BRITISH COLUMBIA

Ministry of Energy & Mines
Energy & Minerals Division
Geological Survey Branch

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)]	TOTAL COST
Assessment Report on a rock sampling program, Mammoth Property, BC	32071.86

AUTHOR(S) Chris Solic SIGNATURE(S)

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) N/A YEAR OF WORK 2012

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) 5425170 2013/Jan/07

PROPERTY NAME Mammoth Property

CLAIM NAME(S) (on which work was done) Big Showing (390111), Mammoth (390112), Scout (405424), Ruby Silver (529121)

COMMODITIES SOUGHT Silver, Lead, Zinc

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN 082KNW077, 082KNW078

MINING DIVISION Revelstoke NTS BCGS 082K.082 & 083

LATITUDE 50 ° 52 ' 14 " LONGITUDE 117 ° 34 ' 27 " (at centre of work)

OWNER(S)

1) Silver Phoenix Resources Inc. 2)

MAILING ADDRESS

Box 134
Canoe, BC V0E 1K0

OPERATOR(S) [who paid for the work]

1) Silver Phoenix Resources Inc 2)

MAILING ADDRESS

Box 134
Canoe, BC V0E 1K0

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Kootenay arc, early Paleozoic, Lardeau Group, Index Formation, Isoclinal folding, phyllite, siliceous marble, galena, sphalerite, siderite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS 7996, 15372, 17978, 19288, 27941, 28871, 29602, 31315

(OVER)

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			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock	54 samples	390111,390112,405424,529121	$32071.86
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST	$32071.86

ASSESSMENT REPORT

on a

ROCK SAMPLING PROGRAM

MAMMOTH PROPERTY

REVELSTOKE MINING DIVISION, BC BCGS 82K.082 & 083

Exploration Work was done on MTO claims: 390111, 390112

Assessment Work was filed on: 390111, 390112, 405424, 529121

NTS: 82K/13
LATITUDE: 50º 52’ 14” N
LONGITUDE: 117º 34’ 27” W
OWNER: Silver Phoenix Resources Inc
OPERATOR: Silver Phoenix Resources Inc
CONSULTANTS: X-Mark Minerals
AUTHOR: Chris Solic
DATE: January 6, 2013

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Appendix I: Rock Sample Locations and Description
Appendix II: Rock Sample Assay Results

1.0 SUMMARY

Note: Some sections of this report have been taken, with modification, from earlier Assessment Reports.

A rock and chip sampling program was performed in and around the Big Showing, one of three showings within the Mammoth Property ("Property") from August 17 to August 25, 2012, by X-Mark Minerals. The Property is owned by Silver Phoenix Resources Inc.("Silver Phoenix"), and consists of four MTO claims.

The Property is situated 20 km NE of Camborne and 70 km SE of Revelstoke, BC (NTS Map Sheet 93 K/13; 50°52' 30" N latitude, 117° 34' 10" W longitude; Figure1) and covers three separate sulphide showings named 1) Big Showing (formerly the Ruby Silver Showing); 2) Scout Showing; and 3) Mammoth Showing. Mineralization consists of disseminations, blebs and aggregates of Pb-Zn-Ag sulphides hosted by silicified, iron-rich carbonate rocks within carbonaceous pelite and meta-volcanicrocks belonging to the Lower Paleozoic Lardeau Group. The deposits are thought to be structurally modified, stratiform in character, and possibly SEDEX in origin.

The Property area consists of lower Paleozoic sedimentary and volcanic rocks belonging to the Lardeau Group. The group is underlain by the lower Cambrian Badshot and Mohican formations and Eocambrian Hamill Group.

Historical reserves quoted in MINFILE for the Big Showing are: 217,620 tonnes at probable 754 grams per tonne silver and possible 398,883 tonnes at 480 grams per tonne silver, both with associated values in gold, lead and zinc. These historical estimates predate NI 43-101 compliance and should not be relied upon.

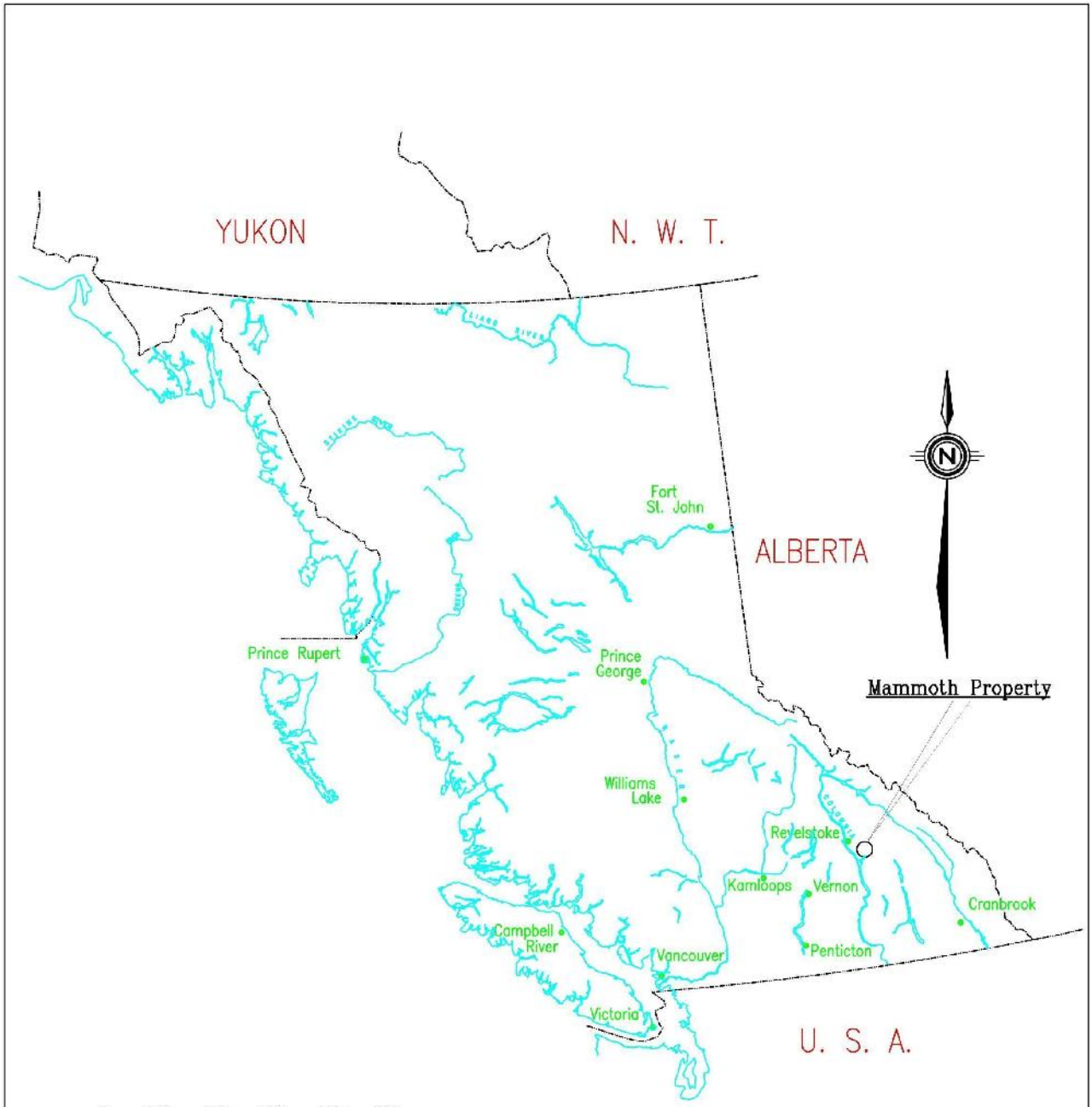
Since its discovery in 1906, the Property has been subject to various work programs including prospecting, production via hand sorted "ore", mapping, soil and rock ampling, and airborne geophysics.

Exploration work carried out during 2012 by X-Mark Minerals consisted of the collection of 54 rock grab and chip samples over known and previously untested sulphide showings. Two zones of known sulphide exposure (the Lower and Upper zones) at the Big Showing were sampled to better assess grade, particularly at the Upper zone, where extremely difficult access had limited sampling in the past. Two other nearby, untested showings, the "Peak 2179" and newly named "Long" showing, were accessed and sampled using trained alpinists. Assay results from this program generally confirm the higher grade nature of the Upper and Lower zones of the Big Showing. The 'Peak 2179' and "Long" showings were found to be mostly typically barren of economic Pb-Zn-Ag mineralization, although rare samples with better grade indicate that these showings may have further potential.

2.0 INTRODUCTION

This assessment report has been prepared by X-Mark Minerals, at the request of Mr. William Murray of Silver Phoenix, the owner/operator of the Property.

X-Mark Minerals was retained by Silver Phoenix to:



X-Mark Minerals	Silver Phoenix Resources Inc.
Mammoth Property	Property Location

Source: Koffyberg, 2008	Scale:	1:10,000,000	N.T.S.:	B.C.	Mining Div:	Revelstoke	Figure: 1

- Conduct a rock sampling program over the Big Showing Property to test historic and newly identified Pb-Zn-Ag showings
- Report on results of sampling program for assessment purposes.

This report describes the 2012 rock/chip sampling program, sampling procedures, analytical results and conclusions.

3.0 LOCATION AND ACCESS

The Property straddles the northern spur of Goldsmith Mountain, southeast of the confluence of Boyd Creek and the Incommapleux River. The lower portions of the property are covered with a dense forest of hemlock, spruce, cedar, pine, and alder. The underbrush is mostly willow, alder and devil's club. Thin overburden covers most of the region below tree line, and significant areas above tree line.

The Property is part of the northern Badshot Range of the Selkirk Mountains, 20 km northeast of Camborne and 70 km southeast of Revelstoke, British Columbia (NTS Map Sheet 93 K/13; 50°52' 30" N latitude, 117° 34' 10" W longitude).

The nearest towns that could provide logistical support are Nakusp, on the eastern shore of Upper Arrow Lake, and Revelstoke, located on the Trans Canada Highway in the Columbia River Valley. Access from Nakusp is via 50 km of gravel road north and east to the settlement of Camborne at the mouth of the Incommapleux River, and from there 20 km up river via logging roads to the base of the property. Logging roads in this area are commonly unusable due to seasonal flooding and/or landslides, as was the case during the 2012 field season. Helicopter from Nakusp or Revelstoke (approximately 30 minutes one way) is the most reliable and expedient mode of access. A steep trail (now overgrown) switchbacks from river level 1100 m up to a narrow ridge then drops 150 m to the main (Lower zone) Big Showing. There are no appropriate camp areas near the Big Showing. Helicopter access requires toe-in landing procedures.

4.0 TOPOGRAPHY

The Property straddles the northern ridge of Goldsmith Mountain, which is southeast of the confluence of the Incommappleux River and Boyd Creek. Elevations within the Property range from 600 metres in the lower areas to 2,179 metres at the uppermost part of the ridge. Topography within the Property is steep to extremely rugged, consisting of mountain ridges, cirques and sheer rock walls. Drainage on the property is via numerous creeks including the Ruby Silver Creek and the Kid Creek. These creeks all eventually flow into the Incommappleux River, which drains southwest into Upper Arrow Lake. Lower parts of the Property are covered by a moderate to thick mantle of glacial till. Much of the evergreen forests in the lower areas have been clear cut and replanted. The higher elevations extend beyond the tree-line and consist of 100 m cliffs and ridges. Rock exposure is good; however, the rugged and steep terrain requires extreme caution and alpine mountain climbing experience.

5.0 PROPERTY DESCRIPTION

The Property consists of four Mineral Title Online claims recorded in the name of Silver Phoenix Resources. Figure 2 shows the location of the Property. Table 1 lists the details of the claim tenure.

Table 1: Tenure Description				
Tenure Name	Tenure Number	Area (ha)	Registered Owner	Good to date
Big Showing	390111	500	Silver Phoenix Resources Inc.	Mar 5, 2013
Mammoth	390112	300	Silver Phoenix Resources Inc.	Mar 5, 2013
Scout	405424	200	Silver Phoenix Resources Inc.	Mar 5, 2013
Ruby Silver	529121	285.52	Silver Phoenix Resources Inc.	Mar 5, 2013

6.0 EXPLORATION HISTORY

Initial work in the area occurred with the discovery in 1903 of high grade silver-lead mineralization at the Mammoth Showing. From 1905 to 1907, it produced 765 tonnes of hand sorted ore that yielded 249 grams of gold, 484 kilograms of silver, 23 tonnes of lead and 1.95 tonnes of zinc (Minfile). The Consolidated Mining and Smelting Company optioned the property in1913. By the 1920s, an adit had been driven at the Mammoth at an elevation of 2,340 m. It was 180 m long towards the southeast with numerous crosscuts along the ridge.

