Drill Core	6710	981	12.7	29.5	5945	139.6	1283	1	7789	1420	2827	0.2	2.2	0.07	<200	<0.005	<0.1	<0.02	4.4	0.69
1421972	Drill Core	9025	971	12.8	29.0	6066	108.3	1094	<1	7649	1219	2276	0.4	2.8	0.06	<200	<0.005	<0.1	0.06	4.6	0.69
1421973	Drill Core	10713	930	14.1	29.0	7210	117.1	768	2	8719	995	2370	0.7	3.3	0.07	948	<0.005	<0.1	0.05	4.8	0.95
1421974	Drill Core	6927	960	13.5	30.1	5726	141.8	1235	2	7312	1287	2715	0.2	2.3	0.07	<200	<0.005	<0.1	0.07	4.4	0.76
1421975	Drill Core	5617	1003	13.0	30.8	5586	147.0	1398	<1	7748	1472	2960	0.3	1.8	0.09	<200	<0.005	<0.1	0.03	4.5	0.75
1421976	Drill Core	7264	937	12.8	29.4	5374	137.7	1175	<1	6938	1235	2583	0.3	1.7	0.07	<200	<0.005	<0.1	0.03	4.1	0.80
1421977	Drill Core	6763	965	13.3	27.5	5415	130.2	1014	1	7146	1147	2660	0.3	2.1	0.09	<200	<0.005	<0.1	<0.02	4.4	0.99
1421978	Rock Pulp	5942	627	7.4	13.2	4160	149.7	71	5	9086	533	2067	11.8	4.0	0.09	10829	0.726	4.0	0.79	3.0	0.78

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

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Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
G1-SMI	Prep Blank	<0.1	0.11	0.72	45.6	0.6	<0.05	1.3	5.32	25.5	0.04	<0.001	0.3	30.3	<0.01	<0.002		
G1-SMI	Prep Blank	0.2	0.12	0.69	46.5	0.7	<0.05	1.4	6.19	29.0	<0.02	0.004	0.2	31.5	<0.01	<0.002		
1421951	Drill Core	<0.1	0.08	<0.02	12.0	0.1	<0.05	3.3	7.20	61.6	<0.02	<0.001	0.8	4.1	<0.01	<0.002		
1421952	Drill Core	<0.1	0.16	0.02	11.6	0.2	<0.05	3.2	8.14	55.1	<0.02	<0.001	0.6	5.2	<0.01	<0.002		
1421953	Drill Core	<0.1	0.09	<0.02	12.2	0.1	<0.05	2.7	5.86	52.1	<0.02	<0.001	0.6	4.1	<0.01	<0.002		
1421954	Drill Core	<0.1	0.10	<0.02	13.4	0.1	<0.05	3.3	6.04	57.3	<0.02	<0.001	0.6	3.9	<0.01	<0.002		
1421955	Drill Core	<0.1	0.11	<0.02	14.7	0.1	<0.05	3.9	6.60	59.0	<0.02	<0.001	0.7	6.3	<0.01	<0.002		
1421956	Drill Core	<0.1	0.08	<0.02	12.3	0.1	<0.05	3.8	6.75	62.6	<0.02	0.001	0.4	5.6	<0.01	<0.002		
1421957	Drill Core	<0.1	0.12	0.03	13.7	0.3	<0.05	5.8	7.52	65.1	<0.02	0.001	0.4	7.5	0.01	<0.002		
1421958	Drill Core	<0.1	0.15	0.03	13.8	0.3	<0.05	5.7	8.19	60.7	<0.02	<0.001	0.6	8.7	<0.01	<0.002		
1421959	Drill Core	<0.1	0.10	<0.02	17.3	0.4	<0.05	2.9	14.06	47.0	0.03	0.001	1.4	18.3	<0.01	<0.002		
1421960	Drill Core	<0.1	0.03	<0.02	14.3	0.2	<0.05	0.9	7.36	29.2	<0.02	0.001	0.5	5.7	<0.01	0.002		
1421961	Drill Core	<0.1	0.04	<0.02	11.3	0.2	<0.05	1.1	7.93	30.0	0.04	0.001	0.3	6.5	<0.01	<0.002		
1421962	Drill Core	<0.1	0.07	0.04	14.5	0.3	<0.05	1.2	7.64	32.5	0.03	<0.001	0.4	7.8	<0.01	<0.002		
1421963	Drill Core	<0.1	0.12	0.09	16.4	0.4	<0.05	2.2	6.12	31.5	<0.02	<0.001	0.2	6.9	<0.01	<0.002		
1421964	Drill Core	<0.1	0.09	0.06	15.8	0.4	<0.05	1.5	6.23	28.6	0.06	0.003	0.4	10.7	<0.01	<0.002		
1421965	Drill Core	0.1	0.13	0.13	21.7	0.4	<0.05	2.0	4.95	24.8	0.03	<0.001	0.2	7.9	<0.01	<0.002		
1421966	Drill Core	<0.1	0.11	0.12	21.8	0.6	<0.05	2.3	5.41	29.2	0.02	0.001	0.3	8.8	<0.01	0.002		
1421967	Drill Core	0.2	0.20	0.18	16.6	0.6	<0.05	2.5	5.37	29.1	<0.02	0.003	0.2	8.1	<0.01	<0.002		
1421968	Rock	<0.1	0.62	0.21	17.0	0.5	<0.05	18.4	4.69	39.5	<0.02	<0.001	0.1	20.2	<0.01	<0.002		
1421969	Drill Core	0.1	0.18	0.18	11.9	0.4	<0.05	2.6	5.47	28.5	<0.02	0.001	0.3	8.4	<0.01	<0.002		
1421970	Drill Core	0.1	0.15	0.21	13.1	0.3	<0.05	2.3	4.82	26.3	<0.02	<0.001	0.2	7.7	<0.01	<0.002		
1421971	Drill Core	0.2	0.10	0.23	13.8	0.5	<0.05	2.4	4.41	24.0	0.02	<0.001	0.3	7.0	<0.01	<0.002		
1421972	Drill Core	0.1	0.14	0.20	10.0	0.4	<0.05	2.3	4.42	24.0	<0.02	<0.001	0.3	6.5	<0.01	<0.002		
1421973	Drill Core	<0.1	0.15	0.11	13.7	0.5	<0.05	2.5	5.42	28.5	0.04	<0.001	0.2	8.4	<0.01	<0.002		
1421974	Drill Core	<0.1	0.14	0.21	14.3	0.3	<0.05	2.4	4.50	25.3	<0.02	0.001	0.2	6.4	<0.01	<0.002		
1421975	Drill Core	0.2	0.13	0.26	15.4	0.4	<0.05	2.2	3.98	25.8	<0.02	0.001	0.1	6.6	<0.01	<0.002		
1421976	Drill Core	0.2	0.11	0.22	13.3	0.3	<0.05	2.0	4.00	24.0	<0.02	0.002	0.1	6.0	<0.01	<0.002		
1421977	Drill Core	<0.1	0.12	0.14	15.4	0.4	<0.05	2.2	4.32	25.3	0.02	0.003	0.1	6.5	<0.01	<0.002		
1421978	Rock Pulp	<0.1	0.10	0.04	7.0	1.4	<0.05	3.1	6.75	15.8	<0.02	0.120	0.5	3.2	*	<0.002	1.082	103

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	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1421979	Drill Core	1.58	<0.005	3.85	84.31	1.51	16.5	127	12.0	7.5	284	23508	2.1	3.6	1.6	10.9	55.0	0.02	0.22	0.29	57
1421980	Drill Core	4.37	0.005	2.56	331.7	1.84	19.5	398	11.4	8.9	513	22742	8.2	5.5	2.3	8.5	106.7	0.03	0.43	0.10	51
1421981	Drill Core	4.12	<0.005	3.61	196.3	2.46	19.7	418	11.3	7.9	708	21664	7.9	4.1	3.0	7.9	137.8	0.03	0.35	0.43	47
1421982	Drill Core	3.95	<0.005	4.52	82.48	1.39	17.2	114	11.3	7.9	317	24398	1.2	2.4	2.2	9.5	55.1	0.03	0.10	0.20	59
1421983	Drill Core	4.73	<0.005	3.96	93.31	1.50	19.5	101	11.3	7.3	259	23778	0.8	2.4	1.9	10.0	39.7	0.03	0.10	0.16	60
1421984	Drill Core	4.23	<0.005	9.18	160.1	2.34	22.0	212	10.6	8.7	304	23521	0.8	2.1	1.0	10.3	42.1	0.04	0.08	1.35	59
1421985	Drill Core	4.24	<0.005	2.99	70.97	2.09	16.3	80	11.4	7.3	227	23003	1.8	2.2	<0.2	10.6	28.9	0.03	0.11	0.37	60
1421986	Drill Core	4.35	<0.005	3.70	82.81	2.02	18.8	92	10.7	6.8	359	22313	1.4	2.2	1.3	10.5	43.6	0.02	0.18	0.25	58
1421987	Drill Core	4.57	<0.005	5.76	447.1	3.05	27.2	534	13.4	10.6	349	26004	2.9	3.0	3.0	9.9	41.3	0.21	0.74	0.22	61
1421988	Drill Core	4.50	<0.005	9.84	68.00	2.88	20.0	115	12.5	8.9	333	25319	1.2	2.9	<0.2	10.0	47.8	0.03	0.19	4.76	62
1421989	Drill Core	4.63	<0.005	2.49	73.57	1.98	21.0	115	13.3	8.4	342	24800	1.6	4.2	<0.2	9.6	82.1	0.02	0.15	0.30	60
1421990	Drill Core	4.10	<0.005	1.79	68.51	2.05	19.6	112	11.3	7.2	315	24049	0.9	2.4	<0.2	9.3	62.6	0.04	0.14	0.43	60
1421991	Drill Core	4.28	<0.005	2.28	114.1	1.77	26.0	235	13.3	11.2	406	26423	1.7	3.2	<0.2	9.2	50.2	0.01	0.10	0.45	60
1421992	Drill Core	4.22	<0.005	2.45	256.3	2.17	21.9	270	13.0	10.3	329	26726	0.7	1.8	0.3	9.5	62.2	0.05	0.06	4.91	63
1421993	Drill Core	4.98	<0.005	20.97	150.8	1.72	20.6	179	11.6	12.3	450	25199	0.6	4.9	0.4	8.9	113.7	0.04	0.06	4.67	57
1421994	Drill Core	3.04	<0.005	3.20	70.00	1.76	19.6	213	11.7	7.9	318	23685	0.8	2.5	3.7	9.6	77.6	0.05	0.24	0.19	61
1421995	Drill Core	4.29	<0.005	1.36	16.10	1.69	17.1	33	10.4	6.4	238	21525	0.8	2.6	<0.2	11.6	29.4	<0.01	0.06	0.27	59
1421996	Drill Core	4.29	<0.005	1.18	9.46	1.46	19.0	24	11.4	6.9	290	23888	1.3	3.3	<0.2	12.1	39.6	0.05	0.11	0.14	64
1421997	Drill Core	4.45	<0.005	1.29	43.63	1.76	18.3	40	10.5	6.1	261	22344	0.7	2.4	<0.2	12.4	25.1	0.02	0.07	0.05	61
1421998	Drill Core	4.02	<0.005	3.18	72.56	1.88	21.8	128	11.6	7.6	345	24478	1.2	2.4	<0.2	12.9	29.8	0.07	0.15	0.22	62
1421999	Drill Core	4.92	<0.005	1.07	19.83	1.55	24.0	39	12.4	8.4	454	24835	1.7	1.8	<0.2	11.6	31.1	0.02	0.18	0.10	62
1422000	Drill Core	3.85	<0.005	1.76	40.00	2.34	22.4	114	11.8	7.0	351	24302	1.9	2.1	<0.2	10.9	27.5	0.05	0.20	0.21	62
1422001	Drill Core	4.07	<0.005	1.96	41.49	1.73	18.4	74	10.7	6.4	327	22517	1.5	2.2	<0.2	11.2	26.0	0.03	0.23	0.07	60
1422002	Drill Core	4.36	<0.005	1.93	49.13	1.54	19.7	58	11.7	6.9	332	24268	1.6	2.1	<0.2	11.5	27.4	0.03	0.32	0.27	63
1422003	Rock	0.45	<0.005	0.04	3.11	2.25	36.3	16	2.4	2.6	158	10317	0.5	1.2	<0.2	3.5	65.1	<0.01	0.04	0.04	9
1422004	Drill Core	4.29	<0.005	1.37	191.3	1.40	19.2	199	11.6	7.5	325	24662	1.3	2.0	<0.2	11.1	28.7	0.03	0.32	0.17	62
1422005	Drill Core	4.17	<0.005	2.10	54.56	1.79	22.0	95	12.3	6.9	402	23559	2.1	2.0	<0.2	10.4	29.9	0.02	0.59	0.11	61
1422006	Drill Core	4.39	<0.005	1.12	61.56	1.62	21.4	80	12.1	7.4	386	23841	1.9	2.2	2.1	11.5	29.4	0.04	0.70	<0.02	59
1422007	Drill Core	4.52	<0.005	1.12	67.00	1.55	21.9	107	11.9	8.0	376	23755	1.9	3.3	<0.2	11.2	28.3	0.02	0.74	0.03	60
1422008	Drill Core	3.92	<0.005	1.63	156.3	1.44	21.2	177	11.8	7.7	333	25675	2.0	2.2	<0.2	10.8	26.9	0.02	1.00	0.06	64

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Suite 1110 - 555 W. Hastings St.
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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1421979	Drill Core	11500	929	15.3	26.7	4569	106.4	595	<1	6201	685	1927	0.3	3.4	0.07	<200	<0.005	<0.1	<0.02	3.9	1.88
1421980	Drill Core	37240	865	16.1	23.1	4010	99.0	405	1	8225	536	2000	0.6	3.8	0.09	666	0.007	<0.1	<0.02	3.7	1.89
1421981	Drill Core	53068	840	16.3	19.8	5552	83.7	317	1	6761	461	1817	0.5	3.7	0.09	742	0.008	<0.1	0.02	3.1	1.88
1421982	Drill Core	12015	863	13.9	27.5	5280	109.7	644	<1	6780	799	2199	0.3	2.9	0.08	218	<0.005	<0.1	0.04	4.1	1.09
1421983	Drill Core	7334	916	13.5	28.6	6044	143.1	977	<1	7507	1021	2595	0.3	2.4	0.09	<200	<0.005	<0.1	<0.02	4.5	1.11
1421984	Drill Core	9140	963	14.4	28.8	6125	119.5	847	<1	6996	717	2132	0.2	2.7	0.08	631	<0.005	<0.1	0.04	4.7	1.07
1421985	Drill Core	6215	961	13.2	29.4	5830	142.9	1263	1	6873	874	2168	0.3	1.7	0.08	<200	<0.005	<0.1	0.02	5.0	0.89
1421986	Drill Core	14456	944	14.2	27.5	5987	116.3	1066	<1	6556	770	1679	0.3	2.0	0.07	<200	<0.005	<0.1	<0.02	4.6	0.84
1421987	Drill Core	10852	903	14.3	31.5	6214	78.9	671	<1	7380	747	1552	0.4	3.1	0.05	527	<0.005	0.1	0.02	4.7	1.13
1421988	Drill Core	9656	945	15.0	30.9	6734	98.9	719	1	7315	707	1862	0.5	2.8	0.06	417	<0.005	0.1	0.10	4.8	1.20
1421989	Drill Core	14142	950	15.5	28.8	6351	86.8	516	<1	7715	595	1652	0.2	3.1	0.06	276	<0.005	0.2	0.02	5.0	1.60
1421990	Drill Core	13653	892	15.1	29.2	4811	107.8	641	<1	6692	761	1758	0.2	3.3	0.06	<200	<0.005	<0.1	0.03	4.3	0.93
1421991	Drill Core	13426	908	15.8	28.8	7248	76.6	483	<1	8407	589	1604	0.2	3.0	0.06	2049	<0.005	0.2	0.04	5.1	1.35
1421992	Drill Core	11970	910	15.4	29.2	6479	105.3	694	<1	7566	700	2184	0.2	3.0	0.08	1500	<0.005	<0.1	0.18	4.9	1.23
1421993	Drill Core	33095	881	15.5	25.9	6232	89.8	463	<1	7226	487	1841	0.1	2.9	0.06	2922	<0.005	0.4	0.68	4.6	1.29
1421994	Drill Core	18416	899	15.0	28.1	5253	104.6	689	<1	7065	655	2018	0.2	2.4	0.08	<200	<0.005	<0.1	<0.02	4.8	1.02
1421995	Drill Core	6447	891	12.6	27.6	4974	134.0	1092	<1	5969	905	2408	0.2	2.2	0.07	<200	<0.005	0.1	<0.02	3.8	0.71
1421996	Drill Core	8445	909	13.6	31.1	5277	139.1	983	<1	6432	851	2390	0.2	2.9	0.08	<200	0.009	<0.1	0.03	4.2	0.80
1421997	Drill Core	6041	913	12.2	29.3	5270	129.6	1218	<1	6191	964	2319	0.3	2.0	0.07	<200	<0.005	<0.1	<0.02	4.2	0.65
1421998	Drill Core	8166	909	16.1	29.9	5450	113.3	1155	<1	7032	1064	2229	0.3	2.9	0.08	511	0.009	<0.1	0.03	4.4	0.62
1421999	Drill Core	11957	926	13.7	28.6	6793	66.7	1162	<1	7805	766	1443	0.4	3.6	0.05	205	0.006	<0.1	<0.02	4.7	0.52
1422000	Drill Core	8162	942	13.4	29.8	5995	84.9	1262	<1	7157	914	1709	1.3	2.9	0.05	434	0.006	<0.1	<0.02	4.8	0.44
1422001	Drill Core	7720	898	12.8	28.3	5504	89.0	1164	<1	6507	851	1734	0.3	2.4	0.05	<200	<0.005	<0.1	0.03	4.0	0.39
1422002	Drill Core	6970	898	13.4	29.6	5921	103.8	1279	<1	6845	918	1945	1.5	2.5	0.06	<200	<0.005	<0.1	<0.02	4.4	0.50
1422003	Rock	3328	307	21.4	8.5	2989	37.2	338	2	5625	619	1410	<0.1	1.0	0.02	<200	<0.005	<0.1	<0.02	3.2	0.14
1422004	Drill Core	7536	895	13.2	28.9	5710	89.8	980	<1	6969	946	1798	0.6	2.7	0.05	226	<0.005	0.1	<0.02	4.4	0.53
1422005	Drill Core	10427	880	12.8	28.9	6829	68.4	1206	<1	7523	918	1508	0.9	3.7	0.03	261	<0.005	<0.1	<0.02	5.2	0.50
1422006	Drill Core	9553	922	13.1	28.3	7032	58.7	1191	<1	7891	1014	1361	0.6	3.4	0.02	<200	0.006	<0.1	<0.02	5.1	0.50
1422007	Drill Core	9157	873	12.7	28.7	7775	50.8	1099	<1	8314	899	1210	0.7	4.2	<0.02	<200	<0.005	0.1	<0.02	5.2	0.56
1422008	Drill Core	8096	896	13.1	28.7	7267	55.5	1208	<1	8061	965	1442	1.3	3.4	0.03	<200	<0.005	<0.1	<0.02	4.9	0.59

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1421979	Drill Core	<0.1	0.09	0.11	12.3	0.4	<0.05	1.6	5.70	30.1	0.02	0.001	0.1	6.5	<0.01	<0.002		
1421980	Drill Core	<0.1	0.08	0.06	13.5	0.2	<0.05	2.9	7.53	32.6	0.03	0.001	0.3	6.2	<0.01	0.003		
1421981	Drill Core	<0.1	0.04	0.05	12.3	0.5	<0.05	1.0	9.56	32.8	<0.02	0.001	0.4	5.0	<0.01	0.002		
1421982	Drill Core	0.1	0.10	0.09	14.2	0.6	<0.05	1.6	5.65	27.3	<0.02	0.006	0.2	6.0	<0.01	<0.002		
1421983	Drill Core	<0.1	0.11	0.14	16.2	0.5	<0.05	2.1	4.36	24.7	<0.02	0.001	0.2	8.3	<0.01	0.003		
1421984	Drill Core	<0.1	0.10	0.09	14.4	0.5	<0.05	2.1	4.95	26.0	<0.02	0.001	0.5	7.8	<0.01	<0.002		
1421985	Drill Core	<0.1	0.09	0.15	14.3	0.4	<0.05	2.3	3.82	23.5	<0.02	<0.001	0.1	7.1	<0.01	<0.002		
1421986	Drill Core	<0.1	0.13	0.14	10.6	0.4	<0.05	2.5	5.87	23.9	<0.02	0.003	0.3	7.6	<0.01	<0.002		
1421987	Drill Core	<0.1	0.12	0.13	9.6	0.4	<0.05	2.0	5.40	27.7	0.04	<0.001	0.2	8.1	<0.01	<0.002		
1421988	Drill Core	<0.1	0.10	0.11	11.8	0.4	<0.05	1.8	5.46	28.4	<0.02	0.002	0.5	7.5	<0.01	<0.002		
1421989	Drill Core	0.1	0.09	0.09	10.3	0.3	<0.05	1.5	6.18	31.0	<0.02	<0.001	0.5	7.5	<0.01	<0.002		
1421990	Drill Core	<0.1	0.10	0.11	10.4	0.3	<0.05	1.9	6.05	30.1	<0.02	0.001	0.4	6.4	<0.01	<0.002		
1421991	Drill Core	<0.1	0.11	0.07	10.2	0.3	<0.05	1.7	6.42	31.5	<0.02	0.001	0.1	9.8	<0.01	<0.002		
1421992	Drill Core	0.1	0.09	0.07	14.8	0.4	<0.05	1.8	6.28	30.5	0.02	<0.001	0.3	7.9	<0.01	<0.002		
1421993	Drill Core	<0.1	0.06	0.06	12.5	0.3	<0.05	1.3	7.68	31.3	0.02	0.004	0.4	7.1	<0.01	<0.002		
1421994	Drill Core	0.1	0.09	0.12	12.8	0.4	<0.05	1.7	5.07	29.8	<0.02	<0.001	0.3	6.2	<0.01	<0.002		
1421995	Drill Core	<0.1	0.13	0.18	13.7	0.3	<0.05	2.1	4.25	24.4	<0.02	<0.001	0.3	5.1	<0.01	<0.002		
1421996	Drill Core	0.2	0.13	0.16	14.2	0.3	<0.05	2.3	5.56	27.6	<0.02	<0.001	0.2	5.7	<0.01	<0.002		
1421997	Drill Core	0.3	0.13	0.23	13.4	0.3	<0.05	1.9	4.20	24.1	<0.02	<0.001	0.2	4.7	<0.01	<0.002		
1421998	Drill Core	0.1	0.13	0.22	11.5	0.3	<0.05	2.3	4.70	28.7	<0.02	<0.001	0.4	5.3	<0.01	<0.002		
1421999	Drill Core	0.1	0.12	0.24	8.1	0.3	<0.05	2.4	5.26	26.5	<0.02	<0.001	0.4	7.1	<0.01	<0.002		
1422000	Drill Core	0.1	0.16	0.25	9.4	0.3	<0.05	2.4	4.56	25.1	<0.02	<0.001	<0.1	5.3	<0.01	<0.002		
1422001	Drill Core	0.1	0.12	0.24	8.9	0.3	<0.05	2.3	4.13	24.2	<0.02	<0.001	0.3	4.4	<0.01	<0.002		
1422002	Drill Core	0.1	0.14	0.18	10.7	0.3	<0.05	2.4	4.58	26.0	<0.02	<0.001	<0.1	4.5	<0.01	<0.002		
1422003	Rock	<0.1	0.38	0.15	3.9	0.4	<0.05	11.3	4.00	45.4	<0.02	<0.001	<0.1	13.6	<0.01	<0.002		
1422004	Drill Core	0.1	0.13	0.16	9.4	0.3	<0.05	2.4	4.80	25.7	<0.02	<0.001	0.3	5.3	<0.01	<0.002		
1422005	Drill Core	0.1	0.14	0.22	6.9	0.4	<0.05	2.2	5.02	24.7	<0.02	<0.001	0.4	7.0	<0.01	<0.002		
1422006	Drill Core	<0.1	0.12	0.26	6.0	0.3	<0.05	2.3	5.10	25.7	0.02	<0.001	0.3	7.0	<0.01	<0.002		
1422007	Drill Core	0.1	0.14	0.27	5.3	0.3	<0.05	2.3	4.99	24.1	<0.02	<0.001	0.4	8.1	<0.01	<0.002		
1422008	Drill Core	0.2	0.14	0.23	6.9	0.4	<0.05	2.2	4.97	25.4	<0.02	<0.001	0.2	7.1	<0.01	<0.002		

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Project: Troitsa
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CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1422009	Drill Core	4.80	0.007	1.51	1752	4.91	40.1	2505	14.7	15.6	566	25710	7.6	3.4	10.5	10.5	36.7	0.20	20.98	2.39	61
1422010	Drill Core	3.91	<0.005	1.23	256.2	1.80	29.3	398	13.0	8.9	404	24116	3.9	1.9	0.4	9.9	34.5	0.05	6.05	0.12	54
1422011	Drill Core	3.18	<0.005	1.10	79.27	1.38	25.4	138	12.2	7.9	534	24384	2.0	1.8	<0.2	10.5	51.9	0.02	2.20	0.11	51
1422012	Drill Core	4.03	<0.005	1.13	484.1	3.22	36.1	604	13.6	8.0	457	24366	2.6	2.2	2.2	10.7	63.3	0.22	3.62	0.30	52
1422013	Rock Pulp	0.10	4.557	1378	>10000	89.16	96.6	>100000	13.5	12.9	631	31651	203.6	2.5	4897	2.3	15.5	9.69	129.7	3.61	32
1422014	Drill Core	4.04	0.008	3.98	781.0	4.57	32.8	1238	12.8	9.9	445	23558	3.6	3.8	5.7	11.5	49.9	0.10	2.91	0.36	50
1422015	Drill Core	3.92	<0.005	1.80	92.37	1.46	22.8	145	11.6	7.6	372	24503	3.0	2.2	0.6	11.3	34.8	0.05	2.11	0.06	61
1422016	Drill Core	4.42	<0.005	1.77	15.16	1.56	24.2	34	12.5	7.5	451	24195	2.4	2.2	2.6	11.4	38.2	0.03	1.86	0.04	61
1422017	Drill Core	4.34	<0.005	0.96	231.4	3.13	20.5	292	12.2	7.5	472	24146	2.8	2.7	3.0	11.5	40.7	0.05	0.82	0.17	61
1422018	Drill Core	4.07	<0.005	47.61	147.9	2.10	24.3	192	11.6	7.2	409	23228	1.8	6.3	0.5	11.3	36.7	0.06	0.69	0.37	58
1422019	Drill Core	4.12	<0.005	5.74	9.04	1.75	22.8	18	11.9	6.7	419	22317	1.7	2.9	2.0	12.1	26.7	0.02	0.36	0.08	59
1422020	Drill Core	4.27	<0.005	3.77	111.0	1.60	20.3	135	9.9	6.1	326	21119	1.4	3.6	1.6	12.0	21.6	0.01	0.26	0.09	56
1422021	Drill Core	4.09	<0.005	1.53	5.29	1.68	20.0	21	9.9	5.9	304	21508	0.9	3.9	0.8	12.0	21.8	<0.01	0.15	0.06	57
1422022	Drill Core	6.57	<0.005	3.47	41.70	1.67	23.3	68	12.4	7.4	519	22857	3.1	3.0	1.2	10.6	43.3	0.01	0.21	0.15	58
1422023	Drill Core	3.52	<0.005	0.66	42.55	1.59	91.2	48	75.1	31.8	1085	60866	24.1	0.2	0.3	0.6	240.2	0.08	0.60	<0.02	181
1422024	Drill Core	4.83	<0.005	3.05	57.10	2.69	25.0	114	12.3	8.6	547	23737	22.0	2.7	3.0	11.6	71.3	0.04	0.62	0.17	47
1422025	Drill Core	2.85	<0.005	1.03	12.07	1.22	22.6	31	12.1	8.0	400	23451	1.4	1.7	0.7	12.0	35.4	0.01	0.13	0.03	59
1422026	Drill Core	4.43	<0.005	1.12	16.81	1.44	21.4	34	11.2	7.9	385	22538	0.7	2.2	0.6	12.1	32.1	0.01	0.14	0.05	59
1422027	Drill Core	4.09	<0.005	1.71	43.76	2.10	27.4	110	13.2	9.7	549	25950	11.2	3.5	2.1	11.5	52.4	<0.01	0.24	0.08	55
1422028	Drill Core	4.02	<0.005	1.42	26.82	1.30	24.5	45	12.4	8.5	420	24504	1.1	3.4	0.5	11.7	149.9	<0.01	0.13	0.08	61
1422029	Drill Core	4.43	<0.005	1.71	47.71	1.70	22.5	106	12.1	8.3	455	24154	2.0	3.3	0.7	10.1	141.1	<0.01	0.17	0.25	57
1422030	Drill Core	7.28	<0.005	1.84	40.88	1.29	23.2	93	13.7	8.9	435	24717	1.1	3.3	0.8	10.4	101.3	0.02	0.14	0.15	60
1422031	Drill Core	2.97	<0.005	0.65	46.97	1.29	94.8	51	84.2	32.0	955	56604	19.4	0.1	<0.2	0.7	263.6	0.12	0.34	<0.02	176
1422032	Drill Core	3.74	<0.005	1.63	105.5	48.84	43.2	1055	14.4	13.4	609	29188	4.4	6.1	1.8	10.0	69.7	0.25	0.32	3.85	51
1422033	Drill Core	4.54	0.007	1.81	225.2	10.18	60.5	999	15.7	19.4	581	25813	37.1	3.9	11.5	9.5	48.7	0.39	1.39	3.65	25
1422034	Drill Core	4.58	<0.005	1.58	132.8	2.62	38.4	237	12.9	8.7	443	25987	12.8	3.4	3.6	10.5	53.1	0.06	0.33	0.31	47
1422035	Drill Core	5.49	0.118	1.51	33.21	1.77	25.6	65	12.9	8.2	506	24376	3.7	3.3	2.1	10.0	62.6	0.01	0.27	0.38	55
1422036	Drill Core	2.61	<0.005	0.47	61.92	2.24	108.0	66	53.9	32.9	949	68286	0.9	0.3	0.6	1.4	348.7	0.14	0.33	0.04	196
1422037	Drill Core	4.69	<0.005	2.37	172.6	1.52	25.4	308	12.5	8.5	470	24977	0.6	3.3	1.8	10.0	42.7	0.03	0.10	0.99	61
1422038	Rock	0.44	<0.005	0.04	4.09	2.13	31.6	13	2.3	2.3	138	9396	0.2	1.6	0.3	3.6	57.6	<0.01	0.02	0.03	9

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1422009	Drill Core	17311	871	15.0	23.9	9766	39.9	956	<1	10819	592	1099	1.0	4.4	0.04	1916	0.006	0.2	0.17	6.4	1.34
1422010	Drill Core	10572	877	14.0	24.9	8249	31.3	871	<1	10191	643	1150	0.9	4.2	0.04	223	0.017	<0.1	0.02	5.5	1.67
1422011	Drill Core	17422	846	14.1	24.3	8609	59.7	402	<1	10335	581	1178	0.6	3.4	0.04	<200	<0.005	<0.1	<0.02	5.1	1.47
1422012	Drill Core	16512	873	15.2	24.7	7247	58.9	321	<1	8844	542	1327	0.6	3.8	0.05	561	0.008	0.2	0.04	4.6	2.28
1422013	Rock Pulp	5796	616	7.4	13.5	4749	137.8	73	3	8963	499	2016	11.6	4.3	0.09	10385	0.675	4.5	0.86	2.9	0.78
1422014	Drill Core	13995	893	14.2	25.9	7049	121.3	563	<1	9212	534	1515	1.2	3.7	0.06	1206	0.005	0.3	0.03	4.8	2.65
1422015	Drill Core	9323	885	13.1	28.0	7774	53.4	922	<1	8296	937	1259	2.1	3.5	<0.02	<200	<0.005	<0.1	0.03	5.2	0.58
1422016	Drill Core	13907	908	13.7	28.4	7716	50.6	837	<1	8155	675	964	0.4	3.7	<0.02	<200	0.008	<0.1	<0.02	5.0	0.71
1422017	Drill Core	14215	886	13.0	27.9	7055	52.3	983	<1	8114	883	1277	0.5	3.7	0.02	439	<0.005	<0.1	0.03	5.0	0.77
1422018	Drill Core	11542	897	12.8	26.5	6363	66.2	914	<1	7329	668	1201	3.1	3.2	0.03	225	<0.005	<0.1	0.03	4.6	1.31
1422019	Drill Core	11145	864	12.6	28.1	7086	37.8	780	1	7355	756	968	0.4	3.4	0.03	<200	0.006	<0.1	<0.02	4.9	0.61
1422020	Drill Core	7427	875	11.9	25.4	5836	33.8	787	1	6185	649	814	0.4	2.4	0.02	<200	<0.005	<0.1	<0.02	4.5	0.46
1422021	Drill Core	6921	858	12.2	28.7	5551	42.8	800	1	6155	769	1007	0.3	2.2	0.03	<200	<0.005	<0.1	<0.02	4.4	0.56
1422022	Drill Core	14651	895	14.4	27.0	8412	68.4	514	<1	8172	561	801	0.2	3.5	0.03	308	<0.005	<0.1	<0.02	5.6	1.24
1422023	Drill Core	38580	1860	19.2	52.9	24251	70.2	2732	2	21557	2367	903	<0.1	12.4	0.09	1207	0.074	<0.1	<0.02	8.0	2.43
1422024	Drill Core	20228	850	16.6	23.2	8763	158.1	44	<1	10568	389	1114	0.2	2.9	0.17	2570	0.022	<0.1	<0.02	5.7	2.31
1422025	Drill Core	10082	887	13.4	26.6	7658	86.9	598	<1	7698	633	898	0.2	2.9	0.03	<200	<0.005	<0.1	<0.02	5.0	0.72
1422026	Drill Core	9202	860	13.6	25.7	7232	65.8	526	<1	7181	644	786	0.1	3.1	0.03	<200	<0.005	<0.1	0.03	4.8	0.66
1422027	Drill Core	14337	853	16.5	26.7	9458	41.6	101	<1	10411	465	869	0.1	3.2	0.03	2370	0.008	<0.1	0.02	6.0	1.24
1422028	Drill Core	11374	914	14.5	27.5	8796	45.0	445	<1	8583	589	784	0.2	3.5	0.02	216	<0.005	<0.1	<0.02	5.4	0.85
1422029	Drill Core	12251	878	15.1	27.8	8403	62.7	513	<1	8412	559	888	0.2	3.4	0.03	1107	0.013	<0.1	<0.02	5.2	1.25
1422030	Drill Core	13246	882	15.4	26.6	9092	96.9	310	<1	8744	571	807	0.1	3.8	0.03	290	0.006	<0.1	<0.02	5.4	1.15
1422031	Drill Core	35535	1941	18.9	58.0	24019	51.5	2992	1	18891	2993	856	<0.1	11.8	0.02	291	0.035	<0.1	<0.02	7.6	0.44
1422032	Drill Core	22174	812	18.2	23.5	8929	94.3	55	<1	11592	381	1101	0.4	3.3	0.06	3406	0.029	<0.1	0.11	6.0	2.08
1422033	Drill Core	20537	835	19.4	18.3	8490	25.9	34	1	10739	295	1681	0.2	2.2	0.11	6837	0.075	<0.1	0.23	4.6	3.58
1422034	Drill Core	15127	890	19.7	24.9	8678	29.3	48	<1	11347	370	1102	0.1	2.9	0.05	1462	0.027	<0.1	<0.02	6.0	1.84
1422035	Drill Core	16151	858	14.8	26.0	8630	123.2	186	<1	8643	447	861	0.3	3.4	0.04	916	<0.005	<0.1	<0.02	5.5	1.30
1422036	Drill Core	38597	1332	26.2	53.4	26162	188.6	3401	1	27415	2685	2066	<0.1	9.8	0.05	515	0.037	<0.1	<0.02	10.6	1.06
1422037	Drill Core	11744	904	15.1	28.5	9061	32.5	229	<1	8924	640	831	0.5	3.3	0.03	<200	0.011	<0.1	0.04	5.7	0.84
1422038	Rock	3939	276	20.4	5.1	2563	43.9	361	6	4529	467	1875	<0.1	1.0	0.06	<200	<0.005	<0.1	<0.02	2.6	0.33

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1422009	Drill Core	0.1	0.09	0.12	8.3	0.4	<0.05	2.3	6.93	29.7	0.10	<0.001	0.4	10.0	<0.01	<0.002		
1422010	Drill Core	0.1	0.13	0.14	8.2	0.5	<0.05	2.3	5.98	27.1	0.02	<0.001	0.3	9.9	<0.01	<0.002		
1422011	Drill Core	<0.1	0.09	0.11	8.3	0.4	<0.05	2.0	5.99	27.6	<0.02	<0.001	0.3	10.6	<0.01	<0.002		
1422012	Drill Core	<0.1	0.10	0.06	9.1	0.3	<0.05	1.7	6.40	28.9	0.03	<0.001	0.4	9.1	<0.01	<0.002		
1422013	Rock Pulp	<0.1	0.09	0.06	6.8	1.2	<0.05	3.3	6.84	15.5	<0.02	0.112	0.4	3.3	*	<0.002	1.072	100
1422014	Drill Core	0.1	0.12	0.09	11.2	0.3	<0.05	2.1	6.00	27.8	0.05	<0.001	0.3	8.8	<0.01	<0.002		
1422015	Drill Core	0.1	0.14	0.19	5.4	0.3	<0.05	2.1	4.87	25.7	<0.02	<0.001	0.1	7.1	<0.01	<0.002		
1422016	Drill Core	0.1	0.13	0.16	4.7	0.4	<0.05	2.5	5.81	27.0	<0.02	<0.001	<0.1	9.0	<0.01	<0.002		
1422017	Drill Core	0.1	0.14	0.19	6.4	0.3	<0.05	2.4	6.05	26.7	0.02	<0.001	0.1	7.7	<0.01	<0.002		
1422018	Drill Core	0.1	0.12	0.14	7.7	0.3	<0.05	2.1	5.50	25.8	<0.02	0.001	0.2	5.7	<0.01	<0.002		
1422019	Drill Core	<0.1	0.13	0.23	3.9	0.4	<0.05	1.7	6.02	29.4	<0.02	<0.001	0.3	7.8	<0.01	<0.002		
1422020	Drill Core	<0.1	0.07	0.28	3.6	0.2	<0.05	1.1	4.74	26.4	0.02	<0.001	0.2	6.2	<0.01	<0.002		
1422021	Drill Core	<0.1	0.08	0.30	4.1	0.2	<0.05	1.2	4.71	26.8	<0.02	<0.001	0.3	6.6	<0.01	<0.002		
1422022	Drill Core	<0.1	0.13	0.14	4.1	0.3	<0.05	1.9	7.02	32.3	<0.02	<0.001	0.3	12.6	<0.01	<0.002		
1422023	Drill Core	<0.1	0.09	0.04	2.9	0.7	<0.05	2.9	22.68	50.6	0.06	<0.001	0.4	14.5	<0.01	<0.002		
1422024	Drill Core	<0.1	0.06	<0.02	7.0	0.2	<0.05	1.3	8.17	37.8	0.02	0.001	0.5	17.6	<0.01	<0.002		
1422025	Drill Core	<0.1	0.11	0.14	4.2	0.2	<0.05	1.9	5.87	29.8	<0.02	<0.001	0.3	10.4	<0.01	<0.002		
1422026	Drill Core	<0.1	0.10	0.14	3.4	0.4	<0.05	1.6	5.54	29.7	<0.02	<0.001	0.3	9.0	<0.01	<0.002		
1422027	Drill Core	<0.1	0.07	0.04	5.4	0.4	<0.05	1.4	8.28	37.3	<0.02	<0.001	0.3	17.9	<0.01	<0.002		
1422028	Drill Core	<0.1	0.07	0.13	3.7	0.3	<0.05	0.9	6.65	32.2	<0.02	<0.001	0.3	12.5	<0.01	<0.002		
1422029	Drill Core	<0.1	0.07	0.14	5.0	0.3	<0.05	1.0	6.22	32.2	<0.02	<0.001	0.4	13.1	<0.01	<0.002		
1422030	Drill Core	<0.1	0.05	0.11	4.4	0.4	<0.05	1.0	7.15	33.3	<0.02	<0.001	0.3	12.5	<0.01	<0.002		
1422031	Drill Core	<0.1	0.15	0.14	2.8	0.8	<0.05	5.3	19.32	49.7	0.05	<0.001	0.3	10.7	<0.01	<0.002		
1422032	Drill Core	<0.1	0.03	0.05	8.8	0.3	<0.05	0.6	8.57	39.6	0.02	<0.001	0.3	13.8	<0.01	<0.002		
1422033	Drill Core	<0.1	0.04	<0.02	11.7	0.5	<0.05	0.7	8.58	41.1	<0.02	<0.001	0.4	15.5	<0.01	<0.002		
1422034	Drill Core	<0.1	0.02	0.05	7.2	0.4	<0.05	0.4	8.65	41.6	<0.02	<0.001	0.4	16.5	<0.01	<0.002		
1422035	Drill Core	<0.1	0.03	0.05	5.0	0.3	<0.05	0.6	7.35	33.7	<0.02	<0.001	0.4	12.5	<0.01	<0.002		
1422036	Drill Core	<0.1	0.04	0.07	5.5	0.9	<0.05	2.4	16.34	63.8	0.06	<0.001	0.5	22.1	<0.01	<0.002		
1422037	Drill Core	<0.1	0.04	0.07	4.6	0.3	<0.05	0.7	7.04	33.4	0.03	<0.001	0.3	11.6	<0.01	<0.002		
1422038	Rock	<0.1	0.51	0.23	8.3	0.4	<0.05	15.2	4.54	46.3	<0.02	<0.001	0.2	13.6	<0.01	<0.002		

