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 Energy & Minerals Division
 Geological Survey Branch

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT (type of survey(s)) Technical Assessment Report – Soil Sampling Program	TOTAL COST \$4,839.15
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AUTHOR(S) Richard Beck SIGNATURE(S)

NOTICE OF WORK NUMBER(S) / DATE(S) _____ YEAR OF WORK 2015

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBERS / DATE(S):
Event #:5574929

PROPERTY NAME Lone Pine

CLAIM NAME(S) (on which work was done) 513961, 528413, 529131, 529132, 529133, 529400,
539634, 540502, 540504

COMMODITIES SOUGHT Molybdenum, copper and silver

MINERAL INVENTORY MINFILE NUMBERS, IF KNOWN _____

MINING DIVISION Omineca NTS 093L/10E TRIM _____

LATITUDE 54.31° N LONGITUDE 126.44° W (at centre of work)

NORTHING 6043500 EASTING 647000 UTM ZONE 9U MAP DATUM NAD83

OWNER 1 Bard Ventures Ltd. OWNER 2 _____

MAILING ADDRESS
 Suite 1128
 789 West Pender Street
 Vancouver, BC
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OPERATORS (who paid for work) Bard Ventures Ltd

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PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size, attitude)
Alaskite, Lone Pine, Molybdenum, Alaskite Zone, Quartz Breccia Zone, Hungry Hill

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
GEOCHEMICAL (number of samples analysed for ...)			
Soil – soil grid established and samples taken	40	513961	\$2,429.15
Silt			
Rock			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying	40		\$1330.00
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other: report, prep and post field work			\$1080.00
		TOTAL COST	\$4839.15

2015 TECHNICAL ASSESSMENT REPORT ON B- HORIZON AND MMI SOIL SAMPLING ON THE LONE PINE PROPERTY

Omineca Mining Division, British Columbia

NTS 93L/10E

54 31'N/126 44'W

UTM(NAD83) 6043500N / 647000E Zone 9U

Event #: 5574929

Tenure #'s:

**513961, 528413, 529131, 529132, 529133, 529400, 539634, 540502,
540504**

Prepared for:

Bard Ventures Ltd
Vancouver, British Columbia

Prepared by:

Richard Beck
R. Beck Consulting Services
Smithers, BC

October 2015

**BC Geological Survey
Assessment Report
35873**

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1. SUMMARY

In August of 2015, Bard Ventures Ltd of Vancouver, British Columbia contracted R. Beck Consulting Services of Smithers, B.C. to conduct a short field exploration program on their Houston, British Columbia properties. Mr. Eugene Beukman, of Bard Ventures was the main contact person. The program for which R, Beck Consulting Services was contracted was a detailed soil sampling program over the Quartz Breccia Zone. Sampling consisted of both B-horizon and MMI (Mobile Metal Ions) methods with the focus to compare the two analytical procedures over the same sampled areas.

This report covers the work performed by R, Beck Consulting Services between September and October 2015. As the author of this report, I was physically on the property on September 24th and October 6th 2015.

The work performed was a small detailed B-horizon and MMI sampling program over the Quartz Breccia Zone in the northwest of the claim group.

The property is comprised of 9 mineral tenures that cover greater than 1600 hectares. The tenures completely cover the hillside southeast of Grouse Mountain.

Sampling was designed to identify and locate the presence of copper, gold, silver and other relevant base metals that have been previously identified within drill core. The area selected for sampling covers the most recent drilling efforts of the Quartz Breccia Zone.

Sampling was designed simply to test the presence of copper and gold and/or other minerals within the soil horizons, but with focus on two varying methods of analysis; ICP-MS and MMI.

The Lone Pine Property is located approximately 20km northwest of Houston, British Columbia and 45 km Southeast of Smithers, British Columbia and consists of 9 mineral claims (Figure 1). Exploration included preparatory work and geochemical sampling.

This field program was conducted between late September 2015 and early October 2015 and provided all of the data on which this report is based.

2. INTRODUCTION AND TERMS OF REFERENCE

This report borrows/quotes from historical assessment reports of the area as noted in the References section.

3. PROPERTY DESCRIPTION AND LOCATION

3.1 ACCESSIBILITY AND INFRASTRUCTURE

The Lone Pine Property is easily accessible by road from either Smithers (~45 km) or Houston (~20 km) via highway 16. Access to the central claims, and in particular the location of the 2015 sampling, from highway 16 is by driveway of the local home owner then a bush trail that crosses the natural gas pipeline. Following approximately 4 km of bush trail from the driveway/trail intersection leads to the Quartz Breccia Zone in the northwest of the claims and to the location of the sampling grid.

A major sized 500 kV transmission line parallels the highway and a hydro sub-station is located on the west side of the highway; 3 km away from the center of the claim group. This sub-station is actually located on the claims in the southwest corner.

Houston, British Columbia is the closest community to the property area, located 20 km southeast with a population of approximately 4000 persons. CN rails main line passes through Houston; a main line that supports Prince George to the east and Prince Rupert to the west. There is a small airport located just north of the town of Houston. The largest supply center and community is located 45 km northwest of the property; Smithers, B.C. Smithers has an approximate population of 5500 persons with an additional 4500 persons in the regional 10 km radius. Daily scheduled flights are available from the Smithers Airport. The town has all of the amenities and supplies necessary to fulfill any and all exploration endeavors.

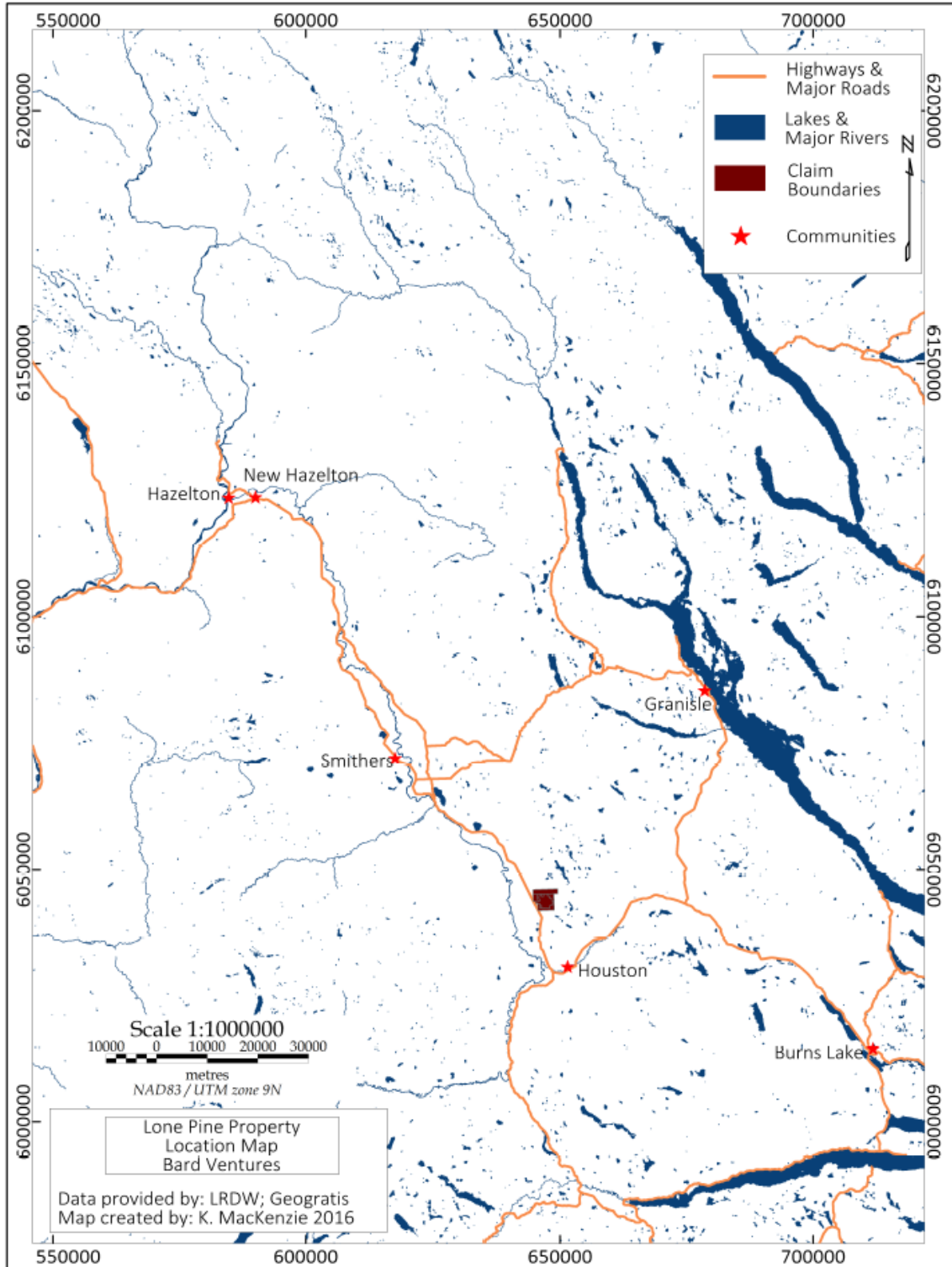


Figure 1: Lone Pine Location Map

3.2 MINERAL TENURE INFORMATION

The Lone Pine Property consists of 9 mineral claims, totaling 1633.3545 hectares. The property is located on NTS map sheet 93L/10E in the Omineca Mining Division and approximately 20 km northwest of the town of Houston, B.C. and 45 km southeast of the town of Smithers, B.C. The geographic coordinates of the approximate centre of the property are 54°31'N and 126°44'W. (Table 1 & Figure 2).

Table 1: Mineral Tenures

Title Number	Claim Name	Title Type	Map Number	Issue Date	Good To Date	Area (ha)
513961		Mineral	093L	2005/jun/05	2020/nov/01	619.619
528413	LONE PINE	Mineral	093L	2006/feb/16	2016/nov/01	112.637
529131	LONE PINE	Mineral	093L	2006/feb/28	2016/nov/01	18.771
529132	LONE PINE	Mineral	093L	2006/feb/28	2016/nov/01	18.771
529133	LONE PINE	Mineral	093L	2006/feb/28	2016/nov/01	18.775
529400	LONE PINE	Mineral	093L	2006/mar/04	2016/nov/01	18.781
539634	LONE PINE	Mineral	093L	2006/aug/19	2016/nov/01	244.1614
540502	LP 1	Mineral	093L	2006/sep/06	2016/nov/01	450.44
540504	LP 2	Mineral	093L	2006/sep/06	2016/nov/01	131.3991
				Total Hectares		1633.3545

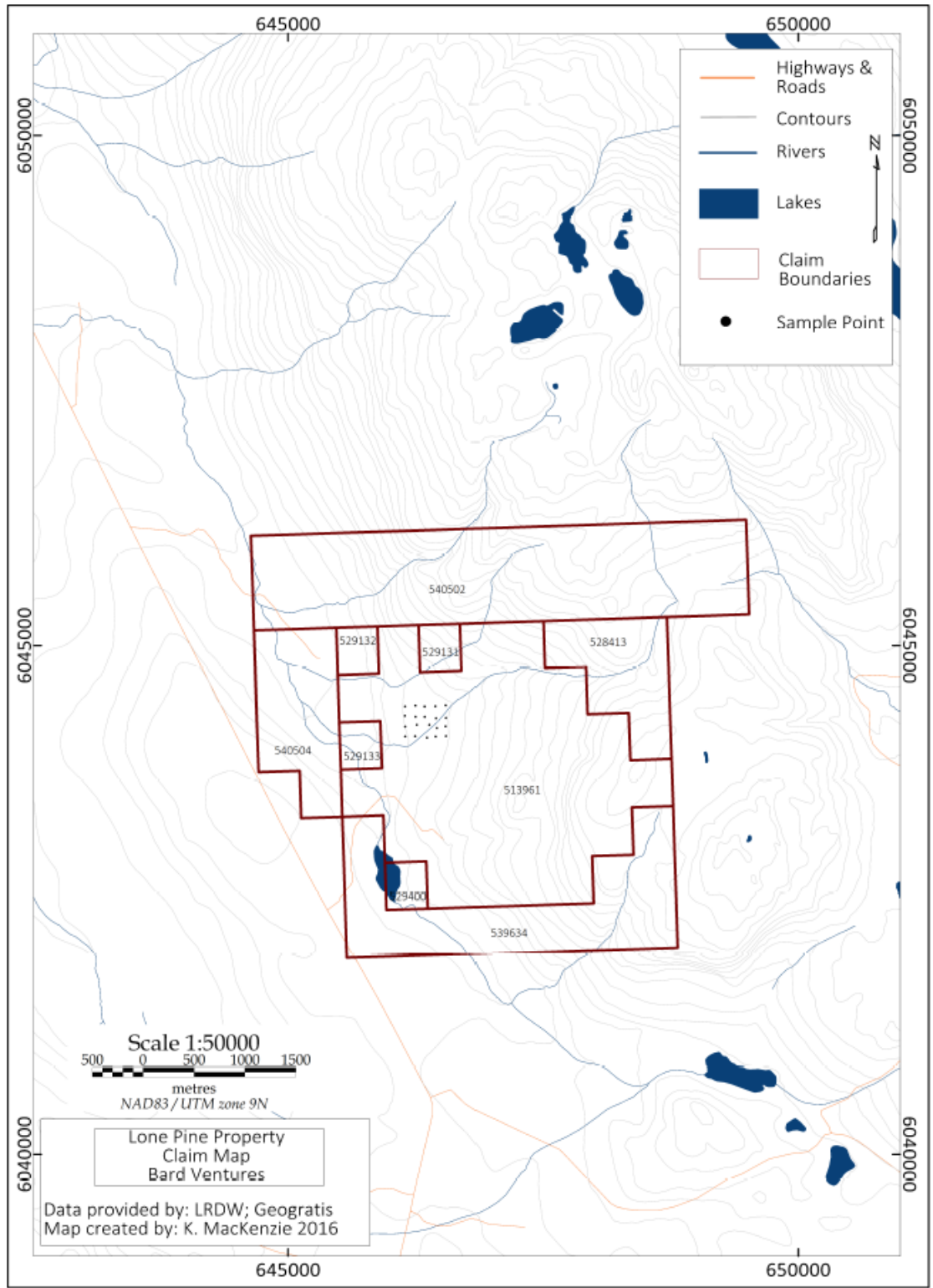


Figure 2: Lone Pine Claims

3.3 PHYSIOGRAPHY AND CLIMATE

The Property is located along the western slopes of the Grouse Mountain Range, a long southerly trending range which leads up to the broad gentle peak of Grouse Mountain, located a few kilometres to the north of the Project area. Locally, the Lone Pine Property is situated on the western slopes and upper plateau of Mineral Hill, a subsidiary ridge of the higher Grouse Mountain Range immediately to the north. Elevations range from approximately 730 m ASL to approximately 1350 m ASL at the summit of Mineral Hill.

The physiography of the project area is best described as moderately mountainous. The mountains here are fairly rounded, with gentle to moderate slopes. The slopes are well drained, but occasional swampy ground can be found in areas where the topography locally flattens. Vegetation in the lower areas on the claim block consists of grassy open meadows, and local mixed deciduous/coniferous forest, with devils club growing in wet areas adjacent to watercourses. The forests cover transitions to thick coniferous forest, comprised of mainly spruce, and hemlock above 850 m elevation. Outcrop exposure in the Mineral Hill area is limited due to a till veneer mantling the slopes of mineral hill at depths of one metre to 30 m based on scattered drill hole casing depths. Outcrop exposure is best developed at higher elevations on steeper slopes and incised creeks. The west and southwest portions of the Property is relatively flat located at the base of the southwest facing slopes. Fishpan Lake is located in the southwest central portion of the Claim block area and is the head waters of Thompson Creek, a northwest flowing drainage paralleling the Grouse Mountain Range. Several major creeks drain the southwest facing slopes of the Property providing adequate water supplies for summer drill programs.

The climate of the area features short cool summers and long, relatively mild winters. Annual temperature variation in the region is approximately -15 to +22 degrees Celsius, snow pack during the winter months range from 1-4 m. While drilling operations can be conducted year round on the Property, the ground is typically snow free by late May.

4. HISTORY

(Miller-Tait, 2000, asst rpt 30735)

The Lone Pine, Huber, or Mineral Hill area has a long history of mineral exploration. First mention of the prospect appears in the Minister of Mines annual report for 1914 wherein they state that Messrs. Bussinger, Barrett and McCormack have sunk a shaft on the Property to a depth 16 feet on a narrow silver-lead-zinc-copper-gold bearing quartz vein. Additional veins discovered in the 1920s were explored by open cuts and short adits.

No further mention is made of the area in any of the literature until 1959, when William Merkley performed some caterpillar stripping, and trenching. At this time open ground in the area was acquired through staking by P.J. Huber. Huber increased his holdings in the area in partnership with WD Yorke- Hardy between 1959 and 1962. Southwest Potash Corporation (later Amax) examined the Property in 1960, and optioned the ground in 1962. Amax conducted geological, geochemical, and magnetometer geophysical surveys over the Alaskite Zone in the southern portions of the Property. Drilling, blasting and chip sampling was undertaken on mineralized outcrops elsewhere on the property.

