NTS 42A01

Soil Geochemistry and Prospecting on Claim Numbers: 4246905, 4251194, 4250911, and 4250912: Preliminary Investigation of Nickel-Copper-PGE Mineralization Potential

Otto Township

Larder Lake Mining Division

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Introduction

The Otto Property, is 100 % owned by Shining Tree Resources Corp. It is comprised of seven unpatented mining claims: 4246905, 4246906, 4250911, 4250912, 4250913, 4251194, and 4253832 located in Otto township. These claims total 51 claim units, and occupy: the E½ of the N½ of Lot 8 Concession 4; Lot 6 Concession 3 and the N½ of Lot 7 Concession 3; S¾ of Lot 6 Concession 5 and N½ Lot 7 Concession 5; Lot 7 and Lot 6, Concession 4; E ½ of the N½ and W ½ of the N¼ of Lot 8 Concession 5; and the S½ of Lot 9 and Lot 8 Concession 4, respectively. Table 1 shows a summary of Shinning Tree Resources Corp.'s land holdings in Otto Township. Map 1a shows provincial scale location map, and Map 1b shows an overview of land holdings with respect to regional features and other administrative boundaries.

Claim Number	Location	Claim Units
4246905	E½ of the N½ of Lot 8 Concession 4	2
4246906	Lot 6 Concession 3 and the N½ of Lot 7 Concession 3	12
4250911	S¾ of Lot 6 Concession 5 and N½ Lot 7 Concession 5	6
4250912	N½ Lot 7, Concession 5	4
4250913	Lot 7 and Lot 6, Concession 4	16
4251194	E ½ of the N½ and W ½ of the N¼ of Lot 8 Concession 5	3
4253832	the S½ of Lot 9 and Lot 8 Concession 4	8

Table 1. A summary of Shinning Tree Resources Corporation's land holdings.

Location and Access

The property is located approximately 3 kilometers South of Swastika, Ontario and 8 km Southwest of Kirkland Lake. Please see Map 2 for a location map relative to provincial scale features.

Hannah road intersects the Northern claim of the property in claim 4251194, accessible via Highway 66 southwest of Swastika and Otto Road 1. Access to the grid is given by a snowmobile/ ATV trail. Sporadic and partially overgrown logging roads are present throughout the gridded area.

Past Work

The current claim group does not have a significant amount of assessment work filed for records of past work. Minorex Ltd. (1980) completed an HLEM survey, a geological investigation, and a shallow drilling program. It appears that HLEM anomalies were causd by what was described as graphitic tuff units. Assays range from trace to 0.01 % Cu, with trace amounts of lead, zinc, and gold. Eric Marion (2004 - 2005) completed a stripping program that uncovered a heterolithic lamprophyre breccia that was prospected for diamonds by SGS Lakefield Ltd. No diamonds were found in the bulk sample by the analysis. Majority of this work occurred on what is currently claim 4250912.

More recently, Shining Tree Resources Corp. has looked at defining potential platinum or PGE mineralization within the Otto stock, which could be associated with ultramafic phases within the intrusive complex. A magnetic survey was completed in the central area on claims 4246905, 4253832, and 4250913. this delineated a broad area with slightly elevated magnetic levels. Soil sampling over this anomaly did show some areas of elevated gold and platinum relative to background levels, but no

extraordinary results occurred from the investigation. Very limited prospecting and sampling of the northern claims did not show significant results or potential for this style of mineralization.

Current Program Purpose

The area to the north has been shown to host some ultramafic intrusive phases as discussed above, and the mafic volcanic rocks are shown to have areas dominated by ultramafic komatiite flows to the north and west-northwest that outcrop at surface. Therefore, the northern claim area was prospected to determine the presence of anomalous Ni-Cu- Co mineralization as a guide to more directed and involved exploration activities. It was thought that more detailed sampling would lead to more promising results in comparison with the initial prospecting program in this area.

This involved the use of a field lab to determine the presence of general anomalous trends in mineralization from prospecting traverses in the northern claim group. Anomalous assay values were used to direct a soil sampling program to determine additional targets of similar mineralization in the area of encouraging prospecting results. Anomalous values would be used to direct future exploration efforts in assessing the potential for economic Ni-Cu-PGE potential in the area.

Local Geology

The south of the claim group is underlain by metamorphosed alkali felsic and intermediate rocks of the Otto Stock. Recent prospecting by Shining Tree Resources revealed that the central portion of teh claim group is largely characterized by megacrystic syenite with potassic feldspar phenocrysts 2-6 cm in size, and mafic mineral modals ranging from 5 - 30 % dominated by amphibole. Trace amounts of garnet and apatitie were observed as well.

To the north are metamorphosed mafic volcanic rocks that host an east-west striking band of clastic metasedimentary rocks of the Tisdale Assemblage. Ontario Geological Survey mapping and prospecting work has shown that these metasedimentary rocks are interbedded with cherty iron formations and felsic volcanic breccias, tuffs, and flows. Ultramafic volcanic rocks occur in east-west striking bands to the north of the claim group.

The Ontario Geological Survey has identified ultramafic phases related to the Otto intrusive stock in the claim area. These were recent targets for diamond mineralization, and it is noted that this may be related to possible economic Ni-Cu-PGE mineralization. The geology of the area is summarized in Map 2.

Prospecting and Soil Sampling Program Design

Prospecting began in the northwest corner of the claim group, and traverse lines occurred at approximately northeast-southwest orientations to locate outcrops. This first area is designated area A, and was the initial investigation area. Trenching unrelated to filed assessment work were located in the southwest corner of claim 4250912, and this became the focus of additional sampling. It is designated sample area B. Following initial interpretation of rock sample data in sampling area B, anomalous nickel

assays were used to support a soil sampling program on a north-south oriented grid. Outcrops were sampled during the sampling process as well during collection of the B-Horizon for soil samples.

An additional day of prospecting occurred in sample area C, which was just to the north of previous prospecting by Shining Tree Resources Corp. East-west traverses were completed to determine if accessory magnetite was the cause of the broad magnetic anomaly as previously inferred, and not by ultramafic or mafic phases of the Otto Stock. Map 2 displays the survey areas described above.

Soil Sample Collection and Preparation

A Dutch auger was used to collect samples approximately 15 to 30 centimeters below the surface. Samples were placed into plastic Ziploc bags, and were labeled and referenced to handheld Garmin GPS (Garmin 62c) or equivalent giving coordinates with minimum accuracies of +/- 5 meters. Collected samples were dried overnight in an oven, and then crushed by hand to ensure grain surfaces were exposed. Samples were then analyzed in a field lab using a Niton XL3t analyzer using factory defaults for calibration for samples. Calibration settings and abundance normalization were optimized for soil sample types and grain surfaces. Samples and gun surfaces were cleaned and wiped with paper towel prior to analysis. Each sample was shot for a total of 60 to 120 seconds, depending on the grid area. More information about the instrument specifications can be found in Appendix G. A total of 86 soil samples were collected in the sample area shown in Map 2.

Prospecting Program Results

A map showing sample locations with respect to topographic features, claim boundaries, and regional geology mapped by the OGS is shown in Maps 3a 3b, and 3c which show areas A, B, and C, respectively. Detailed rock descriptions can be found in Appendix B. The results for each sampling area are discussed below individually. Elevated values for copper (>250 ppm) and nickel (>250 ppm) are indicated on the map.

Sample Area A

Sample area A was dominated by mafic volcanic rocks that formed schists and massive flows. to the northwest, pillowed flows were common. Elevated nickel appeared to be associated with rocks showing trace amounts of disseminated sulphides and an unidentified black mineral with sub-metallic lustre.

Locally, pyritic alteration was observed (2001), which displayed elevated copper concentrations of ~ 300 ppm. Anomalous nickel values of approximately 0.2% were found in a schist unit (1862) displaing green mica, minor actinolite and plagioclase. The rock is intruded by a felsic phase that has large potasic feldpsar pheocrysts up to 1 cm in length, and a very fine grained, black mineral with sub metallic lustre occurs within these fracture planes. this may suggest nickel mineralization potential in combination with intrusive phases within the volcanic host unit.

Sample Area B

Geology in the sampling area B appeared to be very complex, and rock relationships and identification were difficult. Significant copper assays were found where this rock type was associated with pyrite

modals above 5 % (1890). This showed the potential to host up to 0.27 % Zn, 0.23 % Cu and 0.05 % Ni. Elevated nickel levels in the area were also observed in schist units showing minimal amounts of sulphide showings. Copper anomalies were typically associated pyrite rich iron formation, which could be interbedded with felsic units or cherty inclusions. Some of these interbedded layer showed possible influence from intrusive bodies, as coarser grained varieties were observed. Nickel assayed up to 0.21 % in what appeared to be a lamprophyre intrusive in the area that showed signs of previous development.

Additionally, metasedimentary units ranging from fine grained to very-grained with significant amounts of pyrite were observed. they showed the possbility of carrying elevated copper and nickel levels in the relation to other samples as well (600 and 200 ppm, respectively).

Sample Area C

Sample area C was dominated by megacrystic syenite displaying potassic feldspar grains between 0.8 - 4 cm in size. Mafic model assemblages reached up to 30 % locally, dominated by amphibole. Some areas had significant amounts of biotite. Disseminated pyrite in this unit is rare, and garnet, magnetite, and less commonly apatite are accessory minerals. No significant assays or mafic t ultramafic phases were discovered in association with the previous magnetic anomaly in the survey area. Locally, granitic (1907) and equigranular syenite (1915) occurs. No significant alteration phases are observed, but mafic intrusive phases occurring as narrow veinlets and intermediate phases with potassic feldspar phenocrysts were observed (1920).

Soil Sampling Results

The determination of background and anomalous Cu and Ni concentrations in the B-Horizon is difficult to quantify with current methods of analysis. The elevated limits of detection in the range of 75 to 140 ppm for nickel makes the determination of a background signature of the northern claim group difficult. Assays from rocks show that rocks contain elevated levels of nickel concentration. Similar problems are shown for copper concentrations where majority of samples fall below the detection limits of the analyzer, although assays do not appear to show significantly high levels of copper in the soil. Limits of detection are summarized in the following section on quality control. As a result, anomalous values were compared to average crustal abundance levels as baseline for comparison.

Nickel assay values were contoured due to the presence of local continuity in values consistently above the limits of detection. Other elements of interest were indicated by station locations of samples, as the low spatial continuity would either leave to sparse data points for reliable interpolation or create artifacts caused by unreasonable interpolation results. Map 4a shows the location of soil sample locations with relation to topographic and regional geological features. Map 4b shows the resulting nickel contour map with point anomalies for several elements, and contour levels indicating higher levels of iron in the soil.

It appears that anomalous or elevated nickel anomalies occur in a linear trend oriented approximately 320 degrees. Elevated nickel samples occur at local highs and are associated with higher iron values. These nickel anomalies are also loosely associated with more elevated levels of Vanadium and Barite.

Zinc values show local minima within the linear trend to the flank of nickel anomalies, and values around the mean to slightly elevated levels occur with Nickel anomalies. No relationship to lead values is discernible. This structure occurs within a generally elevated background of iron levels in comparison to the flanking regions.

Copper and cobalt anomalies appear to occur in the peripheral regions to the trend elucidated by the iron and nickel values. However, copper levels are not significantly high, meaning that there may not be a strong relationship between nickel and copper anomalies. Cobalt anomalies occur to the southeast o the grid area.

Reliable nickel indicators for nickel anomalies would be values above 350 ppm, which means the most prominent soil anomaly occurs in the area between samples 2006 to 2008, and a smaller anomaly around sample 1954. A lack of data makes determination of copper anomalies difficult, and it is assumed that the current assay values are not fully reliable to suggest the presence of anomalous copper values. Cobalt anomalies are significantly higher than expected crustal levels within a range of 180 - 700 ppm, and investigation of the cause of this anomaly may be warranted.

Conclusions and Recommendations

Mafic volcanic rocks in area A displayed anomalous concentrations of nickel and copper, as well as intrusive relationships suggesting that some alteration to these rocks has occurred. Similarly, iron facies units in the B sampling area showed anomalous values for copper and nickel. Nickel in this area was found to be associated with schists and possibly lamprophyre intrusive. Thin section analysis may better characterize rock types and mineralogical relationships helping to explain the nickel and lesser cobalt mineralization in this area. Area C appears to be less prospective for N--Cu-PGE mineralization in the vicinity of claim 4256905.

Samples showing anomalous nickel mineralization should be assayed for platinum group elements and gold to lower detection limits at a certified lab, to try and determine if they are indicators of PGE mineralization in the area.

It is recommended that additional prospecting and stripping occur on top of nickel soil anomalies to try to define the extent and character of anomalous nickel mineralization in the soil sampling grid. North-trending ground magnetics/ VLF should be successful in delineating conductors associated with pyrite-rich iron facies that has shown to be prospective for potential copper mineralization. The relationship between ultramafic/mafic intrusive and magnetic signature remains unknown, but may help delineate structure in the area. This may also be prospective for PGE mineralization if additional high-quality assays should PGE mineralization associated with nickel mineralization.

References

Berger, B.R. “Geological synthesis along highway 66 from Metachewan to Swastika”. Open reading file 6177. Ontario Geological Survey. 2006.

Map 2239, Ontario Geological Survey, Publication P3534, Precambrian Geology of Ebby and Otto Townships, 2004.

Maps 82 050 and 82 051, Ontario Geological Survey, Aeromagnetic Survey of Kirkland Lake Area 2001.

Map 82 039, Ontario Geological Survey, Aeromagnetic Survey of Kirkland Lake 2000.

Marion, E. Plinky Property; East Group; Otto Township, District of Temiskaming. Kirkland Lake Assessment File (AFRI 2.29948). 31 May, 2005.

Stones, J. Murdock Creek Property; Otto Township, Larder Lake Mining Division. Prepared for: Minorex Ltd. 22 October, 1980.

Appendix A: List of Author Qualifications

1. I have held a valid and current Ontario Prospector's License since 2007.

I certify that the statements, observations, and conclusions are correct and accurate to the best of knowledge.

October 8, 2013
Drew Currah

Appendix B: Rock Descriptions

1867: Highly weathered, iron-rich mafic volcanic rock.

1868: Massive volcanic flow, fine-grained. Appears to have banded areas of potassic feldspar rich material associated with pyritic alteration. Pyrite forms disseminated throughout the rock (<1%).

1869: schist unit displaying green mica, minor actinolite and plagioclase. The rock is intruded by a felsic phase that has large potassic feldpsar phenocrysts up to 1 cm in length, and a very fine grained, black mineral with sub metallic lustre occurs within these fracture planes.

1870: Iron rich shoing weathered sulphide and iron on weathered surface. Aphanitic, light green on fresh surface. 5% pyrite. Could possibly be mafic tuff?.

1872: Massive flow, trace amounts of disseminated pyrite.

1878: Fine grained mafic volcanic, massive flow. Intruded by felspathic materialin narrow veinlets.

1879: medium grained, massive mafic volcanic. up to 15 % amphibole phenorysts.

1880, 1881: Iron formation interbedded with meta-wacke sedimetary rocks. Pyrite is up to 20 % of rock locally.

1882: equigranular potassic feldspar phenocyrsts (55%) in a matrix of biotite (5 %) and fine grained mafic minerals (amphibole and pyroxene?).

1883: Megacrystic syenite with potassic feldspar grains up 1.5 cm in length. Approximately 10 % mafic mineral dominated by horneblende, and minimal amounts of biotite.

1884: Massive mafic flow, disseminated pyrite throughout. Linear band of olivine crystals in present. Dark reddish brown on weathered surfaces.

1886: Pyritic, cherty ironstone. Possbily trace chalcopyrite?.

1888:Cherty iron formation interbedded within fine grained metapelite?. Up to 15 % pyrite.

1890: meta-siltstone or massive felsic flow? Very fine-grained Light green rock, up to 5% pyrite. Dark brown weathered surfaces.

1891: Megacrystic syenite. 20 % mafic minerals dominated by amphibole. Minimal amounts of biotite. Trace apatite.

1892, 1893: Cherty iron formation. Dark brown weathered surfaces, light to darkish grey fresh surfaces. Abundant pyrite (30%).

1894: Massive volcanic flow. No pyrite, minor plagioclase laths. Abundant green mica.

1895, 1896: Mafic volcanic schist unit displaying green mica, fine-grained.

1898: Fine grained black rock. Layered within gabbroic intrusive rock, shows 2 % olivine grians with plagioclase and rare potassic feldspar phenocrysts.

1900: Fine grained, massive flow of basaltic composition. Plagioclase rich, minor amphibole. Crosscut by narrow (~3 mm) wide veinlets of coarser grained quartzo-feldspatic material.

1901: Mafic volcanic schist, disseminated pyrite. Intruded by fine grained syentitic vein 2 cm wide.

1902: Mafic to ultramfic intrusive rock. Displays large percentages of horneblende within plagioclase matrix. Most likely a horneblende rich gabbro.

1903: Distinctive dark reddish brown weathering on surface. Contains finely laminated layers contained subhedral clasts. Possibly a flow breccia interlayered with iron formation. Areas contain up to 5-8 % masive pyrite.

1904: Lamprophyre dyke, or possibly a brecciated flow unit. External, weathered surface is beige to light greyish pink, and fresh surfaces are dark green. Porphyritic texture, showing 5 % of potassic feldspar clasts (2 - 4 mm). Matrix is fine grained, appears to be dominated by augite/ diposide, lesser amounts of amphibole. More minor micaceous planes (cholrite, small amounts of muscovite around KSPAR phenocrysts) occur on some surfaces. Contains disseminated pyrite (1%) shoing cubic habit (1-2 mm). A fine grained dark grey mineral with sub metallic lustre occurs (<1%) in trace amounts. Assays indicate this may be possibly pentlendite or millerite, accounting for abnormal Nickel concentrations.

1905: Metasedimentary (wacke protolith?). Feldspar grains in finer grained matrix. Trace disseminated pyrite.

1906: Cherty iron formation. Iron rich, displaying dark reddish-grey on weathered surfaces. Disseminated cubic pyrite (~1mm) occurs within more passive pyrite (5%). Trace amounts of massive chalcopyrite occur associated with massive pyrite mienralziation (<1 %).

1907: Granite, large areas dominated by massive quartzz with potassic feldspar pheocrysts 4-5 mm in a finer grained matrix of potassic feldspar.

1908: Megacryst syenite with potassium feldspar phenocrysts up to 0.8 cm in size. contains 10 of mafic mineral assemblages dominated by hornblende.

1909: Megacryst syenite with potassium feldspar phenocrysts up to 1 cm in size. contains 10 - 20% of mafic mineral assemblages dominated by amphibole trace amounts of biotite.

1910: Megacryst syenite with potassium feldspar phenocrysts up to 2 cm in size. contains 15 - 20 % of mafic mineral assemblages dominated by amphibole with lesser amounts of biotite.

1911: Megacrystic Syenite, with phenopcrysts up to 1.3 cm in size. Elongated hornblende constitutes 5%, biotite 2 %, and there is trace amounts of subhedral (brown) garnet.

1912: Megacryst syenite with phenocrysts up to 1.2 cm in size. Hornblende constitutes 5 - 8 %, biotite 3 - 5 %. Rare, massive, disseminated pyrite occurs in this outcrop.

1913: Megacrystic syenite with potassic feldspar grains up 1.5 cm in length. Approximately 10 % mafic mineral dominated by horneblende, and minimal amounts of biotite.

1915 : Equigranular syenite, minimal amounts of plagioclase and quartz. Mafic minerals, dominated by horneblende, make up 5 % of the rock. Trace amounts of garnet (brown) are present.

1916 and 1917: Massive mafic volcanic flows. They show a poorly developed foliation defined by green mica(chlorite?). Areas show inclusions of quartz/plagioclase rich, or potassic felspar rich inclusions or blebs. Minor, disseminated pyrite (<1%) occurs as euhedral to massive habit and is pervasive throughout the rock, but can be more concetrated locally.

1918: Megacryst syenite with fine grained biotite (~1 - 2 mm), hornblende. Mafic minerals constitute approximately 10 %. Potassic feldspar phenocrysts up to 8 mm in size. Minor accessory apatite.

1919: Syenite with a bimodal distribution of potassic feldspar grains (~1 - 2 mm and ~3 - 4 mm). Mafic minerals constitute ~8 %, dominated by horneblende.

1920: Granodiorite with 5 % inclusions of rounded potassic feldspar phenocrysts ~ 5mm in size.

1921: Megacrystic syenite with potassic feldspar grains up 1.5 cm in length. Approximately 10 % mafic mineral dominated by horneblende, and minimal amounts of biotite.

1922: Megacryst syenite with potassium feldspar phenocrysts up to 1 cm in size. contains 10 - 20% of mafic mineral assemblages dominated by amphibole trace amounts of biotite.

1923: Cherty iron formation. Iron rich, displaying dark reddish-grey on weathered surfaces. Disseminated cubic pyrite (~1mm) occurs within more passive pyrite (3%).

1935: Massive felsic to intermediate flows interbedded with tuff and/or argillite. Areas qppear quartz rich with lesser amounts of potassic feldspar. Finer grained matrix in areas contains rounded quartz clasts. Rocks contains disseminated, linear bands of pyrite.

1936: Massive volcanic flow. Intruded by narrow syenitic veinlets. Locally appears to be pyrite alteration surrounding intrusive contacts. Significant amounts of green mica.

1948: Schist, trace amounts of disseminated pyrite, abundant green mica. Quartz appears locally abundant.

1950: Massive volcanic flow. Intruded by narrow syenitic veinlets. Locally appears to be pyrite alteration surrounding intrusive contacts.

1951: Mafic tuff, contains quartz inclusions in fine grained matrix. Laminated layers that include massive pyrite in between beds.

1962: Massive felsic flow of dacitic composition. Massive quartz occurs with fine-grained plagioclase. Massive pyrite occurs in linear orientations throughout the rock, some showing euhedral, cubic habit. Minor amounts of potassic phenocrysts occur throughout the sample (<1%). Pyrite also occurs less commonly as massive, irreguarly shaped blebs.

1973, 1974: Cherty iron formation interbedded with recrystalized quartz rich material with lesser amounts of plagiolase and minimal amounts of potassic feldspar phenocrysts. Iron formation shows laminated bedds with linearly oriented pyrite, and recrystalized units show disseminated masses of pyrite. Possibly trace chalcopyrite is preent in some of the recrystalized units.

1989: Fine-grained metasediment. Disseminated pyrite

1998: Fine grained metapelite?.

2001: Massive mafic volcanic flow, minor amounts of quartz, little potassic feldspar. Abundant pyritic alteration (15 %) as massive to euhedral pyrite pervasive throughout the rock. Narrow (~1mm) fractures filled by fine grained potassic feldspar occur through the outcrop.

2005: Mafic volcanic schist. Majority is plagioclase with minor amounts of amphibole, trace amounts of potassic feldspar. fine-grained potassic feldspar occurs in narrow fracture planes in areas of the outcrop.

2011: Metasedimentary, sandstone protolith? Possibly intruded by narrow fractures of felspathic material showing pyrite alteration. Local areas of massive cubic pyrite up to 3 mm.

2018: Banded gneiss (mafic volcanic gneiss) showing layers of potassic feldspar, with coarser calc-sillicate minerals (epidote and horneblende)

2028: Amphibole bearing metasedimentary rock. Amphibole grains 4-7 mm in size within a matrix o plagioclase and amphibole grains.

2029, 2030: Graphitic schist.

2031, 2032: Graphitic schist.

Appendix C: Soil Sample Descriptions

Below are the locations and soil descriptions for the samples collected on the soil sampling grid.

Sample	easting	northing	type	colour	Horizon
1924	567900	5326000	sand	light brown	B
1925	567897	5325976	sand	light brown	B
1926	567901	5325951	sand/gravel	ligt brown/grey	B/C
1927	567899	5325925	sand	light brown	B
1928	567901	5325901	sand	light brown	B
1929	567899	5325875	sand	light brown	B
1930	567900	5325850	sand	light brown	B
1931	567900	5325825	sand/gravel	light brown	B
1933	567898	5325800	sand/clay	light brown/grey	B
1934	567903	5325775	clay	light grey	C
1937	567950	5325975	sand	light brown/grey	B
1938	567949	5325949	sand	light brown/grey	B
1940	567950	5325926	sand	grey	C
1941	567950	5325898	sand/gravel	light brown	B
1942	567951	5325876	sand/clay/gravel	light brown/grey	B/C
1943	567949	5325850	sand	light brown/grey	B/C
1944	567950	5325826	sand/gravel	light brown/grey	C
1945	567949	5325799	sand	grey	C
1946	567951	5325777	sand	light brown/grey	B
1947	567952	5325750	sand/gravel	light brown	B
1949	567950	5325725	sand	light brown	B
1952	567999	5325952	sand	dark grey	B
1953	568000	5325926	sand/gravel	light brown	B
1954	568002	5325902	sand/gravel	light brown	B
1955	568002	5325875	sand/gravel	light brown/grey	B/C
1956	568004	5325851	sand	brown	B
1957	568002	5325826	sand	brown	B
1958	568000	5325803	sand	grey	C
1959	567999	5325775	sand	brown	B
1960	568001	5325752	sand/gravel	light brown	B
1961	568001	5325726	sand	light brown	B
1963	568050	5326000	sand	brown/grey	B
1964	568048	5325978	sand/clay	brown/grey	B
1965	568048	5325951	sand	brown	B
1966	568049	5325926	clay/sand	dark grey	C
1967	578049	5325902	sand	brown	B
1968	568050	5325877	sand/clay	brown/grey	B/C
1969	568049	5325850	sand	brown	B
1970	568049	5325828	sand	dark grey	C

1971	568049	5325828	sand	brown	B
1972	568051	5325776	sand	dark grey	B
1975	568050	5325729	sand	brown	B
1977	568050	5325677	sand	light brown	B
1978	568100	5326000	sand	dark brown	B
1979	568102	5325977	sand	dark brown	B
1980	568101	5325951	sand	light brown	B
1981	568101	5325925	sand	dark brown	B
1982	568100	5325898	sand/clay	grey	C
1983	568101	5325875	sand/clay	grey	C
1984	568100	5325849	sand/clay	grey	C
1985	568101	5325826	sand	brown	B
1986	568101	5325801	sand/clay	grey/brown	B
1987	568100	5325778	sand	grey	C
1988	568099	5325750	sand	grey	C
1990	568150	5326000	sand	light brown	B
1991	568149	5325975	clay	grey	C
1992	568149	5325950	sand	grey	C
1993	568150	5325925	sand/gravel	light brown	B
1994	568149	5325901	sand	brown	B
1996	568149	5325850	sand	grey	C
1997	568149	5325824	sand	grey	C
2002	568199	5325975	sand	brown	B
2003	568201	5325947	clay	grey	C
2004	568198	5325927	sand	light brown	B
2006	568200	5325877	sand	brown	B
2007	568202	5325850	sand	brown	B
2008	568199	5325825	sand	brown	B
2009	568198	5325802	sand	brown	B
2010	568199	5325774	sand/clay	dark grey	B
2012	568250	5326000	sand/gravel	brown	B
2013	568254	5325977	sand/gravel	brown	B
2014	568251	5325949	sand/gravel	grey	C
2015	568248	5325927	sand/clay	brown/grey	B/C
2016	568248	5325927	sand/clay	brown/grey	B/C
2017	568251	5325904	sand/gravel	grey	C
2019	568251	5325851	sand/gravel	dark brown	B
2020	568248	5325830	sand/gravel	brown	B
2021	568253	5325800	sand/gravel	dark brown	B
2022	568252	5325775	sand/gravel	grey	C
2023	568252	5325775	sand/gravel	grey	C
2024	568249	5325750	sand/clay	grey	C
2025	568251	5325726	sand/gravel	brown	B

2026	568248	5325701	sand/gravel	brown	B

Appendix D: Assay Summary for Rock Samples of Selected Elements

Below are the summarized assay results for every rock sample for the elements. Additional elements for each sample can be found in the assay certificates section, Appendix H. Errors are 95 % confidence intervals based on statistics of normalized measurement stacks during analysis. These 95 % confidence intervals correspond to the assumption that error is randomly distributed, the equivalent of two standard deviations away from the mean. Note that error given for samples below the limits of detection are the limits of detection of the sample.

Sample	x	y	Mo	Mo Error	Pb	Pb Error	Zn	Zn Error	Cu	Cu Error	Ni	Ni Error	Co	Co Error	V	V Error	Ba	Ba Error
1867	567123	5326226	< LOD	11	< LOD	13.39	149.17	28.39	113.86	45.48	< LOD	89.98	< LOD	469.31	977.2	107.95	1195.32	56.45
1868	567244	5326172	< LOD	15.49	< LOD	19.32	72.28	33	< LOD	86.8	< LOD	129.22	< LOD	574.86	< LOD	128.08	938.85	75.23
1869	566744	5326340	< LOD	16.87	< LOD	14.81	194.45	46.52	252.46	82.7	534.65	127.41	< LOD	734.56	411.93	186.63	743.3	71.35
1870	566736	5326393	< LOD	9.96	< LOD	15.22	95.19	24.62	< LOD	50.65	145.29	71.17	< LOD	315.12	531.5	106.66	1180.99	65.56
1871	566742	5326403	< LOD	16.86	< LOD	25.14	194.77	47.23	< LOD	99.12	< LOD	136.45	< LOD	632.61	233.9	102.28	1341.44	76.73
1872	566764	5326341	< LOD	17.43	< LOD	17.3	89	38	< LOD	110.19	< LOD	158.16	< LOD	570.33	83.75	54.11	871.72	86.66
1873	567223	5326197	< LOD	10.33	< LOD	12.08	119.51	28.4	< LOD	65.64	131.11	69.49	< LOD	564.74	671.51	109.33	1183.34	70.51
1874	567435	5324274	< LOD	9.82	18.7	8.56	58.03	15.05	< LOD	42.09	< LOD	62.47	< LOD	137.12	< LOD	59.86	1729.63	51.2
1877	566731	5326389	< LOD	12.83	< LOD	14.62	75.86	27.4	97.47	53.29	< LOD	110.09	< LOD	536.44	326.52	104.06	< LOD	172.04
1878	566731	5326389	< LOD	13.15	< LOD	17.18	88.47	31.17	< LOD	86.05	< LOD	124.7	< LOD	594.32	312.97	101.62	788.67	71.92
1879	566845	5326321	< LOD	15.37	< LOD	15.22	56.95	30.54	< LOD	92.77	206.97	98.84	< LOD	591.18	158.07	78.61	887.49	77.55
1880	567997	5325692	< LOD	15.12	< LOD	21.68	320.2	53.14	147.9	74.35	< LOD	153.65	< LOD	820.17	< LOD	100.92	723.66	77.19
1881	567997	5325692	< LOD	12.46	< LOD	16.19	317.5	45.71	1516.7	126.18	< LOD	111.44	< LOD	634.32	< LOD	109.26	642.56	59.65
1882	567354	5324256	< LOD	10.57	13.51	8.96	129.37	22.35	< LOD	40.32	119.19	52.89	< LOD	328.55	431.93	64.95	1142.42	48.47
1883	567247	5324348	16.42	7.46	22.34	10.79	72.81	20.32	80.01	37.63	< LOD	72.6	< LOD	264.32	242.16	97.65	1638.98	50.5
1884	566838	5326327	27.24	8.63	41.07	13.28	116.95	28.12	< LOD	65.84	158.06	71.34	< LOD	439.34	90.76	54.06	674.64	52.43
1885	566718	5326384	< LOD	9.17	< LOD	9.94	62.02	16.15	94.78	28.49	99.75	50.67	< LOD	355.14	607.62	74.66	530.26	39.82
1886	567253	5326182	< LOD	11.24	< LOD	13.28	155.57	32.35	632.42	80.59	190.65	73.18	< LOD	580.53	464.73	113.97	902.45	56.94
1887	567070	5326197	< LOD	12.75	< LOD	14.89	77.05	28.51	< LOD	85.03	271.41	92.64	< LOD	519.53	135.45	47.4	1000.3	68.28
1888	567997	5325692	< LOD	11.57	< LOD	12.57	211.56	35.73	85.67	49.47	< LOD	103.9	< LOD	584.2	< LOD	101.24	< LOD	136.25
1889	566993	5326214	< LOD	9.63	< LOD	9.07	34.66	16.72	< LOD	52.81	< LOD	76.66	< LOD	276.75	< LOD	59.52	635.3	45.91
1890	568417	5325624	20.16	6.99	210.68	22.36	2752.4	120.43	2153.41	123.22	548.9	78.5	< LOD	339.3	119.53	49.9	743.39	47.4

1891	567235	5324358	9.09	5.89	22.92	8.93	< LOD	17.43	99.07	26.4	< LOD	55.24	< LOD	89.19	959.33	44.55	3035.44	58.91
1892	567997	5325693	< LOD	13.37	34.15	14.41	176.16	38.37	275.64	73.21	158.08	90.94	< LOD	748.98	< LOD	128.28	767.3	67.38
1893	567997	5325693	< LOD	15.11	88.96	22.15	96.55	35.21	178.98	74.36	257.39	106.84	< LOD	855.04	< LOD	140.41	844.43	74.76
1894	566937	5326239	< LOD	11.22	< LOD	13.49	113.48	26.74	81.41	47.32	137.28	69.05	< LOD	465.8	259.56	75.2	736.67	56.62
1895	568330	5325636	< LOD	10.99	< LOD	13.63	85.93	24.48	< LOD	61.47	180.6	70.19	< LOD	423.83	140.67	65.5	784.85	139.7
1896	568330	5325636	< LOD	14.43	< LOD	15.88	134.9	35.85	< LOD	69.48	478.82	106.72	< LOD	622.57	791.84	161.31	1447.9	80.18
1897	567199	5326224	< LOD	10.79	< LOD	10.16	188.85	31.45	79.92	44.23	< LOD	98.98	< LOD	523.64	527.97	90.72	711.16	51.34
1898	568363	5325622	< LOD	10.63	< LOD	10.9	57.25	20.4	< LOD	52.18	< LOD	88.24	< LOD	442.76	135.45	82.35	689.95	49.98
1899	566701	5326374	< LOD	9.6	22.55	8.96	168.29	22.98	< LOD	43.95	94.02	49.27	< LOD	338.83	710.19	78.7	1273.41	49.53
1900	567705	5325963	< LOD	10.17	25.05	10.21	66.26	17.58	< LOD	38.29	< LOD	66.39	< LOD	193.31	< LOD	88.15	2670.55	62.1
1901	566701	5326376	< LOD	9.35	27.62	9.27	169.05	22.23	48.23	24.4	< LOD	67.52	< LOD	352.01	581.82	77.88	1149.64	46.85
1902	567697	5325982	< LOD	10.73	< LOD	12.55	104.85	24.71	163.74	48.32	< LOD	91.18	< LOD	453.96	549.13	111.88	651.02	46.38
1903	568006	5325652	< LOD	9.72	< LOD	12.33	104.45	19.64	< LOD	37.98	< LOD	75.42	< LOD	350.36	181.68	52.51	710.35	44.35
1904	568425	5325619	13.19	5.91	< LOD	8.31	< LOD	14.89	< LOD	42.46	2312.13	110.53	431.13	172.14	201.16	38.34	< LOD	102.28
1905	568272	5325718	< LOD	8.16	13.6	7.95	88.09	17.21	< LOD	33.78	260.63	54.41	< LOD	291.79	919.15	72.56	2666.36	57.72
1906	567982	5325697	< LOD	13.37	< LOD	13.83	66.24	37.15	5269.34	291.64	169.56	89.45	< LOD	698.47	< LOD	104.44	827.42	68.9
1907	567499	5324255	< LOD	7.51	16.79	6.83	< LOD	14.5	< LOD	34.21	< LOD	51.23	< LOD	119.67	151.85	20.73	768.57	37.56
1908	567268	5324285	13.76	6.81	32.52	9.12	60.36	14.21	< LOD	36.03	< LOD	56.91	< LOD	219.94	459.33	46.31	1693.52	45.99
1909	567283	5324296	< LOD	9.13	< LOD	11.49	56.6	15.78	< LOD	44.35	< LOD	70.51	< LOD	168.78	< LOD	63.56	1790.1	52.29
1910	567368	5324292	< LOD	7.4	13.51	7.06	< LOD	15	< LOD	36.19	< LOD	54.74	< LOD	138.07	451.94	33.72	1460.88	43.89
1911	567393	5324287	< LOD	9.49	20.72	8.25	51.47	14.19	< LOD	32.67	< LOD	58.08	< LOD	164.35	457.99	36.88	1450.94	46.77
1912	567250	5324323	< LOD	10.66	168	16.95	130.88	19.49	151.37	29.18	< LOD	63.26	< LOD	226.04	586.6	45.55	1456.88	45.86
1913	567262	5324286	11.65	5.66	18.4	7.7	21.29	11.26	< LOD	35.71	< LOD	54.83	< LOD	144.55	560.12	37.26	1899.19	51.38
1915	567379	5324302	10.28	6	71.9	11.96	24.14	12.25	< LOD	29.95	< LOD	57.25	< LOD	147.53	< LOD	48.12	1355.17	44.29
1916	566793	5326407	< LOD	10.53	61.94	13.75	136.25	27.33	269.56	54.63	172.42	65.66	< LOD	495.22	514.56	95.12	761.49	50.81
1917	566793	5326407	< LOD	9.44	78.37	13.14	76.56	17.04	39.49	25.75	115.31	54.36	< LOD	291.31	331.24	52.96	597.07	40.72
1918	567403	5324282	< LOD	9.96	90.99	13.21	91.77	17.06	< LOD	31.39	< LOD	56.74	< LOD	149.13	601.15	50.16	1445.98	45.03
1919	567356	5324291	14.84	6.93	85.8	13.04	91.07	17.46	< LOD	32.29	< LOD	59.41	< LOD	236.09	594.44	56.58	1293.19	43.9
1920	567241	5324383	< LOD	9.15	102.77	13.61	68.08	15.48	< LOD	31.13	< LOD	60.92	< LOD	216.78	676.67	51.63	2167	51.58
1921	567307	5324277	< LOD	8.5	89.28	13.49	77.01	16.78	53.49	24.75	77.8	43.83	< LOD	204.85	646.7	49.14	2211.18	55.26
1922	567248	5324378	8.97	5.86	58.34	11.18	71.57	15.43	< LOD	31.13	< LOD	59.63	< LOD	199.72	773.21	50.37	2105.98	50.27

1923	568395	5325679	< LOD	7.28	68.64	9.94	15.7	8.81	< LOD	32.49	< LOD	49.05	< LOD	188.59	111.49	25.82	662.7	35.12
1935	567902	5325750	11.06	6.91	36.57	11.12	63.9	20.98	375.23	55.83	< LOD	84.07	< LOD	397.16	120.24	57.95	715.27	48.14
1936	567950	5326000	< LOD	11.03	50.21	13.29	382.5	42.11	138.76	48.65	325.6	74.84	< LOD	516.87	561.11	100.58	820.68	54.44
1948	567947	5325730	< LOD	9.38	18.16	9.68	50.82	20.54	681.92	72.16	< LOD	87.02	< LOD	416.81	99.07	55.23	1046.37	54.52
1950	568000	5326000	15.14	6.85	19.86	9.2	84.13	21.4	138.19	41.59	83.09	51.73	< LOD	352.31	638.98	81.86	862.44	48.76
1951	567998	5325975	< LOD	9.03	< LOD	10.22	37.04	12.81	84.26	25.48	80.4	46.43	< LOD	332.3	355.33	64.45	717	40.15
1962	568000	5325701	28.57	10.14	< LOD	20.19	< LOD	38	310.3	79.84	< LOD	139.15	< LOD	758.33	< LOD	77.64	254.16	53.18
1973	568053	5325752	24.72	10.29	81.89	20.12	85.54	31.23	167.03	69.33	179.62	94.06	< LOD	754.92	184.51	120.5	574.69	61.06
1974	568053	5325752	< LOD	6.91	13.89	7.09	94.1	17.2	59.28	24.41	< LOD	73.65	< LOD	169.98	< LOD	57.29	< LOD	159.03
1976	568049	5325698	< LOD	7.37	28	8.93	106.21	18.2	50.38	24.76	369.82	57.25	< LOD	245.55	701.46	56.91	3191.46	60.39
1989	568103	5325724	< LOD	9.57	< LOD	11.15	162.68	26.23	< LOD	54.64	102.14	55.8	< LOD	417.21	402.84	62.99	844.91	50.29
1995	568149	5325875	< LOD	8.46	34.13	10.32	82.78	18.87	63.8	28.26	< LOD	68.41	< LOD	257.5	890.33	67.4	2620.64	62.9
1998	568145	5325799	< LOD	10.97	29.25	11.07	150.1	25.59	76.17	37.16	< LOD	75.98	< LOD	305.38	144.77	76.79	2065.24	59.66
2000	568153	5325748	< LOD	6.5	19	7.19	55.84	13.5	39.72	21.05	< LOD	59.3	< LOD	305.05	332.68	47.18	502.41	37.65
2001	568200	5326000	< LOD	10.78	56.68	13.77	113.21	25.84	304.43	57.37	133.11	66.17	< LOD	438.61	135.21	61.23	1208.19	57.59
2005	568198	5325900	< LOD	9.98	< LOD	14.96	49.92	21.42	138.07	49.11	204.43	67.85	< LOD	364.03	92.34	48.84	1349.83	60.66
2011	568202	5325752	< LOD	9.58	21.71	9.22	65.69	16.82	< LOD	44.45	< LOD	73.79	< LOD	227.61	124.07	57.06	2000.07	56.53
2018	568249	5325880	< LOD	7.69	347.01	24.74	117.75	19.7	69.78	26.77	121.69	46.96	< LOD	379.66	284.01	77.47	758.76	45.14
2027	568248	5325675	< LOD	10.26	< LOD	12.14	87.18	22.09	< LOD	54.01	183.82	60.73	< LOD	330.83	148.68	57.64	1225.54	52.49
2028	567919	5325747	< LOD	8.39	< LOD	8.35	93.55	18.51	< LOD	45.26	252.77	59.02	< LOD	327.44	275.74	55.43	1100.82	49.1
2029	568402	5325616	< LOD	13.3	< LOD	16.83	65.34	26.72	< LOD	74.11	125.97	83.54	< LOD	693.58	< LOD	122.71	849.37	67.81
2030	568402	5325616	< LOD	11.83	< LOD	12.15	53.62	25.18	< LOD	73.78	< LOD	121.74	< LOD	673.7	< LOD	85.84	881.45	71.57
2031	568380	5325436	< LOD	11.87	< LOD	15.71	81.34	26.09	81.03	51.13	< LOD	105.89	< LOD	509.67	127.09	56.6	< LOD	145.73
2032	568380	5325436	< LOD	12.52	< LOD	12.05	131.61	30.14	88.3	51.28	< LOD	107.06	< LOD	582.47	356.77	90.1	676.78	55.16

Appendix E: Assay Summary for Soil Samples of Selected Elements

Below are the summarized assay results for every soil sample for selected elements. Additional elements for each sample can be found in the assay certificates section, Appendix H. Errors are 99 % confidence intervals based on statistics of normalized measurement stacks during analysis. These 99 % confidence intervals correspond to the assumption that error is randomly distributed, the equivalent of three standard deviations away from the mean. Note that error given for samples below the limits of detection are the limits of detection of the sample.

Sample	Mo	Mo Error	Pb	Pb Error	As	As Error	Zn	Zn Error	Cu	Cu Error	Ni	Ni Error	Co	Co Error	Ba	Ba Error
1924	< LOD	11.14	50.19	16.12	< LOD	19.18	93.73	26.68	< LOD	55.07	144.77	77.73	< LOD	392.45	332.89	51.98
1925	< LOD	11.41	58.38	17.79	< LOD	20.57	93.11	27.63	62.46	39.95	175.13	83.3	< LOD	407.24	758.86	59.2
1926	< LOD	9.91	54.41	15.51	< LOD	19.16	31.93	18.24	< LOD	48.49	101.16	65.51	< LOD	267.3	388.48	48.78
1927	< LOD	11.88	60.82	18.66	< LOD	22.8	172.81	35.79	< LOD	61.41	180.32	86.76	< LOD	418.87	1639.82	71.29
1928	< LOD	10.82	49.18	15.83	< LOD	19.5	57.56	22.14	< LOD	51.55	131.9	74.43	< LOD	341.17	427.26	52.02
1929	< LOD	10.44	41.32	14.6	< LOD	17.78	57.35	21.85	< LOD	50.19	165.09	72.2	< LOD	275.13	495.4	52.35
1930	< LOD	10.07	40.45	13.88	< LOD	16.58	62.51	21.53	< LOD	46.88	< LOD	91.87	< LOD	249.3	508.9	51.31
1931	< LOD	10.02	26.02	12.66	< LOD	16.24	32.29	18.06	< LOD	45.52	< LOD	95.49	< LOD	271.57	400.61	49.94
1933	< LOD	10.25	38.43	13.87	< LOD	16.91	28.22	17.33	< LOD	44.89	< LOD	94.5	< LOD	213.16	448.87	49.94
1934	< LOD	13.07	70.72	22.3	< LOD	26.16	< LOD	34.69	< LOD	70.41	< LOD	132.88	< LOD	237.64	623.08	70.8
1937	< LOD	10.64	33.83	13.55	< LOD	16.33	31.6	18.55	< LOD	46.85	< LOD	93.55	< LOD	248.46	391.77	49.39
1938	< LOD	11.05	51.63	16.15	< LOD	18.08	50.61	22.62	< LOD	52.94	124.19	74.52	< LOD	335.89	843.88	58.25
1940	< LOD	10.6	31.89	12.76	< LOD	15.15	< LOD	21.82	< LOD	40.33	< LOD	75.68	< LOD	110.49	309.92	45.4
1941	< LOD	10.92	26.7	12.77	< LOD	14.79	30.66	18.61	< LOD	48.16	< LOD	95.75	< LOD	292.76	431.75	50.69
1942	< LOD	10.69	23.49	12.11	< LOD	13.95	27.29	17.82	< LOD	46.66	< LOD	91.48	< LOD	244.35	427.66	49.28
1943	< LOD	10.14	< LOD	15.71	< LOD	12.92	34.37	17.42	< LOD	43.9	< LOD	85.71	< LOD	187.64	454.23	49.22
1944	< LOD	9.45	19.77	11.11	< LOD	12.55	< LOD	22.91	< LOD	39.11	< LOD	82.25	< LOD	179.26	458.1	48.86
1945	< LOD	10.2	24.92	12.17	< LOD	14.44	26.08	16.78	< LOD	41.76	< LOD	79.03	< LOD	179.19	480.22	50.24
1946	< LOD	9.58	20.84	11.54	< LOD	13.2	< LOD	25.66	< LOD	48.05	< LOD	93.83	< LOD	232.13	488.36	51.22
1947	< LOD	10.52	31.39	13.39	< LOD	16.96	< LOD	27.46	< LOD	45.93	< LOD	100.74	< LOD	343.37	257.01	49.07
1949	< LOD	10.19	25.91	12.04	< LOD	14.49	50.35	19.68	< LOD	44.45	< LOD	90.33	< LOD	244.88	316.2	47.2
1952	< LOD	11.77	25.4	13.88	< LOD	16.32	117.2	31.5	< LOD	56.82	498.88	112.03	< LOD	486.65	380.54	57.77

1953	< LOD	10.64	21.54	12.05	< LOD	13.94	41.65	19.87	< LOD	49.26	< LOD	100.08	< LOD	267.39	548.38	52.45
1954	< LOD	11.69	< LOD	20.35	< LOD	16.8	114.77	32.02	< LOD	66.03	593.07	121.31	< LOD	567.68	698.08	64.99
1955	< LOD	10.67	< LOD	16.03	< LOD	13.63	40.47	18.85	< LOD	44.31	< LOD	90.06	< LOD	214.78	482.16	51.21
1956	< LOD	11.89	30.75	14.35	< LOD	16.79	112.51	29.89	< LOD	52.42	209.46	85.71	< LOD	398.76	648.25	59.65
1957	< LOD	11.73	54.22	17.94	< LOD	20.84	118.52	31.29	< LOD	55.48	137.68	83.58	< LOD	452.7	1055.79	64.48
1958	< LOD	10.66	29.51	12.37	< LOD	13.48	< LOD	22.5	< LOD	39.5	< LOD	79.25	< LOD	141.45	335.77	47.34
1959	< LOD	10.5	25.67	12.46	< LOD	14.68	94.83	25.43	< LOD	47.74	< LOD	95.74	< LOD	305.87	357.64	48.57
1960	< LOD	10.38	18.51	11.42	< LOD	12.59	38.7	18.98	< LOD	47.76	< LOD	93.99	< LOD	274.02	392.2	49.36
1961	< LOD	10.93	< LOD	16.99	< LOD	13.48	32.9	18.96	< LOD	44.2	< LOD	95.84	< LOD	327.25	327.75	49.87
1963	< LOD	10.22	< LOD	16.47	< LOD	13.76	144.37	29.85	79.25	36.89	< LOD	100.55	< LOD	339.59	370.96	50.75
1964	< LOD	11.07	20.67	12.36	< LOD	14.91	87.01	25.74	< LOD	49.15	< LOD	106.17	< LOD	352.53	301.03	50.93
1965	< LOD	11.89	< LOD	18.71	20.14	11.63	98.28	28.38	< LOD	55.49	136.71	83.52	< LOD	428.33	419.15	55.49
1966	< LOD	10.46	16.48	10.77	< LOD	12.19	< LOD	21.99	< LOD	41.47	< LOD	81.5	< LOD	147.45	478.92	49.75
1967	< LOD	12.25	27.97	15.24	< LOD	17.4	95.68	30.46	< LOD	60.87	< LOD	127.8	< LOD	448.17	1201.09	68.18
1968	< LOD	11.56	< LOD	19.21	< LOD	15.21	99.87	28.7	< LOD	54.96	199.76	83.86	< LOD	354.09	785.37	61.15
1969	< LOD	10.47	< LOD	16.85	< LOD	13.19	50.34	20.9	< LOD	46.82	118.44	68.71	< LOD	284.41	517.16	52.57
1970	< LOD	10.54	< LOD	15.76	< LOD	11.51	29.38	17.68	< LOD	47.43	< LOD	92.76	< LOD	182.32	520.22	51.07
1971	< LOD	11.24	< LOD	16.14	< LOD	13.26	48.47	21.02	< LOD	51.48	< LOD	99.68	< LOD	312.13	437.73	52.34
1972	< LOD	10.25	< LOD	15.72	< LOD	12.11	28.57	16.93	< LOD	40.56	< LOD	83.74	< LOD	159.97	348.65	47.71
1975	< LOD	11.07	< LOD	16.92	< LOD	13.61	34.43	18.66	< LOD	46.56	< LOD	90.8	< LOD	253.25	323.04	49.25
1977	< LOD	10.16	< LOD	16.77	< LOD	13.21	< LOD	27.06	< LOD	45.12	< LOD	98.7	< LOD	300.94	383.95	50.49
1978	< LOD	10.69	< LOD	16.35	< LOD	12.87	< LOD	25.42	< LOD	47.89	< LOD	92.06	< LOD	277.06	318.53	49.15
1979	< LOD	10.68	< LOD	16.48	< LOD	12.75	181.03	32.12	54.68	33.65	< LOD	95	< LOD	225.51	93.11	43.61
1980	< LOD	11.1	< LOD	17.52	< LOD	14.08	121.66	28.72	< LOD	51.95	< LOD	105.67	< LOD	309.73	292.88	49.3
1981	< LOD	12.24	< LOD	21.76	< LOD	16.99	136.23	34.81	< LOD	60.48	517.14	119.36	< LOD	558.09	476.18	60.2
1982	< LOD	11.06	< LOD	15.91	< LOD	12.56	31.93	18.11	< LOD	49.4	< LOD	89.17	< LOD	207.12	420.89	50.45
1983	< LOD	12.49	27.93	15.57	< LOD	17.57	100.64	30.64	< LOD	56.85	221.22	90.91	< LOD	384.83	1541.37	71.04
1984	< LOD	11.32	< LOD	16.79	< LOD	13.25	72.99	24.86	< LOD	56.67	343.9	91.65	< LOD	381.94	290.88	51.17
1985	< LOD	11.25	21.72	13.06	< LOD	14.65	159.93	34.28	< LOD	54.72	366.8	100.23	< LOD	481.98	416.91	55.57
1986	< LOD	11.6	25.58	13.77	< LOD	15.78	93.72	27.49	< LOD	58.09	262.08	90.37	< LOD	409.54	367.71	54.56
1987	< LOD	11.06	20.56	12.16	< LOD	14.03	54.68	21.33	< LOD	45.04	< LOD	100.96	< LOD	269.01	503.47	52.15

1988	< LOD	9.97	18.67	11.39	< LOD	12.52	< LOD	24.63	< LOD	40.61	< LOD	84.73	< LOD	172.17	376.17	47.59
1990	< LOD	10.19	< LOD	15.39	< LOD	12.1	43.82	19.15	< LOD	45.29	< LOD	93.32	< LOD	259.08	309.37	47.06
1991	< LOD	10.93	< LOD	16.76	< LOD	12.62	< LOD	26.95	< LOD	48.46	< LOD	93.6	< LOD	236.76	359.27	50.69
1992	< LOD	10.43	21.39	11.75	< LOD	12.98	26.23	17.05	< LOD	45.79	< LOD	94.05	< LOD	204.76	357.51	47.62
1993	< LOD	10.67	19.75	11.76	< LOD	12.79	39.42	19.68	< LOD	50.33	166.47	75.45	< LOD	334.78	306.73	49.8
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1996	< LOD	10.16	19.03	11.58	< LOD	12.83	< LOD	23.9	< LOD	46.14	< LOD	89.01	< LOD	221.79	343.09	48.69
1997	< LOD	11.14	18.2	11.84	< LOD	12.6	38.35	19.64	< LOD	46.42	< LOD	96.62	< LOD	255.19	494.08	51.84
2002	< LOD	10.74	< LOD	17.66	< LOD	13.93	35.59	19.44	< LOD	45.5	< LOD	97.2	< LOD	329.91	269.92	48.79
2003	< LOD	10.21	< LOD	16.06	< LOD	12.4	< LOD	23.71	< LOD	45.61	< LOD	94.64	< LOD	228.34	384.8	48.87
2004	< LOD	10.63	16.99	11.28	< LOD	13.08	65.03	22.09	< LOD	49.77	401.94	86.33	< LOD	225.96	323.98	47.4
2006	< LOD	10.31	17.84	11.8	< LOD	13.27	54.09	21.1	< LOD	52.62	196.34	75.42	< LOD	313.27	357.95	50.32
2007	< LOD	11.31	< LOD	15.74	< LOD	13.21	82.99	27.84	< LOD	65.72	680.78	123.76	< LOD	525.45	264.75	54.95
2008	< LOD	11.85	< LOD	19.21	< LOD	15.05	89.27	29.44	< LOD	61.02	362.55	104.35	< LOD	500.77	259.95	55.48
2009	< LOD	11.11	18.47	12.11	< LOD	14.7	67.32	23.86	< LOD	52.63	153.91	74.71	< LOD	312.61	418.46	51.65
2010	< LOD	10.43	< LOD	16.34	< LOD	12.28	35.37	18.49	< LOD	48.29	124.08	67.47	< LOD	260.07	445.55	50.89
2012	< LOD	11.06	< LOD	16.75	< LOD	14.04	72.25	23.45	< LOD	45.7	< LOD	101.29	< LOD	337.77	299.86	48.91
2013	< LOD	10.64	< LOD	16.62	< LOD	12.51	86.82	24.87	< LOD	45.44	< LOD	96.51	< LOD	307.94	190.74	46.94
2014	< LOD	10.45	< LOD	16.48	< LOD	12.8	27.11	17.87	< LOD	47.65	< LOD	95.39	< LOD	222.49	433.15	49.38
2015	< LOD	10.35	23.74	12.39	< LOD	13.34	38.91	18.85	< LOD	44.32	< LOD	96.05	< LOD	224.5	347.48	70.66
2016	< LOD	10.15	< LOD	16.11	< LOD	12.38	43.94	19.32	< LOD	42.28	< LOD	88.89	< LOD	225.46	398.56	49.54
2017	< LOD	10.23	< LOD	16.6	< LOD	13.11	26.54	17.07	< LOD	43.61	< LOD	96.23	< LOD	259.09	268.85	47.85
2019	< LOD	10.06	20.42	11.44	< LOD	13.41	37.9	18.71	< LOD	45.53	< LOD	95.85	< LOD	262.93	435.73	50.45
2020	< LOD	10.72	18.81	11.75	< LOD	13.77	44.25	20.24	< LOD	45.39	< LOD	94.21	< LOD	269.78	311.35	48.2
2021	< LOD	10.22	< LOD	14.63	< LOD	12.26	30.61	18.44	< LOD	46.4	< LOD	92.2	< LOD	270.66	423.19	50.85
2022	< LOD	10.06	< LOD	15.3	< LOD	12.15	< LOD	25.68	< LOD	45.54	125.87	65.43	< LOD	214.23	388.8	48.61
2023	< LOD	9.93	< LOD	15.69	< LOD	12.12	27.12	17.23	< LOD	44.79	112.63	65.21	< LOD	229.31	418.31	50.83
2024	< LOD	11.63	24.47	14.08	< LOD	17.3	81.46	28.01	70.77	45.06	443.56	108.01	< LOD	483.29	540.77	58.73
2025	9.65	121.62	14.01	< LOD	10.93	< LOD	23.45	< LOD	39.4	< LOD	80.81	< LOD	175.8	10967.97	47.21	22.85
2026	13.08	222.46	6.74	< LOD	15.89	< LOD	92.86	< LOD	97.76	< LOD	296.48	30264.02	699.57	389.28	8.35	54.92

Appendix F: Prospecting and Soil Sampling Work Log

The following log summarizes the work log for each prospector involved with the current program. Work hours and cost breakdowns are summarized in the following table, with descriptions of the work completed each day.