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CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1422039	Drill Core	4.36	<0.005	1.46	15.20	1.55	21.6	34	10.6	7.4	382	22406	0.9	3.1	0.2	9.7	25.7	0.01	0.21	0.18	58
1422040	Drill Core	4.57	<0.005	1.54	17.53	1.78	23.6	29	10.7	7.2	341	22674	0.9	3.1	<0.2	10.1	22.0	<0.01	0.18	0.06	60
1422041	Drill Core	4.41	<0.005	1.41	10.60	1.84	18.3	21	9.6	6.2	253	20942	0.5	3.1	<0.2	9.1	19.7	<0.01	0.10	0.03	57
1422042	Drill Core	4.48	<0.005	1.67	13.03	1.90	19.4	28	10.0	6.7	269	21518	0.7	3.2	<0.2	9.0	23.8	<0.01	0.09	0.02	58
1422043	Drill Core	4.31	<0.005	1.50	13.38	1.62	23.6	20	11.2	7.7	357	22818	0.6	3.0	0.2	9.5	31.7	0.01	0.13	0.03	59
1422044	Drill Core	4.35	<0.005	15.13	105.0	2.57	22.7	162	9.9	7.4	268	21374	1.0	3.8	1.6	9.8	21.6	0.08	0.13	0.19	57
1422045	Drill Core	4.77	0.008	9.73	129.7	1.95	28.1	303	10.4	7.6	336	21967	0.5	2.3	1.7	9.7	27.0	0.02	0.20	0.11	58
1422046	Drill Core	4.07	<0.005	2.20	67.83	1.32	27.9	88	11.7	8.3	447	23296	0.4	2.1	1.6	10.3	43.2	0.02	0.14	0.06	56
1422047	Drill Core	4.58	<0.005	1.67	11.04	1.50	26.8	30	11.5	8.3	431	22806	0.6	3.5	0.4	10.1	39.1	0.02	0.17	0.06	57
1422048	Drill Core	4.64	<0.005	2.01	42.63	2.27	30.7	70	11.7	8.6	401	23501	0.6	3.5	1.3	10.2	39.2	0.02	0.20	0.12	57
1422049	Drill Core	4.15	<0.005	43.02	345.0	3.04	30.2	422	12.4	9.9	459	23231	0.9	4.3	0.7	10.2	42.5	0.11	0.22	0.13	56
1422050	Drill Core	4.87	<0.005	1.94	28.56	3.48	29.4	48	9.1	6.5	289	19245	0.8	2.4	0.3	11.3	19.6	0.02	0.09	0.07	53
1422051	Drill Core	3.84	<0.005	1.79	14.39	3.43	28.1	37	8.8	6.2	245	19811	0.7	2.2	0.3	11.6	17.2	0.03	0.08	0.05	55
1422052	Drill Core	2.75	<0.005	1.66	167.2	2.57	36.2	117	11.2	7.9	375	22439	0.7	2.3	0.9	12.3	34.8	0.02	0.15	0.07	59
1422053	Drill Core	4.51	<0.005	1.05	109.5	2.22	35.1	93	10.8	8.0	356	22279	1.1	2.2	0.4	10.6	28.8	<0.01	0.18	0.09	59
1422054	Drill Core	4.58	<0.005	1.57	149.2	2.08	22.9	192	11.9	7.6	339	23165	2.7	2.1	1.4	10.0	37.4	0.03	0.14	0.56	51
1422055	Drill Core	4.47	<0.005	2.87	55.81	1.87	19.3	76	9.9	6.9	301	21742	0.5	2.0	1.4	9.8	20.7	0.02	0.07	0.38	54
1422056	Drill Core	4.72	<0.005	10.69	240.4	1.94	19.3	301	10.0	6.7	289	20905	0.9	2.7	0.2	10.1	21.9	0.02	0.08	1.35	53
1422057	Drill Core	4.45	<0.005	2.11	152.9	5.19	25.1	300	11.0	14.9	398	23768	1.2	4.3	0.7	11.4	26.2	0.07	0.11	1.30	51
1422058	Rock Pulp	0.10	4.507	1155	>10000	87.48	106.8	>100000	12.6	12.5	642	31360	209.0	2.7	5362	2.2	15.8	9.54	114.5	3.72	29
1422059	Drill Core	4.87	<0.005	2.26	67.38	1.77	21.8	101	10.2	6.5	316	22364	0.8	5.3	<0.2	12.2	22.5	0.02	0.11	<0.02	56
1422060	Drill Core	4.64	<0.005	2.53	274.2	1.79	20.9	276	10.8	7.2	362	22775	1.7	2.4	1.6	12.1	33.7	0.03	0.17	0.33	58
1422061	Drill Core	4.41	<0.005	1.73	41.01	1.64	23.0	81	11.6	7.9	383	23486	0.5	2.8	0.6	13.1	30.4	0.01	0.12	<0.02	59
1422062	Drill Core	4.25	<0.005	1.77	41.49	1.55	20.4	62	10.3	6.8	324	21379	0.7	2.4	<0.2	13.1	21.0	0.01	0.08	0.02	55
1422063	Drill Core	4.71	<0.005	1.18	46.84	1.40	18.6	56	10.1	7.2	312	21174	1.2	1.8	3.2	12.8	23.7	0.02	0.10	<0.02	57
1422064	Drill Core	1.98	<0.005	0.96	41.80	1.74	21.9	46	11.7	7.5	351	22163	0.9	3.7	1.7	13.2	25.8	0.02	0.12	<0.02	56
1422065	Drill Core	4.11	<0.005	0.85	95.95	1.69	18.6	98	9.5	6.5	229	20994	0.6	3.5	1.4	13.2	21.2	0.02	0.07	<0.02	55
1422066	Drill Core	4.58	<0.005	0.96	14.33	1.48	20.6	26	10.7	7.1	265	21964	0.9	2.3	2.5	13.9	34.6	0.01	0.13	<0.02	57
1422067	Drill Core	4.26	<0.005	2.66	148.3	1.56	18.7	199	10.3	8.8	295	21871	0.6	2.8	1.6	13.9	22.5	0.02	0.10	<0.02	56
1422068	Drill Core	4.08	<0.005	1.98	105.3	1.57	22.2	145	11.2	9.7	361	22689	1.3	2.6	1.8	13.6	30.9	0.02	0.12	0.06	57

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Suite 1110 - 555 W. Hastings St.
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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1422039	Drill Core	8244	918	12.8	28.6	7051	41.8	690	<1	7054	786	941	0.2	2.8	0.02	<200	0.007	<0.1	<0.02	4.8	0.64
1422040	Drill Core	7413	943	12.2	26.9	5894	50.9	834	<1	6409	765	1106	0.2	2.5	0.03	<200	<0.005	<0.1	<0.02	4.8	0.51
1422041	Drill Core	5348	873	11.8	28.0	4955	85.1	899	1	5318	761	1548	0.2	1.7	0.05	<200	<0.005	<0.1	<0.02	3.9	0.49
1422042	Drill Core	6585	911	12.8	26.7	5286	82.4	750	<1	5731	799	1537	0.2	2.1	0.05	<200	<0.005	<0.1	<0.02	4.2	0.59
1422043	Drill Core	9027	902	14.2	27.7	6133	57.4	533	<1	6834	668	1151	0.1	2.8	0.04	<200	<0.005	<0.1	<0.02	4.7	0.62
1422044	Drill Core	6374	897	13.0	25.6	5017	84.2	896	<1	5420	699	1485	0.4	2.2	0.05	1027	<0.005	<0.1	<0.02	4.1	0.54
1422045	Drill Core	7909	863	13.6	27.3	5930	65.8	693	<1	6202	652	1278	0.4	2.7	0.04	<200	<0.005	<0.1	<0.02	4.4	0.63
1422046	Drill Core	14246	847	16.7	24.3	7893	33.0	155	<1	8032	551	788	0.3	3.4	0.02	<200	<0.005	<0.1	<0.02	5.2	0.63
1422047	Drill Core	13380	814	15.1	26.5	7219	40.8	321	<1	7403	638	883	0.1	3.4	<0.02	<200	<0.005	<0.1	<0.02	4.7	0.62
1422048	Drill Core	12163	847	15.3	24.1	6996	43.5	292	<1	7391	506	928	0.1	3.4	0.04	<200	<0.005	<0.1	<0.02	4.6	0.90
1422049	Drill Core	18177	819	13.5	24.6	5963	94.9	630	<1	7032	616	1169	0.2	3.3	0.05	1156	<0.005	<0.1	0.03	4.4	0.81
1422050	Drill Core	6338	763	12.0	22.9	4511	108.8	865	<1	4608	809	2026	0.4	2.2	0.08	<200	<0.005	<0.1	<0.02	3.7	0.53
1422051	Drill Core	4990	788	12.0	26.0	4628	99.6	915	<1	4790	895	1949	0.3	1.8	0.07	<200	<0.005	<0.1	<0.02	3.8	0.45
1422052	Drill Core	9004	816	14.2	24.8	6590	126.0	711	<1	6930	604	1435	0.6	2.5	0.06	226	<0.005	<0.1	<0.02	4.6	0.60
1422053	Drill Core	8251	835	13.2	26.8	7173	113.9	838	<1	7332	764	1744	8.8	2.9	0.07	253	<0.005	<0.1	<0.02	4.4	0.66
1422054	Drill Core	11275	987	13.8	25.8	6716	56.3	659	2	7567	396	1116	1.4	2.3	0.03	1320	0.019	<0.1	<0.02	5.1	0.81
1422055	Drill Core	6507	953	11.7	25.6	5939	64.7	925	2	6267	598	1085	0.5	2.1	0.02	<200	<0.005	<0.1	<0.02	4.4	0.50
1422056	Drill Core	6981	947	11.6	27.0	5671	64.2	883	<1	5944	581	1025	2.7	1.8	0.03	249	0.006	<0.1	0.04	4.3	0.51
1422057	Drill Core	11745	896	11.8	24.7	6603	41.0	786	2	7111	456	729	1.3	2.9	<0.02	2103	<0.005	<0.1	0.06	4.9	0.61
1422058	Rock Pulp	5919	686	6.9	13.0	4319	80.5	64	5	8355	491	1835	11.6	4.0	0.10	10262	0.749	4.2	0.80	2.8	0.65
1422059	Drill Core	7612	948	12.4	27.4	6654	53.7	895	2	6575	560	940	0.4	2.5	<0.02	<200	0.005	<0.1	<0.02	4.6	0.59
1422060	Drill Core	10445	1014	13.8	26.4	6975	47.4	844	1	7172	539	804	0.5	3.3	<0.02	317	0.014	<0.1	<0.02	4.8	0.58
1422061	Drill Core	10014	967	14.0	28.7	7893	62.4	532	<1	7618	539	919	0.1	3.1	<0.02	<200	<0.005	<0.1	<0.02	5.5	0.58
1422062	Drill Core	7011	931	12.5	25.2	6285	67.9	868	<1	6289	560	1088	0.2	2.2	0.02	<200	<0.005	<0.1	<0.02	4.7	0.53
1422063	Drill Core	7403	923	12.6	27.2	5442	64.9	697	<1	5837	612	1162	0.4	2.3	0.03	<200	<0.005	<0.1	<0.02	4.0	0.46
1422064	Drill Core	9825	954	12.9	25.3	6047	52.3	582	1	6216	556	991	0.5	2.3	0.02	<200	0.014	<0.1	<0.02	4.6	0.51
1422065	Drill Core	5479	904	11.8	27.4	5083	102.0	929	<1	5735	722	1743	0.6	1.6	0.05	<200	<0.005	<0.1	<0.02	4.1	0.58
1422066	Drill Core	7229	921	14.5	26.3	5421	97.9	660	<1	6060	571	1506	0.2	2.2	0.05	<200	<0.005	<0.1	<0.02	4.1	0.63
1422067	Drill Core	6815	950	13.0	29.5	5764	77.6	790	<1	5914	650	1245	0.2	1.9	0.03	361	0.006	<0.1	0.03	4.2	0.53
1422068	Drill Core	9525	976	12.9	26.8	6216	68.8	577	1	6345	556	1127	0.2	2.4	0.03	524	<0.005	<0.1	0.03	4.3	0.59

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Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1422039	Drill Core	<0.1	0.06	0.17	4.0	0.3	<0.05	0.8	5.12	28.0	<0.02	<0.001	0.3	8.4	<0.01	<0.002		
1422040	Drill Core	<0.1	0.08	0.21	5.3	0.3	<0.05	0.9	4.79	26.5	<0.02	<0.001	0.2	6.0	<0.01	<0.002		
1422041	Drill Core	<0.1	0.06	0.24	8.4	0.2	<0.05	0.8	3.97	24.9	<0.02	<0.001	0.1	4.2	<0.01	<0.002		
1422042	Drill Core	<0.1	0.05	0.16	8.8	0.3	<0.05	0.8	4.47	26.2	<0.02	<0.001	0.2	4.4	<0.01	<0.002		
1422043	Drill Core	<0.1	0.06	0.13	6.3	0.4	<0.05	0.9	5.19	28.1	<0.02	<0.001	0.2	5.7	<0.01	<0.002		
1422044	Drill Core	<0.1	0.07	0.23	8.5	0.3	<0.05	1.2	4.11	25.4	<0.02	<0.001	0.2	4.1	<0.01	<0.002		
1422045	Drill Core	<0.1	0.11	0.14	7.4	0.4	<0.05	1.8	4.93	27.5	<0.02	<0.001	0.2	5.8	<0.01	<0.002		
1422046	Drill Core	<0.1	0.07	0.04	4.4	0.3	<0.05	1.6	7.13	34.5	<0.02	<0.001	0.3	9.4	<0.01	<0.002		
1422047	Drill Core	<0.1	0.09	0.08	4.2	0.4	<0.05	1.4	6.24	30.8	<0.02	<0.001	0.3	8.6	<0.01	<0.002		
1422048	Drill Core	<0.1	0.10	0.06	5.7	0.4	<0.05	1.5	6.26	31.5	0.02	<0.001	0.3	9.2	<0.01	<0.002		
1422049	Drill Core	<0.1	0.13	0.18	6.6	0.3	<0.05	2.1	6.37	27.9	0.03	<0.001	0.3	7.7	<0.01	<0.002		
1422050	Drill Core	<0.1	0.11	0.23	11.9	0.3	<0.05	1.8	4.04	23.6	<0.02	<0.001	0.2	5.0	<0.01	<0.002		
1422051	Drill Core	<0.1	0.12	0.22	11.5	0.3	<0.05	1.9	3.82	22.9	<0.02	<0.001	0.2	5.0	<0.01	0.012		
1422052	Drill Core	<0.1	0.13	0.16	8.9	0.3	<0.05	2.1	5.21	28.1	<0.02	<0.001	0.2	8.3	<0.01	<0.002		
1422053	Drill Core	<0.1	0.13	0.24	9.9	0.3	<0.05	2.3	4.72	25.4	<0.02	<0.001	0.2	10.2	<0.01	<0.002		
1422054	Drill Core	<0.1	0.08	0.08	7.8	0.3	<0.05	1.9	4.28	24.7	<0.02	<0.001	0.4	10.7	<0.01	<0.002		
1422055	Drill Core	<0.1	0.11	0.15	5.9	0.2	<0.05	1.7	3.30	20.7	<0.02	<0.001	0.3	6.5	<0.01	<0.002		
1422056	Drill Core	<0.1	0.11	0.14	5.7	0.2	<0.05	1.6	3.56	21.0	<0.02	<0.001	0.2	5.3	<0.01	<0.002		
1422057	Drill Core	<0.1	0.12	0.14	5.0	0.3	<0.05	2.4	4.78	22.2	0.03	<0.001	0.2	6.6	<0.01	<0.002		
1422058	Rock Pulp	<0.1	0.10	0.03	5.8	1.2	<0.05	3.1	6.78	14.1	<0.02	0.101	0.5	3.1	*	<0.002	1.052	94
1422059	Drill Core	0.1	0.08	0.14	5.4	0.2	<0.05	1.8	4.06	23.2	<0.02	0.004	0.1	5.9	<0.01	<0.002		
1422060	Drill Core	<0.1	0.10	0.13	4.9	0.2	<0.05	1.9	5.26	26.6	<0.02	<0.001	<0.1	6.9	<0.01	0.003		
1422061	Drill Core	0.1	0.08	0.07	5.7	0.3	<0.05	1.7	5.83	27.7	<0.02	0.002	0.4	8.3	<0.01	<0.002		
1422062	Drill Core	<0.1	0.09	0.15	6.2	0.1	<0.05	1.8	4.06	23.5	<0.02	<0.001	0.3	6.1	<0.01	<0.002		
1422063	Drill Core	<0.1	0.09	0.09	6.0	0.2	<0.05	1.9	4.65	25.5	<0.02	0.001	0.2	5.2	<0.01	<0.002		
1422064	Drill Core	<0.1	0.15	0.08	5.8	0.5	<0.05	2.0	5.16	24.8	<0.02	0.001	0.2	6.0	<0.01	<0.002		
1422065	Drill Core	0.1	0.08	0.13	10.0	0.2	<0.05	1.7	3.96	22.9	<0.02	0.002	0.3	4.8	<0.01	<0.002		
1422066	Drill Core	<0.1	0.09	0.08	9.8	0.2	<0.05	1.8	5.52	28.9	<0.02	<0.001	0.2	6.1	<0.01	<0.002		
1422067	Drill Core	<0.1	0.11	0.11	6.7	<0.1	<0.05	1.9	4.35	25.1	<0.02	<0.001	0.2	5.8	<0.01	<0.002		
1422068	Drill Core	<0.1	0.08	0.07	6.7	0.3	<0.05	1.9	5.60	26.8	<0.02	<0.001	0.3	6.3	<0.01	<0.002		

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	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
1422069	Drill Core	4.21	<0.005	1.39	14.73	1.43	20.8	32	10.2	7.0	347	22396	0.5	3.4	2.4	13.7	32.8	0.02	0.08	<0.02	57
1422070	Drill Core	3.81	<0.005	1.14	26.60	1.59	24.2	50	11.7	8.5	415	23148	1.6	4.4	1.8	12.0	43.1	0.02	0.11	<0.02	56
1422071	Drill Core	4.82	<0.005	1.46	39.17	1.74	17.2	58	8.8	5.6	265	20966	0.5	4.2	0.5	13.0	19.6	0.02	0.05	<0.02	54
1422072	Drill Core	3.90	<0.005	2.71	38.97	1.73	17.1	79	8.8	6.4	285	20218	0.5	2.4	1.7	12.2	17.2	0.02	0.06	<0.02	53
1422073	Drill Core	4.75	<0.005	1.49	12.87	1.68	18.7	30	9.4	6.6	285	21035	0.4	3.7	0.8	11.8	18.1	0.01	0.05	<0.02	56
1422074	Drill Core	4.60	<0.005	1.64	8.03	1.56	18.9	34	9.3	6.4	291	20562	0.6	2.4	1.1	12.2	18.6	<0.01	0.06	<0.02	55

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Project: Troitsa
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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
1422069	Drill Core	8553	945	13.4	28.0	5542	73.9	568	<1	6048	603	1287	0.1	2.4	0.03	<200	<0.005	<0.1	<0.02	4.2	0.59
1422070	Drill Core	12799	943	13.9	25.8	6517	58.1	373	1	7079	488	1070	0.2	3.3	0.03	231	0.013	<0.1	<0.02	4.8	0.90
1422071	Drill Core	5638	937	11.2	27.0	4903	72.4	890	<1	5529	737	1279	0.2	1.5	0.03	<200	<0.005	<0.1	<0.02	3.9	0.48
1422072	Drill Core	6342	986	11.5	25.4	4703	55.1	814	<1	5216	523	876	0.2	1.4	<0.02	<200	0.005	<0.1	<0.02	4.0	0.42
1422073	Drill Core	5790	968	11.3	27.9	4778	55.0	922	<1	5725	755	1122	0.2	1.7	<0.02	<200	<0.005	<0.1	<0.02	3.9	0.35
1422074	Drill Core	5836	925	10.2	24.6	4932	39.2	887	<1	5427	591	851	0.3	1.8	<0.02	<200	0.008	<0.1	0.04	3.7	0.28

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Client: **Callinex Mines Inc.**
Suite 1110 - 555 W. Hastings St.
Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

CERTIFICATE OF ANALYSIS SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
1422069	Drill Core	<0.1	0.13	0.07	7.7	0.2	<0.05	2.2	5.75	26.0	<0.02	0.001	0.2	5.7	<0.01	<0.002		
1422070	Drill Core	<0.1	0.11	0.05	6.9	0.2	<0.05	2.0	6.68	29.6	<0.02	<0.001	0.3	6.9	<0.01	<0.002		
1422071	Drill Core	0.1	0.11	0.17	6.9	0.1	<0.05	1.7	3.86	22.9	<0.02	0.001	0.3	4.3	<0.01	<0.002		
1422072	Drill Core	0.1	0.08	0.17	4.6	<0.1	<0.05	1.8	3.90	23.0	<0.02	0.003	0.2	4.7	<0.01	<0.002		
1422073	Drill Core	<0.1	0.13	0.19	5.2	0.1	<0.05	1.9	4.49	24.0	<0.02	<0.001	0.2	4.9	<0.01	<0.002		
1422074	Drill Core	0.1	0.14	0.16	3.9	0.1	<0.05	1.9	4.35	22.5	<0.02	<0.001	0.2	4.5	<0.01	<0.002		

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Project: Troitsa
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QUALITY CONTROL REPORT SMI12000317.1

	Method	WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
Pulp Duplicates																					
1421970	Drill Core	4.25	<0.005	1.26	60.93	1.67	17.3	59	12.0	7.4	318	23053	0.9	2.0	0.3	12.3	42.1	0.02	0.08	0.05	63
REP 1421970	QC		<0.005																		
1421979	Drill Core	1.58	<0.005	3.85	84.31	1.51	16.5	127	12.0	7.5	284	23508	2.1	3.6	1.6	10.9	55.0	0.02	0.22	0.29	57
REP 1421979	QC			3.96	82.28	1.52	18.0	112	12.2	8.4	284	23866	1.9	3.5	1.2	11.1	54.7	0.03	0.20	0.30	58
1421986	Drill Core	4.35	<0.005	3.70	82.81	2.02	18.8	92	10.7	6.8	359	22313	1.4	2.2	1.3	10.5	43.6	0.02	0.18	0.25	58
REP 1421986	QC			3.86	82.11	2.09	19.3	96	11.5	7.0	342	22447	1.5	2.3	0.4	10.9	46.3	0.02	0.20	0.24	58
1421998	Drill Core	4.02	<0.005	3.18	72.56	1.88	21.8	128	11.6	7.6	345	24478	1.2	2.4	<0.2	12.9	29.8	0.07	0.15	0.22	62
REP 1421998	QC		<0.005																		
1422014	Drill Core	4.04	0.008	3.98	781.0	4.57	32.8	1238	12.8	9.9	445	23558	3.6	3.8	5.7	11.5	49.9	0.10	2.91	0.36	50
REP 1422014	QC			4.04	786.7	4.62	33.8	1286	13.3	9.9	444	23719	3.4	3.9	5.8	11.8	49.9	0.12	2.89	0.40	50
1422032	Drill Core	3.74	<0.005	1.63	105.5	48.84	43.2	1055	14.4	13.4	609	29188	4.4	6.1	1.8	10.0	69.7	0.25	0.32	3.85	51
REP 1422032	QC		<0.005																		
1422049	Drill Core	4.15	<0.005	43.02	345.0	3.04	30.2	422	12.4	9.9	459	23231	0.9	4.3	0.7	10.2	42.5	0.11	0.22	0.13	56
REP 1422049	QC			44.81	351.1	3.14	30.2	460	12.7	9.6	462	23519	0.8	4.4	0.8	10.3	44.2	0.13	0.22	0.14	57
1422066	Drill Core	4.58	<0.005	0.96	14.33	1.48	20.6	26	10.7	7.1	265	21964	0.9	2.3	2.5	13.9	34.6	0.01	0.13	<0.02	57
REP 1422066	QC		<0.005																		
1422074	Drill Core	4.60	<0.005	1.64	8.03	1.56	18.9	34	9.3	6.4	291	20562	0.6	2.4	1.1	12.2	18.6	<0.01	0.06	<0.02	55
REP 1422074	QC			1.70	8.30	1.59	20.3	25	9.5	6.7	293	20250	0.5	2.5	<0.2	11.9	18.6	0.03	0.06	<0.02	54
Core Reject Duplicates																					
1421954	Drill Core	3.44	<0.005	0.50	1.07	14.08	42.0	46	0.7	1.2	548	6449	1.5	5.4	<0.2	2.9	97.2	0.07	0.12	0.08	<2
DUP 1421954	QC	<0.01	<0.005	0.46	1.07	14.44	39.2	44	0.4	1.3	558	6403	1.3	6.0	0.5	2.9	96.2	0.08	0.10	0.08	<2
1421988	Drill Core	4.50	<0.005	9.84	68.00	2.88	20.0	115	12.5	8.9	333	25319	1.2	2.9	<0.2	10.0	47.8	0.03	0.19	4.76	62
DUP 1421988	QC	<0.01	<0.005	7.97	68.00	3.51	21.5	119	12.2	9.1	328	25844	1.4	2.9	1.5	9.7	47.4	0.09	0.20	3.47	62
1422022	Drill Core	6.57	<0.005	3.47	41.70	1.67	23.3	68	12.4	7.4	519	22857	3.1	3.0	1.2	10.6	43.3	0.01	0.21	0.15	58
DUP 1422022	QC	<0.01	<0.005	2.76	40.26	1.71	24.1	79	12.1	7.6	506	22707	3.4	3.0	1.1	10.5	42.2	0.02	0.23	0.14	58
1422056	Drill Core	4.72	<0.005	10.69	240.4	1.94	19.3	301	10.0	6.7	289	20905	0.9	2.7	0.2	10.1	21.9	0.02	0.08	1.35	53
DUP 1422056	QC	<0.01	<0.005	8.60	264.2	2.01	19.4	247	9.6	6.4	282	21195	0.7	2.8	0.7	10.7	21.7	0.04	0.08	1.08	53
Reference Materials																					

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Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	100	10	0.5	0.5	100	0.5	10	1	100	10	100	0.1	0.1	0.02	200	0.005	0.1	0.02	0.1	0.02
Pulp Duplicates																					
1421970	Drill Core	7464	974	13.5	31.2	6131	142.5	1230	1	7237	1150	2473	0.3	2.4	0.08	<200	<0.005	<0.1	0.04	4.8	0.71
REP 1421970	QC																				
1421979	Drill Core	11500	929	15.3	26.7	4569	106.4	595	<1	6201	685	1927	0.3	3.4	0.07	<200	<0.005	<0.1	<0.02	3.9	1.88
REP 1421979	QC	11428	891	15.6	26.4	4723	106.9	629	2	6308	693	1940	0.3	3.3	0.07	<200	<0.005	<0.1	0.03	3.9	1.90
1421986	Drill Core	14456	944	14.2	27.5	5987	116.3	1066	<1	6556	770	1679	0.3	2.0	0.07	<200	<0.005	<0.1	<0.02	4.6	0.84
REP 1421986	QC	14554	947	14.1	26.5	6028	120.5	981	2	6714	811	1743	0.3	2.0	0.06	<200	<0.005	<0.1	<0.02	5.1	0.82
1421998	Drill Core	8166	909	16.1	29.9	5450	113.3	1155	<1	7032	1064	2229	0.3	2.9	0.08	511	0.009	<0.1	0.03	4.4	0.62
REP 1421998	QC																				
1422014	Drill Core	13995	893	14.2	25.9	7049	121.3	563	<1	9212	534	1515	1.2	3.7	0.06	1206	0.005	0.3	0.03	4.8	2.65
REP 1422014	QC	14066	913	14.3	25.7	7054	122.2	566	<1	9211	537	1519	1.3	4.0	0.06	1200	<0.005	0.2	0.07	5.0	2.66
1422032	Drill Core	22174	812	18.2	23.5	8929	94.3	55	<1	11592	381	1101	0.4	3.3	0.06	3406	0.029	<0.1	0.11	6.0	2.08
REP 1422032	QC																				
1422049	Drill Core	18177	819	13.5	24.6	5963	94.9	630	<1	7032	616	1169	0.2	3.3	0.05	1156	<0.005	<0.1	0.03	4.4	0.81
REP 1422049	QC	18403	820	13.8	25.2	6036	97.2	631	<1	7120	636	1188	0.2	3.3	0.04	1160	<0.005	<0.1	0.03	4.5	0.83
1422066	Drill Core	7229	921	14.5	26.3	5421	97.9	660	<1	6060	571	1506	0.2	2.2	0.05	<200	<0.005	<0.1	<0.02	4.1	0.63
REP 1422066	QC																				
1422074	Drill Core	5836	925	10.2	24.6	4932	39.2	887	<1	5427	591	851	0.3	1.8	<0.02	<200	0.008	<0.1	0.04	3.7	0.28
REP 1422074	QC	5841	964	10.6	25.1	4912	39.7	864	<1	5646	644	877	0.3	1.8	<0.02	<200	0.006	<0.1	<0.02	3.8	0.29
Core Reject Duplicates																					
1421954	Drill Core	18520	209	33.7	1.6	1425	101.0	<10	<1	5181	221	2670	0.1	0.6	0.11	979	0.008	0.1	<0.02	1.7	2.34
DUP 1421954	QC	19093	235	32.6	1.4	1336	88.1	<10	<1	4943	206	2479	<0.1	0.6	0.09	1324	0.007	<0.1	0.03	1.5	2.30
1421988	Drill Core	9656	945	15.0	30.9	6734	98.9	719	1	7315	707	1862	0.5	2.8	0.06	417	<0.005	0.1	0.10	4.8	1.20
DUP 1421988	QC	9398	889	14.8	30.9	6536	108.5	731	<1	7213	841	2013	0.2	2.9	0.11	440	<0.005	0.2	0.15	4.9	1.15
1422022	Drill Core	14651	895	14.4	27.0	8412	68.4	514	<1	8172	561	801	0.2	3.5	0.03	308	<0.005	<0.1	<0.02	5.6	1.24
DUP 1422022	QC	14393	919	14.1	26.7	8435	69.3	542	<1	8511	590	837	0.3	3.5	0.03	312	<0.005	<0.1	<0.02	5.4	1.24
1422056	Drill Core	6981	947	11.6	27.0	5671	64.2	883	<1	5944	581	1025	2.7	1.8	0.03	249	0.006	<0.1	0.04	4.3	0.51
DUP 1422056	QC	6911	926	11.3	25.5	5603	65.7	878	1	6016	610	1058	5.6	1.8	0.03	269	<0.005	<0.1	0.06	4.2	0.53
Reference Materials																					

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Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000317.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	7AR	7AR
	Analyte	Ge	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Ag
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	gm/t
	MDL	0.1	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	0.001	0.1	0.1	0.01	0.002	0.001	2
Pulp Duplicates																		
1421970	Drill Core	0.1	0.15	0.21	13.1	0.3	<0.05	2.3	4.82	26.3	<0.02	<0.001	0.2	7.7	<0.01	<0.002		
REP 1421970	QC																	
1421979	Drill Core	<0.1	0.09	0.11	12.3	0.4	<0.05	1.6	5.70	30.1	0.02	0.001	0.1	6.5	<0.01	<0.002		
REP 1421979	QC	<0.1	0.10	0.12	12.1	0.3	<0.05	1.9	5.85	30.5	<0.02	0.005	0.5	6.4	<0.01	<0.002		
1421986	Drill Core	<0.1	0.13	0.14	10.6	0.4	<0.05	2.5	5.87	23.9	<0.02	0.003	0.3	7.6	<0.01	<0.002		
REP 1421986	QC	<0.1	0.15	0.15	11.4	0.4	<0.05	2.6	5.88	25.1	<0.02	0.002	0.2	7.9	<0.01	<0.002		
1421998	Drill Core	0.1	0.13	0.22	11.5	0.3	<0.05	2.3	4.70	28.7	<0.02	<0.001	0.4	5.3	<0.01	<0.002		
REP 1421998	QC																	
1422014	Drill Core	0.1	0.12	0.09	11.2	0.3	<0.05	2.1	6.00	27.8	0.05	<0.001	0.3	8.8	<0.01	<0.002		
REP 1422014	QC	<0.1	0.12	0.11	11.4	0.3	<0.05	2.2	6.02	27.9	0.05	<0.001	0.3	9.0	<0.01	<0.002		
1422032	Drill Core	<0.1	0.03	0.05	8.8	0.3	<0.05	0.6	8.57	39.6	0.02	<0.001	0.3	13.8	<0.01	<0.002		
REP 1422032	QC																	
1422049	Drill Core	<0.1	0.13	0.18	6.6	0.3	<0.05	2.1	6.37	27.9	0.03	<0.001	0.3	7.7	<0.01	<0.002		
REP 1422049	QC	<0.1	0.14	0.17	7.0	0.4	<0.05	2.0	6.54	28.0	0.03	<0.001	0.3	7.6	<0.01	<0.002		
1422066	Drill Core	<0.1	0.09	0.08	9.8	0.2	<0.05	1.8	5.52	28.9	<0.02	<0.001	0.2	6.1	<0.01	<0.002		
REP 1422066	QC																	
1422074	Drill Core	0.1	0.14	0.16	3.9	0.1	<0.05	1.9	4.35	22.5	<0.02	<0.001	0.2	4.5	<0.01	<0.002		
REP 1422074	QC	<0.1	0.14	0.17	4.1	0.2	<0.05	1.9	4.43	22.6	<0.02	0.003	0.2	4.7	<0.01	<0.002		
Core Reject Duplicates																		
1421954	Drill Core	<0.1	0.10	<0.02	13.4	0.1	<0.05	3.3	6.04	57.3	<0.02	<0.001	0.6	3.9	<0.01	<0.002		
DUP 1421954	QC	<0.1	0.09	<0.02	12.3	<0.1	<0.05	3.0	5.84	56.6	<0.02	<0.001	0.7	3.6	<0.01	<0.002		
1421988	Drill Core	<0.1	0.10	0.11	11.8	0.4	<0.05	1.8	5.46	28.4	<0.02	0.002	0.5	7.5	<0.01	<0.002		
DUP 1421988	QC	<0.1	0.09	0.11	12.5	0.4	<0.05	1.8	5.24	28.1	0.03	0.004	0.4	8.7	<0.01	0.004		
1422022	Drill Core	<0.1	0.13	0.14	4.1	0.3	<0.05	1.9	7.02	32.3	<0.02	<0.001	0.3	12.6	<0.01	<0.002		
DUP 1422022	QC	<0.1	0.11	0.14	4.3	0.3	<0.05	2.0	6.81	31.8	<0.02	<0.001	0.3	12.9	<0.01	<0.002		
1422056	Drill Core	<0.1	0.11	0.14	5.7	0.2	<0.05	1.6	3.56	21.0	<0.02	<0.001	0.2	5.3	<0.01	<0.002		
DUP 1422056	QC	0.1	0.09	0.16	5.7	0.2	<0.05	1.5	3.40	21.4	<0.02	<0.001	0.3	5.4	<0.01	<0.002		
Reference Materials																		

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QUALITY CONTROL REPORT SMI12000317.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
STD DS9	Standard			13.43	113.3	123.2	310.7	1844	42.4	7.8	588	23968	25.4	2.8	111.8	6.7	73.8	2.34	6.10	6.41	41
STD DS9	Standard			14.40	119.2	127.6	312.1	1913	42.5	7.5	589	23712	26.3	2.9	119.4	6.8	76.0	2.36	6.14	6.85	40
STD DS9	Standard			13.70	107.7	130.1	309.0	1886	42.1	7.8	610	23310	24.6	2.7	121.4	6.5	66.5	2.32	5.61	6.48	39
STD DS9	Standard			12.21	109.9	125.4	313.9	1859	40.2	7.9	604	23479	25.7	2.9	113.7	6.3	67.7	2.30	5.43	6.45	38
STD DS9	Standard			13.38	109.9	124.7	311.8	1906	41.1	7.5	585	23113	27.0	3.0	136.5	6.9	74.8	2.45	5.47	6.90	40
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OREAS133B	Standard																				
STD OREAS133B	Standard																				
STD OXG99	Standard		0.951																		
STD OXG99	Standard		0.979																		
STD OXG99	Standard		0.945																		
STD OXG99	Standard		0.932																		
STD OXK94	Standard		3.677																		
STD OXK94	Standard		3.660																		
STD OXK94	Standard		3.625																		
STD OXK94	Standard		3.679																		
STD OXG99 Expected			0.932																		
STD OXK94 Expected			3.562																		
STD DS9 Expected				12.84	108	126	317	1830	40.3	7.6	575	23300	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40
STD OREAS133B Expected																					
STD GC-7 Expected																					
BLK	Blank			0.03	0.67	<0.01	<0.1	<2	<0.1	<0.1	1	<100	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank			<0.01	0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<100	0.3	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		