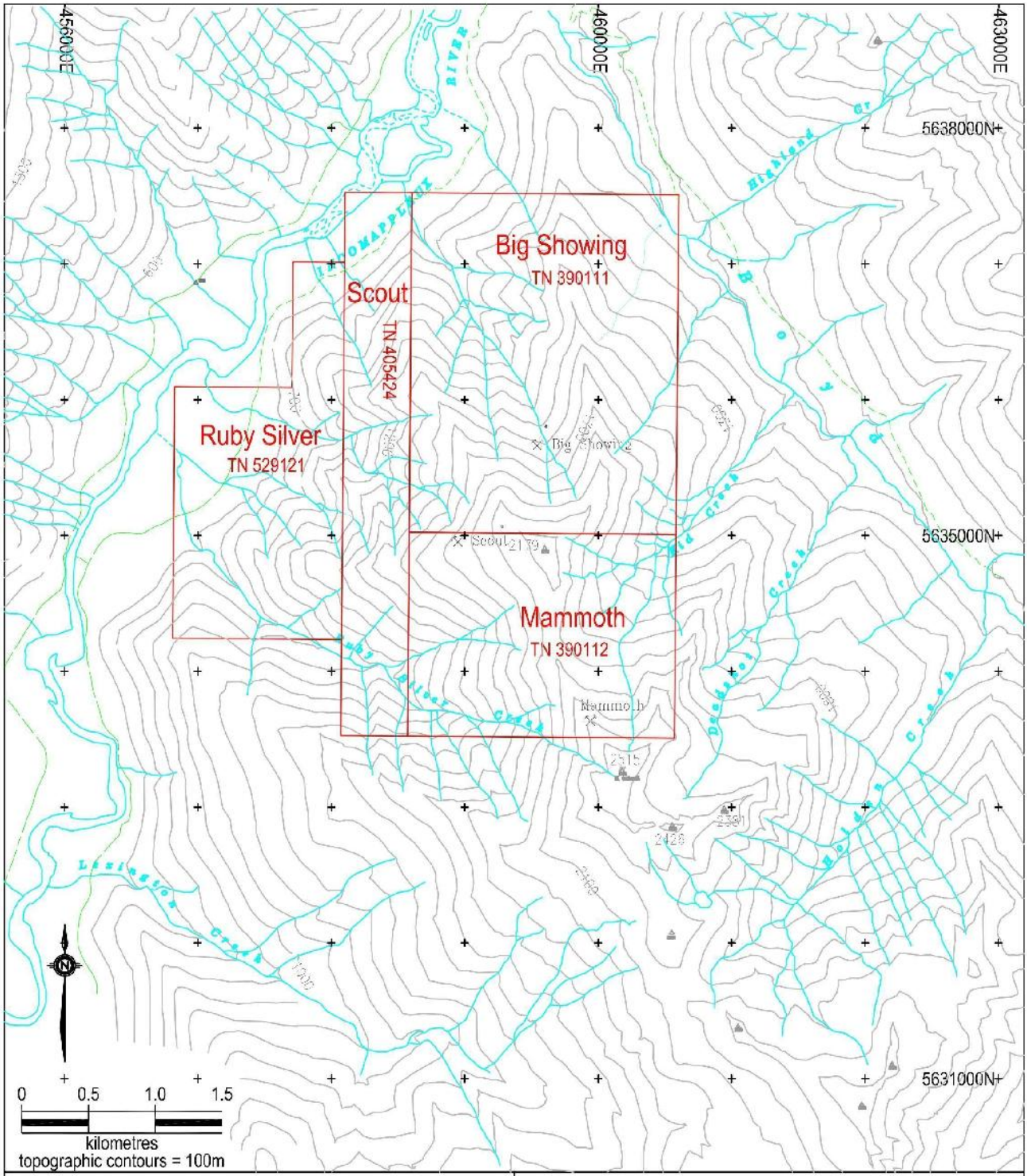
Similarly, the Big Showing was discovered in 1906, and 64 m of adit and crosscuts were completed in 1914 over a strike length of 90 m. The following description is taken from the *Report of the Minister of Mines for 1919*:

*"The vein outcrops on the west side of the creek and is somewhat similar in character to that of the Scout, except that the sulphides are exposed on the surface, due to the action of erosion at this point keeping pace with that of oxidation. It conforms to the stratification of the enclosing rocks and can be traced for many thousands of feet. The surface exposure at the outcrop is rightly called a "**big showing,**" the width of the mineralized ledge being about 50 feet which a considerable quantity of galena occurs as patches and disseminations in a quartz gangue. The Intervening bands of barren material are stained in places with oxide of Iron. At this point the line of the surface cuts the vein at an angle which is not normal to the dip; hence the true width is not represented and is about 20 feet.*

Ore can be traced for some distance up the hill until the vein becomes covered. It is reported that re has been found in a precipitous bluff near the summit. A sample of the galena from the surface ran: Gold, trace; silver 1.6 oz.; lead, 23.5 per cent.; zinc, 1.5 per cent. A sample of the iron-stained ledge-matter ran: Gold, trace; silver, trace; lead, nil; zinc, 4 per cent.

At an elevation of about 5,000 feet and at a vertical distance of 300 feet below the surface showing a tunnel has been driven for 171 feet. The first 66 feet of which follows a course of S 20° E., and the next 105 feet due south. In driving this tunnel they did not allow for the dip of the vein, and it is therefore in the foot-wall side. When this was recognized a crosscut was started at a point 126 feet from the portal and was driven in a direction of N 80° E. for 42 feet; it was abandoned within about 20 feet of the vein. For prospecting purposes this tunnel-site is well chosen, but for operating the property on a large scale a more favorable site might be obtainable at a lower altitude and in a more accessible place." Report MM 1919 page 142-143.

The Scout Showing was also discovered and worked on in the early 1900s. Work prior to 1941 consisted of an upper 56 m adit and a lower 2 to 3 m adit.



X-Mark Minerals	Silver Phoenix Resources Inc.
Mammoth Property	Claim Locations

Souce: Koffyberg, 2008	Scale:	1:40000	N.T.S.:	082K.083,082	Mining Div:	Revelstoke B.C.	Figure: 2

The three showings were consolidated into one property and staked in 1973 by the Leask Syndicate, and again in 1979. Exploration in 1979 consisted of detailed prospecting and mapping (at that time, the Big Showing was named the Ruby Silver Showing). Work done in the 1980s by various companies consisted of geochemical soil and rock sampling, and geological mapping. New Campbell Island Mines Limited optioned the Property from Summer 90 Resources Ltd in 1984, and from 1984-86 carried out geological mapping, geochemical surveys and property evaluations.

Estimates by H.A. Simmons (International Limited) and W.J. Olsson and Associates in 1986, presumably on the Big Showing, yielded "indicated reserves" estimated at 217,620 tonnes grading 754 g/t silver, and "inferred reserves" of 398,883 tonnes grading 480 g/t silver. These "reserves" are non NI 43-101 compliant and should not be relied upon.

W. Murray obtained the claims for Silver Phoenix Resources in 2002. Geological mapping and rock sampling was conducted on the Mammoth and the Scout Showing in 2005 (Turner, 2007; Assessment Report #28871). In 2007, a geological survey program was carried out on the Big Showing by R.I. Thompson, who prospected and collected rock samples in and around the Big Showing. A new showing, termed the Gossan Showing was discovered, with a grab sample returning 6.4 g/t silver and >1% lead (Thompson, 2008, Koffyberg, 2008; Assessment Report #29602). In 2009, a 348 line-km helicopter-borne magnetic survey was flown over the property by Precision Geophysics (Assessment Report #31315)

7.0 GEOLOGY

7.1 Regional Geology

The Property is located in the Kootenay Arc of the Omineca Belt, a concave arcuate, northsouth-trending fold belt of Paleozoic to Mesozoic sedimentary, volcanic and metamorphic rocks and traceable for about 400 km from Revelstoke, south along Kootenay Lake to Washington State. The Kootenay Arc is host to several past producing mines (Jersey, HB, ReevesMacDonald), and many base-metal and precious-metal occurrences. To the west of the Kootenay Arc are the Shuswap and Monashee metamorphic complexes. The Windermere-Purcell anticlinorium lies to the east.

The Kootenay Arc succession in the region of the Property comprises three main terranes: the early Paleozoic pericratonic Kootenay terrane consisting of the Hamill and Lardeau Groups, and the Badshot Formation; the accreted late Paleozoic and early Mesozoic Slide Mountain terrane, comprising the Milford and Kaslo Groups; and the Mesozoic Quesnel terrane, comprising the Kaslo and Rossland volcanic rocks and the Slocan argillites.

The stratigraphic succession is cut by several batholiths and stocks of Jurassic, Cretaceous and Tertiary ages. The Kuskanax and Nelson batholiths are the largest intrusions and are predominately of granite and granodiorite composition. The Battle Range pluton of Cretaceous age is of local importance.

The Lardeau Group consists of six conformable units named the Index, Triune, Ajax, Sharon Creek, Jowett and Broadview Formations. The Index Formation is the lowest and most extensive unit in the Lardeau Group. It consists of a thick sequence of grey, green and black phyllite, limestone and thick calcareous phyllite, tuff, tuffaceous greywacke, pillow basalt and rare quartzite and gritty sandstone.

The Index Formation is overlain by the Triune, Ajax and Sharon Creek Formations, which comprise an assemblage of black siliceous argillite, grey quartzite and black siliceous argillite respectively. These rocks are overlain by volcanic breccias and pillow lavas of the Jowett Formation. The rocks are intercalated with the overlying greywackes, slates and phyllites of the Broadview Formation.

Figure 3 shows the regional geology of the Property.

7.2 Property Geology

The Property is situated within the Index Formation of the Lower Paleozoic Lardeau Group. The rocks consist of green to tan, thinly layered phyllite with numerous quartz veins deformed within isoclinal folds. The phyllite is interbedded with calcite and siliceous marble units and phyllitic marble units. In addition to the phyllite are various units consisting of siliceous marble, marble and iron-rich marble. Within the Property are three main showings: The Big, Mammoth and Scout showings.

The Big Showing consists of two zones of galena, sphalerite and pyrrhotite mineralization, a lower 3 m wide zone (1,400 - 1,430 m elevation) and an upper 9 m zone (1,460 – 1,490 m elevation) which lies within the hinge zone of a parasitic anticlinal fold (Leask, 1980). The showing consists of veins, mineral aggregates and disseminations within a siliceous, iron-rich marble horizon (Thompson, 2007).

The Mammoth Showing lies 2.2 km south of the Big Showing at a higher elevation of 2,240 - 2,600 m. Several zones of galena, sphalerite, tetrahedrite and argentite occur within fractures of the carbonate unit within 33 m of the Scout fault.

The Scott Showing, at an elevation of approx 1,840 m and 1 km southwest from the Big Showing, consists of galena, sphalerite and pyrite within silicified carbonates. Structurally it occurs within a hinge zone of an isoclinal fold (Leask, 1980).