Canex Aerial Explorations Ltd. optioned the Property in 1964, completing geological mapping and soil geochemical surveys in the Alaskite Zone area. In 1965, Molybdenum Explorations Ltd. ("NPL") became involved in the Property initiating an aggressive exploration program which focused primarily on ground surrounding the Alaskite and Quartz Breccia Zones over a four year period from 1966 to 1969. The work completed by Molybdenum Exploration collectively represents the most extensive historical exploration program undertaken on the Property. In 1965 Molybdenum completed 11.41 km of IP Geophysical surveys highlighting a broad area of high chargeability interpreted to be associated with disseminated mineralization. In 1966 Cominco optioned the Property and completed Property scale mapping at 1:1,200 scale followed by a trenching program and the completion of eight drill holes. During the time of Molybdenum's involvement with the Lone Pine Property a total of 1077 soil samples and 84 silt samples were collected. The Quartz Breccia Zone was mapped at a scale of 1:1,200 and the Alaskite Zone at 1:600 scale. A total of 1,006 m of trenching and stripping was completed on the Quartz Breccia Zone with 915 m completed in the Alaskite Zone. Gill (1984) reports 10 diamond drill holes were completed in the

Quartz Breccia Zone and two in the Alaskite Zone; 102 percussion drill holes totalling 2,882 m were completed in the Alaskite – Quartz Breccia Zone areas. Gill (1984) further states that drill core assays from the Alaskite Zone range from 0.04% MoS₂ to 0.24% MoS₂ and 0.05% Cu to 0.1% Cu, while average core assays over 15.24 m in the Quartz Breccia Zone ranged between 0.02% MoS₂ to 0.08% MoS₂ and 0.02% Cu to 0.41% Cu. Drill hole assays from younger quartz-tetrahedrite veins intersected in the Breccia Zone returned up to 8.0 oz/ton silver over 15.24 m.

No further work was apparently carried out by Molybdenum Explorations following the 1969 field programs and the Claims were forfeited in 1971.

In 1976 Granby Mining optioned the Property following encouraging results from a short soil geochemical survey in a previously unexplored area (Granby Zone) east of the Quartz Breccia Zone. In 1976, Granby completed 682.72 m of percussion drilling in 12 vertical holes (M-1 to M-12) drilled to a maximum depth of 60.96 m. The bulk of this drilling was done in the Granby Zone; one percussion drill hole (M-7) was located approximately 1.0 km east of the Alaskite Zone central to Mineral Hill. Generally low grade molybdenum grades were intersected with best results from the 12 hole drill program reporting from percussion hole M-3 returning 0.30% MoS₂ over 18.29 m or 0.18% MoS₂ over 33.53 m.

In 1978 Granby returned to the Property following the completion of soil, magnetometer and induced polarization surveys. Encouraged by soil geochemical and prospecting results centered on Mineral Hill (Mineral Hill Zone), Granby completed a seven hole (M-13 through M-19) vertical percussion drill program totaling 515.3 m. The results of the 7 hole percussion drill program generally returned low molybdenum values with best results reporting 0.028% MoS₂ over 85.4 m in percussion hole M-14. In addition to the 1978 percussion drill program, three core holes were completed on the Property. One angled BQ drill hole (G78-3) was completed in the Mineral Hill Zone to a depth of 172.9 m intersecting low grade molybdenum mineralization. Best results from drill hole G78-3 returned 0.045% MoS₂ over 26.3 m from 128.7 to 155 m depth. The two remaining vertical NQ core holes evaluated the Quartz Breccia Zone (78-1) and Alaskite Zone (78-2). Vertical diamond drill hole 78-1 intersected continuous molybdenum mineralization over its entire core length from 20.7 m to the end of hole at 377.3 m returning 0.062% MoS₂ over 356.6 m. Vertical drill hole 78-2 intersected continuous mineralization throughout its length from 3.6 m to end of hole at 352.3 m returning 0.057% MoS₂ over 348.7 m. Both 78- 1

and 78-2 drill holes terminated in molybdenum mineralization. In 1979 Noranda Exploration Company Limited purchased the assets of the Zapata Granby Corporation, and thus assumed Granby's obligations and rights under the Huber option agreement. In 1981, 5.5 km's of VLF geophysical surveying and prospecting over the southern and western portions of the Property failed to extend the known mineralized zones and allowed their option to lapse in early 1983. In the same year, Noranda re optioned the Mineral Hill Property to evaluate the eastern portions of the Claim group for either "Sam Goosly" or Volcanogenic Massive Sulphide style mineralization. A total of 33.2 km of line cutting was established over which 352 soil samples were collected and 5km of HLEM, 6.82 km of magnetometer, 5.65 km of VLF-EM and 2.7 km of IP geophysical surveys were completed along with 19 line km of geological mapping. Despite the generally positive results no further work was conducted and Noranda terminated their option in 1984.

In 1985, Daffrey Resources optioned the Property and embarked on a program of trench rehabilitation and re-sampling in the Quartz Breccia Zone, and evaluated old workings on silver bearing quartz veins to assess the precious metal potential of the Property. One sample from the Quartz Breccia Zone (Robertson 1988) is reported to have returned 659 oz/ton Ag and 0.29 oz/ton Au from a narrow tetrahedrite vein exposed by trenching. The sampling program was followed by a 12 hole percussion drill program in the Alaskite, and Quartz Breccia Zones.

In 1987, Southern Cross Gold Inc. assumed the Daffrey option and continued to evaluate the Property for its precious metal potential. Southern Cross completed an eight hole NQ drill program totaling 521.8 m with three holes located in the Quartz Breccia Zone, four holes in the Alaskite Zone and one isolated drill hole located several hundred meters west of the Alaskite Zone. Sampling of the drill core was completed over selected core intervals with analysis completed for Au, Ag, Cu, Pb, Zn and Mo.

In 1991 and 1992, Messrs. Lorne Warren and P.J. Hubert completed limited soil sampling programs from which a number of Cu/Mo point soil anomalies were recognized, some of which are coincident with elevated Au, Ag, Pb and Zn soil geochemical results. The claims covering the Lone Pine Project area were allowed to lapse in 1999.

The Merkley brothers of Houston BC staked the first Lone Pine Claims in 2002. From 2003 to 2006 the claims were held in good standing with the filing of assessment work comprising road and trail rehabilitation, prospecting and rock sampling.

During January and February 2007, Bard Ventures Ltd. completed its initial drill program comprised of seven (7) NQ holes totaling 2836.4 m. Two holes were drilled in each of the Alaskite and Quartz Breccia Zones and three holes were completed in the area between the two zones.

Additionally, in late 2007, Bard Ventures completed 16 NQ drill holes in the Alaskite Zone; another 16 drill holes between January and April 2008 (9 in the Alaskite Zone, 5 in the Quartz Breccia Zone and 2 in the Granby Zone) and finally, a third phase of drilling; occurring between and July and October 2008, saw 16 drill holes drilled in the Alaskite Zone. A total of 48 NQ holes were drilled during this period totalling 24,175.9 m completed.

5. GEOLOGICAL SETTING

5.1 REGIONAL GEOLOGY

(Miller-Tait, 2000, asst rpt 30735)

The Lone Pine Project (Figure 3) is located in the Stikine Terrain within the intermontane tectonostratigraphic belt, and is dominantly underlain by Mesozoic Hazelton Group rocks of the Hazelton Trough. Locally the Hazelton Group is overlain by sedimentary rocks of the Upper Jurassic Bowser Lake Group, and underlain by Triassic Takla Group Island Arc derived Volcanic, and Volcano-sedimentary rocks. The Hazelton Group formed from late Triassic to mid Jurassic in an intra-Island Arc setting.

These Mesozoic rocks are principally sub-aerial reddish brown to local greenish pyroclastics and flows intercalated with some Arc derived volcano-sedimentary and limited non-marine sedimentary rocks. In the Lone Pine area the Babine shelf facies rocks have been assigned to the Lower Jurassic Telkwa formation, and these rocks all tend to exhibit a north-westerly strike.

Numerous intrusive stocks occur within the area with Mesozoic Topley granites having been emplaced contemporaneously with the Babine shelf Hazelton Group volcanics. In the late Cretaceous the Bulkley granitic and lesser gabbroic stocks, dykes, and plugs were forcibly emplaced within the older volcano-sedimentary stratigraphy. Granitic Tertiary intrusives are also present in various locales within the general area.

The dominant structure within the general area appears to be northwesterly striking normal faulting, with limited strike-slip displacement, with the subordinate fault set striking to the northeast.

5.2 LOCAL GEOLOGY

(Miller-Tait, 2000, asst rpt 30735)

The Property (Figure 3) is primarily underlain by a sequence of northwesterly striking andesitic flows and pyroclastics, with lesser rhyolite and basalts of the Island Arc derived Telkwa formation of the Lower Jurassic Hazelton Group. Some minor sedimentary rocks of the Upper Jurassic Bowser Lake Group have been noted to be present in discrete locales, and these are typically argillites, quartzite, and greywackes with local calcareous content. All of the aforementioned rocks are altered or hornfelsed, proximal to the contacts of Bulkley Intrusions that outcrop in the southern and western portions of the Property, and which may underlie a thin veneer of hornfels elsewhere.

In the northern Quartz Breccia Zone the hornfels is chloritic, exhibiting a greenish hue, while in the Alaskite Zone the hornfels are compact and biotitic. Robertson (1987) estimated that the area of hornfels alteration covers an area of approximately 2000 by 2500 meters. Gill and Myers (1984) mapped a trachytic flow on the upper plateau of Mineral Hill, reported to resemble the Tertiary Goosly Lake Volcanics which have been mapped elsewhere in the general area.

On the Property the principal intrusives are a porphyritic quartz-monzonite (referred to in the literature as "quartz feldspar porphyry"), and the lesser Alaskite to the south, and finally a

diorite intrusive is noted to the east of the Mineral Hill area which is to the east of the Alaskite Zone. Local aplitic and monzonitic dykes are found in the area of the quartz-monzonite stock.

The Bulkley intrusives are deemed Cretaceous in age; K-Ar dating conducted in 1985 by the BC Geological Survey returned a 69.5 +/- 2 million year date (N. Carter personal communication). Whole-Rock dating was performed on a biotite hornfels in the vicinity of the Alaskite intrusive, as the Alaskite did not contain sufficient biotite for dating purposes. Carter (1981) indicates that the sequence of multiple phase Bulkley intrusive in the Alaskite area was, Alaskite, porphyritic quartz monzonite, followed by a post mineral monzonite dyke.

A mineralized breccia (Quartz Breccia Zone) with siderite cement has been noted to have been formed locally on the Property near the northern margin of the main intrusive body. Quite often around the margins of the intrusives drill holes encountered alternating hornfels, and intrusives of varying types. This pattern may be the result of dykes forming on the periphery of the intrusive, apophyses, sills, or possibly even large xenoliths (if hornfelsing can be shown to be a product of earliest intrusion) of hornfelsed sedimentary or volcano-sedimentary rock.

It has been postulated (Robertson 1987) that as a result of increased brittleness due to contact metamorphism, and fracturing due to forcible emplacement by one or more phases of intrusive, the hornfels became a permissive host for fracture controlled vein emplacement and local disseminated Molybdenum/Copper mineralization.

The Lone Pine Property is classified as a low fluorine porphyry molybdenum deposit which is classified by the BC Geological Survey as deposit type L05 (Sinclair, 1995). These deposits are characterized by stockworks of molybdenite-bearing quartz veinlets and fractures in intermediate to felsic rocks and associated country rocks.

Porphyry molybdenum deposits are associated with a variety of host rocks. Tuffs, flows and other extrusive volcanic rocks may be associated with deposits related to sub volcanic intrusive rocks ranging from granite to granodiorite and their fine grained equivalents; porphyritic quartz monzonite are common to these deposits. Porphyry deposits of this class are characterized by their low fluorine contents compared to intrusive rocks associated with the Climax-type porphyry Mo deposits (Sinclair, 1995).

Porphyry molybdenum deposits can vary widely in shape from inverted cup, to roughly cylindrical, to highly irregular. They are typically hundreds of metres across and range from tens to hundreds of metres in vertical extent. Mineralization is predominately structurally controlled consisting primarily of stockworks of crosscutting fractures and quartz veins, veinlets, vein sets and breccias superimposed on intermediate to felsic intrusive rocks and outward to the surrounding country rock. Multiple stages of mineralization are commonly present. Molybdenite is the principal ore mineral; chalcopyrite, scheelite and galena may also be present but are generally subordinate (Sinclair, 1995).

The low fluorine type porphyry molybdenum deposits are thought to originate from large volumes of magmatic, highly saline aqueous fluids under pressure which strip Mo and other metals from temporally and genetically related magma. Multiple stages of brecciation related to explosive fluid pressure release from the upper parts of small intrusions result in deposition of ore and gangue minerals in crosscutting fractures, veinlets and breccias in the outer carapace of the intrusions and in associated country rocks. Incursion of meteoric water during waning stages

of the magmatic-hydrothermal system may result in late alteration of the host rocks, but do not play a significant role in the ore-forming process (Sinclair, 1995).

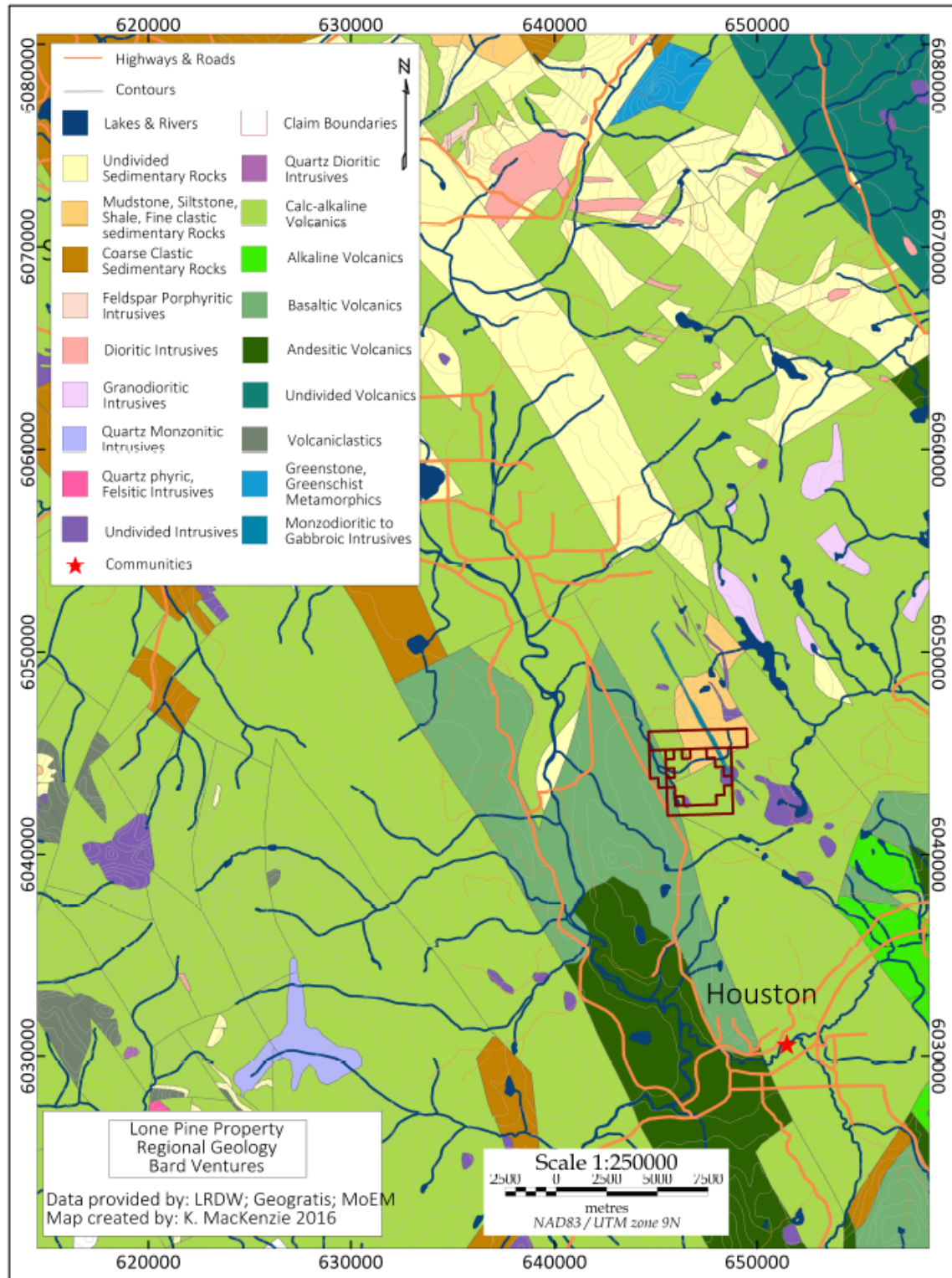


Figure 3: Lone Pine Regional Geology

6. SAMPLING PROGRAM

6.1 GEOCHEMICAL SAMPLES

Between Late September and Early October 2015, R. Beck Consulting Services collected forty (40) geochemical samples on the Lone Pine Property. The samples were taken from the B-horizon in all locations as well as composite samples from the same location.

R. Beck Consulting Services personnel collected the samples using plastic shovels and plastic with careful attentiveness to selecting particular horizons to be analyzed. All samples were marked with orange flagging tape, aluminum marked butter tags and then photographed where possible/applicable. All sites were identified using handheld Garmin GPS units. Samples were collected, placed into a standard paper kraft soil bag, tied off with flagging tape and placed into individual sealable plastic sandwich bags to avoid cross contamination. Samples were taken at 100m intervals along 4 separate lines. Line spacing was also 100m for a total of 20 sample site locations.