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Vancouver BC V6B 4N4 Canada

Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000317.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
STD DS9	Standard	7297	821	13.5	120.1	6243	306.5	1209	1	9607	810	3973	3.0	2.7	5.42	1650	0.201	5.5	4.87	4.5	2.38
STD DS9	Standard	7391	809	13.7	117.7	6211	310.5	1155	3	9943	926	4126	3.1	2.3	5.60	1698	0.231	5.3	5.58	4.6	2.42
STD DS9	Standard	7171	799	14.2	115.2	6120	291.6	1097	3	9610	872	3967	3.2	2.6	5.88	1642	0.213	5.3	5.37	4.8	2.51
STD DS9	Standard	7091	871	13.1	119.6	6152	305.8	1121	2	9393	805	3988	3.0	2.5	5.66	1585	0.213	5.1	5.66	4.4	2.45
STD DS9	Standard	7344	909	14.4	112.6	6297	305.7	1171	2	9743	841	4034	3.3	2.4	5.63	1615	0.205	5.6	5.50	4.6	2.59
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OREAS133B	Standard																				
STD OREAS133B	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXG99	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXK94	Standard																				
STD OXG99 Expected																					
STD OXK94 Expected																					
STD DS9 Expected		7201	819	13.3	121	6165	295	1108		9577	853	3950	2.89	2.5	5.3	1615	0.2	5.2	5.02	4.59	2.37
STD OREAS133B Expected																					
STD GC-7 Expected																					
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	0.05	<0.1	<0.02
BLK	Blank	<100	<10	<0.5	0.6	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank																				
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Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000317.1

		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Cu % 0.001	7AR Ag gm/t 2
STD DS9	Standard	0.2	0.08	1.46	33.9	6.5	<0.05	2.1	6.07	25.7	2.27	0.056	5.8	25.2	0.12	0.348		
STD DS9	Standard	0.1	0.09	1.48	35.5	6.6	<0.05	2.0	6.16	25.8	2.34	0.065	5.2	27.2	0.11	0.373		
STD DS9	Standard	0.1	0.07	1.80	35.7	6.3	<0.05	2.0	6.44	28.2	2.25	0.065	5.7	24.1	0.12	0.372		
STD DS9	Standard	<0.1	0.06	1.33	34.5	6.3	<0.05	1.9	5.52	22.8	2.40	0.055	5.3	25.5	0.11	0.360		
STD DS9	Standard	0.1	0.09	1.42	33.8	6.9	<0.05	2.2	5.93	25.6	2.40	0.074	6.4	27.4	0.10	0.368		
STD GC-7	Standard																0.575	>300
STD GC-7	Standard																0.563	>300
STD OREAS133B	Standard																0.033	109
STD OREAS133B	Standard																0.032	106
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXG99	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXK94	Standard																	
STD OXG99 Expected																		
STD OXK94 Expected																		
STD DS9 Expected		0.1	0.08	1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	0.061	5.4	25.2	0.12	0.35		
STD OREAS133B Expected																	0.0332	100
STD GC-7 Expected																	0.555	619
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	0.02	<0.1	<0.02	0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																	
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Project: Troitsa
Report Date: October 01, 2012

QUALITY CONTROL REPORT SMI12000317.1

		WGHT	G6	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V
		kg	gm/t	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.005	0.01	0.01	0.01	0.1	2	0.1	0.1	1	100	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank			<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
BLK	Blank			<0.01	0.05	<0.01	<0.1	3	<0.1	<0.1	<1	<100	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	<0.01	<0.005	0.11	3.09	2.99	46.6	18	2.3	4.2	584	19253	0.4	1.7	3.7	6.1	68.7	0.07	0.04	0.10	37
G1-SMI	Prep Blank	<0.01	<0.005	0.12	2.73	3.05	50.2	5	2.6	4.4	636	20824	0.6	2.0	1.0	6.7	73.8	0.04	<0.02	0.08	39

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QUALITY CONTROL REPORT SMI12000317.1

		1F15 Ca ppm 100	1F15 P ppm 10	1F15 La ppm 0.5	1F15 Cr ppm 0.5	1F15 Mg ppm 100	1F15 Ba ppm 0.5	1F15 Ti ppm 10	1F15 B ppm 1	1F15 Al ppm 100	1F15 Na ppm 10	1F15 K ppm 100	1F15 W ppm 0.1	1F15 Sc ppm 0.1	1F15 Tl ppm 0.02	1F15 S ppm 200	1F15 Hg ppm 0.005	1F15 Se ppm 0.1	1F15 Te ppm 0.02	1F15 Ga ppm 0.1	1F15 Cs ppm 0.02
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	0.015	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
BLK	Blank	<100	<10	<0.5	<0.5	<100	<0.5	<10	<1	<100	<10	<100	<0.1	<0.1	<0.02	<200	<0.005	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	5183	812	13.4	7.7	5034	168.7	1244	2	10327	1359	5369	0.1	2.5	0.34	<200	<0.005	0.2	0.10	5.2	2.86
G1-SMI	Prep Blank	5558	881	16.1	8.5	5188	180.3	1380	2	11407	1653	5731	<0.1	2.8	0.37	<200	<0.005	<0.1	0.05	5.1	3.04

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		1F15 Ge ppm 0.1	1F15 Hf ppm 0.02	1F15 Nb ppm 0.02	1F15 Rb ppm 0.1	1F15 Sn ppm 0.1	1F15 Ta ppm 0.05	1F15 Zr ppm 0.1	1F15 Y ppm 0.01	1F15 Ce ppm 0.1	1F15 In ppm 0.02	1F15 Re ppm 0.001	1F15 Be ppm 0.1	1F15 Li ppm 0.1	1F15 Pd ppm 0.01	1F15 Pt ppm 0.002	7AR Cu % 0.001	7AR Ag gm/t 2
BLK	Blank																	
BLK	Blank																	
BLK	Blank																	
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																<0.001	<2
BLK	Blank	<0.1	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<0.001	<0.1	<0.1	<0.01	<0.002		
BLK	Blank																<0.001	<2
Prep Wash																		
G1-SMI	Prep Blank	<0.1	0.11	0.72	45.6	0.6	<0.05	1.3	5.32	25.5	0.04	<0.001	0.3	30.3	<0.01	<0.002		
G1-SMI	Prep Blank	0.2	0.12	0.69	46.5	0.7	<0.05	1.4	6.19	29.0	<0.02	0.004	0.2	31.5	<0.01	<0.002		

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Appendix H

Analytical Procedures and Detection Limits

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METHOD SPECIFICATIONS
GROUP 1D AND 1F – GEOCHEMICAL AQUA REGIA DIGESTION

Package Codes: 1D01 to 1D03, 1DX1 to 1DX3, 1F01 to 1F07
Sample Digestion: HNO3-HCl acid digestion
Instrumentation Method: ICP-ES (1D), ICP-MS (1DX, 1F)
Applicability: Sediment, Soil, Non-mineralized Rock and Drill Core

Method Description:

Prepared sample is digested with a modified Aqua Regia solution of equal parts concentrated HCl, HNO3 and DI H2O for one hour in a heating block of hot water bath. Sample is made up to volume with dilute HCl. Sample splits of 0.5g, 15g or 30g can be analyzed.

Element	Group 1D Detection	Group 1DX Detection	Group 1F Detection	Upper Limit
Ag	0.3 ppm	0.1 ppm	2 ppb	100 ppm
Al*	0.01%	0.01%	0.01%	10%
As	2 ppm	0.5 ppm	0.1 ppm	10000 ppm
Au	2 ppm	0.5 ppb	0.2 ppb	100 ppm
B*^	20 ppm	20 ppm	20 ppm	2000 ppm
Ba*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Bi	3 ppm	0.1 ppm	0.02 ppm	2000 ppm
Ca*	0.01%	0.01%	0.01%	40%
Cd	0.5 ppm	0.1 ppm	0.01 ppm	2000 ppm
Co	1 ppm	0.1 ppm	0.1 ppm	2000 ppm
Cr*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Cu	1 ppm	0.1 ppm	0.01 ppm	10000 ppm
Fe*	0.01%	0.01%	0.01%	40%
Ga*	-	1 ppm	0.1 ppm	1000 ppm
Hg	1 ppm	0.01 ppm	5 ppb	50 ppm
K*	0.01%	0.01%	0.01%	10%
La*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Mg*	0.01%	0.01%	0.01%	30%
Mn*	2 ppm	1 ppm	1 ppm	10000 ppm
Mo	1 ppm	0.1 ppm	0.01 ppm	2000 ppm
Na*	0.01%	0.001%	0.001%	5%
Ni	1 ppm	0.1 ppm	0.1 ppm	10000 ppm
P*	0.001%	0.001%	0.001%	5%
Pb	3 ppm	0.1 ppm	0.01 ppm	10000 ppm
S	0.05%	0.05%	0.02%	10%

Element	Group 1D Detection	Group 1DX Detection	Group 1F Detection	Upper Limit
Sb	3 ppm	0.1 ppm	0.02 ppm	2000 ppm
Sc	-	0.1 ppm	0.1 ppm	100 ppm
Se	-	0.5 ppm	0.1 ppm	100 ppm
Sr*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Te	-	0.2 ppm	0.02 ppm	1000 ppm
Th*	2 ppm	0.1 ppm	0.1 ppm	2000 ppm
Ti*	0.01%	0.001%	0.001%	5%
Tl	5 ppm	0.1 ppm	0.02 ppm	1000 ppm
U*	8 ppm	0.1 ppm	0.05 ppm	2000 ppm
V*	1 ppm	2 ppm	2 ppm	10000 ppm
W*	2 ppm	0.1 ppm	0.05 ppm	100 ppm
Zn	1 ppm	1 ppm	0.1 ppm	10000 ppm
Be*	-	-	0.1 ppm	1000 ppm
Ce*	-	-	0.1 ppm	2000 ppm
Cs*	-	-	0.02 ppm	2000 ppm
Ge*	-	-	0.1 ppm	100 ppm
Hf*	-	-	0.02 ppm	1000 ppm
In	-	-	0.02 ppm	1000 ppm
Li*	-	-	0.1 ppm	2000 ppm
Nb*	-	-	0.02 ppm	2000 ppm
Rb*	-	-	0.1 ppm	2000 ppm
Re	-	-	1 ppb	1000 ppb
Sn*	-	-	0.1 ppm	100 ppm
Ta*	-	-	0.05 ppm	2000 ppm
Y*	-	-	0.01 ppm	2000 ppm
Zr*	-	-	0.1 ppm	2000 ppm
Pt*	-	-	2 ppb	100 ppm
Pd*	-	-	10 ppb	100 ppm
Pb_{204}	-	-	0.01 ppm	10000 ppm
Pb_{206}	-	-	0.01 ppm	10000 ppm
Pb_{207}	-	-	0.01 ppm	10000 ppm
Pb_{208}	-	-	0.01 ppm	10000 ppm

* Solubility of some elements will be limited by mineral species present.
^Detection limit = 1 ppm for 15g / 30g analysis.

Limitations:

Au solubility can be limited by refractory and graphitic samples.

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METHOD SPECIFICATIONS
GROUP 3B AND G6 – PRECIOUS METALS BY FIRE ASSAY FUSION

Package Codes: 3B01 to 3B04, G601 to G614
Sample Digestion: Lead-collection fire assay fusion
Instrumentation Method: ICP-ES (3B, G6), ICP-MS (3B-MS), AA (3B, G6), Gravimetric (G6)
Applicability: Rock, Drill Core

Method Description:

Prepared sample is custom-blended with fire-assay fluxes, PbO litharge and a Ag inquart. Firing the charge at 1050 °C liberates Ag ± Au ± PGEs that report to the molten Pb-metal phase. After cooling the Pb button is recovered, placed in a cupel and fired at 950 °C to render a Ag ± Au ± PGEs dore bead. The bead is digested for ICP analysis or weighed and parted in ACS grade HNO_3 to dissolve Ag leaving a Au sponge. Au is weighed for Gravimetric determination; ACS grade HCl is added dissolving the Au ± PGE sponge for Instrument determination.

Element	3B Detection	3B Upper Limit	3B-MS Detection	3B-MS Upper Limit
Au	2 ppb	10 ppm	1 ppb	10 ppm
Pt	3 ppb	10 ppm	0.1 ppb	10 ppm
Pd	2 ppb	10 ppm	0.5 ppb	10 ppm

Element	G6 (Inst) Detection	G6 (Inst) Upper Limit	G6 (Grav) Detection	G6 (Grav) Upper Limit
Ag	--	--	5 g/t	1 ton
Au	0.005 g/t	10 ppm	0.17 g/t	1 ton
Pt	0.01 g/t	100 ppm	--	--
Pd	0.01 g/t	100 ppm	--	--

Note:
*Sulphide-rich samples require a 15g or smaller sample for proper fusion.

Appendix I

REPORT ON A HELICOPTER-BORNE Z-AXIS TIPPER ELECTROMAGNETIC (ZTEM) AND AEROMAGNETIC GEOPHYSICAL SURVEY

REPORT ON A HELICOPTER-BORNE Z-AXIS TIPPER ELECTROMAGNETIC (ZTEM) AND AEROMAGNETIC GEOPHYSICAL SURVEY

Cole /Troitsa Lake Project

Houston, British Columbia

For:

Callinex Mines Inc

By:

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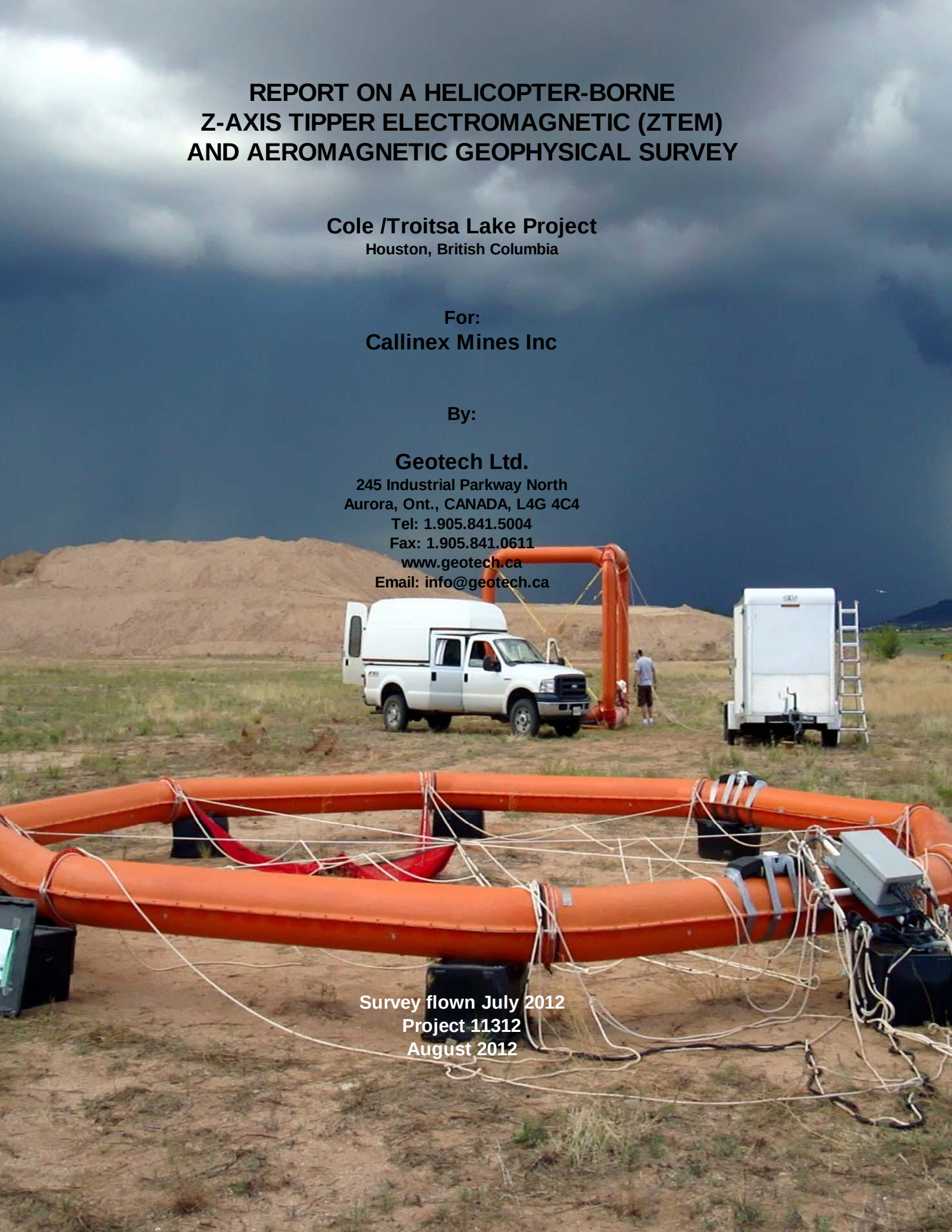

Survey flown July 2012
Project 11312
August 2012

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REPORT ON A HELICOPTER-BORNE Z-AXIS, TIPPER ELECTROMAGNETIC (ZTEM) AND AEROMAGNETIC GEOPHYSICAL SURVEY

Cole /Troitsa Lake Project
Houston, British Columbia

Executive Summary

During July 24th to August 2nd 2012 Geotech Ltd. carried out a helicopter-borne geophysical survey for Callinex Mines Inc over the Cole/Troitsa Lake Project situated Near Houston British Columbia Canada.

Principal geophysical sensors included a Z-Axis Tipper electromagnetic (ZTEM) system, and a caesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 1011 line-kilometres of geophysical data were acquired during the survey.

The survey operations were based out of Houston, British Columbia. In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of final digital data and map products were undertaken from the office of Geotech Ltd. in Aurora, Ontario.

The processed survey results are presented as the following maps:

- Total Magnetic Intensity
- 3D View of In-Phase Total Divergence versus Skin Depth
- In-Phase Total Divergence (30Hz, 90Hz and 360Hz)
- Tzx In-line In-Phase & Quadrature Profiles over 90Hz Phase Rotated Grid
- Tzy Cross-line In-Phase & Quadrature Profiles over 90Hz Phase Rotated Grid

The survey report describes the procedures for data acquisition, processing, final image presentation and the specifications for the digital data set. 2D inversions over selected lines were performed in support of the ZTEM survey results.

1. INTRODUCTION

1.1 General Considerations

These services are the result of the Agreement made between Geotech Ltd. and Callinex Mines Inc. to perform a helicopter-borne geophysical survey over the Cole/Troitsa Lake Project located near Houston, British Columbia (Figure 1).

J.J. O'Donnell represented Callinex Mines Inc. during the data acquisition and data processing phases of this project.

The geophysical surveys consisted of helicopter borne AFMAG Z-axis Tipper electromagnetic (ZTEM) system and aero magnetics using a caesium magnetometer. A total of 1011 line kilometres of geophysical data were acquired during the survey. The survey area is shown in Figure 2.

In a ZTEM survey, a single vertical-dipole air-core receiver coil is flown over the survey area in a grid pattern, similar to regional airborne EM surveys. Two orthogonal, air-core horizontal axis coils are placed close to the survey site to measure the horizontal EM reference fields. Data from the three coils are used to obtain the Tzx and Tzy Tipper (Vozoff, 1972) components at six frequencies in the 30 to 720 Hz band. The ZTEM is useful in mapping geology using resistivity contrasts and magnetometer data provides additional information on geology using magnetic susceptibility contrasts.

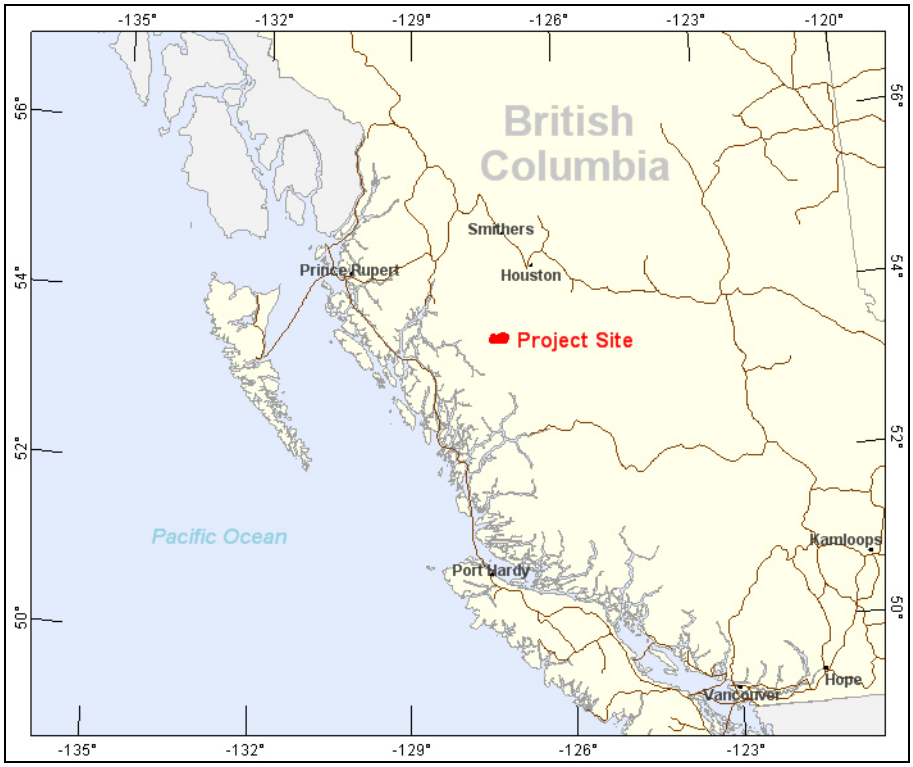


Figure 1: Property Location

The crew was based out Houston British Columbia for the acquisition phase of the survey. Survey flying was started on July 24th 2012 and finished on August 2nd 2012.

Data quality control and quality assurance, and preliminary data processing were carried out on a daily basis during the acquisition phase of the project. Final reporting, data presentation and archiving were completed from the Aurora office of Geotech Ltd. in August, 2012.

1.2 Survey Location

The Block is located approximately 98 kilometres southwest of Houston, British Columbia as shown in Figure 2.

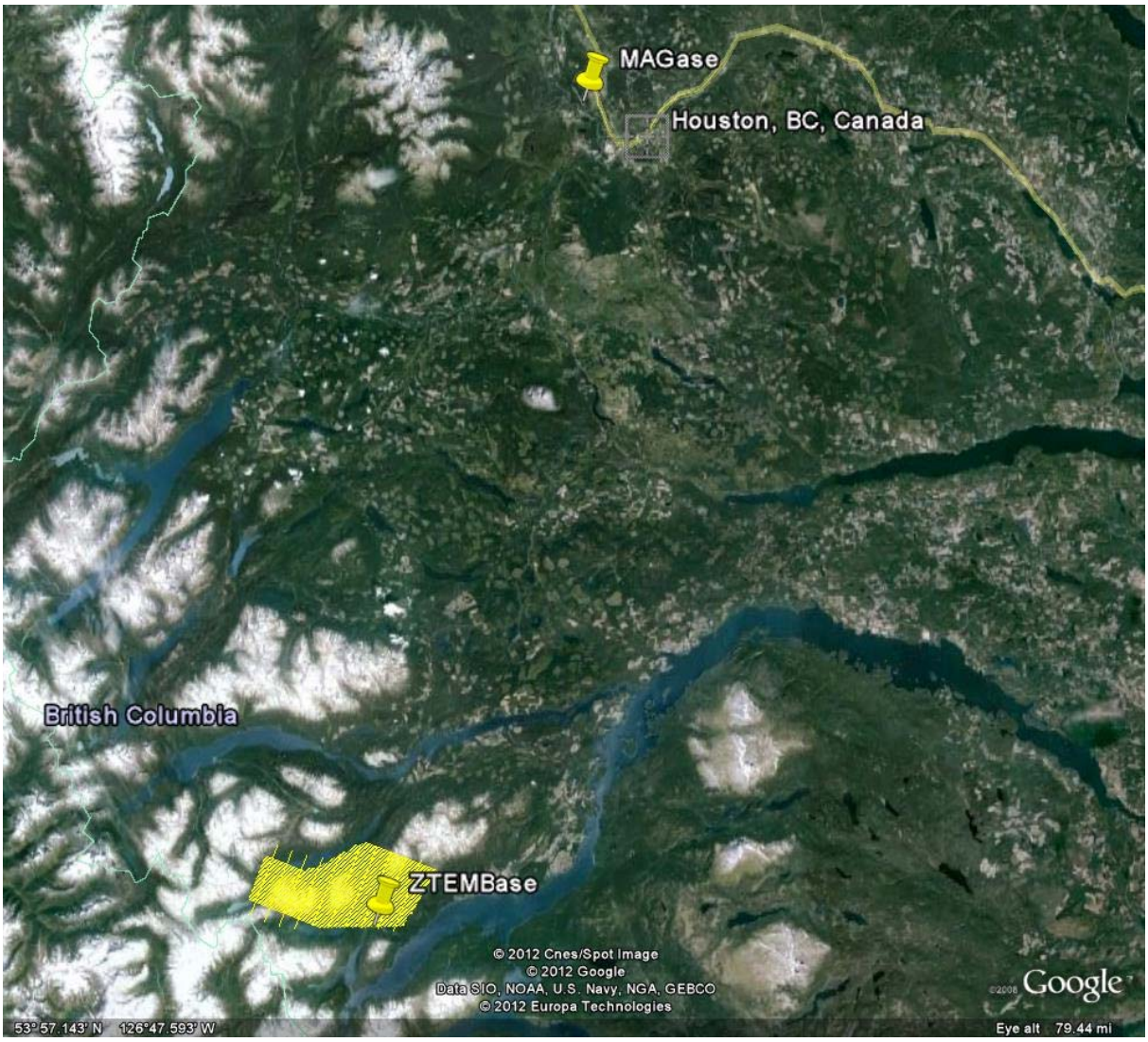


Figure 2: The Block, with ZTEM and Magnetic Base Station Locations

The block was flown in a southeast to northwest (N 110° E azimuth) direction, with a flight line spacing of 200 metres, as depicted in Figure 3. Tie lines were flown perpendicular to the traverse lines at a spacing of 2000 metres, in a north to south (N 20° E azimuth) direction. For more detailed information on the flight spacing and direction see Table 1.

1.3 Topographic Relief and Cultural Features

Topographically, the block exhibits a high relief with an elevation ranging from 894 to 2089 metres above mean sea level over an area of 182 square kilometres (Figure 3). The survey area has various rivers and streams running throughout which connects various lakes. The most notable lake is Troitsa Lake located along the northwest corner of the block. There are no visible signs of culture such as roads, trails or buildings throughout the survey (Figure 3).

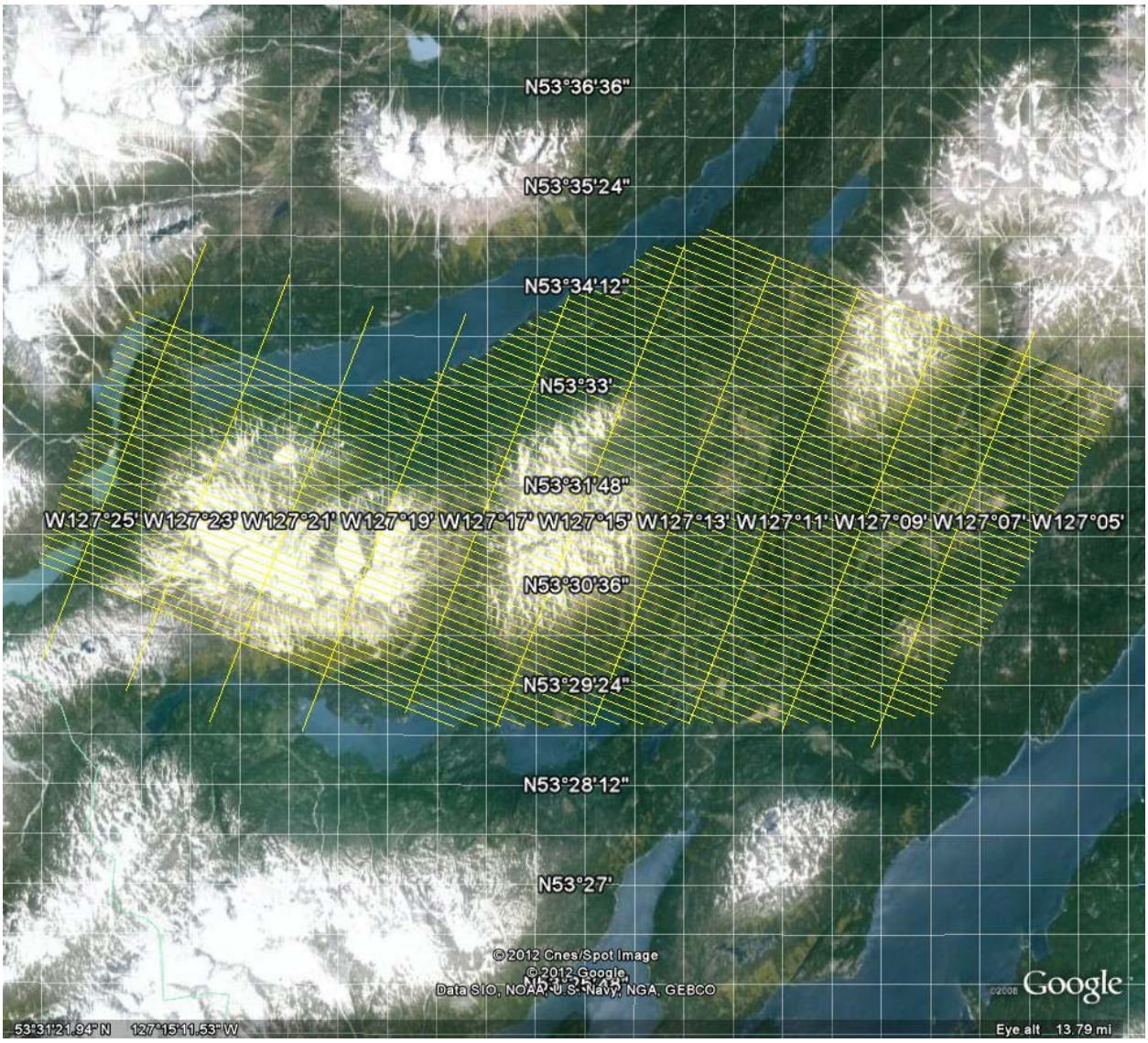


Figure 3: Google Earth image of the survey

The survey area is covered by numerous mining claims, which are shown in Appendix A, and are plotted on all maps. The survey area is covered by NTS (National Topographic Survey) of Canada sheet 093E06 & 093E11.

2. DATA ACQUISITION

2.1 Survey Area

The survey block (see Location map in Appendix A and Figure 2) and general flight specifications are as follows:

Table 1: Survey Specifications

Survey block	Traverse Line spacing (m)	Area (Km^2)	Planned Line-km	Actual[1] Line-km	Flight direction	Line numbers
block	Traverse: 200	182	908	908	N 110° E / N 290° E	L1000 – L1620
	Tie: 2000		103	103	N 20° E / N 200° E	T1800 – T1890
TOTAL		**182**	**1011**	**1011**		

Survey block boundaries co-ordinates are provided in Appendix B.

2.2 Survey Operations

Survey operations were based out of Houston, British Columbia on July 24th, 2012 until August 2nd, 2011. The following table shows the timing of the flying.

Table 2: Survey Schedule

Date	Flight #	Flow km	Block	Crew location	Comments
24-Jul-2012				Houston, BC	Crew arrived
25-Jul-2012				Houston, BC	System assembly and logistics
26-Jul-2012				Houston, BC	Helicopter arrived and testing started
27-Jul-2012				Houston, BC	testing
28-Jul-2012				Houston, BC	testing
29-Jul-2012				Houston, BC	No production due to weather
30-Jul-2012	1,2	454		Houston, BC	454km flown
31-Jul-2012				Houston, BC	No production due to weather
1-Aug-2012				Houston, BC	No production due to weather
2-Aug-2012	3,4,5	557		Houston, BC	Remaining kms were flown – flying complete

[1] Actual line-km represents the total line-km contained in the final databases. These line-km normally exceed the Planned line-km's, as indicated in the survey NAV files.

2.3 Flight Specifications

During the survey the helicopter was maintained at a mean height of 218 metres above the ground with a nominal survey speed of 80 km/hour for the survey block. This allowed for a nominal EM sensor terrain clearance of 148 metres and a magnetic sensor clearance of 163 metres.

The on board operator was responsible for monitoring the system integrity. He also maintained a detailed flight log during the survey, tracking the times of the flight as well as any unusual geophysical or topographic feature.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer. The data were then uploaded via ftp to the Geotech office in Aurora for daily quality assurance and quality control by trained personnel.

2.4 Aircraft and Equipment

2.4.1 Survey Aircraft

The survey was flown using a Eurocopter Aerospatiale (Astar) 350 B3 helicopter, registration number C-GEOJ. The helicopter was operated by Geotech Aviation. Installation of the geophysical and ancillary equipment was carried out by a Geotech Ltd crew.

2.4.2 Airborne Receiver

The airborne ZTEM receiver coil measures the vertical component (Z) of the EM field. The receiver coil is a Geotech Z-Axis Tipper (ZTEM) loop sensor which is isolated from most vibrations by a patented suspension system and is encased in a fibreglass shell. It is towed from the helicopter using an 85 metre long cable as shown in Figure 4. The cable is also used to transmit the measured EM signals back to the data acquisition system.

The coil has a 7.4 metre diameter with an orientation to the Vertical Dipole. The digitizing rate of the receiver is 2000 Hz. Attitudinal positioning of the receiver coil is enabled using 3 GPS antennas mounted on the coil. The output sampling rate is 0.4 seconds (see Section 2.4.7)

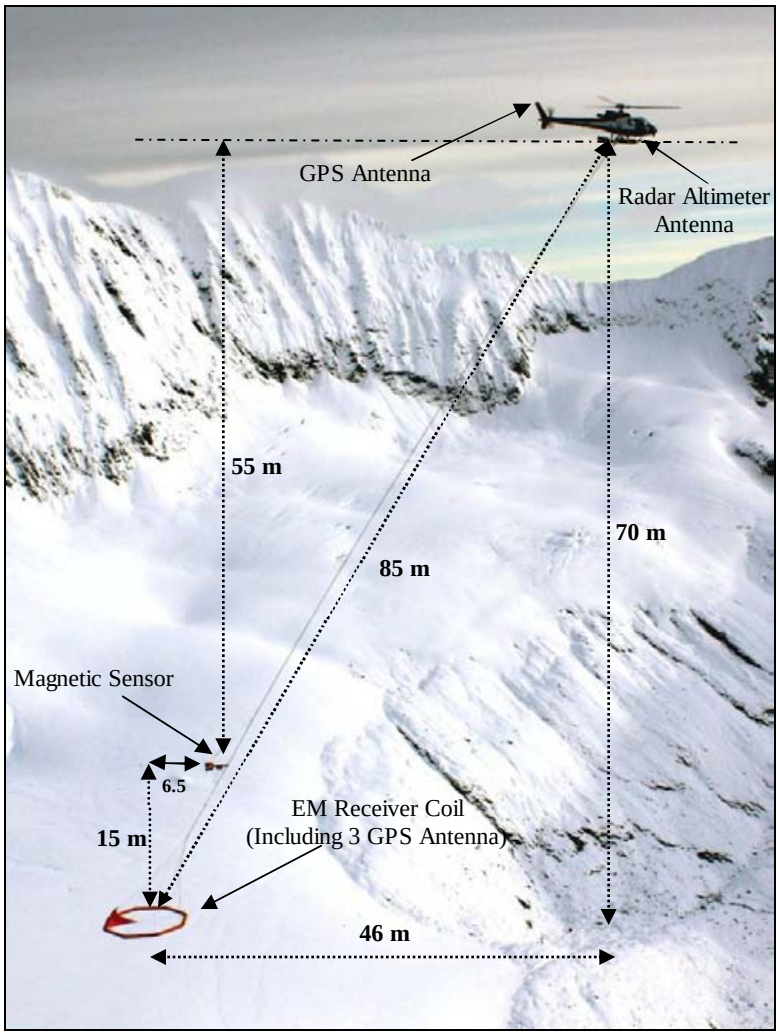


Figure 4: ZTEM System Configuration

2.4.3 Base Station Receiver

The two Geotech ZTEM base station receiver coils measure the orthogonal, horizontal X and Y components of the EM reference field. They are set up perpendicular to each other and roughly oriented according to the flight line direction. The orientation of both units is not critical as the horizontal field can be further decomposed into the two orientations of the survey flight. The orientation of the base stations were measured using a compass.

The base station coils each have a diameter of 3.5 meters, with the coil orientations to the horizontal dipole, as shown in Figure 5.

The base station receiver coils for the block were installed at the block (53°29.009 N, 127°11.483 W). The azimuth of the reference coil was N283^{o}E (named as A) and for the orthogonal component it was N13^{o}E (named as B). Angles A and B are taken into account together with the survey lines azimuth to calculate the in-line (Tzx) and cross-line (Tzy) field utilizing a proprietary software.

Figure 5: ZTEM base station receiver coils.

2.4.4 Airborne magnetometer

The magnetic sensor utilized for the survey was a Geometrics split-beam optically pumped caesium vapour magnetic field sensor, mounted in a separate bird, and towed on a cable at a mean distance of 55 metres below the helicopter (Figure 4). The sensitivity of the magnetic sensor is 0.02 nanoTesla (nT) at a sampling interval of 0.1 seconds. The magnetometer will perform continuously in areas of high magnetic gradient with the ambient range of the sensor approximately 20k-100k nT. The Aerodynamic magnetometer noise is specified to be less than 0.5 nT. The magnetometer sends the measured magnetic field strength as nanoTesla to the data acquisition system via the RS-232 port.

2.4.5 Radar Altimeter

A Terra TRA 3000/TRI 40 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit.

2.4.6 GPS Navigation System

The navigation system used was a Geotech PC104 based navigation system utilizing a NovAtel's WAAS(Wide Area Augmentation System) enable OEM4-G2-3151W GPS receiver, Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and an NovAtel GPS antenna mounted on the helicopter tail (Figure 5). As many as 11 GPS and two WAAS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8 m, with WAAS active, it is 1.0 m. The co-ordinates of the block were set-up prior to the survey and the information was fed into the airborne navigation system.

2.4.7 Digital Acquisition System

The power supply and the data acquisition system are mounted on an equipment rack which is installed into the helicopter. Signal and power wires are run through the helicopter to connect on to the tow cable outside. The tow cable supports the ZTEM and magnetometer birds during flight via a safety shear pin connected to the helicopter hook. The major power and data cables have a quick disconnect safety feature as well. The installation was undertaken by the Geotech Ltd. crew and was certified before surveying.

A Geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. The data type and sampling interval as provided in Table 3.

Table 3: Acquisition and Processing Sampling Rates

DATA TYPE	ACQUISITION SAMPLING	PROCESSING SAMPLING
ZTEM Receiver	0.0005 sec	0.4 sec
Magnetometer	0.1 sec	0.4 sec
GPS Position	0.2 sec	0.4 sec
Radar Altimeter	0.2 sec	0.4 sec
ZTEM Base station	0.0005 sec	– –

2.4.8 Mag Base Station

A combined magnetometer/GPS base station was utilized on this project. A Geometrics Caesium split-beam vapour magnetometer was used as a magnetic sensor with a sensitivity of 0.001 nT. The base station was recording the magnetic field together with the GPS time at 1 Hz on a base station computer.