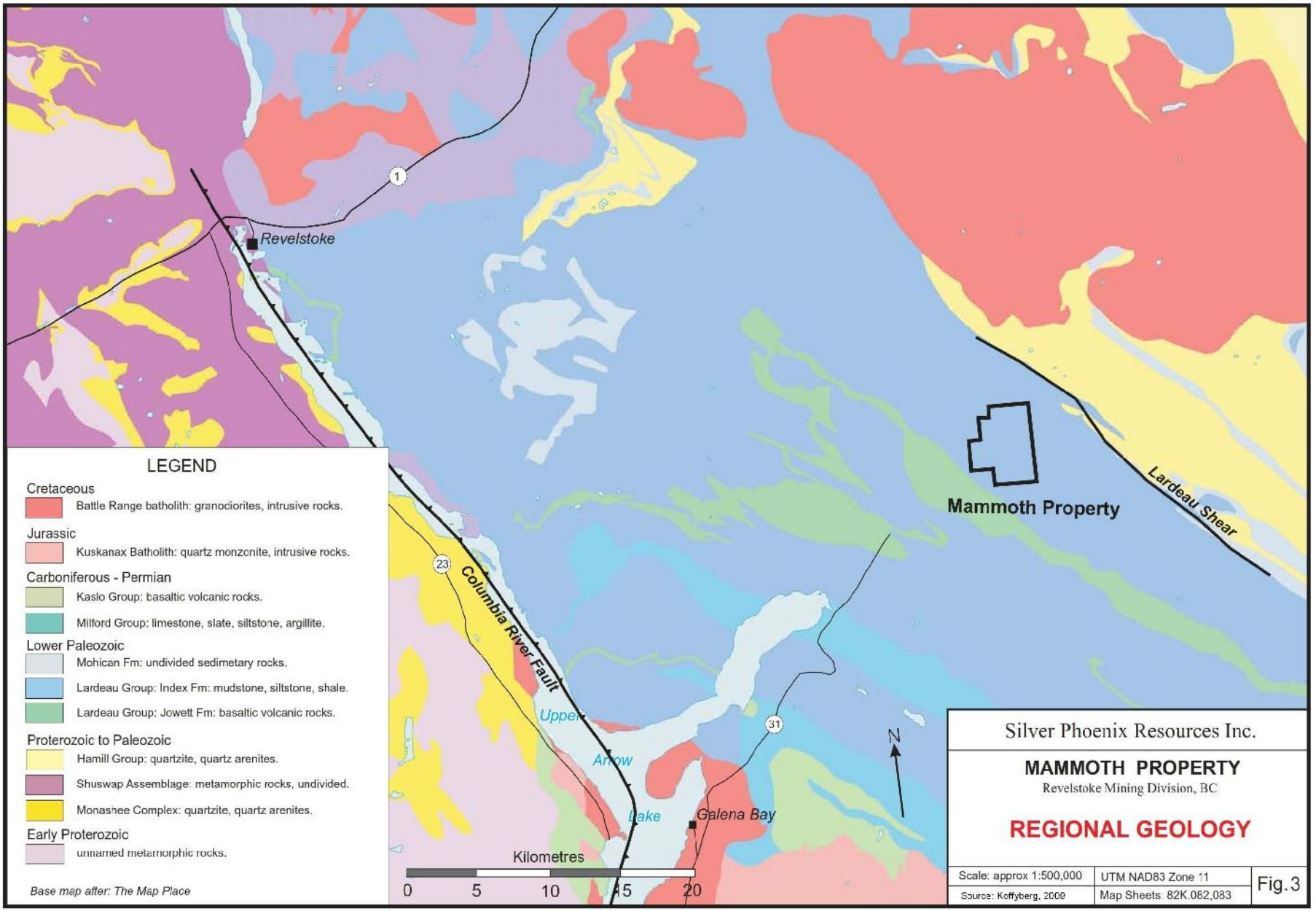
The geology of the property was mapped by J. Leask (1980) and is shown on Figure 4.

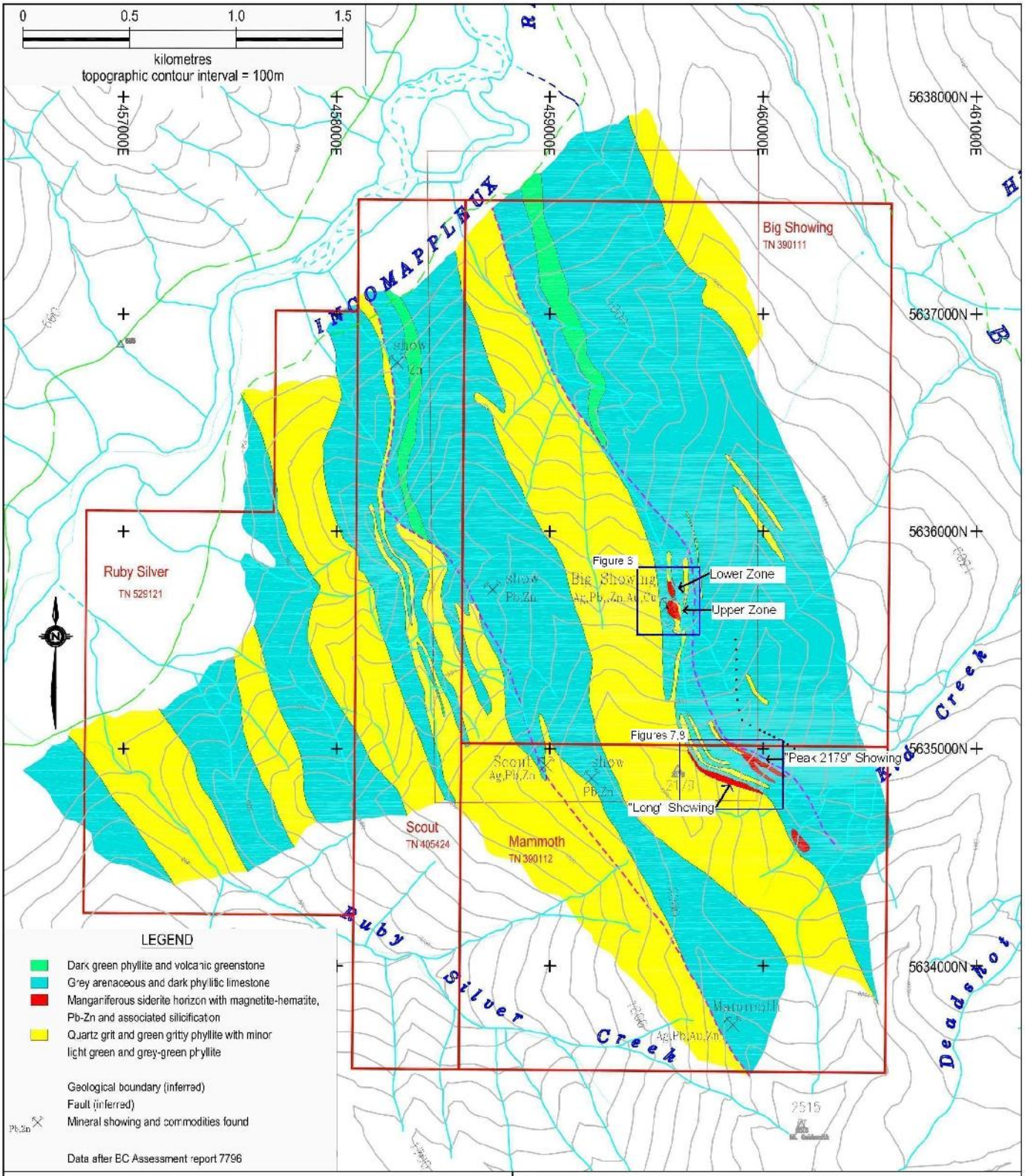
7.3 Structure

The Lardeau Group underwent folding and deformation in Devonian to Mid-Mississippian time.

Structurally, the Lardeau shear zone at Boyd Creek marks the boundary between the Lardeau Group and the older Badshot Formation and Hamill Group to the east. This likely coincides with the deformation of the Lardeau Group. Further deformation occurred through late Jurassic, producing large isoclinal folds within the rocks of the Index Formation.

The second prominent structural feature is the Columbia River Fault zone to the west of the Property. It is a 250–km long linear detachment zone trending north-south along the Columbia River. It separates the ductilely-deformed gneisses of the Monashee-Shuswap complex to the west from the Lardeau, Milford and Hamill Groups and related intrusions on the east. The fault dips gently to the east and truncates the major folds and metamorphic zones that had developed in the mid-Jurassic.


Revelstoke
1
23
31
Columbia River Fault
Upper
Arrow
Lake
Galena Bay
Mammoth Property
Lardeau Shear
N
Kilometres
0
5
10
15
20
LEGEND
Cretaceous
Battle Range batholith: granodiorites, intrusive rocks.
Jurassic
Kuskanax Batholith: quartz monzonite, intrusive rocks.
Carboniferous - Permian
Kaslo Group: basaltic volcanic rocks.
Milford Group: limestone, slate, siltstone, argillite.
Lower Paleozoic
Mohican Fm: undivided sedimetary rocks.
Lardeau Group: Index Fm: mudstone, siltstone, shale.
Lardeau Group: Jowett Fm: basaltic volcanic rocks.
Proterozoic to Paleozoic
Hamill Group: quartzite, quartz arenites.
Shuswap Assemblage: metamorphic rocks, undivided.
Monashee Complex: quartzite, quartz arenites.
Early Proterozoic
unnamed metamorphic rocks.
Base map after: The Map Place
Silver Phoenix Resources Inc.
MAMMOTH PROPERTY
Revelstoke Mining Division, BC
REGIONAL GEOLOGY
Scale: approx 1:500,000
Source: Koffyberg, 2009
UTM NAD83 Zone 11
Map Sheets: 82K.082,083
Fig. 3



X-Mark Minerals	Silver Phoenix Resources Inc.
Mammoth Property	Property Geology and Showing Locations

Modified from: Koffyberg, 2008	Scale:	1:25000	N.T.S.:	082K.082,083	Mining Div:	Revelstoke B.C.	Figure: 4

8.0 MINERALIZATION AND DEPOSIT TYPE

Lower Index formation clastics formed under conditions of high cratonic relief and were likely basinal slope deposits. The chlorite rich gray-green and light green phyllitic siltstone likely reflects a deeper basin environment. Overlapping lateral facies changes resulted from multiple transgressions and regressions, although structural complexity complicates this interpretation. Massive chlorite at the base of the silicified ore zone reflects hydrothermal activity in the basin. Lead-zinc mineralization associated with silicification is precipitated from metaliferous brines originating from fissures at some depth in the basin. The manganiferous siderite horizon is generally stratigraphically coincident with the lead- zinc mineralization but was precipitated more distally from the source of metalliferous brines. The deposits are thought to be structurally modified, stratiform in character, and possibly SEDEX in origin.

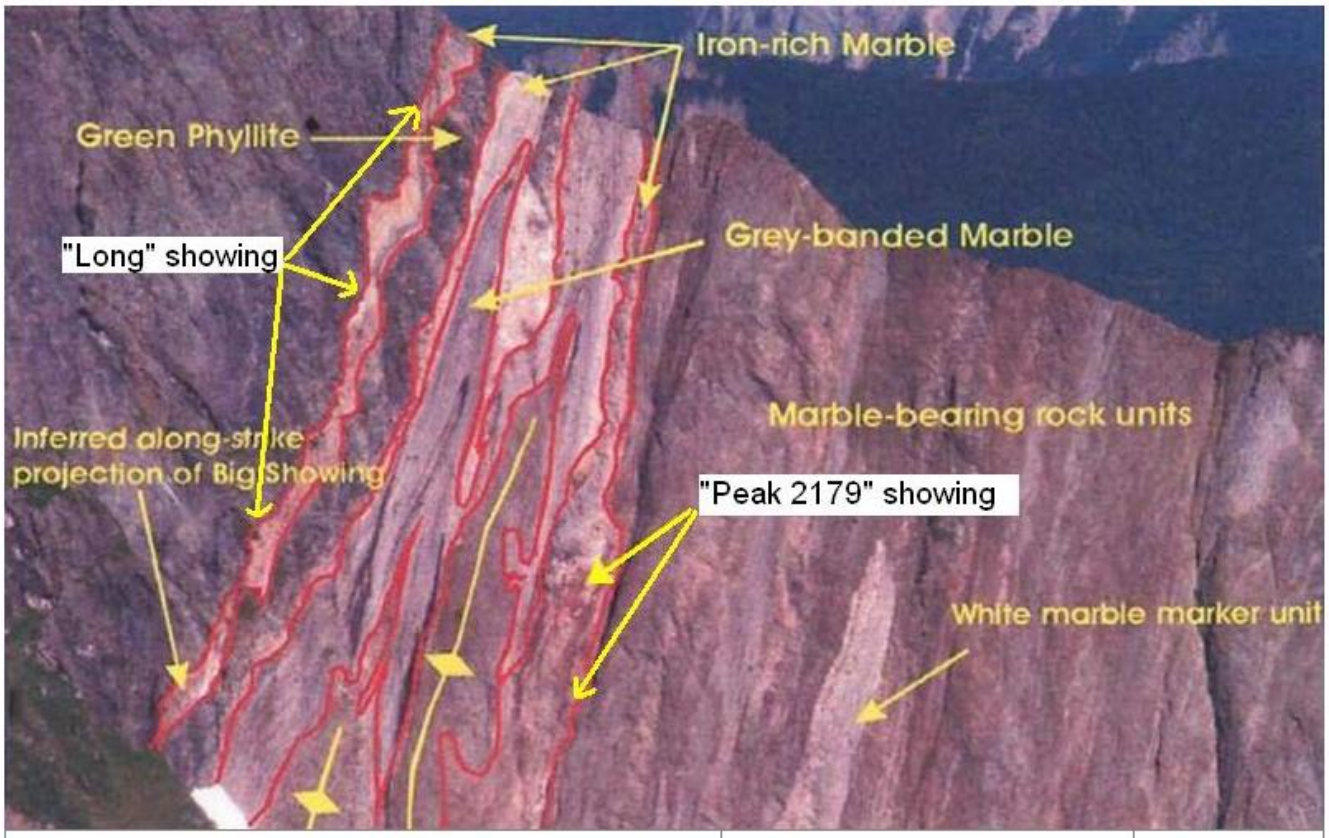
Speculatively, rates of influx of hydrothermal brines may have varied because of sea level changes and subsequent changes in hydrostatic head in the fissure system (Degens Ross, 1970). Mineralizing episodes appear to have been fairly closely followed by either uplift or regression of the sea. Gray micritic limestone was apparently deposited above the carbonate compensation depth, in an off-shelf environment, as pelagic ooze. Rusty lenticular lenses that contain up to two percent disseminated magnetite are present at several horizons within the gray limestone. These rusty horizons possibly represent several pauses in carbonate deposition with concomitant formation of insoluble residue by carbonate dissolution along these unconformities. Transgressions of the sea resulted in more stagnant, deeper water conditions and deposition of graphitic carbonate with thinly interbedded black graphitic phyllites. Sea level regression followed, and deposition of pelagic oozes became dominant again.