Date	Activity	Personnel	Rate	Sub-Total	Notes
14-Sep-13	Prospecting Area A	Drew Currah, Ken Kelly	$300/day/man	$600	Prospecting looked at outcrops in the NW corner of the claim group. Traverses were generally east-west
15-Sep-13	Prospecting Area B	Drew Currah, Ken Kelly	$300/day/man	$600	Prospecting looked at continuation of outcrops to the east. This located old treching works that were sampled in the area.
16-Sep-13	Prospectin Area C	Drew Currah, Ken Kelly	$300/day/man	$600	Prospecting looked at the central claim portion in areas where previous magnetic anomalies were located
17-Sep-13	Prospecting Area B	Drew Currah, Ken Kelly	$300/day/man	$300	Prospecting looked at determining the locations of additional trenching; quality of soil samples in the area. Collection of additional samples from the B area
18-Sep-13	Prospecting Area B / Soil Sampling	Drew Currah, Ken Kelly	$300/day/man	$600	Soil sampling in a grid around trenched area in NS orientation. Outcrops were sampled in the gridded area
19-Sep-13	Prospecting Area B / Soil Sampling	Drew Currah, Ken Kelly	$300/day/man	$600	Soil sampling in a grid around trenched area in NS orientation. Outcrops were sampled in the gridded area
20-Sep-13	Prospecting Area B / Soil Sampling	Drew Currah, Ken Kelly	$300/day/man	$600	Soil sampling in a grid around trenched area in NS orientation. Outcrops were sampled in the gridded area
Total:				$3,900	

Appendix G: Thermo Scientific Niton XLT-3 Instrument Specifications

Below are the specifications of the Niton XL3t Analyzer made by Thermo Scientific.

Dimiensions (cm)	**24.4, 23, 9.5**
Tube	Au anode 50 kV maximum, 40 uA maximum
Detector	High-performance Si PIN diode
System Electronics	533 MHz ARM 11 CPU, 300 MHz Dedicated DSP, 80 MHz ASICS DSP, 4096 Channel MCA, 32 Mb internal storage
Batteries	4 or 6 cell Lithium-ion batteries
Display	Colour VGA touchscreen
Element Detection Range	Atomic number >25 to U
Data transfer:	RS-232 or USB port

Appendix H: Assay Certificates

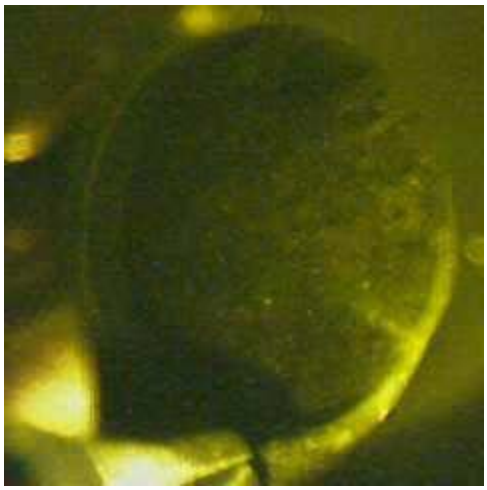
This appendix starts on the following page.

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1867
Mode	TestAll Geo
Time	2013-09-14 20:12
Duration	120.56
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



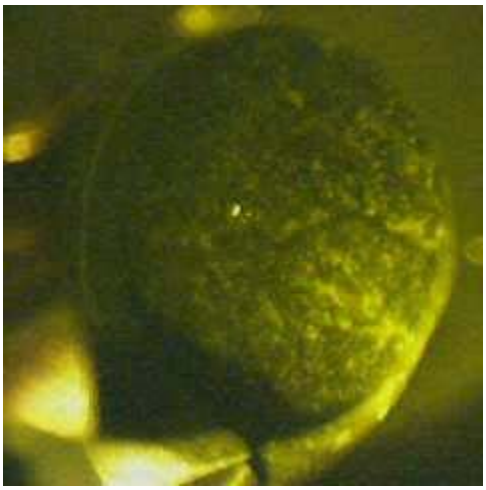
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Sr	89.304	±	18.224
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Rb	85.928	±	5.715
Th	< LOD	:	300000.000
Pb	< LOD	:	13.392
Se	< LOD	:	7.013
As	15.453	±	6.822
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	149.168	±	28.389
W	< LOD	:	124.647
Cu	113.859	±	45.484
Ni	< LOD	:	89.977
Co	< LOD	:	469.309
Fe	116340.922	±	2664.348
Mn	6121.396	±	340.237
Cr	102.929	±	48.369
V	977.205	±	107.947
Ti	6266.667	±	225.271
Sc	102.324	±	37.655
Ca	440.250	±	236.241
K	29483.766	±	941.415
S	< LOD	:	2504.311
Ba	1195.320	±	56.447
Cs	73.854	±	8.450
Te	133.167	±	24.884
Sb	< LOD	:	31.587
Sn	< LOD	:	32.820
Cd	< LOD	:	12.008
Ag	< LOD	:	8.484
Pd	< LOD	:	6.373
Bal	821555.938	±	5530.822
Nb	12.187	±	5.559
Bi	< LOD	:	14.475
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

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Flags	
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INSPECTOR	
MISC	
NOTE	



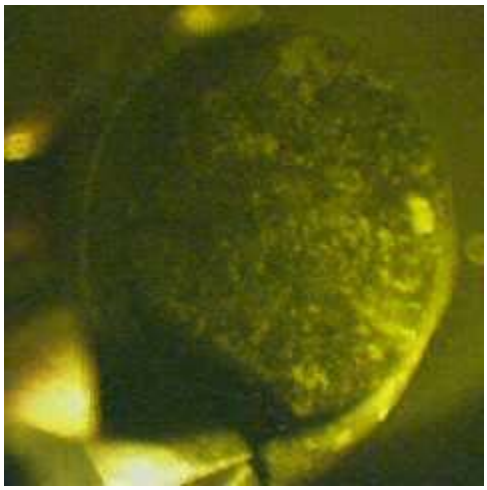
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Rb	49.634	±	6.135
Th	< LOD	:	300000.000
Pb	< LOD	:	19.323
Se	< LOD	:	8.542
As	< LOD	:	10.579
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	72.276	±	33.003
W	< LOD	:	177.403
Cu	< LOD	:	86.800
Ni	< LOD	:	129.224
Co	< LOD	:	574.860
Fe	65517.434	±	2607.314
Mn	1384.343	±	279.421
Cr	< LOD	:	66.846
V	< LOD	:	128.080
Ti	1655.223	±	149.459
Sc	< LOD	:	258.282
Ca	98856.820	±	1435.871
K	52807.926	±	1485.143
S	< LOD	:	4196.655
Ba	938.852	±	75.235
Cs	85.569	±	11.916
Te	158.704	±	35.315
Sb	< LOD	:	46.720
Sn	91.414	±	24.495
Cd	< LOD	:	18.262
Ag	< LOD	:	12.509
Pd	< LOD	:	9.575
Bal	726306.000	±	10000.933
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Bi	< LOD	:	20.655
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

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Flags	
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LOCATION	
INSPECTOR	
MISC	
NOTE	



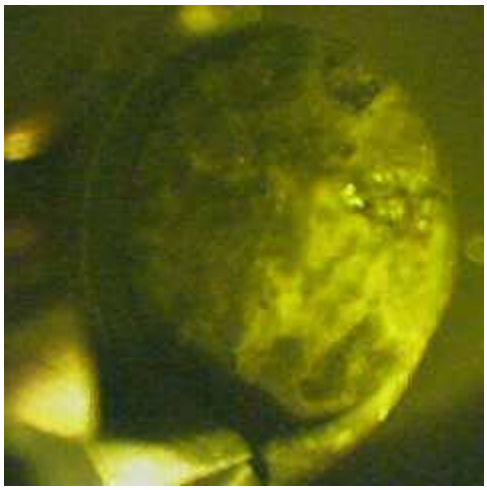
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Th	< LOD	:	300000.000
Pb	< LOD	:	14.812
Se	< LOD	:	10.582
As	< LOD	:	9.714
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	194.449	±	46.518
W	< LOD	:	172.076
Cu	252.457	±	82.701
Ni	534.653	±	127.412
Co	< LOD	:	734.556
Fe	130316.273	±	4361.709
Mn	2505.665	±	354.489
Cr	3364.924	±	173.042
V	411.935	±	186.628
Ti	13665.825	±	573.393
Sc	< LOD	:	190.966
Ca	22838.100	±	939.315
K	2364.246	±	575.519
S	< LOD	:	7224.760
Ba	743.303	±	71.350
Cs	109.079	±	12.007
Te	154.598	±	34.770
Sb	83.038	±	20.666
Sn	90.761	±	24.173
Cd	< LOD	:	18.111
Ag	< LOD	:	13.652
Pd	< LOD	:	8.418
Bal	819350.875	±	7832.728
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Bi	< LOD	:	13.063
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

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INSPECTOR	
MISC	
NOTE	



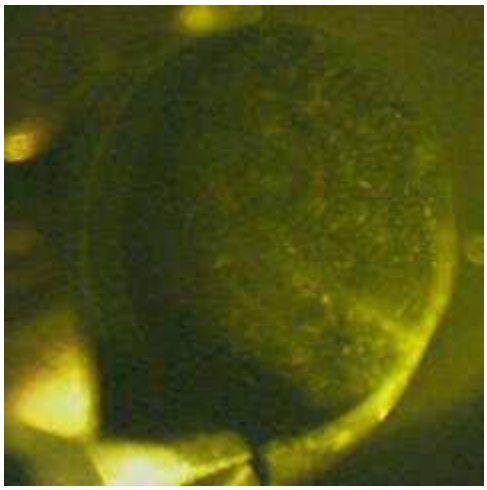
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Pb	< LOD	:	15.219
Se	< LOD	:	6.725
As	37.077	±	11.039
Hg	< LOD	:	15.533
Au	< LOD	:	10.387
Zn	95.191	±	24.624
W	< LOD	:	150.192
Cu	< LOD	:	50.646
Ni	145.292	±	71.174
Co	< LOD	:	315.123
Fe	36467.105	±	743.311
Mn	357.608	±	129.111
Cr	92.144	±	47.626
V	531.499	±	106.658
Ti	6328.863	±	289.022
Sc	< LOD	:	177.495
Ca	46022.320	±	952.380
K	24443.791	±	988.314
S	63156.949	±	5662.504
Ba	1180.994	±	65.560
Cs	83.499	±	9.864
Te	102.494	±	28.381
Sb	< LOD	:	37.622
Sn	78.639	±	20.148
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Bi	< LOD	:	15.840
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

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NOTE	



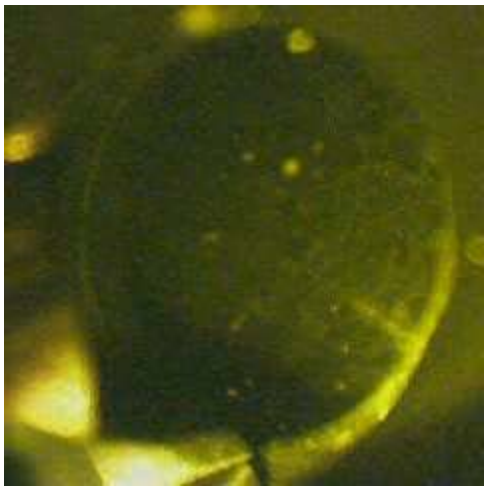
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Rb	31.517	±	5.421
Th	< LOD	:	300000.000
Pb	< LOD	:	25.142
Se	< LOD	:	10.199
As	< LOD	:	17.140
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	194.767	±	47.231
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Cu	< LOD	:	99.125
Ni	< LOD	:	136.455
Co	< LOD	:	632.615
Fe	80568.969	±	2986.985
Mn	1613.874	±	302.616
Cr	213.367	±	54.437
V	233.904	±	102.276
Ti	4827.416	±	270.469
Sc	< LOD	:	147.273
Ca	26311.918	±	751.866
K	11957.365	±	739.352
S	< LOD	:	3102.755
Ba	1341.435	±	76.730
Cs	69.298	±	11.180
Te	144.607	±	33.281
Sb	< LOD	:	45.802
Sn	< LOD	:	48.109
Cd	< LOD	:	17.339
Ag	< LOD	:	12.160
Pd	< LOD	:	7.702
Bal	844089.063	±	7557.198
Nb	< LOD	:	13.125
Bi	< LOD	:	22.483
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
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Certificate of Verification

XL3t-34724

Reading No	1872
Mode	TestAll Geo
Time	2013-09-14 20:40
Duration	60.00
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



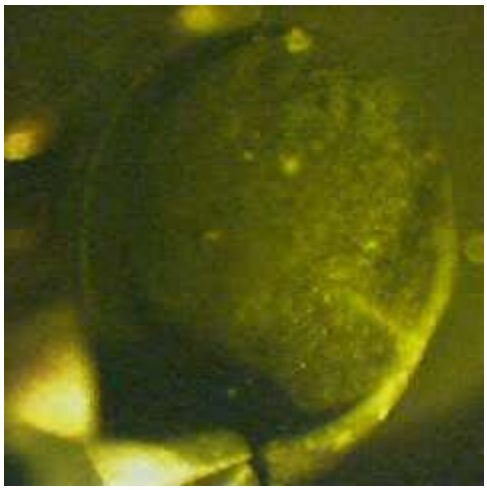
	ppm	±	Error
Mo	< LOD	:	17.431
Zr	99.553	±	15.574
Sr	1941.596	±	137.940
U	< LOD	:	300000.000
Rb	< LOD	:	3.925
Th	< LOD	:	300000.000
Pb	< LOD	:	17.301
Se	< LOD	:	9.138
As	< LOD	:	10.515
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	89.003	±	38.003
W	< LOD	:	190.233
Cu	< LOD	:	110.192
Ni	< LOD	:	158.161
Co	< LOD	:	570.333
Fe	54674.609	±	2315.515
Mn	1173.255	±	286.348
Cr	197.366	±	37.423
V	83.747	±	54.108
Ti	1665.161	±	143.685
Sc	159.911	±	68.611
Ca	19660.297	±	516.644
K	8351.317	±	497.503
S	2629.321	±	1440.484
Ba	871.721	±	86.659
Cs	131.503	±	14.563
Te	240.939	±	43.276
Sb	< LOD	:	48.517
Sn	136.437	±	30.167
Cd	< LOD	:	19.112
Ag	< LOD	:	15.241
Pd	< LOD	:	8.325
Bal	877739.813	±	6771.123
Nb	< LOD	:	13.211
Bi	< LOD	:	18.545
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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XL3t-34724

Reading No	1873
Mode	TestAll Geo
Time	2013-09-14 20:45
Duration	120.95
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



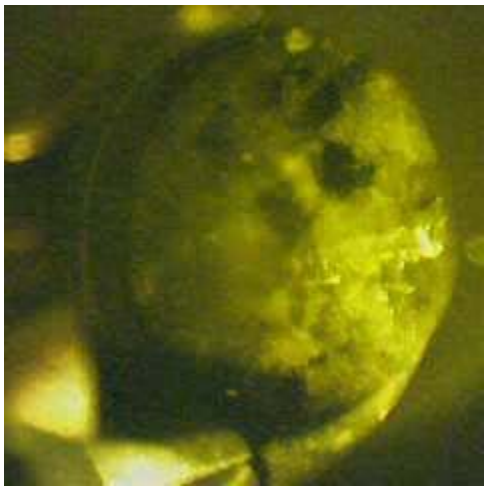
	ppm	±	Error
Mo	< LOD	:	10.327
Zr	51.940	±	7.216
Sr	244.905	±	29.298
U	< LOD	:	300000.000
Rb	< LOD	:	2.181
Th	< LOD	:	300000.000
Pb	< LOD	:	12.077
Se	< LOD	:	6.218
As	< LOD	:	6.901
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	119.514	±	28.403
W	< LOD	:	133.366
Cu	< LOD	:	65.643
Ni	131.106	±	69.487
Co	< LOD	:	564.744
Fe	182491.703	±	4203.664
Mn	1529.928	±	195.613
Cr	< LOD	:	76.038
V	671.514	±	109.327
Ti	5506.292	±	224.225
Sc	< LOD	:	140.339
Ca	25376.895	±	698.211
K	4707.848	±	499.199
S	< LOD	:	5037.317
Ba	1183.345	±	70.505
Cs	178.955	±	11.668
Te	324.541	±	34.799
Sb	149.868	±	20.356
Sn	190.506	±	24.512
Cd	< LOD	:	13.164
Ag	< LOD	:	9.968
Pd	< LOD	:	7.168
Bal	773348.000	±	6324.055
Nb	< LOD	:	7.540
Bi	< LOD	:	11.737
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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XL3t-34724

Reading No	1874
Mode	TestAll Geo
Time	2013-09-14 20:49
Duration	120.39
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



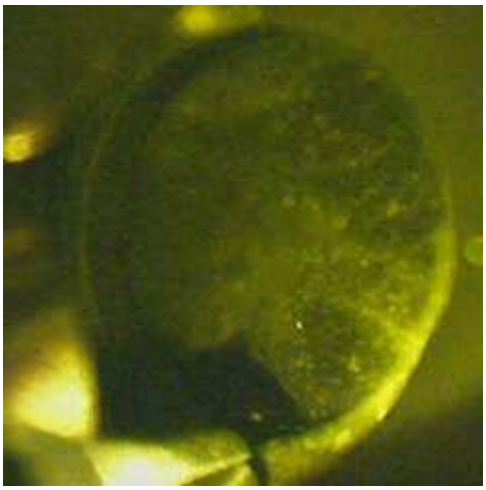
	ppm	±	Error
Mo	< LOD	:	9.822
Zr	341.508	±	12.961
Sr	1020.664	±	18.391
U	< LOD	:	18.411
Rb	49.054	±	3.580
Th	< LOD	:	9.669
Pb	18.699	±	8.558
Se	< LOD	:	4.917
As	< LOD	:	6.994
Hg	< LOD	:	11.247
Au	< LOD	:	7.289
Zn	58.033	±	15.049
W	< LOD	:	82.498
Cu	< LOD	:	42.094
Ni	< LOD	:	62.470
Co	< LOD	:	137.124
Fe	13314.673	±	318.348
Mn	421.162	±	88.306
Cr	167.457	±	21.226
V	< LOD	:	59.859
Ti	1912.838	±	72.922
Sc	< LOD	:	48.304
Ca	11794.389	±	267.436
K	29783.965	±	542.552
S	< LOD	:	2111.722
Ba	1729.628	±	51.201
Cs	100.078	±	7.207
Te	146.835	±	20.948
Sb	72.574	±	12.352
Sn	< LOD	:	26.858
Cd	< LOD	:	10.185
Ag	< LOD	:	6.759
Pd	< LOD	:	5.367
Bal	908054.563	±	2709.669
Nb	14.363	±	4.759
Bi	< LOD	:	13.160
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1875
Mode	TestAll Geo
Time	2013-09-15 08:11
Duration	6.69
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	30.685
Zr	< LOD	:	23.244
Sr	342.075	±	86.478
U	< LOD	:	300000.000
Rb	< LOD	:	7.176
Th	< LOD	:	300000.000
Pb	< LOD	:	33.703
Se	< LOD	:	11.726
As	< LOD	:	21.939
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	< LOD	:	91.972
W	< LOD	:	299.938
Cu	276.303	±	151.839
Ni	< LOD	:	250.219
Co	< LOD	:	1207.688
Fe	89243.250	±	5524.686
Mn	1773.157	±	560.746
Cr	< LOD	:	678.203
V	< LOD	:	1342.554
Ti	3325.573	±	1372.275
Sb	< LOD	:	217.693
Sn	< LOD	:	223.488
Cd	< LOD	:	326.888
Ag	< LOD	:	337.986
Pd	< LOD	:	165.769
Bal	902708.750	±	6209.666
Nb	< LOD	:	22.333
Bi	< LOD	:	39.455
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

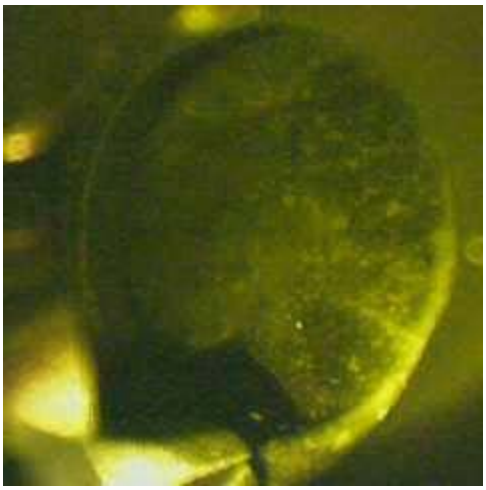
Supervised By: _____

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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1876
Mode	TestAll Geo
Time	2013-09-15 08:12
Duration	2.01
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	127.836
Zr	< LOD	:	132.980
Sr	< LOD	:	499.973
U	< LOD	:	300000.000
Rb	< LOD	:	45.095
Th	< LOD	:	300000.000
Pb	< LOD	:	6.761
Se	< LOD	:	1.500
As	< LOD	:	1.500
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	< LOD	:	18.621
W	< LOD	:	90.922
Cu	< LOD	:	901.104
Ni	< LOD	:	850.273
Co	< LOD	:	5035.051
Fe	78109.820	±	17187.318
Mn	< LOD	:	3267.804
Cr	< LOD	:	2777.055
V	< LOD	:	6830.094
Ti	< LOD	:	6046.762
Sb	< LOD	:	770.512
Sn	< LOD	:	1023.826
Cd	< LOD	:	1374.320
Ag	< LOD	:	1501.174
Pd	< LOD	:	697.387
Bal	915966.500	±	19462.035
Nb	< LOD	:	106.178
Bi	< LOD	:	17.725
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

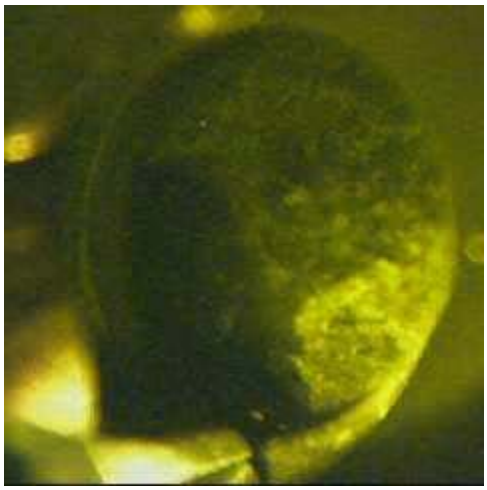
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Certificate of Verification

XL3t-34724

Reading No	1877
Mode	TestAll Geo
Time	2013-09-15 08:16
Duration	64.37
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	12.834
Zr	27.168	±	6.878
Sr	217.597	±	31.527
U	< LOD	:	300000.000
Rb	< LOD	:	2.487
Th	< LOD	:	300000.000
Pb	< LOD	:	14.624
Se	< LOD	:	8.097
As	< LOD	:	7.360
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	75.862	±	27.396
W	< LOD	:	133.031
Cu	97.470	±	53.293
Ni	< LOD	:	110.092
Co	< LOD	:	536.440
Fe	85774.867	±	2668.522
Mn	1595.022	±	250.823
Cr	527.978	±	79.212
V	326.522	±	104.060
Ti	2822.367	±	198.831
Ca	87046.000	±	2494.233
K	6876.666	±	1517.387
S	< LOD	:	7302.654
Ba	< LOD	:	172.036
Sb	< LOD	:	41.606
Sn	< LOD	:	43.626
Cd	< LOD	:	15.129
Ag	< LOD	:	10.955
Pd	< LOD	:	6.724
Bal	814219.563	±	7349.141
Nb	< LOD	:	9.788
Bi	< LOD	:	13.744
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

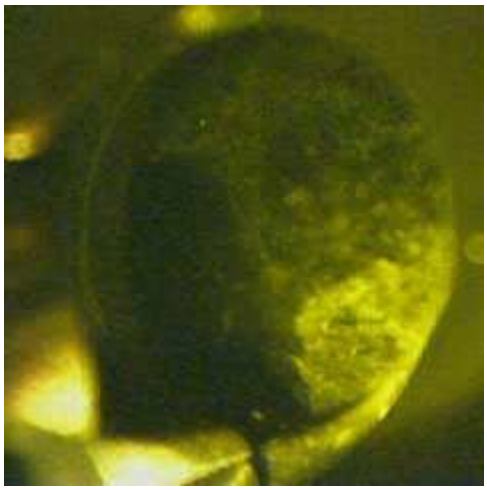
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1878
Mode	TestAll Geo
Time	2013-09-15 08:22
Duration	60.00
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



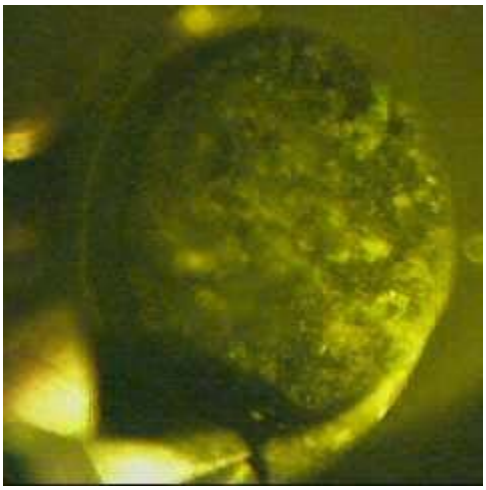
	ppm	±	Error
Mo	< LOD	:	13.149
Zr	41.586	±	8.404
Sr	204.028	±	33.989
U	< LOD	:	300000.000
Rb	3.539	±	2.081
Th	< LOD	:	300000.000
Pb	< LOD	:	17.178
Se	< LOD	:	10.021
As	< LOD	:	9.656
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	88.471	±	31.166
W	< LOD	:	139.785
Cu	< LOD	:	86.053
Ni	< LOD	:	124.701
Co	< LOD	:	594.316
Fe	85091.188	±	2928.708
Mn	1651.265	±	281.422
Cr	478.543	±	73.312
V	312.970	±	101.618
Ti	2936.846	±	202.608
Sc	< LOD	:	272.739
Ca	79795.328	±	1467.137
K	4735.645	±	636.861
S	< LOD	:	6022.872
Ba	788.672	±	71.921
Cs	122.673	±	12.149
Te	213.483	±	35.958
Sb	104.373	±	21.204
Sn	< LOD	:	44.044
Cd	< LOD	:	16.160
Ag	< LOD	:	11.495
Pd	< LOD	:	8.642
Bal	815904.938	±	7086.949
Nb	< LOD	:	11.032
Bi	< LOD	:	15.012
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1879
Mode	TestAll Geo
Time	2013-09-15 08:25
Duration	60.00
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



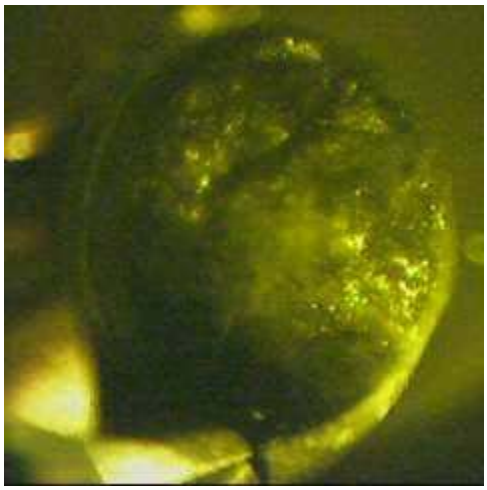
	ppm	±	Error
Mo	< LOD	:	15.367
Zr	45.098	±	9.845
Sr	658.273	±	63.731
U	< LOD	:	300000.000
Rb	38.223	±	5.313
Th	< LOD	:	300000.000
Pb	< LOD	:	15.223
Se	< LOD	:	9.021
As	< LOD	:	7.689
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	56.954	±	30.545
W	< LOD	:	168.042
Cu	< LOD	:	92.767
Ni	206.965	±	98.840
Co	< LOD	:	591.184
Fe	73658.641	±	2687.814
Mn	1496.789	±	280.872
Cr	139.181	±	50.469
V	158.072	±	78.608
Ti	2047.979	±	163.525
Sc	< LOD	:	180.877
Ca	40843.254	±	936.588
K	11155.460	±	734.498
S	< LOD	:	5643.453
Ba	887.493	±	77.554
Cs	119.639	±	12.796
Te	170.346	±	37.085
Sb	73.324	±	21.617
Sn	98.759	±	25.805
Cd	< LOD	:	18.985
Ag	< LOD	:	12.416
Pd	< LOD	:	9.492
Bal	844223.688	±	6676.169
Nb	< LOD	:	11.418
Bi	< LOD	:	17.049
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1880
Mode	TestAll Geo
Time	2013-09-15 08:32
Duration	120.95
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



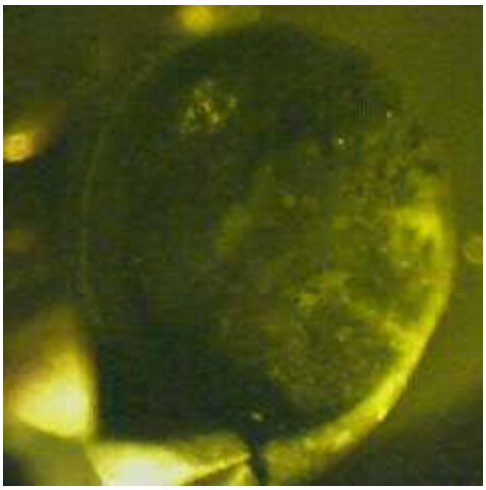
	ppm	±	Error
Mo	< LOD	:	15.122
Zr	< LOD	:	9.700
Sr	129.441	±	28.288
U	< LOD	:	300000.000
Rb	6.677	±	2.379
Th	< LOD	:	300000.000
Pb	< LOD	:	21.677
Se	19.078	±	8.911
As	24.734	±	11.481
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	320.202	±	53.137
W	< LOD	:	201.597
Cu	147.898	±	74.354
Ni	< LOD	:	153.651
Co	< LOD	:	820.175
Fe	282928.969	±	7836.385
Mn	2472.304	±	279.699
Cr	< LOD	:	108.061
V	< LOD	:	100.915
Ti	159.476	±	94.212
Sc	< LOD	:	151.636
Ca	27589.293	±	747.595
K	2058.942	±	405.476
S	132376.641	±	8184.472
Ba	723.657	±	77.186
Cs	115.236	±	13.232
Te	194.419	±	38.675
Sb	107.727	±	23.093
Sn	< LOD	:	46.954
Cd	< LOD	:	18.955
Ag	< LOD	:	14.661
Pd	< LOD	:	9.083
Bal	456911.750	±	15147.088
Nb	< LOD	:	11.197
Bi	< LOD	:	12.385
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1881
Mode	TestAll Geo
Time	2013-09-15 08:35
Duration	121.13
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



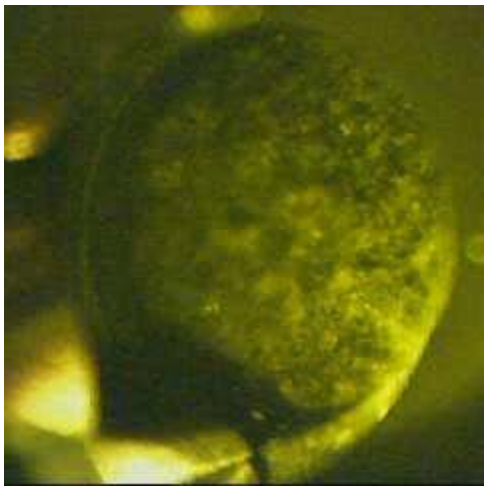
	ppm	±	Error
Mo	< LOD	:	12.458
Zr	< LOD	:	7.993
Sr	202.235	±	28.645
U	< LOD	:	300000.000
Rb	4.587	±	1.817
Th	< LOD	:	300000.000
Pb	< LOD	:	16.188
Se	< LOD	:	8.187
As	< LOD	:	9.795
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	317.501	±	45.709
W	< LOD	:	152.939
Cu	1516.705	±	126.183
Ni	< LOD	:	111.442
Co	< LOD	:	634.319
Fe	214352.219	±	5198.083
Mn	2475.709	±	242.239
Cr	178.071	±	62.319
V	< LOD	:	109.261
Ti	< LOD	:	116.279
Sc	259.347	±	107.945
Ca	26388.311	±	780.711
K	13356.564	±	812.112
S	37492.750	±	4958.083
Ba	642.559	±	59.650
Cs	109.813	±	10.282
Te	165.445	±	29.883
Sb	79.068	±	17.588
Sn	111.614	±	21.058
Cd	< LOD	:	15.107
Ag	< LOD	:	10.919
Pd	< LOD	:	6.970
Bal	671649.063	±	10695.191
Nb	< LOD	:	9.279
Bi	< LOD	:	9.626
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1882
Mode	TestAll Geo
Time	2013-09-15 08:40
Duration	120.06
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



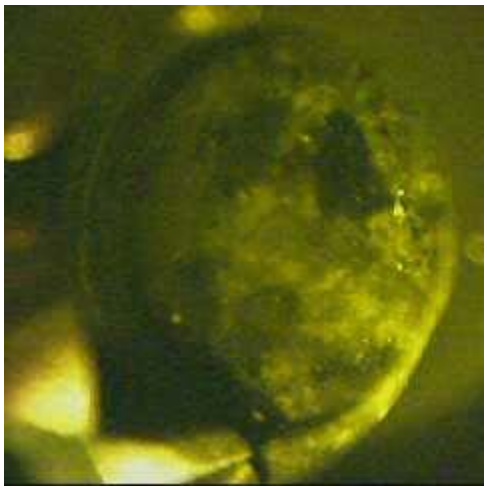
	ppm	±	Error
Mo	< LOD	:	10.568
Zr	268.764	±	14.916
Sr	1697.365	±	26.130
U	< LOD	:	22.291
Rb	27.952	±	3.081
Th	< LOD	:	9.914
Pb	13.510	±	8.957
Se	< LOD	:	5.237
As	< LOD	:	6.625
Hg	< LOD	:	13.194
Au	< LOD	:	9.462
Zn	129.366	±	22.354
W	< LOD	:	91.148
Cu	< LOD	:	40.324
Ni	119.186	±	52.889
Co	< LOD	:	328.549
Fe	59076.859	±	736.837
Mn	1372.353	±	167.748
Cr	154.896	±	36.873
V	431.930	±	64.946
Ti	4723.427	±	159.611
Sc	150.472	±	71.870
Ca	30469.119	±	550.637
K	7418.452	±	416.052
S	< LOD	:	1817.195
Ba	1142.422	±	48.468
Cs	87.980	±	7.409
Te	132.824	±	21.592
Sb	< LOD	:	27.695
Sn	< LOD	:	28.744
Cd	< LOD	:	10.397
Ag	< LOD	:	8.515
Pd	< LOD	:	4.618
Bal	877578.375	±	3668.981
Nb	< LOD	:	7.490
Bi	< LOD	:	12.119
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
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Certificate of Verification

XL3t-34724

Reading No	1883
Mode	TestAll Geo
Time	2013-09-15 08:44
Duration	120.75
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



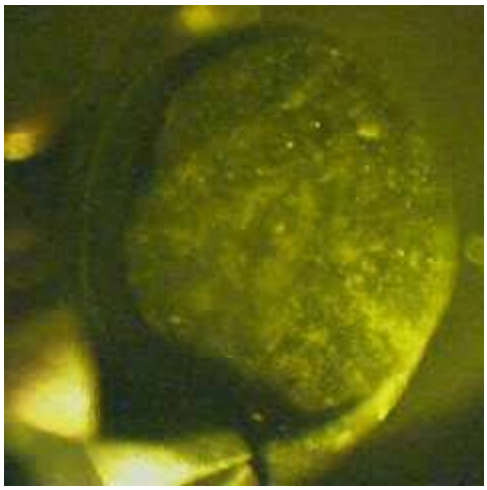
	ppm	±	Error
Mo	16.421	±	7.463
Zr	310.916	±	16.571
Sr	5747.027	±	187.705
U	< LOD	:	300000.000
Rb	47.873	±	3.962
Th	< LOD	:	300000.000
Pb	22.344	±	10.791
Se	< LOD	:	6.252
As	< LOD	:	8.663
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	72.808	±	20.322
W	< LOD	:	99.091
Cu	80.006	±	37.633
Ni	< LOD	:	72.598
Co	< LOD	:	264.321
Fe	31008.801	±	886.739
Mn	1209.774	±	169.917
Cr	125.577	±	30.103
V	242.164	±	97.648
Ti	17847.313	±	290.127
Sc	< LOD	:	95.879
Ca	38188.504	±	513.620
K	22767.430	±	562.154
S	< LOD	:	1687.214
Ba	1638.977	±	50.497
Cs	66.979	±	6.964
Te	78.051	±	19.938
Sb	35.522	±	11.681
Sn	52.545	±	13.954
Cd	< LOD	:	11.988
Ag	< LOD	:	7.413
Pd	< LOD	:	5.655
Bal	850390.500	±	4147.562
Nb	144.121	±	9.328
Bi	67.390	±	13.451
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1884
Mode	TestAll Geo
Time	2013-09-15 08:48
Duration	120.92
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



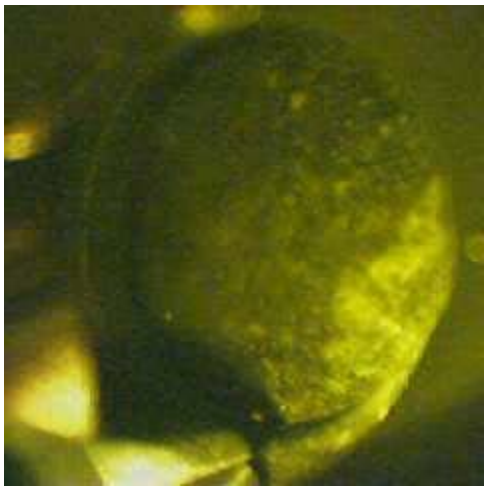
	ppm	±	Error
Mo	27.244	±	8.631
Zr	177.683	±	14.459
Sr	4039.539	±	165.074
U	< LOD	:	300000.000
Rb	< LOD	:	2.740
Th	< LOD	:	300000.000
Pb	41.069	±	13.278
Se	< LOD	:	7.118
As	< LOD	:	11.822
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	116.951	±	28.116
W	< LOD	:	136.037
Cu	< LOD	:	65.844
Ni	158.061	±	71.343
Co	< LOD	:	439.339
Fe	75890.117	±	2120.836
Mn	1270.028	±	203.503
Cr	676.441	±	48.461
V	90.756	±	54.059
Ti	2841.742	±	147.256
Sc	< LOD	:	193.033
Ca	98471.047	±	1021.787
K	1462.867	±	311.770
S	23211.305	±	2909.823
Ba	674.642	±	52.427
Cs	94.301	±	8.845
Te	138.428	±	25.661
Sb	68.007	±	15.105
Sn	99.998	±	18.137
Cd	< LOD	:	11.801
Ag	< LOD	:	9.727
Pd	< LOD	:	6.214
Bal	734136.188	±	8001.185
Nb	11.293	±	5.995
Bi	< LOD	:	13.800
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1885
Mode	TestAll Geo
Time	2013-09-15 08:53
Duration	121.03
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



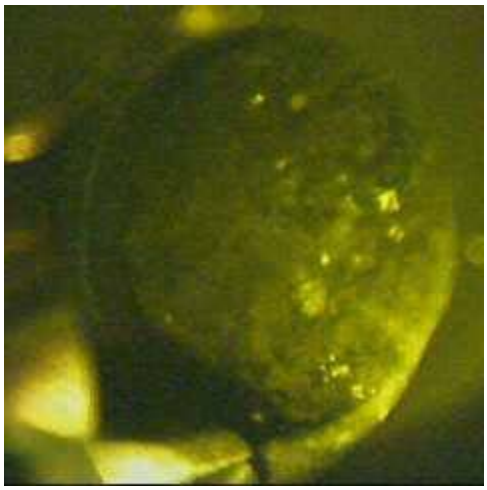
	ppm	±	Error
Mo	< LOD	:	9.173
Zr	64.429	±	6.326
Sr	114.686	±	6.677
U	< LOD	:	10.408
Rb	1.767	±	1.175
Th	< LOD	:	7.346
Pb	< LOD	:	9.942
Se	< LOD	:	5.260
As	< LOD	:	5.490
Hg	< LOD	:	12.051
Au	< LOD	:	7.979
Zn	62.019	±	16.154
W	< LOD	:	90.771
Cu	94.784	±	28.487
Ni	99.750	±	50.672
Co	< LOD	:	355.141
Fe	76581.031	±	791.056
Mn	1343.766	±	159.079
Cr	255.097	±	37.379
V	607.622	±	74.661
Ti	5255.225	±	173.024
Sc	< LOD	:	150.961
Ca	53165.145	±	804.573
K	1645.499	±	308.992
S	2616.983	±	1730.068
Ba	530.256	±	39.820
Cs	82.379	±	6.822
Te	120.767	±	19.867
Sb	55.912	±	11.668
Sn	70.581	±	13.761
Cd	< LOD	:	9.394
Ag	< LOD	:	7.849
Pd	< LOD	:	5.155
Bal	858304.000	±	4060.508
Nb	8.868	±	4.676
Bi	< LOD	:	9.141
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1886
Mode	TestAll Geo
Time	2013-09-15 08:58
Duration	120.31
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



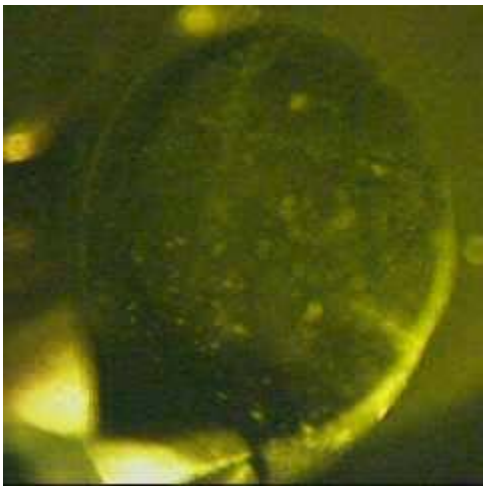
	ppm	±	Error
Mo	< LOD	:	11.243
Zr	132.338	±	10.470
Sr	173.418	±	25.557
U	< LOD	:	300000.000
Rb	9.312	±	2.175
Th	< LOD	:	300000.000
Pb	< LOD	:	13.281
Se	< LOD	:	7.358
As	< LOD	:	9.234
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	155.567	±	32.347
W	< LOD	:	136.959
Cu	632.422	±	80.592
Ni	190.652	±	73.177
Co	< LOD	:	580.533
Fe	191120.719	±	4481.493
Mn	1947.888	±	213.982
Cr	145.462	±	63.722
V	464.733	±	113.971
Ti	5216.767	±	235.203
Sc	170.490	±	100.008
Ca	20545.260	±	712.638
K	7181.189	±	651.187
S	41390.602	±	5325.059
Ba	902.451	±	56.942
Cs	113.899	±	9.350
Te	180.903	±	27.328
Sb	84.681	±	16.011
Sn	113.607	±	19.176
Cd	< LOD	:	12.625
Ag	< LOD	:	8.759
Pd	< LOD	:	6.255
Bal	706721.375	±	10025.372
Nb	14.215	±	6.243
Bi	< LOD	:	9.607
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1887
Mode	TestAll Geo
Time	2013-09-15 10:00
Duration	121.33
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