At each location an area was selected that boasted the most favourable medium to expose the B-horizon of the soil cross section. The first sample taken from the site was the sample to be tested using a typical ICP-MS soil analysis and the sample was from the B-horizon only. The trowel was then cleaned thoroughly before a second sample was taken from the same location within the same hole. The second sample was a composite that consisted of sampling just below the organic mat into the B-horizon and often into the underlying C and E horizons. These samples were being tested via the analysis for MMI (mobile metal ion) thus the field measures taken in making certain all digging tools were plastic and not metal. The composite sample channel from the inside wall of the hole was on average 10 cm wide and 25-45 cm in depth. An approximate 500m x 400m area was covered. A total of 40 samples were taken from 20 sample site locations; 20 B-horizon soil samples and 20 composite samples including the B-horizon. All samples taken are found in Appendix IV.

For the purpose of identifying anomalous soils in the area known as the Quartz Breccia Zone a small grid was designed to cover an area that included the 5 most recent drill holes into the Quartz Breccia Zone done in 2008. As the anomalous elements and metals identified in the 2008 drill program were Mo, Au, Ag, Pb and Zn the same elements and metals were contoured in geosoft to produce representative map images of the various metals (Appendix III).

These samples are lab numbers 3001 to 3040 inclusive See Appendix I for assay analysis results and Appendix I for associated field notes for each of the selected 40 samples analyzed.

Location was determined using a handheld Garmin CSx GPS unit. Samples were collected in kraft sample bags and uniquely labeled with sample tags. Samples were taken by R. Beck personnel and upon completion of the sampling program all samples

were delivered to and submitted to the SGS lab in Burnaby, B.C. at the end of the program.

All samples were transported directly to the SGS lab in Burnaby B.C. via Bandstra trucking from Smithers, B.C.

7. SAMPLING

7.1 SAMPLING METHOD AND APPROACH

See Sections 6.1 and 6.2 for details of on-site sampling method. After sample collection, sample bags were stored by Mr. R. Beck until they were delivered to the SGS Lab in Burnaby, BC. Mr. Beck personally shipped the samples to the lab from Smithers B.C. using Bandstra trucking. The samples were received at the lab 2 days after shipment date.

7.2 SAMPLE PREPARATION, ANALYSES, AND SECURITY

The sample analyses for both ICP-OES and MMI are shown in Appendix II.

7.3 DATA VERIFICATION

No standards or blanks were submitted although the labs run their own tests regularly.

7.4 RESULTS

All assay results may be found in Appendix I.

8. INTERPRETATION AND CONCLUSIONS

Both the ICP-OES (predominantly measured in ppm) and the MMI analyses (measured in ppb) have successfully outlined anomalous regions within the 500 m x 400 m soil grid designed over the Quartz Breccia Zone in the northwest of the property claims. All modelled contour maps (Appendix III) compare remarkably well and both methods of analysis outline the exact same areas as being anomalous. Though the differences in ppm and ppb are significant it does not take away from the fact that the anomalies in this area are real. The only element to not be contoured for the purpose of this report was the ICP-OES of Ag as all values recorded were <2 ppm and therefore would not plot.

It is of great interest that these methods compare so well and across numerous elements as well having comparable anomalous areas. The presence of Ag, Cu, Mo, Pb and Zn ties in very well with the results of the historical Quartz Breccia drilling in recent years. It is the Quartz Breccia Zone alone that has, to date, illustrated the presence of Pb and Zn compared to other regions; i.e. the Alaskite Zone, where the anomalous values are Mo with minor Cu and localized Ag.

9. RECOMMENDATIONS

The results of the 2015 program were excellent in that we were able to effectively compare two different soil methods and analyses and reach the same conclusion with both; anomalies. For future geochemical programs in similar terrain I would recommend ICP-OES when budgets are tight as there is a significant cost difference between ICP and MMI and only one laboratory that analyzes using the MMI procedure. Should a budget be plentiful and time be equally in favour, then MMI would be a good choice for soil analysis as detects at a much lower fraction size.

In future programs and prior to any further drilling it is recommended that the property be examined for “where have we not seen any exploration”, as well as, areas peripheral to main target horizons and consider an initial wide spaced soil program that covers and larger area as this approach, in a cost effective manner, can possibly identify new unfound target areas.

An infill soil program coupled with a quick mapping of the gridded area would be a second phase that would better delineate any new potential targets.

10. STATEMENT OF COSTS

BARD VENTURES (sampling program) LONE PINE PROPERTY					
Personnel	Field Days	Days	Rate	Subtotal	
Richard Beck	Sept 24 2015 & Oct 6 2015	2	\$450.00	\$900.00	
Howard Inkster	Sept 24 2015 & Oct 6 2015	2	\$350.00	\$700.00	
				\$1,600.00	\$1,600.00
Field Equipment Rentals		No.	Rate	Subtotal	
Truck	Sept 24 2015 & Oct 6 2015	2	\$120.00	\$240.00	
Truck km's	Sept 24 2015 & Oct 6 2015	200	\$0.52	\$104.00	
Quad w/ trailer	Sept 24 2015 & Oct 6 2015	2	\$200.00	\$400.00	
				\$744.00	\$744.00
Consumables cost		No.	Rate	Subtotal	
Rice bags		5	\$0.95	\$4.75	
soil bags		40	\$0.26	\$10.40	
				\$15.15	\$15.15
Shipping costs		No.	Rate	Subtotal	
samples	per shipment	1	50	\$50.00	
				\$50.00	\$50.00
Per diem Food	Rates per day	No.	Rate	Subtotal	
Meals	daily	4	\$17.50	\$70.00	
				\$70.00	\$70.00
Analytical costs	Rates per day	No.	Rate	Subtotal	
Samples MMI		20	\$46.00	\$920.00	
Samples ICP		20	\$18.00	\$360.00	
				\$1,280.00	\$1,280.00
Asst rpt writing & GIS	Rates per day	No.	Rate	Subtotal	
Richard Beck		12	\$55.00	\$660.00	
GIS		6	\$70.00	\$420.00	
				\$1,080.00	\$1,080.00
TOTAL Expenditures	w/o taxes				\$4,839.15

11. REFERENCES

1. Miller-Tait, J. (2009), Diamond Drilling Report on the 2007 Phase 2 and 2008 Phases 1&2 Drill Programs; Lone Pine Property Assessment Report # 30375

12. STATEMENT OF QUALIFICATIONS

I, Richard Beck, residing at 4901 Slack Road, Smithers, British Columbia, do hereby certify that:

- I am the sole proprietor of R. Beck Consulting Services and I was the former President of UTM Exploration Services Ltd.
- I attended Dalhousie University from 1985 to 1989, specializing in Geology;
- Between 1987 and 1990, and 1990 to present I have been continuously employed as a junior geologist/project manager/senior exploration geologist in the mineral exploration sector;
- I did visit the property acting on behalf of UTM Exploration Services Ltd at the time and I did witness the sample locations for which this report identifies; however, I did not supervise the 2014/2014 sampling program or oversee any of the data collected; I have solely compiled the data collected herein and written the assessment report

Date at Smithers, British Columbia, and this 29th day of February, 2016.



Richard Beck

R. Beck Consulting Services

APPENDIX I: ASSAY CERTIFICATES



Certificate of Analysis

Work Order : VC153711

[Report File No.: 0000014986]

To: **Richard Beck**
COD SGS ASSAYERS
4901 Slack Road
Smithers
BC V0J 2N2

Date: Dec 31, 2015

P.O. No. : Richard Beck/Lone Pine
Project No. : -
No. Of Samples : 20
Date Submitted : Dec 14, 2015
Report Comprises : Pages 1 to 6
(Inclusive of Cover Sheet)

Distribution of unused material:
Active files:

Certified By :

Cam Chiang
Assistant Operations Manager

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at <http://www.scc.ca/en/search/palcan/sgs>

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample
n.a. = Not applicable -- = No result
*INF = Composition of this sample makes detection impossible by this method
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion
Methods marked with an asterisk (e.g. *NAA00V) were subcontracted
Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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Element Method Det.Lim. Units	WtKg G_WGH79 0.01 kg	@Ag GE_ICP14B 2 ppm	@Al GE_ICP14B 0.01 %	@As GE_ICP14B 3 ppm	@Ba GE_ICP14B 5 ppm	@Be GE_ICP14B 0.5 ppm	@Bi GE_ICP14B 5 ppm	@Ca GE_ICP14B 0.01 %
3001	0.553	<2	1.44	10	157	<0.5	<5	0.31
3003	0.388	<2	1.59	15	121	<0.5	<5	0.29
3005	0.304	<2	1.44	12	124	<0.5	<5	0.28
3007	0.483	<2	1.38	9	147	<0.5	<5	0.39
3009	0.520	<2	1.62	17	164	<0.5	<5	0.55
3011	0.508	<2	1.49	11	140	<0.5	<5	0.50
3013	0.333	<2	1.53	12	141	<0.5	<5	0.45
3015	0.365	<2	1.27	7	211	<0.5	<5	0.41
3017	0.460	<2	1.44	14	238	<0.5	<5	0.28
3019	0.427	<2	1.17	9	183	<0.5	<5	0.54
3021	0.433	<2	2.38	13	251	0.7	<5	1.05
3023	0.648	<2	1.19	9	85	<0.5	<5	0.36
3025	0.410	<2	1.11	7	203	<0.5	<5	0.42
3027	0.452	<2	1.29	8	184	<0.5	<5	0.58
3029	0.412	<2	1.84	9	259	0.6	<5	0.91
3031	0.233	<2	1.71	13	181	<0.5	<5	1.19
3033	0.303	<2	1.39	11	91	<0.5	<5	0.42
3035	0.431	<2	1.90	10	233	0.6	<5	0.58
3037	0.401	<2	2.25	15	234	0.6	<5	0.67
3039	0.488	<2	1.57	17	196	<0.5	<5	0.56

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Final : VC153711 Order: Richard Beck/Lone Pine
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Element	@Cd	@Co	@Cr	@Cu	@Fe	@Hg	@K	@La
Method	GE_ICP14B	GE_ICP14B	GE_ICP14B	GE_ICP14B	GE_ICP14B	GE_ICP14B	GE_ICP14B	GE_ICP14B
Det.Lim.	1	1	1	0.5	0.01	1	0.01	0.5
Units	ppm	ppm	ppm	ppm	%	ppm	%	ppm
3001	1	9	18	35.9	2.93	<1	0.07	6.1
3003	1	11	20	31.2	3.28	<1	0.11	6.1
3005	1	9	19	25.0	2.87	<1	0.09	6.8
3007	1	9	17	24.0	2.79	<1	0.07	5.5
3009	1	14	24	29.4	3.49	<1	0.07	11.2
3011	2	9	19	36.1	2.95	<1	0.12	6.8
3013	1	11	20	30.8	3.10	<1	0.09	7.4
3015	1	9	15	30.0	2.65	<1	0.08	6.6
3017	4	9	15	58.5	2.88	<1	0.09	5.2
3019	1	9	15	27.2	2.48	<1	0.09	5.1
3021	2	11	34	153	3.63	<1	0.24	18.6
3023	1	8	15	30.4	2.41	<1	0.08	4.7
3025	2	12	13	35.2	2.28	<1	0.09	6.2
3027	2	10	16	34.8	2.59	<1	0.09	6.5
3029	2	11	22	85.5	3.28	<1	0.13	10.6
3031	1	8	21	101	2.92	<1	0.10	8.8
3033	1	11	19	35.9	3.04	<1	0.09	5.9
3035	3	14	23	135	3.44	<1	0.15	9.0
3037	2	12	27	160	3.87	<1	0.14	14.6
3039	2	13	22	43.7	3.44	<1	0.11	11.9

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Final : VC153711 Order: Richard Beck/Lone Pine
Report File No.: 0000014985

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Element Method Det.Lim. Units	@Li	@Mg	@Mn	@Mo	@Na	@Ni	@P	@Pb
	GE_ICP14B 1 ppm	GE_ICP14B 0.01 %	GE_ICP14B 2 ppm	GE_ICP14B 1 ppm	GE_ICP14B 0.01 %	GE_ICP14B 1 ppm	GE_ICP14B 0.01 %	GE_ICP14B 2 ppm
3001	14	0.52	965	2	0.02	21	0.06	7
3003	13	0.65	633	2	0.01	23	0.09	9
3005	13	0.57	589	2	0.01	24	0.07	5
3007	12	0.51	744	1	0.01	20	0.06	6
3009	15	0.61	1160	<1	0.02	23	0.07	11
3011	15	0.60	657	8	0.02	21	0.06	6
3013	15	0.61	818	1	0.02	21	0.10	9
3015	13	0.44	1200	3	0.01	21	0.09	6
3017	10	0.46	863	16	0.01	14	0.07	24
3019	12	0.42	1070	3	0.02	19	0.08	6
3021	19	0.73	995	25	0.02	35	0.09	9
3023	11	0.42	617	12	0.01	14	0.03	8
3025	8	0.28	2340	6	0.01	17	0.10	9
3027	12	0.44	1330	2	0.01	21	0.10	7
3029	14	0.51	1400	8	0.02	28	0.10	8
3031	14	0.56	521	3	0.02	25	0.08	8
3033	12	0.51	781	4	0.02	18	0.05	10
3035	11	0.47	1680	5	0.02	27	0.06	10
3037	16	0.72	1090	7	0.02	31	0.11	10
3039	13	0.60	1500	3	0.02	25	0.11	13

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Element Method Det.Lim. Units	@S GE_ICP14B 0.01 %	@Sb GE_ICP14B 5 ppm	@Sc GE_ICP14B 0.5 ppm	@Sn GE_ICP14B 10 ppm	@Sr GE_ICP14B 5 ppm	@Ti GE_ICP14B 0.01 %	@V GE_ICP14B 1 ppm	@W GE_ICP14B 10 ppm
3001	0.02	<5	3.3	<10	20	0.06	56	<10
3003	0.01	<5	3.7	<10	19	0.06	61	<10
3005	0.02	<5	3.6	<10	19	0.06	54	<10
3007	0.02	<5	3.1	<10	29	0.06	51	<10
3009	0.03	<5	6.0	<10	34	0.05	66	<10
3011	0.03	<5	4.2	<10	30	0.06	57	<10
3013	0.02	<5	3.9	<10	31	0.06	59	<10
3015	0.03	<5	2.8	<10	30	0.06	46	<10
3017	0.03	8	2.6	<10	19	0.05	50	<10
3019	0.04	<5	2.4	<10	36	0.05	44	<10
3021	0.06	6	9.4	<10	56	0.04	62	<10
3023	0.02	<5	2.9	<10	19	0.06	46	<10
3025	0.05	6	1.8	<10	33	0.05	42	<10
3027	0.06	<5	2.6	<10	37	0.05	47	<10
3029	0.05	6	5.7	<10	42	0.04	53	<10
3031	0.09	6	6.4	<10	49	0.03	54	<10
3033	0.02	<5	3.0	<10	26	0.07	56	<10
3035	0.03	<5	5.4	<10	36	0.05	62	<10
3037	0.04	<5	8.6	<10	46	0.05	64	<10
3039	0.02	<5	6.1	<10	34	0.04	65	<10

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Final : VC153711 Order: Richard Beck/Lone Pine
 Report File No : 0000014986

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Element Method Det.Lim. Units	@Y	@Zn	@Zr
	GE_ICP148 0.5 ppm	GE_ICP148 1 ppm	GE_ICP148 0.5 ppm
3001	4.5	124	0.6
3003	4.3	84	<0.5
3005	5.6	89	0.7
3007	4.0	80	0.8
3009	10.6	82	1.5
3011	7.1	111	1.2
3013	5.8	108	0.7
3015	4.4	123	0.8
3017	3.1	449	<0.5
3019	4.4	117	1.3
3021	26.1	150	5.6
3023	3.0	93	1.1
3025	3.6	146	0.8
3027	5.6	119	1.2
3029	13.5	196	3.3
3031	13.4	83	3.2
3033	3.8	96	<0.5
3035	8.5	197	1.6
3037	21.3	115	4.0
3039	14.1	114	1.9

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Certificate of Analysis

Work Order : VC153710
[Report File No.: 0000014936]

To: Richard Beck
COD SGS ASSAYERS
4901 Slack Road
Smithers
BC V0J 2N2

Date: Dec 30, 2015

P.O. No. : Richard Beck/Lone Pine
Project No. : -
No. Of Samples : 20
Date Submitted : Dec 14, 2015
Report Comprises : Pages 1 to 8
(Inclusive of Cover Sheet)

Distribution of unused material:
Active files:

Certified By :