Volcanic greenstone and dark green phyllite formed in a submarine environment as flow rocks as evidenced by rare pillow structures.

9.0 WORK PROGRAM

Between August 17 and August 25, 2012, a rock and chip sampling program was carried out on the Mammoth Property by personnel of X-Mark Minerals. The program consisted of the collection and assay of 54 rock and chip samples from known and untested Pb-Zn-Ag showings. The primary objectives of the program were to better understand Pb-Zn-Ag grades at the Big Showing, particularly at the Upper Zone (Figure 4) where prohibitive access has prevented recent sampling; and to conduct maiden sampling over the “Peak 2179” showing, an iron-stained exposure identified by Robert Thompson (Koffyberg, 2009) on a cliff-face due south of the Big Showing, and the “Long” showing, a second cliff-face showing parallel to “Peak 2179” identified by X-Mark Minerals (Figure 5). Both the “Peak 2179” and “Long” showings exhibit rust coloured staining and stratigraphic positions similar to the Pb-Zn-Ag-enriched showings at the Big Showing, but have not previously been sampled due to their position on a near-vertical cliff-face accessible only by trained alpinists using ropes and secured climbing routes. Two alpinists were hired by X-Mark Minerals, and with their assistance all showings were accessed and sampled.

9.1 Sample Methodology



Modified from: Koffyberg, 2008	"Peak 2179" and "Long" Showings	Figure: 5

Rock grab and chip samples were collected from outcrop with a geo-pick hammer. Sample material was placed in clear ore bags, tagged, and location and sample description recorded on paper and hand held GPS. Sample ID was written on flagging tape and secured to actual location site (not always possible on cliff-face locations). All samples for assay were placed in zap-strap sealed rice bags and shipped via courier to Actlabs in Kamloops, BC. Rock grab samples represent the best mineralized material present, whereas the chip samples are representative of average rock composition across the interval as a whole.

At the "Peak 2179" and "Long" showings, the author of this report did not accompany the alpinists onto the cliff-face for sampling, due to lack of proper mountaineering skills. Basic mineralization identification and sampling instruction was given by the author to the alpinists earlier in the program while sampling side by side at the Upper and Lower Zones of the Big Showing. With radio and visual communication between author and alpinists maintained at all times, the alpinists climbed or descended into high interest zones of the showings and collected rock grab samples (no chip samples) at approximate vertical intervals, targeting best mineralized material if possible. Rock sample coordinates and ID were recorded via GPS and radioed to the author. When the maximum number of samples for safe carrying was attained, the alpinists would return to base location, deposit samples with author for description.

9.2 Sample Preparation, Analysis and Quality Control

Rock sample preparation involved crushing the sample to 10 mesh, then pulverizing a 250 g split to -150 mesh (code RX1). A "near-total" agua regia digestion (code 8-4) was used before INAA+ICP/OES (code 1H) analysis for 50 elements. The analytical results of the rock samples are shown in Appendix II. Quality control samples from the lab are included with each batch. No problems with the quality control samples are evident.

10.0 ROCK GRAB AND CHIP SAMPLING RESULTS

10.1 Big Showing

A total of 11 grab and 10 chip samples were collected for assay from the Big Showing (sample numbers ranging from BS121702 to BS171201) on August 17th and 25th, 2012. On August 17th, the author and one alpinist were dropped via helicopter at a toe-in site near the Lower Zone with the intent of ascending the steep slope to the Upper Zone, since a safe toe-in landing site could not be found there. The Lower Zone was not accessed or sampled on this day. While climbing to the Upper Zone, grab samples were collected from a SE striking, rusty, iron-bearing siderite marble that pinches and swells and lies adjacent to a small creek (sample ID: BS121702 to BS121711, and BS171201). Visible mineralization in the siderite, when present, is typically in the form of fine-grained to massive pyrite, and assays returned only trace Pb-Zn-Ag levels from these samples. Because of difficult climbing conditions and extra time needed to locate a toe-in pick up site, the Upper Zone was not accessed.

On August 25th, X-Mark personnel returned to the Big Showing for a second attempt at the Upper Zone. A toe-in site near the Lower Zone was again used, and 3 chip samples and one grab sample (sample ID: BS122501 to BS122507) were collected from the Lower Zone showing in the vicinity of the old portal. All chip samples (at both Lower and Upper Zones) were collected over 2 m intervals and in W-E orientation. Mineralization at the Lower Zone is typified by stringers, disseminations and pods of fine-grained to massive galena, sphalerite and pyrite within a rusty weathering, siliceous marble. Best grade for the chip samples was <2% combined Pb-Zn, and 7 g/t Ag. The single grab sample, containing approximately 30% galena, assayed 25% Pb, 0.6% Zn, and 95.2 g/t Ag. Although time constraints prevented detailed mapping of the showing, earlier reports indicate widths ranging from 1 – 5 m and vertical length of up to 30 m, which appeared to be accurate. Sample locations (for both Upper and Lower zones) and assay results are shown in Figure 6.

The Upper Zone was this time successfully accessed, and 11 chip and grab samples were collected (7 chip samples, 4 grab samples). The Upper Zone was confirmed to vary from 2 – 9 m in width over a vertical length of approximately 30 m, and is constrained within the hinge zone of a parasitic anticlinal fold (Figure 7). Grades were higher than at the Lower Zone, with the best chip sample (BS122508) returning 21% Pb (trace Zn) and 61 g/t Ag. Average grade for the chip samples was approximately 6% Pb, <1% Zn, and 20 g/t Ag. Grab samples ranged from 2% to 38.6% combined Pb-Zn, and 3.6 g/t to 98 g/t Ag.

10.2 "Peak 2179" Showing

In Assessment Report #29602, the "Peak 2179" showing is described as follows:
"The inferred zone of interest is well displayed (as a) layer that can be traced from the ridge crest, down slope into a thickened "molar tooth" shaped zone interpreted as the hinge of a syncline. The dark

rusty weathering character of the zone is consistent with mineralized rocks observed elsewhere. If this interpretation is correct, then structural thickening will have increased the economic potential of this zone. Given the nature of exposure, proper sampling and assessment will require technical climbing ability and the support of an alpinist capable of providing safe belays."

On August 18, 2012, X-Mark personnel, which included the author and two alpinists, landed on the south side of the cliff that hosts the "Peak 2179" (and "Long") showing and hiked to the base where the showing is lost beneath a talus slope. From this location, the alpinists ascended the cliff face via secured climbing ropes to the "thickened molar tooth". The author was in visual and radio contact with the alpinists at all times, and guided their sampling of the "molar tooth", which is approximately half way up the cliff, down slope in approximate 10 m intervals, for a total vertical sampling distance of approximatley 50 m. Because of its 'pinch and swell' character, thickness of the layer where sampled ranged from approximately 10 meters at the "molar tooth" to zero where the layer was pinched off. At the widest points of the layer, samples were collected at the center and near the east and west contacts; as the layer thinned down slope, samples were collected near the contacts or from the center. In total, 9 grab samples were collected and assayed (sample ID: PS121803 to PS121820). Sample locations and assay results are shown in Figure 8.

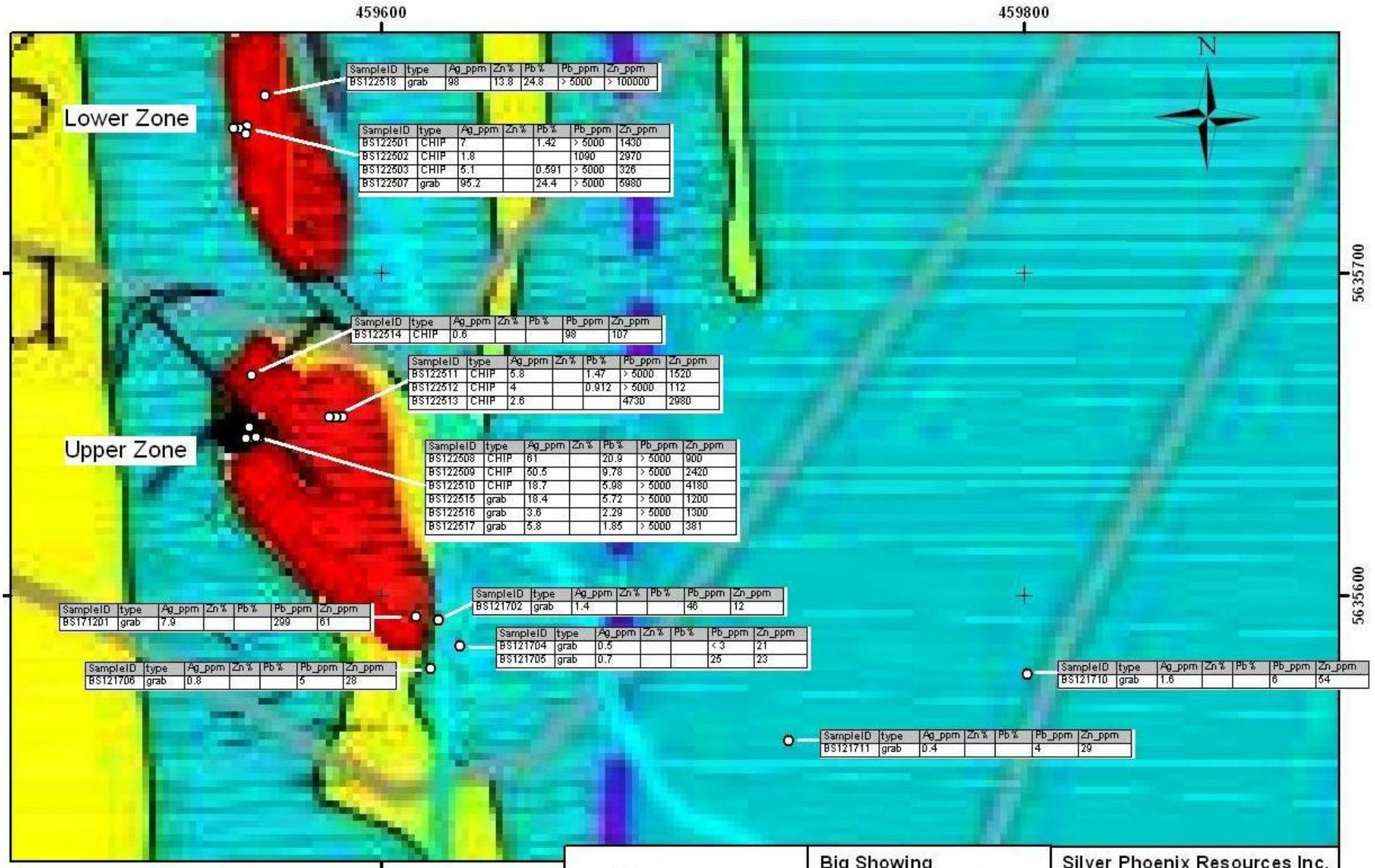
Complicating the sample point projection is the general inaccuracy of the elevation data recorded by the hand held GPS unit (Garmin GPSMap76) which would often indicate, for example, a gain of 10 m in elevation from the previous sample location when in fact there had been an approximate 10 m drop down slope. X/Y inaccuracy readings from the GPS unit varied from 4 – 15 m, but elevation readings seemed to be worse; for this reason, elevation records from the GPS should be regarded with caution. To compensate, actual distances between sample points were visually estimated while on the cliff-face and noted in the sampling notes, and sample locations were marked on a laminated photo carried by the alpinists as they were collected (Figure 9).