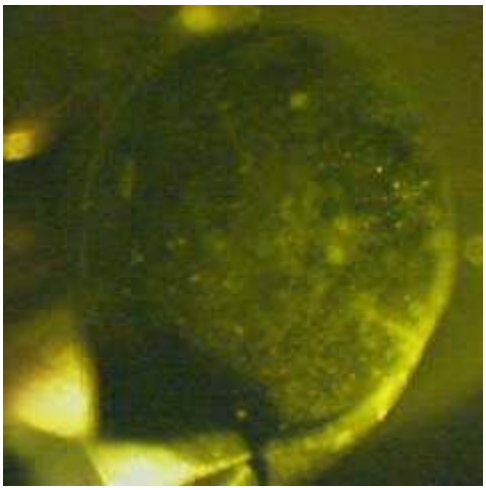
	ppm	±	Error
Mo	< LOD	:	12.750
Zr	44.131	±	7.833
Sr	409.706	±	41.076
U	< LOD	:	300000.000
Rb	19.020	±	3.183
Th	< LOD	:	300000.000
Pb	< LOD	:	14.894
Se	< LOD	:	8.157
As	< LOD	:	9.884
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	77.049	±	28.510
W	< LOD	:	159.649
Cu	< LOD	:	85.033
Ni	271.407	±	92.636
Co	< LOD	:	519.528
Fe	90727.188	±	2660.682
Mn	2218.873	±	271.046
Cr	352.920	±	34.706
V	135.448	±	47.400
Ti	1728.225	±	122.114
Sc	174.819	±	64.395
Ca	28180.717	±	488.409
K	4886.569	±	326.983
S	< LOD	:	1687.403
Ba	1000.301	±	68.284
Cs	119.337	±	11.122
Te	204.131	±	32.645
Sb	93.465	±	19.115
Sn	< LOD	:	37.686
Cd	< LOD	:	15.628
Ag	< LOD	:	11.732
Pd	< LOD	:	5.608
Bal	828850.125	±	5995.541
Nb	< LOD	:	9.695
Bi	< LOD	:	14.677
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1888
Mode	TestAll Geo
Time	2013-09-15 10:08
Duration	121.30
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



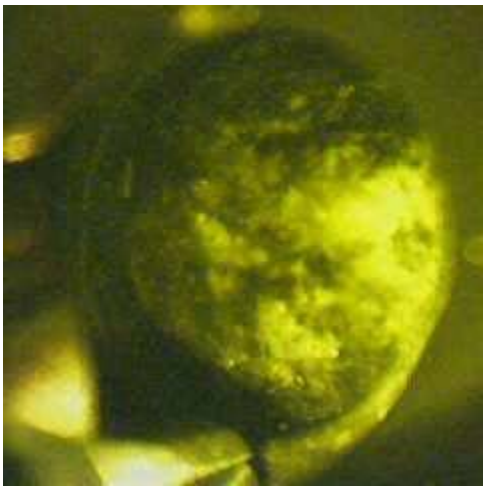
	ppm	±	Error
Mo	< LOD	:	11.574
Zr	< LOD	:	7.559
Sr	165.127	±	25.073
U	< LOD	:	300000.000
Rb	11.309	±	2.340
Th	< LOD	:	300000.000
Pb	< LOD	:	12.567
Se	< LOD	:	6.341
As	< LOD	:	8.262
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	211.556	±	35.726
W	< LOD	:	141.781
Cu	85.671	±	49.471
Ni	< LOD	:	103.901
Co	< LOD	:	584.197
Fe	181069.453	±	4325.127
Mn	2398.332	±	233.509
Cr	< LOD	:	78.324
V	< LOD	:	101.241
Ti	243.867	±	77.496
Sc	282.074	±	119.419
Ca	37732.242	±	886.526
K	10738.539	±	719.539
S	21506.016	±	3886.082
Ba	< LOD	:	136.249
Cs	113.810	±	9.421
Te	185.361	±	27.627
Sb	< LOD	:	32.081
Sn	101.877	±	19.075
Cd	< LOD	:	12.006
Ag	< LOD	:	10.055
Pd	< LOD	:	5.710
Bal	725258.000	±	8964.149
Nb	< LOD	:	7.472
Bi	< LOD	:	9.237
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1889
Mode	TestAll Geo
Time	2013-09-15 10:14
Duration	120.11
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	9.628
Zr	< LOD	:	7.502
Sr	700.150	±	42.505
U	< LOD	:	300000.000
Rb	< LOD	:	1.870
Th	< LOD	:	300000.000
Pb	< LOD	:	9.071
Se	< LOD	:	5.534
As	< LOD	:	6.273
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	34.659	±	16.722
W	< LOD	:	96.836
Cu	< LOD	:	52.805
Ni	< LOD	:	76.661
Co	< LOD	:	276.747
Fe	32944.418	±	1006.388
Mn	2338.806	±	227.405
Cr	< LOD	:	45.673
V	< LOD	:	59.516
Ti	315.192	±	56.838
Sc	< LOD	:	446.212
Ca	447126.188	±	2438.975
K	1294.684	±	558.044
S	5823.841	±	3474.187
Ba	635.299	±	45.907
Cs	101.901	±	7.841
Te	161.451	±	22.975
Sb	< LOD	:	29.366
Sn	< LOD	:	29.444
Cd	< LOD	:	10.836
Ag	< LOD	:	8.530
Pd	< LOD	:	5.739
Bal	596132.688	±	7996.806
Nb	< LOD	:	7.219
Bi	< LOD	:	7.287
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1890
Mode	TestAll Geo
Time	2013-09-15 10:24
Duration	121.12
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



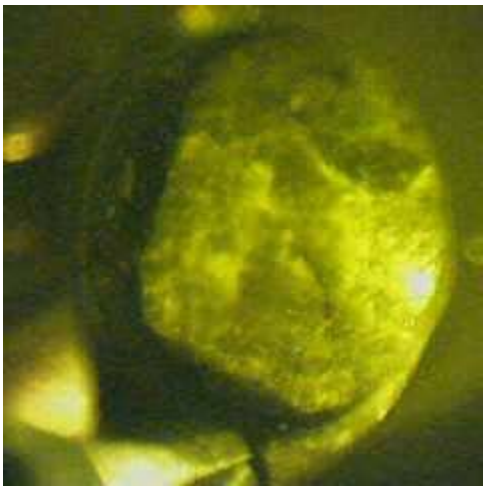
	ppm	±	Error
Mo	20.157	±	6.992
Zr	29.533	±	6.227
Sr	920.792	±	50.939
U	< LOD	:	300000.000
Rb	36.168	±	3.407
Th	< LOD	:	300000.000
Pb	210.683	±	22.359
Se	< LOD	:	6.766
As	< LOD	:	19.608
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	2752.396	±	120.434
W	< LOD	:	196.749
Cu	2153.413	±	123.221
Ni	548.902	±	78.499
Co	< LOD	:	339.297
Fe	54241.617	±	1375.279
Mn	894.577	±	166.327
Cr	1214.608	±	51.851
V	119.525	±	49.898
Ti	2439.493	±	110.192
Sc	115.311	±	58.855
Ca	23898.615	±	461.509
K	20856.014	±	600.351
S	12648.351	±	1890.902
Ba	743.387	±	47.403
Cs	90.253	±	7.829
Te	150.774	±	23.019
Sb	< LOD	:	29.521
Sn	< LOD	:	31.381
Cd	< LOD	:	12.654
Ag	< LOD	:	9.326
Pd	< LOD	:	5.839
Bal	849257.500	±	5366.819
Nb	< LOD	:	7.632
Bi	< LOD	:	14.847
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1891
Mode	TestAll Geo
Time	2013-09-15 10:27
Duration	120.54
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



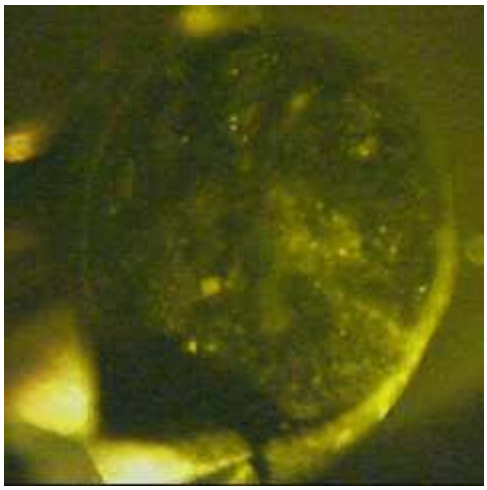
	ppm	±	Error
Mo	9.086	±	5.889
Zr	< LOD	:	16.392
Sr	2752.064	±	29.658
U	< LOD	:	25.039
Rb	66.898	±	4.083
Th	< LOD	:	10.024
Pb	22.921	±	8.934
Se	< LOD	:	3.898
As	< LOD	:	6.718
Hg	< LOD	:	10.876
Au	< LOD	:	7.730
Zn	< LOD	:	17.435
W	< LOD	:	71.331
Cu	99.075	±	26.405
Ni	< LOD	:	55.240
Co	< LOD	:	89.188
Fe	3682.999	±	168.048
Mn	153.806	±	62.433
Cr	195.599	±	19.184
V	959.335	±	44.553
Ti	1782.296	±	62.373
Sc	< LOD	:	26.385
Ca	2410.351	±	175.701
K	50090.293	±	649.051
S	< LOD	:	1024.514
Ba	3035.438	±	58.912
Cs	98.369	±	7.066
Te	163.253	±	20.746
Sb	< LOD	:	25.428
Sn	< LOD	:	26.690
Cd	< LOD	:	9.286
Ag	< LOD	:	8.026
Pd	< LOD	:	5.134
Bal	904342.563	±	2582.554
Nb	< LOD	:	6.422
Bi	< LOD	:	13.431
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1892
Mode	TestAll Geo
Time	2013-09-15 10:33
Duration	120.54
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



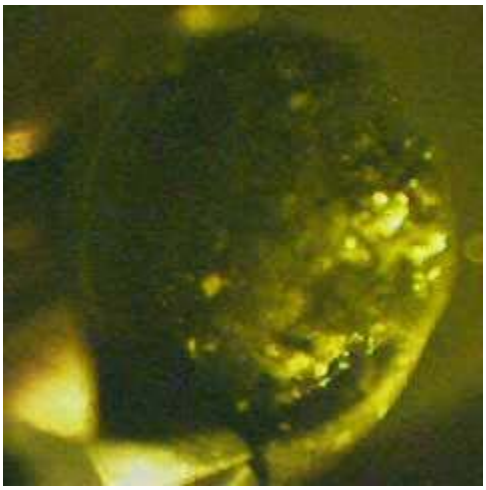
	ppm	±	Error
Mo	< LOD	:	13.375
Zr	< LOD	:	9.461
Sr	409.941	±	43.693
U	< LOD	:	300000.000
Rb	15.565	±	3.048
Th	< LOD	:	300000.000
Pb	34.150	±	14.407
Se	< LOD	:	9.993
As	< LOD	:	14.529
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	176.163	±	38.368
W	< LOD	:	165.074
Cu	275.638	±	73.215
Ni	158.080	±	90.944
Co	< LOD	:	748.985
Fe	271559.281	±	7050.970
Mn	2661.056	±	266.723
Cr	< LOD	:	98.172
V	< LOD	:	128.283
Ti	287.845	±	98.540
Sc	175.314	±	111.373
Ca	24550.537	±	821.033
K	20991.156	±	1065.339
S	119589.148	±	8840.617
Ba	767.302	±	67.382
Cs	107.178	±	11.330
Te	187.876	±	33.338
Sb	< LOD	:	37.451
Sn	121.131	±	23.400
Cd	< LOD	:	14.206
Ag	< LOD	:	11.560
Pd	< LOD	:	7.432
Bal	502260.281	±	14246.058
Nb	< LOD	:	10.169
Bi	< LOD	:	12.313
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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XL3t-34724

Reading No	1893
Mode	TestAll Geo
Time	2013-09-15 10:37
Duration	120.48
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



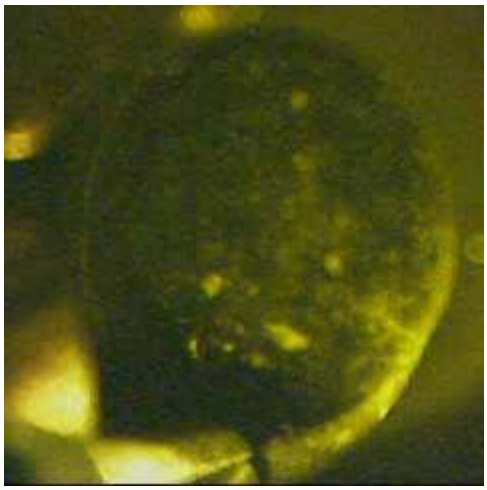
	ppm	±	Error
Mo	< LOD	:	15.115
Zr	12.236	±	7.473
Sr	498.694	±	52.476
U	< LOD	:	300000.000
Rb	19.214	±	3.597
Th	< LOD	:	300000.000
Pb	88.959	±	22.149
Se	20.642	±	9.206
As	43.572	±	16.723
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	96.548	±	35.213
W	< LOD	:	190.891
Cu	178.983	±	74.362
Ni	257.389	±	106.841
Co	< LOD	:	855.040
Fe	335055.156	±	9152.997
Mn	1288.124	±	232.094
Cr	< LOD	:	104.709
V	< LOD	:	140.409
Ti	378.280	±	110.914
Sc	< LOD	:	163.519
Ca	22187.525	±	831.153
K	34218.758	±	1379.811
S	228405.078	±	9117.347
Ba	844.433	±	74.756
Cs	125.347	±	12.616
Te	229.308	±	37.293
Sb	< LOD	:	40.082
Sn	139.697	±	26.077
Cd	< LOD	:	15.666
Ag	< LOD	:	11.739
Pd	< LOD	:	8.222
Bal	358138.875	±	16348.186
Nb	< LOD	:	11.521
Bi	< LOD	:	13.861
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1894
Mode	TestAll Geo
Time	2013-09-15 10:42
Duration	120.99
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



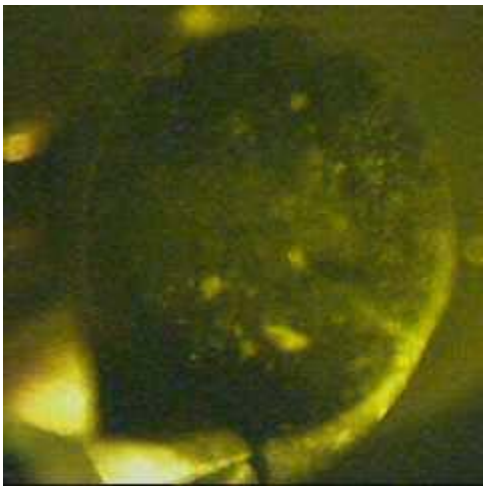
	ppm	±	Error
Mo	< LOD	:	11.216
Zr	78.522	±	7.946
Sr	235.911	±	27.623
U	< LOD	:	300000.000
Rb	7.200	±	1.913
Th	< LOD	:	300000.000
Pb	< LOD	:	13.486
Se	< LOD	:	5.633
As	< LOD	:	7.347
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	113.477	±	26.744
W	< LOD	:	123.710
Cu	81.413	±	47.324
Ni	137.276	±	69.048
Co	< LOD	:	465.799
Fe	97374.945	±	2493.524
Mn	2293.990	±	238.067
Cr	324.571	±	44.580
V	259.557	±	75.204
Ti	4596.490	±	206.408
Sc	266.567	±	100.678
Ca	48694.469	±	767.443
K	4349.700	±	395.772
S	< LOD	:	4892.830
Ba	736.667	±	56.615
Cs	114.121	±	9.604
Te	197.556	±	28.332
Sb	< LOD	:	31.844
Sn	121.954	±	19.838
Cd	< LOD	:	13.470
Ag	< LOD	:	8.494
Pd	< LOD	:	5.110
Bal	815580.500	±	5558.068
Nb	< LOD	:	8.369
Bi	< LOD	:	10.272
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1895
Mode	TestAll Geo
Time	2013-09-15 10:51
Duration	94.14
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



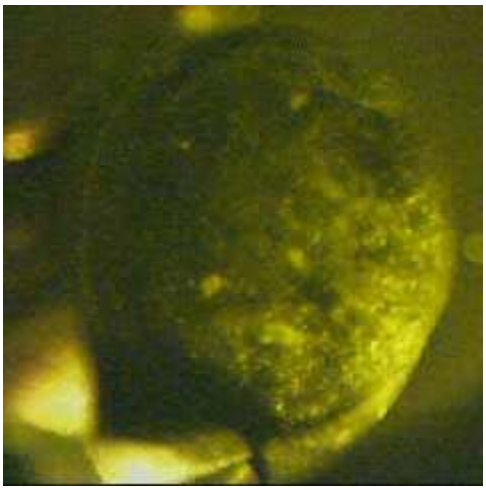
	ppm	±	Error
Mo	< LOD	:	10.986
Zr	46.765	±	8.242
Sr	1635.968	±	81.016
U	< LOD	:	300000.000
Rb	29.847	±	3.412
Th	< LOD	:	300000.000
Pb	< LOD	:	13.630
Se	< LOD	:	5.866
As	< LOD	:	6.999
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	85.931	±	24.476
W	< LOD	:	124.840
Cu	< LOD	:	61.468
Ni	180.600	±	70.193
Co	< LOD	:	423.827
Fe	76028.000	±	2014.619
Mn	1849.268	±	221.533
Cr	466.667	±	49.090
V	140.674	±	65.497
Ti	2810.268	±	153.000
Sc	< LOD	:	136.348
Ca	36952.918	±	715.990
K	18810.748	±	734.068
S	< LOD	:	5429.288
Ba	784.850	±	139.704
Sb	< LOD	:	46.628
Sn	< LOD	:	49.006
Cd	< LOD	:	17.155
Ag	< LOD	:	12.602
Pd	< LOD	:	9.087
Bal	822706.438	±	5901.745
Nb	9.842	±	5.696
Bi	< LOD	:	13.248
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1896
Mode	TestAll Geo
Time	2013-09-15 10:55
Duration	60.00
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	14.434
Zr	74.431	±	12.332
Sr	1934.987	±	118.908
U	< LOD	:	300000.000
Rb	23.907	±	4.056
Th	< LOD	:	300000.000
Pb	< LOD	:	15.880
Se	< LOD	:	6.681
As	< LOD	:	8.395
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	134.902	±	35.845
W	< LOD	:	149.147
Cu	< LOD	:	69.483
Ni	478.816	±	106.722
Co	< LOD	:	622.569
Fe	113357.688	±	3496.487
Mn	2163.850	±	296.194
Cr	1254.498	±	116.059
V	791.844	±	161.308
Ti	7878.145	±	374.386
Sc	< LOD	:	190.375
Ca	21127.498	±	926.319
K	13714.379	±	1070.812
S	< LOD	:	4596.605
Ba	1447.904	±	80.182
Cs	95.537	±	11.756
Te	179.497	±	34.923
Sb	< LOD	:	43.417
Sn	< LOD	:	45.930
Cd	< LOD	:	19.070
Ag	< LOD	:	12.823
Pd	< LOD	:	9.500
Bal	831162.313	±	7529.781
Nb	< LOD	:	11.151
Bi	< LOD	:	16.336
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1897
Mode	TestAll Geo
Time	2013-09-15 11:05
Duration	120.22
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



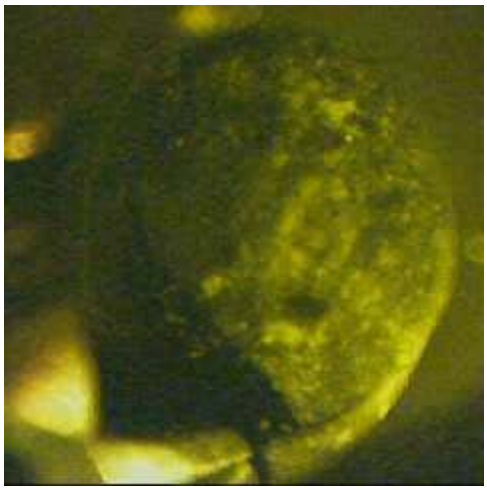
	ppm	±	Error
Mo	< LOD	:	10.790
Zr	44.796	±	6.537
Sr	261.659	±	28.545
U	< LOD	:	300000.000
Rb	2.382	±	1.418
Th	< LOD	:	300000.000
Pb	< LOD	:	10.156
Se	< LOD	:	6.648
As	< LOD	:	6.056
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	188.849	±	31.450
W	< LOD	:	122.408
Cu	79.917	±	44.227
Ni	< LOD	:	98.983
Co	< LOD	:	523.641
Fe	144072.422	±	3381.127
Mn	3615.370	±	268.669
Cr	< LOD	:	79.192
V	527.969	±	90.722
Ti	2115.393	±	138.878
Sc	< LOD	:	233.569
Ca	77228.461	±	1218.975
K	3707.674	±	513.231
S	< LOD	:	3676.500
Ba	711.159	±	51.336
Cs	114.633	±	8.740
Te	177.317	±	25.528
Sb	< LOD	:	30.481
Sn	110.395	±	17.897
Cd	< LOD	:	11.473
Ag	< LOD	:	9.461
Pd	< LOD	:	5.965
Bal	764678.063	±	6625.799
Nb	9.104	±	5.621
Bi	< LOD	:	9.543
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1898
Mode	TestAll Geo
Time	2013-09-15 11:12
Duration	120.92
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



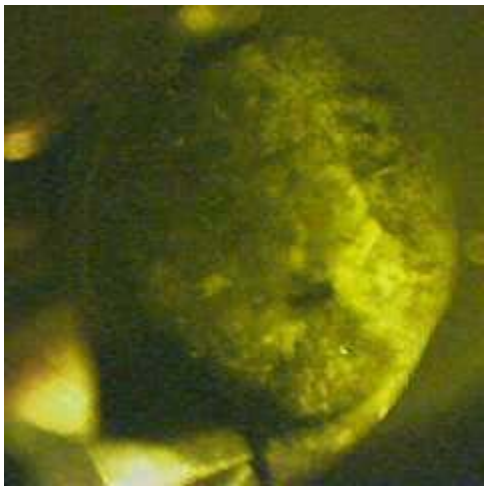
	ppm	±	Error
Mo	< LOD	:	10.629
Zr	101.526	±	10.309
Sr	2671.740	±	110.422
U	< LOD	:	300000.000
Rb	< LOD	:	2.198
Th	< LOD	:	300000.000
Pb	< LOD	:	10.896
Se	< LOD	:	6.157
As	< LOD	:	7.230
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	57.251	±	20.402
W	< LOD	:	111.720
Cu	< LOD	:	52.178
Ni	< LOD	:	88.237
Co	< LOD	:	442.761
Fe	96102.484	±	2394.951
Mn	3312.814	±	264.660
Cr	389.997	±	55.298
V	135.449	±	82.353
Ti	3682.860	±	177.970
Sc	< LOD	:	317.249
Ca	177792.672	±	1692.673
K	4190.686	±	545.371
S	< LOD	:	3855.489
Ba	689.953	±	49.983
Cs	109.234	±	8.512
Te	169.333	±	24.848
Sb	85.112	±	14.658
Sn	107.846	±	17.431
Cd	< LOD	:	10.554
Ag	< LOD	:	7.661
Pd	< LOD	:	5.560
Bal	714549.438	±	6958.264
Nb	11.113	±	5.426
Bi	< LOD	:	10.198
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1899
Mode	TestAll Geo
Time	2013-09-15 11:20
Duration	120.63
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



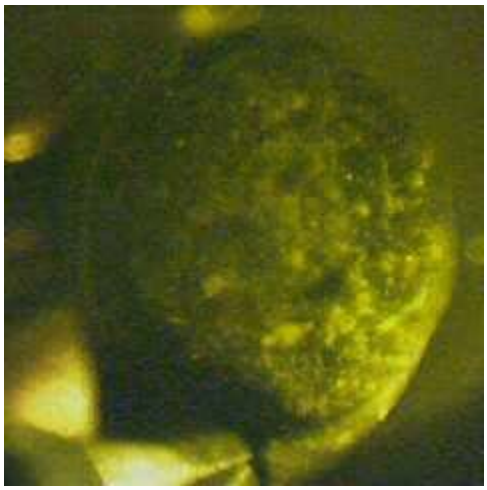
	ppm	±	Error
Mo	< LOD	:	9.604
Zr	116.011	±	9.883
Sr	801.714	±	17.087
U	< LOD	:	15.850
Rb	20.789	±	2.526
Th	< LOD	:	9.064
Pb	22.546	±	8.962
Se	< LOD	:	5.326
As	13.686	±	6.541
Hg	< LOD	:	11.879
Au	< LOD	:	8.922
Zn	168.289	±	22.975
W	< LOD	:	96.876
Cu	< LOD	:	43.952
Ni	94.016	±	49.272
Co	< LOD	:	338.832
Fe	69467.078	±	757.498
Mn	1740.098	±	177.128
Cr	567.287	±	48.852
V	710.188	±	78.705
Ti	4538.348	±	163.654
Sc	< LOD	:	154.611
Ca	52598.680	±	822.557
K	15928.915	±	669.528
S	< LOD	:	2586.203
Ba	1273.411	±	49.533
Cs	104.751	±	7.511
Te	150.252	±	21.802
Sb	< LOD	:	26.944
Sn	< LOD	:	28.987
Cd	< LOD	:	10.008
Ag	< LOD	:	7.606
Pd	< LOD	:	5.260
Bal	841250.063	±	4442.212
Nb	9.494	±	4.775
Bi	< LOD	:	11.417
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1900
Mode	TestAll Geo
Time	2013-09-15 11:25
Duration	120.03
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.165
Zr	160.592	±	14.183
Sr	2211.854	±	28.729
U	< LOD	:	25.660
Rb	98.201	±	5.603
Th	< LOD	:	11.101
Pb	25.050	±	10.212
Se	< LOD	:	5.565
As	< LOD	:	8.321
Hg	< LOD	:	12.983
Au	< LOD	:	9.700
Zn	66.261	±	17.582
W	< LOD	:	95.484
Cu	< LOD	:	38.289
Ni	< LOD	:	66.392
Co	< LOD	:	193.309
Fe	24646.389	±	459.753
Mn	601.179	±	112.058
Cr	236.392	±	29.905
V	< LOD	:	88.150
Ti	3125.660	±	114.214
Sc	< LOD	:	72.565
Ca	20444.895	±	421.167
K	70331.445	±	966.549
S	< LOD	:	1683.438
Ba	2670.549	±	62.103
Cs	100.012	±	7.790
Te	154.398	±	22.691
Sb	69.043	±	13.251
Sn	93.206	±	16.040
Cd	< LOD	:	11.177
Ag	< LOD	:	7.321
Pd	< LOD	:	5.009
Bal	821447.000	±	4481.407
Nb	15.687	±	5.226
Bi	< LOD	:	16.060
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1901
Mode	TestAll Geo
Time	2013-09-15 11:31
Duration	120.99
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



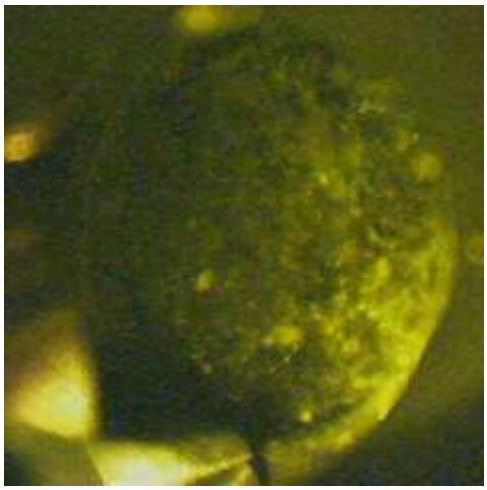
	ppm	±	Error
Mo	< LOD	:	9.351
Zr	120.106	±	10.077
Sr	956.741	±	18.078
U	< LOD	:	15.540
Rb	18.447	±	2.369
Th	< LOD	:	8.881
Pb	27.624	±	9.272
Se	< LOD	:	5.132
As	12.533	±	6.482
Hg	< LOD	:	12.000
Au	< LOD	:	8.025
Zn	169.051	±	22.234
W	< LOD	:	95.614
Cu	48.228	±	24.401
Ni	< LOD	:	67.515
Co	< LOD	:	352.012
Fe	87347.516	±	823.281
Mn	2297.604	±	191.130
Cr	381.769	±	44.801
V	581.822	±	77.885
Ti	4585.140	±	165.482
Sc	< LOD	:	204.066
Ca	74766.641	±	1083.679
K	13900.646	±	715.237
S	< LOD	:	3041.699
Ba	1149.642	±	46.852
Cs	92.566	±	7.168
Te	127.057	±	20.746
Sb	66.015	±	12.296
Sn	86.926	±	14.658
Cd	< LOD	:	11.237
Ag	< LOD	:	7.964
Pd	< LOD	:	4.968
Bal	822239.688	±	4547.515
Nb	11.528	±	4.696
Bi	< LOD	:	11.495
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1902
Mode	TestAll Geo
Time	2013-09-15 11:36
Duration	121.25
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



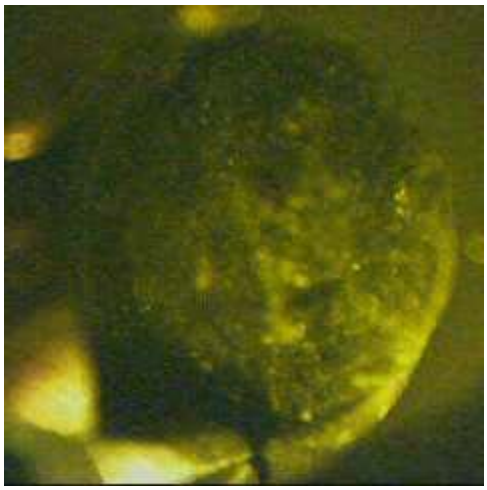
	ppm	±	Error
Mo	< LOD	:	10.728
Zr	52.523	±	7.714
Sr	1157.980	±	62.978
U	< LOD	:	300000.000
Rb	15.793	±	2.509
Th	< LOD	:	300000.000
Pb	< LOD	:	12.554
Se	< LOD	:	6.077
As	< LOD	:	6.804
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	104.853	±	24.707
W	< LOD	:	110.617
Cu	163.741	±	48.322
Ni	< LOD	:	91.184
Co	< LOD	:	453.959
Fe	100561.656	±	2462.083
Mn	1452.923	±	190.095
Cr	< LOD	:	63.263
V	549.133	±	111.879
Ti	10563.414	±	313.773
Sc	242.715	±	115.858
Ca	58645.270	±	893.386
K	5565.911	±	464.450
S	< LOD	:	2717.246
Ba	651.018	±	46.381
Cs	89.374	±	7.801
Te	121.407	±	22.555
Sb	51.005	±	13.159
Sn	82.033	±	15.814
Cd	< LOD	:	12.418
Ag	< LOD	:	9.075
Pd	< LOD	:	6.013
Bal	806627.125	±	5581.093
Nb	11.986	±	5.601
Bi	< LOD	:	11.724
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1903
Mode	TestAll Geo
Time	2013-09-15 11:39
Duration	121.21
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



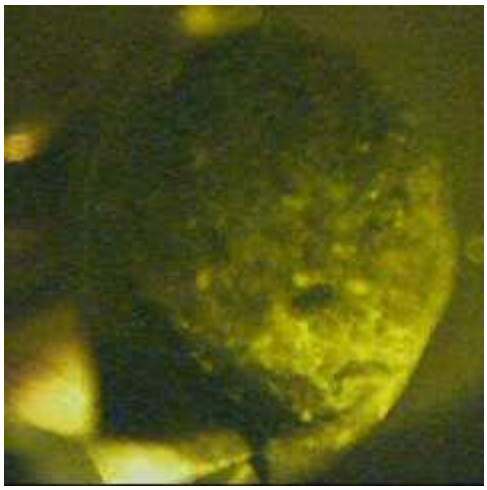
	ppm	±	Error
Mo	< LOD	:	9.721
Zr	77.657	±	7.382
Sr	237.320	±	9.670
U	< LOD	:	20.215
Rb	117.651	±	6.266
Th	< LOD	:	9.101
Pb	< LOD	:	12.333
Se	< LOD	:	5.583
As	< LOD	:	7.064
Hg	< LOD	:	12.514
Au	< LOD	:	7.411
Zn	104.450	±	19.637
W	< LOD	:	78.874
Cu	< LOD	:	37.985
Ni	< LOD	:	75.419
Co	< LOD	:	350.358
Fe	81082.250	±	836.495
Mn	1294.187	±	162.473
Cr	151.607	±	37.238
V	181.677	±	52.510
Ti	1450.928	±	90.314
Sc	< LOD	:	79.253
Ca	11317.260	±	421.171
K	28088.234	±	847.428
S	4208.181	±	1775.852
Ba	710.354	±	44.355
Cs	88.580	±	7.357
Te	136.080	±	21.485
Sb	54.572	±	12.462
Sn	75.706	±	14.837
Cd	< LOD	:	10.186
Ag	< LOD	:	8.501
Pd	< LOD	:	4.652
Bal	858939.500	±	4725.623
Nb	< LOD	:	7.201
Bi	< LOD	:	13.736
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
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Certificate of Verification

XL3t-34724

Reading No	1904
Mode	TestAll Geo
Time	2013-09-15 11:43
Duration	120.46
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	13.193	±	5.914
Zr	< LOD	:	5.353
Sr	35.415	±	3.721
U	< LOD	:	7.745
Rb	< LOD	:	1.500
Th	< LOD	:	5.643
Pb	< LOD	:	8.313
Se	< LOD	:	4.612
As	< LOD	:	6.061
Hg	< LOD	:	12.999
Au	< LOD	:	7.647
Zn	< LOD	:	14.893
W	< LOD	:	80.279
Cu	< LOD	:	42.460
Ni	2312.132	±	110.533
Co	431.131	±	172.143
Fe	51769.617	±	600.652
Mn	693.653	±	123.099
Cr	1345.990	±	57.640
V	201.156	±	38.343
Ti	737.854	±	54.897
Sc	< LOD	:	63.659
Ca	8834.227	±	319.859
K	1995.495	±	260.038
S	< LOD	:	1678.709
Ba	< LOD	:	102.278
Cs	70.431	±	6.128
Te	110.016	±	17.971
Sb	< LOD	:	24.114
Sn	< LOD	:	25.464
Cd	< LOD	:	8.981
Ag	< LOD	:	6.385
Pd	< LOD	:	4.582
Bal	921545.250	±	2715.496
Nb	7.943	±	4.462
Bi	< LOD	:	6.344
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
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Certificate of Verification

XL3t-34724

Reading No	1905
Mode	TestAll Geo
Time	2013-09-15 11:50
Duration	121.38
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



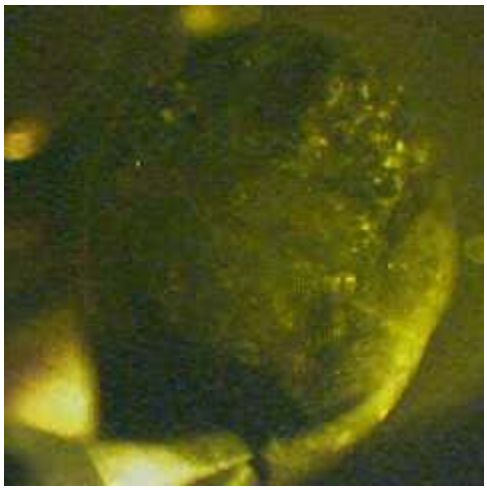
	ppm	±	Error
Mo	< LOD	:	8.162
Zr	108.120	±	9.142
Sr	666.879	±	15.019
U	< LOD	:	14.282
Rb	23.760	±	2.520
Th	< LOD	:	8.817
Pb	13.597	±	7.953
Se	< LOD	:	4.370
As	< LOD	:	7.198
Hg	< LOD	:	11.780
Au	< LOD	:	7.398
Zn	88.089	±	17.209
W	< LOD	:	82.533
Cu	< LOD	:	33.783
Ni	260.628	±	54.407
Co	< LOD	:	291.789
Fe	48527.813	±	609.495
Mn	1142.602	±	142.828
Cr	861.234	±	50.636
V	919.150	±	72.558
Ti	3786.567	±	134.545
Sc	< LOD	:	139.151
Ca	47861.148	±	731.715
K	20398.738	±	689.541
S	< LOD	:	2201.799
Ba	2666.360	±	57.716
Cs	103.952	±	7.221
Te	150.630	±	20.974
Sb	< LOD	:	25.065
Sn	< LOD	:	26.791
Cd	< LOD	:	9.567
Ag	< LOD	:	6.399
Pd	< LOD	:	3.870
Bal	860698.250	±	3803.265
Nb	< LOD	:	6.525
Bi	< LOD	:	11.474
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1906
Mode	TestAll Geo
Time	2013-09-15 11:56
Duration	120.08
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



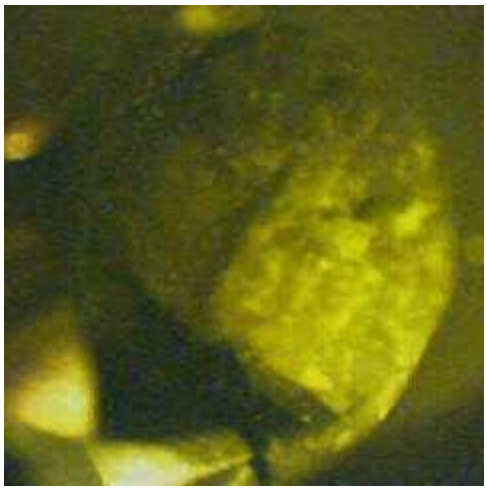
	ppm	±	Error
Mo	< LOD	:	13.372
Zr	< LOD	:	7.094
Sr	67.328	±	20.891
U	< LOD	:	300000.000
Rb	< LOD	:	1.652
Th	< LOD	:	300000.000
Pb	< LOD	:	13.825
Se	< LOD	:	10.101
As	< LOD	:	9.976
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	66.235	±	37.154
W	< LOD	:	161.986
Cu	5269.336	±	291.637
Ni	169.561	±	89.449
Co	< LOD	:	698.466
Fe	242773.531	±	6140.968
Mn	1264.808	±	206.650
Cr	< LOD	:	82.920
V	< LOD	:	104.436
Ti	< LOD	:	117.485
Sc	< LOD	:	153.222
Ca	26922.400	±	769.541
K	890.754	±	360.871
S	43212.215	±	5187.284
Ba	827.419	±	68.902
Cs	121.468	±	11.601
Te	211.059	±	34.153
Sb	102.151	±	20.095
Sn	< LOD	:	41.448
Cd	< LOD	:	16.314
Ag	< LOD	:	10.402
Pd	< LOD	:	7.995
Bal	640913.875	±	11871.413
Nb	< LOD	:	10.253
Bi	15.974	±	10.051
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1907
Mode	TestAll Geo
Time	2013-09-15 12:03
Duration	120.94
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



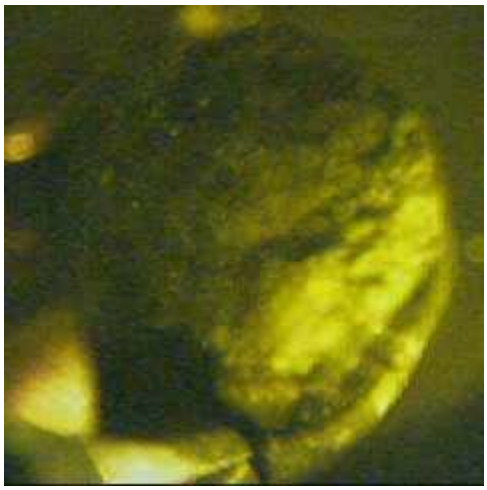
	ppm	±	Error
Mo	< LOD	:	7.515
Zr	6.528	±	3.849
Sr	126.931	±	5.769
U	< LOD	:	17.862
Rb	147.060	±	5.888
Th	< LOD	:	8.259
Pb	16.789	±	6.830
Se	< LOD	:	3.151
As	< LOD	:	6.106
Hg	< LOD	:	8.849
Au	< LOD	:	5.343
Zn	< LOD	:	14.501
W	< LOD	:	64.351
Cu	< LOD	:	34.205
Ni	< LOD	:	51.226
Co	< LOD	:	119.673
Fe	6103.688	±	185.708
Mn	< LOD	:	62.946
Cr	156.356	±	17.585
V	151.852	±	20.733
Ti	249.080	±	23.339
Sc	< LOD	:	21.996
Ca	1087.305	±	188.741
K	63669.797	±	806.190
S	< LOD	:	1190.191
Ba	768.573	±	37.564
Cs	93.695	±	6.173
Te	175.591	±	18.412
Sb	< LOD	:	21.861
Sn	< LOD	:	23.153
Cd	< LOD	:	8.303
Ag	< LOD	:	5.760
Pd	< LOD	:	4.598
Bal	906135.875	±	2591.866
Nb	< LOD	:	5.808
Bi	< LOD	:	14.014
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1908
Mode	TestAll Geo
Time	2013-09-15 12:07
Duration	120.97
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



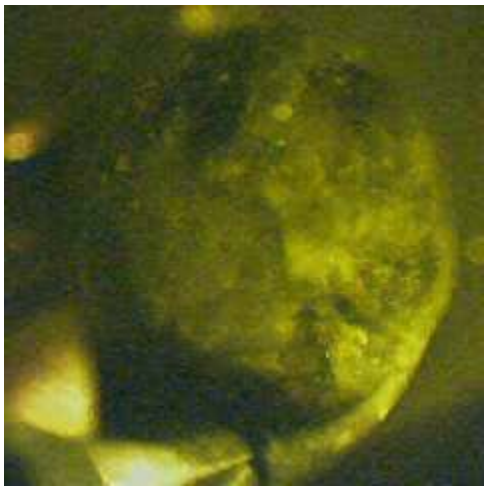
	ppm	±	Error
Mo	13.762	±	6.809
Zr	617.858	±	15.193
Sr	1258.010	±	19.111
U	< LOD	:	18.409
Rb	58.079	±	3.700
Th	< LOD	:	8.986
Pb	32.521	±	9.123
Se	< LOD	:	4.634
As	< LOD	:	7.689
Hg	< LOD	:	9.724
Au	< LOD	:	8.194
Zn	60.363	±	14.208
W	< LOD	:	69.320
Cu	< LOD	:	36.025
Ni	< LOD	:	56.909
Co	< LOD	:	219.939
Fe	26589.240	±	420.146
Mn	744.814	±	106.497
Cr	244.069	±	24.181
V	459.325	±	46.311
Ti	3627.327	±	110.706
Sc	< LOD	:	83.434
Ca	25311.125	±	452.312
K	28074.357	±	648.564
S	< LOD	:	1637.088
Ba	1693.518	±	45.986
Cs	70.765	±	6.322
Te	109.698	±	18.462
Sb	< LOD	:	23.485
Sn	< LOD	:	25.163
Cd	< LOD	:	9.252
Ag	< LOD	:	6.158
Pd	< LOD	:	4.903
Bal	894884.438	±	2895.494
Nb	10.723	±	4.394
Bi	< LOD	:	12.556
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1909
Mode	TestAll Geo
Time	2013-09-15 12:12
Duration	121.51
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



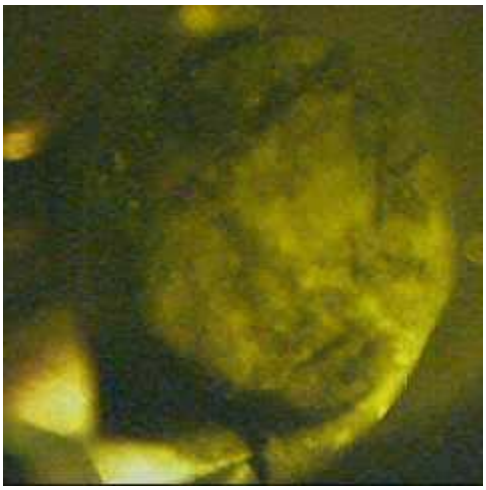
	ppm	±	Error
Mo	< LOD	:	9.126
Zr	274.334	±	12.855
Sr	1026.135	±	19.469
U	< LOD	:	18.516
Rb	38.227	±	3.371
Th	< LOD	:	9.740
Pb	< LOD	:	11.490
Se	< LOD	:	5.528
As	< LOD	:	7.707
Hg	< LOD	:	11.575
Au	< LOD	:	8.577
Zn	56.595	±	15.780
W	< LOD	:	88.291
Cu	< LOD	:	44.348
Ni	< LOD	:	70.506
Co	< LOD	:	168.777
Fe	19288.521	±	403.800
Mn	538.744	±	104.231
Cr	< LOD	:	32.324
V	< LOD	:	63.562
Ti	1930.459	±	78.553
Sc	< LOD	:	58.646
Ca	17367.180	±	324.408
K	29831.424	±	563.531
S	1703.132	±	882.149
Ba	1790.103	±	52.290
Cs	92.949	±	7.255
Te	140.188	±	21.119
Sb	69.186	±	12.436
Sn	< LOD	:	27.538
Cd	< LOD	:	9.928
Ag	< LOD	:	6.974
Pd	< LOD	:	4.787
Bal	889551.313	±	3360.615
Nb	15.363	±	5.078
Bi	14.973	±	9.115
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1910
Mode	TestAll Geo
Time	2013-09-15 12:16
Duration	121.08
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



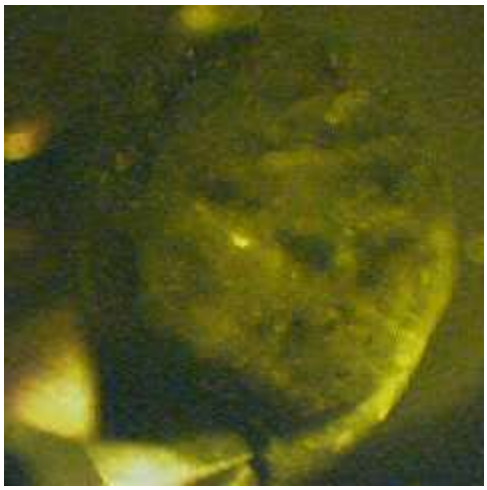
	ppm	±	Error
Mo	< LOD	:	7.400
Zr	145.926	±	8.651
Sr	684.212	±	13.653
U	< LOD	:	16.655
Rb	70.042	±	3.971
Th	< LOD	:	8.530
Pb	13.509	±	7.061
Se	< LOD	:	3.637
As	< LOD	:	6.066
Hg	< LOD	:	9.593
Au	< LOD	:	6.134
Zn	< LOD	:	14.999
W	< LOD	:	72.425
Cu	< LOD	:	36.187
Ni	< LOD	:	54.737
Co	< LOD	:	138.071
Fe	7330.777	±	214.296
Mn	85.313	±	50.399
Cr	139.247	±	18.047
V	451.944	±	33.719
Ti	1297.330	±	53.565
Sc	< LOD	:	27.080
Ca	2688.392	±	180.787
K	44297.098	±	645.291
S	< LOD	:	1112.704
Ba	1460.880	±	43.886
Cs	82.856	±	6.300
Te	126.172	±	18.402
Sb	58.915	±	10.814
Sn	< LOD	:	23.980
Cd	< LOD	:	9.937
Ag	< LOD	:	6.031
Pd	< LOD	:	4.825
Bal	916570.500	±	2525.933
Nb	9.032	±	4.211
Bi	< LOD	:	12.837
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1911
Mode	TestAll Geo
Time	2013-09-15 12:19
Duration	121.07
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



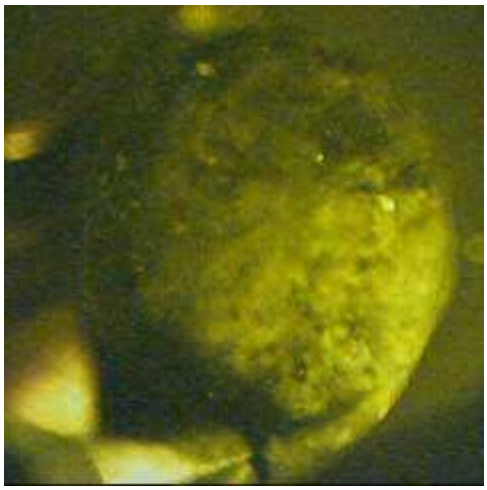
	ppm	±	Error
Mo	< LOD	:	9.493
Zr	358.499	±	12.647
Sr	943.585	±	17.229
U	< LOD	:	17.566
Rb	40.090	±	3.133
Th	< LOD	:	8.164
Pb	20.720	±	8.253
Se	< LOD	:	3.560
As	< LOD	:	6.857
Hg	< LOD	:	10.914
Au	< LOD	:	6.792
Zn	51.470	±	14.188
W	< LOD	:	81.638
Cu	< LOD	:	32.671
Ni	< LOD	:	58.085
Co	< LOD	:	164.345
Fe	11613.029	±	289.926
Mn	469.035	±	88.534
Cr	195.753	±	20.163
V	457.994	±	36.879
Ti	2048.246	±	72.654
Sc	< LOD	:	40.038
Ca	8419.277	±	224.802
K	28358.826	±	508.236
S	< LOD	:	1071.005
Ba	1450.940	±	46.772
Cs	76.828	±	6.711
Te	146.178	±	19.923
Sb	< LOD	:	23.482
Sn	< LOD	:	24.822
Cd	< LOD	:	9.031
Ag	< LOD	:	6.341
Pd	< LOD	:	4.214
Bal	920035.375	±	2522.440
Nb	8.380	±	4.426
Bi	< LOD	:	9.838
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1912
Mode	TestAll Geo
Time	2013-09-15 12:25
Duration	120.33
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



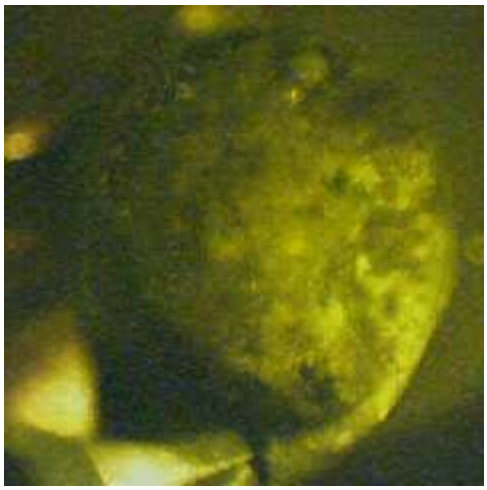
	ppm	±	Error
Mo	< LOD	:	10.664
Zr	631.527	±	14.761
Sr	451.458	±	12.139
U	< LOD	:	15.677
Rb	45.251	±	3.407
Th	12.586	±	7.480
Pb	167.996	±	16.951
Se	< LOD	:	4.993
As	< LOD	:	18.018
Hg	< LOD	:	10.697
Au	< LOD	:	7.085
Zn	130.882	±	19.495
W	< LOD	:	88.124
Cu	151.374	±	29.177
Ni	< LOD	:	63.262
Co	< LOD	:	226.041
Fe	21899.742	±	401.177
Mn	716.423	±	107.942
Cr	< LOD	:	36.443
V	586.605	±	45.552
Ti	2033.181	±	79.145
Sc	< LOD	:	72.506
Ca	23849.082	±	403.625
K	30339.893	±	616.238
S	2178.817	±	1039.010
Ba	1456.882	±	45.858
Cs	76.755	±	6.576
Te	135.505	±	19.394
Sb	< LOD	:	24.719
Sn	< LOD	:	25.948
Cd	< LOD	:	9.540
Ag	< LOD	:	6.546
Pd	< LOD	:	5.115
Bal	890848.000	±	3208.385
Nb	18.251	±	4.839
Bi	< LOD	:	14.286
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1913
Mode	TestAll Geo
Time	2013-09-15 12:28
Duration	121.19
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