Cam Chiang
Assistant Operations Manager

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Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample
n.a. = Not applicable -- = No result
*INF = Composition of this sample makes detection impossible by this method
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion
Methods marked with an asterisk (e.g. *NAA08V) were subcontracted
Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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Element Method Det.Lim. Units	Ag	Al	As	Au	Ba	Bi	Ca	Cd
	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	0.5	1	10	0.1	10	0.5	2	1
	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
3002	36.7	104	<10	3.2	2510	<0.5	402	18
3004	46.1	123	10	5.9	2770	<0.5	325	10
3006	51.0	113	10	4.2	2940	<0.5	340	19
3008	46.8	96	<10	3.1	2890	<0.5	531	34
3010	28.1	100	<10	0.2	4010	<0.5	706	43
3012	29.6	94	<10	3.4	2730	<0.5	543	225
3014	28.8	146	<10	2.6	2630	<0.5	397	70
3016	47.4	115	<10	4.4	3030	<0.5	422	90
3018	203	197	10	4.4	3410	0.8	231	362
3020	32.3	87	<10	1.9	2530	<0.5	505	68
3022	193	55	<10	0.9	4020	<0.5	980	58
3024	90.2	96	<10	0.6	1110	<0.5	483	42
3026	25.8	196	<10	0.4	2260	<0.5	256	188
3028	22.6	131	<10	0.4	1870	<0.5	439	94
3030	50.8	85	<10	0.2	3680	<0.5	835	137
3032	2.3	47	<10	0.3	3930	<0.5	1090	89
3034	42.1	162	<10	0.4	1140	<0.5	424	118
3036	81.8	129	<10	0.5	2670	<0.5	541	286
3038	128	104	<10	0.5	6310	<0.5	889	108
3040	79.9	73	<10	0.4	2840	<0.5	610	52
*Rep 3006	51.2	110	<10	4.0	2800	<0.5	336	18
*Std MMISRM19	24.1	20	10	5.0	1830	<0.5	894	38
*Blk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	2	<1

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Element Method Det.Lim. Units	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu
	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	2	1	100	0.2	10	0.5	0.2	0.2
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3002	54	20	<100	4.6	280	10.7	4.9	3.6
3004	85	22	<100	3.6	460	10.4	4.5	3.8
3006	95	19	<100	3.5	280	23.2	9.8	7.9
3008	62	12	<100	2.3	140	11.0	5.3	3.6
3010	306	26	<100	0.3	360	73.0	35.5	23.6
3012	41	19	<100	0.3	300	22.1	11.5	7.5
3014	158	58	<100	1.3	430	40.8	20.9	10.9
3016	73	30	<100	2.2	290	17.4	9.7	5.3
3018	65	30	<100	6.4	780	17.5	10.5	4.3
3020	66	24	<100	1.9	140	12.5	6.2	3.9
3022	79	35	<100	0.3	1020	62.0	36.6	15.6
3024	66	34	<100	1.6	590	9.8	5.0	3.0
3026	44	42	<100	3.8	220	39.8	25.9	5.4
3028	95	20	<100	3.8	130	30.3	16.4	8.4
3030	34	15	<100	0.9	370	39.7	23.6	10.3
3032	15	167	<100	0.8	1870	36.0	33.0	5.3
3034	87	43	<100	3.5	280	19.3	10.7	4.4
3036	84	25	<100	3.7	3210	62.5	39.1	13.3
3038	53	22	<100	0.6	5010	122	93.9	21.2
3040	155	23	<100	0.4	1580	51.2	25.3	19.8
*Rep 3006	97	22	<100	3.4	290	22.0	9.4	7.7
*Std MMISRM19	23	301	<100	4.4	1950	12.6	6.9	2.5
*Blk BLANK	<2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2

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Element Method Det.Lim. Units	Fe GE_MMI_M 1 ppm	Ga GE_MMI_M 0.5 ppb	Gd GE_MMI_M 0.5 ppb	Hg GE_MMI_M 1 ppb	In GE_MMI_M 0.1 ppb	K GE_MMI_M 0.5 ppm	La GE_MMI_M 1 ppb	Li GE_MMI_M 1 ppb
3002	18	2.5	15.6	<1	<0.1	17.1	19	<1
3004	16	1.4	14.7	<1	<0.1	106	20	<1
3006	20	2.0	31.1	<1	<0.1	95.1	38	<1
3008	21	1.8	14.6	<1	<0.1	12.4	15	<1
3010	41	1.1	87.8	<1	<0.1	27.5	96	<1
3012	21	1.4	27.6	<1	<0.1	105	24	1
3014	52	1.4	43.1	<1	<0.1	47.9	47	<1
3016	29	2.3	23.1	<1	<0.1	34.9	25	<1
3018	42	4.2	16.3	<1	0.1	27.8	21	2
3020	22	1.5	15.8	<1	<0.1	59.2	15	1
3022	17	0.7	69.1	<1	<0.1	65.9	33	4
3024	26	2.0	12.6	<1	<0.1	20.3	13	<1
3026	43	2.7	25.1	<1	0.1	49.3	13	1
3028	25	1.4	35.1	<1	<0.1	42.0	27	<1
3030	18	0.8	42.9	<1	<0.1	24.7	25	<1
3032	30	0.6	26.0	<1	<0.1	24.0	12	3
3034	52	1.9	19.0	<1	<0.1	18.4	21	<1
3036	23	0.9	58.5	<1	<0.1	71.4	51	<1
3038	25	<0.5	104	<1	<0.1	16.3	61	<1
3040	18	1.1	75.6	<1	<0.1	24.4	49	<1
*Rep 3006	22	2.4	30.4	<1	<0.1	93.7	38	<1
*Std MMISRM19	10	<0.5	14.4	<1	<0.1	86.1	3	1
*Blk BLANK	<1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1

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Element Method Det.Lim. Units	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb
	GE_MMI_M 0.5 ppm	GE_MMI_M 100 ppb	GE_MMI_M 2 ppb	GE_MMI_M 0.5 ppb	GE_MMI_M 1 ppb	GE_MMI_M 5 ppb	GE_MMI_M 0.1 ppm	GE_MMI_M 5 ppb
3002	12.6	6800	9	0.6	38	230	1.5	88
3004	25.2	2500	13	<0.5	41	131	3.0	241
3006	39.2	4400	22	<0.5	87	279	1.5	110
3008	11.0	5100	6	<0.5	36	345	1.6	69
3010	30.4	5400	6	<0.5	230	374	0.8	162
3012	39.8	5900	22	<0.5	68	385	1.2	71
3014	28.5	7300	7	<0.5	103	423	2.1	238
3016	30.4	15400	31	<0.5	51	715	1.7	79
3018	8.9	7500	64	1.7	40	185	2.5	1510
3020	51.1	13800	32	<0.5	34	434	1.7	74
3022	84.7	13600	398	<0.5	107	1080	0.2	53
3024	16.1	8100	123	<0.5	34	250	1.5	122
3026	35.7	8600	14	<0.5	36	365	1.7	263
3028	29.9	8400	18	<0.5	72	505	1.8	102
3030	45.8	5600	35	<0.5	73	606	0.4	64
3032	73.3	6200	8	<0.5	29	211	0.2	189
3034	7.5	4000	8	<0.5	44	403	1.5	220
3036	44.4	7300	6	<0.5	112	958	0.4	148
3038	56.1	3900	<2	<0.5	150	930	0.2	194
3040	34.2	4500	34	<0.5	170	539	0.8	52
*Rep 3006	37.9	4600	20	<0.5	87	263	1.6	109
*Std MMISRM19	194	7000	9	<0.5	18	1920	0.4	1000
*Blk BLANK	<0.5	<100	3	<0.5	<1	<5	0.1	<5

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Element Method Det.Lim. Units	Pd GE_MMI_M 1 ppb	Pr GE_MMI_M 0.5 ppb	Pt GE_MMI_M 0.1 ppb	Rb GE_MMI_M 1 ppb	Sb GE_MMI_M 0.5 ppb	Sc GE_MMI_M 5 ppb	Sm GE_MMI_M 1 ppb	Sn GE_MMI_M 1 ppb
3002	<1	7.1	<0.1	397	<0.5	9	12	<1
3004	<1	7.1	<0.1	251	<0.5	7	11	<1
3006	<1	15.3	<0.1	368	<0.5	17	25	<1
3008	<1	6.1	<0.1	300	<0.5	8	12	<1
3010	<1	41.3	<0.1	9	<0.5	61	69	<1
3012	<1	11.0	<0.1	30	1.2	16	23	<1
3014	<1	18.8	<0.1	115	0.8	57	33	<1
3016	<1	9.3	<0.1	288	1.9	21	17	<1
3018	<1	7.1	<0.1	308	12.0	43	12	<1
3020	<1	6.1	<0.1	426	1.0	11	11	<1
3022	<1	16.5	<0.1	123	2.1	21	42	<1
3024	<1	5.5	<0.1	253	2.4	14	10	<1
3026	<1	6.1	<0.1	384	0.5	49	13	<1
3028	<1	12.7	<0.1	400	<0.5	24	26	<1
3030	<1	12.4	<0.1	197	<0.5	20	28	<1
3032	<1	4.5	<0.1	96	<0.5	26	13	<1
3034	<1	8.0	<0.1	289	<0.5	37	14	<1
3036	<1	19.7	<0.1	331	<0.5	90	37	<1
3038	<1	24.4	<0.1	191	<0.5	105	60	<1
3040	<1	26.9	<0.1	44	0.8	25	60	<1
*Rep 3006	<1	15.5	<0.1	364	<0.5	18	25	<1
*Std MMISRM19	<1	2.3	<0.1	209	0.8	14	9	<1
*Blk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1

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Element Method Det.Lim. Units	Sr	Ta	Tb	Te	Th	Ti	Tl	U
	GE_MMI_M 10 ppb	GE_MMI_M 1 ppb	GE_MMI_M 0.1 ppb	GE_MMI_M 10 ppb	GE_MMI_M 0.5 ppb	GE_MMI_M 10 ppb	GE_MMI_M 0.1 ppb	GE_MMI_M 0.5 ppb
3002	1480	<1	2.1	<10	3.0	80	0.3	5.0
3004	1300	<1	2.0	<10	4.2	60	0.1	9.6
3006	1520	<1	4.2	<10	6.0	80	0.2	9.7
3008	2940	<1	2.1	<10	1.6	<10	0.1	6.0
3010	3690	<1	12.6	<10	9.3	<10	<0.1	36.4
3012	2340	<1	4.2	<10	2.1	<10	<0.1	17.3
3014	1850	<1	6.9	<10	8.8	50	<0.1	15.8
3016	2150	<1	3.2	<10	2.1	30	0.3	6.8
3018	690	<1	2.9	<10	9.2	280	0.2	13.7
3020	2600	<1	2.2	<10	1.9	10	<0.1	5.0
3022	5600	<1	10.2	<10	2.2	<10	0.1	142
3024	1410	<1	1.8	<10	4.0	40	0.1	16.4
3026	1800	<1	5.0	<10	6.0	60	<0.1	8.2
3028	1860	<1	5.2	<10	3.0	20	<0.1	12.8
3030	3540	<1	6.5	<10	1.3	<10	0.2	27.5
3032	5200	<1	4.9	<10	<0.5	<10	0.2	34.1
3034	1500	<1	3.1	<10	5.6	80	<0.1	11.9
3036	2660	<1	9.9	<10	8.0	<10	0.2	60.1
3038	7010	<1	18.6	<10	3.4	<10	0.4	180
3040	2690	<1	9.5	<10	6.9	<10	0.1	65.1
*Rep 3006	1480	<1	4.4	<10	7.3	110	0.2	10.4
*Std MMISRM19	5250	<1	2.1	<10	16.4	<10	0.7	56.3
*Blk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5

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Element Method Det.Lim. Units	W	Y	Yb	Zn	Zr
	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	0.5	1	0.2	10	2
	ppb	ppb	ppb	ppb	ppb
3002	0.6	64	3.3	740	18
3004	<0.5	49	2.8	260	17
3006	0.5	112	6.3	360	27
3008	<0.5	62	3.5	780	9
3010	<0.5	362	25.0	1460	19
3012	<0.5	126	9.2	7620	9
3014	<0.5	204	14.9	2250	28
3016	<0.5	109	7.2	2610	14
3018	1.0	99	7.6	5940	37
3020	<0.5	72	4.1	1840	9
3022	2.5	425	26.6	940	11
3024	<0.5	52	4.0	1650	12
3026	<0.5	283	18.6	1730	14
3028	<0.5	167	11.3	2090	15
3030	<0.5	262	17.4	3240	10
3032	<0.5	298	28.5	1060	7
3034	<0.5	109	7.6	2220	15
3036	<0.5	449	27.5	570	18
3038	<0.5	1110	71.3	660	26
3040	<0.5	322	19.3	420	21
*Rep 3006	0.6	107	6.4	290	30
*Std MMISRM19	<0.5	67	5.4	2500	13
*Blk BLANK	<0.5	1	<0.2	<10	<2

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APPENDIX II: SAMPLE ANALYSES AND METHOD SUMMARY

GE ICP14B: The Determination of 34 Elements by a Aqua Regia Digest and ICP-OES.

1. Parameter(s) measured, unit(s):

Silver (Ag); Aluminum (Al); Arsenic (As); Barium (Ba); Beryllium (Be); Bismuth (Bi); Calcium (Ca); Cadmium (Cd); Chromium (Cr); Cobalt (Co); Copper (Cu); Iron (Fe); Potassium (K); Lanthanum (La); Lithium (Li); Magnesium (Mg); Manganese (Mn); Molybdenum (Mo); Sodium (Na); Nickel (Ni); Phosphorus (P); Lead (Pb); Antimony (Sb); Scandium (Sc); Sulfur (S); Tin (Sn); Strontium (Sr); Titanium (Ti); Vanadium (V); Tungsten (W); Yttrium (Y); Zinc (Zn); Zirconium (Zr); (Mercury (Hg) can be added on) : ppm and %

2. Typical sample size:

0.25 g

3. Type of sample applicable (media):

Crushed and Pulverized rocks, soils and sediments

4. Sample preparation technique used:

Crushed and pulverized rock, soil and /or sediment samples are digested using 3:1 HCl and HNO₃.

5. Method of analysis used:

The digested sample solution is analyzed by inductively coupled plasma Optical Emission Spectrometer (ICP-OES). Samples are analyzed against known calibration materials to provide quantitative analysis of the original sample.

6. Data reduction by:

The results are exported via computer, on line, data fed to the SGS Laboratory Information Management System (SLIM) with secure audit trail.

7. Figures of Merit:

(*Mercury can be added on)

Element	Reporting Limit (ppm)	Upper Limit	Element	Reporting Limit (ppm)	Upper Limit	Element	Reporting Limit (ppm)	Upper Limit	Element	Reporting Limit (ppm)	Upper Limit
Ag	2.0	100ppm	Cu	0.5	1.0%	P	0.01(%)	15%	Y	0.5	1.0%
Al	0.01 (%)	15%	Fe	0.01(%)	15%	Pb	2.0	1.0%	Zn	1.0	1.0%
As	3.0	1.0%	K	0.01(%)	15%	S	0.01%	5.0%	Zr	0.5	1.0%
Ba	5.0	1.0%	La	0.5	1.0%	Sb	5.0	1.0%			
Be	0.5	0.25%	Li	1.0	1.0%	Sc	0.5	1.0%	*Hg	1.0	1.0%
Bi	5.0	1.0%	Mg	0.01(%)	15%	Sn	10	1.0%			
Ca	0.01(%)	15%	Mn	2.0	1.0%	Sr	5	1.0%			
Cd	1.0	1.0%	Mo	1.0	1.0%	Ti	0.01(%)	15%			
Cr	1.0	1.0%	Na	0.01(%)	15%	V	1.0	1.0%			
Co	1.0	1.0%	Ni	1.0	1.0%	W	10	1.0%			

8. Quality control:

Instrument calibration is performed for each batch or work order and calibration checks are analyzed within each analytical run. Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~14%. Quality assurance measures of precision and accuracy are verified statistically using SLIM control charts with set criteria for data acceptance. Data that fails is subject to investigation and repeated as necessary.

MMI - M : **The Determination of Mobile Metal Ions (MMI):** Ag, Al, As, Au, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Hg, In, K, La, Li, Mg, Mn, Mo, Nb, Nd, Ni, P, Pb, Pd, Pr, Pt, Rb, Sb, Sc, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, U, W, Y, Yb, Zn, Zr by partial extraction and ICP-MS.