Visual observations, historic data and assay results from the Mammoth property reveal that higher grade Pb-Zn-Ag mineralization is typically hosted by rusty, siliceous marble rather than the more ubiquitous rusty, non-siliceous, iron-bearing marble, or siderite. Rock samples and direct observation at the base of the cliff where the "Peak 2179" showing is easily accessible indicate that the showing is predominantly hosted by siderite. Pyrite was commonly observed, sometimes as coarse-grained, euhedral pods, but galena, sphalerite and pyrrhotite were generally absent. Combined Pb-Zn grades for 7 of the 9 grab samples were <0.4%, with low corresponding silver values; the two other samples, PS121803 and PS121805, however, assayed 5.55% and 18.2% Pb, and 101 g/t and 127 g/t Ag (the two highest silver values from this program) respectively, and contained massive, euhedral pyrite and possible fine-grained galena.

10.3 "Long" Showing

The author of this report observed an untested, rusty weathering layer herein termed the "Long" showing, parallel to the "Peak 2179" showing on the same south facing cliff and in the same stratigraphic layer identified in Assessment Report #29602 as being the 'inferred along-strike projection of the Big Showing'.

On August 19th and 24th, 2012, X-Mark Minerals personnel, which included two alpinists, landed near and then hiked to the 2179 m elevation peak from where the alpinists repelled into the "Long" showing.



SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS122518	grab	98	13.8	24.8	> 5000	> 100000

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS122501	CHIP	7		1.42	> 5000	1430
BS122502	CHIP	1.8			1090	2970
BS122503	CHIP	5.1		0.591	> 5000	326
BS122507	grab	95.2		24.4	> 5000	5980

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS122514	CHIP	0.6			98	107

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS122511	CHIP	5.8		1.47	> 5000	1520
BS122512	CHIP	4		0.912	> 5000	112
BS122513	CHIP	2.6			4730	2980

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS122508	CHIP	61		20.9	> 5000	900
BS122509	CHIP	50.5		9.78	> 5000	2420
BS122510	CHIP	18.7		5.98	> 5000	4180
BS122515	grab	18.4		5.72	> 5000	1200
BS122516	grab	3.6		2.29	> 5000	1300
BS122517	grab	5.8		1.85	> 5000	381

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS171201	grab	7.9			299	61

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS121702	grab	1.4			46	12

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS121704	grab	0.5			< 3	21
BS121705	grab	0.7			25	23

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS121706	grab	0.8			5	28

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS121710	grab	1.6			6	54

SampleID	type	Ag_ppm	Zn %	Pb %	Pb_ppm	Zn_ppm
BS121711	grab	0.4			4	29

Figure 6

Big Showing
Lower and Upper Zone
Sample ID and Assay

Silver Phoenix Resources Inc.
Date: November, 2012
UTM: NAD83, Zone 11

X-Mark Minerals	Big Showing: Upper Zone Setting and Geology	Figure: 7

The showing is widest approximately 1/3rd of the distance down from the top of the ridge, and it was this area that was targeted for sampling. The author remained at the top of the ridge in visual and radio contact with the alpinists to assist in determining sample locations and record observations. At its widest point where sampled, the showing is approximately 8 m wide, and owing to its pinch and swell character, is sometimes pinched off completely. In total, 23 grab samples (sample ID: LS121901 to LS122422) were collected and sent for assay (Figure 8) from areas shown in Figure 9.

Like the “Peak 2179” showing, the “Long” showing is hosted by rusty weathering, iron-bearing siderite marble, rather than the more prospective siliceous marble found at the Big Showing. There are marked differences between the siderite marble at the “Long” showing and siderite marble found elsewhere on the property, however; mainly its colour, which is noticeably darker purple, and the predominance of magnetite, which can reach 50% of total rock composition and regularly has massive, euhedral form. Pyrite is rare; galena, sphalerite, pyrrhotite were not observed in any hand samples. Grades at the “Long” showing were the lowest in this program, with the best sample (LS121901) returning <0.13% combined Pb-Zn and only trace silver.

11.0 DISCUSSION

11.1 Big Showing

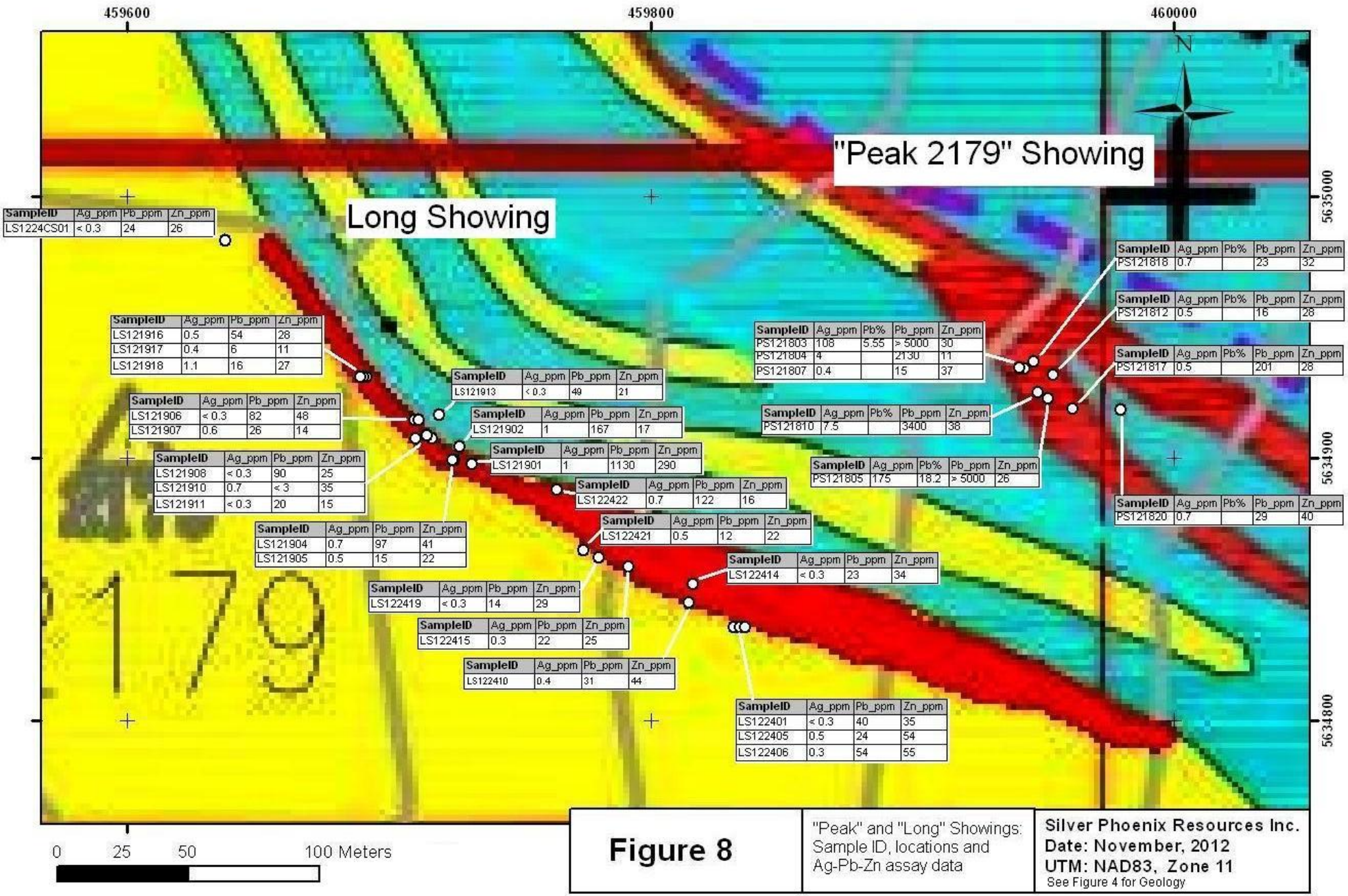
The Lower Zone of the Big Showing, located at the old portal entrance, is hosted by rusty weathering, siliceous marble. Best grades from this program were 25% combined Pb-Zn and 95.2 g/t silver from the single grab sample, and 1.5% combined Pb-Zn and 5.1 g/t silver from a 2 m chip sample.

The Upper Zone of the Big Showing is also hosted by rusty weathering, siliceous marble. Grades were higher than at the Lower Zone, with the best chip sample returning 21% Pb (trace Zn) and 61 g/t Ag. Average grade for the chip samples was approximately 6% Pb, <1% Zn, and 20 g/t Ag. Grab samples ranged from 2 – 38.6% combined Pb-Zn, and 3.6 – 98 g/t Ag. Non-siliceous, rusty, iron-bearing marble (siderite) associated with both Lower and Upper Zones of the Big Showing contains only trace mineralization.

Although some of the better grades from both zones can be considered economic, their relatively small size and the extreme ruggedness and difficulty of access of this area makes further development of the showings challenging. Structurally, the area is very complex, as it was thought that the two showings (“Peak 2179” and “Long”) sampled on the cliff face due south (along strike) of the Big Showing, in similar stratigraphic positions and with the same general appearance, would represent along-strike projections of the mineralized, siliceous marble, and therefore significantly increase the size potential of the higher grade 'ore'. Observations and assay results suggest that the mineralized, siliceous marble does not, in fact, project through to the southern cliff face, further constraining possible extensions at depth. Two high grade samples from the “Peak 2179” showing, although not hosted by the more prospective silicious marble, indicate that there nevertheless may be mineralized continuity through to the Big Showing, and that siderite rocks on the property do have mineralized potential.

11.2 “Peak 2179” Showing

The “Peak 2179” showing was sampled over a vertical distance of approximatley 50 m, including the thickened 'molar tooth' section which is interpreted as a possible fold hinge. Visual observation and



SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS1224CS01	< 0.3	24	26

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS121916	0.5	54	28
LS121917	0.4	6	11
LS121918	1.1	16	27

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS121906	< 0.3	82	48
LS121907	0.6	26	14

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS121908	< 0.3	90	25
LS121910	0.7	< 3	35
LS121911	< 0.3	20	15

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS121904	0.7	97	41
LS121905	0.5	15	22

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS121913	< 0.3	49	21

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS121902	1	167	17

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS121901	1	1130	290

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS122422	0.7	122	16

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS122421	0.5	12	22

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS122414	< 0.3	23	34

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS122419	< 0.3	14	29

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS122415	0.3	22	25

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS122410	0.4	31	44

SampleID	Ag_ppm	Pb_ppm	Zn_ppm
LS122401	< 0.3	40	35
LS122405	0.5	24	54
LS122406	0.3	54	55

SampleID	Ag_ppm	Pb%	Pb_ppm	Zn_ppm
PS121803	108	5.55	> 5000	30
PS121804	4		2130	11
PS121807	0.4		15	37