The base station magnetometer sensors for the block were installed at Houston airport (54°26.2927 N, 126°46.5514 W) away from electric transmission lines and moving ferrous objects such as motor vehicles. The base station data were backed-up to the data processing computer at the end of each survey day.

3. PERSONNEL

The following Geotech Ltd. personnel were involved in the project.

Field:

Project Manager:	Scott Trew (Office)
Data QC:	Neil Fiset (Office)
Crew chief:	Benjamin Bruder
Operator:	Michael Altman

The survey pilot and the mechanical engineer were employed directly by the helicopter operator – Geotech Aviation.

Pilot:	Geo Rawlins
Mechanical Engineer:	Zack Govis

Office:

Preliminary Data Processing:	Neil Fiset
Final Data Processing:	Francis Tong
Final Data QC:	Geoff Plastow
2D Inversions:	Shengkai Zhao
Reporting/Mapping:	Wendy Acorn

Data acquisition phase was carried out under the supervision of Andrei Bagrianski, P. Geo, Chief Operating Officer. Processing and 2D Inversions phases were carried out under the supervision of Geoff Plastow ZTEM Processing Manager. The overall contract management and customer relations were by Paolo Berardelli.

4. DATA PROCESSING AND PRESENTATION

Data compilation and processing were carried out by the application of Geosoft OASIS Montaj and programs proprietary to Geotech Ltd.

4.1 Flight Path

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the WGS 84, UTM Zone 9 North coordinate system in Oasis Montaj.

The flight path was drawn using linear interpolation between x, y positions from the navigation system. Positions are updated every second and expressed as UTM easting's (x) and UTM northing's (y).

4.2 In-field Processing and Quality Control

In-Field data processing and quality control are done on a flight by flight basis by a qualified data processor (see Section 3.0). Processing steps and check-up procedures are designed to assure the best possible final quality of ZTEM survey data. A general overview of those steps is presented in the following paragraphs.

The In-Field quality control can be separated into several phases:

a. GPS Processing Phase: GPS Data are first examined and evaluated during the GrafMov processing.
b. Raw data, ZTEM viewer phase:

   Data can be viewed, examined for consistency, individual channel spectra examined and overall noise estimated in the viewer provided by the ZTEM proprietary software, on the raw flight data and raw base station data separately, on the merged data, and finally on the data that have undergone ZTEM processing.
c. Field Geosoft phase:

   Magnetic data, Radar altimeter data, GPS positioning data are re-examined and processed in this phase. Prior to splitting the lines EM data are examined flight by flight and the effectiveness of applying the attitude correction evaluated. After splitting the lines, a set of grids are generate for each parameter and their consistency evaluated. Data profiles are also re-evaluated on a line to line basis. A power line monitor channel is available in order to identify power line noise.

4.3 GPS Processing

Three GPS sensor (mounted on the airborne receiving loop) measurements were differentially corrected using the Waypoint GrafMov™ software in order to yield attitude corrections to recorded EM data.

4.4 ZTEM Electromagnetic Data

The ZTEM data were processed using proprietary software. Processing steps consist of the following preliminary and final processing steps:

4.4.1 Preliminary Processing

a. Airborne EM, Mag, radar altimeter and GPS data are first merged with EM base station data into one file.
b. Merged data are viewed and examined for consistency in an incorporated viewer
c. In the next, processing phase, the following entities are taken into account:
   - the Base station coils orientation with respect to the Magnetic North,
   - the Local declination of the magnetic field,
   - Suggested direction of the X coordinate (North or line direction),
   - Sensitivity coefficient that compensates for the difference in geometry between the base station and airborne coils.
   - Rejection filters for the 60 Hz and helicopter generated frequencies.
d. Six frequencies (30, 45, 90, 180, 360, and 720 Hz) are extracted from the airborne EM time-series coil response using windows of 0.4 seconds and the base station coils using windows of 1.0 seconds.
e. The real (In-Phase) and imaginary (Quadrature) parts of the tipper transfer functions are derived from the In-line (X or Tzx) and Cross-line (Y or Tzy) components.
f. Such processed EM data are then merged with the GPS data, magnetic base station data and exported into a Geosoft xyz file.

4.4.2 Geosoft Processing

Next stage of the preliminary data processing is done in a Geosoft ™ environment, using the following steps:

a. Import the output xyz file from the AFMAG processing, as well as the base Mag data into one database.
b. Split lines according to the recorded line channel,
c. GPS processing, flight path recovery (correcting, filtering, calculating Bird GPS coordinates, line splitting)
d. Radar altimeter processing, yielding the altitude values in metres.
e. Magnetic spike removal, filtering (applied to both airborne and base station data). Calculation of a base station corrected mag.
f. Apply preliminary attitude corrections to EM data (In phase and Quadrature), filter and make preliminary grids and profiles of all channels.

4.4.3 Final Processing

Final data processing and quality control were undertaken by Geotech Ltd headquarters in Aurora, Ontario by qualified senior data processing personnel.

A quality control step consisted of re-examining all data in order to validate the preliminary data processing and to allow for final adjustments to the data.

Attitude corrections were re-evaluated, and re-applied, on component by component, flight by flight, and frequency by frequency bases. Any remaining line to line system noise was removed by applying a mild additional levelling correction.

4.4.4 ZTEM Profile Sign Convention

Tzx and Tzy tipper components do not exhibit maxima or minima above conductors, resistors or at contacts; in fact they produce cross-over type anomalies (Ward, 1959; Vozoff, 1972; Labson, 1985). The crossover polarity sign convention for ZTEM is according to the right hand Cartesian rule (Z positive –up) that is commonly used for multi-component transient electromagnetic methods.

For the southeast to northwest lines of the Block the sign convention for the In-phase Tzx in-line component crossover is positive-negative pointing northwest to southeast for tabular conductors perpendicular to the profile (Figure 6). The corresponding Tzy component in-phase cross-over polarity is positive-negative pointing southwest to northeast (90 degrees counter clockwise to Tzx) according to the right hand Cartesian rule.

For the Southwest to Northeast tie-lines of the Block the sign convention for the Tzx in-line component crossover is positive-negative pointing southwest to northeast for tabular conductors perpendicular to the profile (Figure 6). The corresponding Tzy component in-phase cross-over polarity is positive-negative pointing southeast to northwest (90 degrees counter clockwise to Tzx) according to the right hand Cartesian rule.

Conversely, tabular resistive bodies produce In-Phase cross-over's that are opposite in sign to conductors. A brief discussion of ZTEM and AFMAG, along with selected forward model responses is presented in Appendix D.

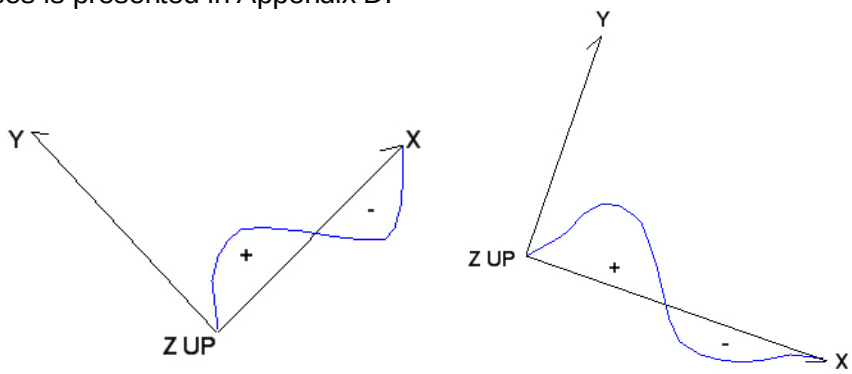


Figure 6: ZTEM Crossover Polarity Convention for Tzx and Tzy for the block. – Tie-Lines Left side and Lines Right side

4.4.5 ZTEM Quadrature Sign Dependence

One important note regarding the sign of the ZTEM Quadrature, relative to the In-Phase component, particularly with regards to computer modeling and inversion.

The sign of the magnetotelluric Quadrature relative to the In-Phase tipper transfer function component pertains to the Fourier transformation of the time series to give frequency domain spectra. There are two widely used conventions for time dependence in the transformations, **exp(+iωt)** and **exp(-iωt).** That which is implemented largely is a matter of personal preference and precedent. The importance of the In-Phase and Quadrature sign convention is not critical, provided that it is known and documented.

In ZTEM, the data processing code used for the Fourier transformation the time-series data to frequency domain spectra adopts a **exp(-iωt)** time dependence (J. Dodds, Geo Equipment Manufacturing, pers. comm., Nov-2009). Whereas in the forward modeling and inversion program Zvert2d, the sign of the Quadrature relative to the In-Phase transfer function assumes an **exp(+iωt)** dependence[2].

As a result, for users interested in computer modeling and inversion of ZTEM data, the sign of the Quadrature will need to be reversed, relative to the In-Phase component, in order to provide a proper result (Figure 7). Indeed this reverse Quadrature polarity convention is assumed in all forward modeling and inversion of ZTEM data, as described in Figures 5-7 in Appendix D.

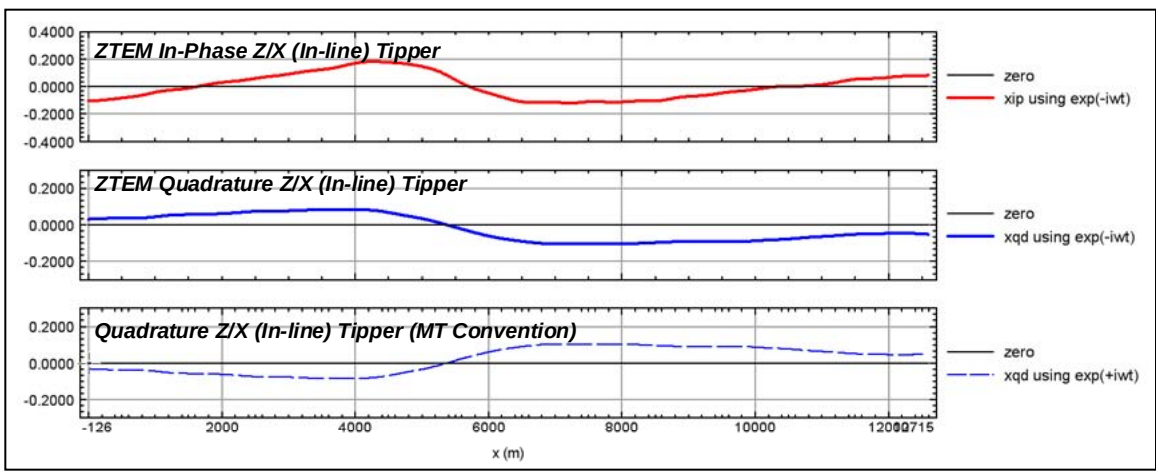


Figure 7: Illustration of ZTEM In-Phase & Quadrature Tipper transfer function polarity convention (e-iωt) relative to equivalent MT Tipper Quadrature polarity convention (e+iωt) for a graphitic conductor in Athabasca Basin, SK.

4.4.6 Total Divergence and Phase Rotation Processing

In a final processing step DT (Total Divergence) and PR (Phase Rotation) processing are applied to the multi-frequency In-phase and Quadrature ZTEM data. This is due to the crossover nature of the Tipper Responses; these additional processing steps are applied to convert them into local maxima for easier interpretation.

[2] Phillip E. Wannamaker (2009): Two-dimensional Inversion of ZTEM data: Synthetic Model Study and Test Profile Images, Internal Geotech technical report by Emblem Exploration Services Inc., January 22, 2009, 32 pp.

To present the data from both tipper components into one image, the Total Divergence parameter, termed the DT is calculated from the horizontal derivatives of the Tzx and Tzy tippers (Lo and Zang, 2008). It is analogous to the "Peaker" parameter in VLF (Pedersen, 1998).

Total Divergence DT:	***DT = DIV (Tzx, Tzy)*** ***= d(Tzx)/dx+d(Tzy)/dy***

This DT parameter was introduced by Petr Kuzmin (Milicevic, 2007, p. 13) and is derived for each of the In Phase and Quadrature components at individual frequencies. These in turn allow for minima over conductors and maxima over resistive zones. DT grids for each of the extracted frequencies were generated accordingly, using a reverse colour scheme with warm colours over conductors and cool colours over resistors.

The DT gives a clearer image of conductor's location and shape but, as a derivative, it does not preserve some of the long wavelength information and is also sensitive to noise.

As an alternative, a 90 degree Phase Rotation (PR) technique is also applied to the grids of each individual component (Tzx and Tzy). It transforms bipolar (cross over) anomalies into single pole anomalies with a maximum over conductors, while preserving long wavelength information (Lo et al., 2009). The two orthogonal grids are then usually added to obtain a Total Phase Rotated (TPR) grid for the In-Phase and Quadrature.

Total Phase-Rotation TPR: = PR (Tzx) + PR (Tzy)

A presentation of the ZTEM test survey results over unconformity uranium deposits that illustrates DT and TPR examples, as documented by Lo et al. (2009) is provided in Appendix E.

4.4.7 2D EM Inversion

2d inversions of the ZTEM results were performed over selected lines using the Geotech Av2dtopo software developed by Phil Wannamaker, U. of Utah, for Geotech Ltd. The inversion algorithm is based on the 2D inversion code with Jacobians of de Lugao and Wannamaker (1996), the 2D forward code of Wannamaker et al (1987), and the Gauss-Newton parameter step equations of Tarantola (1987). Av2dtopo has been developed/modified for use with our ZTEM platform by taking into account the ground topography and the air-layer between the receiver bird and the ground surface. It also implements a depth-of-investigation (DOI) index, using the 1.5x MT maximum skin depth and integrated 1D conductance method of Spies (1989). This is shown using a dashed DOI line and opaque coloring in the 2d inversion section of Appendix F.

The 2D code only considers the In-Line (Tzx) data and assumes that the strike lengths of bodies are infinite and orthogonal to the profile. The code is designed to account for the ZTEM vertical coil receiver and fixed base station reference measurements. The inversion uses a model-mesh consisting of 440 cells laterally and 112 cells vertically. Typically the ZTEM data are de-sampled to 192 pts, in order to allow the inversion to run in 20 minutes or less. Typically, between 1-2% errors are added to the In-line in-phase (XIP) and Quadrature (XQD) data obtained at 30,45,90,180,360 & 720Hz. Errors are adjusted until numerical convergence (<1.0 rms) is attained in 5 iterations or less. All inversions are based on an

apriori homogeneous starting half-space model, usually between 100 – 1000ohm metres, as determined by the interpreter, based on model testing, as described in Appendix F.

4.5 Magnetic Data

The processing of the total magnetic field intensity (TMI) data involved the correction for diurnal variations by using the digitally recorded ground base station magnetic values. The base station magnetometer data was edited and merged into the Geosoft GDB database on a daily basis. The aeromagnetic data was corrected for diurnal variations by subtracting the observed magnetic base station deviations.

Tie line levelling was carried out by adjusting intersection points along traverse lines. A micro-levelling procedure was applied to remove persistent low-amplitude components of flight-line noise remaining in the data.

The corrected magnetic data was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of 50 metres. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

5. DELIVERABLES

5.1 Survey Report

The survey report describes the data acquisition, processing, and final presentation of the survey results. The survey report is provided in two paper copies and digitally in PDF format.

5.2 Maps

Final maps were produced at scale of 1:20,000. The coordinate/projection system used was NAD83, UTM Zone 9 North. All maps show the mining claims, flight path trace and topographic data; latitude and longitude are also noted on maps.

The preliminary and final results of the survey are presented as profile plans for the EM data that were generated for individual real (In-Phase) and imaginary parts (Quadrature) of the Tzx and Tzy components. Colour contour maps of the corresponding DT (Total Divergence) or TPR (Total Phase Rotated) grids for three of the six frequencies, (30, 45, 90, 180, 360 and 720Hz), as well as for corresponding Phase Rotated Grids for individual components.

3D views have been constructed by plotting the either DT or TPR grids at their respective penetration depths using a 1000 ohm-m half space, using the Bostick skin depth rule (Bostick, 1977) see Appendix D.

Final maps were chosen, in consultation with the client, to represent all collected data, are listed in Section 5.3.

Sample maps of the related 3D view, Magnetic and Total Divergence are included in this report and presented in Appendix C.

Digital Data

- Two copies of the data and maps on a DVD were prepared to accompany the report. Each DVD contains a digital file of the line data in GDB Geosoft Montaj.

- DVD structure.

  There are two (2) main directories;

  Data contains databases and grids, as described below.
  Report contains a copy of the report and appendices in PDF format.

  Databases in Geosoft GDB format, containing the channels listed in Table 4.

Table 4: Geosoft GDB Data Format

Column	Description
X	UTM Easting NAD83 Zone 9N, (Centre of the ZTEM loop) (meters)
Y	UTM Northing NAD83 Zone 9N, (Centre of the ZTEM loop) (meters)
Longitude	Longitude – WGS84 (Centre of the ZTEM loop) (Decimal degree)
Latitude	Latitude – WGS84 (Centre of the ZTEM loop) (Decimal degree)
Z	Elevation- WGS84 (Centre of the ZTEM loop) (metres)
Radar	Helicopter terrain clearance from radar altimeter (metres - AGL)
Alt_B:	Calculated ZTEM Bird terrain clearance (metres)
DEM	Digital Elevation Model (above mean sea level, meters)
Gtime	UTC Time (seconds of the day)
basemag	Magnetic base station data, nT
Mag1	Measured total magnetic field, nT
Mag2	Diurnally-corrected total magnetic field, nT
Mag3	Levelled total magnetic field, nT
xIp_030Hz	Tzx In-Phase 30 Hz final corrected
xIp_045Hz	Tzx In-Phase 45 Hz final corrected
xIp_090Hz	Tzx In-Phase 90 Hz final corrected
xIp_180Hz	Tzx In-Phase 180 Hz final corrected
xIp_360Hz	Tzx In-Phase 360 Hz final corrected
xIp_720Hz	Tzx In-Phase 720 Hz final corrected
xQd_030Hz	Tzx Quadrature 30 Hz final corrected
xQd_045Hz	Tzx Quadrature 45 Hz final corrected
xQd_090Hz	Tzx Quadrature 90 Hz final corrected
xQd_180Hz	Tzx Quadrature 180 Hz final corrected
xQd_360Hz	Tzx Quadrature 360 Hz final corrected
xQd_720Hz	Tzx Quadrature 720 Hz final corrected
yIp_030Hz	Tzy In-Phase 30 Hz final corrected
yIp_045Hz	Tzy In-Phase 45 Hz final corrected
yIp_090Hz	Tzy In-Phase 90 Hz final corrected
yIp_180Hz	Tzy In-Phase 180 Hz final corrected
yIp_360Hz	Tzy In-Phase 360 Hz final corrected
yIp_720Hz	Tzy In-Phase 720 Hz final corrected
yQd_030Hz	Tzy Quadrature 30 Hz final corrected
yQd_045Hz	Tzy Quadrature 45 Hz final corrected
yQd_090Hz	Tzy Quadrature 90 Hz final corrected
yQd_180Hz	Tzy Quadrature 180 Hz final corrected
yQd_360Hz	Tzy Quadrature 360 Hz final corrected
yQd_720Hz	Tzy Quadrature 720 Hz final corrected
PLM	Power Line Monitor (60Hz)

- Grids in Geosoft GRD format, as follows:

TMI:	Total Magnetic Intensity
DEM:	Digital Elevation Model
PLM:	Power Line Monitor
XIP_30Hz_PR:	Tzx In-Phase Component Phase Rotated grid at 30 Hz
XIP_45Hz_PR:	Tzx In-Phase Component Phase Rotated grid at 45 Hz
XIP_90Hz_PR:	Tzx In-Phase Component Phase Rotated grid at 90 Hz
XIP_180Hz_PR:	Tzx In-Phase Component Phase Rotated grid at 180 Hz
XIP_360Hz_PR:	Tzx In-Phase Component Phase Rotated grid at 360 Hz
XIP_720Hz_PR:	Tzx In-Phase Component Phase Rotated grid at 720 Hz
XQd_30Hz_PR:	Tzx Quadrature component Phase Rotated grid at 30 Hz
XQd_45Hz_PR:	Tzx Quadrature component Phase Rotated grid at 45 Hz
XQd_90Hz_PR:	Tzx Quadrature component Phase Rotated grid at 90 Hz
XQd_180Hz_PR:	Tzx Quadrature component Phase Rotated grid at 180 Hz
XQd_360Hz_PR:	Tzx Quadrature component Phase Rotated grid at 360 Hz
XQd_720Hz_PR:	Tzx Quadrature component Phase Rotated grid at 720 Hz
YIP_30Hz_PR:	Tzy In-Phase Component Phase Rotated grid at 30 Hz
YIP_45Hz_PR:	Tzy In-Phase Component Phase Rotated grid at 45 Hz
YIP_90Hz_PR:	Tzy In-Phase Component Phase Rotated grid at 90 Hz
YIP_180Hz_PR:	Tzy In-Phase Component Phase Rotated grid at 180 Hz
YIP_360Hz_PR:	Tzy In-Phase Component Phase Rotated grid at 360 Hz
YIP_720Hz_PR:	Tzy In-Phase Component Phase Rotated grid at 720 Hz
YQd_30Hz_PR:	Tzy Quadrature component Phase Rotated grid at 30 Hz
YQd_45Hz_PR:	Tzy Quadrature component Phase Rotated grid at 45 Hz
YQd_90Hz_PR:	Tzy Quadrature component Phase Rotated grid at 90 Hz
YQd_180Hz_PR:	Tzy Quadrature component Phase Rotated grid at 180 Hz
YQd_360Hz_PR:	Tzy Quadrature component Phase Rotated grid at 360 Hz
YQd_720Hz_PR:	Tzy Quadrature component Phase Rotated grid at 720 Hz
IP_30Hz_DT:	Total Divergence grid from In-phase components at 30 Hz
IP_45Hz_DT:	Total Divergence grid from In-phase components at 45 Hz
IP_90Hz_DT:	Total Divergence grid from In-phase components at 90 Hz
IP_180Hz_DT:	Total Divergence grid from In-phase components at 180 Hz
IP_360Hz_DT:	Total Divergence grid from In-phase components at 360 Hz
IP_720Hz_DT:	Total Divergence grid from In-phase components at 720 Hz
QD_30Hz_DT:	Total Divergence grid from Quadrature components at 30 Hz
QD_45Hz_DT:	Total Divergence grid from Quadrature components at 45 Hz
QD_90Hz_DT:	Total Divergence grid from Quadrature components at 90 Hz
QD_180Hz_DT:	Total Divergence grid from Quadrature components at 180 Hz
QD_360Hz_DT:	Total Divergence grid from Quadrature components at 360 Hz
QD_720Hz_DT:	Total Divergence grid from Quadrature components at 720 H
IP_30Hz_TPR:	Total Phase Rotated grid from In-phase components at 30 Hz
IP_45Hz_TPR:	Total Phase Rotated grid from In-phase components at 45 Hz
IP_90Hz_TPR:	Total Phase Rotated grid from In-phase components at 90 Hz
IP_180Hz_TPR:	Total Phase Rotated grid from In-phase components at 180 Hz
IP_360Hz_TPR:	Total Phase Rotated grid from In-phase components at 360 Hz
IP_720Hz_TPR:	Total Phase Rotated grid from In-phase components at 720 Hz
QD_30Hz_TPR:	Total Phase Rotated grid from Quadrature components at 30 Hz
QD_45Hz_TPR:	Total Phase Rotated grid from Quadrature components at 45 Hz
QD_90Hz_TPR:	Total Phase Rotated grid from Quadrature components at 90 Hz
QD_180Hz_TPR:	Total Phase Rotated grid from Quadrature components at 180 Hz

QD_360Hz_TPR: Total Phase Rotated grid from Quadrature components at 360 Hz
QD_720Hz_TPR: Total Phase Rotated grid from Quadrature components at 720 Hz

A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information. A grid cell size of 50 metres was used.

- Maps at 1:20,000 scale in Geosoft MAP format, as follows:

  11312_20K_3D_IP_DT: 3D view of In-Phase Total Divergence versus Skin Depth (30-720Hz)
  11312_20K_TMI: Total Magnetic Intensity (TMI)
  11312_20K_30Hz_IP_DT: 30Hz In-Phase Total Divergence Grid
  11312_20K_90Hz_IP_DT: 90Hz In-Phase Total Divergence Grid
  11312_20K_360Hz_IP_DT: 360Hz In-Phase Total Divergence Grid
  11312_20K_XIP_profiles_XIP_PR: Tzx (In-line) In-Phase Profiles over 90Hz Phase Rotated In-Phase Grid
  11312_20K_XQD_profiles_XQD_PR: Tzx (In-line) Quadrature Profiles over a 90Hz Phase Rotated Quadrature Grid.
  11312_20K_YIP_profiles_YIP_PR: Tzy (Cross-line) In-Phase Profiles over 90Hz Phase Rotated In-Phase Grid
  11312_20K_YQD_profiles_YQD_PR: Tzy (Cross-line) Quadrature Profiles over 90Hz Phase Rotated Quadrature Grid.

- 2D Resistivity Inversion maps:
  11312_L1170_res: resistivity inversion of line 1170
  11312_L1510_res: resistivity inversion of line 1510

- Maps are also presented in PDF format.

- 1:50,000 topographic vectors were taken from the NRCAN Geogratis database at; http://geogratis.gc.ca/geogratis/en/index.html.

- A Google Earth file *"11312_Callinex.kml"* is included, showing the flight path of each block. Free versions of Google Earth software from: http://earth.google.com/download-earth.html

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

A helicopter-borne ZTEM and aeromagnetic geophysical survey has been completed over the Cole/Troitsa Lake Project located near Houston British Columbia, Canada.

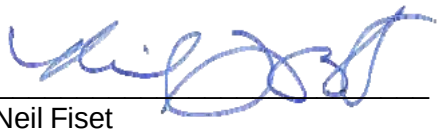
The total area coverage is 182 km^2. Total survey line coverage is 1011 line kilometres. The principal sensors included a Z-Axis Tipper electromagnetic (ZTEM) system and a caesium magnetometer. Results have been presented as stacked profiles and contour colour images at a scale of 1:20,000.

There is no summary interpretation included in this report, however 2D inversions over selected lines have been provided in Appendix F.

6.2 Recommendations

Based on the geophysical results obtained, a number of interesting conductive structures were identified across the property. The magnetic results also contain worthwhile information in support of exploration targets of interest. We therefore recommend a more detailed interpretation of the available geophysical data, including additional 2D or 3D inversion in conjunction with the geology, prior to ground follow up and drill testing.

Respectfully submitted[3],



Neil Fiset
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August 2012

[3]Final data processing of the EM and magnetic data were carried out by Neil Fiset and Francis Tong. 2Dinversions were carried out by Shengkai Zhao from the office of Geotech Ltd. in Aurora, Ontario, under the supervision of Jean Legault P. Geo, P. Eng, Chief Geophysicist (Interpretation).

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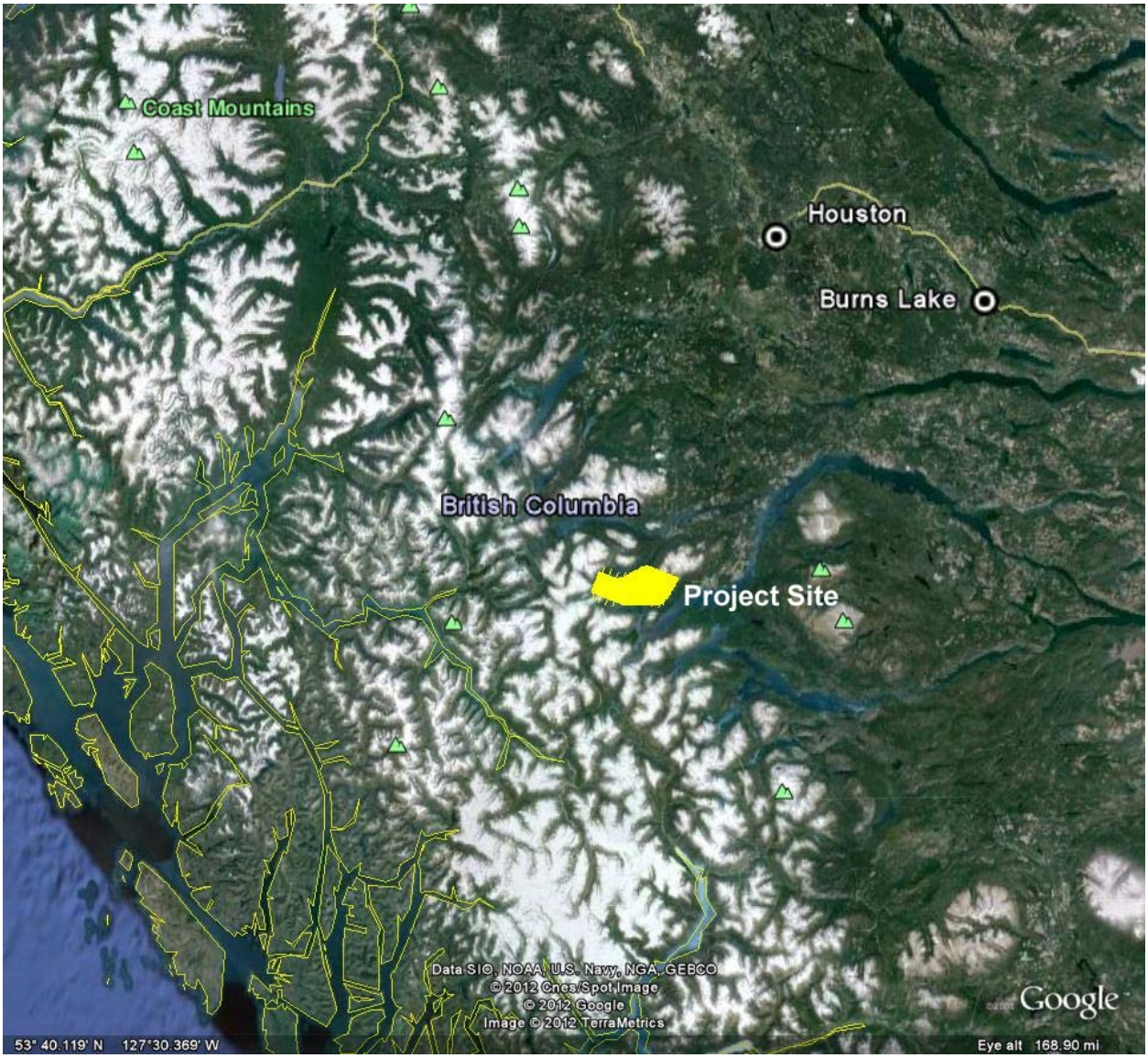
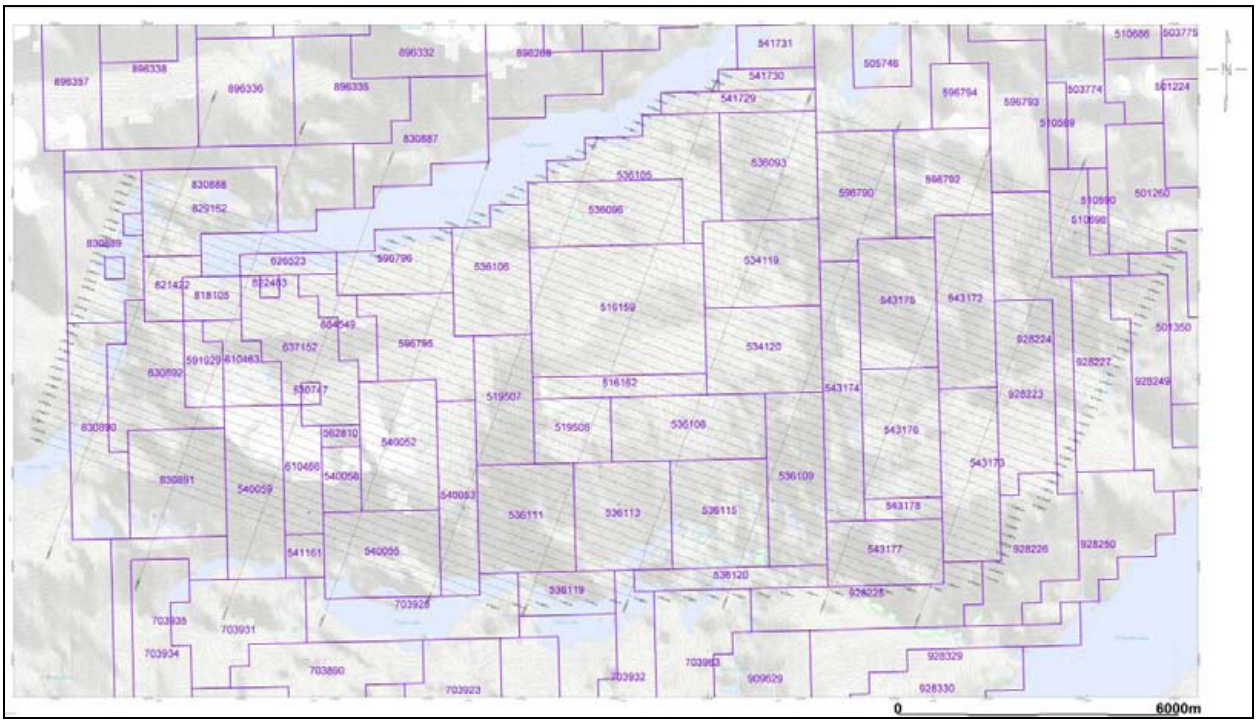
APPENDIX A

SURVEY BLOCK LOCATION MAP



Survey Overview Location Map



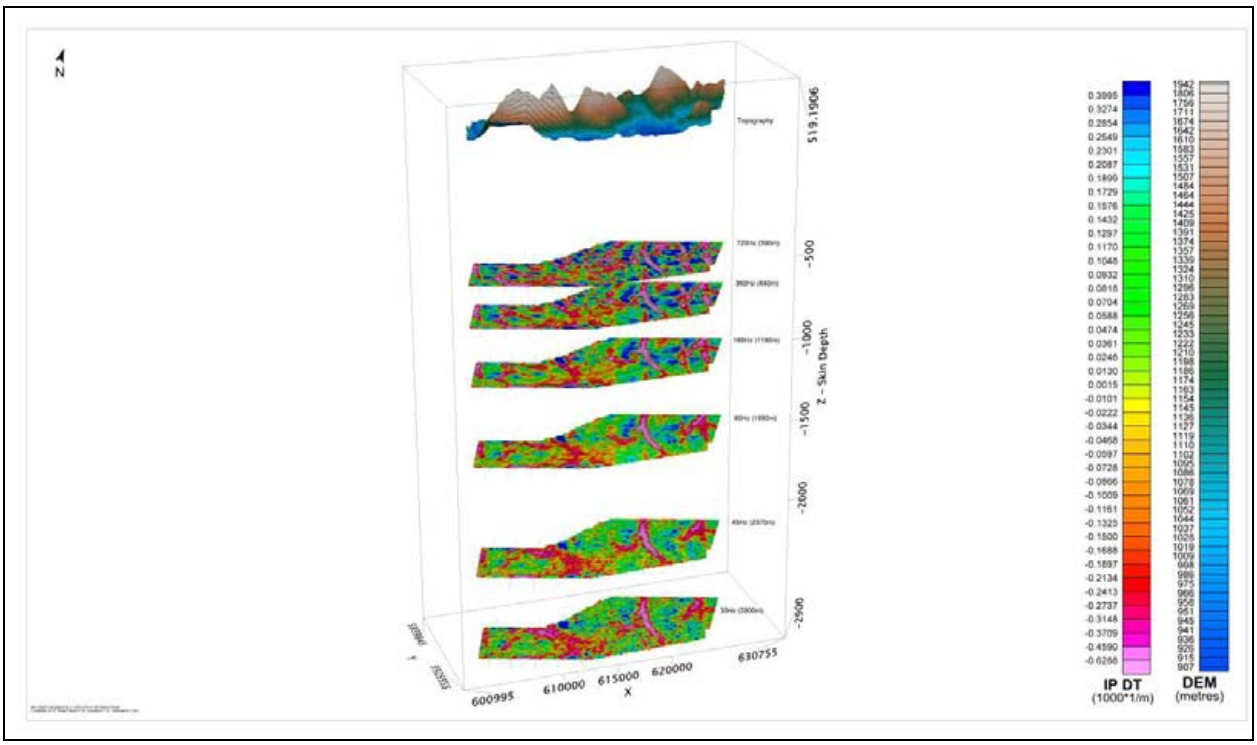
Mining Claims

APPENDIX B

SURVEY BLOCK COORDINATES
(WGS84 Zone 9N)

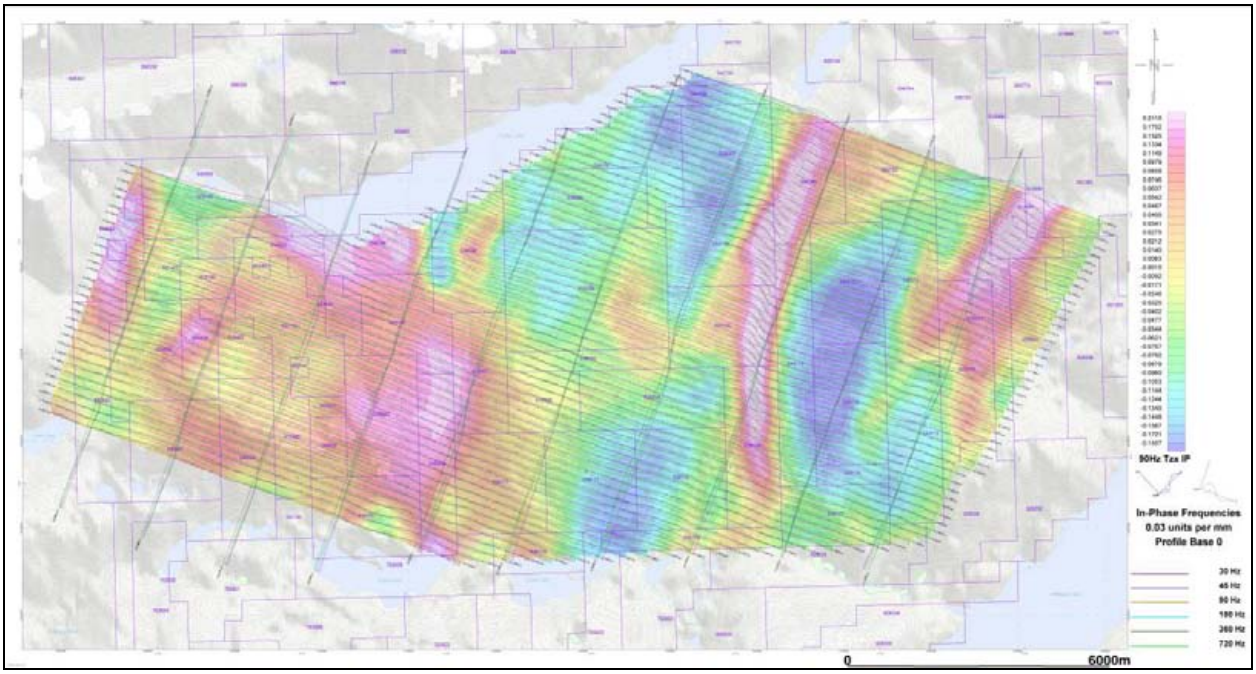
X	Y
605752.4	5936299.5
603837.9	5931035.5
603794.9	5930625.5
613191.9	5927205.5
622692.2	5927579.5
623930.8	5927767.5
624477.8	5929271.5
624922.2	5929322.5
627955.9	5935031
618559	5938451
618234.3	5938143.5
617883.8	5938058
617345.8	5938041
616371.8	5937118
615875.4	5937080.5
615671.2	5936947.5
615090	5936520
614158.7	5936007.5
613671.9	5935546
613321.4	5935461
613159.2	5935307
612552.6	5935102
612390.1	5934948
611758.1	5934965.5
611407.6	5934880
611082.9	5934572.5