1. **Parameter(s) measured, unit(s):**
Silver (Ag); Aluminum (Al); Arsenic (As); Gold (Au); Barium (Ba); Bismuth (Bi); Calcium (Ca); Cadmium (Cd); Cerium (Ce); Chromium (Cr); Cobalt (Co); Cesium (Cs); Copper (Cu); Dysprosium (Dy); Erbium (Er); Europium (Eu); Iron (Fe); Gallium (Ga); Gadolinium (Gd); Mercury (Hg); Indium (In); Potassium (K); Lanthanum (La); Lithium (Li); Magnesium (Mg); Manganese (Mn); Molybdenum (Mo); Niobium (Nb); Neodymium (Nd); Nickel (Ni); Phosphorus (P); Lead (Pb); Palladium (Pd); Praseodymium (Pr); Platinum (Pt); Rubidium (Rb); Antimony (Sb); Scandium (Sc); Samarium (Sm); Tin (Sn); Strontium (Sr); Tantalum (Ta); Terbium (Tb); Tellurium (Te); Thorium (Th); Titanium (Ti); Thallium (Tl); Uranium (U); Tungsten (W); Yttrium (Y); Ytterbium (Yb); Zinc (Zn) and Zirconium (Zr) by partial extraction and ICP-MS: ppb.
2. **Typical sample size:**
50 g
3. **Type of sample applicable (media):**
Soils
4. **Sample preparation technique used:**
Mobile metal ions present in soil samples are partially extracted using a concentrated MMI –M solution.
5. **Method of analysis used:**
The extracted sample solution is analyzed by Inductively coupled plasma Mass Spectrometer (ICP-MS). Samples are analyzed against known calibration materials to provide quantitative analysis of the original sample.
6. **Data reduction by:**
The results are exported via computer, on line, data fed to the SGS Laboratory Information Management System (SLIM) with secure audit trail.
7. **Figures of Merit:**

Element	Reporting Limit (ppb)	Element	Reporting Limit (ppb)	Element	Reporting Limit (ppb)	Element	Reporting Limit (ppb)
Ag	0.5	Er	0.2	Nd	1	Ta	1
Al	1.0 (ppm)	Eu	0.2	Ni	5	Tb	0.1
As	10	Fe	1.0 (ppm)	P	0.1 (ppm)	Te	10
Au	0.1	Ga	0.5	Pb	5	Th	0.5
Ba	10	Gd	0.5	Pd	1	Ti	10
Bi	0.5	Hg	1	Pr	0.5	Tl	0.1
Ca	2 (ppm)	In	0.1	Pt	0.1	U	0.5
Cd	1	K	0.5 (ppm)	Rb	1	W	0.5
Ce	2	La	1	Sb	0.5	Y	1
Co	1	Li	1	Sc	5	Yb	0.2
Cr	100	Mg	0.5 (ppm)	Sm	1	Zn	10
Cs	0.2	Mn	100	Sn	1	Zr	2
Cu	10	Mo	2	Sr	10		

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Minerals Services METHOD SUMMARY

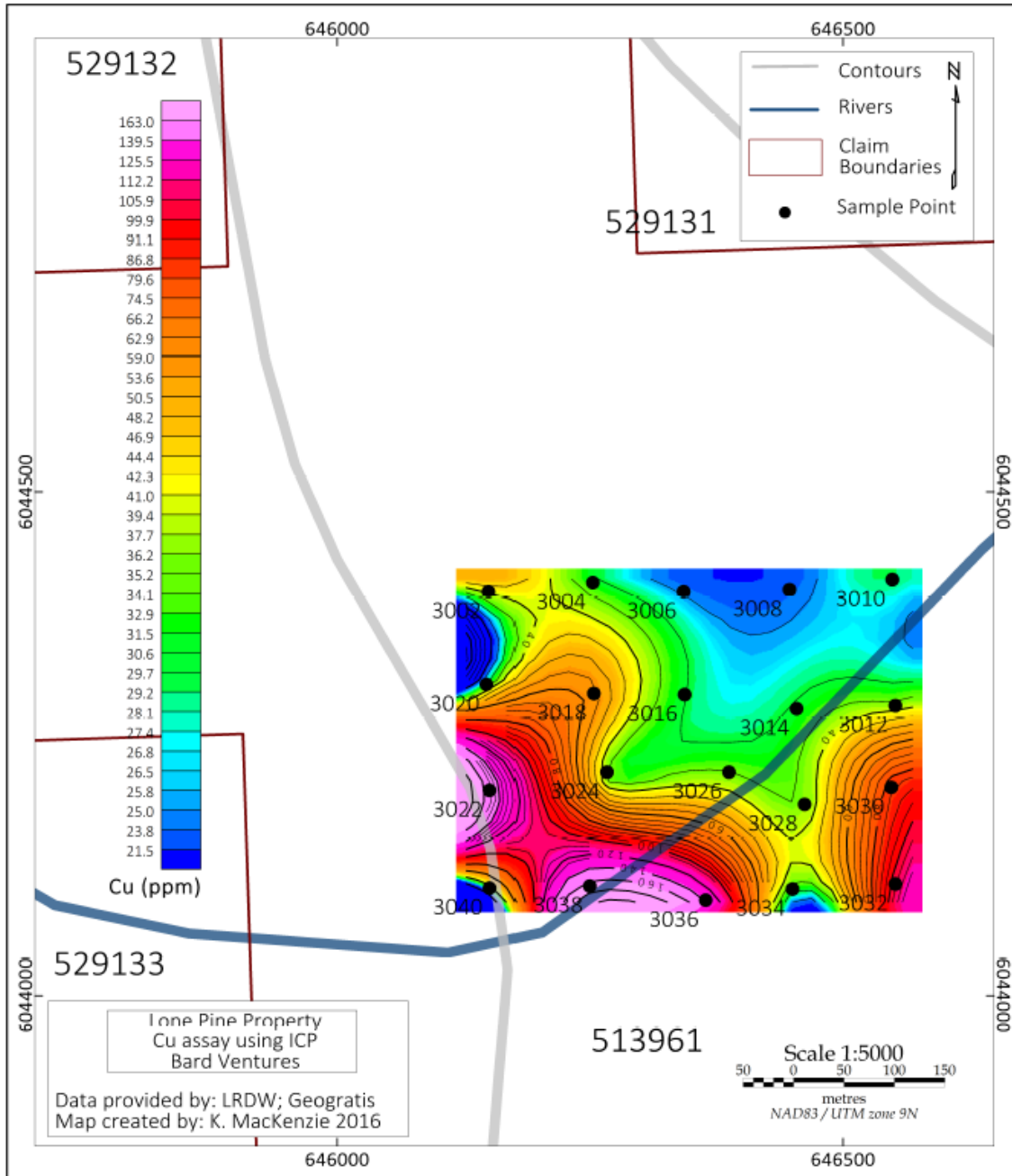
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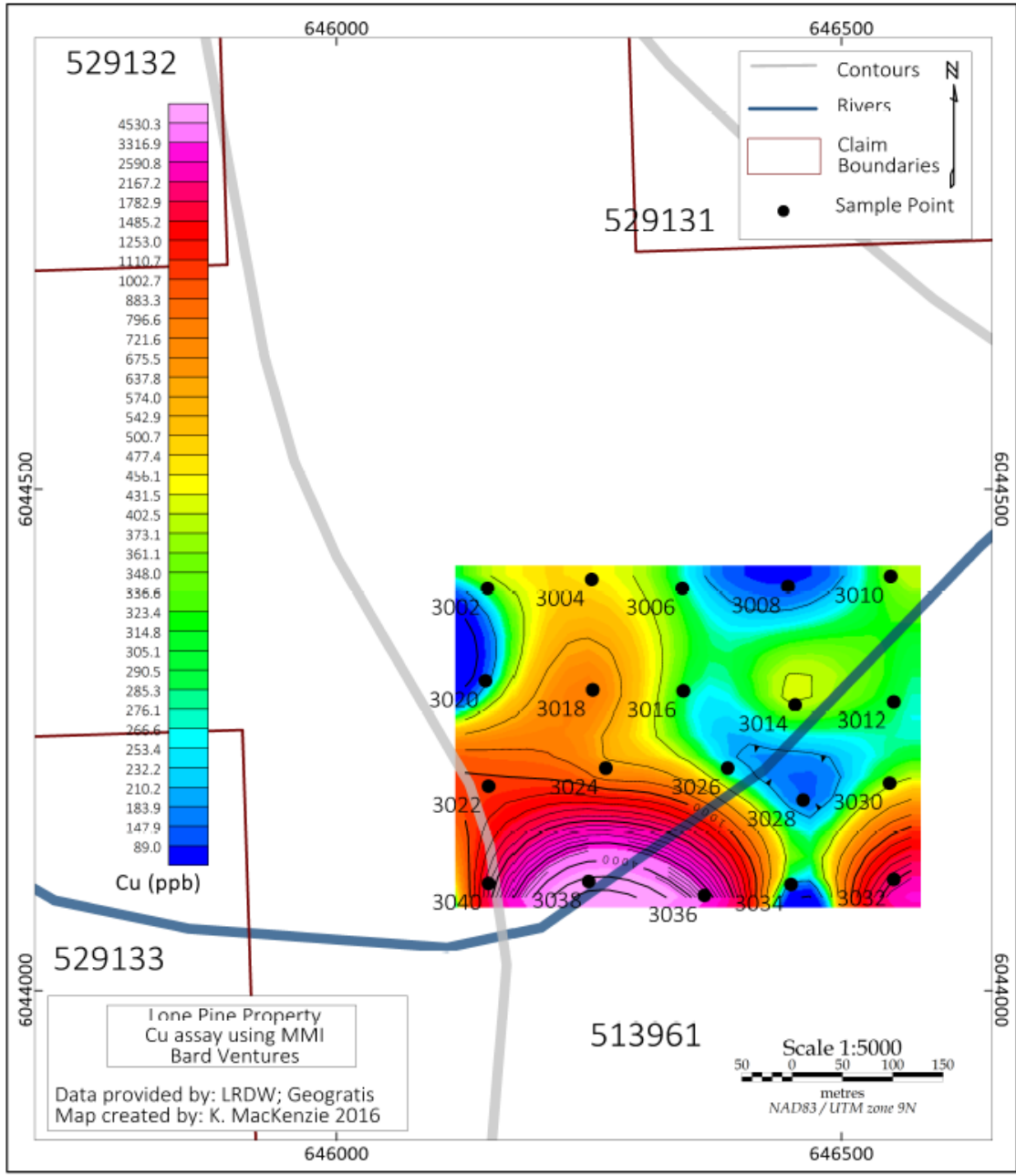
8. Quality control:

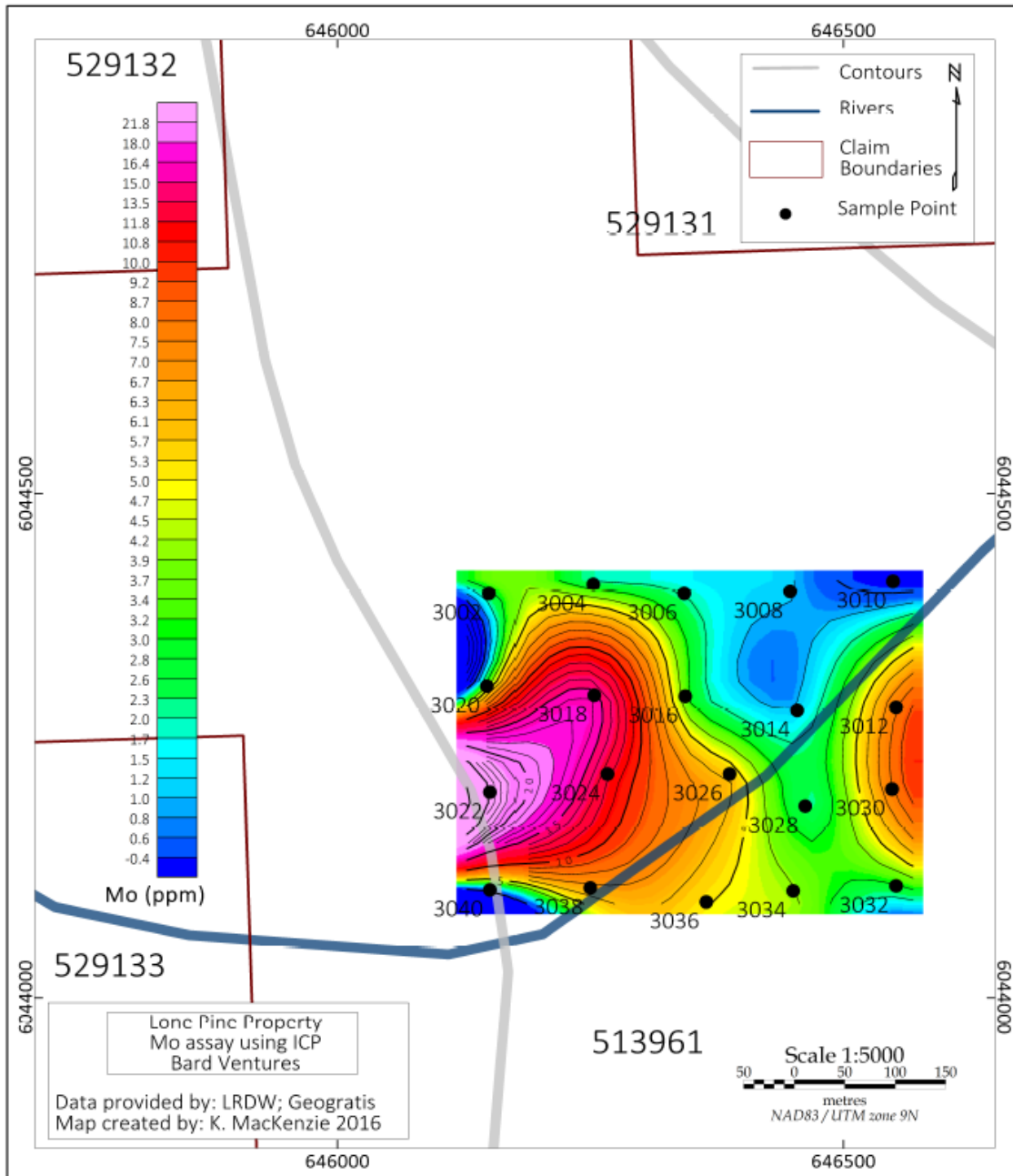
Instrument calibration is performed for each batch or work order and calibration checks are analyzed within each analytical run. Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~14%.

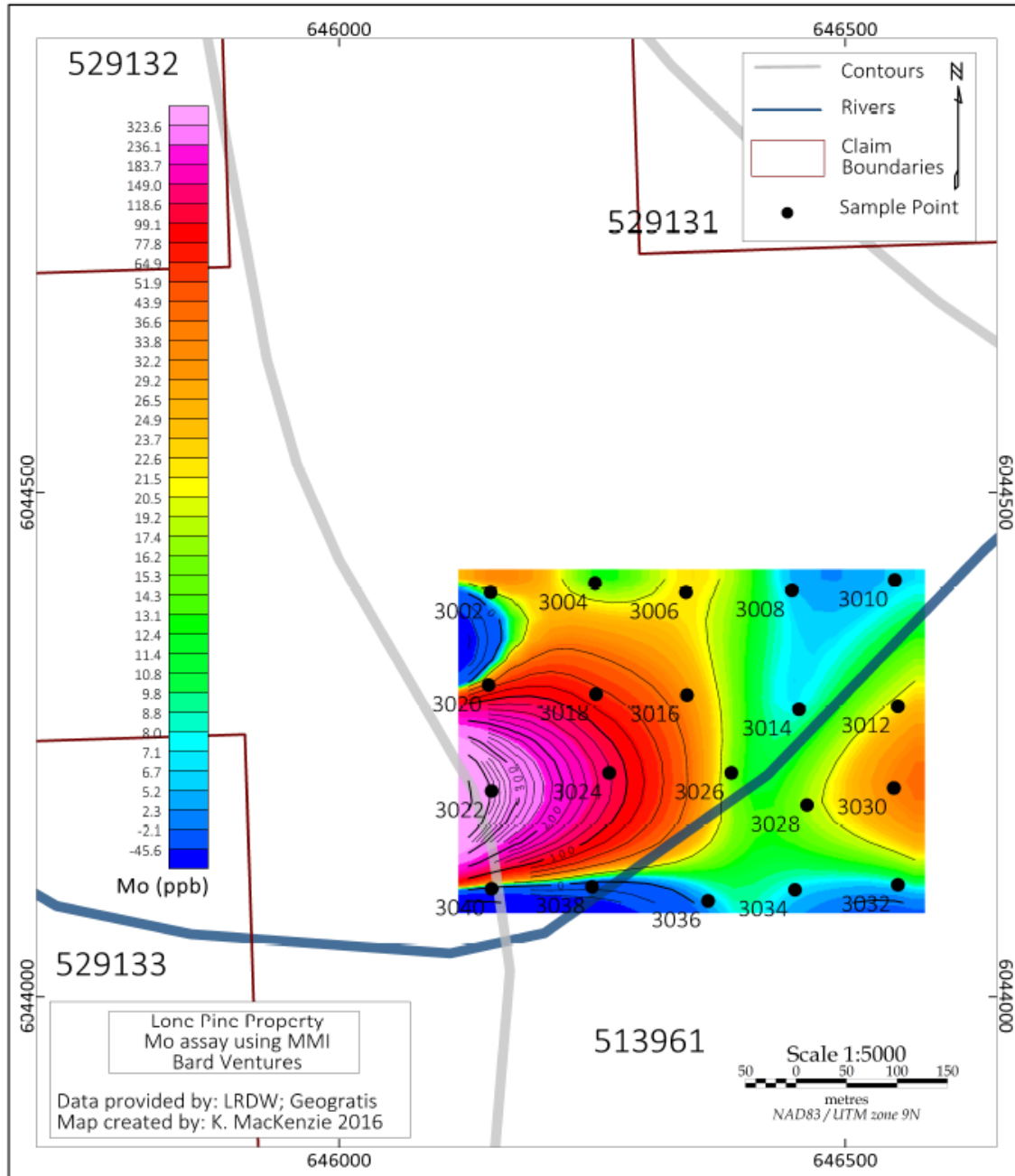
Quality assurance measures of precision and accuracy are verified statistically using SLIM control charts with set criteria for data acceptance. Data that fails is subject to investigation and repeated as necessary.