SampleID	Ag_ppm	Pb%	Pb_ppm	Zn_ppm
PS121810	7.5		3400	38

SampleID	Ag_ppm	Pb%	Pb_ppm	Zn_ppm
PS121805	175	18.2	> 5000	26

SampleID	Ag_ppm	Pb%	Pb_ppm	Zn_ppm
PS121818	0.7		23	32

SampleID	Ag_ppm	Pb%	Pb_ppm	Zn_ppm
PS121812	0.5		16	28

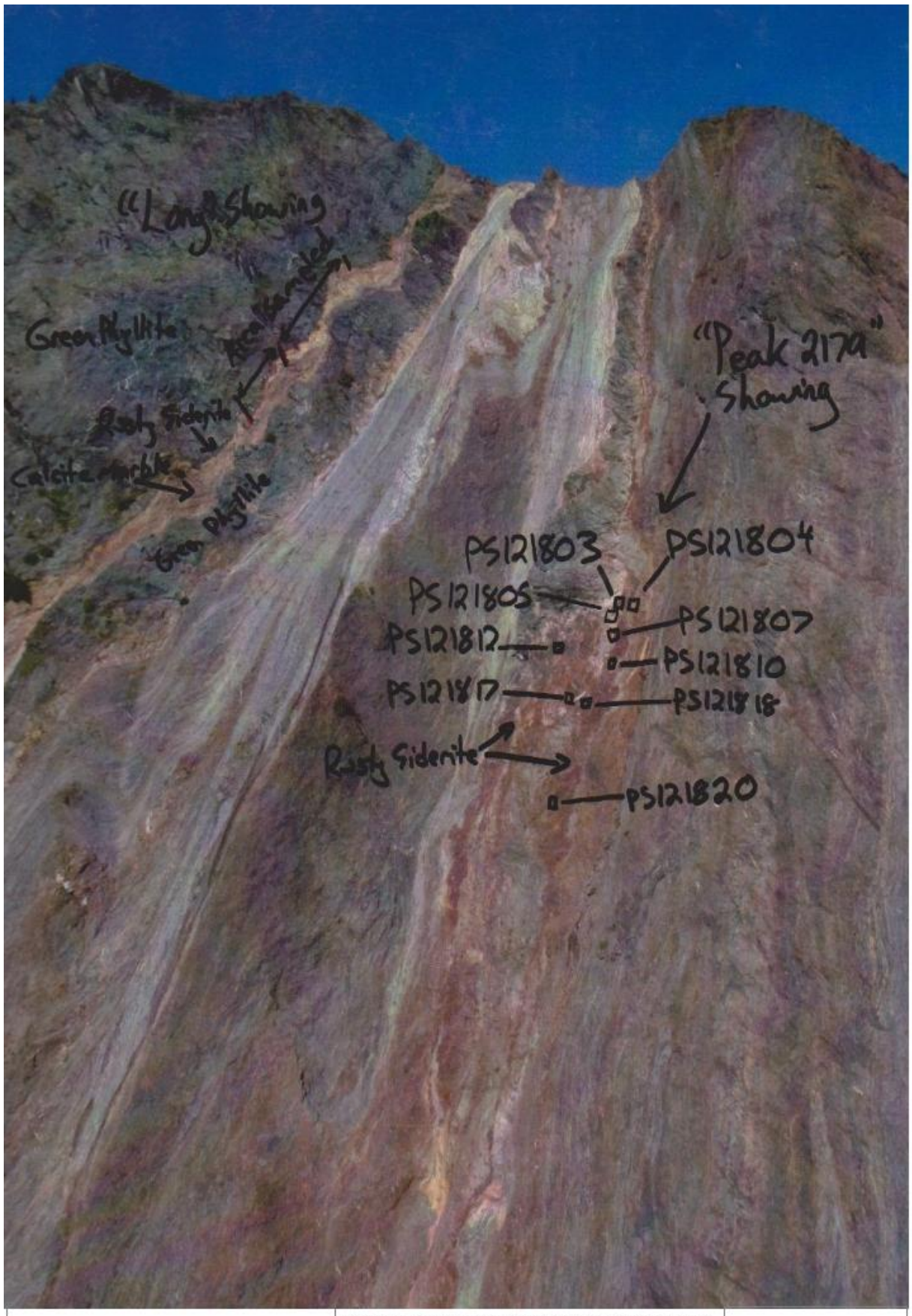
SampleID	Ag_ppm	Pb%	Pb_ppm	Zn_ppm
PS121817	0.5		201	28

SampleID	Ag_ppm	Pb%	Pb_ppm	Zn_ppm
PS121820	0.7		29	40

Figure 8

"Peak" and "Long" Showings: Sample ID, locations and Ag-Pb-Zn assay data

Silver Phoenix Resources Inc.
Date: November, 2012
UTM: NAD83, Zone 11
See Figure 4 for Geology



X-Mark Minerals	"Peak 2179" and "Long" showings: Field observed sample locations and geology	Figure: 9

assay results indicate that areas of the showing that were sampled are hosted by siderite rather than the more prospective siliceous marble found at the Big Showing. Although assays results for most of the samples were at trace levels, two samples did return encouraging results, with 5.55% and 18.2% Pb, and 101 g/t and 127 g/t Ag (the two highest silver values from this program) respectively. Given the structural complexity of the property, and the association of siderite with the mineralized siliceous marble at the Big Showing, it's possible that certain sections of the "Peak 2179" showing will contain pods or intervals of high grade siderite and/or siliceous marble. If this is the case, it can be assumed that additional mineralization exists at depth and along-strike between the "Peak 2179" and Big Showings

11.3 "Long" Showing

Like the "Peak 2179" showing, the "Long" showing is hosted by rusty weathering siderite marble, rather than the more prospective siliceous marble found at the Big Showing. The "Long" showing is unique amongst the showings sampled in this report in that it has a dark purple colour and a very high magnetite content, often in massive, euhedral form. Grades at the "Long" showing were the lowest in this program, with the best sample returning <0.13% combined Pb-Zn and only trace silver. Although the exact location of the 'inferred along-strike projection of the Big Showing' indicated in Assessment Report #29602 was not sampled, close-up observation from the helicopter by the author did not reveal significant differences in appearance from sections of the showing that were sampled. If the "Long" showing does host economic mineralization, it is likely in discreet sections only, as seen at the "Peak 2179" showing.

12.0 RECOMMENDATIONS

At the Big Showing, detailed mapping, structural analysis and additional chip sampling is required to better assess true size, grade, and down-dip and/or along-strike potential, particularly at the larger Upper Zone where grades are higher. Preexisting data should be synthesized and digitized. Assistance from a trained alpinist is recommended whenever attempting to access the Upper Zone. There are no suitable camping locations with access to the Upper Zone, and possibly the Lower Zone as well, leaving helicopter or a long hike along the now overgrown trail to valley bottom as the only access options.

If good potential for increased size at depth is recognized, the Upper and/or Lower Zone should be drill tested. Since extreme topographic conditions at both showings may be prohibitive for safe drill pad location, an experienced drill pad builder should visit the showings to assess drill pad viability as part of any future program.

The "Peak 2179" and "Long" showings are not recommended for follow-up work at this time. Despite their large size relative to the Upper and Lower zones at the Big Showing, rock type (non-siliceous, siderite marble) and mineralization are not favorable. The two high grade samples at the "Peak 2179" showing are encouraging and support the possibility of limited along-strike continuity of the Big Showing to the north.

The two other showings on this property, Mammoth and Scout, that weren't visited during this program should be assessed as part of any future program. Historical data indicates Pb-Zn-Ag values similar to the Big Showing. Difficult access and small size, the biggest limitations to developing the Big

Showing, may be less prohibitive at Mammoth and Scout, making them easier prospects to develop on their own or in conjunction with work at the Big Showing.

The presence of numerous, high grade showings, albeit relatively small in size and in challenging terrain, highlights the overall potential of the property.

Cost estimates for a follow-up work program include detailed mapping and additional chip sampling of the Upper and Lower zones of the Big Showing, as well as the Mammoth and Scout showings; structural analysis by a structural geologist; and drill pad feasibility. Details are provided below:

Professional Services:	
Project Geologist (Synthesize and digitize historical data; planning; mapping and sampling of Big Showing, Mammoth and Scout showings):	
14 days @ $700/day	$9800
Structural Geologist (Structural analysis of showings and property geology):	
6 days @ $800/day	$4800
Structural Geologist report:	$2000
Assessment Report Writing and GIS:	$3500
Field Personnel:	
Alpinist:	
6 days @ $600/day	$3600
Field assistant:	
6 days @ $400/day	$2400
Drill pad builder:	
1 day @ $500/day	$500
Expenses:	
Assays:	
60 samples @ $50/sample	$3000
Helicopter:	
8 days @ $3200/day	$25600
Food and Accommodation:	
6 days @ $400/day	$2400
Transportation	
6 days @ $150/day	$900
Miscellaneous @ 10% of total costs	$5850
Total:	$64350
Contingency @ 15%:	$9650
Final Total:	$74000

13.0 REFERENCES

British Columbia Ministry of Mines; Annual Reports: 1896-536; 1900-810; 1903-133; 1904G121; 1905-J156; 1906-H139, H249, H253; 1907-L214; 1914-K270; 1916-K523

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Thompson, R.I. (2007): Geological Reconnaissance of the Big Showing Property, Incommappleux River Area, Southern British Columbia, internal report for Discovery Consultants; in Assessment Report 29602

Turner, J. (2007): Technical Report on the Mammoth, Scout and Big Showing Property, Revelstoke Mining Division, for Silver Phoenix Resources Ltd, dated February 9, 2007

14.0 STATEMENT OF COSTS

Professional Services:	
Chris Solic, Project Geologist	
Program planning, preparation, fieldwork (August 17-25, 2012), data interpretation	
7 days @ $500/day	$3500
Assessment Report writing	$1500
Field Personnel:	
Nathan MacDonald, Certified Alpine Climbing Guide	
Rock sampling support, August 17-25, 2012	
5 days @ $600/day	$3000
Megan Smith, Alpinist	
Rock sampling support, August 17-25, 2012	
3 days @ $550/day	$1650
Expenses:	
Analytical: Actlabs (Kamloops, BC)	
Rock sample preparation and analysis	
55 samples @ $42.79	$2353.45
Courier of samples to Actlabs, Kamloops	$30
Photo laminating	$48.33
Satellite phone rental	$96.75
Sampling and field supplies	$248.73
Food	
6 days @ $50/day	$300
Transportation:	
Vehicle rental	
6 days @ $75/day	$450
Vehicle fuel	
6 days @ $50/day	$350
Helicopter	$11373.25
Total:	$24900.51
HST @ 12%:	$2988.06
Contingency @ 15%:	$4183.29
Final Total:	$32071.86

15.0 STATEMENT OF QUALIFICATIONS

I, Chris Solic, Geologist and owner of X-Mark Minerals, 207 Larsen Ave, Enderby, BC, V0E1V2

DO HEREBY CERTIFY that:

1. I am a geologist in mineral exploration.

2. I graduated with a B.Sc. degree in Geological Sciences from the University of Manitoba in 2006.

3. I have worked as a geologist for a total of 6 years since graduation from University.

4. This report is based upon knowledge of the Property gained from field experience at the Property and from a review of existing industry and government reports.