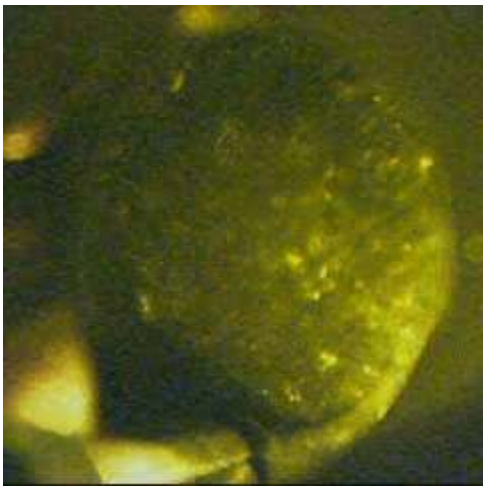
	ppm	±	Error
Mo	11.647	±	5.664
Zr	< LOD	:	12.748
Sr	1277.949	±	19.003
U	< LOD	:	17.740
Rb	45.360	±	3.249
Th	< LOD	:	8.270
Pb	18.404	±	7.696
Se	< LOD	:	3.825
As	< LOD	:	6.236
Hg	< LOD	:	9.655
Au	< LOD	:	6.945
Zn	21.287	±	11.257
W	< LOD	:	70.488
Cu	< LOD	:	35.714
Ni	< LOD	:	54.829
Co	< LOD	:	144.550
Fe	9206.258	±	245.292
Mn	217.984	±	65.609
Cr	183.038	±	19.639
V	560.120	±	37.256
Ti	1529.530	±	59.220
Sc	< LOD	:	38.813
Ca	7502.962	±	228.198
K	39832.840	±	605.500
S	< LOD	:	1101.923
Ba	1899.191	±	51.385
Cs	88.754	±	6.972
Te	172.141	±	20.786
Sb	< LOD	:	24.986
Sn	< LOD	:	26.514
Cd	< LOD	:	9.548
Ag	< LOD	:	6.569
Pd	< LOD	:	5.035
Bal	909367.438	±	2632.169
Nb	8.637	±	4.292
Bi	< LOD	:	11.666
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1914
Mode	TestAll Geo
Time	2013-09-15 12:30
Duration	63.95
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	61.041
Zr	< LOD	:	142.805
Sr	< LOD	:	602.594
U	< LOD	:	300000.000
Rb	< LOD	:	104.851
Th	< LOD	:	300000.000
Pb	408563.969	±	56428.457
Se	328.990	±	194.474
As	19598.336	±	2818.918
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	< LOD	:	148.145
W	< LOD	:	818.902
Cu	< LOD	:	270.863
Ni	< LOD	:	363.979
Co	< LOD	:	390.935
Fe	2606.307	±	670.767
Mn	< LOD	:	579.928
Cr	235.580	±	117.047
V	313.690	±	123.521
Ti	208.232	±	106.880
Ca	3668.288	±	825.829
K	< LOD	:	2648.067
S	81860.773	±	26906.068
Ba	< LOD	:	746.695
Sb	< LOD	:	162.298
Sn	< LOD	:	158.174
Cd	< LOD	:	58.869
Ag	< LOD	:	61.282
Pd	< LOD	:	46.021
Bal	479980.500	±	68161.633
Nb	< LOD	:	49.961
Bi	< LOD	:	1309.040
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

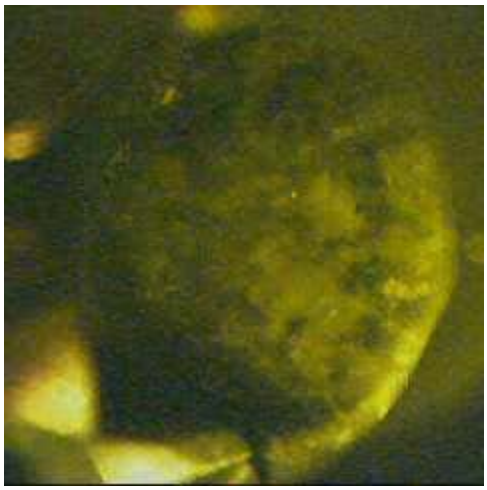
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Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1915
Mode	TestAll Geo
Time	2013-09-15 12:34
Duration	120.73
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	10.276	±	6.005
Zr	94.503	±	9.520
Sr	1080.912	±	18.191
U	< LOD	:	17.475
Rb	45.155	±	3.369
Th	24.204	±	7.692
Pb	71.898	±	11.960
Se	< LOD	:	4.894
As	< LOD	:	11.952
Hg	< LOD	:	10.896
Au	< LOD	:	7.565
Zn	24.140	±	12.250
W	< LOD	:	72.424
Cu	< LOD	:	29.945
Ni	< LOD	:	57.253
Co	< LOD	:	147.526
Fe	8169.490	±	240.630
Mn	236.852	±	69.468
Cr	228.465	±	20.774
V	< LOD	:	48.120
Ti	1393.700	±	57.120
Sc	< LOD	:	36.568
Ca	6948.369	±	203.144
K	24107.168	±	462.791
S	2015.519	±	745.032
Ba	1355.174	±	44.287
Cs	83.062	±	6.477
Te	140.076	±	19.070
Sb	< LOD	:	24.239
Sn	< LOD	:	25.715
Cd	< LOD	:	10.508
Ag	< LOD	:	6.364
Pd	< LOD	:	4.847
Bal	930632.875	±	2470.598
Nb	8.453	±	4.462
Bi	28.725	±	9.912
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1916
Mode	TestAll Geo
Time	2013-09-15 12:41
Duration	121.13
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



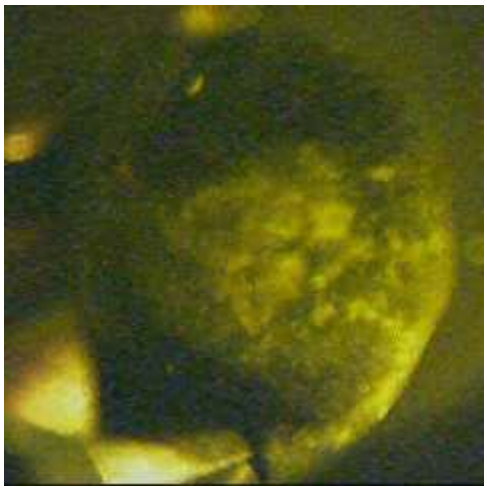
	ppm	±	Error
Mo	< LOD	:	10.533
Zr	47.809	±	6.393
Sr	174.186	±	23.365
U	< LOD	:	300000.000
Rb	3.230	±	1.458
Th	< LOD	:	300000.000
Pb	61.940	±	13.751
Se	< LOD	:	4.980
As	< LOD	:	13.781
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	136.250	±	27.328
W	< LOD	:	114.586
Cu	269.562	±	54.629
Ni	172.422	±	65.660
Co	< LOD	:	495.219
Fe	146596.672	±	3209.135
Mn	2199.560	±	208.799
Cr	130.310	±	52.399
V	514.558	±	95.122
Ti	4053.147	±	183.367
Sc	< LOD	:	115.791
Ca	14302.772	±	553.231
K	6048.881	±	552.946
S	< LOD	:	3041.436
Ba	761.488	±	50.805
Cs	112.557	±	8.546
Te	197.256	±	25.293
Sb	< LOD	:	29.793
Sn	< LOD	:	31.631
Cd	< LOD	:	11.365
Ag	< LOD	:	8.021
Pd	< LOD	:	5.267
Bal	821936.313	±	5415.570
Nb	< LOD	:	8.141
Bi	< LOD	:	8.627
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1917
Mode	TestAll Geo
Time	2013-09-15 12:45
Duration	121.41
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	

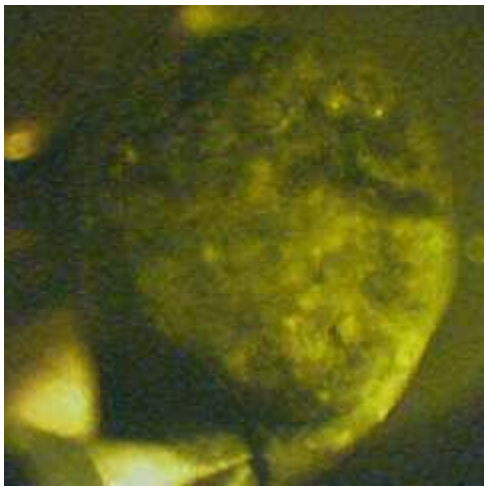


	ppm	±	Error
Mo	< LOD	:	9.443
Zr	39.425	±	5.330
Sr	36.480	±	4.172
U	< LOD	:	12.140
Rb	24.122	±	2.659
Th	< LOD	:	8.661
Pb	78.375	±	13.139
Se	< LOD	:	5.446
As	< LOD	:	14.168
Hg	< LOD	:	10.752
Au	< LOD	:	8.059
Zn	76.560	±	17.043
W	< LOD	:	98.018
Cu	39.489	±	25.749
Ni	115.307	±	54.365
Co	< LOD	:	291.306
Fe	56157.520	±	690.643
Mn	970.015	±	139.716
Cr	65.909	±	33.434
V	331.243	±	52.958
Ti	1671.280	±	90.833
Sc	< LOD	:	195.771
Ca	104571.484	±	1074.289
K	59726.172	±	1144.409
S	3858.167	±	2062.399
Ba	597.069	±	40.715
Cs	89.476	±	6.919
Te	129.097	±	20.125
Sb	55.825	±	11.772
Sn	92.281	±	14.227
Cd	< LOD	:	11.204
Ag	< LOD	:	8.086
Pd	< LOD	:	4.980
Bal	753313.688	±	5814.061
Nb	8.954	±	4.853
Bi	< LOD	:	11.764
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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XL3t-34724



Reading No	1918
Mode	TestAll Geo
Time	2013-09-15 12:49
Duration	120.65
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	

	ppm	±	Error
Mo	< LOD	:	9.963
Zr	424.121	±	13.796
Sr	1115.795	±	18.852
U	< LOD	:	17.890
Rb	40.952	±	3.255
Th	< LOD	:	10.347
Pb	90.991	±	13.212
Se	< LOD	:	3.879
As	< LOD	:	13.048
Hg	< LOD	:	10.573
Au	< LOD	:	8.046
Zn	91.774	±	17.058
W	< LOD	:	79.146
Cu	< LOD	:	31.394
Ni	< LOD	:	56.745
Co	< LOD	:	149.133
Fe	16510.475	±	347.564
Mn	725.179	±	106.570
Cr	208.465	±	24.284
V	601.150	±	50.162
Ti	3516.227	±	113.463
Sc	72.223	±	39.299
Ca	13285.735	±	319.402
K	33965.180	±	650.379
S	1543.661	±	964.312
Ba	1445.976	±	45.034
Cs	81.985	±	6.497
Te	126.507	±	18.966
Sb	54.683	±	11.075
Sn	< LOD	:	25.460
Cd	< LOD	:	10.288
Ag	< LOD	:	7.634
Pd	< LOD	:	4.813
Bal	901460.625	±	3033.445
Nb	28.170	±	5.102
Bi	19.707	±	9.461
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1919
Mode	TestAll Geo
Time	2013-09-15 12:54
Duration	121.11
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



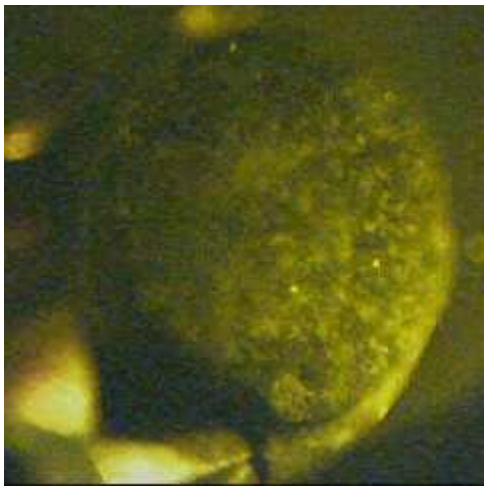
	ppm	±	Error
Mo	14.842	±	6.926
Zr	496.643	±	14.599
Sr	1103.710	±	18.857
U	< LOD	:	18.337
Rb	37.144	±	3.125
Th	12.529	±	7.116
Pb	85.800	±	13.041
Se	< LOD	:	4.954
As	< LOD	:	12.677
Hg	< LOD	:	11.195
Au	< LOD	:	7.902
Zn	91.065	±	17.460
W	< LOD	:	78.378
Cu	< LOD	:	32.295
Ni	< LOD	:	59.412
Co	< LOD	:	236.087
Fe	27402.330	±	449.121
Mn	864.329	±	118.454
Cr	303.800	±	27.403
V	594.437	±	56.585
Ti	5589.137	±	157.698
Sc	< LOD	:	75.941
Ca	21674.010	±	409.847
K	31921.787	±	665.215
S	< LOD	:	1559.037
Ba	1293.188	±	43.898
Cs	72.915	±	6.432
Te	107.404	±	18.718
Sb	48.819	±	10.979
Sn	< LOD	:	25.751
Cd	< LOD	:	9.287
Ag	< LOD	:	7.153
Pd	< LOD	:	4.902
Bal	885679.938	±	3189.111
Nb	30.819	±	5.198
Bi	15.273	±	9.075
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1920
Mode	TestAll Geo
Time	2013-09-15 12:57
Duration	121.52
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



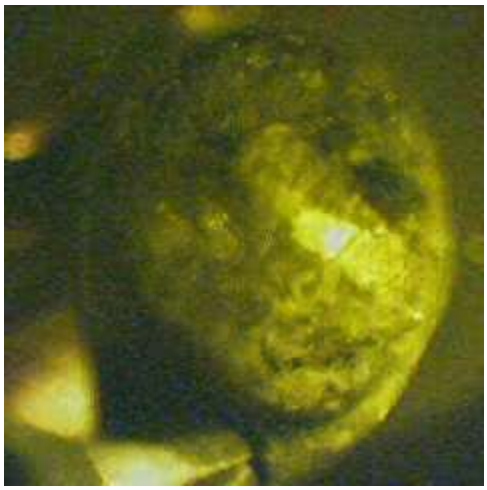
	ppm	±	Error
Mo	< LOD	:	9.151
Zr	170.587	±	10.362
Sr	974.670	±	17.395
U	< LOD	:	17.479
Rb	40.127	±	3.183
Th	< LOD	:	10.136
Pb	102.770	±	13.611
Se	< LOD	:	4.353
As	< LOD	:	13.398
Hg	< LOD	:	11.010
Au	< LOD	:	7.051
Zn	68.079	±	15.481
W	< LOD	:	80.422
Cu	< LOD	:	31.134
Ni	< LOD	:	60.920
Co	< LOD	:	216.780
Fe	21490.451	±	390.506
Mn	651.315	±	101.833
Cr	< LOD	:	41.313
V	676.675	±	51.629
Ti	2292.271	±	88.572
Sc	< LOD	:	78.072
Ca	22924.461	±	421.405
K	27401.947	±	625.697
S	1740.875	±	1081.124
Ba	2167.001	±	51.582
Cs	94.546	±	6.789
Te	147.467	±	19.849
Sb	< LOD	:	24.800
Sn	< LOD	:	26.491
Cd	< LOD	:	9.281
Ag	< LOD	:	6.490
Pd	< LOD	:	3.846
Bal	895074.063	±	3205.110
Nb	14.957	±	4.655
Bi	< LOD	:	12.735
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1921
Mode	TestAll Geo
Time	2013-09-15 13:04
Duration	120.52
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	

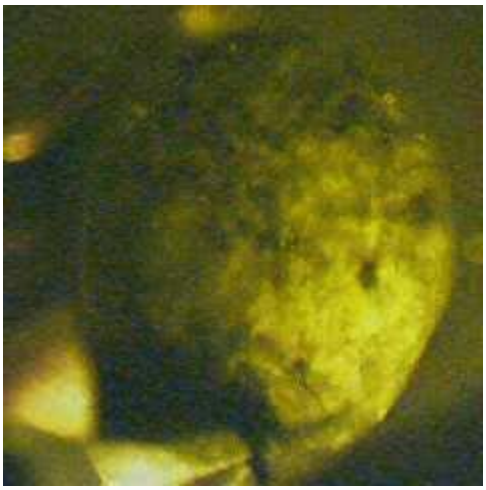


	ppm	±	Error
Mo	< LOD	:	8.497
Zr	301.543	±	13.334
Sr	1416.298	±	21.667
U	< LOD	:	19.843
Rb	44.005	±	3.384
Th	< LOD	:	10.353
Pb	89.279	±	13.487
Se	< LOD	:	4.872
As	< LOD	:	12.319
Hg	< LOD	:	11.718
Au	< LOD	:	7.842
Zn	77.014	±	16.779
W	< LOD	:	80.983
Cu	53.489	±	24.752
Ni	77.798	±	43.828
Co	< LOD	:	204.849
Fe	20474.371	±	394.783
Mn	754.468	±	112.314
Cr	223.796	±	25.207
V	646.703	±	49.143
Ti	2643.156	±	93.519
Sc	< LOD	:	68.391
Ca	19678.684	±	377.208
K	37161.563	±	680.262
S	< LOD	:	1488.365
Ba	2211.177	±	55.264
Cs	100.987	±	7.292
Te	144.128	±	21.145
Sb	< LOD	:	25.537
Sn	< LOD	:	27.437
Cd	< LOD	:	9.489
Ag	< LOD	:	6.787
Pd	< LOD	:	3.933
Bal	885371.000	±	3238.195
Nb	8.813	±	4.551
Bi	< LOD	:	11.426
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724



Reading No	1922
Mode	TestAll Geo
Time	2013-09-15 13:07
Duration	121.31
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	

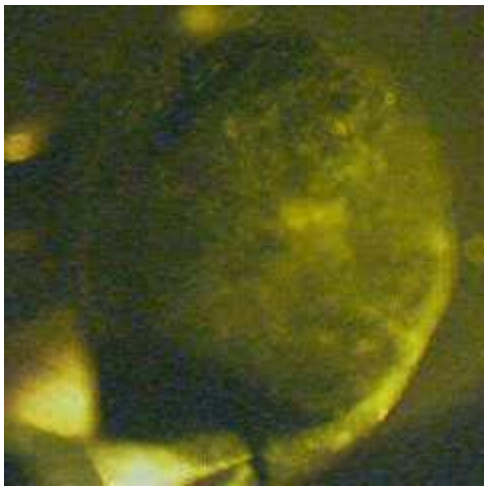
	ppm	±	Error
Mo	8.971	±	5.863
Zr	< LOD	:	12.866
Sr	1268.153	±	19.827
U	< LOD	:	20.353
Rb	80.926	±	4.574
Th	< LOD	:	9.675
Pb	58.343	±	11.176
Se	< LOD	:	4.586
As	< LOD	:	10.887
Hg	< LOD	:	10.023
Au	< LOD	:	7.698
Zn	71.570	±	15.435
W	< LOD	:	77.303
Cu	< LOD	:	31.134
Ni	< LOD	:	59.633
Co	< LOD	:	199.721
Fe	18058.598	±	358.488
Mn	592.103	±	97.592
Cr	< LOD	:	38.151
V	773.209	±	50.373
Ti	2181.869	±	82.118
Sc	< LOD	:	55.226
Ca	12521.974	±	320.757
K	47948.906	±	762.724
S	< LOD	:	1490.207
Ba	2105.979	±	50.266
Cs	76.165	±	6.543
Te	122.038	±	19.151
Sb	< LOD	:	24.690
Sn	< LOD	:	26.783
Cd	< LOD	:	9.576
Ag	< LOD	:	7.233
Pd	< LOD	:	4.379
Bal	880648.500	±	3313.998
Nb	11.254	±	4.567
Bi	< LOD	:	13.893
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1923
Mode	TestAll Geo
Time	2013-09-15 13:12
Duration	120.99
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



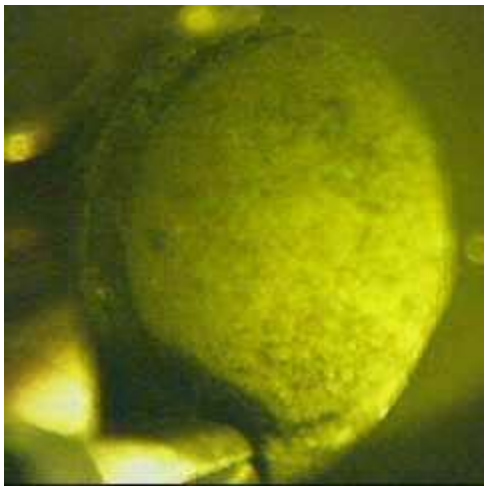
	ppm	±	Error
Mo	< LOD	:	7.279
Zr	35.224	±	4.091
Sr	24.697	±	2.896
U	< LOD	:	9.313
Rb	16.249	±	1.781
Th	< LOD	:	6.732
Pb	68.636	±	9.936
Se	< LOD	:	3.085
As	16.154	±	7.444
Hg	< LOD	:	8.354
Au	< LOD	:	6.112
Zn	15.698	±	8.805
W	< LOD	:	63.485
Cu	< LOD	:	32.488
Ni	< LOD	:	49.049
Co	< LOD	:	188.594
Fe	22128.268	±	349.698
Mn	< LOD	:	93.767
Cr	117.768	±	20.111
V	111.494	±	25.820
Ti	535.258	±	38.909
Sc	< LOD	:	23.281
Ca	385.310	±	132.580
K	11917.692	±	456.813
S	16361.558	±	1988.400
Ba	662.701	±	35.116
Cs	96.866	±	5.918
Te	168.692	±	17.545
Sb	82.798	±	10.362
Sn	< LOD	:	21.798
Cd	< LOD	:	7.871
Ag	< LOD	:	5.329
Pd	< LOD	:	4.272
Bal	947732.625	±	3244.040
Nb	< LOD	:	4.398
Bi	< LOD	:	8.506
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1924
Mode	Soil
Time	2013-09-21 13:43
Duration	120.42
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.142
Zr	184.522	±	13.417
Sr	172.731	±	11.962
U	< LOD	:	16.946
Rb	17.522	±	5.633
Th	< LOD	:	12.546
Pb	50.186	±	16.125
Se	< LOD	:	6.751
As	< LOD	:	19.177
Hg	< LOD	:	17.333
Au	< LOD	:	10.629
Zn	93.730	±	26.684
W	< LOD	:	105.899
Cu	< LOD	:	55.073
Ni	144.774	±	77.726
Co	< LOD	:	392.446
Fe	48906.277	±	935.862
Mn	758.124	±	186.796
Cr	467.981	±	73.937
V	< LOD	:	157.969
Ti	3948.979	±	289.485
Sc	< LOD	:	136.904
Ca	16898.246	±	692.452
K	4978.146	±	581.546
S	< LOD	:	2742.408
Ba	332.891	±	51.984
Cs	32.736	±	8.859
Te	54.210	±	25.953
Sb	< LOD	:	22.477
Sn	31.049	±	17.774
Cd	< LOD	:	15.821
Ag	< LOD	:	12.105
Pd	< LOD	:	16.874

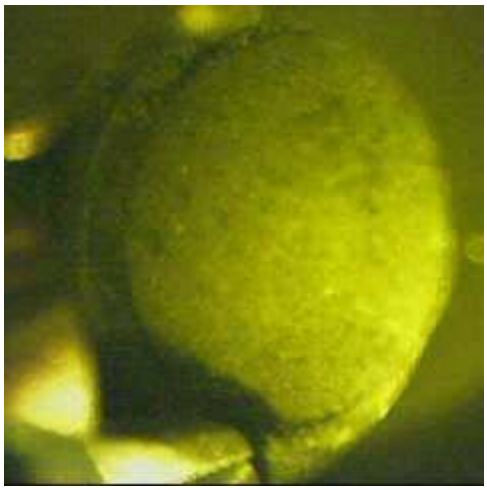
Supervised By: _____

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1925
Mode	Soil
Time	2013-09-21 13:51
Duration	120.11
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.408
Zr	195.621	±	15.219
Sr	421.316	±	18.842
U	< LOD	:	20.598
Rb	30.005	±	7.116
Th	< LOD	:	13.687
Pb	58.378	±	17.789
Se	< LOD	:	8.138
As	< LOD	:	20.566
Hg	< LOD	:	17.036
Au	< LOD	:	11.607
Zn	93.107	±	27.626
W	< LOD	:	112.502
Cu	62.461	±	39.948
Ni	175.134	±	83.304
Co	< LOD	:	407.240
Fe	49749.488	±	969.470
Mn	1049.091	±	212.963
Cr	319.591	±	71.313
V	209.124	±	124.354
Ti	4317.365	±	331.070
Sc	< LOD	:	142.363
Ca	18142.455	±	732.974
K	8691.059	±	743.164
S	< LOD	:	3290.897
Ba	758.859	±	59.205
Cs	32.798	±	9.164
Te	55.371	±	26.828
Sb	< LOD	:	23.434
Sn	< LOD	:	27.157
Cd	< LOD	:	16.523
Ag	< LOD	:	12.552
Pd	< LOD	:	16.355

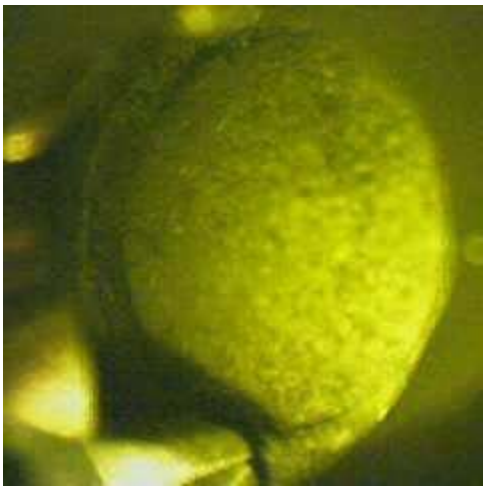
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Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1926
Mode	Soil
Time	2013-09-21 13:55
Duration	120.22
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	9.908
Zr	72.903	±	10.105
Sr	299.710	±	14.587
U	< LOD	:	18.302
Rb	42.230	±	7.194
Th	< LOD	:	10.945
Pb	54.407	±	15.511
Se	< LOD	:	6.105
As	< LOD	:	19.163
Hg	< LOD	:	15.529
Au	< LOD	:	10.703
Zn	31.927	±	18.238
W	< LOD	:	97.140
Cu	< LOD	:	48.495
Ni	101.161	±	65.513
Co	< LOD	:	267.296
Fe	25496.660	±	634.780
Mn	388.188	±	131.150
Cr	228.588	±	54.831
V	133.427	±	84.545
Ti	2922.233	±	225.264
Sc	< LOD	:	98.086
Ca	10785.065	±	494.574
K	9635.239	±	651.117
S	< LOD	:	2440.143
Ba	388.478	±	48.783
Cs	22.813	±	8.095
Te	< LOD	:	35.183
Sb	< LOD	:	20.660
Sn	< LOD	:	23.888
Cd	< LOD	:	14.557
Ag	< LOD	:	10.711
Pd	< LOD	:	14.732

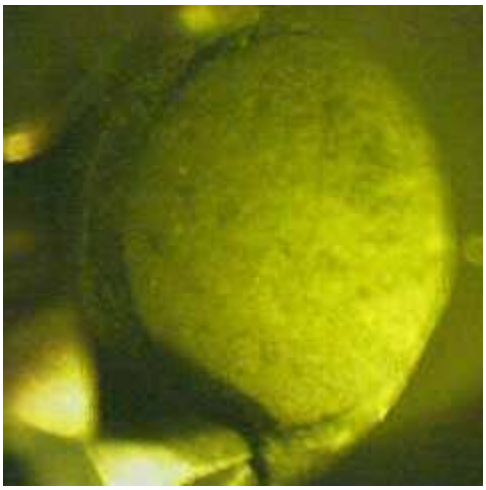
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1927
Mode	Soil
Time	2013-09-21 14:01
Duration	120.27
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.878
Zr	219.689	±	18.030
Sr	892.393	±	27.783
U	< LOD	:	25.647
Rb	43.898	±	8.658
Th	< LOD	:	14.194
Pb	60.824	±	18.660
Se	< LOD	:	8.476
As	< LOD	:	22.801
Hg	< LOD	:	18.811
Au	< LOD	:	12.873
Zn	172.806	±	35.788
W	< LOD	:	115.771
Cu	< LOD	:	61.410
Ni	180.318	±	86.757
Co	< LOD	:	418.872
Fe	50064.922	±	991.965
Mn	1221.961	±	230.887
Cr	277.230	±	69.309
V	< LOD	:	201.607
Ti	4735.046	±	361.529
Sc	< LOD	:	148.098
Ca	19275.641	±	748.552
K	14796.571	±	921.419
S	< LOD	:	3429.904
Ba	1639.815	±	71.294
Cs	40.566	±	9.560
Te	57.115	±	27.760
Sb	25.173	±	16.275
Sn	29.160	±	19.176
Cd	< LOD	:	17.201
Ag	< LOD	:	13.258
Pd	< LOD	:	17.902

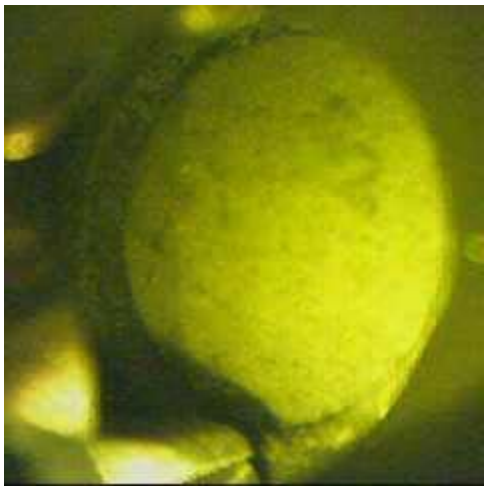
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Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1928
Mode	Soil
Time	2013-09-21 14:04
Duration	120.25
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.818
Zr	180.484	±	13.859
Sr	356.711	±	16.583
U	< LOD	:	19.590
Rb	37.091	±	7.235
Th	< LOD	:	11.959
Pb	49.180	±	15.833
Se	< LOD	:	6.935
As	< LOD	:	19.504
Hg	< LOD	:	16.570
Au	< LOD	:	10.763
Zn	57.561	±	22.142
W	< LOD	:	98.698
Cu	< LOD	:	51.546
Ni	131.901	±	74.433
Co	< LOD	:	341.167
Fe	37457.500	±	802.773
Mn	572.408	±	161.551
Cr	262.763	±	63.701
V	157.797	±	100.743
Ti	3616.554	±	272.210
Sc	< LOD	:	126.621
Ca	15326.627	±	643.584
K	10254.949	±	749.050
S	< LOD	:	2929.770
Ba	427.261	±	52.016
Cs	27.775	±	8.609
Te	41.078	±	25.122
Sb	< LOD	:	21.954
Sn	< LOD	:	25.850
Cd	< LOD	:	15.654
Ag	< LOD	:	11.873
Pd	< LOD	:	15.377

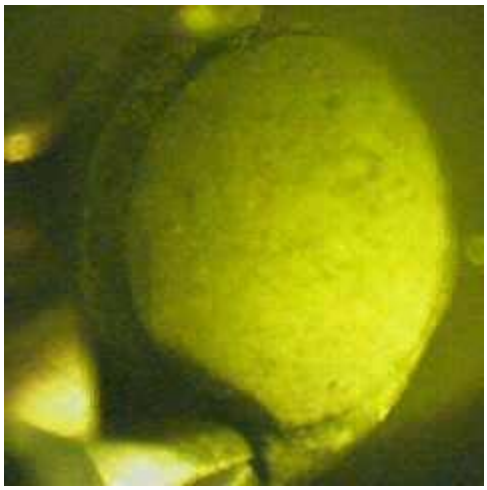
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1929
Mode	Soil
Time	2013-09-21 14:08
Duration	120.10
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.445
Zr	160.752	±	13.173
Sr	384.426	±	16.766
U	< LOD	:	19.718
Rb	39.443	±	7.288
Th	< LOD	:	13.246
Pb	41.321	±	14.605
Se	< LOD	:	6.403
As	< LOD	:	17.784
Hg	< LOD	:	16.061
Au	< LOD	:	11.070
Zn	57.345	±	21.847
W	< LOD	:	103.148
Cu	< LOD	:	50.193
Ni	165.089	±	72.204
Co	< LOD	:	275.131
Fe	26088.582	±	653.972
Mn	419.976	±	137.148
Cr	206.216	±	56.008
V	< LOD	:	138.781
Ti	3052.010	±	249.722
Sc	< LOD	:	113.426
Ca	14907.875	±	587.567
K	10631.770	±	701.414
S	< LOD	:	2589.267
Ba	495.398	±	52.346
Cs	35.638	±	8.597
Te	48.227	±	25.009
Sb	< LOD	:	22.028
Sn	< LOD	:	25.540
Cd	< LOD	:	15.403
Ag	< LOD	:	11.689
Pd	< LOD	:	16.319

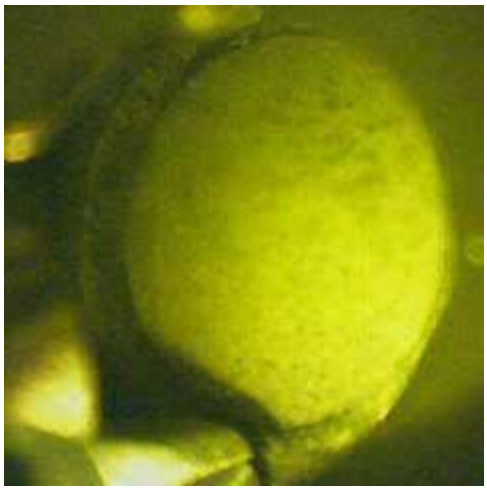
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Certificate of Verification

XL3t-34724

Reading No	1930
Mode	Soil
Time	2013-09-21 14:12
Duration	120.51
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.066
Zr	104.670	±	10.781
Sr	272.800	±	13.779
U	< LOD	:	18.098
Rb	37.785	±	6.851
Th	< LOD	:	10.650
Pb	40.452	±	13.878
Se	< LOD	:	5.990
As	< LOD	:	16.581
Hg	< LOD	:	15.167
Au	< LOD	:	8.713
Zn	62.506	±	21.529
W	< LOD	:	95.420
Cu	< LOD	:	46.879
Ni	< LOD	:	91.866
Co	< LOD	:	249.296
Fe	23290.277	±	599.762
Mn	299.514	±	119.571
Cr	203.977	±	55.005
V	157.490	±	86.740
Ti	2776.863	±	226.815
Sc	< LOD	:	104.102
Ca	12014.612	±	524.367
K	9896.456	±	666.224
S	< LOD	:	2201.845
Ba	508.898	±	51.313
Cs	36.886	±	8.411
Te	56.145	±	24.574
Sb	26.074	±	14.455
Sn	28.911	±	16.811
Cd	< LOD	:	15.223
Ag	< LOD	:	11.554
Pd	< LOD	:	15.480

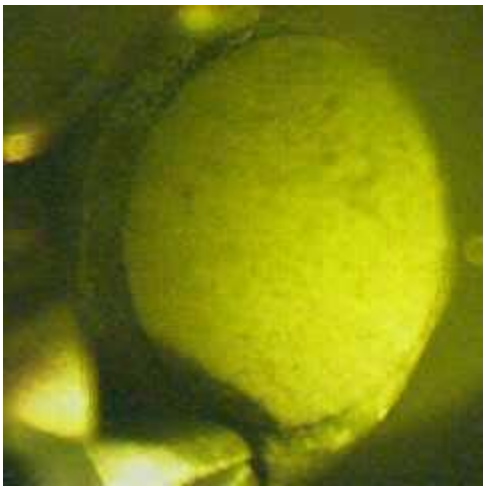
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1931
Mode	Soil
Time	2013-09-21 14:15
Duration	120.16
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.024
Zr	160.077	±	12.347
Sr	259.664	±	13.599
U	< LOD	:	17.407
Rb	44.746	±	7.220
Th	< LOD	:	12.727
Pb	26.022	±	12.656
Se	< LOD	:	6.987
As	< LOD	:	16.243
Hg	< LOD	:	15.142
Au	< LOD	:	9.103
Zn	32.288	±	18.056
W	< LOD	:	94.576
Cu	< LOD	:	45.519
Ni	< LOD	:	95.486
Co	< LOD	:	271.570
Fe	26490.582	±	645.938
Mn	251.330	±	117.884
Cr	210.000	±	56.309
V	< LOD	:	131.349
Ti	2642.007	±	235.465
Sc	< LOD	:	97.673
Ca	10144.962	±	499.830
K	10820.654	±	708.223
S	< LOD	:	2361.834
Ba	400.609	±	49.940
Cs	31.847	±	8.356
Te	57.014	±	24.559
Sb	< LOD	:	21.416
Sn	26.745	±	16.702
Cd	< LOD	:	14.906
Ag	< LOD	:	11.270
Pd	< LOD	:	15.605

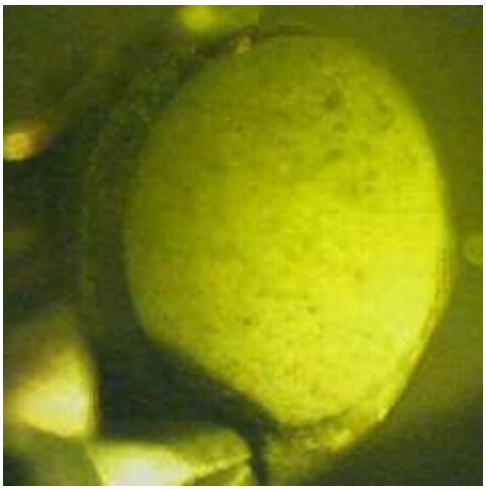
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1932
Mode	Soil
Time	2013-09-21 14:17
Duration	18.98
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	16.384
Zr	144.053	±	19.013
Sr	279.608	±	22.348
U	< LOD	:	29.321
Rb	43.774	±	11.585
Th	< LOD	:	15.844
Pb	< LOD	:	30.204
Se	< LOD	:	9.851
As	< LOD	:	24.203
Hg	< LOD	:	23.624
Au	< LOD	:	17.661
Zn	< LOD	:	38.773
W	< LOD	:	142.174
Cu	< LOD	:	68.897
Ni	< LOD	:	150.600
Co	< LOD	:	345.955
Fe	16205.918	±	802.841
Mn	< LOD	:	262.963

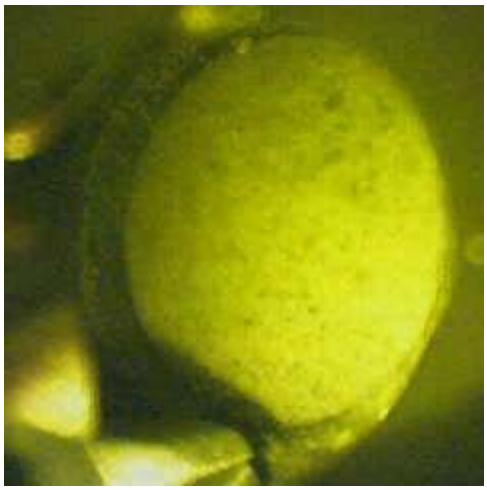
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1933
Mode	Soil
Time	2013-09-21 14:21
Duration	120.00
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.250
Zr	141.630	±	11.912
Sr	286.738	±	14.179
U	< LOD	:	18.903
Rb	45.222	±	7.394
Th	< LOD	:	12.011
Pb	38.426	±	13.870
Se	< LOD	:	6.290
As	< LOD	:	16.907
Hg	< LOD	:	15.562
Au	< LOD	:	10.112
Zn	28.215	±	17.333
W	< LOD	:	92.587
Cu	< LOD	:	44.895
Ni	< LOD	:	94.496
Co	< LOD	:	213.159
Fe	16218.896	±	503.448
Mn	313.062	±	116.139
Cr	187.490	±	47.810
V	< LOD	:	107.607
Ti	2371.470	±	190.370
Sc	< LOD	:	93.688
Ca	12838.797	±	492.922
K	11538.106	±	648.863
S	< LOD	:	2230.424
Ba	448.869	±	49.941
Cs	34.561	±	8.279
Te	53.710	±	24.217
Sb	< LOD	:	21.127
Sn	26.015	±	16.494
Cd	< LOD	:	14.786
Ag	< LOD	:	10.988
Pd	< LOD	:	15.022

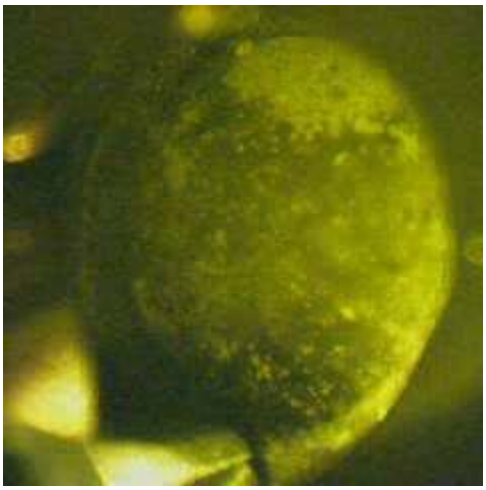
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1934
Mode	Soil
Time	2013-09-21 14:24
Duration	120.36
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	13.069
Zr	93.766	±	13.340
Sr	213.917	±	16.015
U	< LOD	:	23.801
Rb	38.511	±	9.061
Th	< LOD	:	16.712
Pb	70.721	±	22.301
Se	< LOD	:	9.244
As	< LOD	:	26.155
Hg	< LOD	:	23.580
Au	< LOD	:	14.775
Zn	< LOD	:	34.688
W	< LOD	:	147.150
Cu	< LOD	:	70.413
Ni	< LOD	:	132.880
Co	< LOD	:	237.641
Fe	12204.306	±	568.195
Mn	204.142	±	132.589
Cr	97.708	±	25.895
V	< LOD	:	52.776
Ti	780.857	±	87.482
Sc	< LOD	:	40.256
Ca	3917.485	±	199.675
K	4331.105	±	297.686
S	< LOD	:	1139.389
Ba	623.084	±	70.795
Cs	68.836	±	11.758
Te	113.074	±	34.425
Sb	54.847	±	20.293
Sn	40.544	±	23.099
Cd	22.147	±	14.444
Ag	< LOD	:	16.433
Pd	< LOD	:	22.049

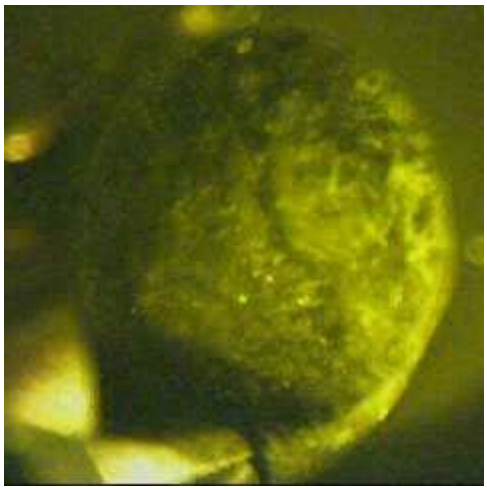
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1935
Mode	TestAll Geo
Time	2013-09-21 14:32
Duration	121.20
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



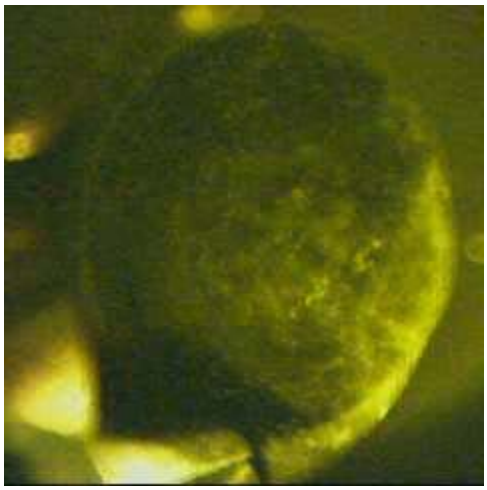
	ppm	±	Error
Mo	11.061	±	6.912
Zr	93.984	±	9.024
Sr	1817.244	±	79.668
U	< LOD	:	300000.000
Rb	10.656	±	2.071
Th	< LOD	:	300000.000
Pb	36.565	±	11.125
Se	< LOD	:	4.993
As	16.402	±	8.015
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	63.896	±	20.977
W	< LOD	:	110.167
Cu	375.233	±	55.832
Ni	< LOD	:	84.072
Co	< LOD	:	397.157
Fe	79204.547	±	1926.919
Mn	1835.991	±	197.492
Cr	86.971	±	38.160
V	120.241	±	57.954
Ti	1955.700	±	109.788
Sc	< LOD	:	184.052
Ca	79892.719	±	972.175
K	5377.306	±	437.512
S	29410.115	±	3318.130
Ba	715.271	±	48.145
Cs	110.078	±	8.148
Te	170.030	±	23.819
Sb	73.401	±	13.887
Sn	104.619	±	16.670
Cd	< LOD	:	11.494
Ag	< LOD	:	9.065
Pd	< LOD	:	5.954
Bal	770079.438	±	6998.094
Nb	< LOD	:	7.382
Bi	12.901	±	8.403
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1936
Mode	TestAll Geo
Time	2013-09-21 15:04
Duration	121.33
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



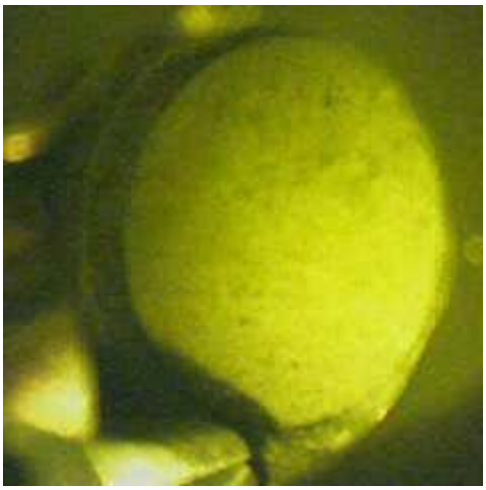
	ppm	±	Error
Mo	< LOD	:	11.031
Zr	85.384	±	8.953
Sr	1076.754	±	61.781
U	< LOD	:	300000.000
Rb	9.014	±	2.068
Th	< LOD	:	300000.000
Pb	50.208	±	13.292
Se	< LOD	:	6.667
As	< LOD	:	13.446
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	382.496	±	42.108
W	< LOD	:	118.685
Cu	138.758	±	48.652
Ni	325.597	±	74.844
Co	< LOD	:	516.867
Fe	151460.328	±	3481.776
Mn	3309.842	±	254.507
Cr	175.993	±	55.436
V	561.107	±	100.581
Ti	4732.278	±	202.891
Sc	194.116	±	127.212
Ca	48496.539	±	969.446
K	3992.502	±	501.409
S	22848.188	±	3903.470
Ba	820.682	±	54.442
Cs	113.418	±	9.068
Te	195.525	±	26.760
Sb	< LOD	:	30.323
Sn	< LOD	:	32.223
Cd	< LOD	:	11.682
Ag	< LOD	:	8.004
Pd	< LOD	:	4.625
Bal	750176.313	±	7944.607
Nb	< LOD	:	8.316
Bi	< LOD	:	10.016
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1937
Mode	Soil
Time	2013-09-21 15:13
Duration	120.31
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.643
Zr	245.549	±	14.504
Sr	266.184	±	13.906
U	< LOD	:	19.447
Rb	46.052	±	7.613
Th	< LOD	:	11.598
Pb	33.825	±	13.549
Se	< LOD	:	6.734
As	< LOD	:	16.332
Hg	< LOD	:	15.382
Au	< LOD	:	10.884
Zn	31.601	±	18.547
W	< LOD	:	101.358
Cu	< LOD	:	46.852
Ni	< LOD	:	93.550
Co	< LOD	:	248.456
Fe	21010.311	±	582.235
Mn	559.613	±	144.946
Cr	193.423	±	52.004
V	< LOD	:	124.203
Ti	2924.144	±	221.776
Sc	< LOD	:	99.973
Ca	12160.814	±	514.094
K	12291.857	±	711.857
S	< LOD	:	2348.731
Ba	391.772	±	49.390
Cs	26.736	±	8.232
Te	< LOD	:	35.864
Sb	< LOD	:	21.029
Sn	< LOD	:	24.309
Cd	< LOD	:	14.663
Ag	< LOD	:	11.416
Pd	< LOD	:	14.962

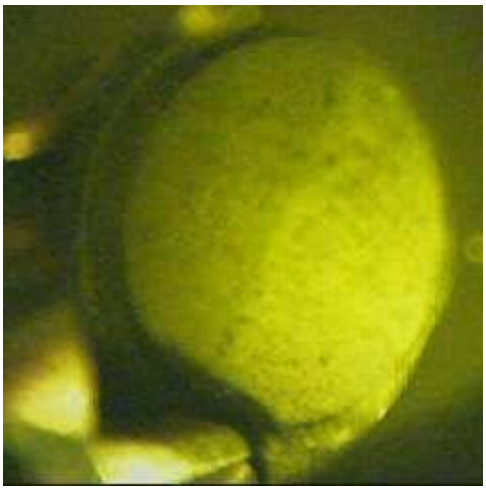
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1938
Mode	Soil
Time	2013-09-21 15:16
Duration	120.03
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.048
Zr	240.513	±	16.121
Sr	557.170	±	20.705
U	< LOD	:	21.589
Rb	37.848	±	7.541
Th	< LOD	:	12.550
Pb	51.631	±	16.150
Se	< LOD	:	6.681
As	< LOD	:	18.081
Hg	< LOD	:	17.554
Au	< LOD	:	11.442
Zn	50.609	±	22.621
W	< LOD	:	118.545
Cu	< LOD	:	52.944
Ni	124.193	±	74.520
Co	< LOD	:	335.894
Fe	36064.406	±	791.492
Mn	575.156	±	162.438
Cr	256.553	±	63.611
V	< LOD	:	168.445
Ti	3703.530	±	297.719
Sc	< LOD	:	121.160
Ca	14649.360	±	626.811
K	13540.038	±	835.431
S	< LOD	:	2690.779
Ba	843.885	±	58.247
Cs	29.128	±	8.814
Te	< LOD	:	38.071
Sb	< LOD	:	22.453
Sn	< LOD	:	26.437
Cd	< LOD	:	15.712
Ag	< LOD	:	12.097
Pd	< LOD	:	16.037