APPENDIX C
GEOPHYSICAL MAPS[1]

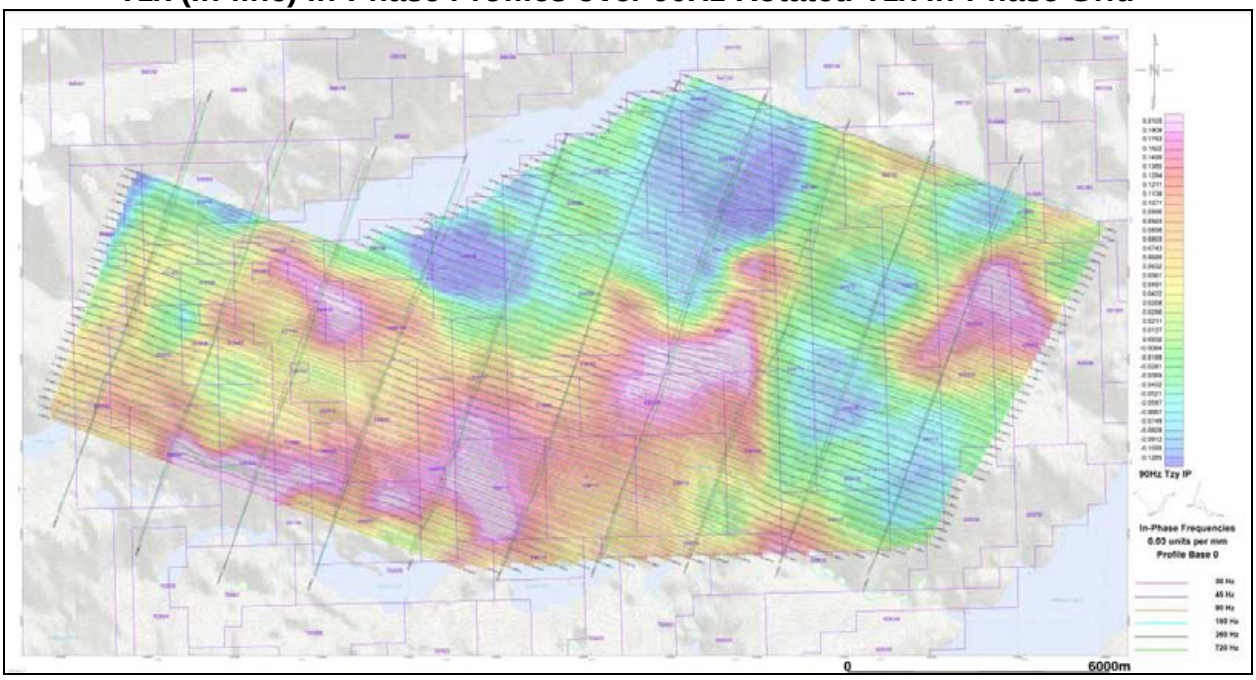


3D View of In-Phase, Total Divergence (DT) grids versus Skin Depth (30Hz–720Hz)

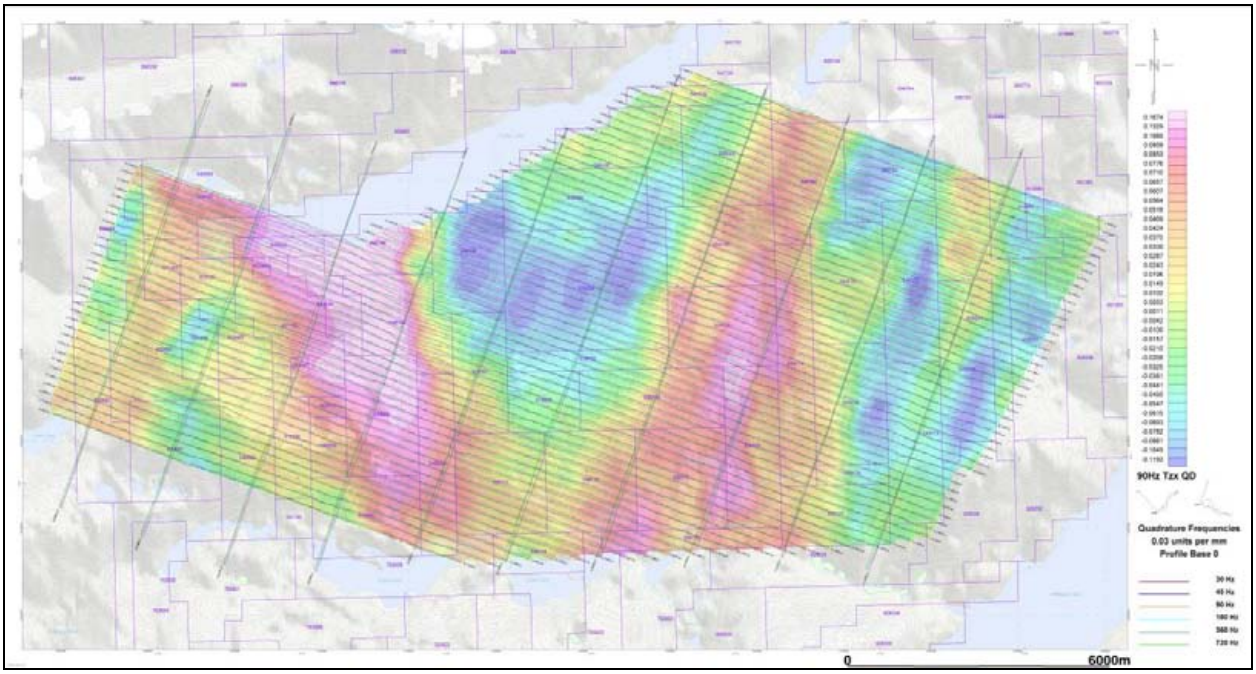
[1] Full size geophysical maps are also available in PDF format on the final DVD



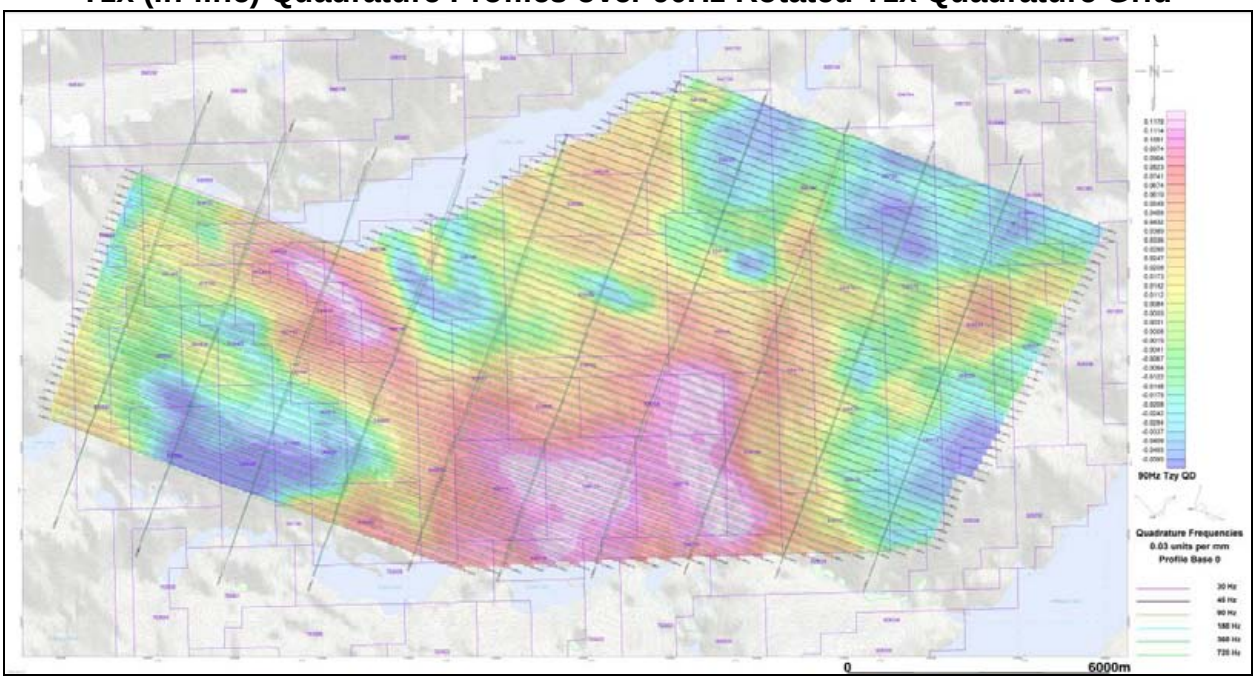
Tzx (In-line) In-Phase Profiles over 90Hz Rotated Tzx In-Phase Grid



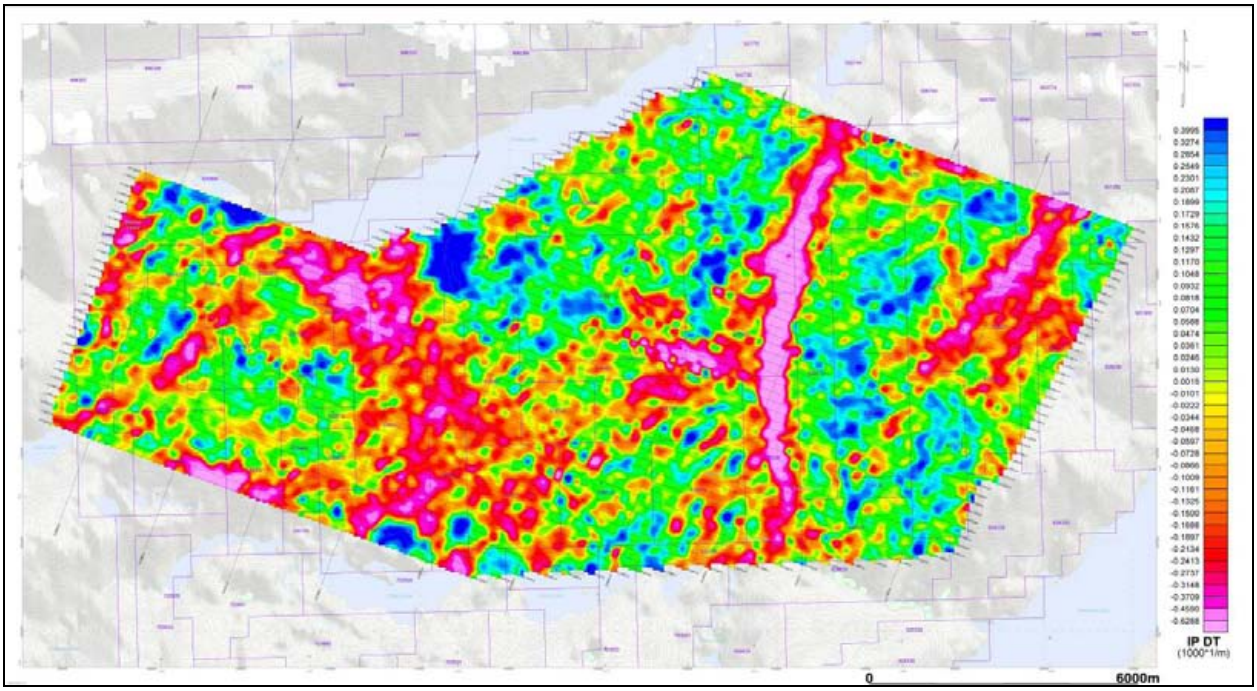
Tzy (Cross-line) In-Phase Profiles over 90Hz Rotated Tzy In-Phase Grid



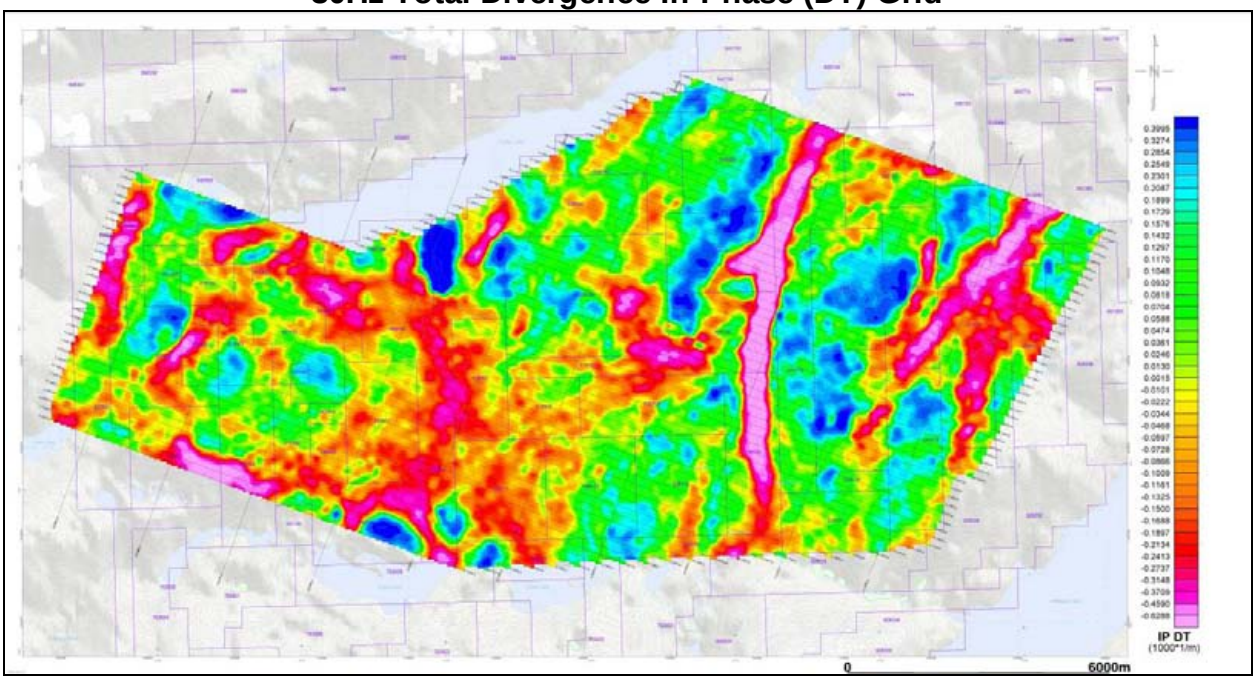
Tzx (In-line) Quadrature Profiles over 90Hz Rotated Tzx Quadrature Grid



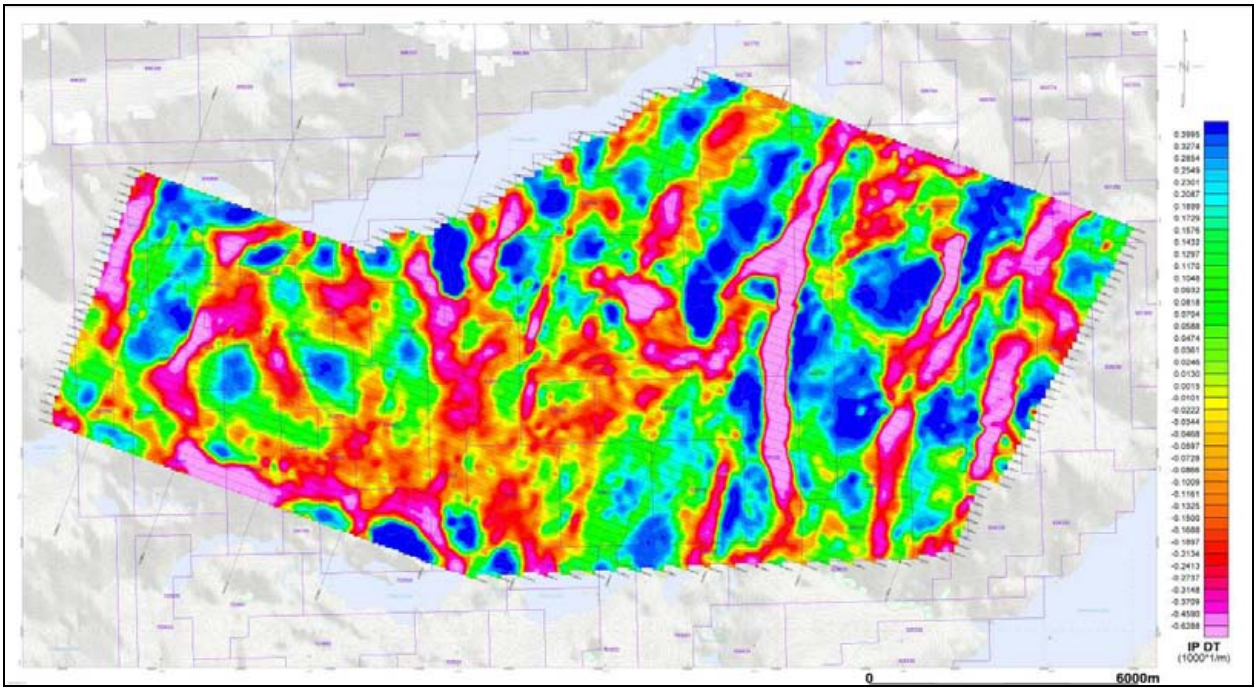
Tzy (Cross-line) Quadrature Profiles over 90Hz Rotated Tzy Quadrature Grid



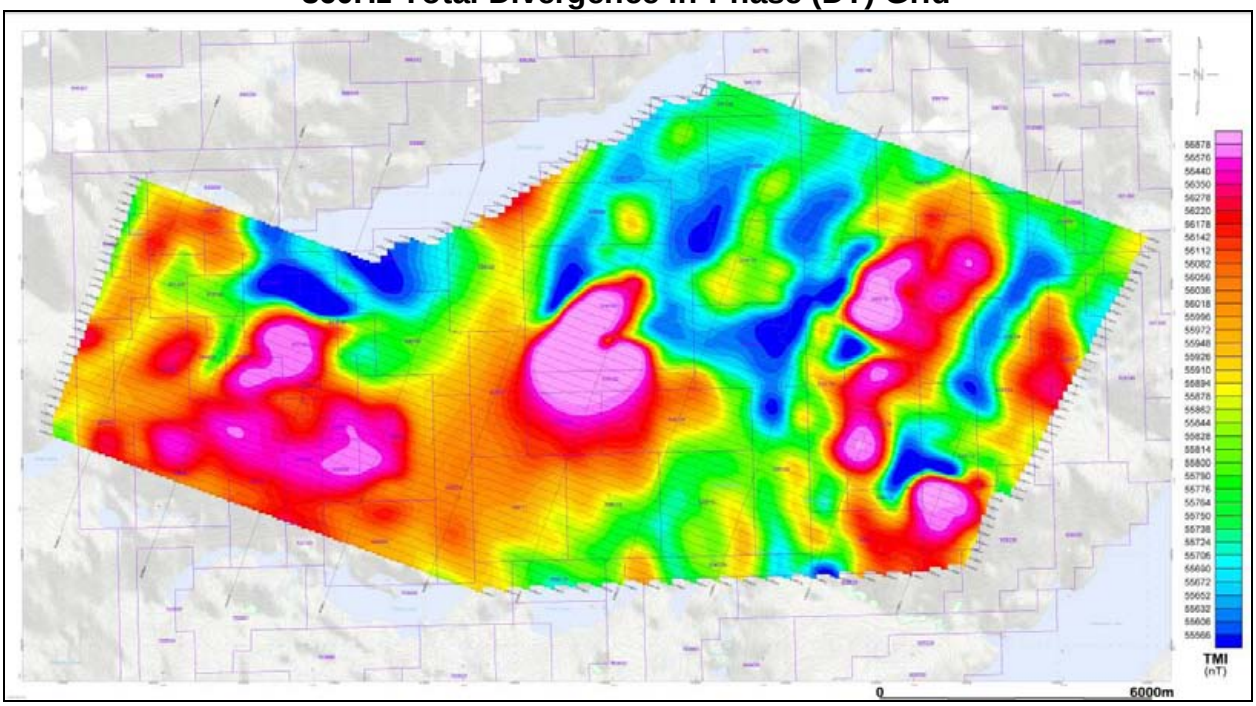
30Hz Total Divergence In-Phase (DT) Grid



90Hz Total Divergence In-Phase (DT) Grid



360Hz Total Divergence In-Phase (DT) Grid



Total Magnetic Intensity (TMI)

APPENDIX D

ZTEM THEORETICAL CONSIDERATIONS

A brief section on the theory behind the AFMAG technique is provided for completeness and a more comprehensive development of the theory can be found in standard texts. The natural EM field is normally horizontally polarized. Subsurface lateral variations of conductivity generate a vertical component, which is linearly related to the horizontal field. Although the fields look like random signals, they may be treated as the sum of sinusoids. At each frequency the field can be expressed as a complex number with magnitude and argument equal to the amplitude and phase of the sinusoid. The relation between the field components can then be expressed by a linear complex equation with two complex coefficients at any one frequency. These coefficients are dependent upon the subsurface and not upon the horizontal field present at any particular time and are appropriate parameters to measure (Vozoff, 1972).

$$Hz(f) = Tx(f)\, Hx(f) + Ty(f)\, Hy(f), \qquad (1)$$

Where

Hx(f), Hy(f) and Hz(f) are x, y and z components of the field,

Tx(f) and Ty(f) are the “tipper” coefficients.

In the case of a horizontally homogeneous environment, Tx and Ty are equal to zero because Hz =0. They show certain anomalies only by the presence of changes in subsurface conductivity in the horizontal direction. The real parts of the coefficients correspond to tangents of tilt angles measured with a controlled source. The complex tensor [Tx, Ty] known as the “tipper” defines the vertical response to horizontal fields in the x and y directions respectively.

Tx and Ty are two unknown coefficients in one equation, and we therefore must combine two or more sets of measurements to solve them. To reduce effects of noise, multiple sets of measurements can be made, and the coefficients, which minimize the squared error in predicting the measured Z from X and Y, can be found. This leads to next formulas for estimating the coefficients.

$$Tx = ([HzHx^*]\,[HyHy^*] - [HzHy^*]\,[HyHx^*]) \,/\, ([HxHx^*]\,[HyHy^*] - [HxHy^*]\,[HyHx^*]), \qquad (2)$$

and

$$Ty = ([HzHy^*]\,[HxHx^*] - [HzHx^*]\,[HxHy^*]) \,/\, ([HxHx^*]\,[HyHy^*] - [HxHy^*]\,[HyHx^*]\,. \qquad (3)$$

Where

[HxHy*] (For example) denotes a sum of the product of Hx with the complex conjugate of Hy.

In practical processing algorithms, all numbers Hx, Hy and Hz can be obtained by applying the same digital band-pass filters to three incoming parallel data signals. FFT algorithms are also applicable. All sums like [HxHy*] can be calculated on the basis of a discrete time interval in the range from 0.1 to 1 sec or on a sliding time base.

Using platform attitude data in the EM data processing can be done at different stages of the signal processing. The most obvious idea is to transform parallel data from local coordinates of the platform into absolute geographical coordinates before the main signal processing procedure. Unfortunately, the proper algorithms of attitude data obtained, often require some post-processing algorithms such as using post-calculated accelerations based on GPS data etc. That is why it is preferable to treat x-y-z coordinates in formulas above in the local coordinate system of the platform and to recalculate resulting local tilt angles into a geographical or global coordinate system later, during the data post processing.

In weak field conditions where the level of the signal is comparable with input noise levels in preamplifiers, the bias in the estimated values of Tx and Ty caused by noise in the horizontal signals become substantial and cannot be reduced by any averaging. This bias can be removed by the use of separate reference signals containing noise uncorrelated with noise in signals Hx and Hy. (Anav et al., 1976).

$$\mathbf{Tx = ([HzRx^*]\,[HyRy^*] - [HzRy^*]\,[HyRx^*]) \,/\, ([HxRx^*]\,[HyRy^*] - [HxRy^*]\,[HyRx^*]), \qquad (4)}$$

and

$$\mathbf{Ty = ([HzRy^*]\,[HxRx^*] - [HzRx^*]\,[HxRy^*]) \,/\, ([HxRx^*]\,[HyRy^*] - [HxRy^*]\,[HyRx^*]). \qquad (5)}$$

Where:

Rx is the reference field x component,
Ry is the reference field y component.

An additional two electromagnetic sensors, providing these reference signals can be placed at some distance away from the main x, y and z sensors. Currently, though, no additional remote-reference processing are applied to ZTEM data.

Numerical Modelling

In order to understand the airborne AFMAG responses to conductors for a variety of geological environments, EMIGMA^{TM} modelling code from PetRos EiKon (Toronto, ON) was obtained to conduct the formulated model studies.

Below are some of the modelling results from their study.

Modelling assumption:

The assumptions for the modelling are that:
3 components of the magnetic field are measured and they are processed according to:

$$Hz(f) = Tx(f)\,Hx(f) + Ty(f)\,Hy(f)$$

The vector (Tx,Ty) is usually referred to as the 'tipper' vector and is determined in the frequency domain through processing. This is normally done by determining transfer functions from an extended time series.

For the modelling exercise, the 3 components of the magnetic vector (Hx,Hy,and Hz) are modelled twice for 2 orthogonal polarizations of a plane wave source field and then the tipper is calculated from a matrix calculation using the results of the 2 source polarizations' models. For the 2D forward modelling results, the tipper vectors are shown as a function of frequency

Basic Model Response

For the initial models, we assume a thin plate-like model. The model is perpendicular to the flight direction. Initially, we will assume very long strike directions. From this quasi-2D model, there are 2 basic responses. The so-called TE response and the so-called TM response.

For the initial models, we will assume the strike is in the y (North) directions and the flight is in the x (East) direction Sensor heights are 30m above ground.

TE Mode: For the TE response, the electric field excitation flows along strike (current channelling) and the horizontal H field (Hx) flows perpendicular to strike thus causing induction through Faraday's law. The Hz response is generated both from channelling and induction.

TM Mode: For this response, the electric field excitation flows perpendicular to strike generating quasi-static charges on faces and the horizontal H field (Hx) flows parallel to strike. Since, the XZ face is very small for this model, little current is induced. The charges on the faces have a small dipole moment due to the thinness of the model.

For the rest of the models unless otherwise noted, the parameters used are:

Strike Length: 1km
Depth Extent: 1km
Conductance: 100S
Depth to Top: 10m
Background: Thin-overburden (10m), Resistive Basement (1000 Ohm-m)

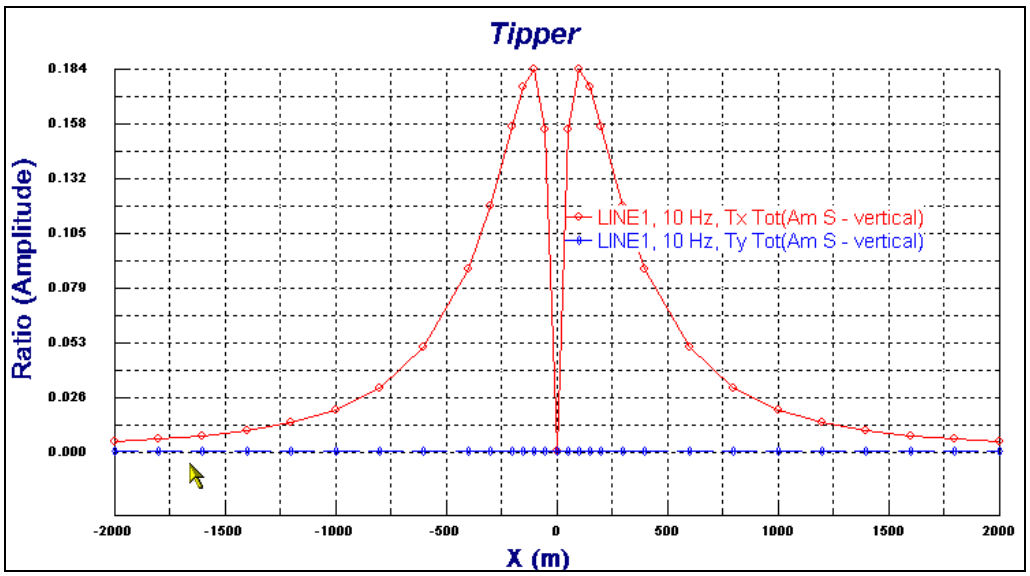


Figure D-1 – Calculated Tipper components at 10 Hz for above model parameters.

Figure D1 shows the Tipper (Tx,Ty) Amplitudes at 10Hz using a10Ωm overburden. Note small Ty (ie quasi-TM response)

Amplitude Response

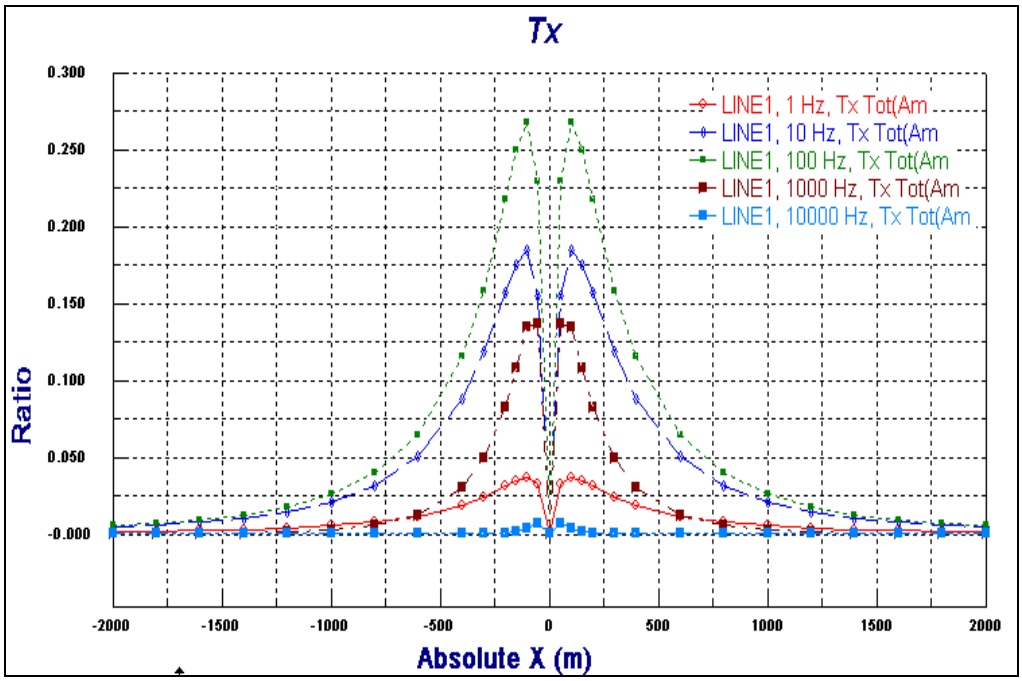


Figure D-2 – Calculated Tx component of the Tipper at various frequencies

The (Tx) response amplitude at 1,10,100,1000,10000 Hx. Peak amplitude at 100Hz

Inphase and Quadrature Response

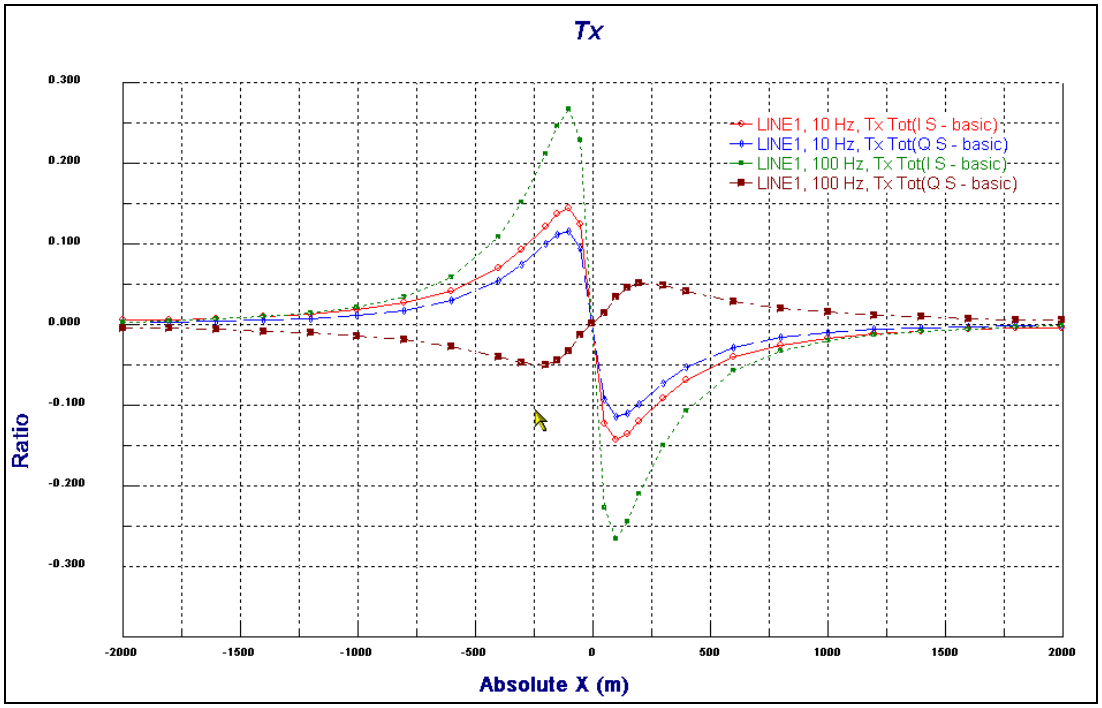


Figure D-3 – Calculated In-phase and Quadrature of the Tx component at various frequencies

Figure D-3 shows the In-phase and Quadrature response at 10 and 100Hz. Note the crossovers in the In-phase and Quadrature, and the phase reversal in the Quadrature responses from low to high frequencies.

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September, 2007

AFMAG Source Fields and ZTEM method[1]

AFMAG uses naturally occurring audio frequency magnetic fields as the source of the primary field signal, and therefore requires no transmitter (Ward, 1959). The primary fields resemble those from VLF except that they are lower frequency (tens & hundreds of Hz versus tens of kHz) and are usually not as strongly directionally polarized (Labson et al., 1985). These EM fields used in AFMAG are derived from worldwide atmospheric thunderstorm activity, have the unique characteristic of being uniform, planar and horizontal, and also propagate vertically into the earth – to great depth, up to several km, as determined by the magnetotelluric (MT) skin depth (Vozoff, 1972), which is directly proportional to the ratio of the bedrock resistivity to the frequency (Figure D4).

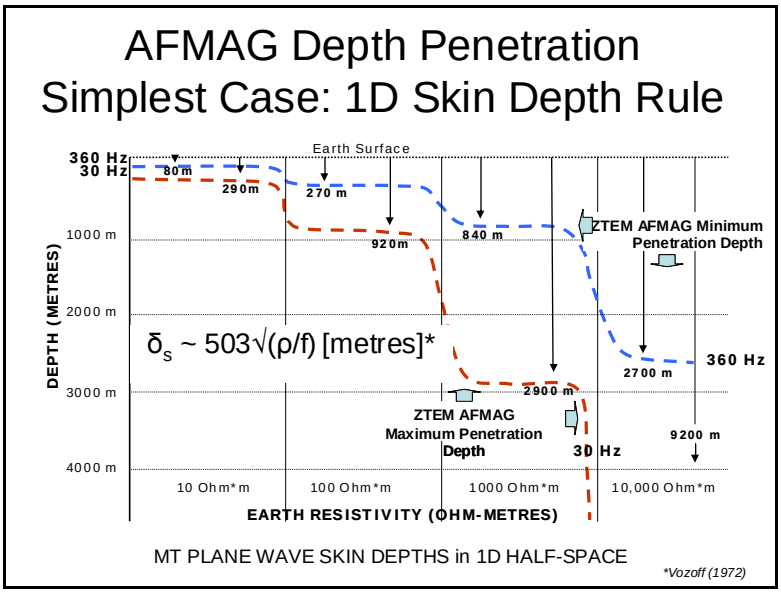

Figure D4: MT Skin Depth Penetrations for ZTEM in 30-360Hz and 10-1000 ohm resistivity

At the frequencies used for ZTEM, the penetration depths likely range between approx. 600m to 2km in this region (approx. 1k ohm-m avg. resistivity assumed), according to the following equation for the Bostick skin depth $\delta_B = 356 * \sqrt{(\rho / f)}$ metres (Bostick, 1977), which is considered appropriate as a rule of thumb equivalent depth estimate.

The other unique aspect of AFMAG fields is that they react to relative contrasts in the resistivity, and therefore do not depend on the absolute conductance, as measured using inductive EM systems, such as VTEM. Hence poorly, conductive targets, such as alteration zones and fault zones can be mapped, as well as higher conductance features, like graphitic units. Conversely, resistive targets can also be detected using AFMAG– provided they are of a sufficient size and contrast to produce a vertical field anomaly. Indeed resistors produce reversed anomalies relative to conductive features. Hence AFMAG can be effective as an all-round resistivity mapping tool, making it unique among airborne EM methods. A series of 2D

[1] From: Legault, J.M., Kumar, H., and Milicevic, B. (2009): ZTEM tipper AFMAG and 2D inversion results over an unconformity uranium target in northern Saskatchewan, Expanded Abstract submitted to Society of Exploration Geophysics SEG conference, Houston, Tx, Nov-2009, 5 pp.

synthetic models that illustrate these aspects have been created using the 2D forward MT modelling code of Wannamaker et al. (1987) and are presented in figures D5-D7.

The tipper from a single site contains information on the dimensionality of the subsurface (Pedersen, 1998), for example, in a horizontally stratified or 1D earth, ***T***=0 and as such H_Z is absent. For a 2D earth with the y-axis along strike, T_Y=0 and $H_Z = T_X * H_X$. In 3D earths, both T_X and T_Y will be non-zero. H_Z is therefore only present, as a secondary field, due to a lateral resistivity contrast, whereas the horizontal H_X and H_Y fields are a mixture of secondary and primary fields (Stodt et al., 1981). But, as an approximation, as in the telluric-magnetotelluric method (T-MT; Hermance and Thayer, 1975) used by distributed MT acquisition systems, the horizontal fields are assumed to be practically uniform, which is particularly useful for rapid reconnaissance mapping purposes. By measuring the vertical magnetic field H_X, using a mobile receiver and the orthogonal horizontal H_X and H_Y fields at a fixed base station reference site, ZTEM is a direct adaptation of this technique for airborne AFMAG surveying.

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Geotech Ltd.