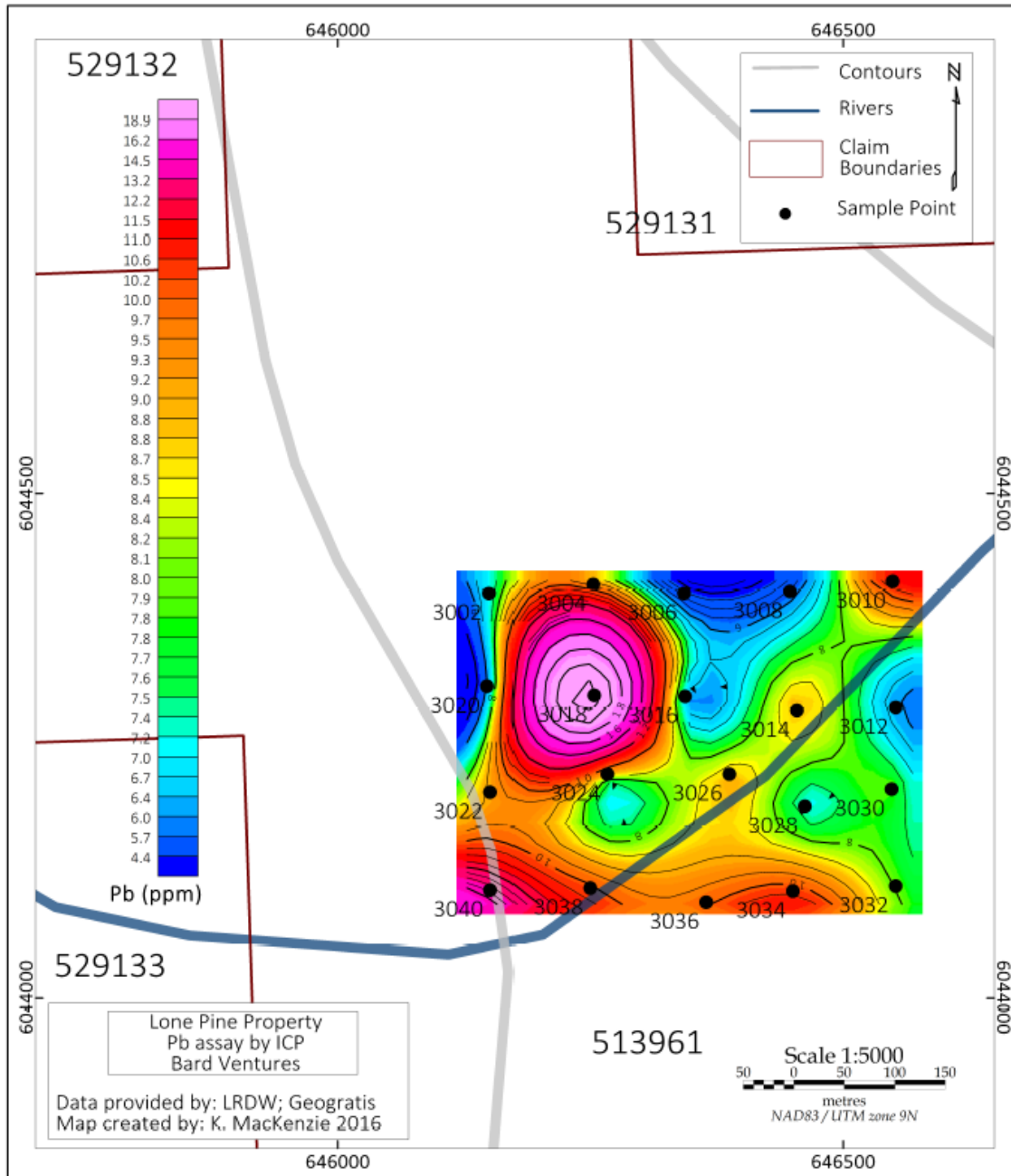
APPENDIX III: SOIL CONTOUR MAPS

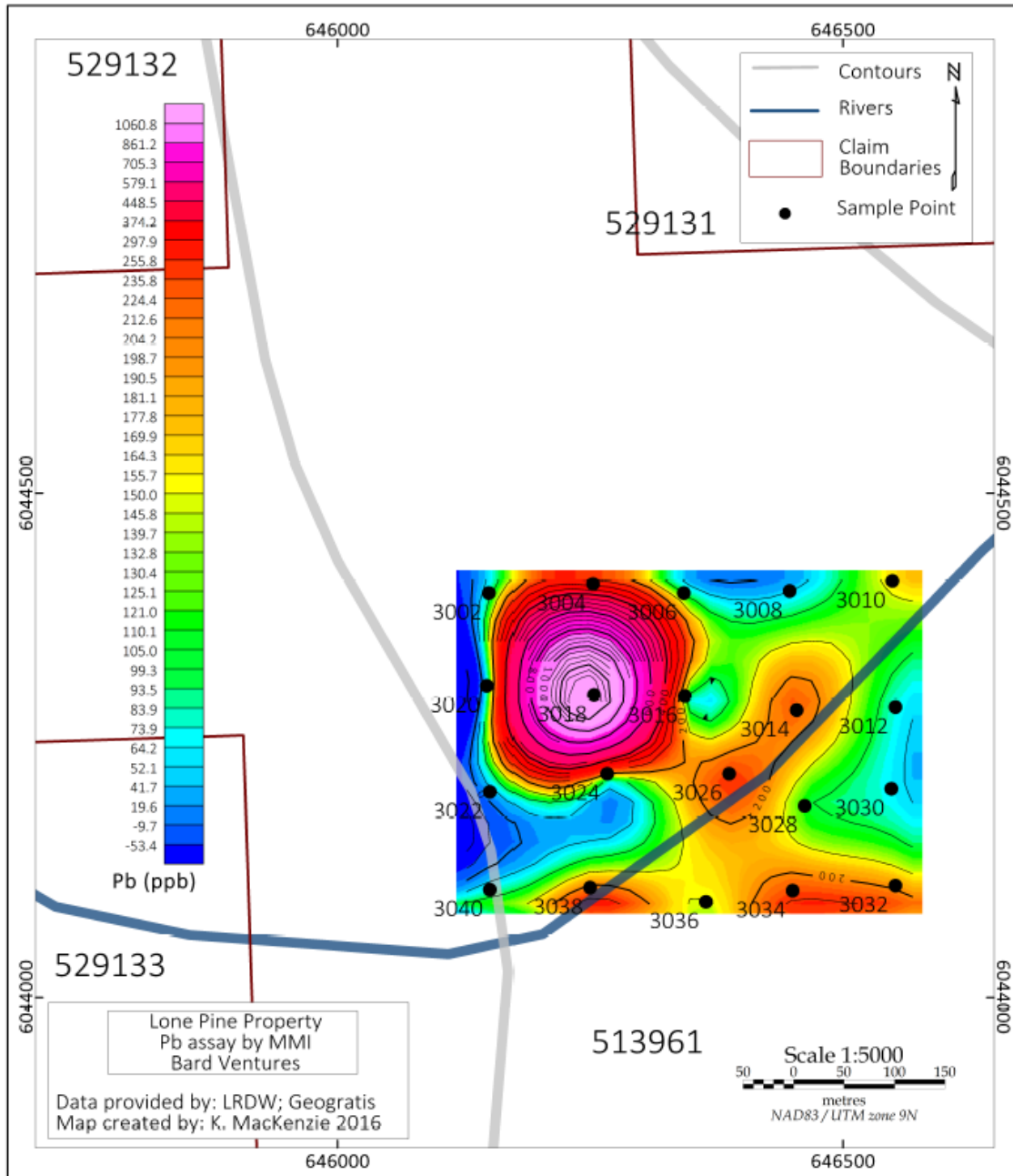


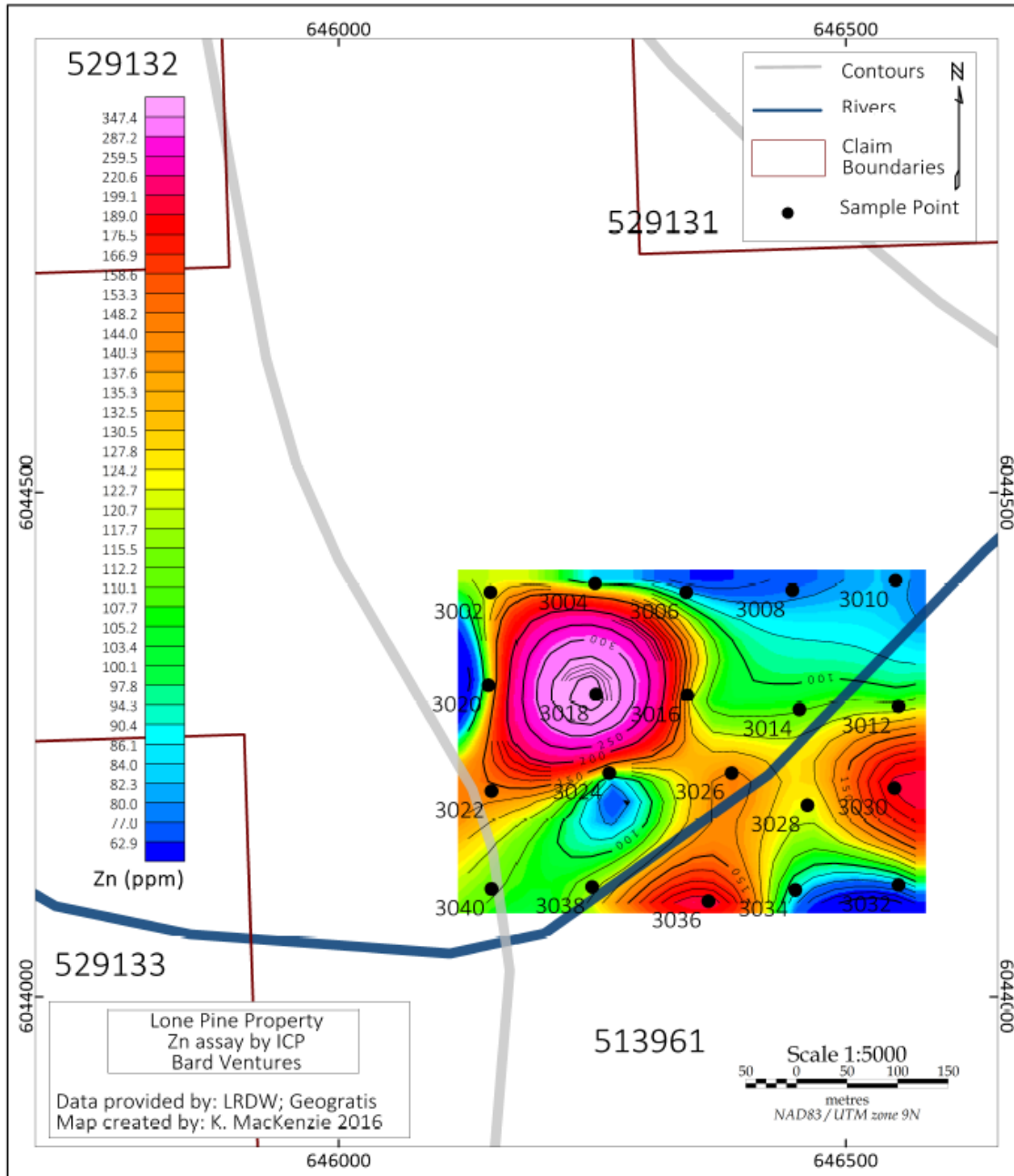


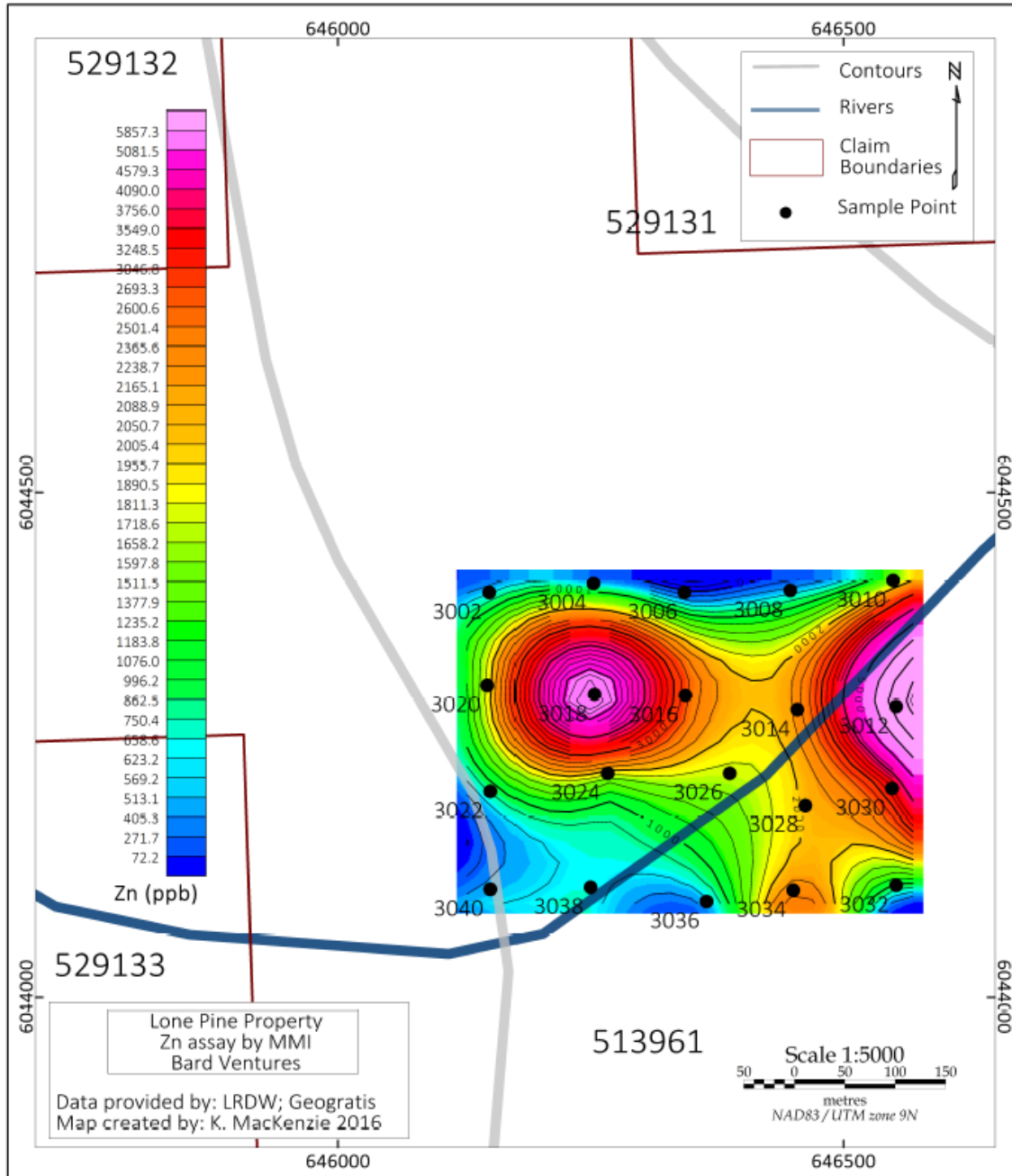




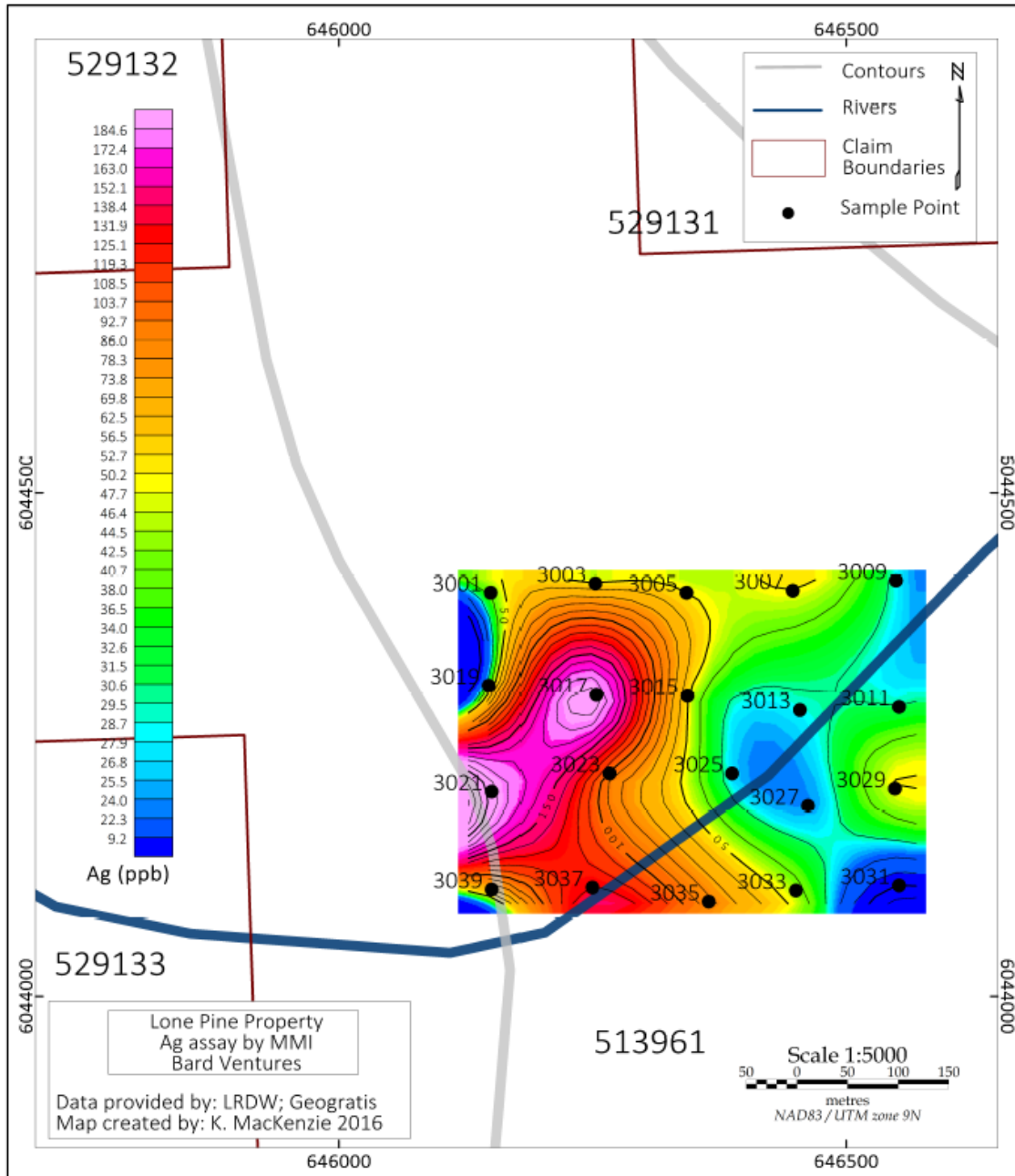


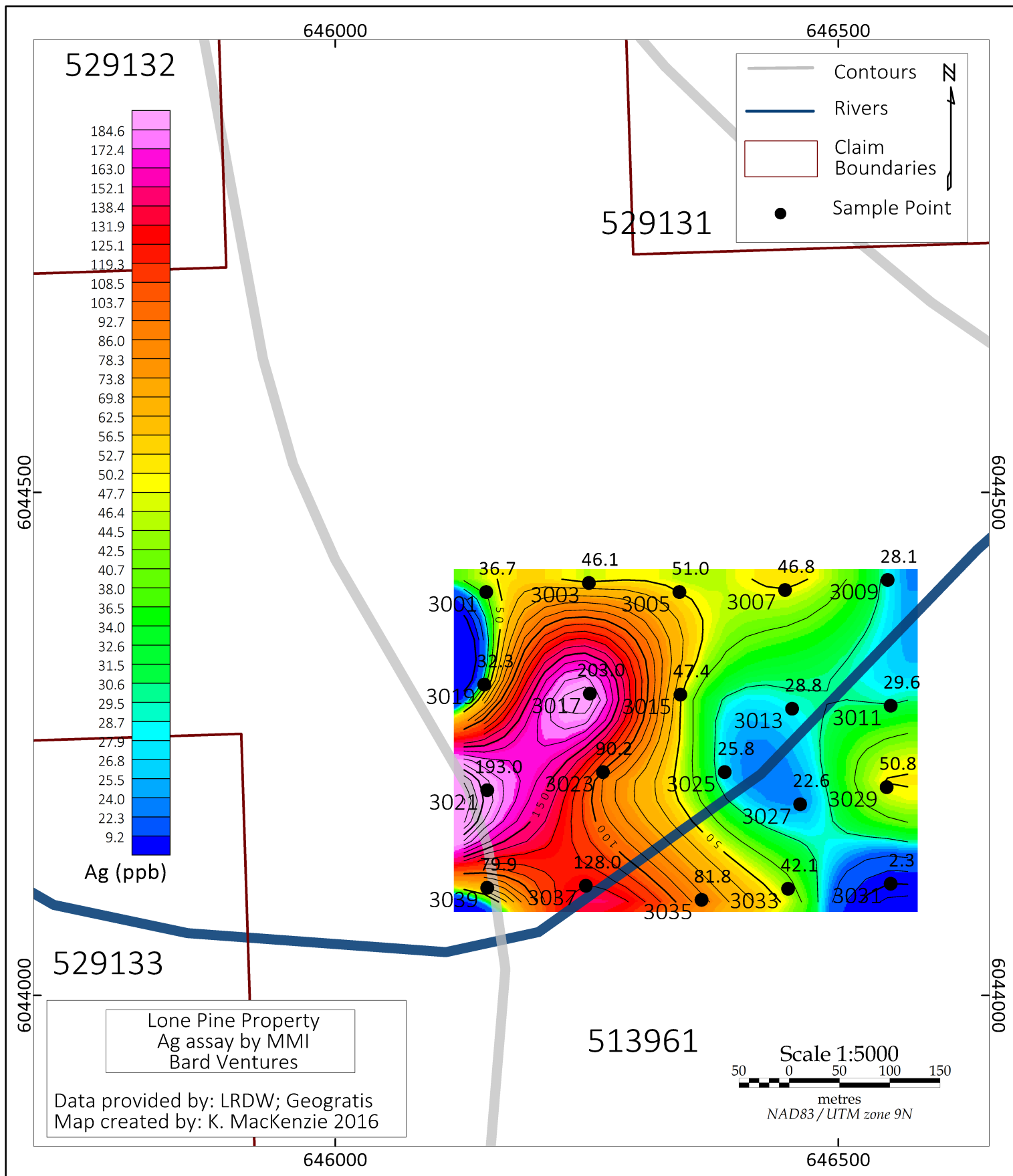






**NOTE: NO CONTOUR MAP AVAILABLE FOR ICP-OES AG ANALYSIS
AS ALL SAMPLE TOTALS WERE <2.**

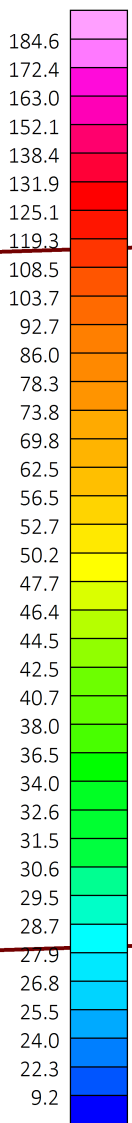




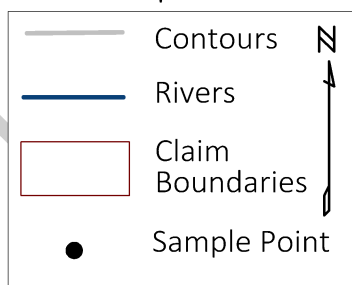
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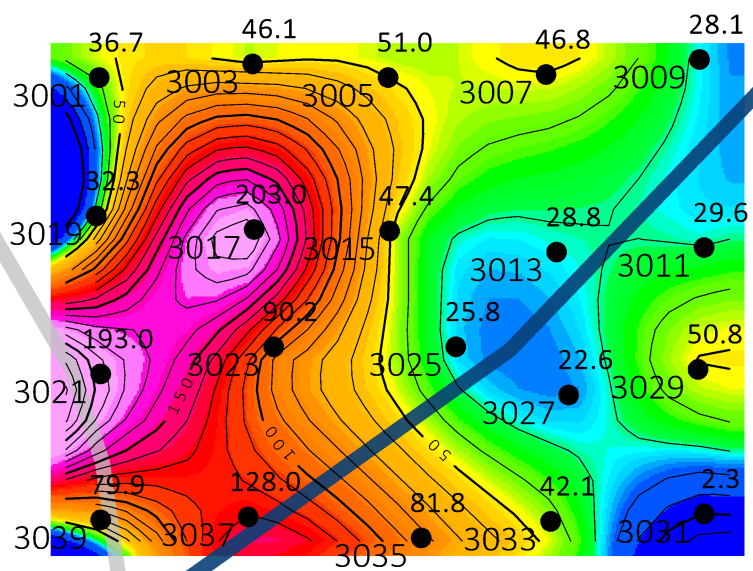
Ag (ppb)



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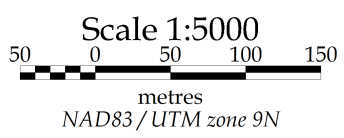