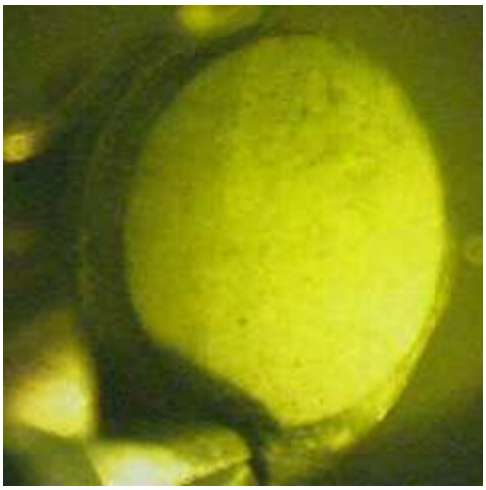
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1939
Mode	Soil
Time	2013-09-21 15:17
Duration	5.02
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	73.766
Zr	380.957	±	118.247
Sr	212.053	±	86.795
U	< LOD	:	195.500
Rb	< LOD	:	92.375
Th	< LOD	:	52.580
Pb	< LOD	:	110.099
Se	< LOD	:	43.568
As	< LOD	:	101.503
Hg	< LOD	:	99.449
Au	< LOD	:	102.829
Zn	< LOD	:	120.805
W	< LOD	:	534.566
Cu	< LOD	:	159.529
Ni	< LOD	:	567.897
Co	< LOD	:	1013.921
Fe	5696.654	±	2119.954
Mn	< LOD	:	367.615

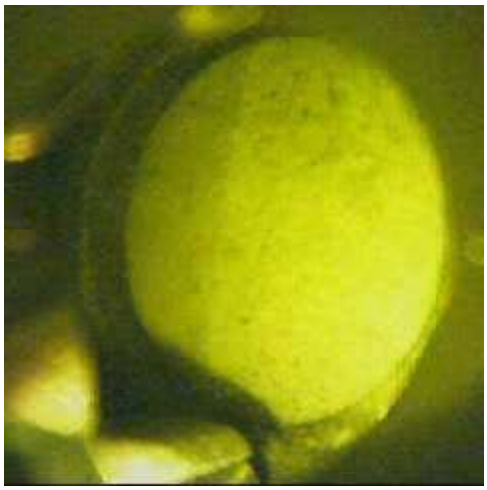
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1940
Mode	Soil
Time	2013-09-21 15:23
Duration	120.33
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.598
Zr	369.908	±	15.938
Sr	218.196	±	11.958
U	< LOD	:	18.506
Rb	54.122	±	7.628
Th	< LOD	:	12.031
Pb	31.892	±	12.765
Se	< LOD	:	6.634
As	< LOD	:	15.148
Hg	< LOD	:	13.770
Au	< LOD	:	9.721
Zn	< LOD	:	21.819
W	< LOD	:	88.399
Cu	< LOD	:	40.334
Ni	< LOD	:	75.677
Co	< LOD	:	110.491
Fe	4772.695	±	265.156
Mn	< LOD	:	116.459
Cr	92.926	±	36.816
V	< LOD	:	92.382
Ti	2599.753	±	166.595
Sc	< LOD	:	57.956
Ca	6008.570	±	309.146
K	14225.519	±	602.961
S	< LOD	:	1662.685
Ba	309.920	±	45.401
Cs	13.403	±	7.603
Te	< LOD	:	33.092
Sb	< LOD	:	19.318
Sn	< LOD	:	22.378
Cd	< LOD	:	13.993
Ag	< LOD	:	10.286
Pd	< LOD	:	14.699

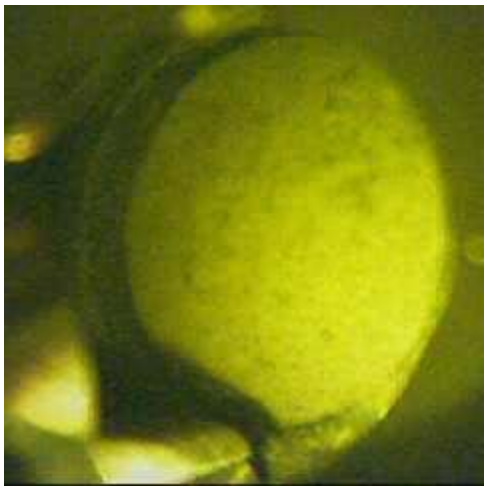
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Certificate of Verification

XL3t-34724

Reading No	1941
Mode	Soil
Time	2013-09-21 15:28
Duration	120.28
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.919
Zr	272.841	±	15.280
Sr	302.896	±	14.845
U	< LOD	:	18.414
Rb	42.909	±	7.296
Th	< LOD	:	12.125
Pb	26.704	±	12.770
Se	< LOD	:	6.589
As	< LOD	:	14.793
Hg	< LOD	:	15.833
Au	< LOD	:	8.846
Zn	30.664	±	18.613
W	< LOD	:	102.443
Cu	< LOD	:	48.160
Ni	< LOD	:	95.754
Co	< LOD	:	292.760
Fe	29044.648	±	685.330
Mn	306.303	±	125.860
Cr	156.099	±	56.134
V	< LOD	:	137.484
Ti	2758.399	±	246.948
Sc	< LOD	:	101.424
Ca	10156.223	±	518.208
K	13136.954	±	795.160
S	< LOD	:	2544.529
Ba	431.752	±	50.691
Cs	25.481	±	8.364
Te	48.170	±	24.575
Sb	< LOD	:	21.631
Sn	< LOD	:	24.774
Cd	< LOD	:	14.974
Ag	< LOD	:	11.734
Pd	< LOD	:	15.134

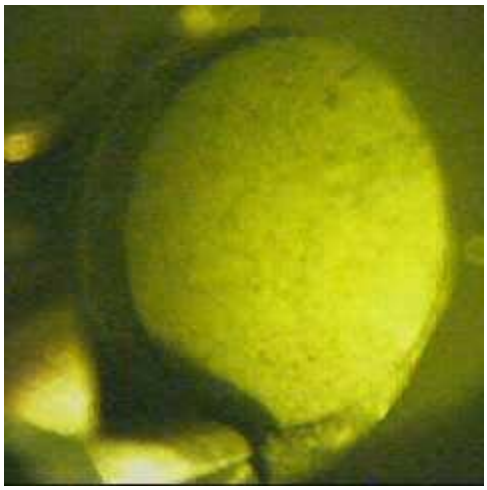
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1942
Mode	Soil
Time	2013-09-21 15:31
Duration	120.57
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.693
Zr	253.112	±	14.509
Sr	251.441	±	13.438
U	< LOD	:	17.743
Rb	43.461	±	7.216
Th	< LOD	:	11.623
Pb	23.486	±	12.114
Se	< LOD	:	6.178
As	< LOD	:	13.954
Hg	< LOD	:	16.012
Au	< LOD	:	10.081
Zn	27.295	±	17.818
W	< LOD	:	98.990
Cu	< LOD	:	46.661
Ni	< LOD	:	91.481
Co	< LOD	:	244.354
Fe	19603.572	±	558.251
Mn	335.160	±	122.401
Cr	158.039	±	50.104
V	128.290	±	83.254
Ti	3212.939	±	224.515
Sc	< LOD	:	90.739
Ca	10590.983	±	480.817
K	13516.981	±	733.749
S	< LOD	:	2059.588
Ba	427.657	±	49.277
Cs	31.322	±	8.185
Te	45.298	±	23.869
Sb	21.451	±	14.062
Sn	30.827	±	16.454
Cd	< LOD	:	15.030
Ag	< LOD	:	10.933
Pd	< LOD	:	15.307

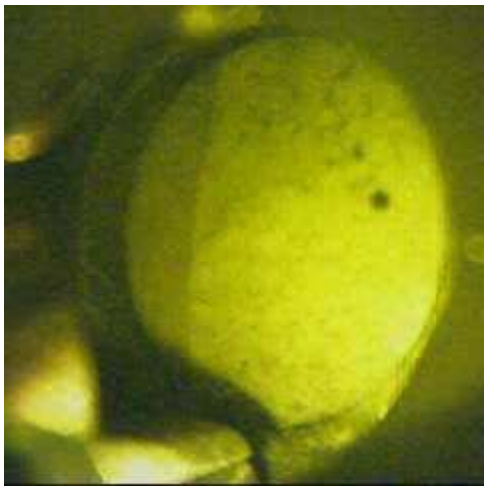
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Certificate of Verification

XL3t-34724

Reading No	1943
Mode	Soil
Time	2013-09-21 15:34
Duration	120.07
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.144
Zr	173.180	±	12.408
Sr	250.523	±	13.152
U	< LOD	:	18.961
Rb	53.641	±	7.792
Th	< LOD	:	11.161
Pb	< LOD	:	15.714
Se	< LOD	:	5.606
As	< LOD	:	12.921
Hg	< LOD	:	13.888
Au	< LOD	:	8.951
Zn	34.370	±	17.424
W	< LOD	:	81.931
Cu	< LOD	:	43.896
Ni	< LOD	:	85.714
Co	< LOD	:	187.643
Fe	13170.533	±	449.424
Mn	235.894	±	104.729
Cr	182.772	±	46.502
V	< LOD	:	109.339
Ti	2971.914	±	197.887
Sc	< LOD	:	87.416
Ca	11328.815	±	457.754
K	13238.009	±	672.603
S	< LOD	:	1985.637
Ba	454.233	±	49.217
Cs	38.973	±	8.189
Te	54.873	±	23.861
Sb	25.313	±	14.045
Sn	33.338	±	16.400
Cd	< LOD	:	15.060
Ag	< LOD	:	10.725
Pd	< LOD	:	14.914

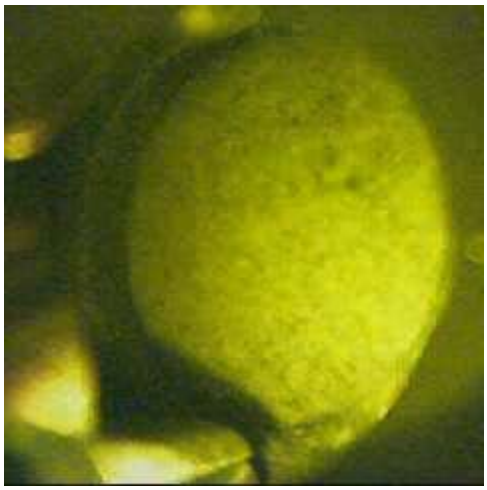
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1944
Mode	Soil
Time	2013-09-21 15:38
Duration	120.25
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	9.453
Zr	124.520	±	10.996
Sr	267.643	±	13.283
U	< LOD	:	16.438
Rb	39.263	±	6.621
Th	< LOD	:	10.559
Pb	19.771	±	11.114
Se	< LOD	:	6.070
As	< LOD	:	12.552
Hg	< LOD	:	14.481
Au	< LOD	:	9.829
Zn	< LOD	:	22.908
W	< LOD	:	90.387
Cu	< LOD	:	39.112
Ni	< LOD	:	82.249
Co	< LOD	:	179.255
Fe	11715.395	±	415.344
Mn	278.871	±	106.309
Cr	147.190	±	43.161
V	< LOD	:	97.419
Ti	2468.641	±	179.855
Sc	< LOD	:	85.015
Ca	12043.027	±	451.659
K	10711.808	±	591.697
S	< LOD	:	1804.826
Ba	458.103	±	48.865
Cs	39.382	±	8.123
Te	62.839	±	23.797
Sb	< LOD	:	20.689
Sn	40.097	±	16.421
Cd	< LOD	:	14.591
Ag	< LOD	:	10.825
Pd	< LOD	:	14.690

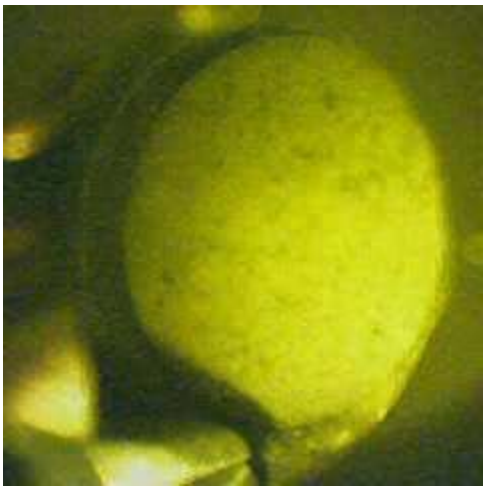
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1945
Mode	Soil
Time	2013-09-21 15:43
Duration	120.33
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.199
Zr	255.568	±	14.486
Sr	302.974	±	14.437
U	< LOD	:	19.369
Rb	49.300	±	7.625
Th	< LOD	:	11.113
Pb	24.922	±	12.175
Se	< LOD	:	6.330
As	< LOD	:	14.442
Hg	< LOD	:	14.950
Au	< LOD	:	10.495
Zn	26.079	±	16.780
W	< LOD	:	87.510
Cu	< LOD	:	41.756
Ni	< LOD	:	79.028
Co	< LOD	:	179.188
Fe	11462.325	±	420.350
Mn	254.338	±	106.619
Cr	102.864	±	41.791
V	< LOD	:	102.829
Ti	2435.263	±	185.102
Sc	< LOD	:	86.294
Ca	11755.611	±	455.199
K	16190.006	±	717.195
S	< LOD	:	1847.633
Ba	480.223	±	50.237
Cs	35.893	±	8.281
Te	40.820	±	23.959
Sb	22.412	±	14.163
Sn	33.183	±	16.646
Cd	< LOD	:	14.840
Ag	< LOD	:	11.297
Pd	< LOD	:	14.867

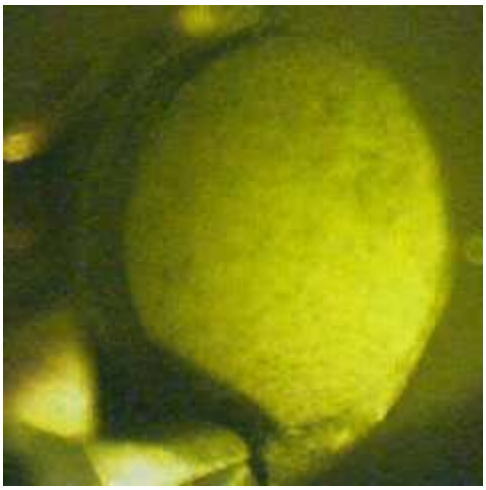
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1946
Mode	Soil
Time	2013-09-21 15:46
Duration	120.36
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	9.577
Zr	79.263	±	9.920
Sr	247.958	±	13.185
U	< LOD	:	17.751
Rb	40.031	±	6.936
Th	< LOD	:	10.892
Pb	20.844	±	11.540
Se	< LOD	:	5.813
As	< LOD	:	13.202
Hg	< LOD	:	16.000
Au	< LOD	:	8.038
Zn	< LOD	:	25.658
W	< LOD	:	94.568
Cu	< LOD	:	48.047
Ni	< LOD	:	93.832
Co	< LOD	:	232.131
Fe	18826.170	±	540.556
Mn	287.105	±	114.807
Cr	193.670	±	49.792
V	< LOD	:	120.063
Ti	3118.760	±	218.491
Sc	< LOD	:	89.137
Ca	10594.899	±	470.001
K	13131.321	±	709.023
S	< LOD	:	2136.126
Ba	488.364	±	51.219
Cs	44.708	±	8.510
Te	71.082	±	24.921
Sb	33.535	±	14.673
Sn	43.133	±	17.213
Cd	< LOD	:	15.562
Ag	< LOD	:	11.899
Pd	< LOD	:	15.506

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Certificate of Verification

XL3t-34724

Reading No	1947
Mode	Soil
Time	2013-09-21 15:50
Duration	120.02
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.521
Zr	137.111	±	11.820
Sr	211.136	±	12.672
U	< LOD	:	18.351
Rb	41.824	±	7.322
Th	< LOD	:	10.065
Pb	31.392	±	13.394
Se	< LOD	:	7.085
As	< LOD	:	16.962
Hg	< LOD	:	16.911
Au	< LOD	:	11.119
Zn	< LOD	:	27.463
W	< LOD	:	102.952
Cu	< LOD	:	45.929
Ni	< LOD	:	100.743
Co	< LOD	:	343.369
Fe	40217.887	±	817.795
Mn	315.687	±	135.767
Cr	199.734	±	63.620
V	276.623	±	122.417
Ti	6004.667	±	336.649
Sc	< LOD	:	107.409
Ca	10066.766	±	550.303
K	12930.037	±	842.826
S	< LOD	:	2790.243
Ba	257.009	±	49.074
Cs	16.956	±	8.373
Te	< LOD	:	36.506
Sb	< LOD	:	21.394
Sn	< LOD	:	25.080
Cd	< LOD	:	15.022
Ag	< LOD	:	11.274
Pd	< LOD	:	15.198

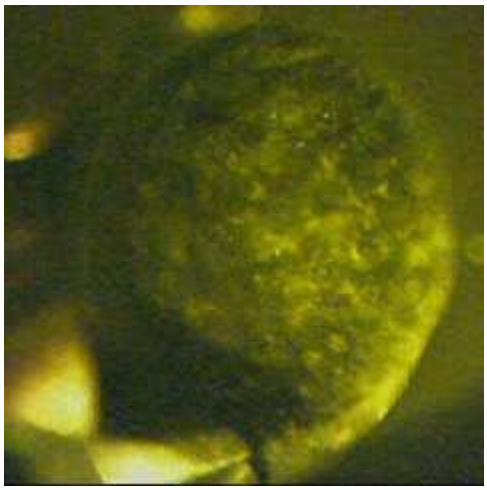
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1948
Mode	TestAll Geo
Time	2013-09-21 16:00
Duration	120.52
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



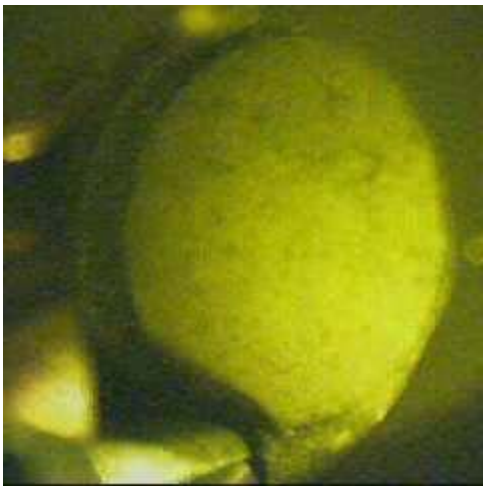
	ppm	±	Error
Mo	< LOD	:	9.376
Zr	< LOD	:	10.597
Sr	2083.954	±	91.061
U	< LOD	:	300000.000
Rb	14.918	±	2.404
Th	< LOD	:	300000.000
Pb	18.159	±	9.681
Se	< LOD	:	6.239
As	< LOD	:	9.591
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	50.815	±	20.536
W	< LOD	:	106.227
Cu	681.918	±	72.163
Ni	< LOD	:	87.019
Co	< LOD	:	416.805
Fe	81959.680	±	2101.115
Mn	1766.923	±	203.481
Cr	237.919	±	42.296
V	99.068	±	55.226
Ti	1146.928	±	93.086
Sc	< LOD	:	250.227
Ca	139079.234	±	1341.679
K	8205.818	±	560.241
S	17666.646	±	3099.674
Ba	1046.370	±	54.517
Cs	121.806	±	8.750
Te	171.806	±	25.336
Sb	< LOD	:	29.352
Sn	111.458	±	17.892
Cd	< LOD	:	11.069
Ag	< LOD	:	8.701
Pd	< LOD	:	5.873
Bal	719689.688	±	7464.796
Nb	< LOD	:	7.598
Bi	< LOD	:	11.257
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1949
Mode	Soil
Time	2013-09-21 16:04
Duration	120.36
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.186
Zr	209.454	±	13.072
Sr	218.189	±	12.264
U	< LOD	:	15.999
Rb	42.379	±	6.835
Th	< LOD	:	10.728
Pb	25.915	±	12.042
Se	< LOD	:	5.715
As	< LOD	:	14.487
Hg	< LOD	:	14.788
Au	< LOD	:	9.390
Zn	50.354	±	19.682
W	< LOD	:	89.160
Cu	< LOD	:	44.454
Ni	< LOD	:	90.330
Co	< LOD	:	244.881
Fe	22448.488	±	583.003
Mn	225.534	±	108.535
Cr	138.765	±	51.519
V	< LOD	:	122.736
Ti	2598.619	±	218.050
Sc	< LOD	:	92.082
Ca	8798.631	±	456.103
K	11599.319	±	704.523
S	< LOD	:	2103.648
Ba	316.195	±	47.205
Cs	20.984	±	7.963
Te	< LOD	:	34.802
Sb	< LOD	:	20.362
Sn	< LOD	:	23.594
Cd	< LOD	:	14.606
Ag	< LOD	:	10.843
Pd	< LOD	:	14.348

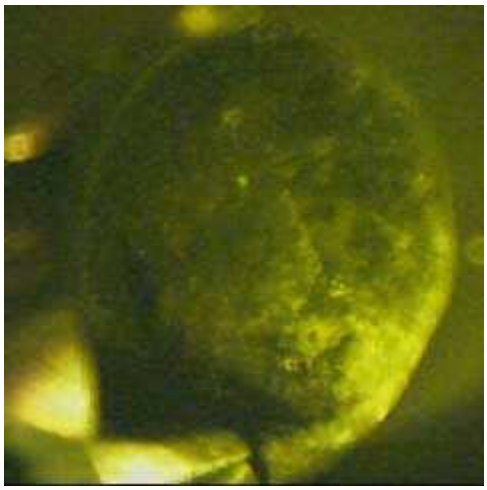
Supervised By: _____

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1950
Mode	TestAll Geo
Time	2013-09-21 16:55
Duration	120.96
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



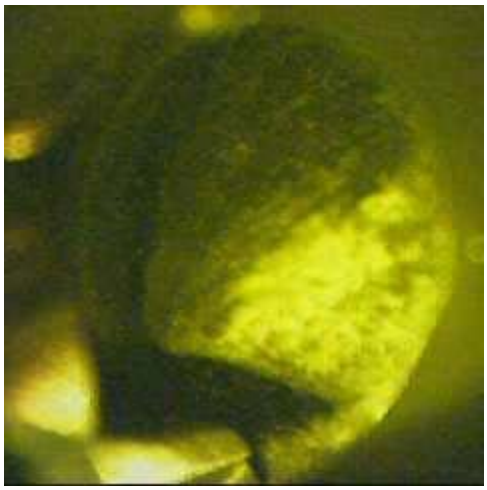
	ppm	±	Error
Mo	15.142	±	6.851
Zr	118.248	±	9.530
Sr	1964.234	±	81.266
U	< LOD	:	300000.000
Rb	23.428	±	2.714
Th	< LOD	:	300000.000
Pb	19.861	±	9.197
Se	< LOD	:	4.854
As	< LOD	:	8.646
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	84.127	±	21.400
W	< LOD	:	105.298
Cu	138.187	±	41.590
Ni	83.092	±	51.728
Co	< LOD	:	352.314
Fe	72077.406	±	1666.741
Mn	1766.562	±	187.474
Cr	89.273	±	39.633
V	638.979	±	81.864
Ti	4820.053	±	176.703
Sc	130.530	±	75.750
Ca	27109.072	±	577.419
K	8315.138	±	484.272
S	6845.893	±	1941.541
Ba	862.442	±	48.756
Cs	100.646	±	7.945
Te	169.758	±	23.393
Sb	< LOD	:	28.080
Sn	91.752	±	16.173
Cd	< LOD	:	11.272
Ag	< LOD	:	8.863
Pd	< LOD	:	5.686
Bal	868140.500	±	4880.451
Nb	15.259	±	5.182
Bi	< LOD	:	11.083
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1951
Mode	TestAll Geo
Time	2013-09-21 16:59
Duration	121.14
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



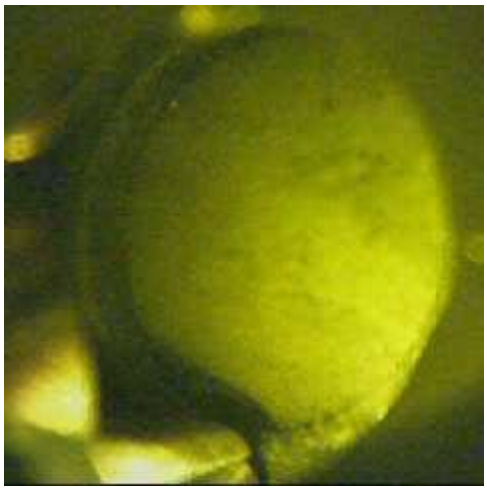
	ppm	±	Error
Mo	< LOD	:	9.034
Zr	142.463	±	8.350
Sr	322.283	±	10.357
U	< LOD	:	15.005
Rb	48.988	±	3.514
Th	< LOD	:	7.297
Pb	< LOD	:	10.221
Se	< LOD	:	5.138
As	< LOD	:	7.062
Hg	< LOD	:	10.492
Au	< LOD	:	7.707
Zn	37.044	±	12.809
W	< LOD	:	77.321
Cu	84.263	±	25.478
Ni	80.400	±	46.425
Co	< LOD	:	332.303
Fe	69902.625	±	719.808
Mn	3181.961	±	211.772
Cr	362.133	±	41.535
V	355.335	±	64.454
Ti	3456.646	±	135.971
Sc	< LOD	:	163.422
Ca	48804.824	±	861.361
K	18014.990	±	766.638
S	5985.037	±	2308.173
Ba	717.000	±	40.148
Cs	96.560	±	6.694
Te	155.379	±	19.660
Sb	67.950	±	11.467
Sn	90.751	±	13.669
Cd	< LOD	:	9.133
Ag	< LOD	:	6.306
Pd	< LOD	:	4.853
Bal	853751.750	±	4463.774
Nb	11.982	±	4.595
Bi	< LOD	:	11.406
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1952
Mode	Soil
Time	2013-09-21 17:05
Duration	120.55
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.770
Zr	115.773	±	13.186
Sr	328.759	±	17.462
U	< LOD	:	18.001
Rb	9.818	±	5.222
Th	< LOD	:	11.304
Pb	25.399	±	13.884
Se	< LOD	:	6.872
As	< LOD	:	16.321
Hg	< LOD	:	19.204
Au	< LOD	:	11.423
Zn	117.205	±	31.503
W	< LOD	:	133.553
Cu	< LOD	:	56.822
Ni	498.883	±	112.028
Co	< LOD	:	486.654
Fe	64629.230	±	1155.053
Mn	1302.232	±	249.509
Cr	597.245	±	85.905
V	231.880	±	122.402
Ti	4442.650	±	335.041
Sc	< LOD	:	258.546
Ca	56386.066	±	1335.903
K	4042.104	±	631.438
S	< LOD	:	3575.347
Ba	380.540	±	57.771
Cs	44.791	±	9.872
Te	58.981	±	28.616
Sb	36.730	±	17.023
Sn	40.825	±	19.779
Cd	< LOD	:	17.338
Ag	< LOD	:	12.940
Pd	< LOD	:	17.730

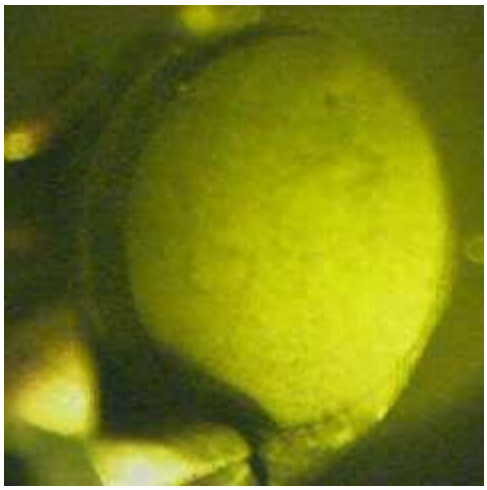
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Certificate of Verification

XL3t-34724

Reading No	1953
Mode	Soil
Time	2013-09-21 17:08
Duration	120.44
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.641
Zr	230.959	±	14.551
Sr	357.536	±	16.046
U	< LOD	:	18.814
Rb	43.316	±	7.348
Th	< LOD	:	11.815
Pb	21.541	±	12.049
Se	< LOD	:	6.448
As	< LOD	:	13.942
Hg	< LOD	:	16.081
Au	< LOD	:	10.275
Zn	41.649	±	19.867
W	< LOD	:	101.149
Cu	< LOD	:	49.263
Ni	< LOD	:	100.078
Co	< LOD	:	267.393
Fe	24668.414	±	630.339
Mn	325.768	±	124.733
Cr	169.608	±	53.354
V	136.817	±	90.107
Ti	3191.728	±	241.263
Sc	< LOD	:	112.855
Ca	14838.236	±	582.822
K	14014.227	±	783.516
S	< LOD	:	2330.591
Ba	548.380	±	52.450
Cs	35.933	±	8.515
Te	59.371	±	24.952
Sb	< LOD	:	21.727
Sn	30.221	±	17.042
Cd	< LOD	:	15.424
Ag	< LOD	:	11.383
Pd	< LOD	:	16.260

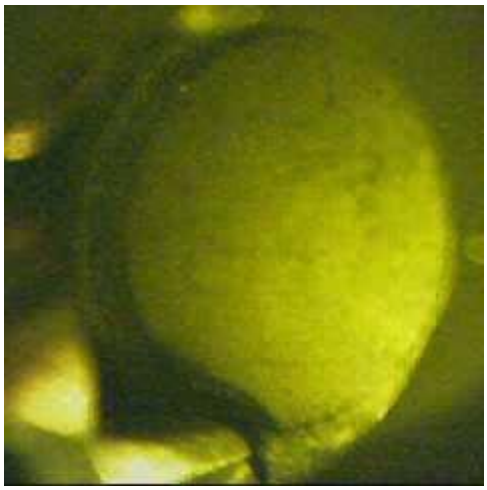
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1954
Mode	Soil
Time	2013-09-21 17:11
Duration	120.32
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.695
Zr	84.507	±	12.275
Sr	303.167	±	17.090
U	< LOD	:	19.935
Rb	41.152	±	8.104
Th	< LOD	:	13.725
Pb	< LOD	:	20.351
Se	< LOD	:	9.084
As	< LOD	:	16.798
Hg	< LOD	:	20.776
Au	< LOD	:	12.223
Zn	114.765	±	32.019
W	< LOD	:	138.768
Cu	< LOD	:	66.025
Ni	593.074	±	121.311
Co	< LOD	:	567.676
Fe	85982.203	±	1354.883
Mn	1562.819	±	279.811
Cr	810.122	±	102.080
V	238.977	±	149.156
Ti	4853.624	±	400.337
Sc	< LOD	:	230.099
Ca	36809.215	±	1165.701
K	10904.685	±	953.789
S	< LOD	:	4133.660
Ba	698.080	±	64.987
Cs	58.081	±	10.476
Te	91.650	±	30.630
Sb	31.263	±	17.690
Sn	37.875	±	20.722
Cd	< LOD	:	18.245
Ag	< LOD	:	13.853
Pd	< LOD	:	18.684

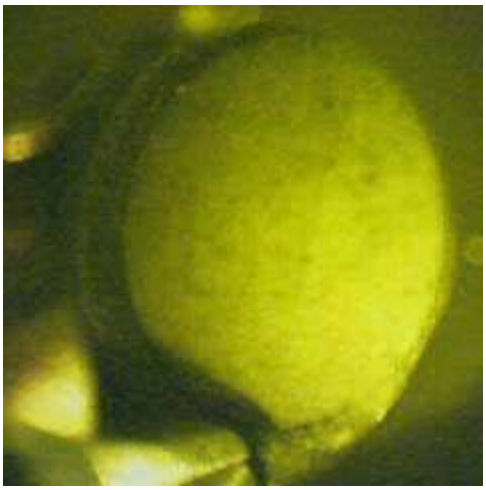
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1955
Mode	Soil
Time	2013-09-21 17:14
Duration	120.33
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.671
Zr	312.364	±	15.699
Sr	257.572	±	13.541
U	< LOD	:	17.664
Rb	44.609	±	7.245
Th	< LOD	:	12.041
Pb	< LOD	:	16.027
Se	< LOD	:	6.383
As	< LOD	:	13.633
Hg	< LOD	:	14.797
Au	< LOD	:	9.306
Zn	40.469	±	18.852
W	< LOD	:	90.410
Cu	< LOD	:	44.311
Ni	< LOD	:	90.058
Co	< LOD	:	214.779
Fe	16973.461	±	517.645
Mn	343.249	±	121.622
Cr	147.034	±	47.095
V	< LOD	:	122.599
Ti	3607.192	±	229.524
Sc	< LOD	:	93.245
Ca	11669.120	±	485.221
K	15753.140	±	758.323
S	< LOD	:	2203.435
Ba	482.158	±	51.211
Cs	34.992	±	8.438
Te	65.511	±	24.849
Sb	< LOD	:	21.638
Sn	34.503	±	16.972
Cd	< LOD	:	15.482
Ag	< LOD	:	11.026
Pd	< LOD	:	15.864

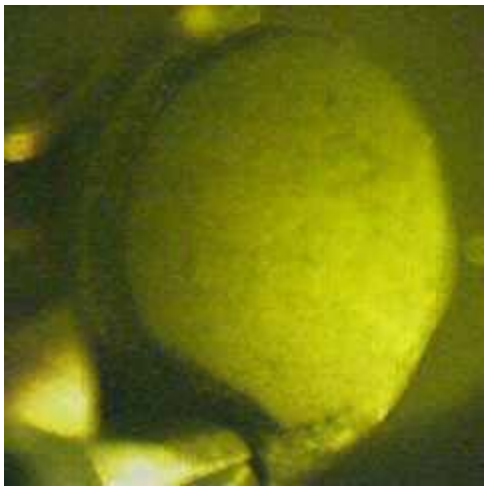
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1956
Mode	Soil
Time	2013-09-21 17:17
Duration	118.21
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.895
Zr	223.508	±	16.566
Sr	586.923	±	22.178
U	< LOD	:	24.689
Rb	52.069	±	8.964
Th	< LOD	:	11.933
Pb	30.746	±	14.348
Se	< LOD	:	6.867
As	< LOD	:	16.792
Hg	< LOD	:	18.571
Au	< LOD	:	11.694
Zn	112.514	±	29.893
W	< LOD	:	121.374
Cu	< LOD	:	52.418
Ni	209.456	±	85.715
Co	< LOD	:	398.764
Fe	47727.070	±	950.088
Mn	823.736	±	196.215
Cr	255.598	±	67.857
V	244.870	±	120.820
Ti	4737.046	±	324.626
Sc	< LOD	:	135.709
Ca	15874.739	±	690.724
K	14133.438	±	907.373
S	< LOD	:	3103.631
Ba	648.246	±	59.647
Cs	38.013	±	9.506
Te	57.061	±	27.717
Sb	< LOD	:	24.325
Sn	36.241	±	19.116
Cd	< LOD	:	17.448
Ag	< LOD	:	12.609
Pd	< LOD	:	17.619

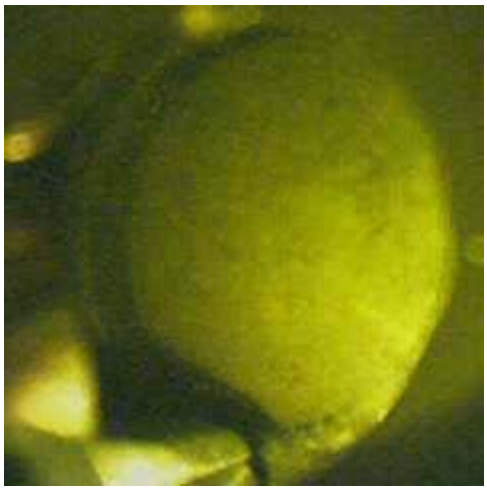
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1957
Mode	Soil
Time	2013-09-21 17:20
Duration	120.46
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.726
Zr	234.348	±	18.883
Sr	1020.160	±	29.789
U	< LOD	:	24.995
Rb	26.877	±	7.440
Th	< LOD	:	13.536
Pb	54.223	±	17.939
Se	< LOD	:	8.035
As	< LOD	:	20.845
Hg	< LOD	:	19.579
Au	< LOD	:	11.212
Zn	118.523	±	31.287
W	< LOD	:	118.040
Cu	< LOD	:	55.485
Ni	137.680	±	83.578
Co	< LOD	:	452.702
Fe	59999.711	±	1089.106
Mn	1018.308	±	220.418
Cr	227.546	±	73.401
V	299.237	±	149.237
Ti	6402.269	±	404.425
Sc	175.314	±	109.020
Ca	19905.895	±	800.041
K	8971.812	±	789.633
S	< LOD	:	3070.935
Ba	1055.791	±	64.484
Cs	26.615	±	9.369
Te	41.173	±	27.320
Sb	< LOD	:	23.652
Sn	< LOD	:	28.141
Cd	< LOD	:	16.813
Ag	< LOD	:	12.590
Pd	< LOD	:	17.420

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Certificate of Verification

XL3t-34724

Reading No	1958
Mode	Soil
Time	2013-09-21 17:23
Duration	120.13
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.657
Zr	393.031	±	16.369
Sr	212.836	±	11.858
U	< LOD	:	18.216
Rb	52.825	±	7.538
Th	< LOD	:	11.393
Pb	29.511	±	12.367
Se	< LOD	:	5.851
As	< LOD	:	13.479
Hg	< LOD	:	14.673
Au	< LOD	:	10.002
Zn	< LOD	:	22.495
W	< LOD	:	83.985
Cu	< LOD	:	39.500
Ni	< LOD	:	79.250
Co	< LOD	:	141.449
Fe	7689.172	±	335.570
Mn	124.301	±	82.866
Cr	< LOD	:	55.826
V	< LOD	:	102.740
Ti	3184.550	±	190.155
Sc	< LOD	:	64.895
Ca	6725.145	±	342.884
K	16386.883	±	677.923
S	< LOD	:	1674.826
Ba	335.768	±	47.344
Cs	21.277	±	7.956
Te	38.296	±	23.334
Sb	< LOD	:	20.296
Sn	< LOD	:	23.979
Cd	< LOD	:	14.300
Ag	< LOD	:	10.780
Pd	< LOD	:	15.096

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Certificate of Verification

XL3t-34724

Reading No	1959
Mode	Soil
Time	2013-09-21 17:27
Duration	120.44
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.495
Zr	181.422	±	12.852
Sr	224.630	±	12.827
U	< LOD	:	16.847
Rb	37.826	±	6.836
Th	< LOD	:	11.664
Pb	25.672	±	12.460
Se	< LOD	:	6.475
As	< LOD	:	14.681
Hg	< LOD	:	15.664
Au	< LOD	:	11.261
Zn	94.833	±	25.433
W	< LOD	:	100.931
Cu	< LOD	:	47.744
Ni	< LOD	:	95.743
Co	< LOD	:	305.872
Fe	32518.465	±	723.267
Mn	257.166	±	122.682
Cr	232.711	±	61.624
V	< LOD	:	147.855
Ti	3399.796	±	268.699
Sc	< LOD	:	108.949
Ca	11535.527	±	561.954
K	10812.760	±	754.866
S	< LOD	:	2473.344
Ba	357.640	±	48.569
Cs	25.612	±	8.150
Te	< LOD	:	35.446
Sb	< LOD	:	20.722
Sn	< LOD	:	24.199
Cd	< LOD	:	14.771
Ag	< LOD	:	10.963
Pd	< LOD	:	14.380

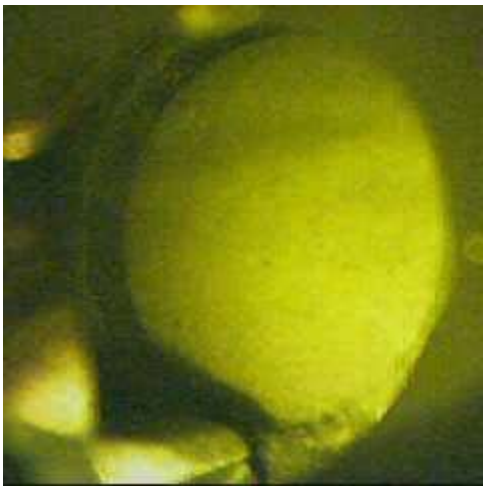
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Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1960
Mode	Soil
Time	2013-09-21 17:30
Duration	120.53
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.378
Zr	205.327	±	13.431
Sr	240.486	±	13.187
U	< LOD	:	17.883
Rb	42.689	±	7.213
Th	< LOD	:	11.583
Pb	18.506	±	11.424
Se	< LOD	:	5.966
As	< LOD	:	12.590
Hg	< LOD	:	14.485
Au	< LOD	:	10.054
Zn	38.695	±	18.976
W	< LOD	:	94.403
Cu	< LOD	:	47.764
Ni	< LOD	:	93.993
Co	< LOD	:	274.023
Fe	26691.994	±	652.396
Mn	276.502	±	120.004
Cr	145.493	±	54.704
V	168.978	±	97.449
Ti	4053.652	±	265.104
Sc	< LOD	:	97.500
Ca	10012.049	±	505.697
K	13359.897	±	786.101
S	< LOD	:	2496.389
Ba	392.204	±	49.364
Cs	30.287	±	8.264
Te	49.055	±	24.188
Sb	22.064	±	14.215
Sn	27.587	±	16.553
Cd	< LOD	:	14.961
Ag	< LOD	:	11.061
Pd	< LOD	:	14.986

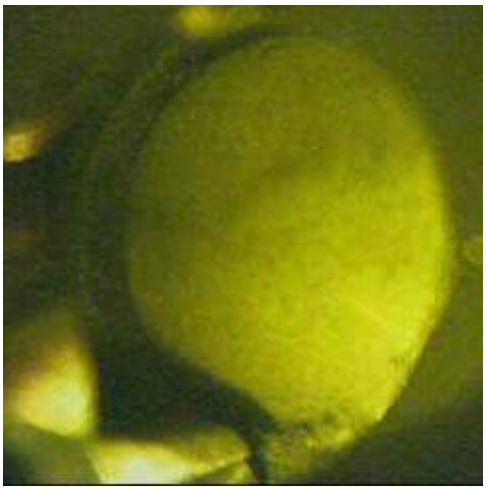
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1961
Mode	Soil
Time	2013-09-21 17:33
Duration	120.15
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.932
Zr	151.981	±	12.561
Sr	250.736	±	13.893
U	< LOD	:	18.311
Rb	37.718	±	7.116
Th	< LOD	:	11.712
Pb	< LOD	:	16.985
Se	< LOD	:	7.211
As	< LOD	:	13.479
Hg	< LOD	:	16.208
Au	< LOD	:	11.187
Zn	32.899	±	18.960
W	< LOD	:	99.207
Cu	< LOD	:	44.202
Ni	< LOD	:	95.840
Co	< LOD	:	327.247
Fe	35677.996	±	778.179
Mn	321.628	±	135.665
Cr	220.046	±	61.556
V	177.147	±	110.230
Ti	4560.013	±	300.526
Sc	< LOD	:	106.158
Ca	11193.180	±	557.923
K	12888.358	±	816.495
S	< LOD	:	2570.046
Ba	327.752	±	49.875
Cs	23.606	±	8.424
Te	< LOD	:	36.883
Sb	< LOD	:	21.698
Sn	< LOD	:	24.911
Cd	< LOD	:	15.461
Ag	< LOD	:	11.192
Pd	< LOD	:	14.907

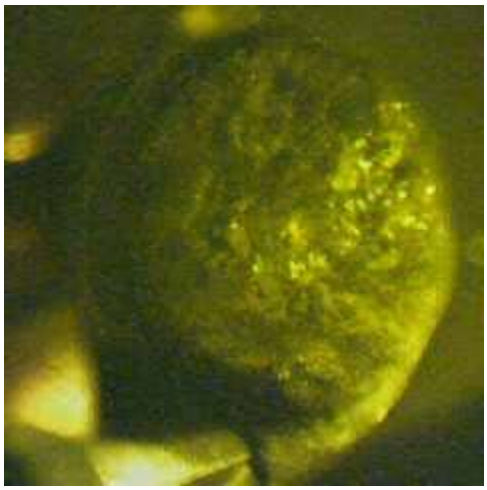
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1962
Mode	TestAll Geo
Time	2013-09-21 17:40
Duration	121.20
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



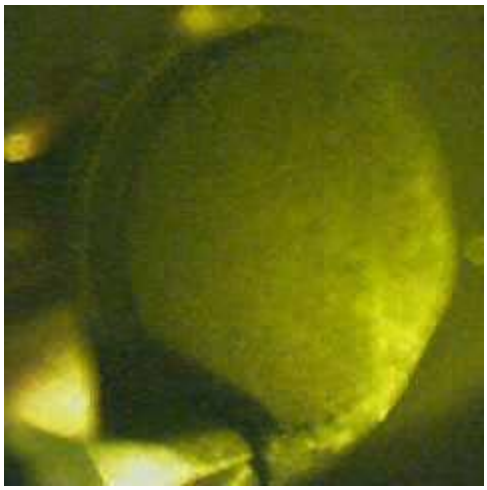
	ppm	±	Error
Mo	28.568	±	10.143
Zr	< LOD	:	10.152
Sr	401.347	±	44.403
U	< LOD	:	300000.000
Rb	< LOD	:	1.717
Th	< LOD	:	300000.000
Pb	< LOD	:	20.187
Se	14.224	±	7.852
As	61.575	±	13.882
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	< LOD	:	37.995
W	< LOD	:	173.908
Cu	310.304	±	79.838
Ni	< LOD	:	139.152
Co	< LOD	:	758.334
Fe	234927.906	±	6063.434
Mn	< LOD	:	261.336
Cr	< LOD	:	66.781
V	< LOD	:	77.640
Ti	< LOD	:	106.430
Sc	< LOD	:	72.132
Ca	5315.059	±	320.309
K	< LOD	:	367.539
S	384686.063	±	8628.726
Ba	254.163	±	53.180
Cs	41.147	±	9.360
Te	< LOD	:	39.365
Sb	< LOD	:	23.003
Sn	< LOD	:	27.224
Cd	< LOD	:	16.384
Ag	< LOD	:	12.635
Pd	< LOD	:	7.836
Bal	369389.531	±	13078.837
Nb	17.134	±	7.617
Bi	< LOD	:	14.952
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1963
Mode	Soil
Time	2013-09-21 18:31
Duration	120.65
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.223
Zr	111.266	±	10.960
Sr	210.682	±	12.504
U	< LOD	:	18.321
Rb	40.178	±	7.168
Th	< LOD	:	11.070
Pb	< LOD	:	16.466
Se	< LOD	:	6.964
As	< LOD	:	13.764
Hg	< LOD	:	15.084
Au	< LOD	:	10.202
Zn	144.367	±	29.850
W	< LOD	:	98.955
Cu	79.246	±	36.885
Ni	< LOD	:	100.553
Co	< LOD	:	339.591
Fe	41010.441	±	816.199
Mn	358.779	±	138.348
Cr	250.454	±	65.664
V	< LOD	:	160.160
Ti	3598.559	±	286.418
Sc	< LOD	:	112.980
Ca	10862.321	±	569.391
K	10937.960	±	789.312
S	< LOD	:	2881.718
Ba	370.956	±	50.748
Cs	24.954	±	8.492
Te	44.989	±	24.915
Sb	< LOD	:	22.007
Sn	< LOD	:	25.401
Cd	< LOD	:	15.515
Ag	< LOD	:	11.554
Pd	< LOD	:	16.015

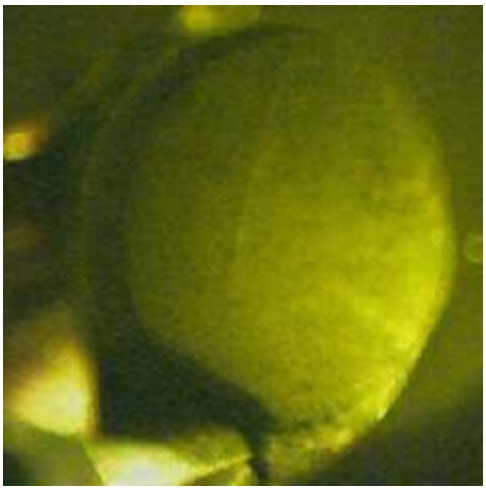
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1964
Mode	Soil
Time	2013-09-21 18:34
Duration	120.27
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.073
Zr	213.690	±	14.250
Sr	228.188	±	13.493
U	< LOD	:	17.709
Rb	33.247	±	6.831
Th	< LOD	:	12.186
Pb	20.668	±	12.358
Se	< LOD	:	6.670
As	< LOD	:	14.905
Hg	< LOD	:	16.668
Au	< LOD	:	10.174
Zn	87.006	±	25.739
W	< LOD	:	105.390
Cu	< LOD	:	49.146
Ni	< LOD	:	106.173
Co	< LOD	:	352.533
Fe	39483.160	±	831.775
Mn	656.949	±	170.687
Cr	204.909	±	59.640
V	< LOD	:	163.142
Ti	5449.910	±	310.392
Sc	< LOD	:	116.804
Ca	14129.043	±	614.511
K	13004.026	±	819.276
S	< LOD	:	2471.580
Ba	301.034	±	50.930
Cs	22.511	±	8.643
Te	< LOD	:	37.318
Sb	< LOD	:	21.840
Sn	< LOD	:	25.788
Cd	< LOD	:	15.135
Ag	< LOD	:	11.335
Pd	< LOD	:	16.584

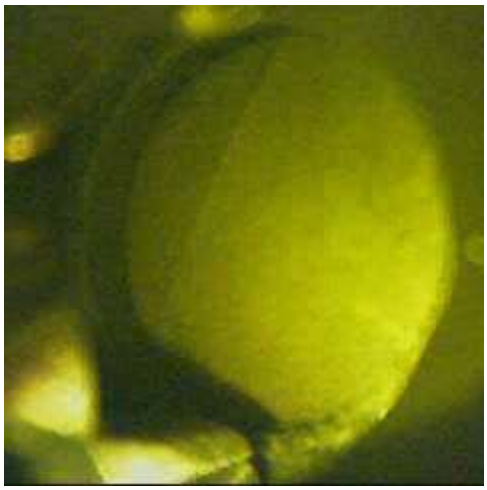
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Certificate of Verification

XL3t-34724

Reading No	1965
Mode	Soil
Time	2013-09-21 18:37
Duration	120.14
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.893
Zr	298.511	±	16.954
Sr	247.632	±	14.627
U	< LOD	:	19.712
Rb	42.865	±	7.905
Th	< LOD	:	13.628
Pb	< LOD	:	18.713
Se	< LOD	:	7.754
As	20.136	±	11.634
Hg	< LOD	:	18.434
Au	< LOD	:	12.314
Zn	98.278	±	28.375
W	< LOD	:	117.803
Cu	< LOD	:	55.488
Ni	136.712	±	83.521
Co	< LOD	:	428.333
Fe	52417.254	±	997.511
Mn	365.230	±	157.366
Cr	211.355	±	64.047
V	183.528	±	104.039
Ti	3239.839	±	273.872
Sc	< LOD	:	116.704
Ca	11972.464	±	604.336
K	14287.736	±	899.496
S	< LOD	:	3146.271
Ba	419.149	±	55.485
Cs	33.263	±	9.266
Te	46.827	±	26.978
Sb	< LOD	:	23.478
Sn	36.599	±	18.713
Cd	< LOD	:	16.307
Ag	< LOD	:	12.626
Pd	< LOD	:	16.838