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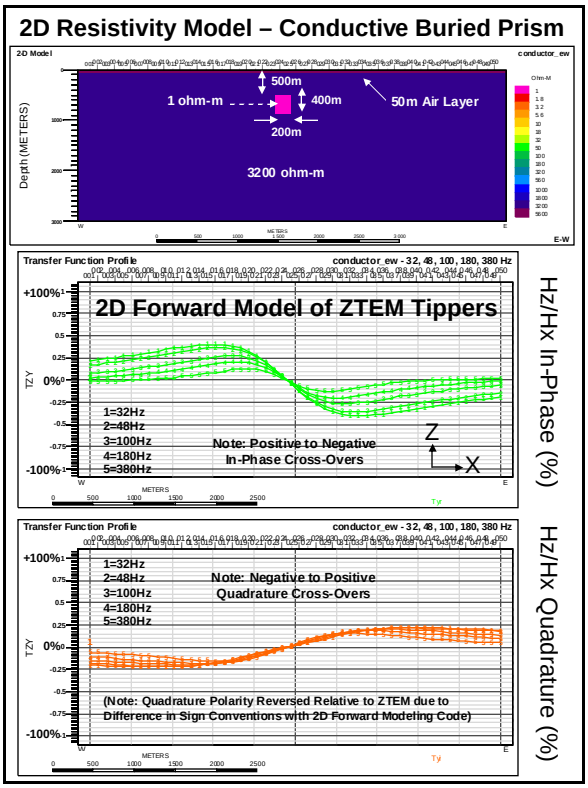

Figure D5: 2D synthetic forward model Tipper responses (Tzy) for conductive brick model.

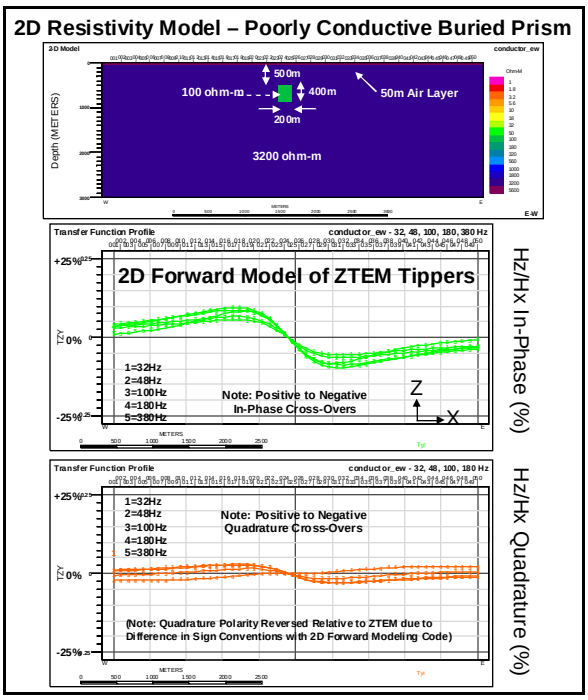

Figure D6: 2D synthetic forward model Tipper response (Tzx) for poorly conductive brick model.

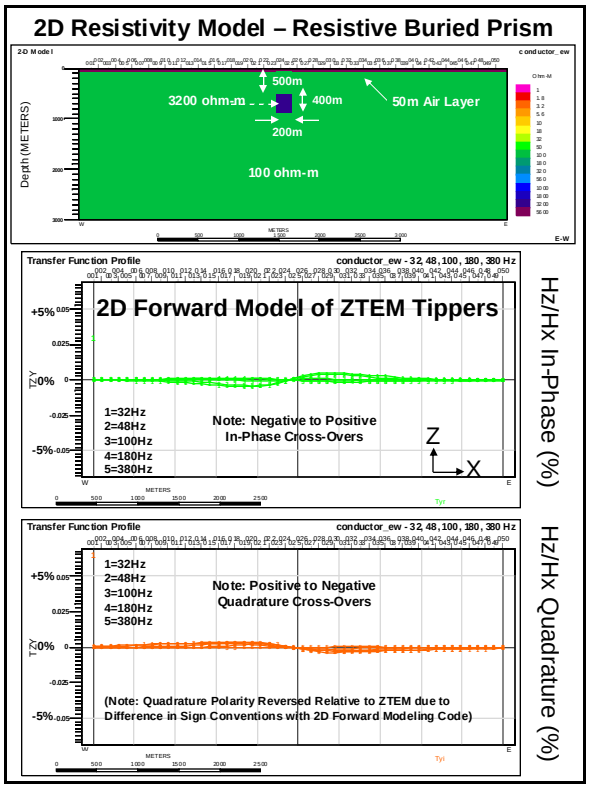

Figure D7: 2D synthetic forward model Tipper response (Tzx) for resistive brick model.

APPENDIX E

ZTEM (AIRBORNE AFMAG) TESTS OVER UNCONFORMITY URANIUM DEPOSITS[6]

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Key Words: ZTEM, AFMAG, electromagnetic, airborne, uranium, Athabasca.

INTRODUCTION

A series of demonstration tests were conducted using the ZTEM, airborne AFMAG system over deep targets in the Athabasca Basin of Saskatchewan, Canada. These tests were conducted in mid-2008 and were flown to test ZTEM's ability to detect large conductive targets at depth; deeper than conventional airborne EM methods. Data are presented over areas where the conductors are located 450-600 metres beneath the surface. As well, a case of ZTEM following the plunge of a conductor to over 800 metres depth is shown.

BACKGROUND

The ZTEM system is the latest implementation of an airborne AFMAG system first commercialized in late 2006. ZTEM uses a large, 8 metre diameter airborne air core coil, slung from a helicopter, to measure the vertical component of the AFMAG signal. Two 4 metre square coils are deployed on the ground to measure the horizontal field. The ZTEM system has flown successful demonstration surveys over porphyry copper deposits in the southwest USA (Zang et al., 2008).

ZTEM was tested in the Athabasca Basin in Canada in May of 2008 to determine its depth of investigation and to determine its suitability for mapping deep conductors in the crystalline basement. Over 30% of the world's U3O8 is mined in the Athabasca Basin from unconformity uranium deposits. Unconformity uranium deposits of the Athabasca Basin are often associated with conductors located in the crystalline basement. The search for economic uranium deposits is moving to areas of the basin which are deeper and beyond the detection limits of modern airborne instrumentation. This creates the requirement for a system which can detect conductivity past the detection limits of modern traditional EM systems. This was the motivation behind the field trials of the ZTEM system in the Athabasca Basin. Several areas where known deep conductors (450-600m+) were located were flown. Also, a test survey block in the northern part of the basin was able to trace a deep and plunging conductor to depths that no other airborne EM system has been able to achieve.

ATHABASCA BASIN GEOLOGY

The high-grade uranium deposits within the Athabasca Basin are associated with the unconformity between the essentially flat-lying Proterozoic Athabasca Group sandstones and the underlying Archean-Paleoproterozoic metamorphic and igneous basement rocks. The deposits occupy a range of positions from wholly basement-hosted to wholly sediment-hosted, at structurally favourable sites in the interface between the deeply weathered basement and overlying sediments of the Athabasca Basin (Ruzicka, 1997). The locations of These deposits are lithologically and structurally controlled by

[6] Extended abstract submitted to 20TH ASEG International Geophysical Conference & Exhibition, Adelaide, AU, 22-26 Feb, 2009.

the sub-Athabasca unconformity and basement faults and fracture zones, which are localized in graphitic pelitic gneisses that may flank structurally competent Archean granitoid domes (Quirt, 1989).

In general, most of the known important deposits tend to occur within a few tens to a few hundred metres of the unconformity and within 500 m of the current ground surface. This may be more of a limitation of exploration techniques. There is no reason to believe that the distribution of the deposits is dependent on the modern day depth of burial.
Empirically, the geophysical exploration for unconformity type uranium targets have been to search for large basement structures which post date the sandstone deposition of the basement (Matthews et. al, 1997). All the deposits located so far are associated with fault structures associated with a graphitic conductive basement. An alteration zone of clay silicification and enrichment around the deposits probably leads to magnetite destruction causing the magnetic low observed around the deposits. The clay alteration should give rise to a resistivity low signature about the deposits. The low conductivity of the clay alteration makes it a difficult target for airborne EM if it is buried at significant depth.

ZTEM INSTRUMENTATION AND PRESENTATION

ZTEM is an airborne AFMAG system introduced by Geotech Ltd. of Canada in early 2007 (Lo et al., 2008). In a ZTEM survey, a single vertical dipole air-core coil is flown over the survey area in a grid pattern similar to other airborne electromagnetic surveys. Two orthogonal, air-core, horizontal axis coils placed close to the survey site measures the horizontal EM fields for reference. A GPS array on the airborne coil monitors its attitude for post-flight corrections.

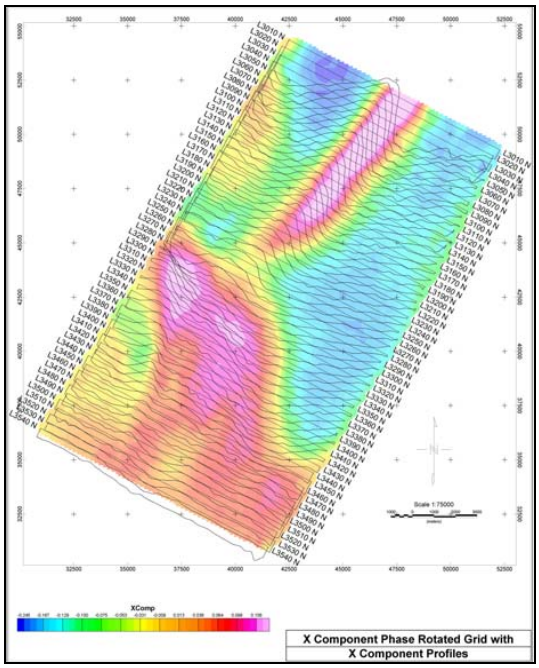

Figure 1 – Stacked profiles of the x-component Tipper over the gridded values of the phase rotated x-component data. Note that the cross-overs in the profiles are now peaks on the image.

As the source field is assumed to be far away, the excitation of the ground is more or less uniform.

For large structures, the signal fall-off will be much slower than from a dipole source, such as those energized by traditional airborne systems. With the ZTEM system being less susceptible to terrain clearance, the planned ground clearance height is higher and the terrain drape is looser as compared to standard helicopter EM surveys.

The two Tippers obtained from the relationship between the vertical airborne coil and the two ground coils have a cross-over over a steeply dipping, plate-like body. The cross-overs can be made into local maxima via a 90 degree phase rotation which allows for easier interpretation of the gridded values. Figure 1 is an example of this transformation.

To present the data of both Tippers as one image, we calculate a parameter termed the DT which is the horizontal divergence of the two Tippers, much in the same manner as the "peaker" parameter in VLF (Pedersen, 1998). The DT is typically plotted with an inverted colour bar as it is negative over a steeply dipping thin body.

ZTEM RESULTS – NORTHERN ATHABASCA BASIN

Figure 2 shows gridded values from a number of ZTEM lines over an area where the sedimentary cover is approximately 450-600 metres thick. A number of traditional EM systems have also been flown over this block. While they were able to detect conductors, the resolution of the conductive features is not nearly as detailed as the information provided by ZTEM.

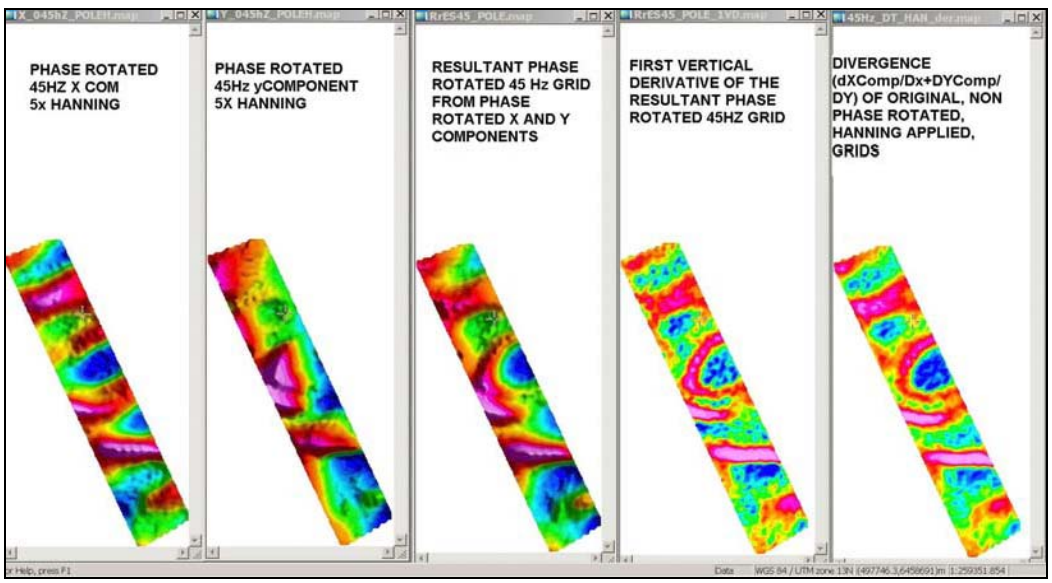

Figure 2 – ZTEM results over an area of 450-600 metre thick sedimentary cover.

Figure 3, from another area, shows the data from one of the larger blocks that was flown. It is a 3D composite image of the DT at various frequencies plotted at the equivalent skin depth assuming a 1,000 ohm-m average resistivity.

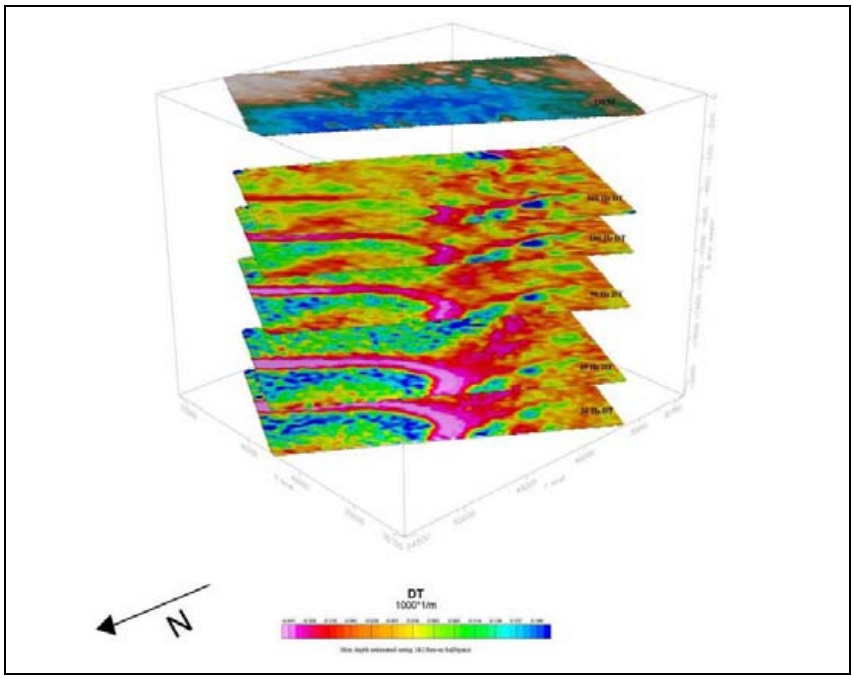

Figure 3 - Perspective view of DT's of different frequencies plotted at the skin depth (using a 1,000 ohm-m Earth.

The data in Figure 3 come from a survey over the north rim of the Athabasca Basin. The sandstone cover is about 500m on the left hand side of the image, and progressively getting deeper to the right. It is about 700m in the middle part of the image and over 800 metres thick on the right middle portion where exploration drilling is concentrated. Starting in the middle left and trending to the right of the image, there is a known graphitic shear.

In the uppermost (600m) "depth slice", Figure 3 shows a linear conductive feature that progressively weakens as one moves to the right until it is no longer seen. This is interpreted to be due to the graphitic shear conductor plunging deeper past the depth of investigation of the 360 Hz data. The lower frequencies penetrate more into the sedimentary cover that is deeper towards the right. DT's of decreasing frequency show the linear conductive feature extending more and more to the right. The feature also strengthens/sharpens into a synformal shape with lower frequencies. This fits with what the known geology of a plunging conductor at depth is doing.

At the nose of the fold, in the right third of the images, we also see another, broader anomalous zone that trends towards the back of the image. At this location, two radioactive springs are situated. These spring waters which are anomalously high in uranium and radon may reflect the upward migration of deep waters along faults, suggesting structural targets in areas where basinal waters may have tapped a radioactive source. This broad DT trend might be the plunge of the fold axis that is aligned away from the front of the image. An anomaly along this trend, at the highest frequency, that steadily grows with each decreasing frequency can be seen. This might represent an alteration zone in the sandstone that is detected at the shallowest depth. By about the 90Hz DT depth slice or so, we are possibly in the deeper basement and into a basement graphitic unit.

CONCLUSIONS

A number of successful ZTEM tests were conducted over the Athabasca Basin. The tests demonstrated that ZTEM can easily detect conductivity to 800 metres beneath relatively resistive sedimentary cover. Assuming a 1,000 ohm-metre resistivity, the skin depth of the 30 Hz data is approximately 2,000 metres. The 30 Hz data presented have good signal to noise ratios indicating a deep depth of exploration. The observation that ZTEM may be detecting the clay alteration above the crystalline basement is a significant advantage for exploration of unconformity uranium deposits.

More demonstration surveys are planned in the Athabasca Basin later this year. And more target types for testing are also planned.

ACKNOWLEDGEMENTS

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APPENDIX F

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

2D ZTEM Inversion Start Model Test Results

for

Callinex Mines Inc.

Cole/Troitsa Lake Project

Houston, British Columbia

Project: 11312

By

Geotech Ltd.

245 Industrial Parkway North

Aurora, Ont., CANADA, L4G 4C4

Tel: 1.905.841.5004

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September, 2012

GEOTECH LTD. AIRBORNE GEOPHYSICAL

Start Model Test

ZTEM inversions require a suitable a priori resistivity starting model – usually the representative average/bulk resistivity for the survey area. The correct choice ensures the proper depth estimates for inversion models. When ground or borehole resistivity data are unavailable, the choice can be estimated using a range of starting models. The final model with smallest input error suggests the most optimal choice of half-space resistivity. We have tested 100, 300, 1000, and 3000 ohm-m start models for L1170. The 1000 ohm-m apriori proved to be most suitable choice, statistically. The results are summarized below.

Start model (ohm-m)	Input error (%)	Iterations	RMS
100	2.3992	5	0.9998
300	1.8762	5	1.0000
1000	**1.6652**	5	0.9999
3000	1.7362	5	1.0000

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

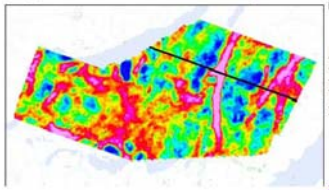
GEOTECH LTD.

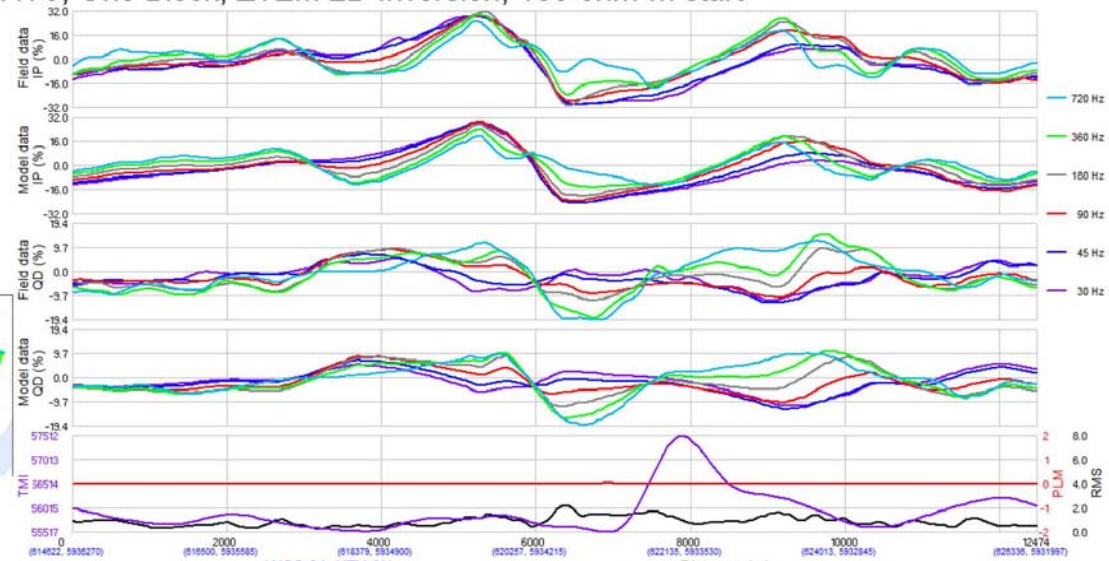
L1170, One Block, ZTEM 2D Inversion, 100 ohm-m start

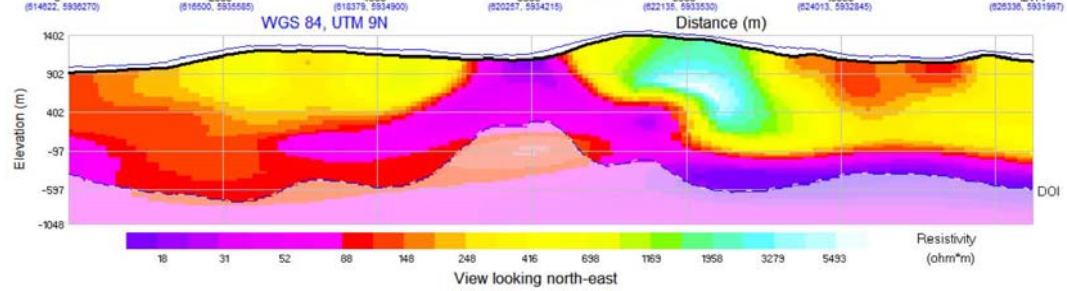
2D INVERSION PARAMETERS

Inversion code: Geotech AV2DTOPO
Model Mesh: 440 wide x 112 vertical,
Average cell width: 32.65 m
2 cells between sites
Input Data: In-Phase & Quadrature,
Tzx In-line (only)
Average sampling rate: 6.070 points,
Total data points: 2304
Frequencies: 30 45 90 180 360 720
Input error(%): 2.40 2.40 2.40 2.40 2.40 2.40
Half-space resistivity: 100 ohm-m,
Output error: 1.000 RMS in 5 iterations

Flight Path of L1170 over IP 90 Hz DT image







Callinex Mines Inc.
One Block
Houston, British Columbia

Geotech ZTEM System
Resistivity-Depth Image
Project 11312, L1170
Flight 1, 2012/07/30

Flown and processed by Geotech Ltd.
245 Industrial Parkway North
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

2012/9/4

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

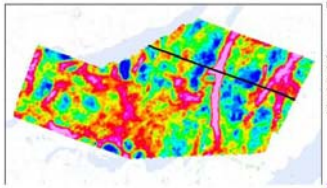
GEOTECH LTD.

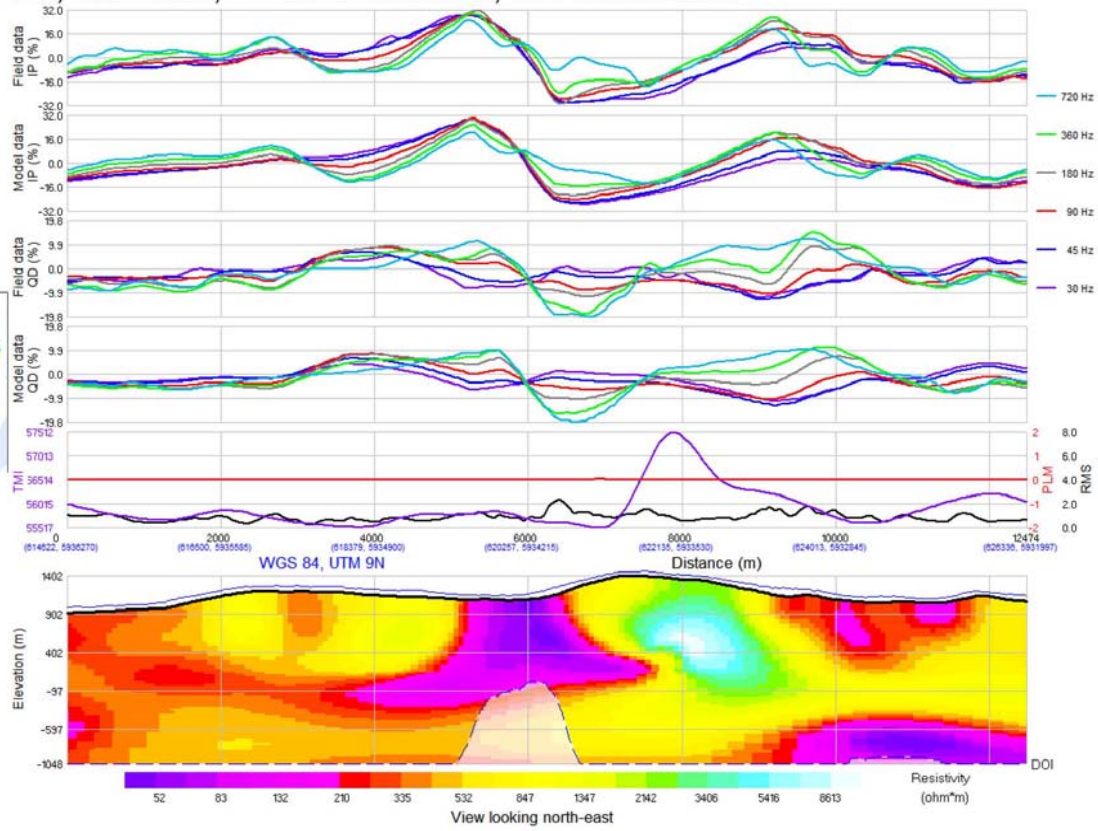
L1170, One Block, ZTEM 2D Inversion, 300 ohm-m start

2D INVERSION PARAMETERS

Inversion code: Geotech AV2DTOPO
Model Mesh: 440 wide x 112 vertical,
Average cell width: 32.65 m
2 cells between sites
Input Data: In-Phase & Quadrature,
Tzx In-line (only)
Average sampling rate: 6.070 points,
Total data points: 2304
Frequencies: 30 45 90 180 360 720
Input error(%): 1.88 1.88 1.88 1.88 1.88 1.88
Half-space resistivity: 300 ohm-m,
Output error: 1.000 RMS in 5 iterations

Flight Path of L1170 over IP 90 Hz DT image





Callinex Mines Inc. One Block Houston, British Columbia
Geotech ZTEM System Resistivity-Depth Image Project 11312, L1170 Flight 1, 2012/07/30
Flown and processed by Geotech Ltd. 245 Industrial Parkway North Aurora, Ontario, Canada L4G 4C4 www.geotech.ca
2012/9/4

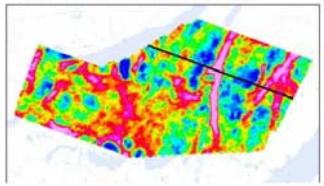
GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

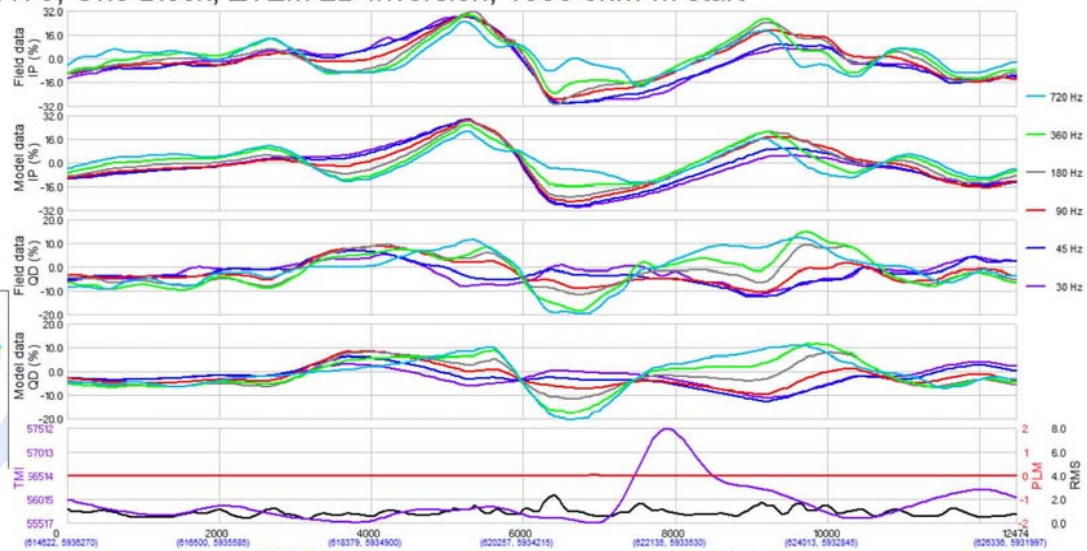
GEOTECH LTD.

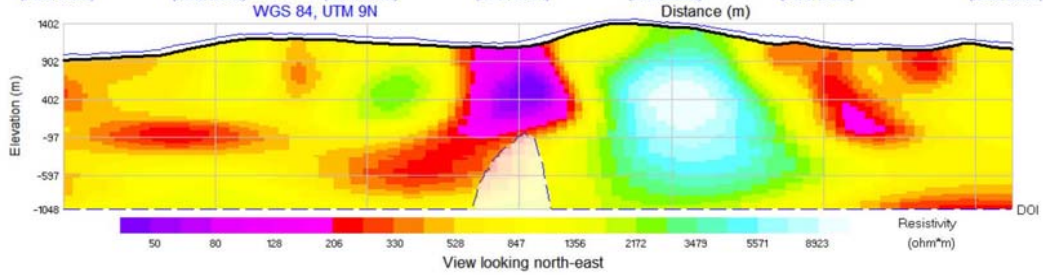
L1170, One Block, ZTEM 2D Inversion, 1000 ohm-m start

2D INVERSION PARAMETERS
Inversion code: Geotech AV2DTOPO
Model Mesh: 440 wide x 112 vertical,
Average cell width: 32.65 m
2 cells between sites
Input Data: In-Phase & Quadrature,
Tzx In-line (only)
Average sampling rate: 6.070 points,
Total data points: 2304
Frequencies: 30 45 90 180 360 720
Input error(%): 1.67 1.67 1.67 1.67 1.67 1.67
Half-space resistivity: 1000 ohm-m,
Output error: 1.000 RMS in 5 iterations

Flight Path of L1170 over IP 90 Hz DT image







Callinex Mines Inc. One Block Houston, British Columbia
Geotech ZTEM System Resistivity-Depth Image Project 11312, L1170 Flight 1, 2012/07/30
Flown and processed by Geotech Ltd. 245 Industrial Parkway North Aurora, Ontario, Canada L4G 4C4 www.geotech.ca
2012/9/4

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

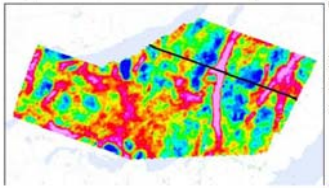
GEOTECH LTD.

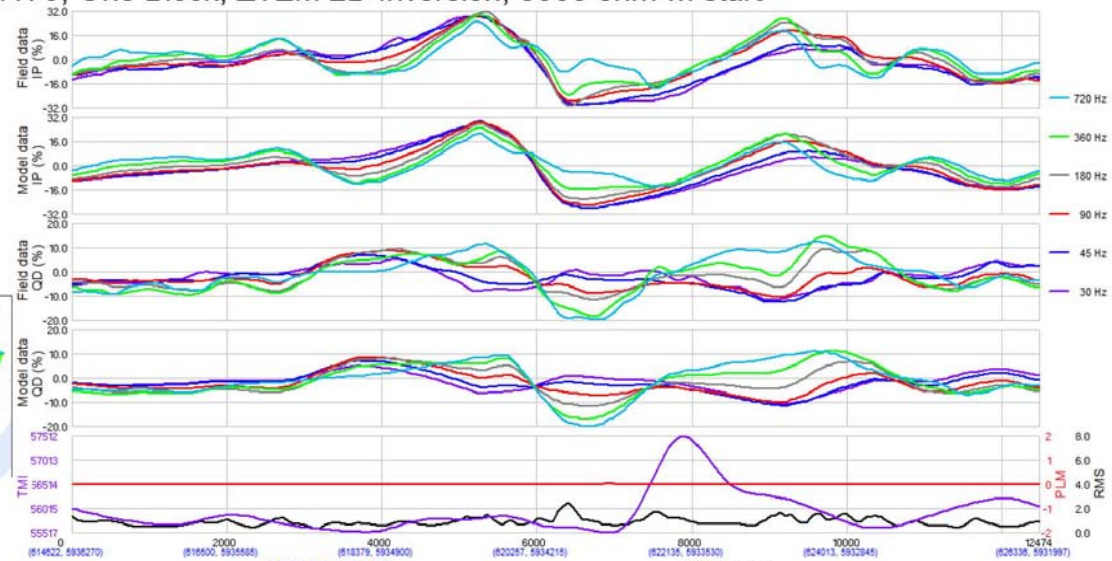
L1170, One Block, ZTEM 2D Inversion, 3000 ohm-m start

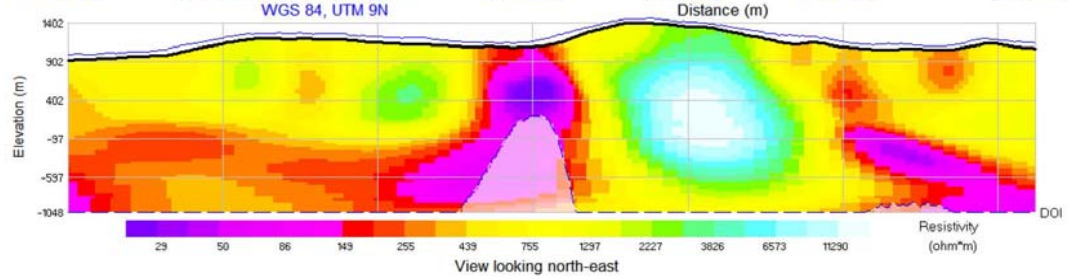
2D INVERSION PARAMETERS

Inversion code: Geotech AV2DTOPO
Model Mesh: 440 wide x 112 vertical,
Average cell width: 32.65 m
2 cells between sites
Input Data: In-Phase & Quadrature,
Tzx In-line (only)
Average sampling rate: 6.070 points,
Total data points: 2304
Frequencies: 30 45 90 180 360 720
Input error(%): 1.74 1.74 1.74 1.74 1.74 1.74
Half-space resistivity: 3000 ohm-m,
Output error: 1.000 RMS in 5 iterations

Flight Path of L1170 over IP 90 Hz DT image







Callinex Mines Inc. One Block Houston, British Columbia
Geotech ZTEM System Resistivity-Depth Image Project 11312, L1170 Flight 1, 2012/07/30
Flown and processed by Geotech Ltd. 245 Industrial Parkway North Aurora, Ontario, Canada L4G 4C4 www.geotech.ca
2012/9/4

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

2D ZTEM Inversion Results
for
Callinex Mines Inc.
Cole/Troitsa Lake Project
Houston, British Columbia

Project: 11312

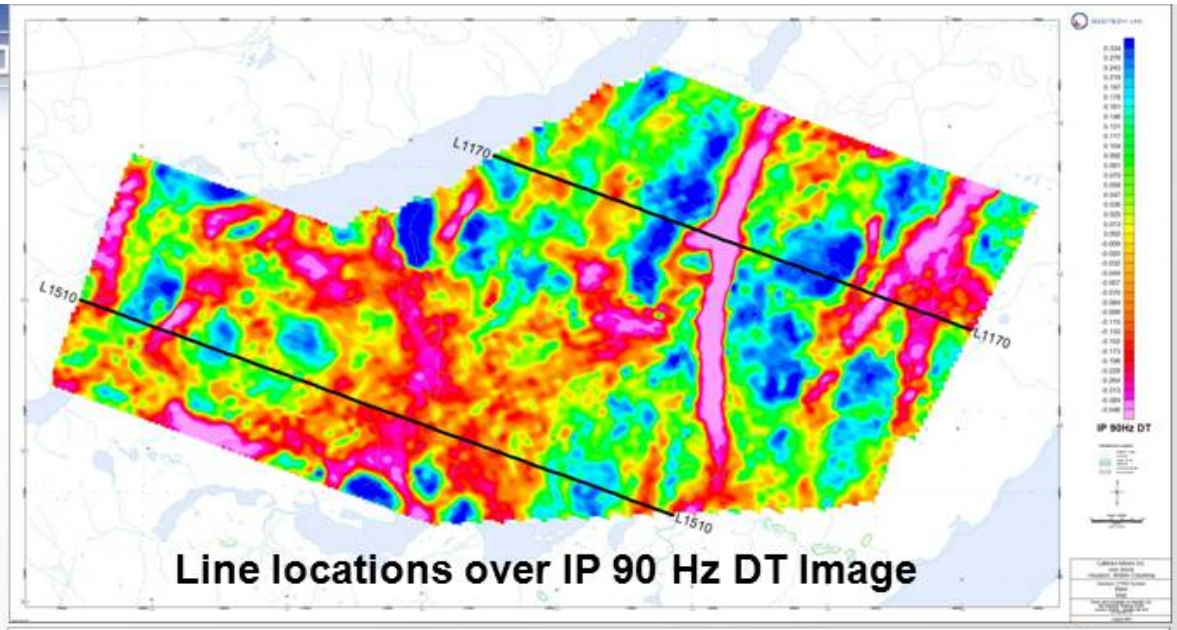
By
Geotech Ltd.

245 Industrial Parkway North
Aurora, Ont., CANADA, L4G 4C4
Tel: 1.905.841.5004
Fax: 1.905.841.0611
www.geotech.ca
Email: info@geotech.ca
September, 2012

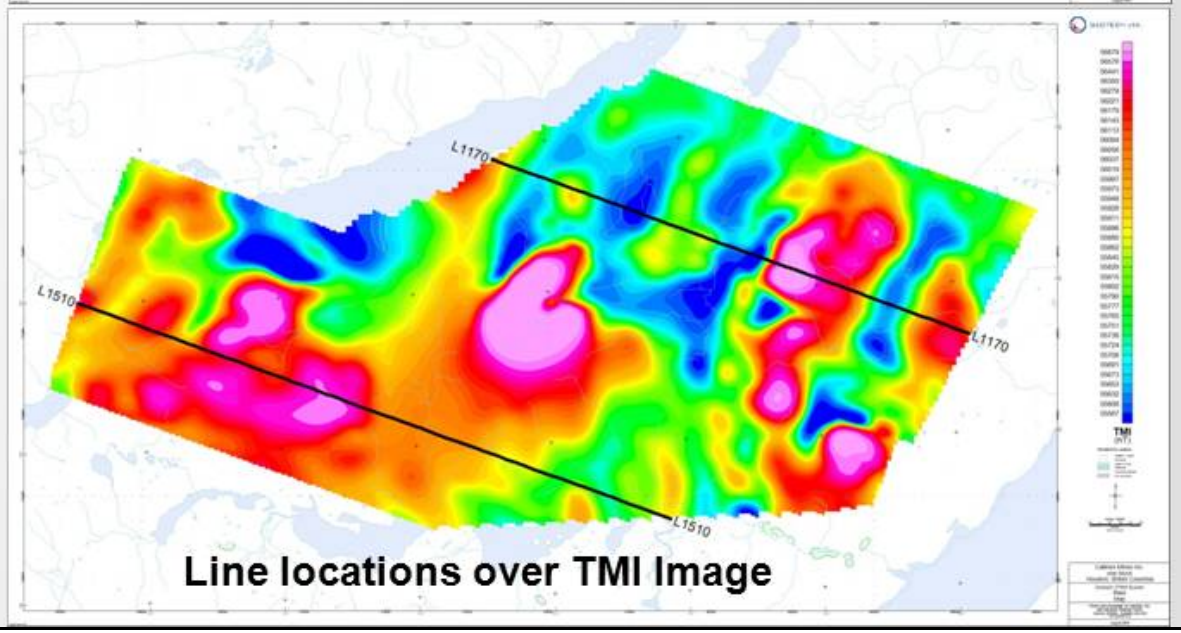
GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

Summary

- Geotech Av2Dtopo program was used to perform the inversion of ZTEM data (Tzx in-line) with topography and receiver altitude effects considered.
- Total 2 lines, 3 inversions were performed with 6 frequency data and 1000 ohm-m start model.
- Slide 3 shows the inverted line locations over In-Phase (IP) 90Hz DT image and TMI image.
- Slides 4 and 6 show the inversion results, the inversion parameters, and the location over IP 90Hz DT image for each inversion.
- The dash lines in the resistivity cross sections indicate 1.5 x MT skin depth at 30Hz, which is a maximum depth of investigation (DOI) estimate (Spies, 1989) for the ZTEM inversion model.