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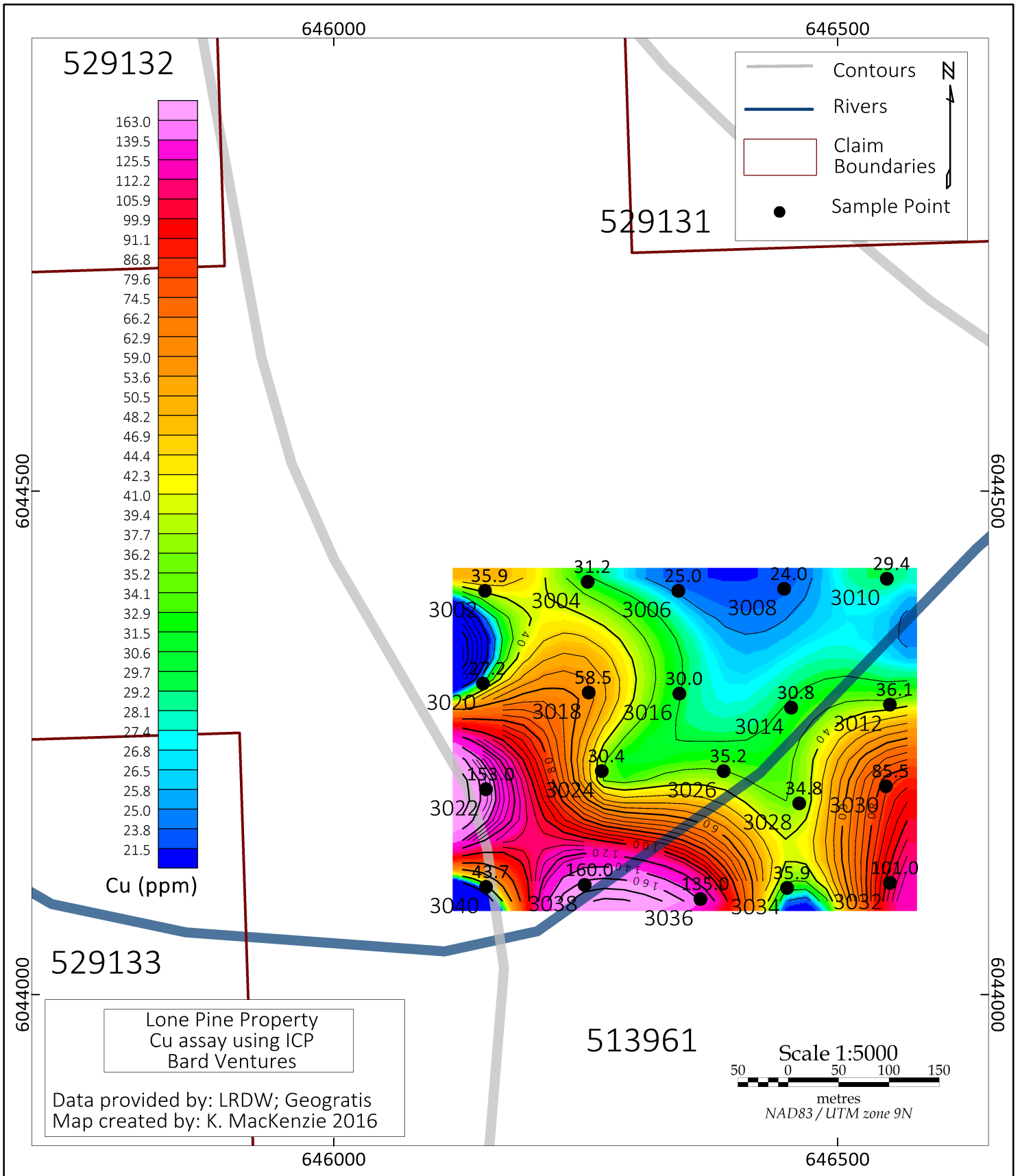
Lone Pine Property
Ag assay by MMI
Bard Ventures

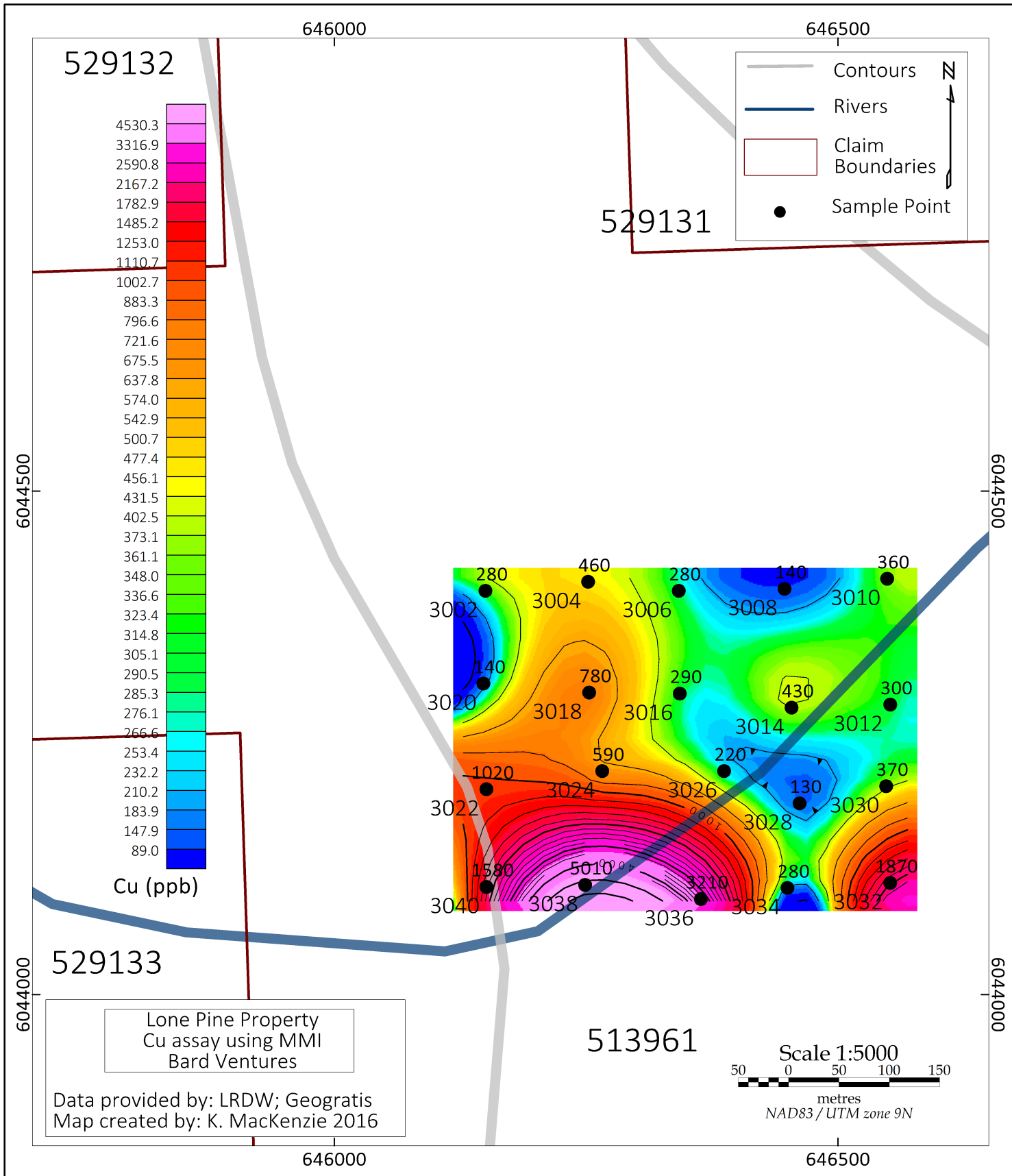
Data provided by: LRDW; Geogratias
Map created by: K. MacKenzie 2016



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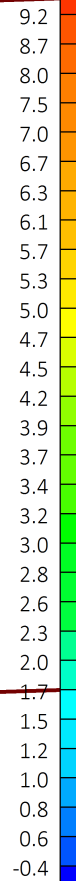


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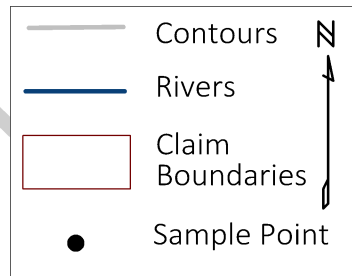
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21.8
18.0
16.4
15.0
13.5
11.8
10.8
10.0



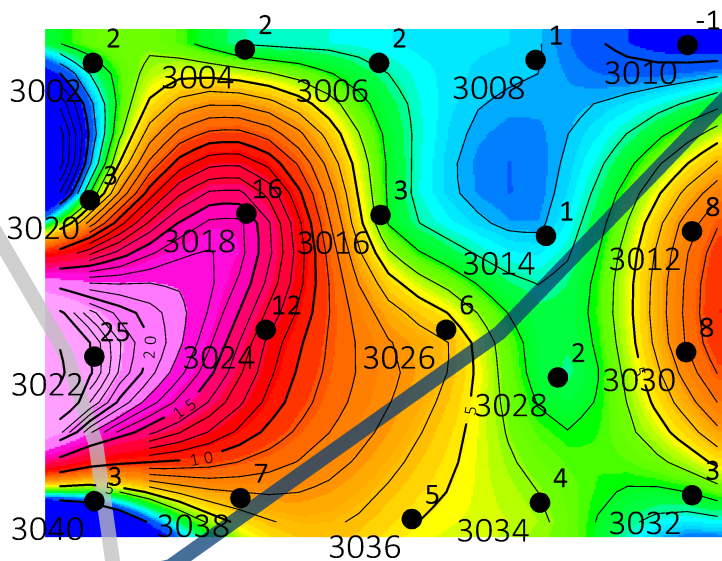
Mo (ppm)