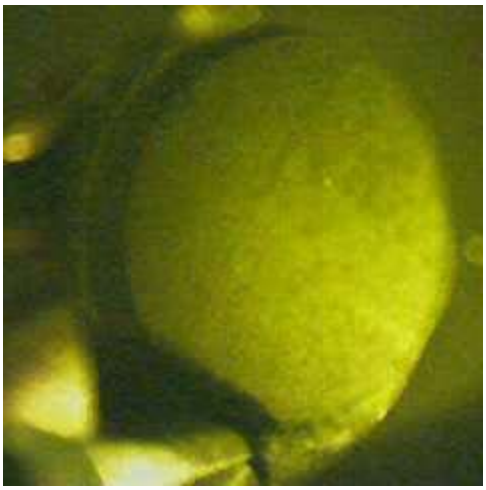
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1966
Mode	Soil
Time	2013-09-21 18:40
Duration	120.42
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.461
Zr	312.163	±	15.260
Sr	290.053	±	13.848
U	< LOD	:	19.368
Rb	49.131	±	7.506
Th	< LOD	:	10.787
Pb	16.476	±	10.772
Se	< LOD	:	5.824
As	< LOD	:	12.195
Hg	< LOD	:	14.960
Au	< LOD	:	8.992
Zn	< LOD	:	21.986
W	< LOD	:	90.752
Cu	< LOD	:	41.468
Ni	< LOD	:	81.501
Co	< LOD	:	147.454
Fe	8301.741	±	351.098
Mn	140.310	±	86.956
Cr	85.842	±	39.010
V	< LOD	:	101.803
Ti	2917.974	±	184.439
Sc	< LOD	:	76.068
Ca	10120.396	±	406.706
K	16785.809	±	691.717
S	< LOD	:	1662.720
Ba	478.921	±	49.748
Cs	32.300	±	8.172
Te	45.732	±	23.812
Sb	< LOD	:	20.972
Sn	< LOD	:	24.354
Cd	< LOD	:	14.831
Ag	< LOD	:	11.215
Pd	< LOD	:	15.495

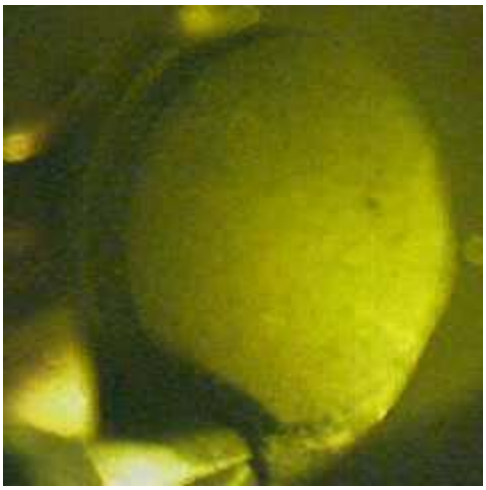
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1967
Mode	Soil
Time	2013-09-21 18:43
Duration	120.32
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	12.250
Zr	238.633	±	19.662
Sr	1048.724	±	31.091
U	< LOD	:	27.345
Rb	39.818	±	8.792
Th	< LOD	:	15.429
Pb	27.970	±	15.235
Se	< LOD	:	7.944
As	< LOD	:	17.398
Hg	< LOD	:	20.038
Au	< LOD	:	13.382
Zn	95.676	±	30.462
W	< LOD	:	131.955
Cu	< LOD	:	60.870
Ni	< LOD	:	127.804
Co	< LOD	:	448.172
Fe	54917.516	±	1072.946
Mn	892.253	±	213.721
Cr	180.332	±	66.189
V	< LOD	:	197.250
Ti	5054.738	±	359.898
Sc	< LOD	:	166.807
Ca	24829.600	±	857.903
K	17245.828	±	1008.494
S	< LOD	:	3295.381
Ba	1201.093	±	68.185
Cs	49.134	±	9.902
Te	71.535	±	28.798
Sb	32.275	±	16.877
Sn	39.519	±	19.858
Cd	< LOD	:	17.459
Ag	< LOD	:	13.043
Pd	< LOD	:	18.211

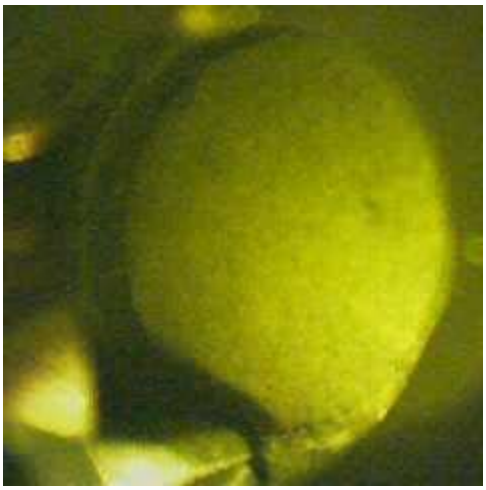
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1968
Mode	Soil
Time	2013-09-21 18:46
Duration	120.16
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.561
Zr	232.024	±	19.424
Sr	1328.810	±	33.076
U	< LOD	:	27.241
Rb	34.007	±	8.109
Th	< LOD	:	12.736
Pb	< LOD	:	19.210
Se	< LOD	:	6.961
As	< LOD	:	15.213
Hg	< LOD	:	17.988
Au	< LOD	:	12.666
Zn	99.866	±	28.702
W	< LOD	:	113.633
Cu	< LOD	:	54.958
Ni	199.756	±	83.858
Co	< LOD	:	354.092
Fe	38011.035	±	845.401
Mn	821.681	±	190.767
Cr	189.133	±	60.770
V	< LOD	:	168.103
Ti	4609.684	±	306.683
Sc	< LOD	:	158.735
Ca	26790.123	±	817.463
K	11000.188	±	765.401
S	< LOD	:	2728.375
Ba	785.370	±	61.150
Cs	40.778	±	9.513
Te	74.356	±	27.958
Sb	33.321	±	16.403
Sn	43.475	±	19.272
Cd	< LOD	:	17.277
Ag	< LOD	:	12.754
Pd	< LOD	:	18.482

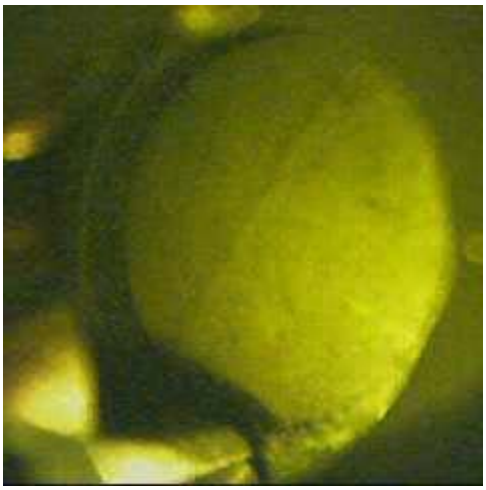
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Certificate of Verification

XL3t-34724

Reading No	1969
Mode	Soil
Time	2013-09-21 18:49
Duration	120.27
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.468
Zr	181.695	±	13.394
Sr	318.001	±	15.321
U	< LOD	:	18.562
Rb	43.993	±	7.416
Th	< LOD	:	10.799
Pb	< LOD	:	16.853
Se	< LOD	:	6.265
As	< LOD	:	13.190
Hg	< LOD	:	15.575
Au	< LOD	:	9.830
Zn	50.341	±	20.900
W	< LOD	:	100.858
Cu	< LOD	:	46.818
Ni	118.438	±	68.713
Co	< LOD	:	284.411
Fe	28288.402	±	682.185
Mn	460.046	±	142.405
Cr	262.269	±	58.452
V	< LOD	:	140.163
Ti	3409.351	±	257.175
Sc	< LOD	:	110.229
Ca	14371.080	±	590.500
K	13726.614	±	798.387
S	< LOD	:	2389.902
Ba	517.155	±	52.570
Cs	38.102	±	8.615
Te	51.611	±	25.052
Sb	25.158	±	14.761
Sn	27.064	±	17.114
Cd	< LOD	:	15.559
Ag	< LOD	:	11.193
Pd	< LOD	:	16.106

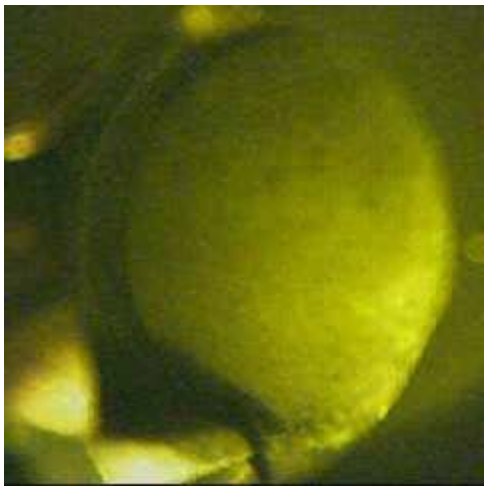
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1970
Mode	Soil
Time	2013-09-21 18:52
Duration	120.33
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.544
Zr	274.064	±	15.075
Sr	329.033	±	15.125
U	< LOD	:	19.134
Rb	52.867	±	7.794
Th	< LOD	:	12.463
Pb	< LOD	:	15.760
Se	< LOD	:	6.250
As	< LOD	:	11.507
Hg	< LOD	:	16.009
Au	< LOD	:	8.826
Zn	29.377	±	17.683
W	< LOD	:	94.384
Cu	< LOD	:	47.427
Ni	< LOD	:	92.765
Co	< LOD	:	182.316
Fe	11351.452	±	421.133
Mn	271.757	±	110.820
Cr	237.987	±	46.758
V	< LOD	:	112.738
Ti	3476.058	±	207.602
Sc	< LOD	:	89.943
Ca	13047.983	±	475.333
K	16474.135	±	721.609
S	< LOD	:	1881.652
Ba	520.223	±	51.069
Cs	39.117	±	8.370
Te	66.696	±	24.579
Sb	< LOD	:	21.191
Sn	40.242	±	16.928
Cd	< LOD	:	15.031
Ag	< LOD	:	11.270
Pd	< LOD	:	15.376

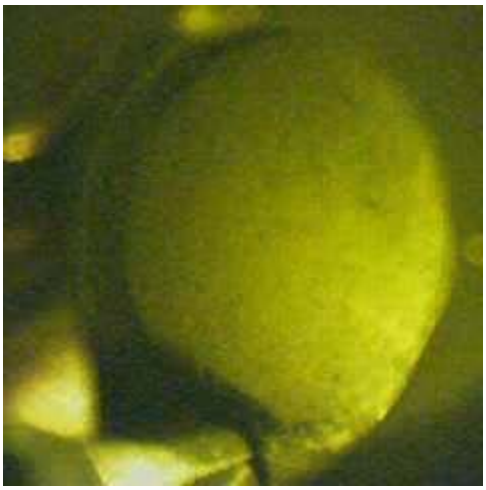
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Certificate of Verification

XL3t-34724

Reading No	1971
Mode	Soil
Time	2013-09-21 18:56
Duration	120.30
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.242
Zr	254.965	±	15.644
Sr	424.622	±	17.821
U	< LOD	:	20.524
Rb	37.716	±	7.338
Th	< LOD	:	11.089
Pb	< LOD	:	16.145
Se	< LOD	:	7.129
As	< LOD	:	13.259
Hg	< LOD	:	15.600
Au	< LOD	:	11.468
Zn	48.467	±	21.019
W	< LOD	:	99.161
Cu	< LOD	:	51.478
Ni	< LOD	:	99.680
Co	< LOD	:	312.132
Fe	32817.277	±	742.055
Mn	353.718	±	136.815
Cr	208.387	±	59.309
V	< LOD	:	155.847
Ti	4327.635	±	287.149
Sc	< LOD	:	103.906
Ca	10921.769	±	538.302
K	11726.881	±	765.502
S	< LOD	:	2489.828
Ba	437.726	±	52.337
Cs	34.295	±	8.705
Te	49.598	±	25.380
Sb	< LOD	:	22.283
Sn	36.403	±	17.580
Cd	< LOD	:	16.290
Ag	< LOD	:	11.788
Pd	< LOD	:	16.120

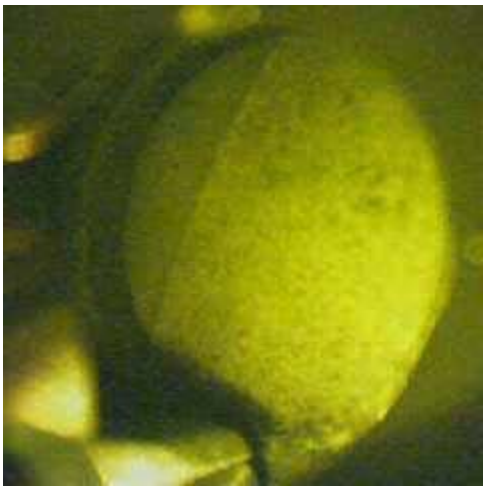
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Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1972
Mode	Soil
Time	2013-09-21 18:59
Duration	120.28
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.253
Zr	306.515	±	15.122
Sr	242.873	±	12.826
U	< LOD	:	19.224
Rb	50.314	±	7.604
Th	< LOD	:	10.979
Pb	< LOD	:	15.718
Se	< LOD	:	5.917
As	< LOD	:	12.107
Hg	< LOD	:	14.685
Au	< LOD	:	8.942
Zn	28.568	±	16.929
W	< LOD	:	89.799
Cu	< LOD	:	40.561
Ni	< LOD	:	83.740
Co	< LOD	:	159.968
Fe	9313.385	±	374.856
Mn	193.928	±	94.957
Cr	71.234	±	38.656
V	< LOD	:	101.138
Ti	3110.686	±	185.971
Sc	< LOD	:	78.356
Ca	11062.325	±	422.491
K	14430.519	±	650.369
S	< LOD	:	1726.892
Ba	348.645	±	47.705
Cs	25.877	±	8.034
Te	54.568	±	23.718
Sb	< LOD	:	20.481
Sn	< LOD	:	23.993
Cd	< LOD	:	14.548
Ag	< LOD	:	10.895
Pd	< LOD	:	15.464

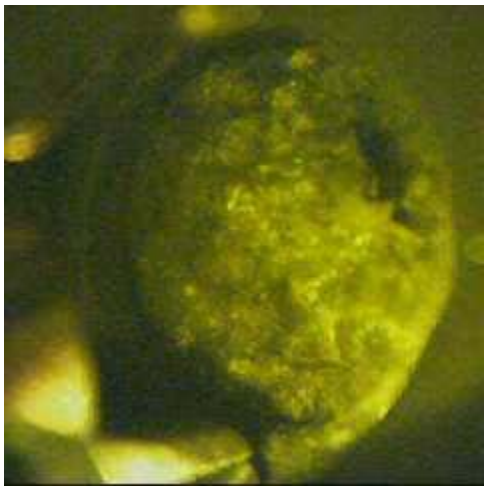
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1973
Mode	TestAll Geo
Time	2013-09-21 19:05
Duration	120.82
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



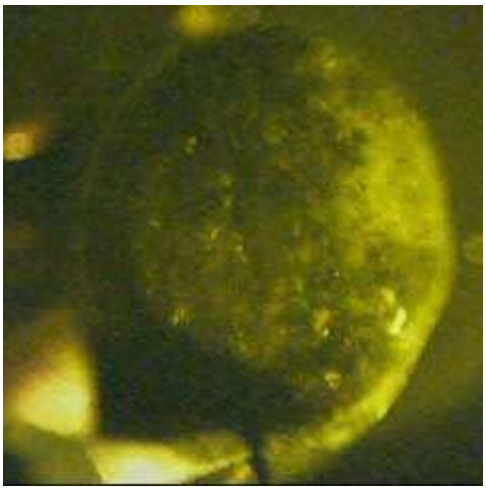
	ppm	±	Error
Mo	24.720	±	10.292
Zr	123.939	±	12.055
Sr	201.366	±	32.151
U	< LOD	:	300000.000
Rb	4.612	±	2.063
Th	< LOD	:	300000.000
Pb	81.888	±	20.121
Se	< LOD	:	10.247
As	51.113	±	16.088
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	85.540	±	31.232
W	< LOD	:	165.266
Cu	167.030	±	69.334
Ni	179.621	±	94.059
Co	< LOD	:	754.924
Fe	258078.906	±	6783.726
Mn	589.019	±	191.426
Cr	< LOD	:	92.533
V	184.513	±	120.495
Ti	6205.750	±	289.646
Sc	< LOD	:	90.452
Ca	5186.462	±	386.959
K	5148.750	±	552.159
S	244095.547	±	9766.814
Ba	574.693	±	61.060
Cs	85.574	±	10.452
Te	110.553	±	30.005
Sb	56.489	±	17.690
Sn	72.637	±	20.867
Cd	< LOD	:	15.046
Ag	< LOD	:	12.384
Pd	< LOD	:	7.705
Bal	472701.594	±	14370.711
Nb	15.321	±	7.505
Bi	< LOD	:	14.027
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1974
Mode	TestAll Geo
Time	2013-09-21 19:17
Duration	83.65
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



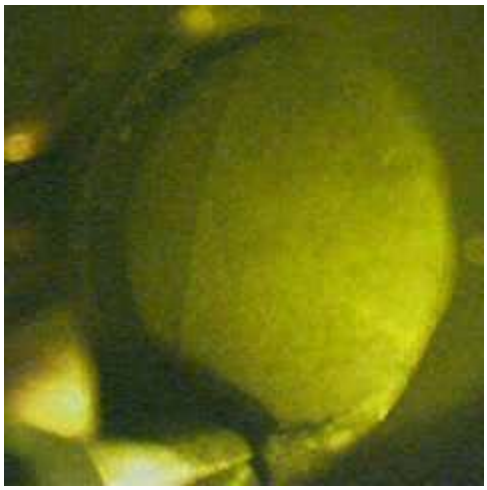
	ppm	±	Error
Mo	< LOD	:	6.910
Zr	15.875	±	4.101
Sr	21.975	±	3.229
U	< LOD	:	8.379
Rb	2.040	±	1.247
Th	< LOD	:	6.597
Pb	13.889	±	7.090
Se	< LOD	:	4.926
As	< LOD	:	8.694
Hg	< LOD	:	10.454
Au	< LOD	:	7.387
Zn	94.102	±	17.203
W	< LOD	:	98.115
Cu	59.285	±	24.409
Ni	< LOD	:	73.649
Co	< LOD	:	169.982
Fe	21326.781	±	399.521
Mn	415.447	±	88.897
Cr	< LOD	:	44.582
V	< LOD	:	57.294
Ti	441.073	±	53.345
Sc	< LOD	:	89.671
Ca	18881.510	±	470.766
K	898.593	±	220.951
S	9133.586	±	1850.948
Ba	< LOD	:	159.029
Sb	< LOD	:	40.004
Sn	< LOD	:	39.780
Cd	< LOD	:	16.743
Ag	15.938	±	8.797
Pd	< LOD	:	6.337
Bal	933335.313	±	4816.036
Nb	12.376	±	5.033
Bi	< LOD	:	9.718
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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XL3t-34724

Reading No	1975
Mode	Soil
Time	2013-09-21 19:21
Duration	120.47
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.065
Zr	288.387	±	15.386
Sr	230.981	±	13.089
U	< LOD	:	19.350
Rb	50.201	±	7.845
Th	< LOD	:	11.259
Pb	< LOD	:	16.924
Se	< LOD	:	6.384
As	< LOD	:	13.608
Hg	< LOD	:	16.406
Au	< LOD	:	10.096
Zn	34.432	±	18.662
W	< LOD	:	94.114
Cu	< LOD	:	46.557
Ni	< LOD	:	90.801
Co	< LOD	:	253.250
Fe	21579.061	±	593.457
Mn	301.534	±	121.871
Cr	124.457	±	48.270
V	< LOD	:	134.264
Ti	4434.591	±	250.851
Sc	< LOD	:	91.259
Ca	10245.108	±	472.938
K	13922.172	±	741.700
S	< LOD	:	1986.041
Ba	323.045	±	49.253
Cs	19.437	±	8.294
Te	< LOD	:	36.430
Sb	< LOD	:	21.540
Sn	< LOD	:	25.041
Cd	< LOD	:	15.058
Ag	< LOD	:	11.325
Pd	< LOD	:	16.075

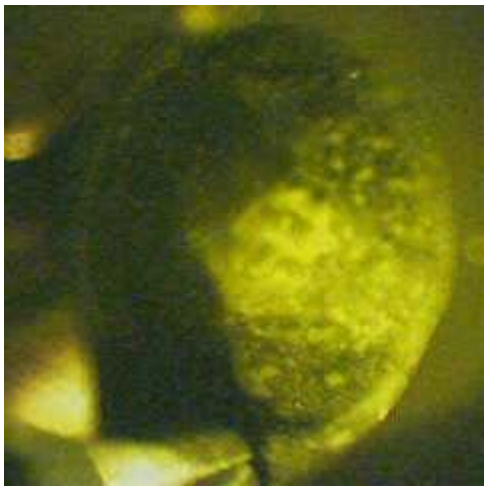
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Certificate of Verification

XL3t-34724

Reading No	1976
Mode	TestAll Geo
Time	2013-09-21 19:25
Duration	121.43
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



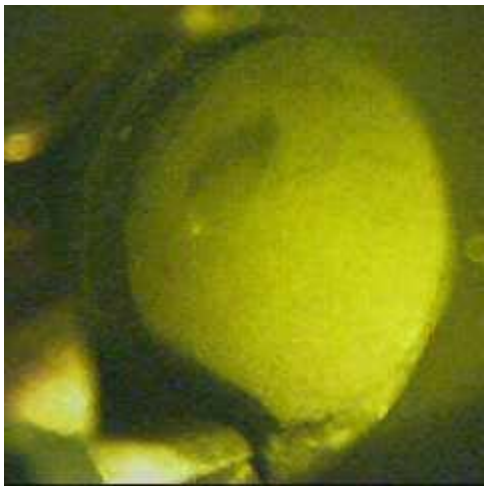
	ppm	±	Error
Mo	< LOD	:	7.366
Zr	11.971	±	6.823
Sr	658.361	±	14.690
U	< LOD	:	15.279
Rb	39.776	±	3.107
Th	< LOD	:	7.363
Pb	28.002	±	8.928
Se	< LOD	:	4.304
As	< LOD	:	8.420
Hg	< LOD	:	10.914
Au	< LOD	:	7.126
Zn	106.209	±	18.197
W	< LOD	:	76.561
Cu	50.382	±	24.762
Ni	369.816	±	57.249
Co	< LOD	:	245.555
Fe	32112.559	±	488.928
Mn	1174.069	±	135.783
Cr	513.462	±	37.916
V	701.461	±	56.914
Ti	2228.729	±	92.249
Sc	< LOD	:	108.321
Ca	34676.293	±	569.728
K	14420.481	±	534.217
S	< LOD	:	1775.745
Ba	3191.458	±	60.386
Cs	121.542	±	7.251
Te	166.610	±	20.947
Sb	< LOD	:	24.524
Sn	101.799	±	14.932
Cd	< LOD	:	9.330
Ag	< LOD	:	6.356
Pd	< LOD	:	3.673
Bal	895712.813	±	3134.997
Nb	< LOD	:	5.291
Bi	< LOD	:	9.416
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1977
Mode	Soil
Time	2013-09-21 19:28
Duration	120.36
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.162
Zr	149.180	±	12.388
Sr	284.370	±	14.470
U	< LOD	:	18.281
Rb	36.864	±	6.961
Th	< LOD	:	10.974
Pb	< LOD	:	16.773
Se	< LOD	:	6.958
As	< LOD	:	13.211
Hg	< LOD	:	16.401
Au	< LOD	:	11.176
Zn	< LOD	:	27.055
W	< LOD	:	102.938
Cu	< LOD	:	45.121
Ni	< LOD	:	98.703
Co	< LOD	:	300.941
Fe	31632.035	±	718.541
Mn	188.283	±	115.388
Cr	220.529	±	59.860
V	< LOD	:	156.252
Ti	4375.244	±	287.407
Sc	< LOD	:	103.135
Ca	10473.582	±	529.498
K	11487.297	±	759.607
S	< LOD	:	2537.215
Ba	383.948	±	50.487
Cs	26.570	±	8.432
Te	< LOD	:	36.727
Sb	< LOD	:	21.694
Sn	33.275	±	17.081
Cd	< LOD	:	15.604
Ag	< LOD	:	11.383
Pd	< LOD	:	15.754

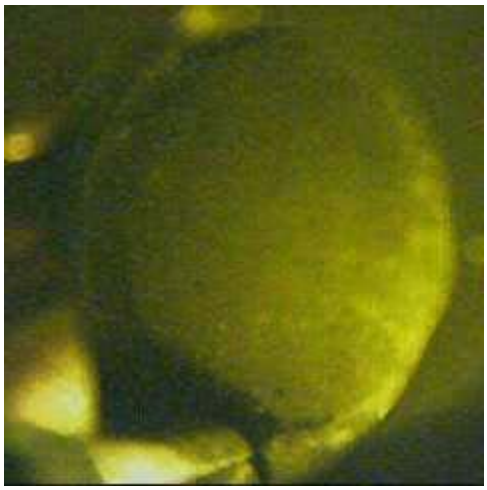
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Certificate of Verification

XL3t-34724

Reading No	1978
Mode	Soil
Time	2013-09-21 19:31
Duration	120.19
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.691
Zr	203.202	±	13.566
Sr	254.536	±	13.701
U	< LOD	:	17.348
Rb	46.816	±	7.417
Th	< LOD	:	10.554
Pb	< LOD	:	16.354
Se	< LOD	:	6.022
As	< LOD	:	12.869
Hg	< LOD	:	16.604
Au	< LOD	:	10.371
Zn	< LOD	:	25.415
W	< LOD	:	95.246
Cu	< LOD	:	47.885
Ni	< LOD	:	92.058
Co	< LOD	:	277.060
Fe	26802.816	±	660.515
Mn	227.821	±	115.329
Cr	111.842	±	52.102
V	< LOD	:	131.773
Ti	3233.051	±	239.535
Sc	< LOD	:	104.555
Ca	12084.477	±	544.506
K	13737.231	±	792.197
S	< LOD	:	2323.585
Ba	318.533	±	49.150
Cs	20.932	±	8.295
Te	< LOD	:	36.416
Sb	< LOD	:	21.227
Sn	< LOD	:	24.825
Cd	< LOD	:	15.032
Ag	< LOD	:	11.179
Pd	< LOD	:	14.846

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XL3t-34724

Reading No	1979
Mode	Soil
Time	2013-09-21 19:34
Duration	120.28
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.678
Zr	241.597	±	13.961
Sr	208.689	±	12.165
U	< LOD	:	18.079
Rb	46.991	±	7.410
Th	< LOD	:	12.969
Pb	< LOD	:	16.478
Se	< LOD	:	6.524
As	< LOD	:	12.747
Hg	< LOD	:	16.413
Au	< LOD	:	10.293
Zn	181.032	±	32.118
W	< LOD	:	103.651
Cu	54.684	±	33.646
Ni	< LOD	:	94.998
Co	< LOD	:	225.506
Fe	18280.004	±	533.532
Mn	324.049	±	118.034
Cr	168.695	±	49.303
V	< LOD	:	118.863
Ti	2779.782	±	214.889
Sc	< LOD	:	82.558
Ca	8406.388	±	428.256
K	12672.466	±	699.875
S	< LOD	:	2201.391
Ba	93.105	±	43.615
Cs	< LOD	:	11.304
Te	< LOD	:	32.523
Sb	< LOD	:	19.186
Sn	< LOD	:	22.528
Cd	< LOD	:	14.138
Ag	< LOD	:	10.268
Pd	< LOD	:	13.918

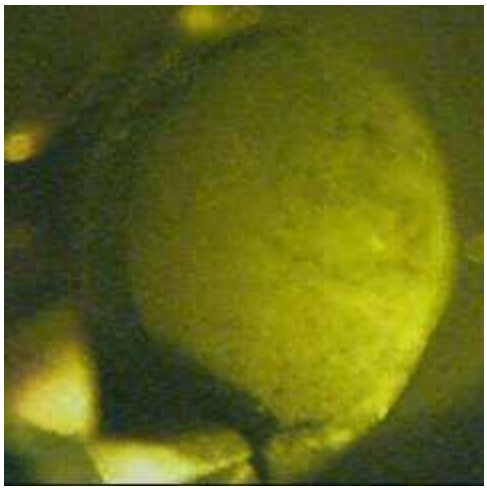
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Certificate of Verification

XL3t-34724

Reading No	1980
Mode	Soil
Time	2013-09-21 19:38
Duration	120.26
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.096
Zr	240.206	±	14.912
Sr	256.230	±	14.180
U	< LOD	:	18.481
Rb	44.504	±	7.591
Th	< LOD	:	12.952
Pb	< LOD	:	17.522
Se	< LOD	:	7.513
As	< LOD	:	14.083
Hg	< LOD	:	16.377
Au	< LOD	:	10.798
Zn	121.661	±	28.720
W	< LOD	:	100.516
Cu	< LOD	:	51.949
Ni	< LOD	:	105.669
Co	< LOD	:	309.733
Fe	31038.189	±	733.139
Mn	348.376	±	134.966
Cr	172.072	±	53.895
V	< LOD	:	132.854
Ti	3377.078	±	241.974
Sc	< LOD	:	93.679
Ca	9397.759	±	485.556
K	12855.372	±	764.002
S	< LOD	:	2435.410
Ba	292.882	±	49.301
Cs	16.555	±	8.333
Te	< LOD	:	36.498
Sb	< LOD	:	21.245
Sn	< LOD	:	24.683
Cd	< LOD	:	15.224
Ag	< LOD	:	11.252
Pd	< LOD	:	15.165

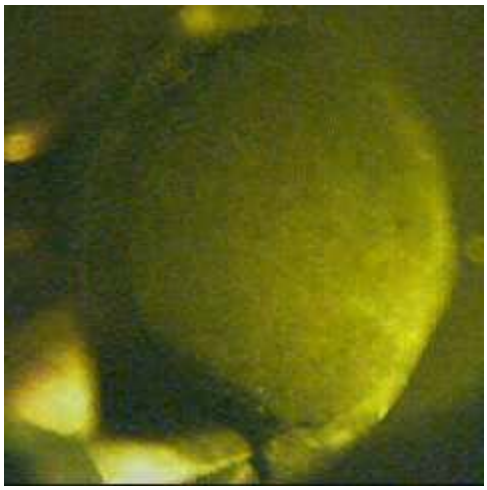
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Certificate of Verification

XL3t-34724

Reading No	1981
Mode	Soil
Time	2013-09-21 19:42
Duration	120.42
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	12.237
Zr	152.479	±	17.022
Sr	786.638	±	27.654
U	< LOD	:	24.940
Rb	37.152	±	8.435
Th	< LOD	:	13.465
Pb	< LOD	:	21.764
Se	< LOD	:	9.669
As	< LOD	:	16.993
Hg	< LOD	:	20.944
Au	< LOD	:	13.601
Zn	136.228	±	34.812
W	< LOD	:	140.070
Cu	< LOD	:	60.477
Ni	517.137	±	119.355
Co	< LOD	:	558.085
Fe	79832.883	±	1325.721
Mn	1396.368	±	271.166
Cr	579.970	±	88.802
V	226.093	±	139.315
Ti	5626.150	±	384.991
Sc	< LOD	:	214.966
Ca	36539.668	±	1111.104
K	9957.048	±	876.807
S	< LOD	:	3706.079
Ba	476.180	±	60.197
Cs	36.917	±	9.971
Te	58.095	±	29.111
Sb	< LOD	:	25.490
Sn	< LOD	:	29.481
Cd	< LOD	:	17.946
Ag	< LOD	:	12.860
Pd	< LOD	:	17.451

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Certificate of Verification

XL3t-34724

Reading No	1982
Mode	Soil
Time	2013-09-21 19:45
Duration	120.38
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.064
Zr	310.084	±	16.054
Sr	316.243	±	15.138
U	< LOD	:	19.594
Rb	46.424	±	7.621
Th	< LOD	:	11.738
Pb	< LOD	:	15.913
Se	< LOD	:	5.620
As	< LOD	:	12.558
Hg	< LOD	:	15.922
Au	< LOD	:	9.543
Zn	31.933	±	18.110
W	< LOD	:	89.670
Cu	< LOD	:	49.402
Ni	< LOD	:	89.171
Co	< LOD	:	207.124
Fe	14974.222	±	492.489
Mn	276.845	±	114.094
Cr	113.595	±	42.830
V	< LOD	:	106.523
Ti	2406.066	±	190.229
Sc	< LOD	:	96.819
Ca	14871.083	±	510.145
K	15141.841	±	707.613
S	< LOD	:	2001.399
Ba	420.886	±	50.447
Cs	23.388	±	8.324
Te	38.795	±	24.351
Sb	< LOD	:	21.359
Sn	25.293	±	16.718
Cd	< LOD	:	15.044
Ag	< LOD	:	11.084
Pd	< LOD	:	15.553

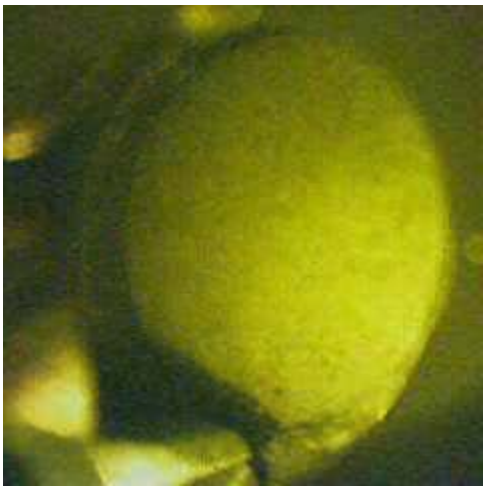
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Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1983
Mode	Soil
Time	2013-09-21 19:48
Duration	120.43
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	12.490
Zr	272.878	±	22.773
Sr	1840.120	±	40.573
U	< LOD	:	31.819
Rb	39.749	±	9.215
Th	< LOD	:	14.773
Pb	27.926	±	15.570
Se	< LOD	:	8.326
As	< LOD	:	17.566
Hg	< LOD	:	19.077
Au	< LOD	:	11.299
Zn	100.637	±	30.640
W	< LOD	:	126.942
Cu	< LOD	:	56.849
Ni	221.223	±	90.911
Co	< LOD	:	384.827
Fe	41404.109	±	920.747
Mn	916.210	±	210.682
Cr	343.211	±	69.895
V	< LOD	:	207.906
Ti	6541.430	±	382.974
Sc	< LOD	:	172.457
Ca	30668.512	±	895.330
K	16822.322	±	946.017
S	< LOD	:	3249.750
Ba	1541.367	±	71.043
Cs	38.914	±	9.664
Te	56.381	±	28.094
Sb	< LOD	:	24.493
Sn	32.053	±	19.431
Cd	< LOD	:	17.308
Ag	< LOD	:	12.864
Pd	< LOD	:	17.759

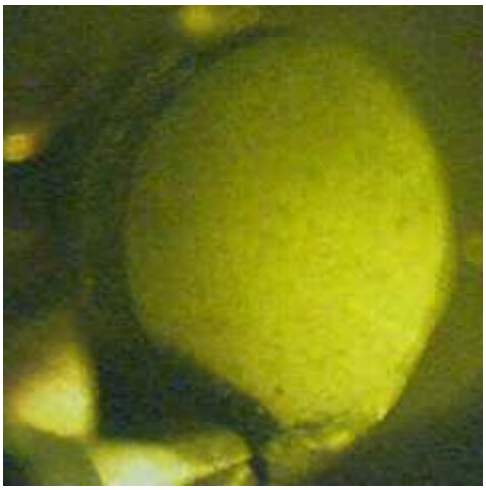
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1984
Mode	Soil
Time	2013-09-21 19:51
Duration	120.46
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.325
Zr	225.196	±	14.622
Sr	186.369	±	12.497
U	< LOD	:	17.213
Rb	29.097	±	6.576
Th	< LOD	:	11.812
Pb	< LOD	:	16.788
Se	< LOD	:	7.150
As	< LOD	:	13.247
Hg	< LOD	:	17.798
Au	< LOD	:	10.625
Zn	72.992	±	24.860
W	< LOD	:	115.058
Cu	< LOD	:	56.666
Ni	343.903	±	91.646
Co	< LOD	:	381.940
Fe	46058.660	±	915.507
Mn	715.063	±	182.066
Cr	410.462	±	72.169
V	< LOD	:	157.696
Ti	3740.738	±	289.206
Sc	< LOD	:	176.358
Ca	28432.816	±	896.433
K	8000.901	±	719.917
S	< LOD	:	3122.214
Ba	290.885	±	51.171
Cs	30.544	±	8.787
Te	< LOD	:	37.940
Sb	< LOD	:	22.229
Sn	< LOD	:	25.932
Cd	< LOD	:	15.698
Ag	< LOD	:	11.368
Pd	< LOD	:	15.647

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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1985
Mode	Soil
Time	2013-09-21 19:54
Duration	120.13
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.252
Zr	136.549	±	13.365
Sr	327.432	±	16.864
U	< LOD	:	19.355
Rb	26.993	±	6.791
Th	< LOD	:	12.045
Pb	21.723	±	13.063
Se	< LOD	:	7.011
As	< LOD	:	14.648
Hg	< LOD	:	18.831
Au	< LOD	:	11.563
Zn	159.930	±	34.284
W	< LOD	:	125.217
Cu	< LOD	:	54.722
Ni	366.797	±	100.228
Co	< LOD	:	481.982
Fe	67276.336	±	1139.965
Mn	1216.572	±	237.538
Cr	558.221	±	87.406
V	< LOD	:	187.197
Ti	4399.123	±	341.073
Sc	< LOD	:	174.094
Ca	22341.102	±	875.018
K	6760.679	±	735.702
S	< LOD	:	3452.886
Ba	416.909	±	55.572
Cs	24.580	±	9.205
Te	49.456	±	27.067
Sb	< LOD	:	23.799
Sn	30.417	±	18.581
Cd	< LOD	:	16.669
Ag	< LOD	:	12.544
Pd	< LOD	:	17.857

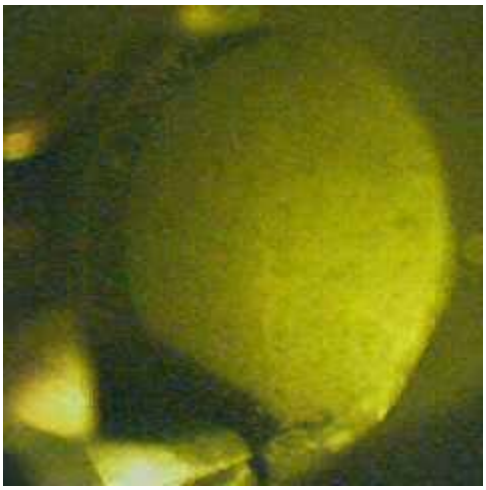
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1986
Mode	Soil
Time	2013-09-21 19:57
Duration	120.34
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.602
Zr	183.678	±	14.689
Sr	361.042	±	17.535
U	< LOD	:	20.252
Rb	24.797	±	6.690
Th	< LOD	:	13.162
Pb	25.580	±	13.771
Se	< LOD	:	7.230
As	< LOD	:	15.778
Hg	< LOD	:	19.163
Au	< LOD	:	11.085
Zn	93.720	±	27.488
W	< LOD	:	108.900
Cu	< LOD	:	58.092
Ni	262.078	±	90.368
Co	< LOD	:	409.538
Fe	49349.578	±	967.937
Mn	882.639	±	202.473
Cr	404.043	±	73.413
V	185.243	±	112.983
Ti	4222.022	±	309.278
Sc	< LOD	:	186.257
Ca	31168.189	±	942.780
K	6298.269	±	662.786
S	< LOD	:	3188.465
Ba	367.708	±	54.564
Cs	31.104	±	9.207
Te	53.012	±	26.979
Sb	< LOD	:	23.420
Sn	31.364	±	18.501
Cd	< LOD	:	16.698
Ag	< LOD	:	12.614
Pd	< LOD	:	17.640

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Certificate of Verification

XL3t-34724

Reading No	1987
Mode	Soil
Time	2013-09-21 20:00
Duration	120.16
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.061
Zr	279.966	±	15.951
Sr	413.967	±	17.401
U	< LOD	:	19.557
Rb	36.225	±	7.063
Th	< LOD	:	12.490
Pb	20.559	±	12.156
Se	< LOD	:	6.624
As	< LOD	:	14.034
Hg	< LOD	:	16.224
Au	< LOD	:	10.828
Zn	54.675	±	21.333
W	< LOD	:	97.727
Cu	< LOD	:	45.044
Ni	< LOD	:	100.961
Co	< LOD	:	269.013
Fe	24471.619	±	633.998
Mn	389.557	±	133.753
Cr	274.712	±	58.240
V	< LOD	:	140.559
Ti	3782.571	±	257.953
Sc	< LOD	:	116.462
Ca	15352.110	±	592.999
K	10272.346	±	688.646
S	< LOD	:	2348.469
Ba	503.472	±	52.148
Cs	33.038	±	8.529
Te	51.908	±	24.931
Sb	< LOD	:	21.857
Sn	27.137	±	17.041
Cd	< LOD	:	15.320
Ag	< LOD	:	11.550
Pd	< LOD	:	15.772

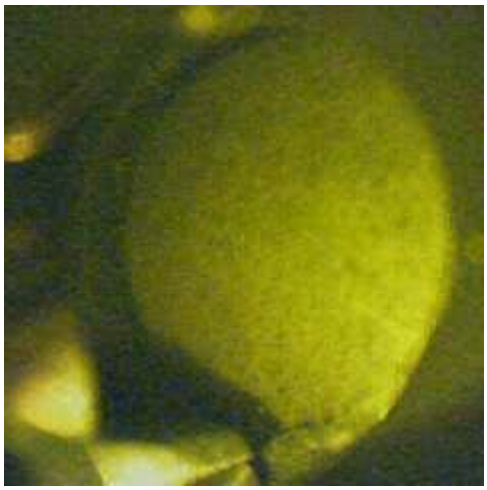
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Certificate of Verification

XL3t-34724

Reading No	1988
Mode	Soil
Time	2013-09-21 20:03
Duration	120.50
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	9.967
Zr	192.310	±	12.891
Sr	280.421	±	13.765
U	< LOD	:	19.180
Rb	42.864	±	7.211
Th	< LOD	:	11.992
Pb	18.672	±	11.389
Se	< LOD	:	6.718
As	< LOD	:	12.517
Hg	< LOD	:	15.035
Au	< LOD	:	9.156
Zn	< LOD	:	24.632
W	< LOD	:	92.833
Cu	< LOD	:	40.611
Ni	< LOD	:	84.729
Co	< LOD	:	172.167
Fe	10419.511	±	396.955
Mn	198.974	±	97.368
Cr	148.705	±	42.706
V	< LOD	:	105.679
Ti	3081.782	±	192.722
Sc	< LOD	:	82.873
Ca	11323.952	±	436.523
K	13159.907	±	640.398
S	< LOD	:	1779.553
Ba	376.171	±	47.595
Cs	23.333	±	7.928
Te	< LOD	:	34.571
Sb	< LOD	:	20.221
Sn	< LOD	:	23.674
Cd	< LOD	:	14.592
Ag	< LOD	:	10.291
Pd	< LOD	:	14.185

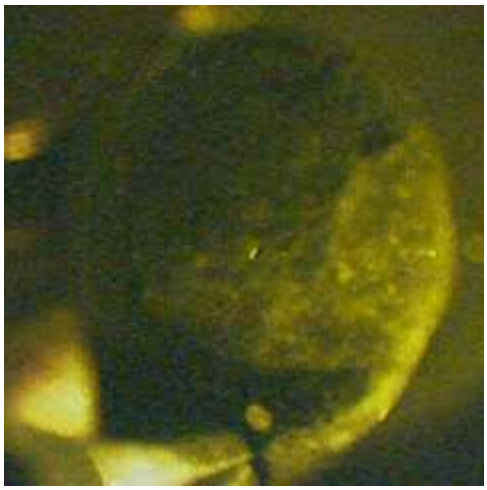
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1989
Mode	TestAll Geo
Time	2013-09-21 20:09
Duration	120.23
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



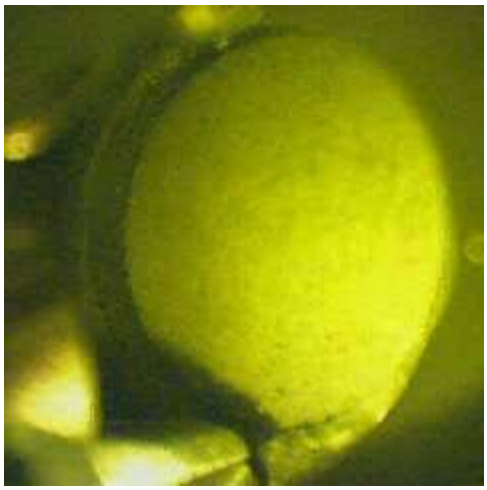
	ppm	±	Error
Mo	< LOD	:	9.567
Zr	9.118	±	5.763
Sr	1188.853	±	58.930
U	< LOD	:	300000.000
Rb	4.230	±	1.522
Th	< LOD	:	300000.000
Pb	< LOD	:	11.150
Se	< LOD	:	5.655
As	< LOD	:	7.213
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	162.677	±	26.232
W	< LOD	:	100.167
Cu	< LOD	:	54.639
Ni	102.143	±	55.797
Co	< LOD	:	417.212
Fe	103209.430	±	2287.581
Mn	2161.623	±	202.026
Cr	118.476	±	40.825
V	402.845	±	62.990
Ti	1055.849	±	84.091
Sc	< LOD	:	180.181
Ca	60902.273	±	941.481
K	2555.548	±	384.318
S	6904.706	±	2350.831
Ba	844.911	±	50.295
Cs	112.145	±	8.310
Te	188.789	±	24.509
Sb	< LOD	:	29.188
Sn	110.618	±	17.108
Cd	< LOD	:	11.249
Ag	< LOD	:	7.763
Pd	< LOD	:	4.491
Bal	820720.688	±	5395.004
Nb	< LOD	:	7.226
Bi	< LOD	:	10.469
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1990
Mode	Soil
Time	2013-09-22 08:14
Duration	120.58
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.188
Zr	123.405	±	11.048
Sr	225.262	±	12.541
U	< LOD	:	17.124
Rb	35.063	±	6.571
Th	< LOD	:	10.634
Pb	< LOD	:	15.390
Se	< LOD	:	6.346
As	< LOD	:	12.099
Hg	< LOD	:	14.706
Au	< LOD	:	9.105
Zn	43.818	±	19.153
W	< LOD	:	92.433
Cu	< LOD	:	45.289
Ni	< LOD	:	93.324
Co	< LOD	:	259.077
Fe	25560.404	±	626.733
Mn	315.978	±	122.950
Cr	322.739	±	59.371
V	< LOD	:	123.089
Ti	2550.660	±	221.619
Sc	< LOD	:	97.219
Ca	11030.360	±	510.446
K	9560.889	±	663.406
S	< LOD	:	2257.238
Ba	309.372	±	47.059
Cs	19.827	±	7.945
Te	36.360	±	23.318
Sb	< LOD	:	20.291
Sn	< LOD	:	23.839
Cd	< LOD	:	14.287
Ag	< LOD	:	10.697
Pd	< LOD	:	15.064

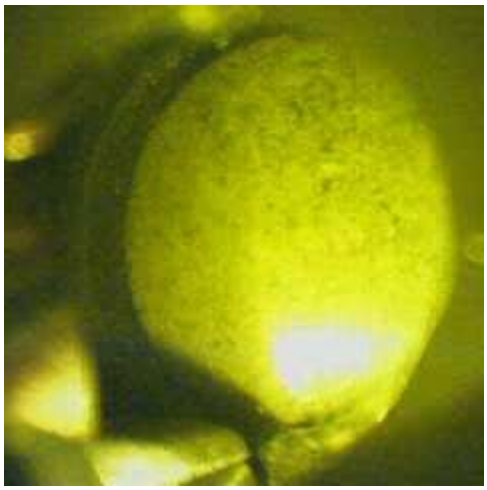
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1991
Mode	Soil
Time	2013-09-22 08:17
Duration	120.69
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.933
Zr	161.458	±	12.926
Sr	269.549	±	14.414
U	< LOD	:	20.111
Rb	50.664	±	8.094
Th	< LOD	:	11.983
Pb	< LOD	:	16.758
Se	< LOD	:	6.456
As	< LOD	:	12.619
Hg	< LOD	:	16.376
Au	< LOD	:	10.434
Zn	< LOD	:	26.953
W	< LOD	:	103.492
Cu	< LOD	:	48.464
Ni	< LOD	:	93.602
Co	< LOD	:	236.759
Fe	18223.660	±	558.784
Mn	372.887	±	129.154
Cr	125.876	±	42.684
V	102.581	±	66.633
Ti	2181.081	±	175.388
Sc	< LOD	:	79.979
Ca	9595.231	±	417.462
K	11607.704	±	625.019
S	< LOD	:	1816.813
Ba	359.266	±	50.691
Cs	28.309	±	8.532
Te	< LOD	:	36.824
Sb	< LOD	:	21.758
Sn	< LOD	:	25.333
Cd	< LOD	:	15.315
Ag	< LOD	:	11.900
Pd	< LOD	:	15.912

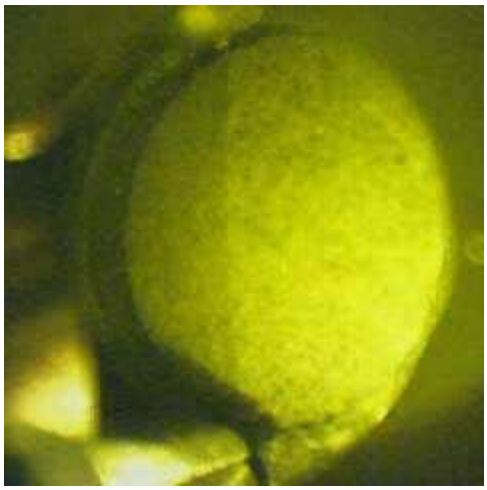
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1992
Mode	Soil
Time	2013-09-22 08:20
Duration	120.44
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.430
Zr	164.035	±	12.513
Sr	302.284	±	14.511
U	< LOD	:	18.528
Rb	39.212	±	7.007
Th	< LOD	:	11.105
Pb	21.393	±	11.753
Se	< LOD	:	6.366
As	< LOD	:	12.981
Hg	< LOD	:	14.072
Au	< LOD	:	9.436
Zn	26.232	±	17.053
W	< LOD	:	93.622
Cu	< LOD	:	45.786
Ni	< LOD	:	94.053
Co	< LOD	:	204.756
Fe	15180.874	±	486.291
Mn	281.460	±	112.114
Cr	171.174	±	47.093
V	< LOD	:	103.743
Ti	2092.382	±	181.111
Sc	< LOD	:	92.623
Ca	12945.785	±	490.656
K	10952.387	±	628.972
S	< LOD	:	1796.186
Ba	357.506	±	47.619
Cs	27.907	±	8.010
Te	< LOD	:	34.862
Sb	< LOD	:	20.352
Sn	< LOD	:	23.886
Cd	< LOD	:	14.292
Ag	< LOD	:	10.928
Pd	< LOD	:	14.817