Line locations over IP 90 Hz DT Image



Line locations over TMI Image

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

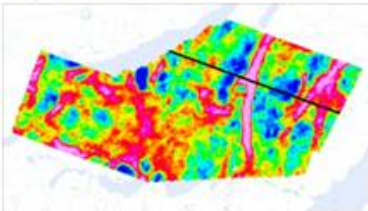
GEOTECH LTD.

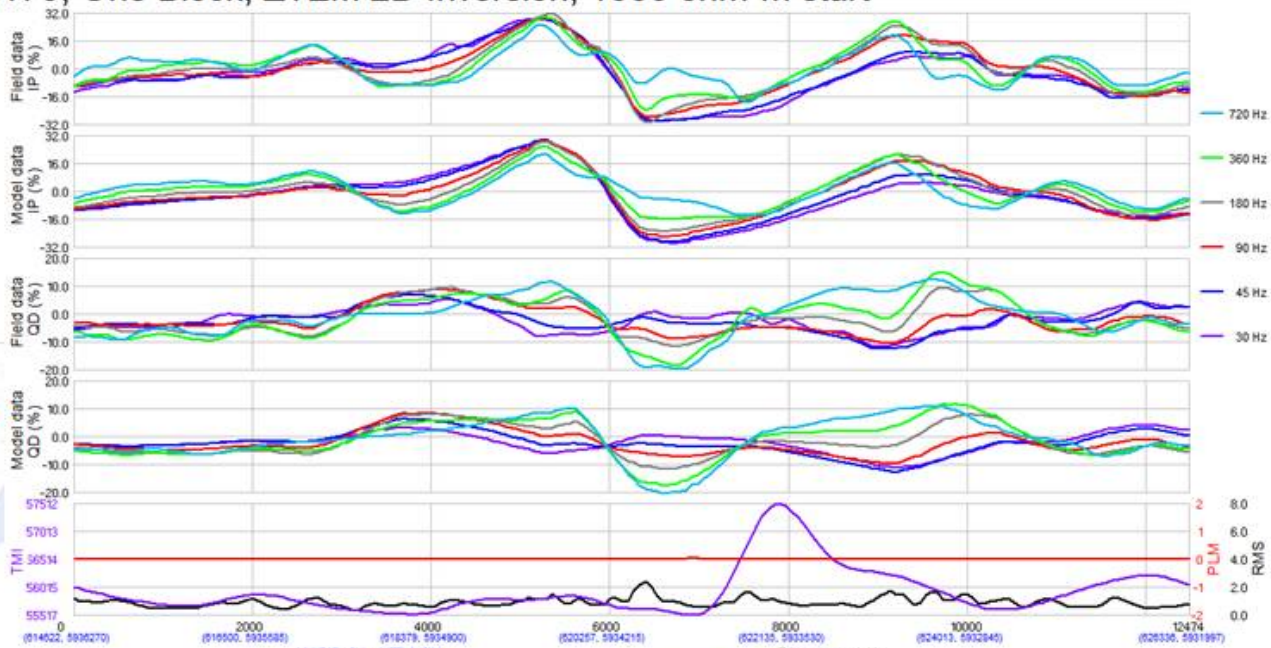
L1170, One Block, ZTEM 2D Inversion, 1000 ohm-m start

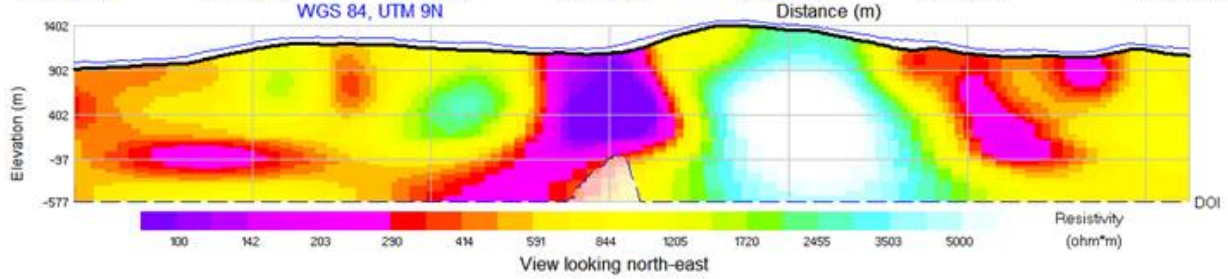
2D INVERSION PARAMETERS

Inversion code: Geotech AV2DTOPO
Model Mesh: 440 wide x 112 vertical,
Average cell width: 32.65 m
2 cells between sites
Input Data: In-Phase & Quadrature,
Tzx In-line (only)
Average sampling rate: 6.070 points,
Total data points: 2304
Frequencies: 30 45 90 180 360 720
Input error(%): 1.67 1.67 1.67 1.67 1.67 1.67
Half-space resistivity: 1000 ohm-m,
Output error: 1.000 RMS in 5 iterations

Flight Path of L1170 over IP 90 Hz DT image







Callinex Mines Inc. One Block Houston, British Columbia
Geotech ZTEM System Resistivity-Depth Image Project 11312, L1170 Flight 1, 2012/07/30
Flown and processed by Geotech Ltd. 245 Industrial Parkway North Aurora, Ontario, Canada L4G 4C4 www.geotech.ca
2012/9/5

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

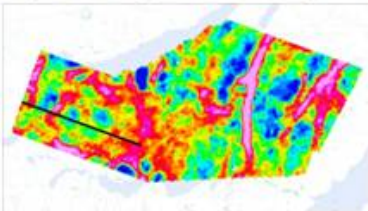
GEOTECH LTD.

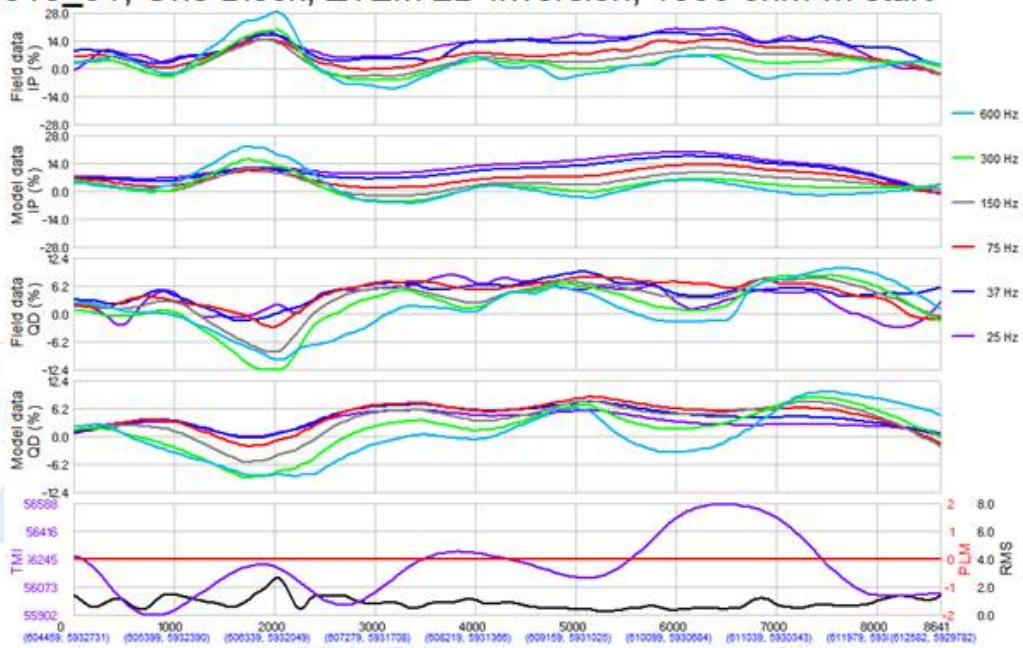
L1510_01, One Block, ZTEM 2D Inversion, 1000 ohm-m start

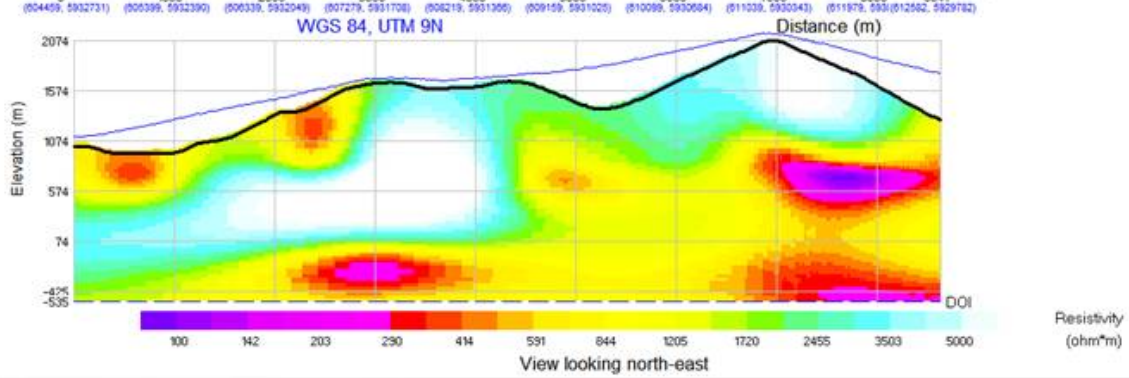
2D INVERSION PARAMETERS

Inversion code: Geotech AV2DTOPO
Model Mesh: 440 wide x 112 vertical,
Average cell width: 22.62 m
2 cells between sites
Input Data: In-Phase & Quadrature,
Tzx In-line (only)
Average sampling rate: 1.900 points,
Total data points: 2304
Frequencies: 25 37 75 150 300 600
Input error(%): 1.89 1.89 1.89 1.89 1.89 1.89
Half-space resistivity: 1000 ohm-m,
Output error: 0.999 RMS in 5 iterations

Flight Path of L1510_01 over IP 90 Hz DT image







Callinex Mines Inc. One Block Houston, British Columbia
Geotech ZTEM System Resistivity-Depth Image Project 11312, L1510_01 Flight 3, 2012/08/02
Flown and processed by Geotech Ltd. 245 Industrial Parkway North Aurora, Ontario, Canada L4G 4C4 www.geotech.ca
2012/9/5

GEOTECH LTD. AIRBORNE GEOPHYSICAL SURVEYS

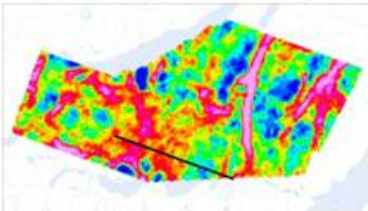
GEOTECH LTD.

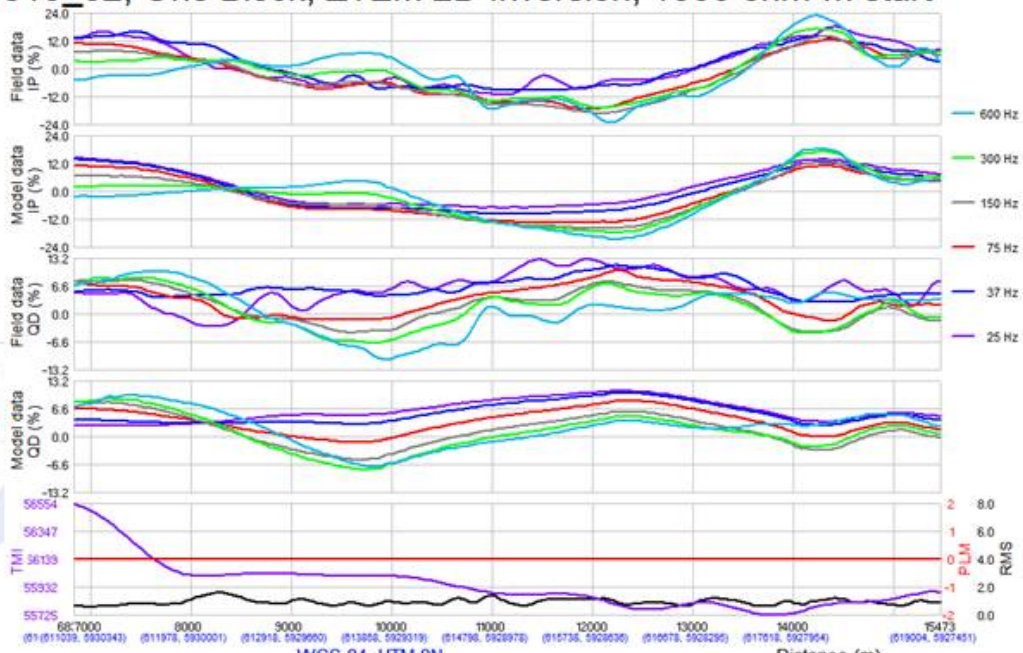
L1510_02, One Block, ZTEM 2D Inversion, 1000 ohm-m start

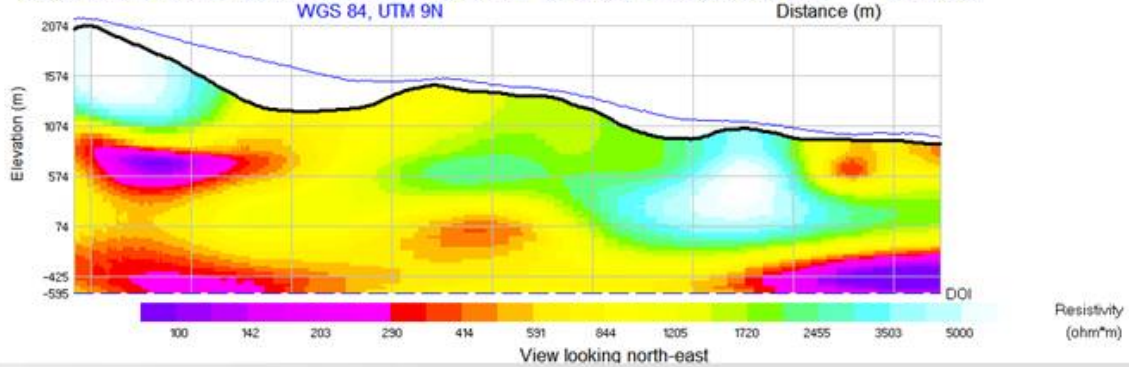
2D INVERSION PARAMETERS

Inversion code: Geotech AV2DTOPO
Model Mesh: 440 wide x 112 vertical,
Average cell width: 22.62 m
2 cells between sites
Input Data: In-Phase & Quadrature,
Tzx In-line (only)
Average sampling rate: 1.900 points,
Total data points: 2304
Frequencies: 25 37 75 150 300 600
Input error(%): 1.76 1.76 1.76 1.76 1.76 1.76
Half-space resistivity: 1000 ohm-m,
Output error: 0.999 RMS in 5 iterations

Flight Path of L1510_02 over IP 90 Hz DT image



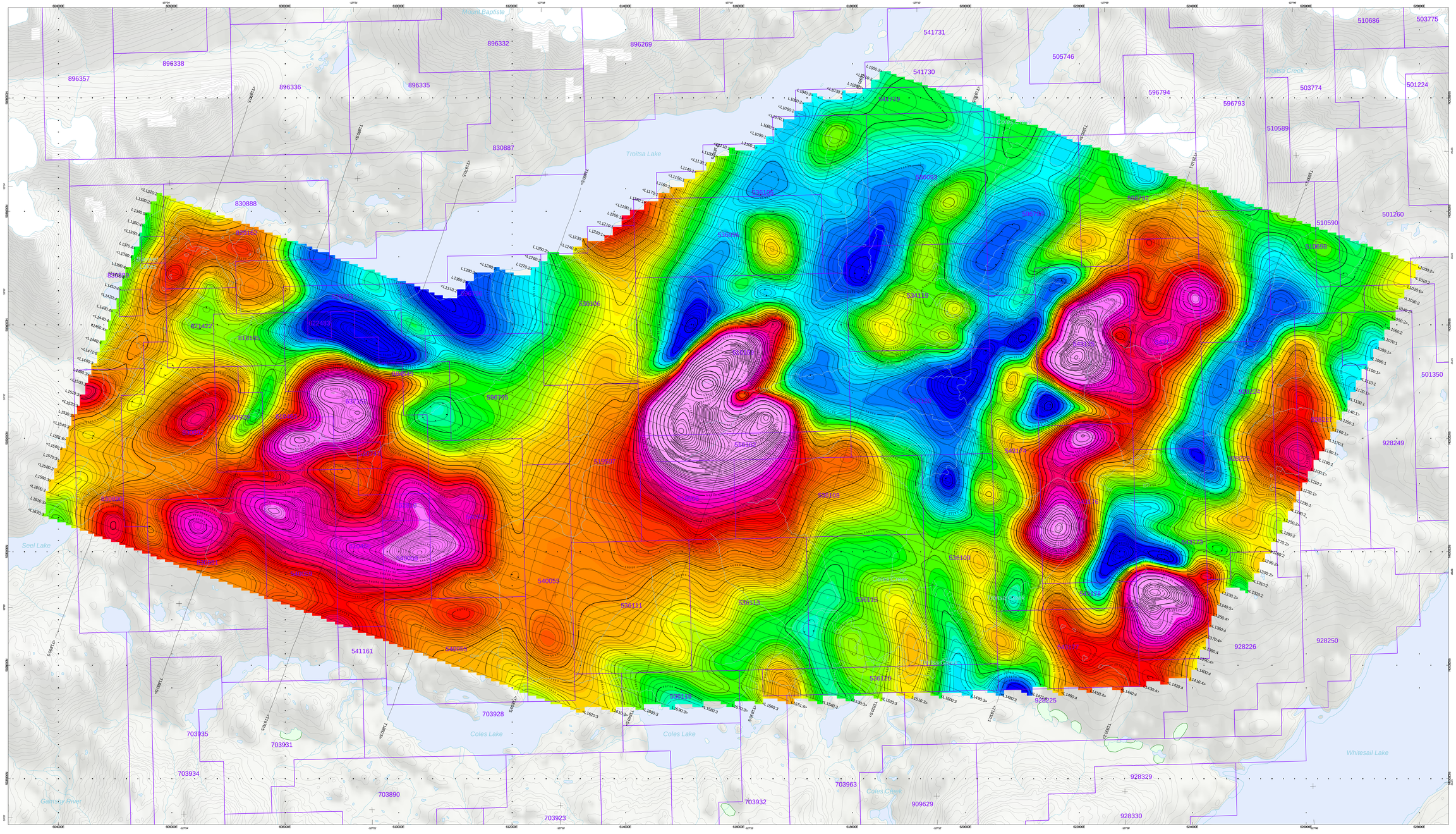




Callinex Mines Inc. One Block Houston, British Columbia
Geotech ZTEM System Resistivity-Depth Image Project 11312, L1510_02 Flight 3, 2012/08/02
Flown and processed by Geotech Ltd. 245 Industrial Parkway North Aurora, Ontario, Canada L4G 4C4 www.geotech.ca
2012/9/5

Appendix J

Airborne Survey Maps



GEOTECH LTD.

SURVEY SPECIFICATIONS:
- Survey Flying Date: July 24th to August- 2nd 2012
- Survey Operations Base: Houston, British Columbia
- Survey Line Spacing: 200 Meters
- Survey Line Direction N 110° E / N 290° E
- Survey Tie Line Spacing: 2000 Meters
- Survey Tie Line Direction: N 20° E / N 200° E
- Helicopter Mean Terrain Clearance: 218 metres
- Mean Ground Air Speed: 35 metres/sec
- ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
- Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS
- Helicopter Type: Aerospatiale A-Star 350 B3 (C-GEOJ)

AIRBORNE INSTRUMENTATION
- Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
- GPS Recievers (4): Novatel CDGPS enabled Propak V3-RT20
- GPS Recievers Location: One on the helicopter, three on EM coil
- Radar Altimeter: Terra TRA 3000/TRI 40
- Nalegation: GEONAV-3

AIRBORNE ELECTROMAGNETIC SYSTEM
- Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
- Coil dimensions: 7.4 metres diameter
- Coil orientation: Vertical Dipole
- Digitizing rate: 2000Hz

AIRBORNE MAGNETOMETER
- Magnetometer: GEOMETRICS
- Magnetometer Sensitivity: +/- 0.02 nT
- Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION

MAGNETIC BASE STATION
- Magnetometer: GEOMETRICS
- Base Station Location: Houston Airport (54°28.2627 N, 126°46.5514 W)

EM BASE STATION
- Two orthogonal square coils
- Coil dimensions: 3.5 metres each side
- Coil orientation: Horizontal Dipole
- Base Station Location: inside the block (53°28.009 N, 127°11.483 W)
- Azimuth: AzA = N 280° E AzB = N 13° E

PROCESSING SUMMARY

MAGNETICS
- Diurnal Subtraction, microlevelling

ZTEM
- Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
- Sampling rate: 0.4 sec.
- Rotation of the inphase part of the inline and orthogonal components (ZXXoc and ZYYoc)to to UTM Eastings and Northings.
- Altitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
- DYATTR) calculated: (dcomp90+dcomp0)/ for all 6 frequencies.
- Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
- Datum: WGS 84
- Projection: Universal Transverse Mercator
- Central Meridian: 135°W (Zone 9N)
- Central Scale Factor: 0.9996
- False Easting/Northing: 500,000/0m
- Major Axis: 6378137.0
- Inverse Flattening: 298.25722
- NTS: 093E06 & 093E11

The topographic database was derived from 1:50000 NRC Dataset Resources Canada(.NT DB data. Lake/Pond/Wetland/Snowand Ice Pack/Mining Claims data was derived from Geocomm. Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocomm.com)(www.geogratis.ca)(https://apps.gov.bc.ca/pub/dwds/home)

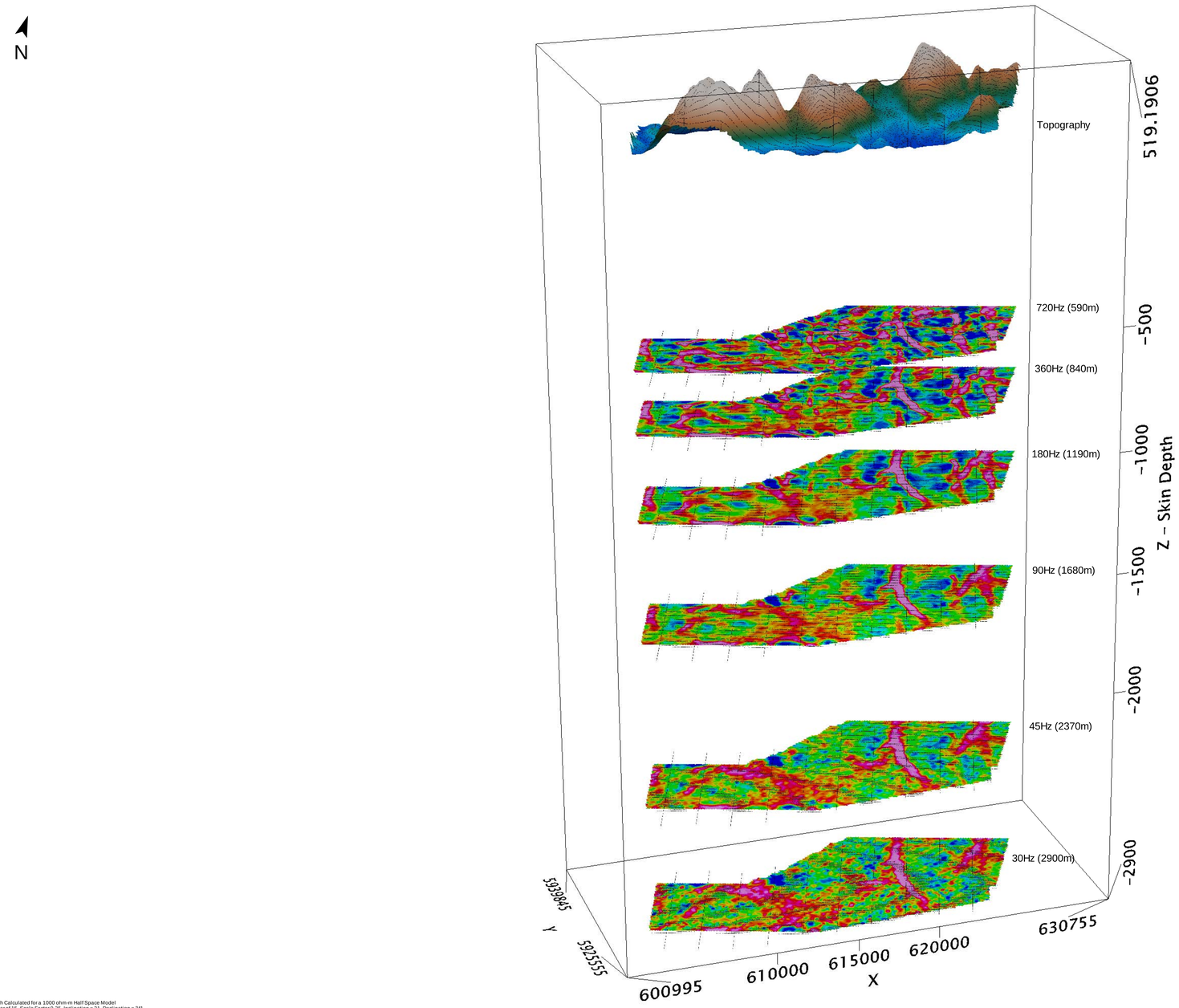
Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System

Total Magnetic Intensity (TMI)

Flown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012



Skin Depth Calculated for a 1000 ohm-m Half Space Model
Z multiplier of 15, Scale Factor 0.25, Inclination = 21, Declination = 341

GEOTECH LTD.

SURVEY SPECIFICATIONS:
- Survey Flying: Date: July 24th to August- 2nd 2012
- Survey Operations: Base: Houston, British Columbia
- Survey Line Spacing: 200 Meters
- Survey Line Direction N 110° E / N 290° E
- Survey Tie Line Spacing: 2000 Meters
- Survey Tie Line Direction: N 20° E / N 200° E
- Helicopter Mean Terrain Clearance: 218 metres
- Mean Ground Air Speed: 35 metres/sec.
- ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
- Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

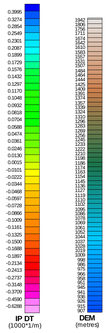
HELICOPTER SPECIFICATIONS
- Helicopter Type: Aerospatiale A-Star 350 B3 (C-GEOJ)

AIRBORNE INSTRUMENTATION
- Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
- GPS Receivers (4): Novatel COGPS enabled Propak V3-R720
- GPS Receivers Location: One on the helicopter, three on EM coil
- Radar Altimeter: Terra TRA 3000/TRI 40
- Nav system: GEONAV-3
- AIRBORNE ELECTROMAGNETIC SYSTEM
  - Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
  - Coil dimensions: 7.4 metres diameter
  - Coil orientation: Vertical Dipole
  - Digitizing rate: 2000Hz
- AIRBORNE MAGNETOMETER
  - Magnetometer: GEOMETRICS
  - Magnetometer Sensitivity: +/- 0.02 nT
  - Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION
- MAGNETIC BASE STATION
  - Magnetometer: GEOMETRICS
  - Base Station Location: Houston Airport (54°28.2627 N, 126°46.5514 W)
- EM BASE STATION
  - Two orthogonal square coils
  - Coil dimensions: 3.5 metres each side
  - Coil orientation: Horizontal Dipole
  - Base Station Location: inside the block (53°29.009 N, 127°11.483 W)
  - Azimuth : AzA = N 200° E AzB = N 13° E

PROCESSING SUMMARY
- MAGNETICS:
  - Diurnal Subtraction, microlevelling
- ZTEM:
  - Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
  - Sampling rate: 0.4 sec.
  - Rotation of the inphase part of the inline and orthogonal components (ZXXoc and ZYXoc)on to UTM Eastings and Northings.
  - Altitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
  - DIVITIS calculated: divergpt0=c+ZYXoc/pi/f for all 6 frequencies.
  - Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
- Datum: WGS 84
- Projection: Universal Transverse Mercator
- Central Meridian: 129°W (Zone 9N)
- Central Scale Factor: 0.9996
- False Easting/Northing: 500,000mE/m
- Major Axis: 6378137.0
- Inverse Flattening: 298.2572
- NTS: 093E06 & 093E11



Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database.
(www.geocomm.com/www.geogratis.ca)

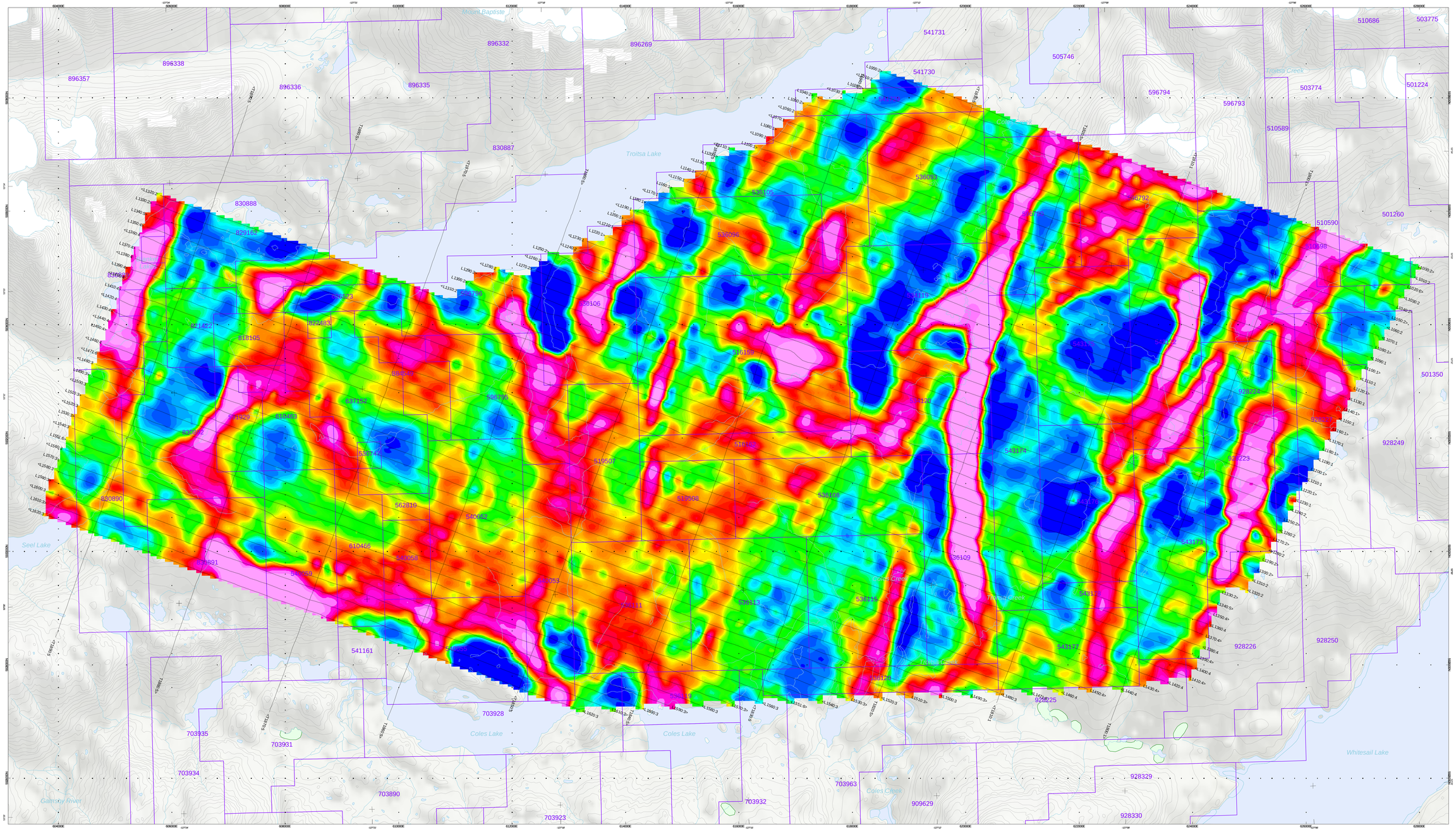
Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System
3D view of in-Phase Total Divergence versus Skin Depth (30 - 720Hz)

Rown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012

Geotech Project# 1102



GEOTECH LTD.

SURVEY SPECIFICATIONS:
Survey Flying Date: July 24th to August 2nd 2012
Survey Operations Base: Houston, British Columbia
Survey Line Spacing: 200 Meters
Survey Line Direction N 132° E / N 290° E
Survey Tie Line Spacing: 2000 Meters
Survey Tie Line Direction N 20° E / N 200° E
Helicopter Mean Terrain Clearance: 218 metres
Mean Ground Air Speed: 25 metres/sec.
ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS
Helicopter Type: Aerospatiale A-Star 350 B3 (C-GEOJ)

AIRBORNE INSTRUMENTATION
Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
GPS Receivers (4): Novatel ODGPS enabled Propak V3-R720
GPS Receivers Location: One on the helicopter, three on EM coil
Radar Altimeter: Terra TRA 3000/TRI 40
Navigation: GEONAV-2

AIRBORNE ELECTROMAGNETIC SYSTEM
Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
Coil dimensions: 7.4 metres diameter
Coil orientation: Vertical Dipole
Digitizing rate: 2000Hz

AIRBORNE MAGNETOMETER
Magnetometer: GEOMETRICS
Magnetometer Sensitivity: +/- 0.02 nT
Sampling Rate: 0.2 Hz

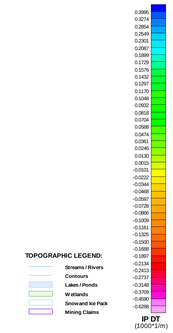
GROUND INSTRUMENTATION
MAGNETIC BASE STATION
Magnetometer: GEOMETRICS
Base Station Location: Houston Airport (54°26.2627 N, 126°46.5514 W)

EM BASE STATION
Two orthogonal square coils
Coil dimensions: 3.5 metres each side
Coil orientation: Horizontal Dipole
Base Station Location: inside the block (53°29.009 N, 127°11.483 W)
Azimuth: AxA = N 20° E AxB = N 13° E

PROCESSING SUMMARY
MAGNETICS:
Diurnal Subtraction, microlevelling
ZTEM:
Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
Sampling rate: 0.4 sec.
Rotation of the inphase part of the inline and orthogonal components (ZXXc and ZYYc)to UTM Eastings and Northings.
Altitude correction applied, (calculated from 3 GPS recievers installed on airborne coil).
DIV(TR) calculated: divergence=dTr/dxdy for all 6 frequencies.
Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
Datum: WGS 84
Projection: Universal Transverse Mercator
Central Meridian: 129°W (Zone 9N)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Major Axis: 6378137.0
Inverse Flattening: 298.25722
NTS: 093E06 & 093E11

TOPOGRAPHIC LEGEND:
Streams / Rivers
Contours
Lakes / Ponds
Wetlands
Snowand Ice Pack
Mining Claims



Scale 1:20000
250 0 250 500 750 1000
(meters)
NAD83 UTM zone 9N

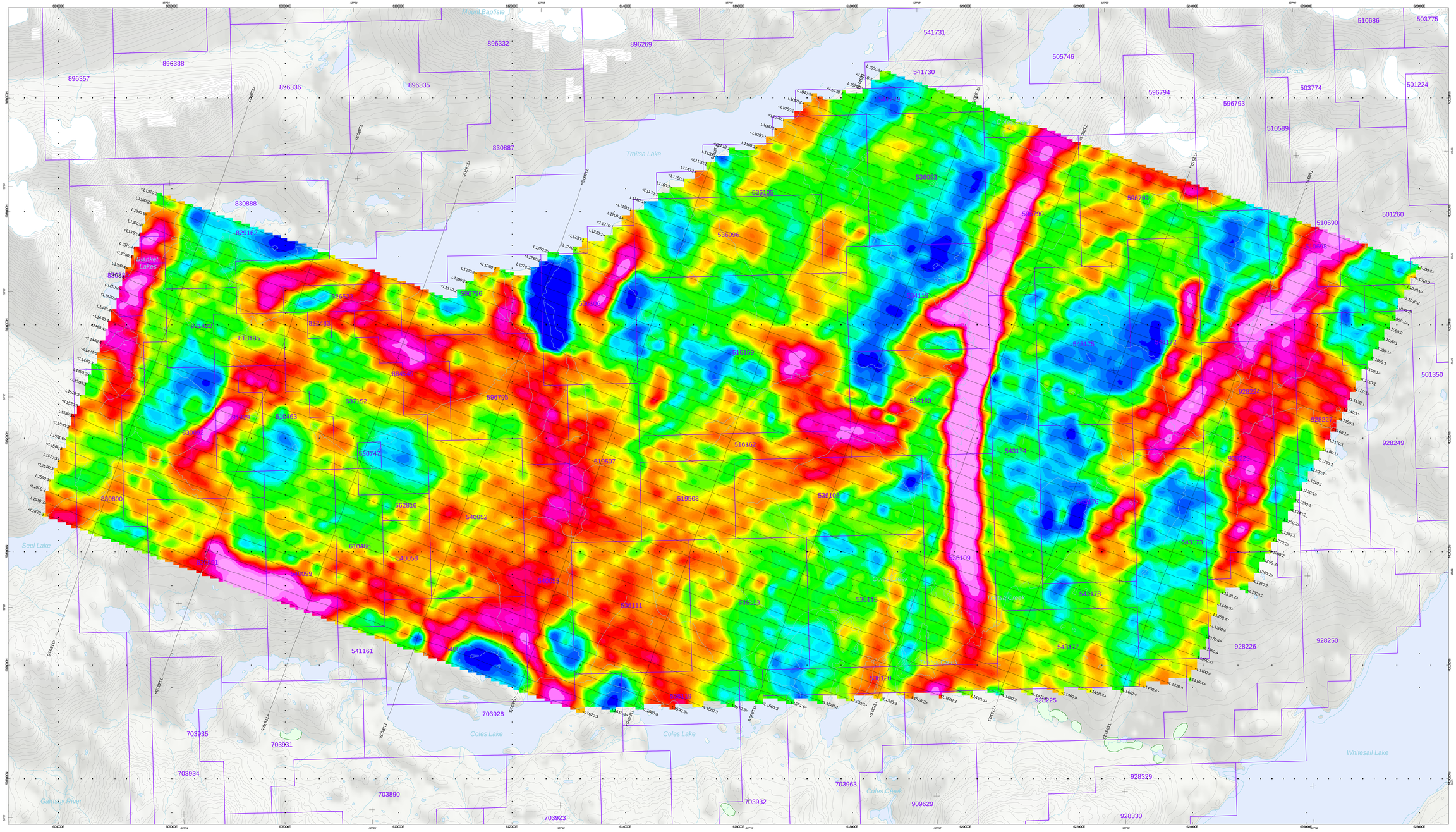
The topographic data base was derived from 1:50,000 NRC (Natural Resources Canada) NTDB data. Lakes and streams were derived from Geocommunities 1:250,000 Canadian National Topographic database. Road data derived from Geocommunities 1:250,000 Canadian National Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocomm.com)(www.geogratis.ca)(https://apps.gov.bc.ca/pub/bcfd/homeid)

Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System
360Hz Total Divergence In-Phase (DT) Grid

Rown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012



GEOTECH LTD.