Dated this tenth day of December, 2012 in Enderby, BC

Signature of

Chris Solic, Geologist
X-Mark Minerals

APPENDIX I

Rock Sample Locations and Descriptions

SampleID	Location	Type	X	Y	Zone	Rock Type	Interval	Mineralization	Description
BS121702	Big Showing	Grab	459618	5635592	11	Siderite	none	10% Py	phyllite/siderite contact
BS121704	Big Showing	Grab	459625	5635584	11	Siderite	none	~5% Py	from center of 2 m wide siderite zone
BS121705	Big Showing	Grab	459625	5635584	11	Siderite	none	~5% Py	collected 30 cm west of BS121704
BS121706	Big Showing	Grab	459615	5635577	11	Siderite	none	none	from center of 1 m wide siderite layer
BS121710	Big Showing	Grab	459801	5635575	11	Siderite	none	minor Py	from center of 1 m wide siderite pod near pick up spot
BS121711	Big Showing	Grab	459727	5635555	11	Siderite	none	minor Py, Gn	siderite pod/stringer 30cm wide at pick up spot
BS122501	LowerZone	Chip	459558	5635745	11	Siliceous marble	2.0 m	minor Py, Gn	0-2 m from east siderite contact
BS122502	LowerZone	Chip	459556	5635745	11	Siliceous marble	2.0 m	up to 5% Py+Gn	2-4 m from sidertie contact
BS122503	LowerZone	Chip	459554	5635745	11	Siliceous marble	2.0 m	minor Py, Gn	4-6 m from siderite contact
BS122507	LowerZone	Grab	459558	5635743	11	Siliceous marble	none	30% Gn	massive Gn pod
BS122508	UpperZone	Chip	459562	5635649	11	Siliceous marble	2.0 m	Up to 50% Gn+Sp	0-2 m from east phyllite contact
BS122509	UpperZone	Chip	459560	5635649	11	Siliceous marble	2.0 m	10-20% Gn, Sp	2-4 m from east phyllite contact
BS122510	UpperZone	Chip	459558	5635649	11	Siliceous marble	2.0 m	10-20% Gn, Sp	4-6 m from east phylite contact
BS122511	UpperZone	Chip	459588	5635655	11	Siliceous marble	2.0 m	5% Gn, Sp	0-2 m from east phyllite contact; lower silica content in this area of the showing
BS122512	UpperZone	Chip	459586	5635655	11	Siliceous marble	2.0 m	minor Gn	2-4 m from east phyllite contact
BS122513	UpperZone	Chip	459584	5635655	11	Siliceous marble	2.0 m	minor Gn	4-6 m from east phyllite contact
BS122514	UpperZone	Chip	459560	5635668	11	Siliceous marble	3.0 m	minor Gn	0-3 m from east phyllite contact (siliceous zone is 3 m wide here)
BS122515	UpperZone	Grab	459561	5635649	11	Siliceous marble	none	10% Gl (+Sp?)	grab from high-grade (Gn+Sp+Py) pod
BS122516	UpperZone	Grab	459561	5635649	11	Siliceous marble	none	20% Py + minor Gl	grab from high-grade (Gn+Sp+Py) pod; same location as BS122515
BS122517	UpperZone	Grab	459559	5635652	11	Phylittic marble	none	10% Gl + minor Py	phylittic marble
BS122518	Big Showing	Float	459564	5635755	11	Siliceous marble	none	30%Gn + minor Sp	float sample near portal
BS171201	Big Showing	Grab	459611	5635593	11	Siderite	none	5% Py	from siderite/phyllite contact
LS121901	LongShowing	Grab	459731	5634898	11	Chloritic siderite	none	none	2 m wide siderite zone; sample collected near western phyllite contact; massive magnetite
LS121902	LongShowing	Grab	459727	5634905	11	Siderite	none	trace Py	3 m north of sample LS121901, 30 cm from western phylitte contact; massive magnetite
LS121904	LongShowing	Grab	459725	5634900	11	Chloritic siderite	none	trace Py	6 m north of sample LS121902; zone is 1.5 m wide; trace magnetite
LS121905	LongShowing	Grab	459724	5634900	11	Siderite	none	none	1 m west of sample LS121904
LS121906	LongShowing	Grab	459709	5634915	11	Chloritic siderite	none	none	zone is 2 m wide, includes numerous quartz veins; sample collected 30 cm from west phyllite contact
LS121907	LongShowing	Grab	459711	5634915	11	Siderite	none	trace Py	2 m east of LS121906 along west marble contact; massive magnetite
LS121908	LongShowing	Grab	459716	5634908	11	Siderite	none	none	zone is 6 m wide here; sample 30 cm from east marble contact
LS121910	LongShowing	Grab	459710	5634908	11	Chloritic siderite	none	none	6 m west of LS121908 at west phyllite contact
LS121911	LongShowing	Grab	459714	5634909	11	Siderite	none	none	zone is 4 m wide here; sample collect 5 m north of LS121910 along east marble contact
LS121913	LongShowing	Grab	459719	5634916	11	Chloritic siderite	none	15% Py	6 m north of sample LS121912; from center of 1 m wide siderite zone; massive Py + magnetite
LS121916	LongShowing	Grab	459691	5634931	11	Chloritic siderite	none	trace Py	collected 25 m north of LS121913 along east marble contact; zone is 3 m wide
LS121917	LongShowing	Grab	459690	5634931	11	Siderite	none	none	collected 1.5 m west of LS121916
LS121918	LongShowing	Grab	459689	5634931	11	Chloritic siderite	none	none	collected 3 m west of LS121916 at west phyllite contact
LS122401	LongShowing	Grab	459832	5634836	11	Siderite	none	none	zone is 6 m wide with numerous quartz bands; sample from west phyllite contact
LS122405	LongShowing	Grab	459834	5634836	11	Siderite	none	5% Py	3.0 m east of LS122401 at center of siderite zone; massive magnetite
LS122406	LongShowing	Grab	459836	5634836	11	Siderite	none	trace Py	6.0 m east of LS122401 at east marble contact; massive magnetite
LS122410	LongShowing	Grab	459814	5634845	11	Siderite	none	trace Py	siderite zone is 2 m wide; sample collected from east marble contact
LS122414	LongShowing	Grab	459816	5634852	11	Siderite	none	10% Py	zone is 2 m wide; sample from west phylitte contact
LS122415	LongShowing	Grab	459792	5634859	11	Siderite	none	none	zone is 2 m wide; sample from east marble contact; massive magnetite
LS122419	LongShowing	Grab	459780	5634862	11	Siderite	none	15% Py	sample from east marble contact of 2 m wide siderite zone
LS122421	LongShowing	Grab	459774	5634865	11	Siderite	none	trace Py	sample from center of 2 m wide siderite zone
LS122422	LongShowing	Grab	459764	5634888	11	Siderite	none	trace Py	zone is 30 cm wide, pinches out above and below
LS1224CS01	LongShowing	Chip	459637	5634983	11	Siderite	2.0 m	trace Py	<10% massive magnetitie; north side of ridge peak; siderite zone is 3 m wide
PS121803	PeakShowing	Grab	459941	5634934	11	Siderite	none	20%Py	siderite zone is 4 m wide, sample collected from western siderite/marble contact
PS121804	PeakShowing	Grab	459943	5634934	11	Siderite	none	tracePy	2.0 m east of PS121803 at center of siderite zone; contains quartz veinlets
PS121805	PeakShowing	Grab	459952	5634923	11	Siderite	none	20% Py, trace Gn	from a 1 m siderite swell that pinches above and below sample site; contains massive Py
PS121807	PeakShowing	Grab	459941	5634935	11	Siderite	none	none	from east marble contact; zone is 4 m wide
PS121810	PeakShowing	Grab	459948	5634925	11	Siderite	none	trace Py	from center of 4 m wide siderite zone
PS121812	PeakShowing	Grab	459954	5634932	11	Siderite	none	trace Py	from center of 9 m wide 'molar tooth' siderite zone; contains massive quartz
PS121817	PeakShowing	Grab	459961	5634919	11	Siderite	none	none	from upper contact of large quartz inclusion in 'molar tooth'
PS121818	PeakShowing	Grab	459946	5634937	11	Siderite	none	trace Py	from lower contact of large quartz inclusion in 'molar tooth'; contains quartz veinlets
PS121820	PeakShowing	Grab	459980	5634919	11	Siderite	none	trace Py	from western marble contact; zone is 6 m wide

APPENDIX II

Rock Sample Assay Results

Quality Analysis ... *Innovative Technologies*

Date Submitted: 31-Aug-12
Invoice No.: A12-09493
Invoice Date: 26-Sep-12
Your Reference: Goat

X-Mark Minerals
207 Larsen Ave
Enderby BC
Canada

ATTN: Chris Solic

CERTIFICATE OF ANALYSIS

55 Rock samples were submitted for analysis.

The following analytical packages were requested: Code 1H INAA(INAAGEO)/Total Digestion ICP(TOTAL)
Code 8-4 Acid Total Digestion Code 8-4 Acid Total Digestion Assays

REPORT **A12-09493**

Notes:
Elements which exceed the upper limits should be analyzed by assay techniques. Some elements are reported by multiple techniques. These are indicated by MULT.

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

1336 Sandhill Drive, Ancaster, Ontario Canada L9G 4V5 TELEPHONE +1.905.648.9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	As	Ba	Be	Bi	Br	Ca	Co	Cr	Cs	Eu	Fe	Hf	Hg	Ir
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb
Detection Limit	2	0.3	1	0.3	1	3	1	1	0.01	0.01	0.5	50	1	2	0.5	0.01	1	2	1	0.2	0.01	1	1	5
Analysis Method	INAA	MULT INAA / TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	MULT INAA / TD-ICP	MULT INAA / TD-ICP	TD-ICP	TD-ICP	INAA	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
BS121702	218	1.4	71	4.1	< 1	46	85	12	> 20.0	0.09	2490	< 50	< 1	< 2	< 0.5	1.00	96	< 2	< 1	< 0.2	40.3	2	< 1	< 5
BS121704	< 2	0.5	33	1.5	< 1	< 3	32	21	0.23	0.40	12.9	< 50	< 1	< 2	< 0.5	5.66	17	24	< 1	0.6	30.1	< 1	< 1	< 5
BS121705	< 2	0.7	51	1.8	< 1	25	28	23	1.56	0.58	75.4	< 50	< 1	< 2	< 0.5	2.09	16	18	< 1	< 0.2	34.1	< 1	< 1	< 5
BS121706	31	0.8	90	1.4	< 1	5	46	28	0.34	0.36	66.2	< 50	< 1	3	< 0.5	8.70	13	17	< 1	0.5	29.4	< 1	< 1	< 5
BS121710	< 2	1.6	44	1.4	< 1	6	21	54	9.38	2.10	7.5	< 50	< 1	< 2	< 0.5	7.50	18	< 2	< 1	< 0.2	27.5	< 1	< 1	< 5
BS121711	< 2	0.4	6	1.4	< 1	4	11	29	0.33	0.48	7.5	330	< 1	2	< 0.5	5.52	8	17	< 1	0.3	35.2	< 1	< 1	< 5
BS122501	17	7.0	584	4.0	3	> 5000	14	1430	0.38	0.11	22.1	< 50	< 1	< 2	< 0.5	4.33	10	23	< 1	< 0.2	20.6	< 1	< 1	< 5
BS122502	42	1.8	50	7.6	< 1	1090	32	2970	1.85	0.19	110	< 50	< 1	< 2	< 0.5	6.16	12	23	< 1	< 0.2	29.4	< 1	< 1	< 5
BS122503	< 2	5.1	130	1.3	1	> 5000	18	326	0.17	0.55	42.3	< 50	< 1	5	2.0	7.51	17	30	< 1	0.6	18.6	< 1	< 1	< 5
BS122507CS	2000	251	160	8.6	< 1	> 5000	9	1950	12.1	0.51	102	< 50	< 1	< 2	< 0.5	0.09	56	< 2	< 1	< 0.2	9.24	< 1	< 1	< 5
BS122507	48	95.2	124	20.5	< 1	> 5000	61	5980	4.13	0.21	32.7	< 50	< 1	< 2	< 0.5	0.34	21	6	< 1	< 0.2	8.52	< 1	3	< 5
BS122508	132	61.0	835	3.1	2	> 5000	47	900	7.62	0.25	589	310	< 1	< 2	< 0.5	0.04	239	21	< 1	< 0.2	10.9	< 1	< 1	< 5
BS122509	63	50.5	140	4.2	< 1	> 5000	6	2420	4.31	0.28	78.2	< 50	< 1	< 2	< 0.5	0.02	9	27	< 1	< 0.2	4.49	< 1	6	< 5
BS122510	41	18.7	106	6.9	< 1	> 5000	11	4180	2.00	0.27	52.4	< 50	< 1	< 2	< 0.5	0.05	15	20	< 1	< 0.2	7.15	< 1	< 1	< 5
BS122511	37	5.8	820	3.8	3	> 5000	71	1520	1.37	0.21	359	< 50	< 1	< 2	< 0.5	0.51	77	< 2	< 1	< 0.2	25.6	< 1	< 1	< 5
BS122512	14	4.0	23	2.0	< 1	> 5000	24	112	0.18	0.23	12.9	< 50	< 1	< 2	< 0.5	1.07	8	15	< 1	0.7	33.1	< 1	< 1	< 5
BS122513	15	2.6	237	10.5	< 1	4730	27	2980	0.23	0.70	20.2	< 50	< 1	3	< 0.5	5.04	16	16	< 1	0.6	27.3	2	< 1	< 5
BS122514	< 2	0.6	131	1.4	< 1	98	26	107	0.08	0.27	15.6	< 50	< 1	< 2	< 0.5	5.93	17	13	< 1	0.7	32.2	< 1	< 1	< 5
BS122515	84	18.4	1230	4.6	8	> 5000	206	1200	9.54	1.49	285	< 50	< 1	12	< 0.5	8.51	156	63	< 1	0.6	13.6	3	< 1	< 5
BS122516	12	3.6	138	2.7	1	> 5000	9	1300	0.41	0.18	12.0	< 50	< 1	< 2	< 0.5	0.08	10	15	< 1	< 0.2	10.1	< 1	< 1	< 5
BS122517	< 2	5.8	18	1.6	< 1	> 5000	16	381	0.33	0.41	16.6	< 50	< 1	< 2	< 0.5	0.15	6	9	< 1	< 0.2	3.32	< 1	< 1	< 5
BS122518	106	98.0	848	309	< 1	> 5000	60	> 100000	10.5	0.11	39.1	< 50	< 1	< 2	< 0.5	0.07	85	< 2	< 1	< 0.2	7.58	< 1	76	< 5
BS171201	401	7.9	2990	1.0	1	299	66	61	11.2	3.00	285	< 50	< 1	< 2	< 0.5	3.90	29	47	< 1	< 0.2	26.8	2	< 1	< 5
LS121901	< 2	1.0	56	1.9	< 1	1130	31	290	0.19	0.76	12.0	< 50	< 1	< 2	< 0.5	6.17	6	< 2	< 1	0.5	43.7	< 1	< 1	< 5
LS121902	< 2	1.0	59	1.4	< 1	167	15	17	0.68	0.58	5.0	< 50	< 1	< 2	< 0.5	7.78	4	< 2	< 1	1.2	35.6	< 1	< 1	< 5
LS121904	< 2	0.7	5	1.2	< 1	97	25	41	0.84	2.50	12.9	< 50	< 1	< 2	< 0.5	6.61	17	63	< 1	0.8	27.8	4	< 1	< 5
LS121905	< 2	0.5	340	1.7	< 1	15	16	22	0.11	2.18	4.9	70	< 1	< 2	< 0.5	5.70	6	< 2	< 1	0.6	38.4	< 1	< 1	< 5
LS121906	< 2	< 0.3	25	0.9	2	82	10	48	0.22	2.83	2.6	< 50	< 1	2	< 0.5	6.52	8	< 2	< 1	0.3	20.5	< 1	< 1	< 5
LS121907	8	0.6	16	1.0	4	26	17	14	0.31	0.70	< 0.5	220	< 1	3	< 0.5	8.01	7	12	< 1	0.8	30.8	< 1	< 1	< 5
LS121908	< 2	< 0.3	20	0.7	3	90	14	25	0.99	0.42	5.8	< 50	< 1	< 2	< 0.5	8.96	11	< 2	< 1	1.0	23.1	< 1	< 1	< 5
LS121910	< 2	0.7	1800	1.4	< 1	< 3	61	35	0.35	5.98	11.7	< 50	< 1	< 2	< 0.5	3.38	46	31	< 1	< 0.2	31.5	< 1	< 1	< 5
LS121911	< 2	< 0.3	31	2.0	< 1	20	32	15	0.03	0.08	3.7	< 50	< 1	< 2	< 0.5	1.98	9	16	< 1	0.3	39.7	< 1	< 1	< 5
LS121913	< 2	< 0.3	33	0.4	2	49	10	21	0.48	1.17	5.6	< 50	< 1	< 2	< 0.5	19.2	6	12	< 1	0.6	6.61	< 1	< 1	< 5
LS121916	11	0.5	49	1.0	< 1	54	26	28	7.67	2.95	20.2	< 50	< 1	< 2	< 0.5	8.26	27	29	< 1	1.0	25.6	< 1	< 1	< 5
LS121917	< 2	0.4	7	1.9	< 1	6	14	11	0.03	0.05	< 0.5	< 50	< 1	< 2	< 0.5	3.18	6	10	< 1	0.4	37.2	< 1	< 1	< 5
LS121918	< 2	1.1	1970	2.8	2	16	96	27	0.09	2.28	9.2	< 50	< 1	< 2	< 0.5	0.20	60	30	< 1	< 0.2	47.1	< 1	< 1	< 5
LS122401	12	< 0.3	74	0.9	< 1	40	25	35	4.08	2.88	14.7	< 50	< 1	< 2	< 0.5	8.91	23	17	3	1.2	23.9	< 1	< 1	< 5
LS122405	< 2	0.5	180	1.4	< 1	24	22	54	2.83	4.80	9.8	< 50	< 1	4	< 0.5	6.14	27	14	< 1	0.6	30.4	< 1	< 1	< 5
LS122406	< 2	0.3	42	1.4	< 1	54	39	55	3.06	5.01	8.1	< 50	< 1	< 2	< 0.5	1.87	30	16	< 1	< 0.2	32.7	< 1	< 1	< 5
LS122410	< 2	0.4	162	1.6	< 1	31	22	44	5.39	3.59	11.7	< 50	< 1	3	< 0.5	4.49	17	11	< 1	< 0.2	32.0	< 1	< 1	< 5
LS122414	14	< 0.3	20	0.9	2	23	23	34	2.61	2.76	6.1	< 50	< 1	< 2	< 0.5	10.6	22	8	< 1	0.4	25.4	< 1	< 1	< 5
LS122415	9	0.3	94	1.3	5	22	18	25	0.69	2.07	10.8	< 50	< 1	< 2	< 0.5	5.11	12	12	< 1	0.4	25.8	< 1	< 1	< 5
LS122419	18	< 0.3	34	0.7	< 1	14	56	29	5.59	2.57	10.8	< 50	< 1	< 2	< 0.5	7.81	57	38	< 1	0.5	24.7	2	< 1	< 5
LS122421	< 2	0.5	7	0.7	< 1	12	15	22	1.82	1.60	6.4	< 50	< 1	4	< 0.5	7.20	8	9	< 1	0.5	30.9	< 1	< 1	< 5
LS122422	< 2	0.7	127	1.1	2	122	19	16	0.92	1.58	2.4	< 50	< 1	< 2	< 0.5	13.3	13	10	< 1	0.6	21.6	< 1	< 1	< 5
LS1224CS01	< 2	< 0.3	815	1.4	< 1	24	23	26	0.22	2.25	1.7	< 50	< 1	< 2	< 0.5	3.02	15	11	< 1	0.8	29.9	< 1	< 1	< 5
PS121803	189	108	308	3.3	1	> 5000	31	30	5.17	0.23	166	250	< 1	< 2	< 0.5	2.81	43	< 2	< 1	0.3	28.5	< 1	< 1	< 5
PS121804	< 2	4.0	10	0.4	< 1	2130	15	11	0.14	0.06	8.2	< 50	< 1	< 2	< 0.5	15.8	5	< 2	< 1	0.8	11.5	< 1	< 1	< 5
PS121805	47	175	458	5.7	< 1	> 5000	33	26	8.71	0.11	229	< 50	< 1	< 2	< 0.5	1.12	15	< 2	< 1	< 0.2	34.3	< 1	6	< 5
PS121807	121	0.4	4	0.7	< 1	15	12	37	0.78	0.08	117	< 50	< 1	< 2	< 0.5	11.2	7	< 2	< 1	0.8	22.7	< 1	< 1	< 5
PS121810	< 2	7.5	1010	1.7	< 1	3400	113	38	10.1	0.27	330	< 50	< 1	< 2	< 0.5	0.66	24	< 2	< 1	< 0.2	39.8	< 1	< 1	< 5