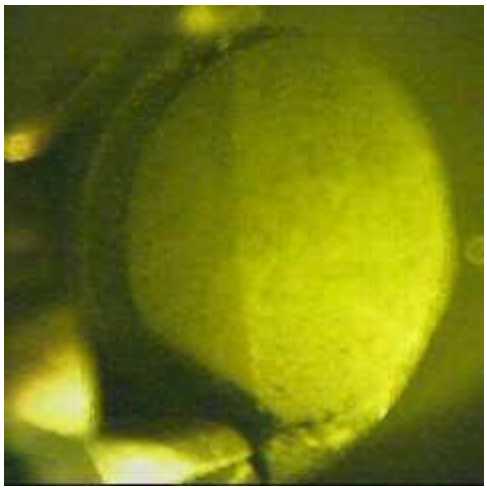
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1993
Mode	Soil
Time	2013-09-22 08:25
Duration	120.14
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.674
Zr	144.307	±	12.454
Sr	266.639	±	14.349
U	< LOD	:	18.242
Rb	37.031	±	7.084
Th	< LOD	:	11.079
Pb	19.748	±	11.764
Se	< LOD	:	5.229
As	< LOD	:	12.785
Hg	< LOD	:	15.500
Au	< LOD	:	11.305
Zn	39.425	±	19.677
W	< LOD	:	98.341
Cu	< LOD	:	50.325
Ni	166.471	±	75.449
Co	< LOD	:	334.785
Fe	37275.664	±	797.822
Mn	480.284	±	152.660
Cr	246.189	±	62.657
V	161.482	±	97.020
Ti	3059.922	±	256.756
Sc	< LOD	:	122.086
Ca	13732.122	±	608.733
K	8932.369	±	702.143
S	< LOD	:	2583.134
Ba	306.725	±	49.795
Cs	23.063	±	8.449
Te	42.089	±	24.800
Sb	< LOD	:	21.549
Sn	31.726	±	17.120
Cd	< LOD	:	15.404
Ag	< LOD	:	11.346
Pd	< LOD	:	16.261

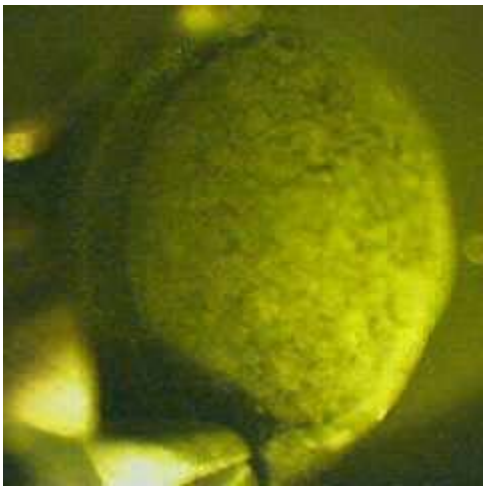
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1994
Mode	Soil
Time	2013-09-22 08:28
Duration	120.16
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.674
Zr	115.133	±	13.057
Sr	452.773	±	19.247
U	< LOD	:	19.072
Rb	11.147	±	5.331
Th	< LOD	:	12.373
Pb	19.562	±	12.632
Se	< LOD	:	7.139
As	< LOD	:	15.181
Hg	< LOD	:	18.191
Au	< LOD	:	10.248
Zn	94.750	±	27.301
W	< LOD	:	114.805
Cu	< LOD	:	54.476
Ni	382.878	±	95.855
Co	< LOD	:	417.447
Fe	53801.344	±	994.191
Mn	1051.717	±	212.374
Cr	573.001	±	81.188
V	< LOD	:	172.852
Ti	4166.002	±	318.275
Sc	< LOD	:	164.467
Ca	22694.930	±	818.049
K	3751.340	±	548.023
S	< LOD	:	3088.504
Ba	226.721	±	49.569
Cs	< LOD	:	12.694
Te	< LOD	:	36.421
Sb	< LOD	:	21.517
Sn	< LOD	:	24.845
Cd	< LOD	:	14.977
Ag	< LOD	:	11.284
Pd	< LOD	:	15.299

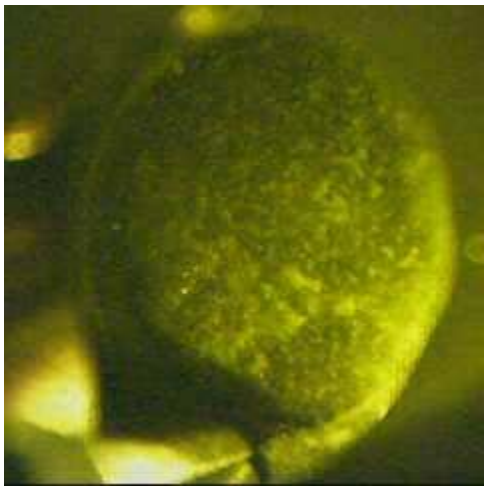
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Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	1995
Mode	TestAll Geo
Time	2013-09-22 08:31
Duration	121.45
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



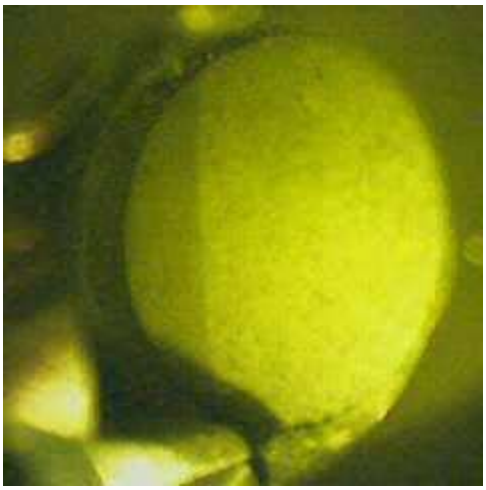
	ppm	±	Error
Mo	< LOD	:	8.460
Zr	183.552	±	14.331
Sr	2276.866	±	29.279
U	< LOD	:	24.161
Rb	48.546	±	3.732
Th	13.353	±	8.012
Pb	34.126	±	10.320
Se	< LOD	:	3.818
As	< LOD	:	8.149
Hg	< LOD	:	13.309
Au	< LOD	:	8.094
Zn	82.777	±	18.866
W	< LOD	:	81.891
Cu	63.803	±	28.258
Ni	< LOD	:	68.409
Co	< LOD	:	257.503
Fe	43284.664	±	610.986
Mn	928.631	±	136.840
Cr	194.809	±	31.896
V	890.332	±	67.397
Ti	3148.935	±	118.928
Sc	< LOD	:	123.265
Ca	46822.590	±	684.846
K	56972.016	±	1024.023
S	13875.957	±	2231.264
Ba	2620.641	±	62.896
Cs	112.622	±	8.025
Te	155.053	±	23.146
Sb	74.165	±	13.574
Sn	93.743	±	16.374
Cd	< LOD	:	9.576
Ag	< LOD	:	8.286
Pd	< LOD	:	5.229
Bal	801722.250	±	5255.992
Nb	18.144	±	5.029
Bi	< LOD	:	14.198
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	1996
Mode	Soil
Time	2013-09-22 08:35
Duration	120.12
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.162
Zr	194.245	±	12.941
Sr	235.174	±	12.845
U	< LOD	:	18.088
Rb	48.581	±	7.471
Th	< LOD	:	11.902
Pb	19.030	±	11.585
Se	< LOD	:	6.855
As	< LOD	:	12.825
Hg	< LOD	:	14.974
Au	< LOD	:	9.666
Zn	< LOD	:	23.899
W	< LOD	:	91.740
Cu	< LOD	:	46.140
Ni	< LOD	:	89.008
Co	< LOD	:	221.791
Fe	17588.387	±	522.111
Mn	269.924	±	112.521
Cr	189.010	±	48.426
V	< LOD	:	112.627
Ti	2706.961	±	202.773
Sc	< LOD	:	89.193
Ca	10375.216	±	457.090
K	13020.005	±	693.002
S	< LOD	:	1823.788
Ba	343.088	±	48.693
Cs	25.733	±	8.207
Te	43.170	±	24.045
Sb	< LOD	:	20.953
Sn	< LOD	:	24.461
Cd	< LOD	:	14.691
Ag	< LOD	:	11.188
Pd	< LOD	:	15.335

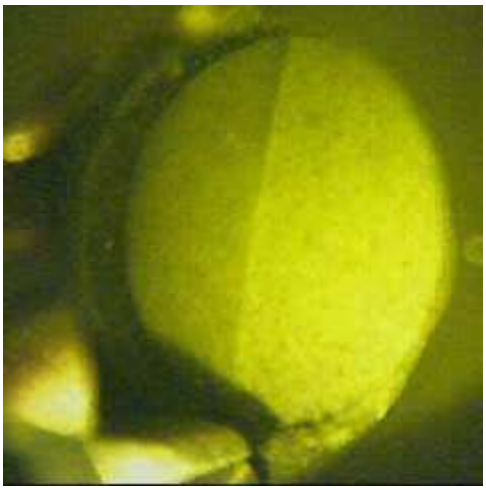
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	1997
Mode	Soil
Time	2013-09-22 08:37
Duration	120.27
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.140
Zr	301.647	±	16.398
Sr	397.854	±	17.141
U	< LOD	:	21.223
Rb	52.814	±	8.207
Th	< LOD	:	12.658
Pb	18.197	±	11.839
Se	< LOD	:	6.082
As	< LOD	:	12.598
Hg	< LOD	:	16.724
Au	< LOD	:	8.336
Zn	38.353	±	19.641
W	< LOD	:	100.423
Cu	< LOD	:	46.417
Ni	< LOD	:	96.624
Co	< LOD	:	255.185
Fe	22449.145	±	609.696
Mn	242.587	±	116.469
Cr	136.390	±	49.123
V	< LOD	:	133.109
Ti	3773.842	±	242.413
Sc	< LOD	:	90.504
Ca	10510.987	±	476.652
K	14683.648	±	755.334
S	< LOD	:	2140.833
Ba	494.079	±	51.841
Cs	25.873	±	8.422
Te	< LOD	:	36.710
Sb	< LOD	:	21.271
Sn	< LOD	:	25.099
Cd	< LOD	:	14.797
Ag	< LOD	:	11.510
Pd	< LOD	:	15.090

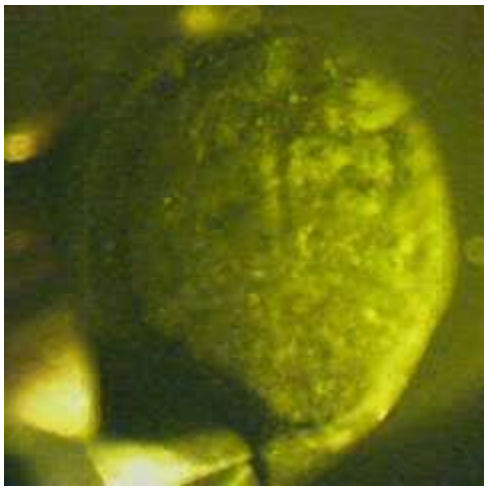
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Certificate of Verification

XL3t-34724

Reading No	1998
Mode	TestAll Geo
Time	2013-09-22 08:41
Duration	120.90
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



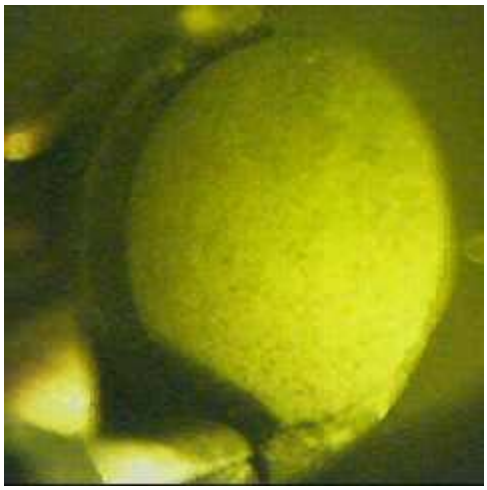
	ppm	±	Error
Mo	< LOD	:	10.967
Zr	209.586	±	16.702
Sr	11148.458	±	344.308
U	< LOD	:	300000.000
Rb	68.747	±	4.855
Th	< LOD	:	300000.000
Pb	29.251	±	11.069
Se	< LOD	:	5.500
As	< LOD	:	10.352
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	150.098	±	25.589
W	< LOD	:	99.862
Cu	76.173	±	37.159
Ni	< LOD	:	75.980
Co	< LOD	:	305.381
Fe	44586.434	±	1189.871
Mn	1490.297	±	180.699
Cr	236.316	±	39.182
V	144.770	±	76.793
Ti	5610.614	±	195.353
Sc	192.721	±	95.901
Ca	58328.551	±	776.344
K	68061.047	±	1140.099
S	< LOD	:	2398.944
Ba	2065.245	±	59.658
Cs	95.208	±	8.020
Te	157.119	±	23.493
Sb	< LOD	:	29.687
Sn	< LOD	:	32.072
Cd	< LOD	:	11.127
Ag	< LOD	:	8.402
Pd	< LOD	:	4.765
Bal	765275.938	±	5812.310
Nb	27.427	±	5.853
Bi	< LOD	:	15.846
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	1999
Mode	TestAll Geo
Time	2013-09-22 08:46
Duration	120.96
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



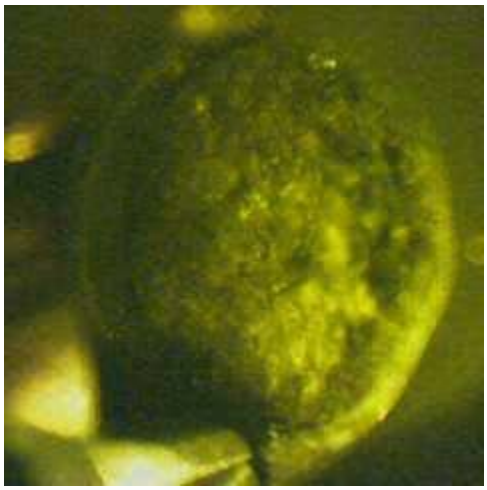
	ppm	±	Error
Mo	24.024	±	6.601
Zr	180.275	±	8.283
Sr	275.548	±	8.984
U	< LOD	:	12.297
Rb	30.321	±	2.792
Th	< LOD	:	7.262
Pb	< LOD	:	9.954
Se	< LOD	:	4.371
As	< LOD	:	6.700
Hg	< LOD	:	9.593
Au	< LOD	:	6.339
Zn	35.890	±	11.878
W	< LOD	:	87.493
Cu	< LOD	:	29.652
Ni	66.336	±	39.706
Co	< LOD	:	234.750
Fe	20040.305	±	361.299
Mn	445.973	±	85.459
Cr	256.367	±	34.402
V	371.693	±	47.528
Ti	2431.205	±	97.022
Sc	76.454	±	42.996
Ca	12468.229	±	331.179
K	12731.520	±	460.334
S	< LOD	:	1390.156
Ba	419.428	±	31.984
Cs	31.526	±	5.326
Te	55.033	±	15.633
Sb	19.611	±	9.109
Sn	< LOD	:	24.796
Cd	< LOD	:	9.086
Ag	< LOD	:	7.200
Pd	< LOD	:	4.903
Bal	929454.625	±	2789.096
Nb	20.764	±	4.888
Bi	< LOD	:	11.557
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Reading No	2000
Mode	TestAll Geo
Time	2013-09-22 08:51
Duration	120.62
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



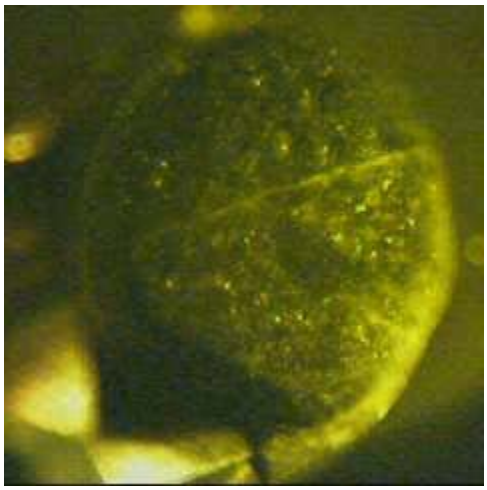
	ppm	±	Error
Mo	< LOD	:	6.502
Zr	24.970	±	4.291
Sr	47.449	±	4.074
U	< LOD	:	8.362
Rb	2.705	±	1.163
Th	< LOD	:	5.699
Pb	19.001	±	7.194
Se	< LOD	:	4.717
As	< LOD	:	7.953
Hg	< LOD	:	9.698
Au	< LOD	:	7.487
Zn	55.843	±	13.502
W	< LOD	:	77.674
Cu	39.719	±	21.046
Ni	< LOD	:	59.304
Co	< LOD	:	305.046
Fe	58539.633	±	621.468
Mn	459.258	±	98.449
Cr	172.376	±	30.369
V	332.685	±	47.178
Ti	1372.505	±	74.800
Sc	< LOD	:	63.033
Ca	7449.723	±	302.245
K	1572.070	±	247.074
S	13813.770	±	2192.396
Ba	502.414	±	37.652
Cs	56.840	±	6.318
Te	87.199	±	18.477
Sb	44.940	±	10.924
Sn	< LOD	:	26.365
Cd	< LOD	:	10.691
Ag	< LOD	:	7.721
Pd	< LOD	:	5.268
Bal	911315.563	±	4096.610
Nb	7.430	±	4.333
Bi	< LOD	:	7.980
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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XL3t-34724

Reading No	2001
Mode	TestAll Geo
Time	2013-09-22 08:57
Duration	120.56
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



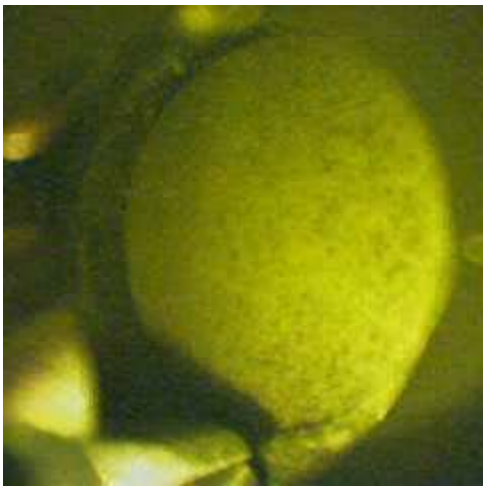
	ppm	±	Error
Mo	< LOD	:	10.778
Zr	38.717	±	8.091
Sr	1899.833	±	88.248
U	< LOD	:	300000.000
Rb	35.018	±	3.611
Th	< LOD	:	300000.000
Pb	56.681	±	13.768
Se	< LOD	:	5.875
As	< LOD	:	13.352
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	113.215	±	25.844
W	< LOD	:	114.509
Cu	304.434	±	57.369
Ni	133.111	±	66.173
Co	< LOD	:	438.612
Fe	87093.031	±	2214.459
Mn	766.916	±	157.487
Cr	64.018	±	34.453
V	135.207	±	61.232
Ti	1948.925	±	111.350
Sc	< LOD	:	121.876
Ca	36184.770	±	639.653
K	19999.273	±	679.169
S	40416.293	±	3503.685
Ba	1208.192	±	57.586
Cs	115.474	±	8.953
Te	186.443	±	26.235
Sb	< LOD	:	30.667
Sn	< LOD	:	32.504
Cd	< LOD	:	11.968
Ag	< LOD	:	9.483
Pd	< LOD	:	6.348
Bal	749484.688	±	7984.684
Nb	< LOD	:	8.073
Bi	< LOD	:	13.682
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	2002
Mode	Soil
Time	2013-09-22 09:01
Duration	120.66
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.742
Zr	213.830	±	14.004
Sr	218.047	±	13.020
U	< LOD	:	19.124
Rb	39.747	±	7.347
Th	< LOD	:	12.085
Pb	< LOD	:	17.663
Se	< LOD	:	7.282
As	< LOD	:	13.927
Hg	< LOD	:	16.937
Au	< LOD	:	10.491
Zn	35.586	±	19.437
W	< LOD	:	101.038
Cu	< LOD	:	45.499
Ni	< LOD	:	97.203
Co	< LOD	:	329.909
Fe	37156.570	±	794.989
Mn	181.156	±	119.438
Cr	151.633	±	57.185
V	170.147	±	100.891
Ti	3752.111	±	271.591
Sc	103.329	±	67.213
Ca	8529.996	±	485.317
K	10363.935	±	727.404
S	< LOD	:	2109.285
Ba	269.918	±	48.786
Cs	16.480	±	8.291
Te	< LOD	:	36.029
Sb	< LOD	:	21.084
Sn	< LOD	:	24.582
Cd	< LOD	:	14.702
Ag	< LOD	:	11.143
Pd	< LOD	:	14.591

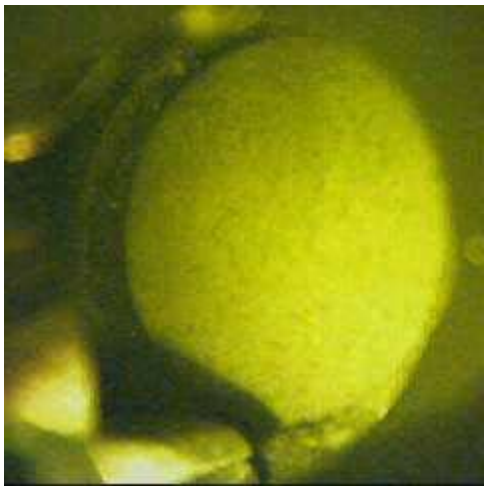
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Certificate of Verification

XL3t-34724

Reading No	2003
Mode	Soil
Time	2013-09-22 09:04
Duration	120.29
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.212
Zr	147.489	±	12.069
Sr	274.243	±	13.950
U	< LOD	:	19.520
Rb	48.900	±	7.696
Th	< LOD	:	11.771
Pb	< LOD	:	16.059
Se	< LOD	:	6.233
As	< LOD	:	12.401
Hg	< LOD	:	15.379
Au	< LOD	:	10.321
Zn	< LOD	:	23.706
W	< LOD	:	90.768
Cu	< LOD	:	45.609
Ni	< LOD	:	94.642
Co	< LOD	:	228.344
Fe	18328.219	±	537.890
Mn	479.439	±	135.232
Cr	176.390	±	49.006
V	< LOD	:	113.349
Ti	2312.540	±	202.345
Sc	< LOD	:	94.992
Ca	11909.842	±	492.168
K	12877.824	±	700.920
S	< LOD	:	2133.345
Ba	384.799	±	48.865
Cs	31.447	±	8.200
Te	41.483	±	23.855
Sb	< LOD	:	21.037
Sn	25.555	±	16.386
Cd	< LOD	:	14.640
Ag	< LOD	:	11.327
Pd	< LOD	:	15.033

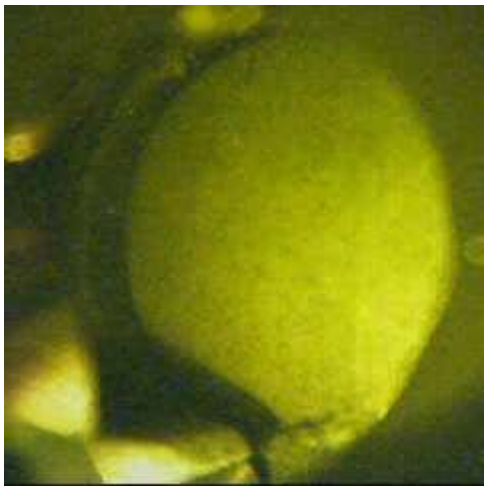
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Certificate of Verification

XL3t-34724

Reading No	2004
Mode	Soil
Time	2013-09-22 09:07
Duration	120.34
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.625
Zr	241.316	±	14.214
Sr	234.759	±	13.032
U	< LOD	:	17.348
Rb	45.968	±	7.315
Th	< LOD	:	11.517
Pb	16.992	±	11.279
Se	< LOD	:	6.082
As	< LOD	:	13.078
Hg	< LOD	:	16.212
Au	< LOD	:	9.171
Zn	65.029	±	22.092
W	< LOD	:	104.602
Cu	< LOD	:	49.771
Ni	401.936	±	86.327
Co	< LOD	:	225.956
Fe	16836.113	±	519.924
Mn	993.505	±	178.025
Cr	118.638	±	46.922
V	< LOD	:	119.171
Ti	2920.129	±	212.874
Sc	< LOD	:	90.223
Ca	10871.458	±	470.046
K	11423.712	±	662.586
S	< LOD	:	1736.939
Ba	323.983	±	47.398
Cs	16.856	±	7.946
Te	< LOD	:	34.716
Sb	< LOD	:	20.350
Sn	< LOD	:	23.582
Cd	< LOD	:	14.436
Ag	< LOD	:	10.404
Pd	< LOD	:	14.289

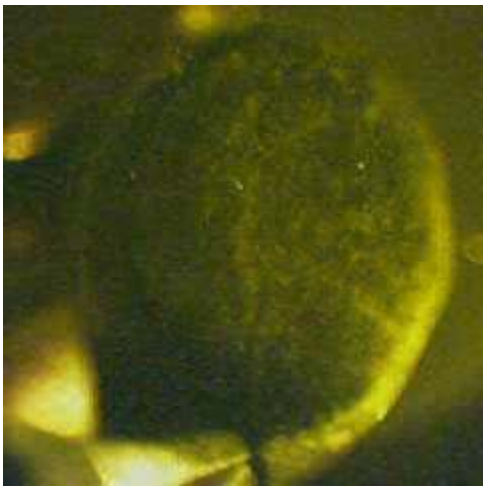
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900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	2005
Mode	TestAll Geo
Time	2013-09-22 09:10
Duration	120.78
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



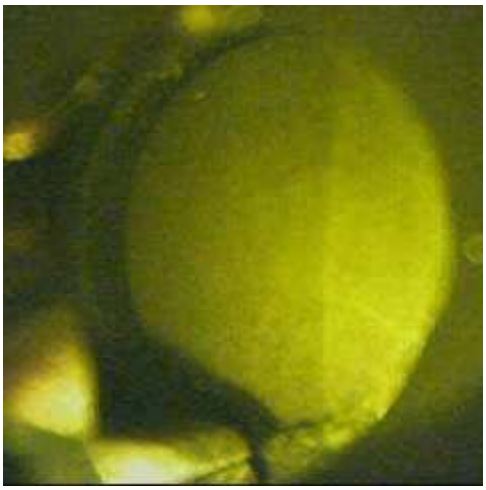
	ppm	±	Error
Mo	< LOD	:	9.980
Zr	114.955	±	11.291
Sr	3015.572	±	123.937
U	< LOD	:	300000.000
Rb	12.088	±	2.394
Th	< LOD	:	300000.000
Pb	< LOD	:	14.958
Se	< LOD	:	6.959
As	< LOD	:	8.035
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	49.923	±	21.419
W	< LOD	:	122.396
Cu	138.072	±	49.107
Ni	204.425	±	67.854
Co	< LOD	:	364.025
Fe	57591.887	±	1570.121
Mn	1099.837	±	181.592
Cr	305.748	±	32.880
V	92.339	±	48.842
Ti	2784.540	±	125.892
Sc	141.988	±	65.049
Ca	32506.016	±	502.857
K	6214.578	±	344.201
S	1773.582	±	1128.904
Ba	1349.831	±	60.660
Cs	115.317	±	9.230
Te	185.625	±	27.008
Sb	89.378	±	15.871
Sn	< LOD	:	32.686
Cd	< LOD	:	11.812
Ag	< LOD	:	9.870
Pd	< LOD	:	6.158
Bal	865833.813	±	4509.328
Nb	< LOD	:	8.178
Bi	16.374	±	9.429
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	2006
Mode	Soil
Time	2013-09-22 09:13
Duration	120.28
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.309
Zr	134.545	±	12.025
Sr	276.700	±	14.346
U	< LOD	:	18.573
Rb	41.806	±	7.300
Th	< LOD	:	11.471
Pb	17.837	±	11.795
Se	< LOD	:	7.245
As	< LOD	:	13.269
Hg	< LOD	:	14.989
Au	< LOD	:	9.241
Zn	54.085	±	21.104
W	< LOD	:	96.678
Cu	< LOD	:	52.624
Ni	196.341	±	75.421
Co	< LOD	:	313.270
Fe	33891.367	±	747.337
Mn	451.553	±	146.240
Cr	371.343	±	66.222
V	150.544	±	97.504
Ti	3416.248	±	262.613
Sc	< LOD	:	125.975
Ca	15190.256	±	627.150
K	9216.318	±	700.812
S	< LOD	:	2616.627
Ba	357.946	±	50.319
Cs	25.875	±	8.453
Te	40.478	±	24.707
Sb	< LOD	:	21.733
Sn	< LOD	:	25.270
Cd	< LOD	:	15.334
Ag	< LOD	:	11.649
Pd	< LOD	:	15.881

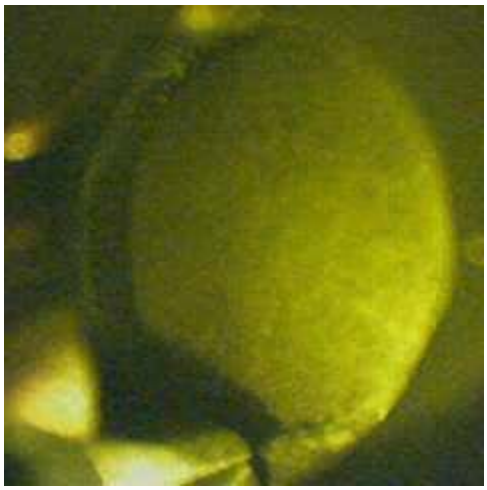
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	2007
Mode	Soil
Time	2013-09-22 09:16
Duration	120.17
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.307
Zr	64.279	±	9.738
Sr	62.692	±	8.195
U	< LOD	:	16.148
Rb	16.354	±	5.707
Th	< LOD	:	12.049
Pb	< LOD	:	15.744
Se	< LOD	:	8.327
As	< LOD	:	13.205
Hg	< LOD	:	20.174
Au	< LOD	:	12.693
Zn	82.987	±	27.844
W	< LOD	:	131.885
Cu	< LOD	:	65.725
Ni	680.776	±	123.758
Co	< LOD	:	525.452
Fe	74573.641	±	1250.601
Mn	1242.050	±	255.181
Cr	855.989	±	97.232
V	205.309	±	123.377
Ti	3623.161	±	328.695
Sc	< LOD	:	223.368
Ca	38651.199	±	1134.735
K	3538.570	±	600.502
S	< LOD	:	3048.151
Ba	264.754	±	54.946
Cs	26.363	±	9.475
Te	< LOD	:	41.486
Sb	< LOD	:	24.454
Sn	< LOD	:	28.092
Cd	< LOD	:	16.992
Ag	< LOD	:	12.630
Pd	< LOD	:	17.820

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Certificate of Verification

XL3t-34724

Reading No	2008
Mode	Soil
Time	2013-09-22 09:20
Duration	120.27
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.848
Zr	107.083	±	14.552
Sr	622.821	±	23.979
U	< LOD	:	20.916
Rb	13.473	±	5.929
Th	< LOD	:	11.074
Pb	< LOD	:	19.213
Se	< LOD	:	7.568
As	< LOD	:	15.046
Hg	< LOD	:	21.183
Au	< LOD	:	12.135
Zn	89.266	±	29.444
W	< LOD	:	137.003
Cu	< LOD	:	61.015
Ni	362.551	±	104.347
Co	< LOD	:	500.775
Fe	68357.102	±	1193.513
Mn	1048.569	±	235.843
Cr	596.042	±	85.956
V	226.370	±	131.713
Ti	5639.477	±	367.203
Sc	< LOD	:	214.957
Ca	38144.043	±	1098.102
K	4904.592	±	649.294
S	< LOD	:	3279.514
Ba	259.952	±	55.484
Cs	23.989	±	9.549
Te	< LOD	:	41.492
Sb	< LOD	:	24.413
Sn	< LOD	:	28.138
Cd	< LOD	:	17.126
Ag	< LOD	:	12.677
Pd	< LOD	:	16.713

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Certificate of Verification

XL3t-34724

Reading No	2009
Mode	Soil
Time	2013-09-22 09:22
Duration	120.33
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.114
Zr	187.230	±	14.459
Sr	442.186	±	18.482
U	< LOD	:	21.399
Rb	36.929	±	7.470
Th	< LOD	:	12.522
Pb	18.473	±	12.107
Se	< LOD	:	6.572
As	< LOD	:	14.702
Hg	< LOD	:	17.021
Au	< LOD	:	10.341
Zn	67.320	±	23.862
W	< LOD	:	109.665
Cu	< LOD	:	52.631
Ni	153.911	±	74.711
Co	< LOD	:	312.614
Fe	32133.859	±	746.882
Mn	493.704	±	151.928
Cr	264.066	±	60.778
V	< LOD	:	141.685
Ti	3315.633	±	256.421
Sc	< LOD	:	129.202
Ca	17015.895	±	649.681
K	9887.564	±	710.976
S	< LOD	:	2399.199
Ba	418.461	±	51.653
Cs	36.215	±	8.650
Te	58.291	±	25.319
Sb	< LOD	:	22.103
Sn	< LOD	:	25.646
Cd	< LOD	:	15.421
Ag	< LOD	:	11.571
Pd	< LOD	:	16.499

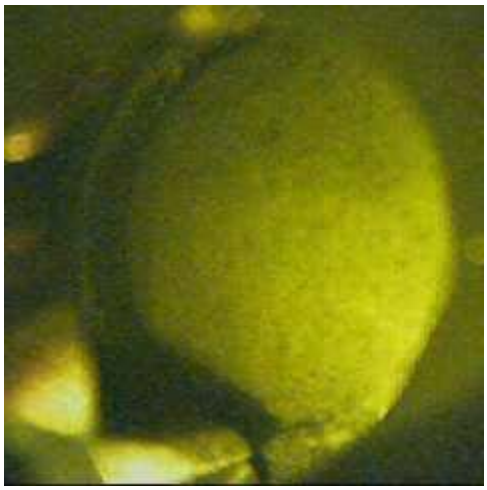
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Certificate of Verification

XL3t-34724

Reading No	2010
Mode	Soil
Time	2013-09-22 09:25
Duration	120.28
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.426
Zr	182.726	±	13.251
Sr	312.632	±	15.032
U	< LOD	:	18.636
Rb	37.813	±	7.001
Th	< LOD	:	11.062
Pb	< LOD	:	16.342
Se	< LOD	:	6.050
As	< LOD	:	12.283
Hg	< LOD	:	15.596
Au	< LOD	:	9.176
Zn	35.366	±	18.485
W	< LOD	:	92.205
Cu	< LOD	:	48.294
Ni	124.078	±	67.471
Co	< LOD	:	260.070
Fe	24217.480	±	624.639
Mn	486.160	±	142.638
Cr	319.901	±	57.181
V	< LOD	:	123.029
Ti	2325.953	±	216.944
Sc	< LOD	:	109.761
Ca	14641.647	±	562.903
K	10898.932	±	684.476
S	< LOD	:	2189.100
Ba	445.550	±	50.891
Cs	26.135	±	8.372
Te	43.814	±	24.514
Sb	< LOD	:	21.581
Sn	< LOD	:	25.031
Cd	< LOD	:	15.356
Ag	< LOD	:	11.179
Pd	< LOD	:	15.693

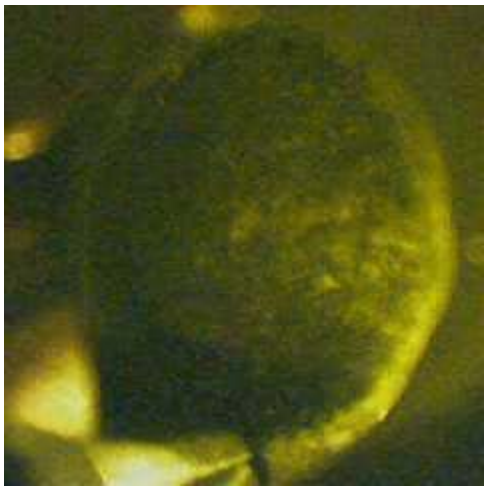
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Certificate of Verification

XL3t-34724

Reading No	2011
Mode	TestAll Geo
Time	2013-09-22 09:30
Duration	120.21
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



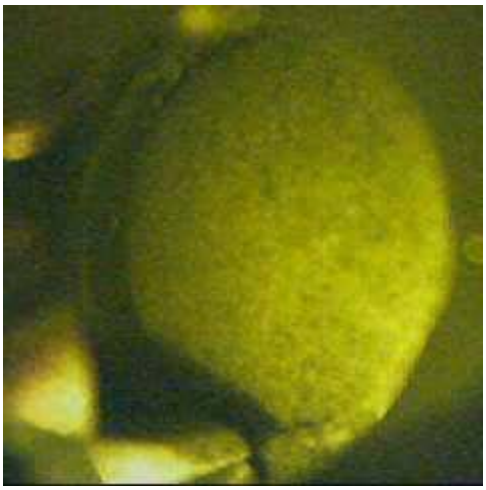
	ppm	±	Error
Mo	< LOD	:	9.581
Zr	139.064	±	10.560
Sr	872.834	±	17.992
U	< LOD	:	17.111
Rb	32.605	±	3.105
Th	< LOD	:	9.993
Pb	21.714	±	9.218
Se	< LOD	:	5.437
As	< LOD	:	8.537
Hg	< LOD	:	12.690
Au	< LOD	:	7.919
Zn	65.685	±	16.820
W	< LOD	:	87.411
Cu	< LOD	:	44.448
Ni	< LOD	:	73.794
Co	< LOD	:	227.607
Fe	34373.840	±	538.567
Mn	811.141	±	127.966
Cr	329.513	±	35.464
V	124.066	±	57.060
Ti	2689.861	±	107.326
Sc	131.936	±	62.943
Ca	29664.631	±	495.251
K	23681.145	±	617.358
S	< LOD	:	1680.363
Ba	2000.070	±	56.532
Cs	106.604	±	7.713
Te	171.807	±	22.616
Sb	< LOD	:	26.930
Sn	< LOD	:	28.934
Cd	< LOD	:	10.382
Ag	< LOD	:	8.509
Pd	< LOD	:	5.833
Bal	873259.188	±	3745.615
Nb	< LOD	:	7.094
Bi	< LOD	:	13.103
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	2012
Mode	Soil
Time	2013-09-22 09:34
Duration	120.39
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.059
Zr	217.008	±	13.956
Sr	195.906	±	12.352
U	< LOD	:	18.577
Rb	46.392	±	7.661
Th	< LOD	:	11.505
Pb	< LOD	:	16.750
Se	< LOD	:	6.886
As	< LOD	:	14.038
Hg	< LOD	:	15.981
Au	< LOD	:	9.487
Zn	72.246	±	23.454
W	< LOD	:	97.561
Cu	< LOD	:	45.697
Ni	< LOD	:	101.288
Co	< LOD	:	337.765
Fe	39754.234	±	821.121
Mn	469.883	±	151.018
Cr	168.570	±	61.032
V	< LOD	:	161.244
Ti	4251.961	±	294.578
Sc	< LOD	:	101.853
Ca	8686.117	±	511.662
K	12107.771	±	809.891
S	< LOD	:	2453.621
Ba	299.855	±	48.907
Cs	16.287	±	8.248
Te	< LOD	:	35.950
Sb	< LOD	:	21.238
Sn	< LOD	:	24.541
Cd	< LOD	:	14.829
Ag	< LOD	:	11.090
Pd	< LOD	:	15.241

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Certificate of Verification

XL3t-34724

Reading No	2013
Mode	Soil
Time	2013-09-22 09:37
Duration	120.29
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.644
Zr	195.166	±	13.234
Sr	209.685	±	12.513
U	< LOD	:	19.031
Rb	49.102	±	7.753
Th	< LOD	:	12.181
Pb	< LOD	:	16.615
Se	< LOD	:	7.411
As	< LOD	:	12.511
Hg	< LOD	:	16.567
Au	< LOD	:	8.654
Zn	86.823	±	24.873
W	< LOD	:	102.977
Cu	< LOD	:	45.439
Ni	< LOD	:	96.511
Co	< LOD	:	307.938
Fe	32803.582	±	731.931
Mn	269.023	±	124.289
Cr	197.692	±	57.923
V	< LOD	:	141.652
Ti	3510.735	±	257.825
Sc	< LOD	:	95.556
Ca	8981.133	±	491.895
K	11778.576	±	759.759
S	< LOD	:	2279.230
Ba	190.742	±	46.936
Cs	< LOD	:	12.036
Te	< LOD	:	35.016
Sb	< LOD	:	20.184
Sn	< LOD	:	23.732
Cd	< LOD	:	14.439
Ag	< LOD	:	10.717
Pd	< LOD	:	15.102

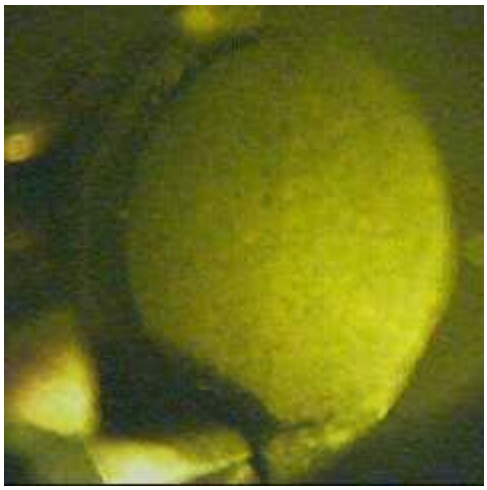
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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	2014
Mode	Soil
Time	2013-09-22 09:40
Duration	120.44
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.455
Zr	189.660	±	12.991
Sr	250.723	±	13.342
U	< LOD	:	19.148
Rb	44.372	±	7.408
Th	< LOD	:	11.386
Pb	< LOD	:	16.485
Se	< LOD	:	6.669
As	< LOD	:	12.805
Hg	< LOD	:	15.979
Au	< LOD	:	9.764
Zn	27.111	±	17.869
W	< LOD	:	102.822
Cu	< LOD	:	47.651
Ni	< LOD	:	95.392
Co	< LOD	:	222.488
Fe	17469.898	±	524.400
Mn	335.330	±	119.566
Cr	166.920	±	48.349
V	161.453	±	80.199
Ti	2838.122	±	209.635
Sc	< LOD	:	86.215
Ca	10418.559	±	458.205
K	12372.408	±	678.785
S	< LOD	:	2051.104
Ba	433.150	±	49.376
Cs	36.405	±	8.233
Te	52.579	±	24.014
Sb	< LOD	:	21.018
Sn	< LOD	:	24.234
Cd	< LOD	:	14.652
Ag	< LOD	:	10.883
Pd	< LOD	:	14.972

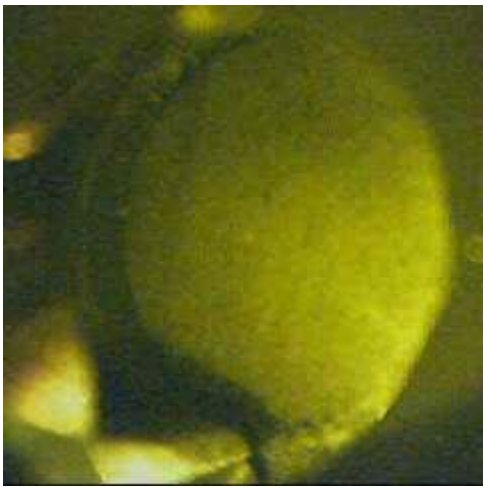
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Certificate of Verification

XL3t-34724

Reading No	2015
Mode	Soil
Time	2013-09-22 09:43
Duration	81.09
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.349
Zr	166.799	±	12.593
Sr	250.092	±	13.508
U	< LOD	:	18.609
Rb	48.555	±	7.635
Th	< LOD	:	11.659
Pb	23.739	±	12.392
Se	< LOD	:	6.830
As	< LOD	:	13.338
Hg	< LOD	:	16.075
Au	< LOD	:	10.825
Zn	38.909	±	18.846
W	< LOD	:	91.502
Cu	< LOD	:	44.319
Ni	< LOD	:	96.051
Co	< LOD	:	224.500
Fe	18452.654	±	545.823
Mn	311.961	±	120.929
Cr	< LOD	:	101.617
V	< LOD	:	185.258
Ti	3801.940	±	336.074
Sc	< LOD	:	130.488
Ca	9889.473	±	670.903
K	13040.502	±	1038.327
S	< LOD	:	3159.093
Ba	347.481	±	70.662
Cs	19.255	±	11.793
Te	< LOD	:	50.759
Sb	< LOD	:	29.889
Sn	< LOD	:	34.834
Cd	< LOD	:	21.265
Ag	< LOD	:	15.377
Pd	< LOD	:	21.242

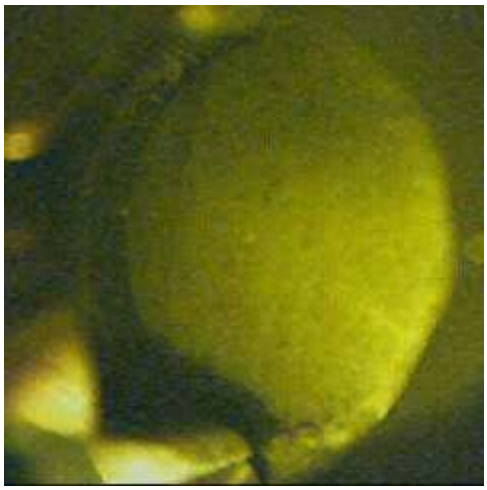
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Certificate of Verification

XL3t-34724

Reading No	2016
Mode	Soil
Time	2013-09-22 09:46
Duration	120.48
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.151
Zr	162.216	±	12.169
Sr	230.737	±	12.760
U	< LOD	:	18.365
Rb	42.777	±	7.201
Th	< LOD	:	11.336
Pb	< LOD	:	16.113
Se	< LOD	:	6.547
As	< LOD	:	12.377
Hg	< LOD	:	15.143
Au	< LOD	:	9.559
Zn	43.945	±	19.324
W	< LOD	:	93.681
Cu	< LOD	:	42.278
Ni	< LOD	:	88.886
Co	< LOD	:	225.462
Fe	18184.508	±	532.276
Mn	292.996	±	115.224
Cr	151.968	±	48.357
V	180.546	±	84.951
Ti	3606.324	±	227.384
Sc	< LOD	:	87.391
Ca	10057.483	±	455.167
K	12921.618	±	696.649
S	< LOD	:	1933.938
Ba	398.557	±	49.539
Cs	24.671	±	8.226
Te	43.295	±	24.126
Sb	< LOD	:	21.048
Sn	< LOD	:	24.539
Cd	< LOD	:	15.019
Ag	< LOD	:	11.585
Pd	< LOD	:	14.843

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Certificate of Verification

XL3t-34724

Reading No	2017
Mode	Soil
Time	2013-09-22 09:49
Duration	120.01
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.226
Zr	145.325	±	11.786
Sr	235.587	±	12.923
U	< LOD	:	18.485
Rb	48.810	±	7.552
Th	< LOD	:	11.017
Pb	< LOD	:	16.598
Se	< LOD	:	7.135
As	< LOD	:	13.108
Hg	< LOD	:	14.949
Au	< LOD	:	9.430
Zn	26.541	±	17.066
W	< LOD	:	93.019
Cu	< LOD	:	43.610
Ni	< LOD	:	96.226
Co	< LOD	:	259.090
Fe	24008.596	±	612.544
Mn	273.747	±	116.939
Cr	145.647	±	52.360
V	< LOD	:	131.300
Ti	3490.470	±	240.001
Sc	< LOD	:	86.488
Ca	8017.939	±	448.058
K	12839.884	±	749.725
S	< LOD	:	2194.374
Ba	268.846	±	47.852
Cs	18.987	±	8.155
Te	< LOD	:	35.579
Sb	< LOD	:	20.754
Sn	< LOD	:	24.267
Cd	< LOD	:	14.701
Ag	< LOD	:	11.088
Pd	< LOD	:	14.874

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900 Middlesex Turnpike
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Certificate of Verification

XL3t-34724

Reading No	2018
Mode	TestAll Geo
Time	2013-09-22 09:53
Duration	120.74
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



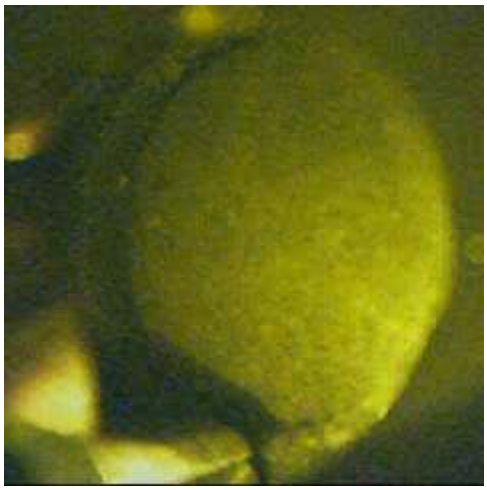
	ppm	±	Error
Mo	< LOD	:	7.693
Zr	175.513	±	8.734
Sr	97.328	±	6.260
U	< LOD	:	9.685
Rb	5.440	±	1.501
Th	< LOD	:	11.028
Pb	347.014	±	24.744
Se	< LOD	:	5.629
As	< LOD	:	24.619
Hg	< LOD	:	11.222
Au	< LOD	:	8.411
Zn	117.751	±	19.704
W	< LOD	:	84.470
Cu	69.775	±	26.766
Ni	121.687	±	46.962
Co	< LOD	:	379.663
Fe	124145.469	±	1012.083
Mn	1101.442	±	146.974
Cr	111.652	±	42.071
V	284.015	±	77.472
Ti	4211.474	±	168.504
Sc	< LOD	:	124.958
Ca	17017.172	±	602.979
K	10989.429	±	699.198
S	19780.059	±	3633.067
Ba	758.765	±	45.140
Cs	112.229	±	7.589
Te	197.092	±	22.485
Sb	98.480	±	13.315
Sn	109.457	±	15.624
Cd	< LOD	:	10.950
Ag	< LOD	:	8.106
Pd	< LOD	:	5.185
Bal	837895.813	±	5934.877
Nb	10.551	±	4.750
Bi	< LOD	:	11.819
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	2019
Mode	Soil
Time	2013-09-22 09:56
Duration	120.38
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.057
Zr	111.949	±	10.875
Sr	231.401	±	12.852
U	< LOD	:	17.706
Rb	39.729	±	6.987
Th	< LOD	:	10.011
Pb	20.421	±	11.437
Se	< LOD	:	5.823
As	< LOD	:	13.407
Hg	< LOD	:	14.827
Au	< LOD	:	10.633
Zn	37.902	±	18.709
W	< LOD	:	94.623
Cu	< LOD	:	45.528
Ni	< LOD	:	95.847
Co	< LOD	:	262.926
Fe	24978.861	±	626.847
Mn	277.285	±	118.852
Cr	285.237	±	57.536
V	< LOD	:	130.418
Ti	2655.466	±	230.753
Sc	< LOD	:	100.088
Ca	11239.736	±	508.731
K	10243.146	±	675.043
S	< LOD	:	2104.948
Ba	435.728	±	50.455
Cs	32.364	±	8.369
Te	48.554	±	24.450
Sb	< LOD	:	21.250
Sn	25.944	±	16.719
Cd	< LOD	:	15.510
Ag	< LOD	:	11.424
Pd	< LOD	:	15.324