SURVEY SPECIFICATIONS:
Survey Flying: Date: July 24th to August- 2nd 2012
Survey Operations: Base: Houston, British Columbia
Survey Line Spacing: 200 Meters
Survey Line Direction N 110° E / N 290° E
Survey Tie Line Spacing: 2000 Meters
Survey Tie Line Direction: N 20° E / N 200° E
Helicopter Mean Terrain Clearance: 218 metres
Mean Ground Air Speed: 35 metres/sec.
ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS
Helicopter Type: Aerospatiale A-Star 350 B3 (C-GECO)

AIRBORNE INSTRUMENTATION
Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
GPS Receivers (4): Novatel CDGPS enabled Propak V3-R720
GPS Receivers Location: One on the helicopter, three on EM coil
Radar Altimeter: Terra TRA 3000/TRI-40
Nalegation: GEONAV-3

AIRBORNE ELECTROMAGNETIC SYSTEM
Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
Coil dimensions: 7.4 metres diameter
Coil orientation: Vertical Dipole
Digitizing rate: 2000Hz

AIRBORNE MAGNETOMETER
Magnetometer: GEOMETRICS
Magnetometer Sensitivity: +/- 0.02 nT
Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION
MAGNETIC BASE STATION
Magnetometer: GEOMETRICS
Base Station Location: Houston Airport (54°26.2627 N, 126°46.5514 W)

EM BASE STATION
Two orthogonal square coils
Coil dimensions: 3.5 metres each side
Coil orientation: Horizontal Dipole
Base Station Location: inside the block (53°28.009 N, 127°11.483 W)
Azimuth: AzA = N 20° E AzB = N 12° E

PROCESSING SUMMARY
MAGNETICS
Diurnal Subtraction, microlevelling
ZTEM
Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
Sampling rate: 0.4 sec
Rotation of the inphase part of the inline and orthogonal components (ZXXoc and ZYXoc)to to UTM Eastings and Northings.
Altitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
DYATTIS calculated. (Xcomp/Ycomp/Zcomp)/Y for all 6 frequencies.
Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
Datum: WGS 84
Projection: Universal Transverse Mercator
Central Meridian: 129°W (Zone 9N)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Major Axis: 6378137.0
Inverse Flattening: 298.25722
NTS: 093E06 & 093E11

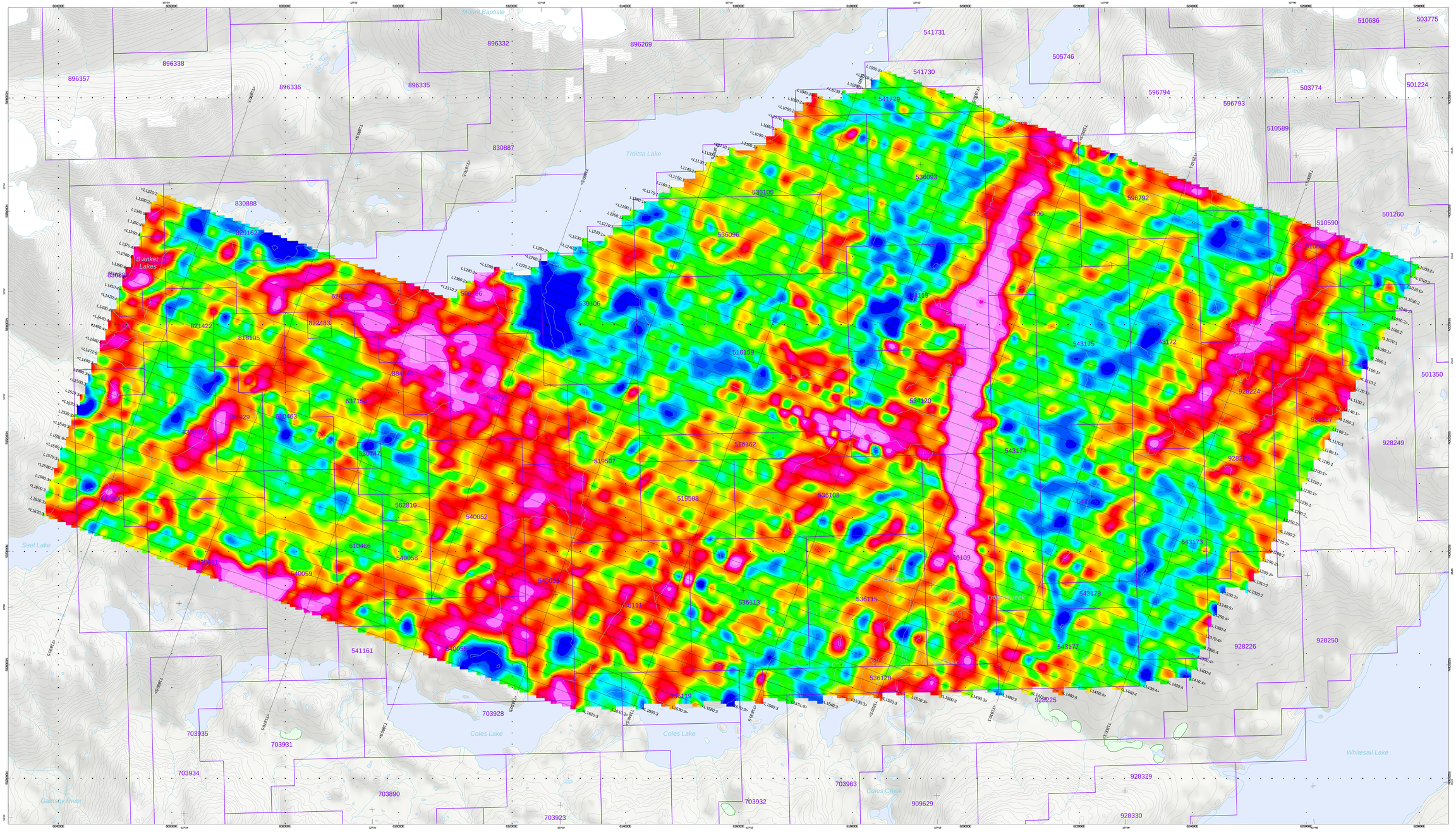
The topographic database was derived from 1:50000 NRC Dataset Resources Canada(.NT DB data. Streams/Rivers, Contours, Lakes/Ponds, Wetlands, Snowand Ice Pack, Mining Claims, Insert data derived from Geocommunicators 1:250,000 Canadian National Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocomm.com/geoweb-geographic-ca/https://apps.gov.bc.ca/pub/dwds/homepg)

Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System
90Hz Total Divergence In-Phase (DT) Grid

Flown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012



GEOTECH LTD.

SURVEY SPECIFICATIONS:
Survey Flying Date: July 24th to August- 2nd 2012
Survey Operations Base: Houston, British Columbia
Survey Line Spacing: 200 Meters
Survey Line Direction N 110° E / N 290° E
Survey Tie Line Spacing: 2000 Meters
Survey Tie Line Direction: N 20° E / N 200° E
Helicopter Mean Terrain Clearance: 218 metres
Mean Ground Air Speed: 35 metres/sec
ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS
Helicopter Type: Aerospatiale A-Star 350 B3 (C-GEOJ)

AIRBORNE INSTRUMENTATION
Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
GPS Receivers (4): Novatel CDGPS enabled Propak V3-R720
GPS Receivers Location: One on the helicopter, three on EM coil
Radar Altimeter: Terra TRA 3000/TRI-40
Nav system: GEONAV

AIRBORNE ELECTROMAGNETIC SYSTEM
Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
Coil dimensions: 7.4 metres diameter
Coil orientation: Vertical Dipole
Digitizing rate: 2000Hz

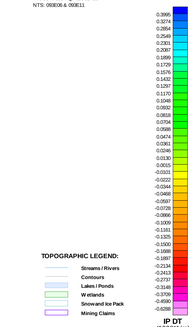
AIRBORNE MAGNETOMETER
Magnetometer: GEOMETRICS
Magnetometer Sensitivity: +/- 0.02 nT
Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION
MAGNETIC BASE STATION
Magnetometer: GEOMETRICS
Base Station Location: Houston Airport (54°26.2627 N, 126°46.5514 W)

EM BASE STATION
Two orthogonal square coils
Coil dimensions: 3.5 metres each side
Coil orientation: Horizontal Dipole
Base Station Location: inside the block (53°29.009 N, 127°11.483 W)
Azimuth: AzA = N 200° E AzB = N 12° E

PROCESSING SUMMARY
MAGNETICS:
Diurnal Subtraction, microlevelling
ZTEM:
Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
Sampling rate: 0.4 sec.
Rotation of the inphase part of the inline and orthogonal components (ZXXor and ZYYor)to UTM Eastings and Northings.
Altitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
DIXTIB: calculated, dicomp60=dicomp60f for all 6 frequencies.
Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
Datum: WGS 84
Projection: Universal Transverse Mercator
Central Meridian: 129°W (Zone 9N)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Major Axis: 6378137.0
Inverse Flattening: 298.25722
NTS: 093E06 & 093E11



TOPOGRAPHIC LEGEND:
Streams / Rivers
Contours
Lakes / Ponds
Wetlands
Snowand Ice Pack
Mining Claims

Scale 1:20000
250 0 250 500 750 1000
(meters)
NAD83 UTM zone 9N

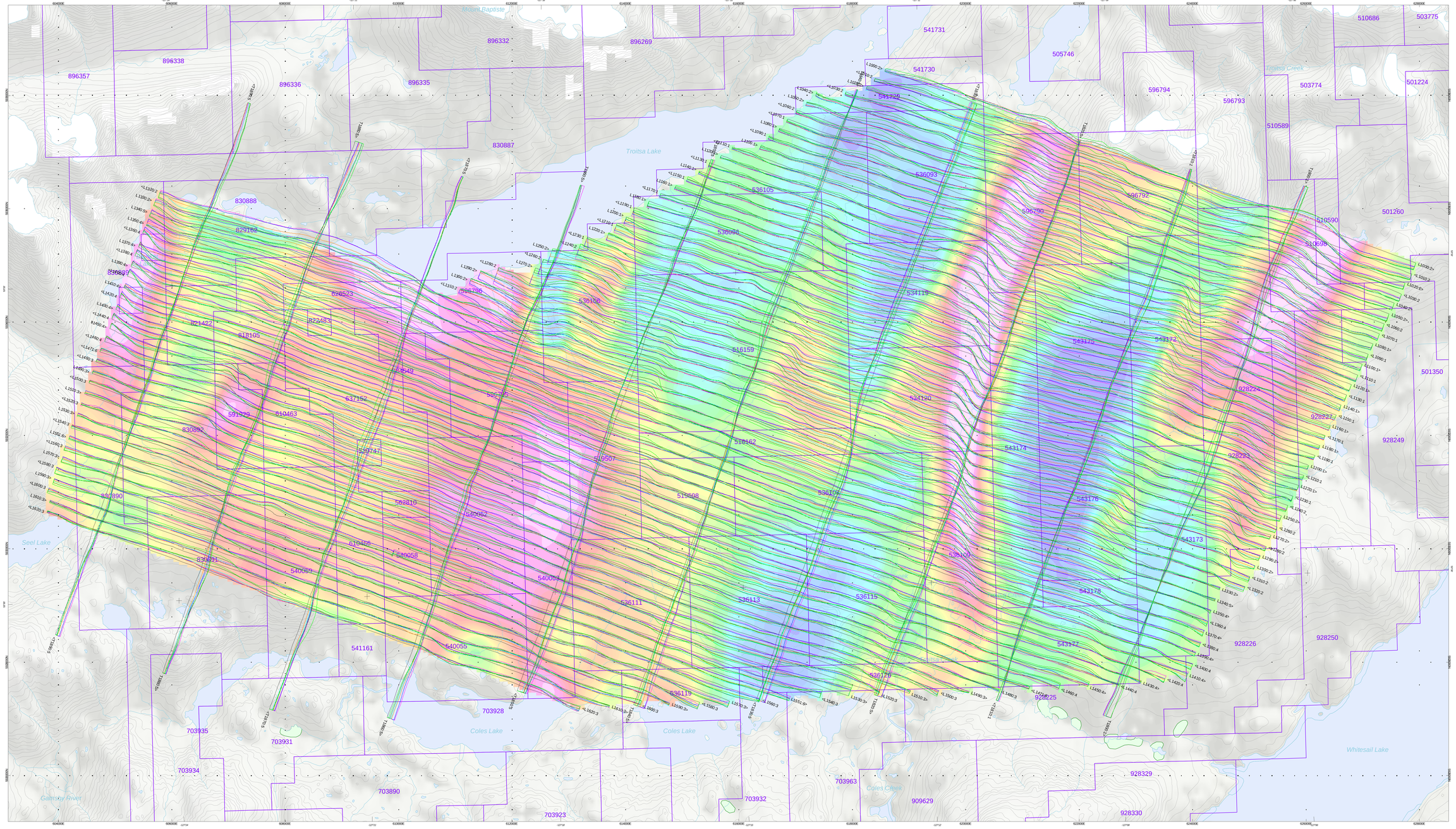
The topographic data base was derived from 1:50000 NRC (Natural Resources Canada) NTDB data. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. Road data derived from Geocommunities 1:250,000 Canadian National Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocomm.com)(www.geogratis.ca)(https://apps.gov.bc.ca/pub/dwtk/home)

Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System
30Hz Total Divergence In-Phase (DT) Grid

Rown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012



GEOTECH LTD.

SURVEY SPECIFICATIONS:
Survey Flying Date: July 24th to August- 2nd 2012
Survey Operations Base: Houston, British Columbia
Survey Line Spacing: 200 Meters
Survey Line Direction N 110° E / N 290° E
Survey Tie Line Spacing: 2000 Meters
Survey Tie Line Direction: N 20° E / N 200° E
Helicopter Mean Terrain Clearance: 218 metres
Mean Ground Air Speed: 35 metres/sec
ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS
Helicopter Type: Aerospatiale A-Star 350 B3 (C-GECO)

AIRBORNE INSTRUMENTATION
Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
GPS Receivers (4): Novatel COGPS enabled Propak V3-R720
GPS Receivers Location: One on the helicopter, three on EM coil
Radar Altimeter: Terra TRA 3000/TRI 40
Navigation: GEONAV-3

AIRBORNE ELECTROMAGNETIC SYSTEM
Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
Coil dimensions: 7.4 metres diameter
Coil orientation: Vertical Dipole
Digitizing rate: 2000Hz

AIRBORNE MAGNETOMETER
Magnetometer: GEOMETRICS
Magnetometer Sensitivity: +/- 0.02 nT
Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION
MAGNETIC BASE STATION
Magnetometer: GEOMETRICS
Base Station Location: Houston Airport (54°28.2627 N, 126°46.5514 W)

EM BASE STATION
Two orthogonal square coils.
Coil dimensions: 3.5 metres each side
Coil orientation: Horizontal Dipole
Base Station Location: inside the block (53°28.009 N, 127°11.483 W)
Azimuth: A/A = N 20° E A/B = N 13° E

PROCESSING SUMMARY
MAGNETICS:
Diurnal Subtraction, microleveling
ZTEM:
Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
Sampling rate: 0.4 sec.
Rotation of the inphase part of the inline and orthogonal components (ZXXoc and ZYXoc)to to UTM Eastings and Northings.
Altitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
DIVZT(B) calculated: dbzxxpt/dx+dbzyxxpt/dy for all 6 frequencies.
Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
Datum: WGS 84
Projection: Universal Transverse Mercator
Central Meridian: 129°W (Zone 9N)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000mx0m
Major Axis: 6378137.0
Inverse Flattening: 298.25722
NTS: 093E06 & 093E11

ZTEM Polarity Convention for NW-SE lines

ZTEM Polarity Convention for SW-NE lines

In-Phase Frequencies
0.03 units per mm
Profile Base 0

30 Hz
45 Hz
90 Hz
180 Hz
360 Hz
720 Hz

TOPOGRAPHIC LEGEND:

Streams / Rivers
Contours
Lakes / Ponds
Wetlands
Snowand Ice Pack
Mining Claims

90Hz Tzx IP

Scale 1:20000
250 0 250 500 750 1000
(meters)
NAD83 UTM zone 9N

The topographic data base was derived from 1:50000 NRC Dataset Resources Canada(.NTDB data. Lake shorelines were digitized from Landsat 7 imagery. Stream and Lake Polygons were Import data derived from Geocommunicators 1:250,000 Canadian National Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocommon.com/(www.geogratis.ca)(https://apps.gov.bc.ca/pub/dwds/home)

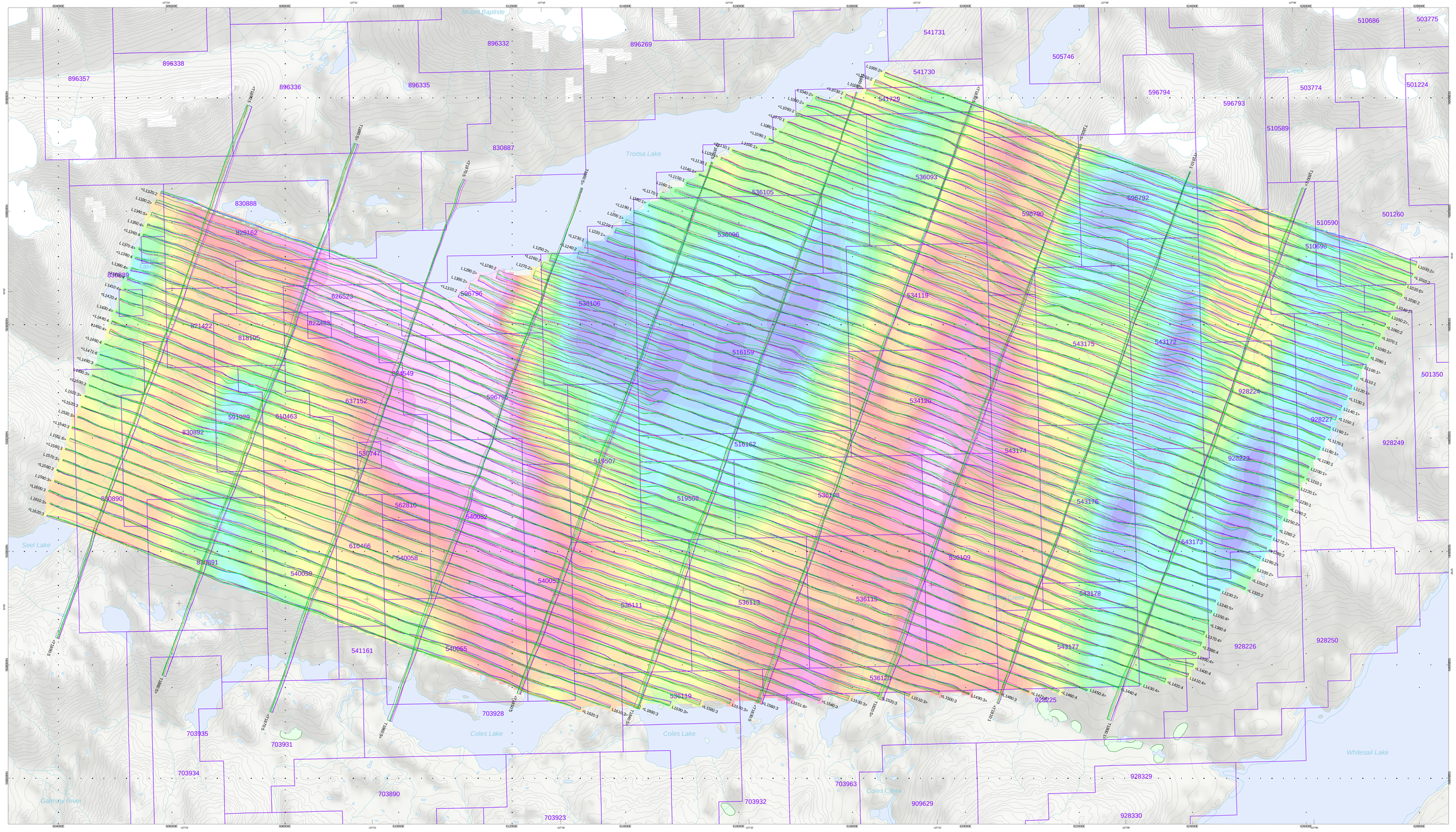
Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System
Tzx (In-line) In-Phase Profiles over
90Hz Phase Rotated In-Phase Grid

Flown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012

Project: Project 1 1.0.0.2



GEOTECH LTD.

SURVEY SPECIFICATIONS:
Survey Flying Date: July 24th to August- 2nd 2012
Survey Operations Base: Houston, British Columbia
Survey Line Spacing: 200 Meters
Survey Line Direction N 110° E / N 290° E
Survey Tie Line Spacing: 2000 Meters
Survey Tie Line Direction: N 20° E / N 200° E
Helicopter Mean Terrain Clearance: 218 metres
Mean Ground Air Speed: 35 metres/sec
ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS
Helicopter Type: Aerospatiale A-Star 350 B3 (C-GEOJ)

AIRBORNE INSTRUMENTATION
Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
GPS Receivers (4): Novatel CDGPS enabled Propak V3-R720
GPS Receivers Location: One on the helicopter, three on EM coil
Radar Altimeter: Terra TRA 3000/TRI-40
Nav system: GEONAV-2
AIRBORNE ELECTROMAGNETIC SYSTEM
Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
Coil dimensions: 7.4 metres diameter
Coil orientation: Vertical Dipole
Digitizing rate: 2000Hz
AIRBORNE MAGNETOMETER
Magnetometer: GEOMETRICS
Magnetometer Sensitivity: +/- 0.02 nT
Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION
MAGNETIC BASE STATION
Magnetometer: GEOMETRICS
Base Station Location: Houston Airport (54°28.2627 N, 126°46.5514 W)
EM BASE STATION
Two orthogonal square coils
Coil dimensions: 3.5 metres each side
Coil orientation: Horizontal Dipole
Base Station Location: inside the block (53°29.009 N, 127°11.483 W)
Azimuth: AzA = N 200° E AzB = N 13° E

PROCESSING SUMMARY
MAGNETICS:
Diurnal Subtraction, microleveling
ZTEM:
Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
Sampling rate: 0.4 sec.
Rotation of the inphase part of the inline and orthogonal components (ZXXoc and ZYYoc)on to UTM Eastings and Northings.
Altitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
DINATTIG calculated: dincorpt0X=dincorpt0Y for all 6 frequencies.
Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
Datum: WGS 84
Projection: Universal Transverse Mercator
Central Meridian: 129°W (Zone 9N)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000/0m
Major Axis: 6378137.0
Inverse Flattening: 298.25722
NTS: 093E06 & 093E11

ZTEM Polarity Convention for NW-SE lines

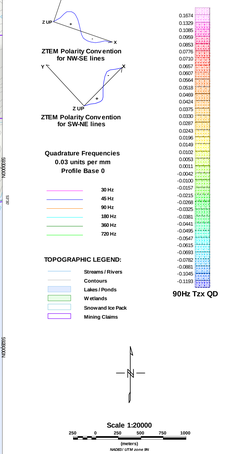
ZTEM Polarity Convention for SW-NE lines

Quadrature Frequencies
0.03 units per mm
Profile Base 0

- 30 Hz
- 45 Hz
- 90 Hz
- 180 Hz
- 360 Hz
- 720 Hz

TOPOGRAPHIC LEGEND:

- Streams / Rivers
- Contours
- Lakes / Ponds
- Wetlands
- Snowand Ice Pack
- Mining Claims



90Hz Tzx QD

Scale 1:20000
250 0 250 500 750 1000
(metres)
NAD83 UTM zone 9N

The topographic data base was derived from 1:50000 NRC (Natural Resources Canada) NTDB data. Roads and Railroads are derived from Geocommunities 1:250,000 Canadian National Topographic database. Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocomm.com/(www.geogratis.ca)(https://apps.gov.bc.ca/pub/dwds/home)

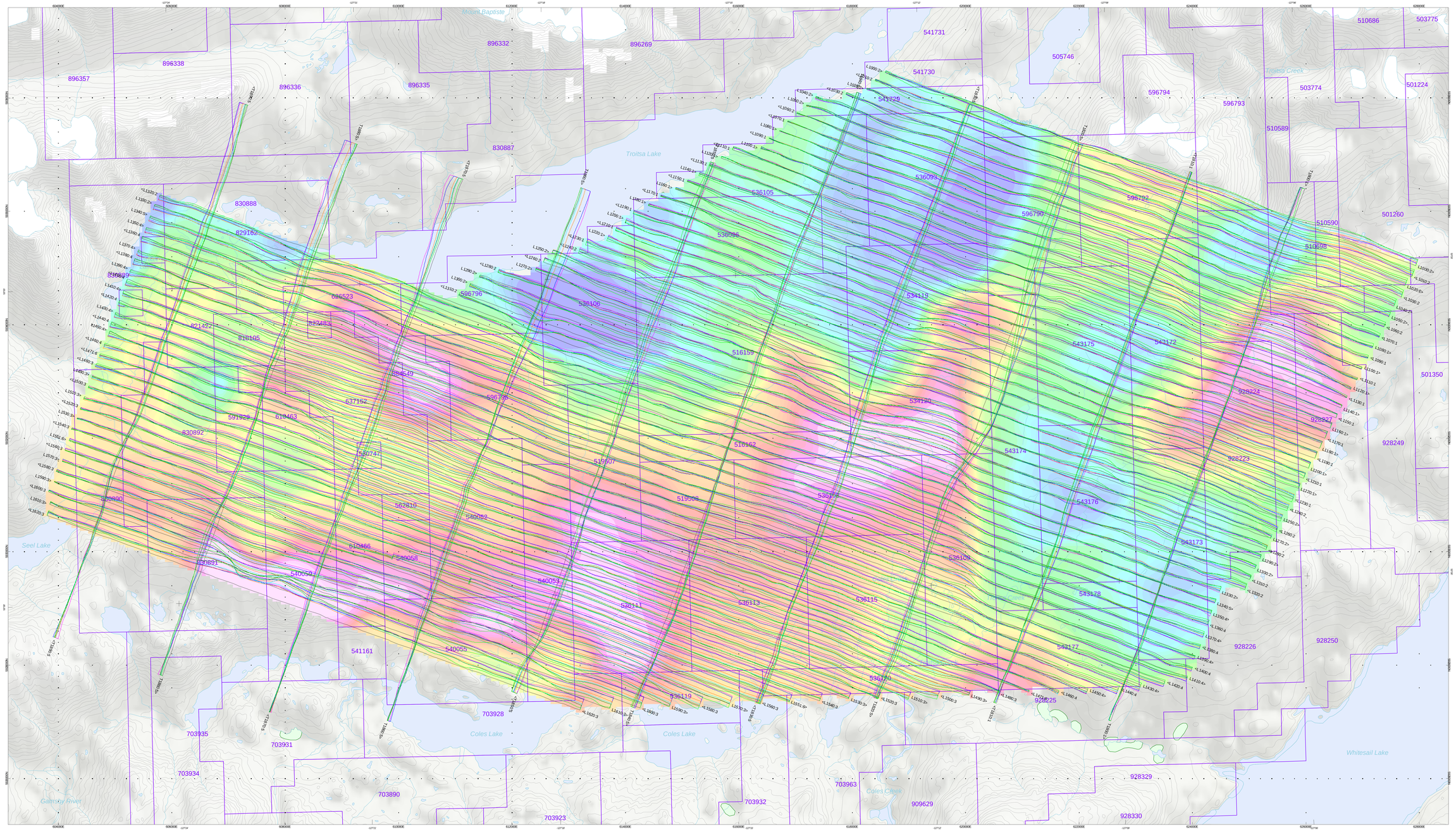
Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System
Tzx (In-line) Quadrature Profiles over 90Hz Phase Rotated Quadrature Grid

Rown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012

Geotech Project# 12062



GEOTECH LTD.

SURVEY SPECIFICATIONS:

Survey Flying: Date: July 24th to August 2nd 2012
Survey Operations: Base: Houston, British Columbia
Survey Line Spacing: 200 Meters
Survey Line Direction: N 110° E / N 290° E
Survey Tie Line Spacing: 2000 Meters
Survey Tie Line Direction: N 20° E / N 200° E
Helicopter Mean Terrain Clearance: 218 metres
Mean Ground Air Speed: 35 metres/sec
ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
Airborne Magnetometer bird towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS

Helicopter Type: Aerospatiale A-Star 350 B3 (C-GEOJ)

AIRBORNE INSTRUMENTATION

Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
GPS Receivers (4): Novatel COGPS enabled Propak V3-RT20
GPS Receivers Location: One on the helicopter, three on EM coil
Radar Altimeter: Trimo TRA 3000/TRI 40
Navigation: GEONAV-7

AIRBORNE ELECTROMAGNETIC SYSTEM

Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
Coil dimensions: 7.4 metres diameter
Coil orientation: Vertical Dipole
Digitizing rate: 2000Hz

AIRBORNE MAGNETOMETER

Magnetometer: GEOMETRICS
Magnetometer Sensitivity: +/- 0.02 nT
Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION

MAGNETIC BASE STATION

Magnetometer: GEOMETRICS
Base Station Location: Houston Airport (54°26.2927 N, 126°46.5514 W)

EM BASE STATION

Two orthogonal square coils
Coil dimensions: 3.5 metres each side
Coil orientation: Horizontal Dipole
Base Station Location: Inside the Block (53°29.009 N, 127°11.483 W)
Azimuth: AzA = N 260° E AzB = N 13° E

PROCESSING SUMMARY

MAGNETICS

Diurnal Subtraction; microlevelling

ZTEM

Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
Sampling rate: 0.4 sec.
Rotation of the inphase part of the inline and orthogonal components
(ZXloc and ZYloc)on to UTM Eastings and Northings.
Altitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
DINET(I): calculated dincorp(dX+dYcorp)dY for all 6 frequencies.
Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION

Datum WGS 84
Projection: Universal Transverse Mercator
Central Meridian: 135°W (Zone 9N)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Major Axis: 6378137.0
Inverse Flattening: 298.25722
NTS: 093E06 & 093E11

ZTEM Polarity Convention for NW-SE lines

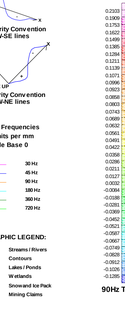
ZTEM Polarity Convention for SW-NE lines

In-Phase Frequencies
0.03 units per mm
Profile Base 0

- 30 Hz
- 45 Hz
- 90 Hz
- 180 Hz
- 360 Hz
- 720 Hz

TOPOGRAPHIC LEGEND:

- Streams / Rivers
- Contours
- Lakes / Ponds
- Wetlands
- Snowand Ice Pack
- Mining Claims



Scale 1:20000

250 0 250 500 750 1000
(meters)
NAD83 / UTM zone 9N

The topographic database was derived from 1:50000 NRC Natural Resources Canada(NTDB data. The topographic database was derived from Geotech Ltd. Radar Topographic Database. Insert data derived from Geocommunities 1:250,000 Canadian National Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocomm.com)(www.geogratis.ca)(https://apps.gov.bc.ca/pub/dwds/home)

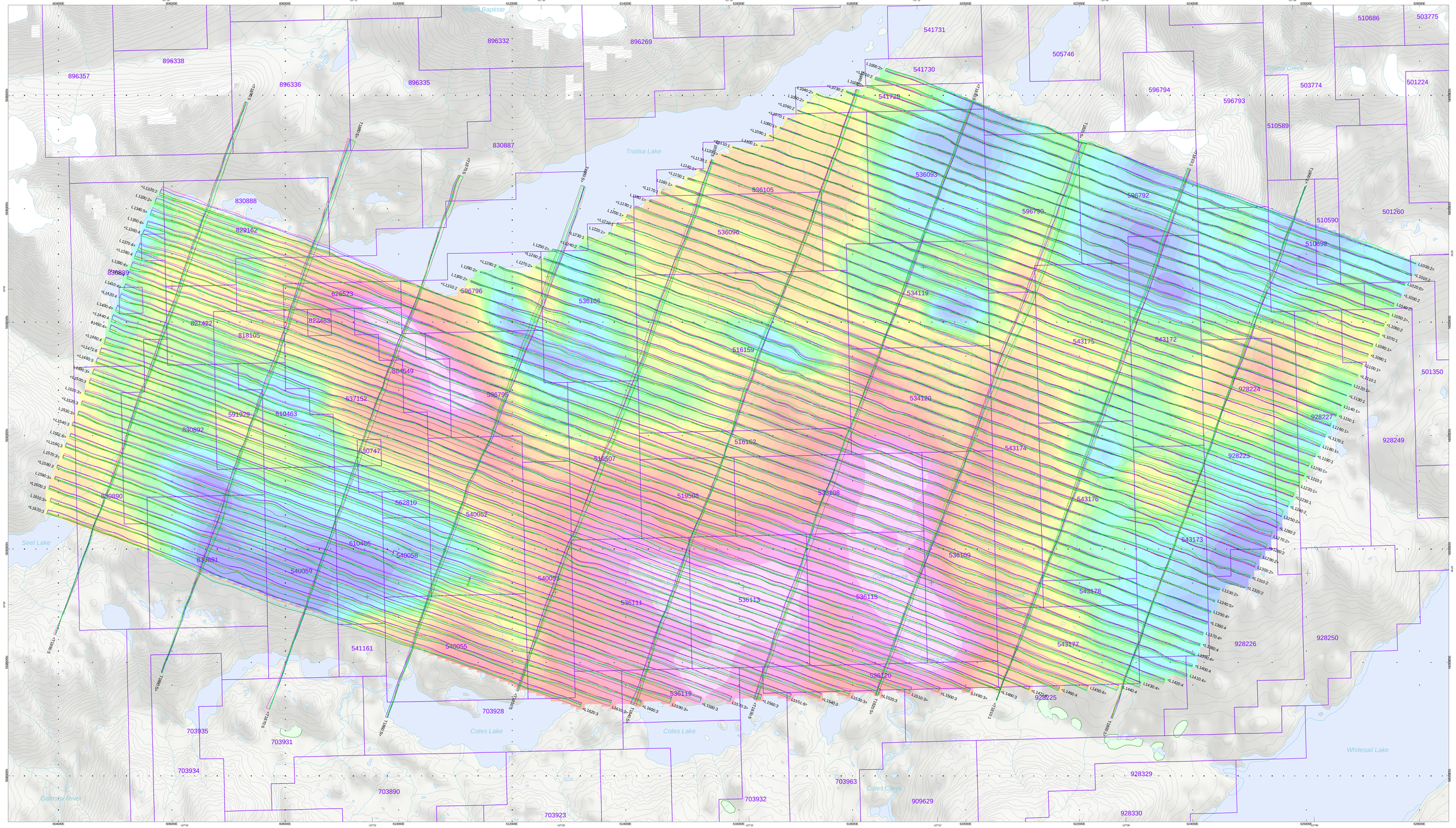
Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System

Tzy (Cross-line) In-Phase Profiles over 90Hz Phase Rotated In-Phase Grid

Flown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

August 2012



GEOTECH LTD.

SURVEY SPECIFICATIONS:
- Survey Flying Date: July 24th to August 2nd 2012
- Survey Operations Base: Houston, British Columbia
- Survey Line Spacing: 200 Meters
- Survey Line Direction: N 110° E / N 290° E
- Survey Tie Line Spacing: 2000 Meters
- Survey Tie Line Direction: N 20° E / N 200° E
- Helicopter Mean Terrain Clearance: 218 metres
- Mean Ground Air Speed: 25 metres/sec
- ZTEM airborne coil: towed at a mean distance of 70 m below the helicopter
- Airborne Magnetometer bird: towed at a mean distance of 55 m below the helicopter

HELICOPTER SPECIFICATIONS
- Helicopter Type: Aerospatiale A-Star 350 B3 (C-GEOJ)

AIRBORNE INSTRUMENTATION
- Survey Type: Helicopter Z-Axis Tipper Electromagnetic (ZTEM), Magnetic towed Bird
- GPS Receivers (4): Novatel CDGPS enabled Propak V3-R730
- GPS Receivers Location: One on the helicopter, three on EM coil
- Radar Altimeter: Terra TRA 3000/TRI 40
- Navigation: GEONAV 3

AIRBORNE ELECTROMAGNETIC SYSTEM
- Electromagnetic System: Geotech Z-Axis Tipper (ZTEM)
- Coil dimensions: 7.4 metres diameter
- Coil orientation: Vertical Dipole
- Digitizing rate: 2000Hz

AIRBORNE MAGNETOMETER
- Magnetometer: GEOMETRICS
- Magnetometer Sensitivity: +/- 0.02 nT
- Sampling Rate: 0.2 Hz

GROUND INSTRUMENTATION

MAGNETIC BASE STATION
- Magnetometer: GEOMETRICS
- Base Station Location: Houston Airport (54°26.2627 N, 126°46.5514 W)

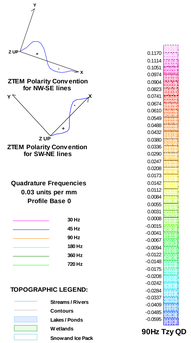
EM BASE STATION
- Two orthogonal square coils
- Coil dimensions: 3.5 metres each side
- Coil orientation: Horizontal Dipole
- Base Station Location: inside the block (53°25.009 N, 127°11.483 W)
- Azimuth: AzA = N 202° E AzB = N 13° E

PROCESSING SUMMARY

MAGNETICS:
- Diurnal Subtraction, microleveling

ZTEM:
- Frequencies extracted: 30, 45, 90, 180, 360, 720Hz.
- Sampling rate: 0.4 sec.
- Rotation of the inphase part of the inline and orthogonal components (ZxNx and ZYNx)on to UTM Eastings and Northings.
- Attitude correction applied, (calculated from 3 GPS recievers installed on aborne coil).
- DNTTB) calculated (dcomp90=(Ycomp90 for all 6 frequencies.
- Phase Rotated Grids (90 deg) calculated from each individual X and Y component grids, for each individual frequency.

MAP PROJECTION
- Datum: NAD 83
- Projection: Universal Transverse Mercator
- Central Meridian: 129W (Zone 9N)
- Central Scale Factor: 0.9996
- False Easting/Northing: 500,000m/0m
- Major Axis: 6378137.0
- Inverse Flattening: 298.257/22
- NTS: 093E06 & 093E11



TOPOGRAPHIC LEGEND:
- Streams / Rivers
- Contours
- Lakes / Ponds
- Wetlands
- Snowand Ice Pack
- Mining Claims

Scale 1:20000

(metres)

NAD83 UTM zone 9N

The topographic data base was derived from 1:50000 NRC (Natural Resources Canada) NTDB data. Lake shorelines were digitized from Landsat 7 imagery. Stream data was digitized from Geocommunicator 1:250,000 Canada Hydrometric Topographic database. Mining Claims are derived from the Province of British Columbia Land and Resource Data Warehouse. (www.geocomm.com)(www.geogratis.ca)(https://apps.gov.bc.ca/pub/dwds/home.do)

Callinex Mines Inc
Cole/Troitsa Lake Project
Houston, British Columbia

Geotech ZTEM System

Tzy (Cross-line) Quadrature Profiles over 90Hz Phase Rotated Quadrature Grid

Flown and processed by Geotech Ltd.
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August 2012