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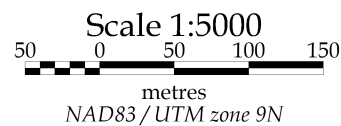
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Lone Pine Property
Mo assay using ICP
Bard Ventures

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Data provided by: LRDW; Geogratia
Map created by: K. MacKenzie 2016



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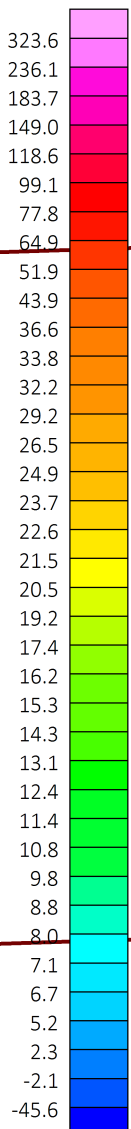
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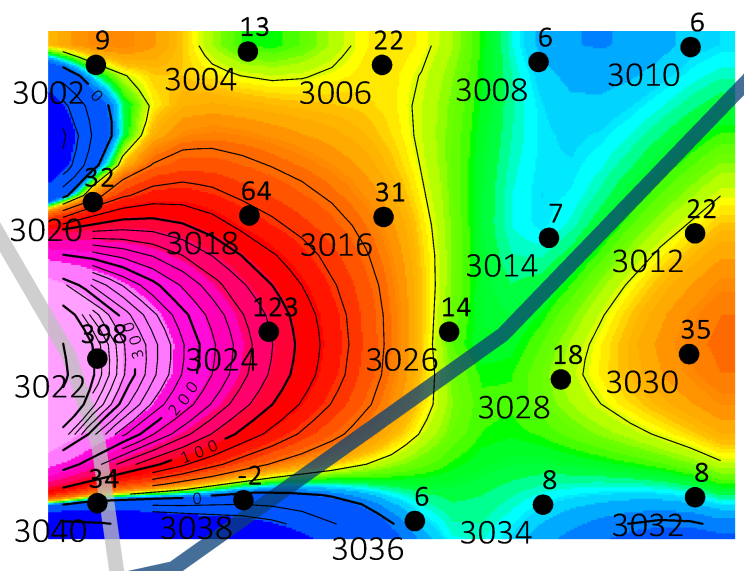
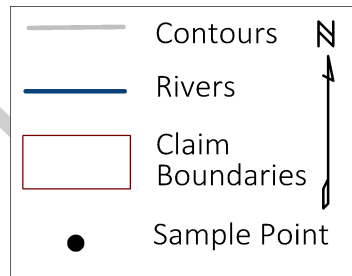
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Mo (ppb)



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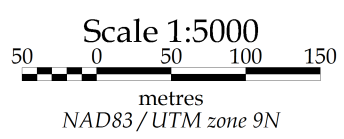
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Lone Pine Property
Mo assay using MMI
Bard Ventures

Data provided by: LRDW; Geogratias
Map created by: K. MacKenzie 2016



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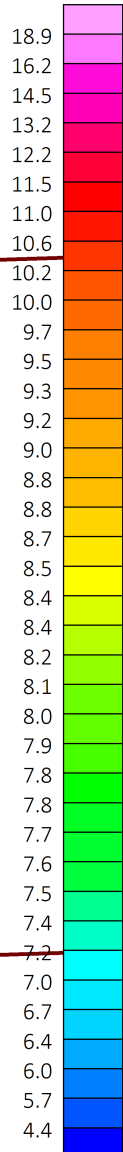
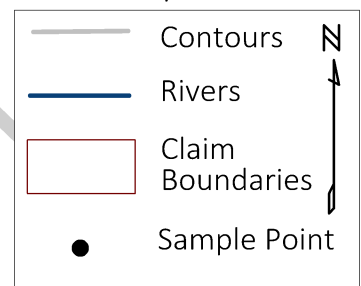
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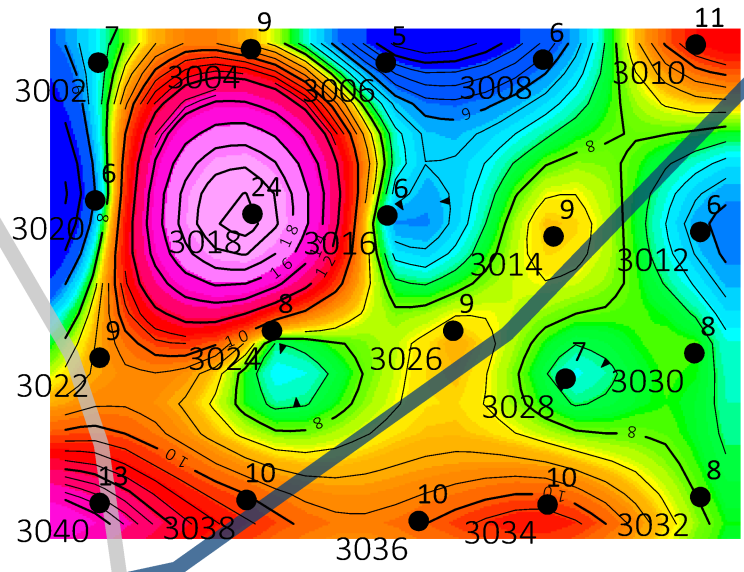
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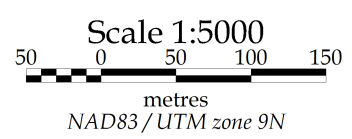
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Lone Pine Property
 Pb assay by ICP
 Bard Ventures

Data provided by: LRDW; Geogratias
 Map created by: K. MacKenzie 2016



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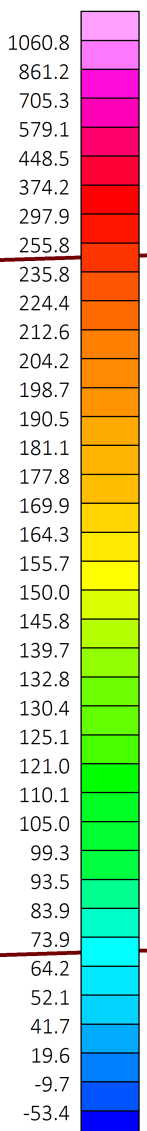
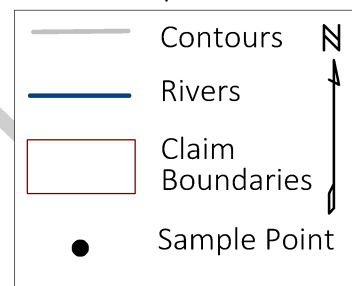
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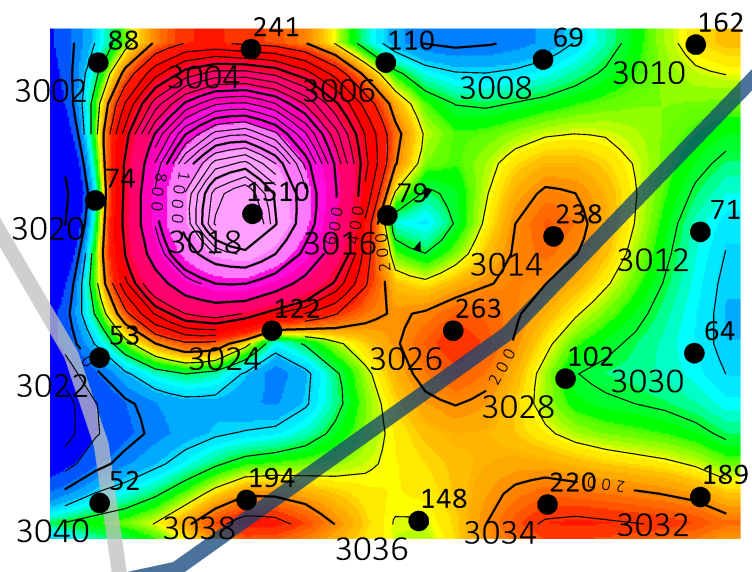
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Pb (ppb)



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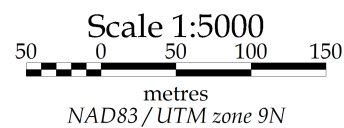
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Lone Pine Property
Pb assay by MMI
Bard Ventures

Data provided by: LRDW; Geogratia
Map created by: K. MacKenzie 2016



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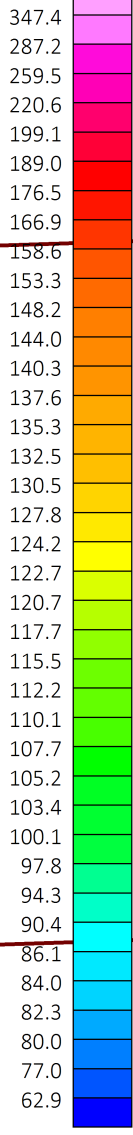
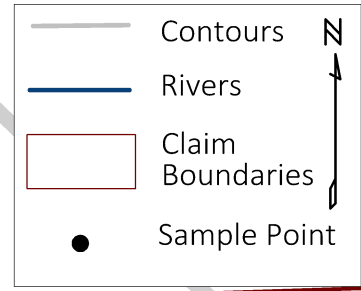
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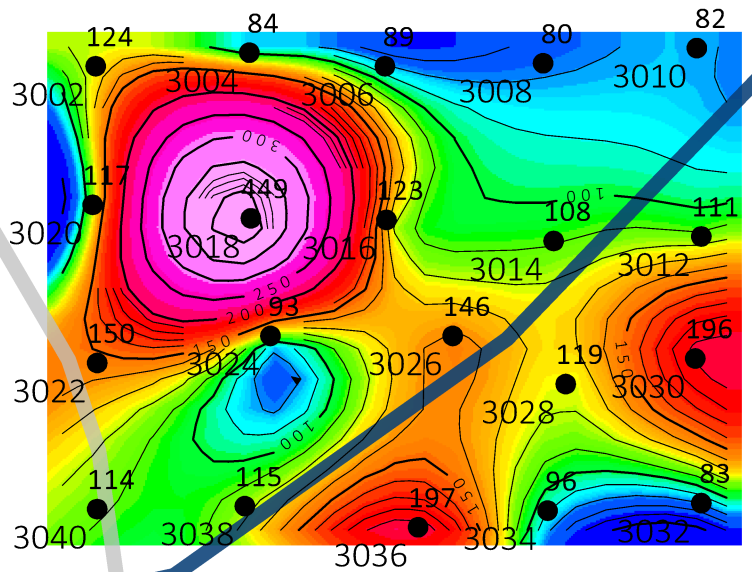
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Zn (ppm)



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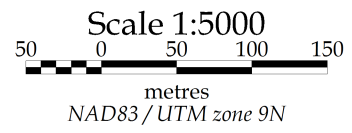
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Lone Pine Property
Zn assay by ICP
Bard Ventures

Data provided by: LRDW; Geogratia
Map created by: K. MacKenzie 2016



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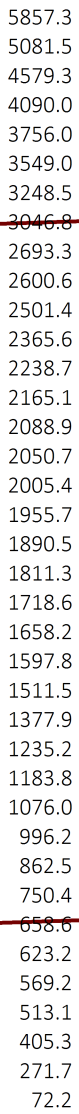
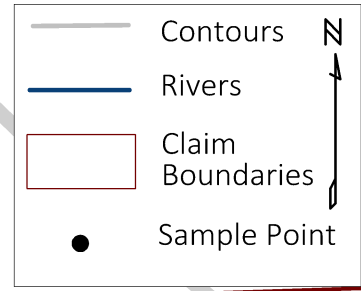
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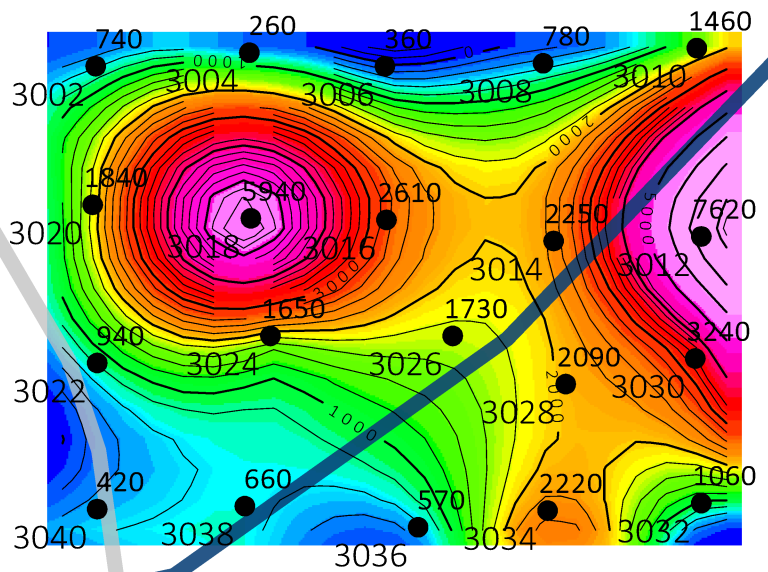
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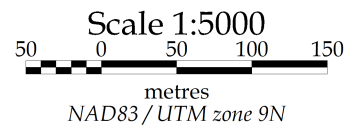
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Lone Pine Property
Zn assay by MMI
Bard Ventures

Data provided by: LRDW; Geogratia
Map created by: K. MacKenzie 2016



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APPENDIX IV: FIELD NOTES AND SAMPLE DESCRIPTION

Sample #	Sample type	Sample Analysis	East	North	Elev (m)	Comments
3001	Soil B Horizon	ICP	646150	6044401	852	open field; light brown silty/clayey B horizon - 35cm depth
3002	Soil Composite	MMI	646150	6044401	852	
3003	Soil B Horizon	ICP	646252	6044410	862	open field; light brown silty/clayey B horizon - 55cm depth
3004	Soil Composite	MMI	646252	6044410	862	
3005	Soil B Horizon	ICP	646342	6044401	866	open field; light brown silty/clayey B horizon - 25cm depth
3006	Soil Composite	MMI	646342	6044401	866	
3007	Soil B Horizon	ICP	646447	6044403	864	treed area; close to 2008 drillhole; clay and silt rich soil with minor sand - 30 cm depth
3008	Soil Composite	MMI	646447	6044403	864	
3009	Soil B Horizon	ICP	646549	6044413	870	sandy with cobbles with organics - silty clay - then B horizon; taken beside small creek
3010	Soil Composite	MMI	646549	6044413	870	
3011	Soil B Horizon	ICP	646552	6044288	872	rocky w/ silty sand and clay - dry - light brown colour - taken on ridge of old trench bearing 300°
3012	Soil Composite	MMI	646552	6044288	872	
3013	Soil B Horizon	ICP	646454	6044285	855	side of small slope on east side of creek; med brown clayey soil - rocky with large cobbles
3014	Soil Composite	MMI	646454	6044285	855	
3015	Soil B Horizon	ICP	646343	6044299	852	top of embankment on west side of creek valley - med brown silty with cobbles - minor sand mostly silty clay -dry
3016	Soil Composite	MMI	646343	6044299	852	

3017	Soil B Horizon	ICP	646253	6044300	847	small hill in middle of old trenches - drill holes to immediate west; brown orange coloured soil; angular cobbles in silty clayey rich soil - dry
3018	Soil Composite	MMI	646253	6044300	847	
3019	Soil B Horizon	ICP	646148	6044309	836	Silty soil medium brown with angular cobbles throughout
3020	Soil Composite	MMI	646148	6044309	836	
3021	Soil B Horizon	ICP	646151	6044204	838	Dark brown soil; minimal organics on top light brown tanned B horizon
3022	Soil Composite	MMI	646151	6044204	838	
3023	Soil B Horizon	ICP	646266	6044222	842	dusty tan coloured soil with few pebbles and trace cobbles; thin organic cover
3024	Soil Composite	MMI	646266	6044222	842	
3025	Soil B Horizon	ICP	646387	6044222	849	dark brown soil silty almost "fluffy" like silty soil
3026	Soil Composite	MMI	646387	6044222	849	
3027	Soil B Horizon	ICP	646462	6044190	857	light brown B horizon with dark brown AH layer minimal organic cover; silty clayey with pebbles and cobbles
3028	Soil Composite	MMI	646462	6044190	857	
3029	Soil B Horizon	ICP	646548	6044207	859	medium brown clay silt soil with large round cobbles; sample 40 m from creek; lots of trenching in the area; deep hole with thick organic cover over B horizon - 75cm
3030	Soil Composite	MMI	646548	6044207	859	
3031	Soil B Horizon	ICP	646552	6044111	863	medium brown clay silt soil with large round cobbles; sample 40 m from creek; lots of trenching in the area; deep hole with thick organic cover over B horizon - 75cm
3032	Soil Composite	MMI	646552	6044111	863	
3033	Soil B Horizon	ICP	646450	6044106	847	silty clayey tan coloured soil with black organic overlaying; cobbles and

3034	Soil Composite	MMI	646450	6044106	847	pebbles t/o are sub-angular
3035	Soil B Horizon	ICP	646364	6044095	827	reddish brown soil of silt and clay with few pebbles and cobbles thin organic cover B horizon close to surface
3036	Soil Composite	MMI	646364	6044095	827	
3037	Soil B Horizon	ICP	646249	6044109	817	clayey silty light brown colour soil no organics; no pebbles, no cobbles
3038	Soil Composite	MMI	646249	6044109	817	
3039	Soil B Horizon	ICP	646151	6044107	816	dark brown soil; lots of angular pebbles; sample near running creek and large open field
3040	Soil Composite	MMI	646151	6044107	816	