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Certificate of Verification

XL3t-34724

Reading No	2020
Mode	Soil
Time	2013-09-22 09:59
Duration	120.18
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.718
Zr	255.631	±	15.288
Sr	362.717	±	16.372
U	< LOD	:	20.372
Rb	44.391	±	7.668
Th	< LOD	:	10.628
Pb	18.814	±	11.754
Se	< LOD	:	6.486
As	< LOD	:	13.768
Hg	< LOD	:	15.644
Au	< LOD	:	10.120
Zn	44.252	±	20.236
W	< LOD	:	98.987
Cu	< LOD	:	45.386
Ni	< LOD	:	94.214
Co	< LOD	:	269.777
Fe	24523.641	±	636.766
Mn	289.357	±	122.219
Cr	143.039	±	51.662
V	< LOD	:	133.522
Ti	3222.640	±	238.366
Sc	< LOD	:	88.314
Ca	8731.800	±	457.096
K	13319.071	±	750.452
S	< LOD	:	2178.581
Ba	311.350	±	48.202
Cs	< LOD	:	12.033
Te	< LOD	:	35.072
Sb	< LOD	:	20.465
Sn	< LOD	:	23.493
Cd	< LOD	:	14.505
Ag	< LOD	:	10.771
Pd	< LOD	:	14.623

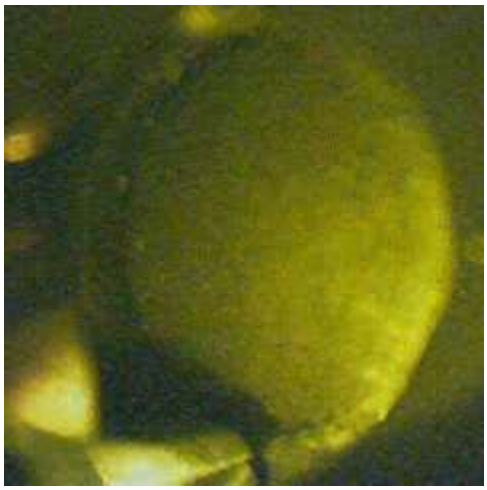
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Certificate of Verification

XL3t-34724

Reading No	2021
Mode	Soil
Time	2013-09-22 10:02
Duration	120.16
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.224
Zr	121.917	±	11.472
Sr	259.028	±	13.778
U	< LOD	:	18.151
Rb	38.420	±	7.018
Th	< LOD	:	10.195
Pb	< LOD	:	14.627
Se	< LOD	:	6.131
As	< LOD	:	12.263
Hg	< LOD	:	16.023
Au	< LOD	:	9.922
Zn	30.615	±	18.440
W	< LOD	:	100.606
Cu	< LOD	:	46.402
Ni	< LOD	:	92.202
Co	< LOD	:	270.658
Fe	26119.303	±	650.767
Mn	233.736	±	115.947
Cr	224.472	±	55.853
V	< LOD	:	127.386
Ti	3051.324	±	232.066
Sc	< LOD	:	101.878
Ca	11902.642	±	532.431
K	11395.793	±	720.962
S	< LOD	:	2517.917
Ba	423.188	±	50.848
Cs	36.030	±	8.501
Te	67.409	±	25.057
Sb	< LOD	:	21.638
Sn	37.754	±	17.180
Cd	< LOD	:	15.205
Ag	< LOD	:	11.555
Pd	< LOD	:	15.845

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XL3t-34724

Reading No	2022
Mode	Soil
Time	2013-09-22 10:05
Duration	120.19
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.056
Zr	141.986	±	11.844
Sr	267.089	±	13.740
U	< LOD	:	18.492
Rb	43.570	±	7.248
Th	< LOD	:	10.344
Pb	< LOD	:	15.302
Se	< LOD	:	6.138
As	< LOD	:	12.151
Hg	< LOD	:	16.352
Au	< LOD	:	8.191
Zn	< LOD	:	25.680
W	< LOD	:	97.810
Cu	< LOD	:	45.540
Ni	125.874	±	65.425
Co	< LOD	:	214.231
Fe	16776.166	±	513.312
Mn	297.020	±	114.925
Cr	182.977	±	48.370
V	< LOD	:	110.367
Ti	2323.501	±	194.939
Sc	< LOD	:	91.762
Ca	11249.606	±	471.145
K	12402.589	±	676.093
S	< LOD	:	1924.274
Ba	388.797	±	48.610
Cs	29.279	±	8.133
Te	50.343	±	23.859
Sb	< LOD	:	20.991
Sn	25.719	±	16.274
Cd	< LOD	:	14.896
Ag	< LOD	:	10.933
Pd	< LOD	:	15.439

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XL3t-34724

Reading No	2023
Mode	Soil
Time	2013-09-22 10:14
Duration	120.17
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	9.928
Zr	134.424	±	11.506
Sr	242.584	±	13.095
U	< LOD	:	18.332
Rb	45.071	±	7.335
Th	< LOD	:	10.003
Pb	< LOD	:	15.691
Se	< LOD	:	5.655
As	< LOD	:	12.119
Hg	< LOD	:	15.139
Au	< LOD	:	10.028
Zn	27.121	±	17.232
W	< LOD	:	94.935
Cu	< LOD	:	44.788
Ni	112.632	±	65.206
Co	< LOD	:	229.311
Fe	18852.895	±	543.057
Mn	338.664	±	120.984
Cr	< LOD	:	33.065
V	< LOD	:	49.093
Ti	740.002	±	85.277
Sc	< LOD	:	42.213
Ca	3481.510	±	215.976
K	3015.972	±	300.616
S	< LOD	:	893.038
Ba	418.310	±	50.831
Cs	32.540	±	8.471
Te	46.527	±	24.699
Sb	< LOD	:	21.563
Sn	< LOD	:	25.244
Cd	< LOD	:	15.357
Ag	< LOD	:	11.805
Pd	< LOD	:	16.131

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XL3t-34724

Reading No	2024
Mode	Soil
Time	2013-09-22 10:17
Duration	120.42
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	11.630
Zr	118.986	±	12.496
Sr	179.096	±	13.093
U	< LOD	:	23.684
Rb	69.731	±	10.193
Th	< LOD	:	13.909
Pb	24.467	±	14.084
Se	< LOD	:	7.613
As	< LOD	:	17.303
Hg	< LOD	:	19.785
Au	< LOD	:	13.439
Zn	81.456	±	28.005
W	< LOD	:	132.446
Cu	70.767	±	45.060
Ni	443.561	±	108.012
Co	< LOD	:	483.293
Fe	64314.184	±	1154.563
Mn	1389.484	±	255.129
Cr	447.244	±	79.221
V	265.969	±	126.511
Ti	3787.124	±	328.546
Sc	< LOD	:	177.128
Ca	25442.164	±	903.289
K	15626.649	±	1009.375
S	< LOD	:	3139.385
Ba	540.766	±	58.725
Cs	39.592	±	9.603
Te	63.946	±	28.086
Sb	< LOD	:	24.429
Sn	37.658	±	19.285
Cd	< LOD	:	17.409
Ag	< LOD	:	12.589
Pd	< LOD	:	17.744

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XL3t-34724

Reading No	2025
Mode	Soil
Time	2013-09-22 10:20
Duration	120.22
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	9.650
Zr	121.619	±	10.866
Sr	243.438	±	12.758
U	< LOD	:	18.560
Rb	52.789	±	7.620
Th	< LOD	:	10.682
Pb	< LOD	:	14.006
Se	< LOD	:	6.177
As	< LOD	:	10.930
Hg	< LOD	:	14.283
Au	< LOD	:	9.484
Zn	< LOD	:	23.453
W	< LOD	:	88.155
Cu	< LOD	:	39.400
Ni	< LOD	:	80.810
Co	< LOD	:	175.801
Fe	10967.966	±	403.957
Mn	194.681	±	96.075
Cr	123.909	±	42.607
V	< LOD	:	101.435
Ti	2527.220	±	184.571
Sc	< LOD	:	83.496
Ca	10610.487	±	430.404
K	13113.961	±	647.330
S	< LOD	:	1800.009
Ba	316.729	±	47.211
Cs	22.854	±	7.980
Te	< LOD	:	34.971
Sb	< LOD	:	20.284
Sn	31.976	±	16.197
Cd	< LOD	:	14.583
Ag	< LOD	:	10.707
Pd	< LOD	:	14.789

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XL3t-34724

Reading No	2026
Mode	Soil
Time	2013-09-22 10:23
Duration	120.10
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.483
Zr	190.053	±	13.078
Sr	222.459	±	12.803
U	< LOD	:	17.892
Rb	34.845	±	6.767
Th	< LOD	:	11.037
Pb	< LOD	:	17.003
Se	< LOD	:	6.736
As	< LOD	:	12.863
Hg	< LOD	:	15.891
Au	< LOD	:	10.053
Zn	26.488	±	17.363
W	< LOD	:	92.863
Cu	< LOD	:	45.347
Ni	< LOD	:	97.763
Co	< LOD	:	296.481
Fe	30264.018	±	699.570
Mn	389.284	±	134.848
Cr	253.122	±	60.707
V	156.688	±	93.979
Ti	3277.559	±	251.044
Sc	< LOD	:	98.179
Ca	9142.851	±	494.503
K	9168.615	±	684.150
S	< LOD	:	2440.580
Ba	391.907	±	49.965
Cs	29.106	±	8.351
Te	54.919	±	24.583
Sb	< LOD	:	21.191
Sn	25.085	±	16.697
Cd	< LOD	:	14.786
Ag	< LOD	:	11.305
Pd	< LOD	:	15.857

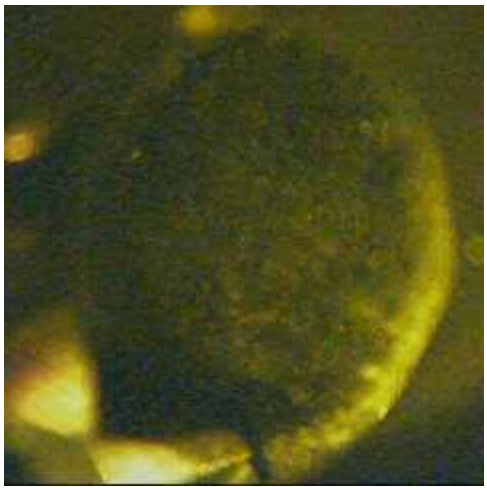
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Certificate of Verification

XL3t-34724

Reading No	2027
Mode	TestAll Geo
Time	2013-09-22 10:27
Duration	121.55
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	10.257
Zr	130.366	±	10.179
Sr	2004.471	±	84.858
U	< LOD	:	300000.000
Rb	14.618	±	2.336
Th	< LOD	:	300000.000
Pb	< LOD	:	12.145
Se	< LOD	:	4.461
As	< LOD	:	6.966
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	87.177	±	22.088
W	< LOD	:	107.573
Cu	< LOD	:	54.010
Ni	183.821	±	60.729
Co	< LOD	:	330.827
Fe	52786.359	±	1367.937
Mn	1218.729	±	176.601
Cr	478.889	±	39.631
V	148.685	±	57.637
Ti	3040.565	±	127.561
Sc	< LOD	:	117.959
Ca	45076.316	±	618.667
K	6318.309	±	370.109
S	2010.648	±	1292.639
Ba	1225.536	±	52.493
Cs	103.791	±	8.032
Te	164.650	±	23.518
Sb	< LOD	:	28.778
Sn	< LOD	:	30.534
Cd	< LOD	:	10.929
Ag	< LOD	:	7.717
Pd	< LOD	:	5.912
Bal	864634.125	±	4286.666
Nb	< LOD	:	7.500
Bi	21.503	±	9.131
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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XL3t-34724



Reading No	2028
Mode	TestAll Geo
Time	2013-09-22 10:31
Duration	120.18
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	

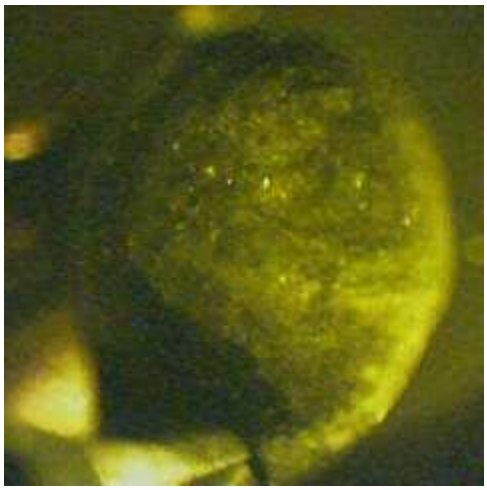
	ppm	±	Error
Mo	< LOD	:	8.390
Zr	126.589	±	8.121
Sr	151.698	±	7.829
U	< LOD	:	12.955
Rb	17.247	±	2.253
Th	< LOD	:	7.893
Pb	< LOD	:	8.345
Se	< LOD	:	3.618
As	< LOD	:	5.060
Hg	< LOD	:	12.438
Au	< LOD	:	6.743
Zn	93.553	±	18.512
W	< LOD	:	93.543
Cu	< LOD	:	45.261
Ni	252.771	±	59.023
Co	< LOD	:	327.441
Fe	58080.883	±	709.199
Mn	1236.705	±	154.868
Cr	159.523	±	31.362
V	275.743	±	55.428
Ti	3284.434	±	125.121
Sc	< LOD	:	63.458
Ca	9237.925	±	321.228
K	8585.765	±	435.812
S	< LOD	:	1621.150
Ba	1100.824	±	49.099
Cs	120.202	±	7.791
Te	213.133	±	23.129
Sb	102.984	±	13.632
Sn	128.907	±	16.277
Cd	< LOD	:	9.947
Ag	< LOD	:	7.571
Pd	< LOD	:	5.280
Bal	907304.750	±	3158.404
Nb	< LOD	:	6.869
Bi	< LOD	:	9.860
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	2029
Mode	TestAll Geo
Time	2013-09-22 10:47
Duration	120.97
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



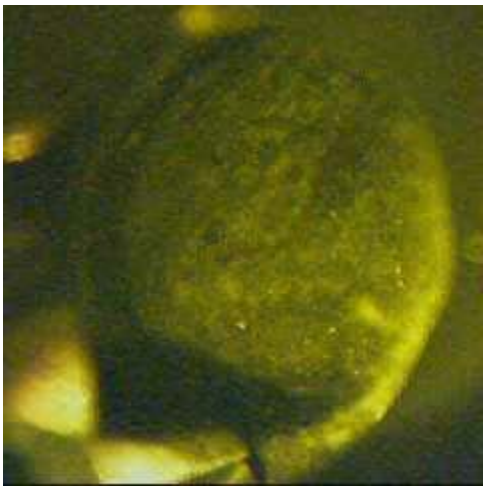
	ppm	±	Error
Mo	< LOD	:	13.304
Zr	< LOD	:	8.966
Sr	351.478	±	39.025
U	< LOD	:	300000.000
Rb	< LOD	:	1.577
Th	< LOD	:	300000.000
Pb	< LOD	:	16.829
Se	< LOD	:	8.714
As	< LOD	:	12.074
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	65.342	±	26.715
W	< LOD	:	149.109
Cu	< LOD	:	74.112
Ni	125.972	±	83.539
Co	< LOD	:	693.576
Fe	240246.547	±	6121.921
Mn	931.171	±	190.796
Cr	< LOD	:	96.451
V	< LOD	:	122.710
Ti	< LOD	:	118.940
Sc	< LOD	:	213.920
Ca	51056.727	±	1107.527
K	2222.386	±	484.033
S	41198.113	±	5484.130
Ba	849.367	±	67.810
Cs	135.784	±	11.511
Te	218.302	±	33.623
Sb	117.716	±	20.033
Sn	131.080	±	23.514
Cd	< LOD	:	13.400
Ag	< LOD	:	11.029
Pd	< LOD	:	6.907
Bal	631429.625	±	11811.070
Nb	< LOD	:	8.729
Bi	< LOD	:	10.977
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	2030
Mode	TestAll Geo
Time	2013-09-22 10:52
Duration	120.01
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
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MISC	
NOTE	



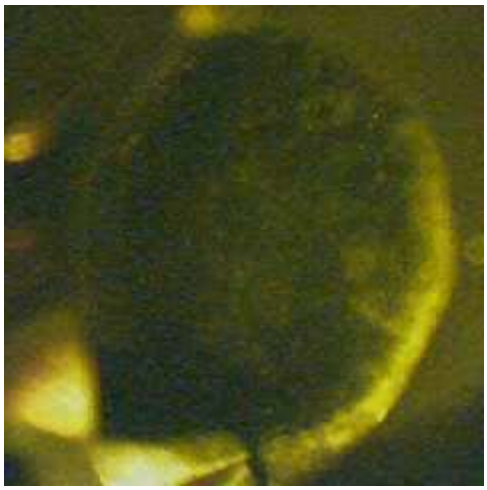
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Mo	< LOD	:	11.828
Zr	< LOD	:	8.864
Sr	404.390	±	41.565
U	< LOD	:	300000.000
Rb	< LOD	:	1.500
Th	< LOD	:	300000.000
Pb	< LOD	:	12.146
Se	< LOD	:	8.983
As	< LOD	:	9.324
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	53.615	±	25.185
W	< LOD	:	146.729
Cu	< LOD	:	73.781
Ni	< LOD	:	121.741
Co	< LOD	:	673.701
Fe	207962.359	±	5394.487
Mn	1019.172	±	195.686
Cr	< LOD	:	67.409
V	< LOD	:	85.837
Ti	< LOD	:	97.307
Sc	216.132	±	128.238
Ca	55322.969	±	983.786
K	< LOD	:	462.543
S	31243.785	±	4134.408
Ba	881.445	±	71.570
Cs	144.150	±	12.148
Te	230.549	±	35.509
Sb	< LOD	:	36.584
Sn	< LOD	:	39.549
Cd	< LOD	:	14.579
Ag	< LOD	:	12.022
Pd	< LOD	:	7.779
Bal	663633.750	±	10535.500
Nb	< LOD	:	8.511
Bi	< LOD	:	12.248
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	2031
Mode	TestAll Geo
Time	2013-09-22 11:01
Duration	121.24
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



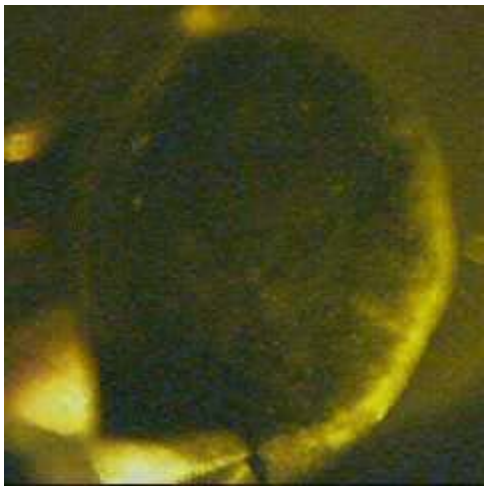
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Mo	< LOD	:	11.867
Zr	49.014	±	7.588
Sr	502.742	±	42.628
U	< LOD	:	300000.000
Rb	3.476	±	1.676
Th	< LOD	:	300000.000
Pb	< LOD	:	15.710
Se	< LOD	:	7.256
As	< LOD	:	8.844
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	81.344	±	26.087
W	< LOD	:	137.114
Cu	81.031	±	51.126
Ni	< LOD	:	105.889
Co	< LOD	:	509.674
Fe	99474.172	±	2802.705
Mn	4186.384	±	333.524
Cr	< LOD	:	49.293
V	127.094	±	56.595
Ti	2601.203	±	150.714
Sc	< LOD	:	229.118
Ca	126541.570	±	1227.034
K	1576.526	±	360.470
S	4912.640	±	2208.166
Ba	< LOD	:	145.726
Cs	100.585	±	9.589
Te	182.949	±	28.335
Sb	84.371	±	16.593
Sn	< LOD	:	36.583
Cd	< LOD	:	13.115
Ag	< LOD	:	9.366
Pd	< LOD	:	6.953
Bal	716264.250	±	7841.435
Nb	13.164	±	6.279
Bi	< LOD	:	9.315
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

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Certificate of Verification

XL3t-34724

Reading No	2032
Mode	TestAll Geo
Time	2013-09-22 11:05
Duration	121.03
Units	ppm
Sigma Value	2
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
MISC	
NOTE	



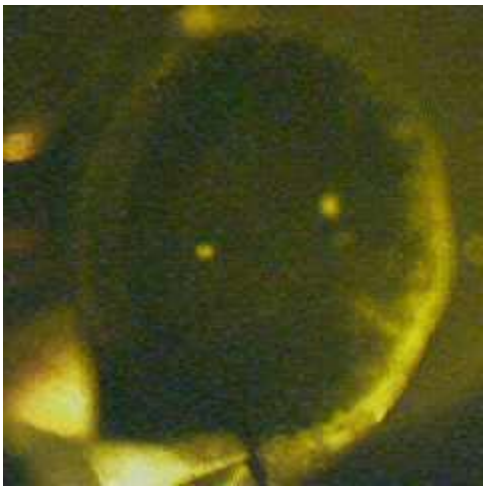
	ppm	±	Error
Mo	< LOD	:	12.516
Zr	106.617	±	9.684
Sr	238.830	±	29.788
U	< LOD	:	300000.000
Rb	4.500	±	1.785
Th	< LOD	:	300000.000
Pb	< LOD	:	12.052
Se	< LOD	:	8.553
As	< LOD	:	7.872
Hg	< LOD	:	300000.000
Au	< LOD	:	300000.000
Zn	131.609	±	30.138
W	< LOD	:	136.375
Cu	88.297	±	51.285
Ni	< LOD	:	107.063
Co	< LOD	:	582.468
Fe	160283.203	±	4017.947
Mn	3904.629	±	298.436
Cr	< LOD	:	71.358
V	356.774	±	90.098
Ti	3076.729	±	172.127
Sc	224.131	±	143.080
Ca	70114.031	±	1111.476
K	4725.739	±	517.201
S	< LOD	:	3625.325
Ba	676.778	±	55.158
Cs	97.715	±	9.337
Te	160.208	±	27.326
Sb	71.604	±	15.972
Sn	< LOD	:	35.948
Cd	< LOD	:	14.467
Ag	< LOD	:	9.217
Pd	< LOD	:	6.822
Bal	737697.688	±	7655.683
Nb	17.547	±	6.498
Bi	< LOD	:	11.763
Re	< LOD	:	1.500
Ta	< LOD	:	1.500
Hf	< LOD	:	1.500

Thermo Fisher Scientific
900 Middlesex Turnpike
Billerica, MA 01821

Certificate of Verification

XL3t-34724

Reading No	2033
Mode	Soil
Time	2013-09-22 11:09
Duration	120.07
Units	ppm
Sigma Value	3
Sequence	Final
Flags	
SAMPLE	
LOCATION	
INSPECTOR	
COR 1	
COR 2	
MISC	
NOTE	



	ppm	±	Error
Mo	< LOD	:	30.939
Zr	< LOD	:	24.193
Sr	< LOD	:	14.108
U	< LOD	:	34.992
Rb	< LOD	:	13.362
Th	< LOD	:	25.836
Pb	< LOD	:	31.658
Se	< LOD	:	36.732
As	< LOD	:	30.803
Hg	< LOD	:	91.721
Au	< LOD	:	45.462
Zn	< LOD	:	118.907
W	< LOD	:	577.404
Cu	< LOD	:	258.421
Ni	< LOD	:	420.254
Co	< LOD	:	281.102
Fe	3994.533	±	657.306
Mn	< LOD	:	399.365
Cr	245.673	±	21.730
V	48.697	±	20.193
Ti	< LOD	:	59.555
Sc	< LOD	:	10.658
Ca	250.881	±	48.376
K	< LOD	:	135.050
S	< LOD	:	568.418
Ba	< LOD	:	92.698
Cs	< LOD	:	17.673
Te	< LOD	:	46.197
Sb	< LOD	:	25.526
Sn	< LOD	:	28.413
Cd	< LOD	:	15.927
Ag	< LOD	:	12.970
Pd	< LOD	:	17.493

Supervised By: _____



Hadrian Ventures

Map 1a: Property Location

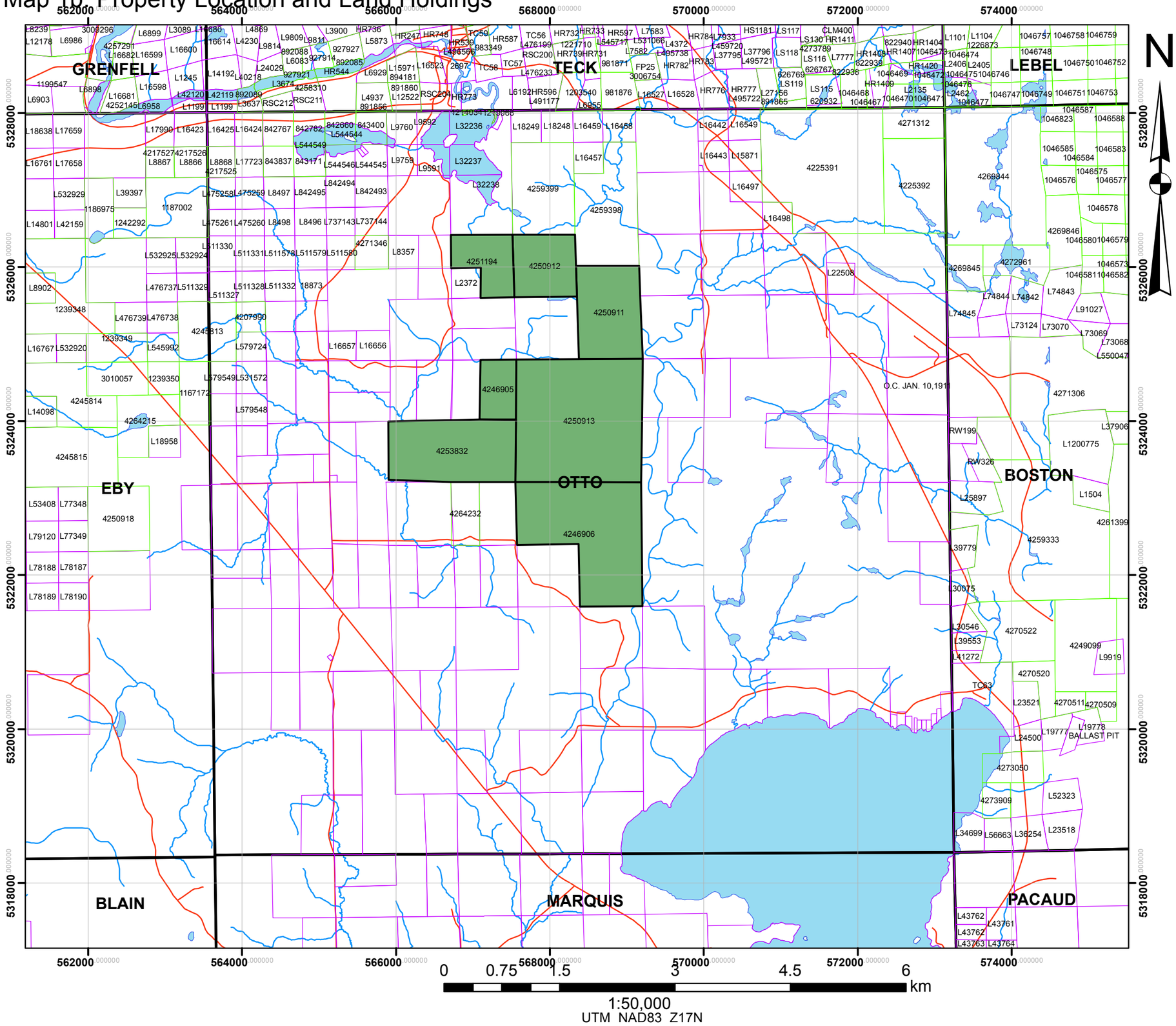
Map 1b: Property Location and Land Holdings

Legend

- Otto Property Claims
- Regional Claims
- Regional Patents
- Township Boundary
- Lakes
- Rivers
- roads

Hadrian Ventures

Figure Created by: Lucas Currah
Date: October, 2013



Map 2: Property Geology and Survey Areas

Legend

- Township Boundary
- Otto Property Claims
- Lakes
- Rivers
- roads

Sampling Areas

Type

- Prospecting
- Soil Sampling

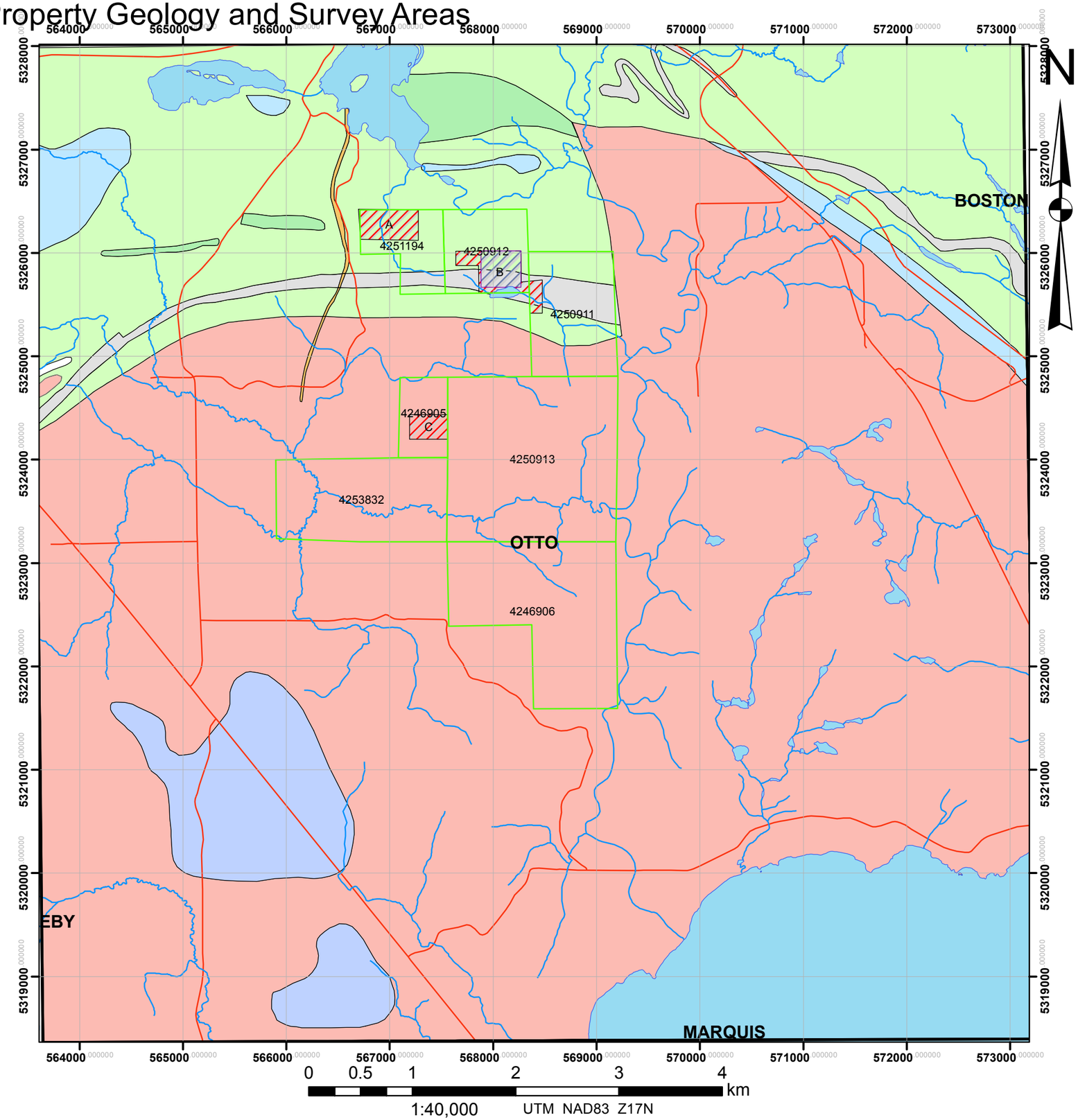
Geology

Lithology

- Diabase Dike
- Alkali Felsic to Intermediate Intrusives
- Alkali Ultramafic and Mafic Intrusives
- Tholeiitic Ultramfic and Mafic Intrusives
- Clastic and Chemical Metasedimentary Rocks
- Mafic Volcanic Rocks
- Ultramafic and Mafic Volcanic Rocks
- Faults

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Figure Created by: Lucas Currah
Date: October, 2013



Map 3a: Rock Sample Locations for Sampling Area A

Legend

Sample Locations

- Lower Ni-Cu Samples
- Cu
- Ni
- Ni, Cu
- Otto Property Claims
- Lakes
- Rivers
- roads

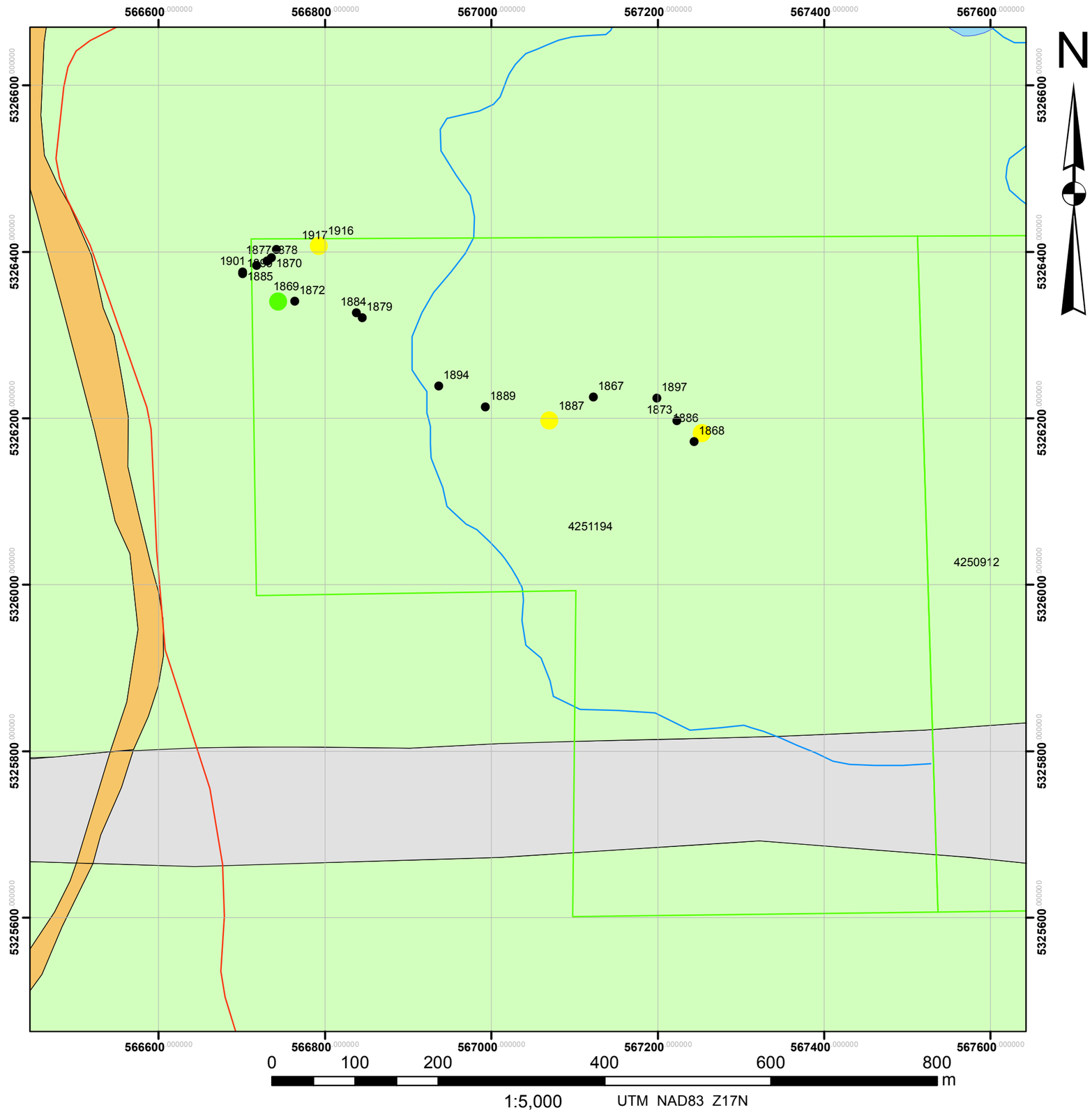
Geology

Lithology

- Diabase Dike
- Alkali Felsic to Intermediate Intrusives
- Alkali Ultramafic and Mafic Intrusives
- Tholeiitic Ultramfic and Mafic Intrusives
- Clastic and Chemical Metasedimentary Rocks
- Mafic Volcanic Rocks
- Ultramafic and Mafic Volcanic Rocks
- Faults

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Figure Created by: Lucas Currah
Date: October, 2013



Map 3b: Rock Sample Locations for Sampling Area B

Legend

Sample Locations

- Lower Ni-Cu Samples
- Cu
- Ni
- Ni, Cu
- Otto Property Claims
- Elevation (m)
- Lakes
- Rivers
- roads

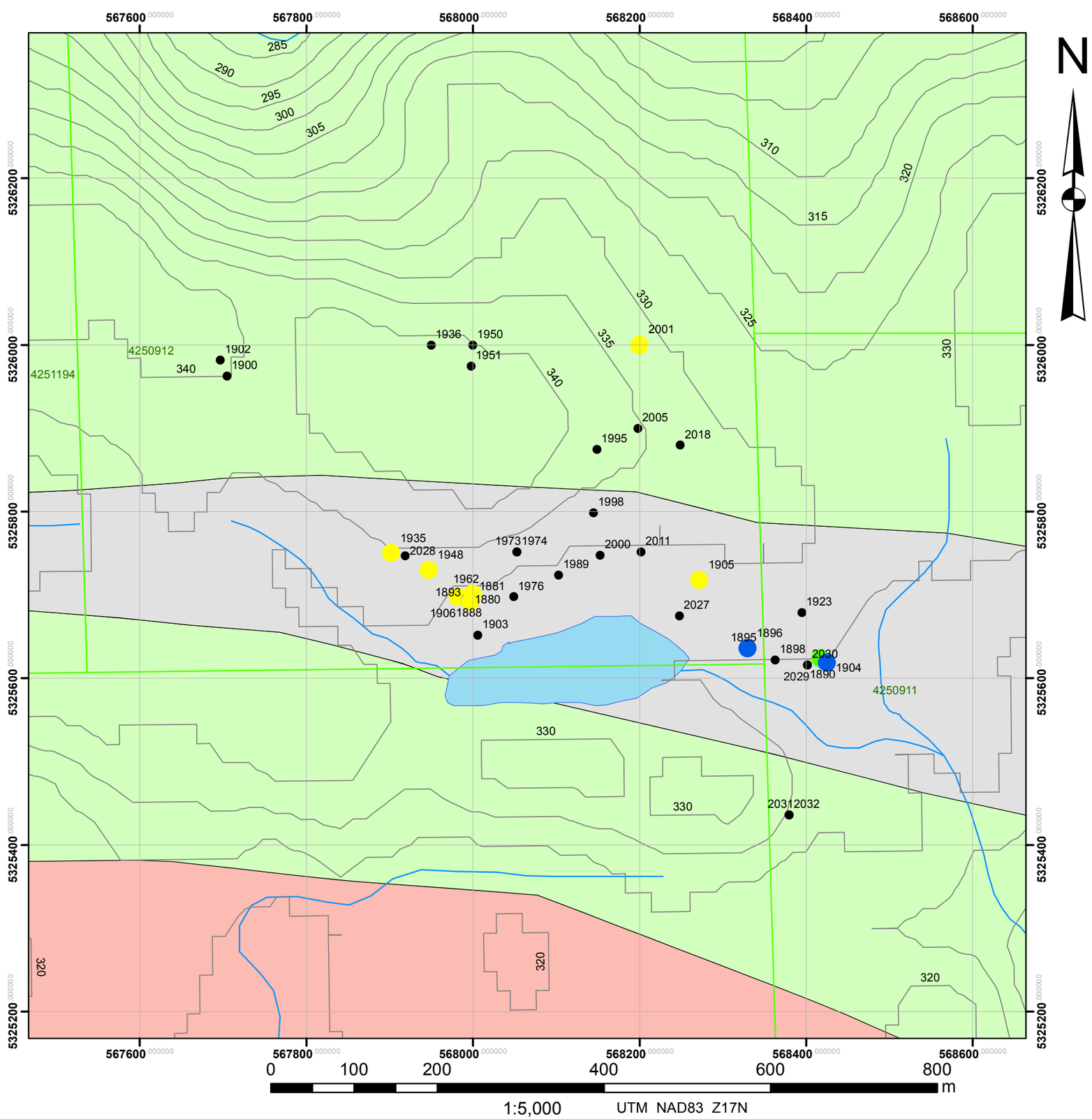
Geology

Lithology

- Diabase Dike
- Alkali Felsic to Intermediate Intrusives
- Alkali Ultramafic and Mafic Intrusives
- Tholeiitic Ultramfic and Mafic Intrusives
- Clastic and Chemical Metasedimentary Rocks
- Mafic Volcanic Rocks
- Ultramafic and Mafic Volcanic Rocks
- Faults

Hadrian Ventures

Figure Created by: Lucas Currah
Date: October, 2013



Map 3c: Rock Sample Locations for Sampling Area C

Legend

Sample Locations

- Lower Ni-Cu Samples
- Cu
- Ni
- Ni, Cu
- Otto Property Claims
- Elevation (m)
- Lakes
- Rivers
- roads

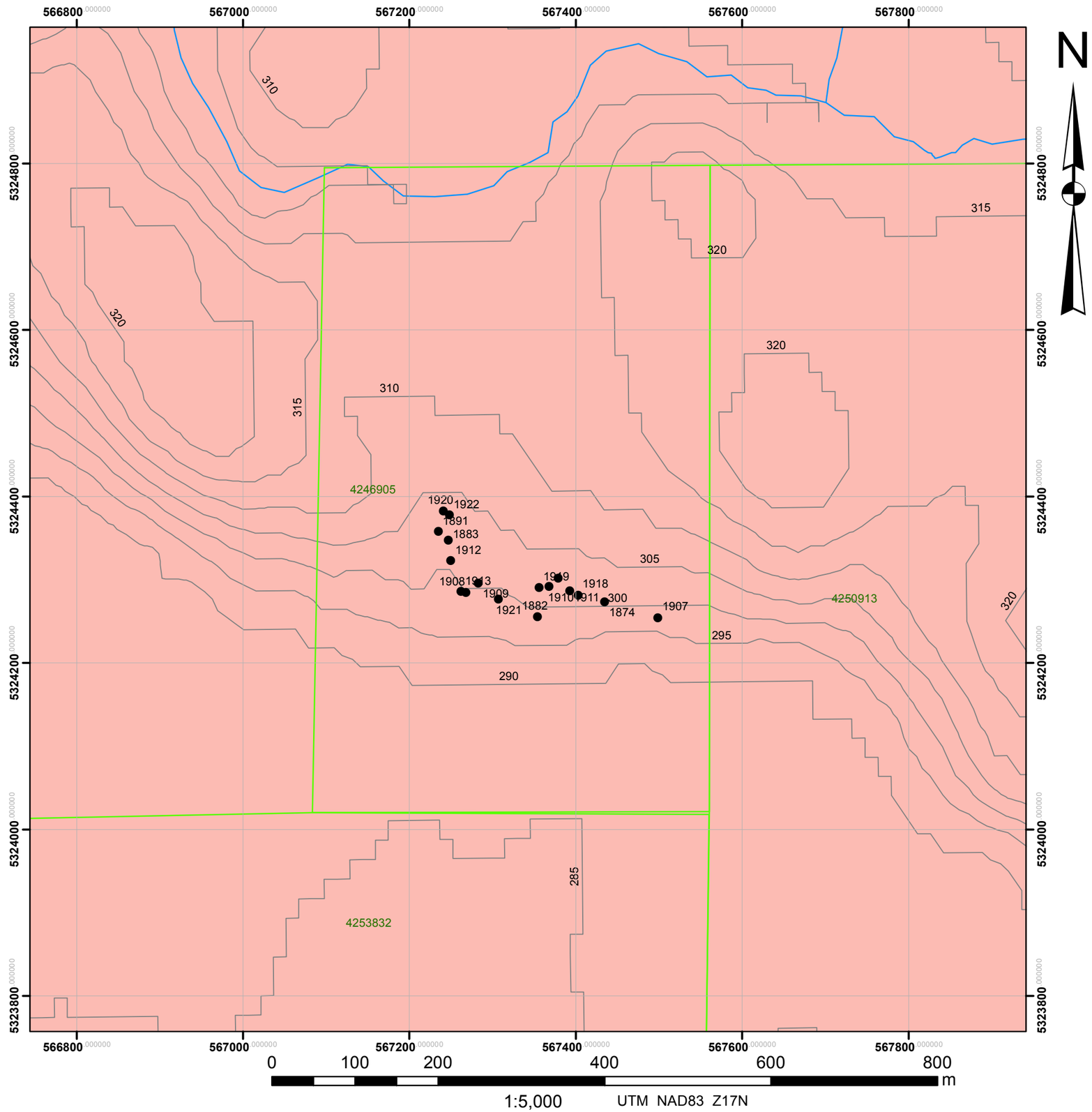
Geology

Lithology

- Diabase Dike
- Alkali Felsic to Intermediate Intrusives
- Alkali Ultramafic and Mafic Intrusives
- Tholeiitic Ultramfic and Mafic Intrusives
- Clastic and Chemical Metasedimentary Rocks
- Mafic Volcanic Rocks
- Ultramafic and Mafic Volcanic Rocks
- Faults

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Date: October, 2013



Map 4a: Soil Sample Locations

Legend

- XYsoil_noerr$
- Otto Property Claims
- Elevation (m)
- Lakes
- Rivers
- roads

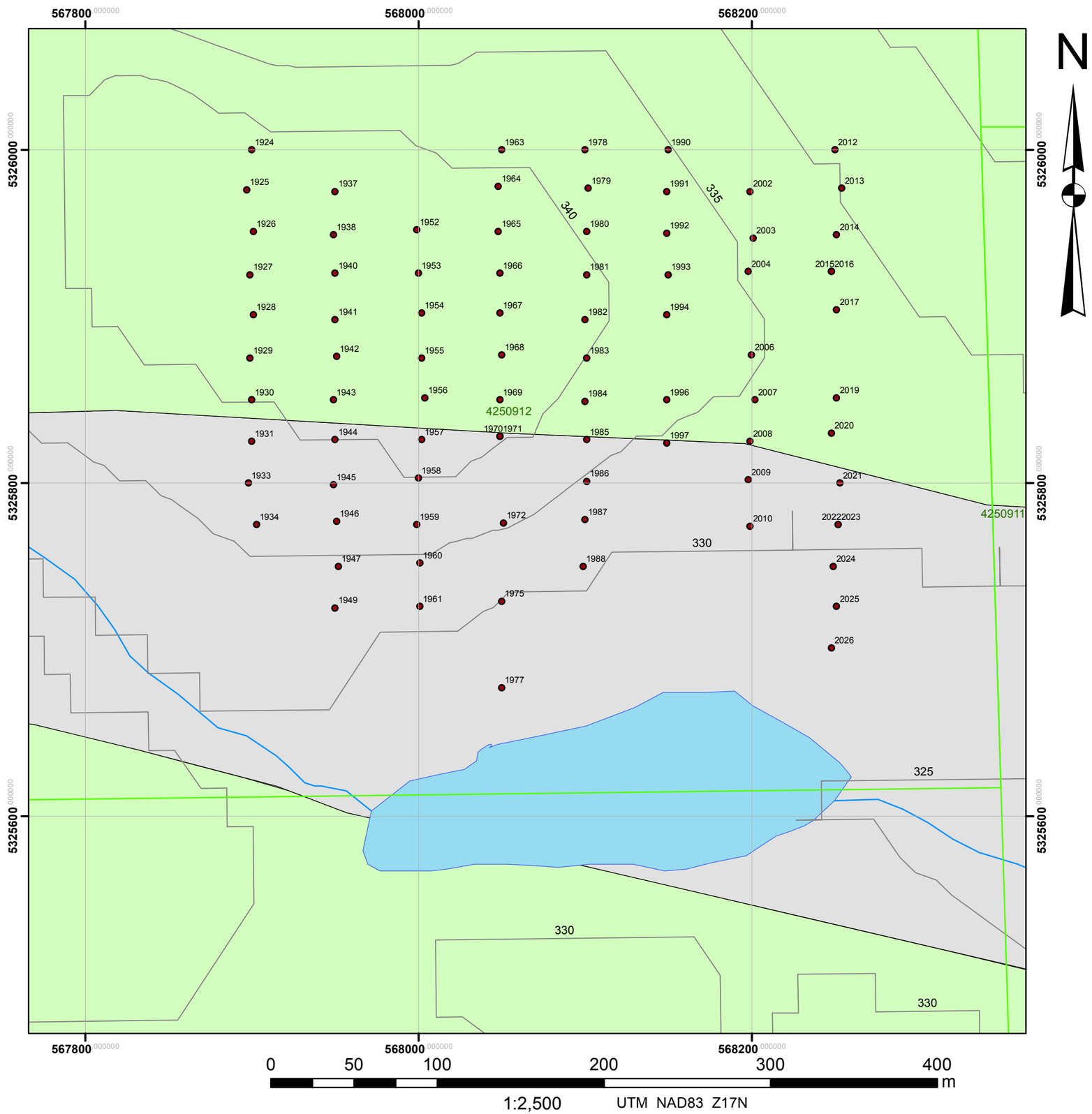
Geology

Lithology

- Diabase Dike
- Alkali Felsic to Intermediate Intrusives
- Alkali Ultramafic and Mafic Intrusives
- Tholeiitic Ultramfic and Mafic Intrusives
- Clastic and Chemical Metasedimentary Rocks
- Mafic Volcanic Rocks
- Ultramafic and Mafic Volcanic Rocks
- Faults

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Map 4b: Interpretation of Ni, Cu, and Co Soil Anomalies

Legend

Nickel Concentration (ppm): 120 – 170 – 220 – 270 – 320 – 370 – 420 – 470 – 520 – 570 – 620 – 670

- Copper Soil Anomaly
- Cobalt Soil Anomaly
- Fe Concentration > 5.8 %
- Sample Location (Ba, V, Pb, Zn, Cu, Ni)
  N.B. Zero values indicate samples below the limit of detection

Samples Collected by: Drew Currah, Ken Kelly
Date: September, 2013
Number of Samples: 82
Analyzer: Thermo Scientific Niton XL3t

Hadrian Ventures

Figure by: Lucas Currah
Date: October, 2013

1 : 1,500

0m 20m 40m 60m 80m 100m

UTM NAD83 Z17N