Analyte Symbol	Au	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	As	Ba	Be	Bi	Br	Ca	Co	Cr	Cs	Eu	Fe	Hf	Hg	Ir
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb
Detection Limit	2	0.3	1	0.3	1	3	1	1	0.01	0.01	0.5	50	1	2	0.5	0.01	1	2	1	0.2	0.01	1	1	5
Analysis Method	INAA	MULT INAA / TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	MULT INAA / TD-ICP	MULT INAA / TD-ICP	TD-ICP	TD-ICP	INAA	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
PS121812	< 2	0.5	58	0.8	< 1	16	15	28	0.11	0.19	20.9	< 50	< 1	< 2	< 0.5	6.05	9	9	< 1	0.5	29.8	< 1	< 1	< 5
PS121817	< 2	0.5	6	1.4	< 1	201	19	28	0.06	0.14	38.0	< 50	< 1	< 2	< 0.5	1.31	16	< 2	< 1	0.5	39.1	< 1	< 1	< 5
PS121818	< 2	0.7	40	1.6	< 1	23	27	32	0.97	0.18	40.0	< 50	< 1	< 2	< 0.5	1.83	32	17	< 1	< 0.2	33.9	< 1	< 1	< 5
PS121820	105	0.7	103	1.4	< 1	29	24	40	2.12	0.99	118	< 50	< 1	3	< 0.5	5.25	29	14	< 1	< 0.2	37.8	< 1	< 1	< 5

Analyte Symbol	K	Li	Mg	Mn	Na	P	Rb	Sb	Sc	Se	Sr	Ta	Ti	Th	U	V	W	Y	La	Ce	Nd	Sm	Sn	Tb
Unit Symbol	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
Detection Limit	0.01	1	0.01	1	0.01	0.001	15	0.1	0.1	3	1	0.5	0.01	0.2	0.5	2	1	1	0.5	3	5	0.1	0.01	0.5
Analysis Method	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA
BS121702	0.02	< 1	0.07	948	0.03	0.003	< 15	< 0.1	0.3	< 3	33	< 0.5	< 0.01	< 0.2	< 0.5	11	< 1	1	2.4	< 3	< 5	0.4	< 0.01	< 0.5
BS121704	0.04	16	1.67	14900	0.10	0.016	< 15	8.6	2.5	< 3	178	4.5	0.03	1.4	< 0.5	8	< 1	5	5.9	14	< 5	1.3	< 0.01	< 0.5
BS121705	0.06	64	1.64	15500	0.10	0.006	< 15	7.9	1.7	< 3	74	5.1	< 0.01	< 0.2	< 0.5	12	< 1	2	1.7	< 3	10	0.5	< 0.01	< 0.5
BS121706	0.07	3	1.00	14700	0.08	0.004	< 15	7.1	1.7	< 3	238	4.6	< 0.01	< 0.2	2.1	9	< 1	4	2.3	< 3	< 5	0.9	< 0.01	< 0.5
BS121710	< 0.01	19	1.31	11100	0.02	0.002	< 15	11.0	1.2	< 3	468	1.7	< 0.01	< 0.2	< 0.5	14	< 1	1	1.4	< 3	< 5	0.4	< 0.01	< 0.5
BS121711	0.04	5	1.25	17100	0.03	0.013	75	12.9	1.6	< 3	363	4.0	0.01	< 0.2	< 0.5	9	< 1	2	3.1	9	< 5	0.6	< 0.01	< 0.5
BS122501	0.02	2	0.25	10100	0.04	0.013	< 15	16.6	0.6	< 3	126	2.5	< 0.01	< 0.2	< 0.5	4	< 1	2	2.1	9	< 5	0.6	0.07	< 0.5
BS122502	0.02	4	0.63	15000	0.04	0.021	< 15	10.1	0.8	< 3	172	1.9	< 0.01	< 0.2	< 0.5	9	< 1	3	1.9	8	< 5	0.7	< 0.01	< 0.5
BS122503	0.17	3	0.76	10600	0.06	0.042	< 15	16.6	1.9	< 3	360	3.5	0.02	1.6	2.7	9	< 1	5	5.9	16	< 5	1.2	< 0.01	< 0.5
BS122507CS	0.11	1	0.02	227	0.07	0.049	< 15	277	0.3	< 3	24	< 0.5	0.02	< 0.2	< 0.5	8	< 1	< 1	2.6	< 3	< 5	0.2	< 0.01	< 0.5
BS122507	0.01	2	0.36	5550	0.04	0.017	< 15	103	0.6	< 3	14	< 0.5	< 0.01	< 0.2	< 0.5	3	< 1	< 1	0.7	< 3	< 5	0.1	< 0.01	< 0.5
BS122508	0.03	2	0.06	1180	0.06	0.020	< 15	101	0.7	< 3	17	3.2	< 0.01	< 0.2	3.0	6	< 1	< 1	1.8	< 3	< 5	< 0.1	< 0.01	< 0.5
BS122509	0.03	2	< 0.01	210	0.08	0.022	< 15	81.0	0.6	< 3	15	4.1	0.01	0.8	< 0.5	6	< 1	< 1	2.1	< 3	< 5	0.1	< 0.01	< 0.5
BS122510	0.02	2	0.03	2680	0.06	0.033	< 15	46.9	1.4	< 3	15	5.2	< 0.01	< 0.2	< 0.5	4	< 1	< 1	1.2	< 3	< 5	0.3	< 0.01	< 0.5
BS122511	0.02	1	0.36	11800	0.06	0.015	< 15	26.7	0.7	< 3	22	3.1	< 0.01	< 0.2	< 0.5	6	< 1	2	2.0	< 3	< 5	0.9	< 0.01	< 0.5
BS122512	0.03	2	0.90	18200	0.06	0.018	< 15	14.7	1.1	< 3	33	3.6	< 0.01	1.4	< 0.5	13	< 1	3	10.1	21	14	2.3	< 0.01	0.9
BS122513	0.05	7	1.36	14300	0.10	0.023	< 15	13.8	2.3	< 3	97	3.7	0.01	1.3	1.8	13	< 1	3	7.6	18	< 5	1.1	< 0.01	< 0.5
BS122514	0.02	9	1.51	16300	0.05	0.023	< 15	10.1	1.3	< 3	122	2.6	< 0.01	0.7	< 0.5	11	< 1	4	4.1	13	< 5	1.4	< 0.01	< 0.5
BS122515	0.24	7	0.10	2400	0.20	0.055	< 15	23.0	2.3	< 3	263	4.2	0.19	7.7	2.6	15	< 1	9	21.2	33	< 5	1.8	< 0.01	< 0.5
BS122516	0.01	1	0.07	2900	0.05	0.014	< 15	18.4	1.1	< 3	7	4.0	< 0.01	< 0.2	1.9	4	< 1	< 1	0.7	< 3	< 5	0.1	< 0.01	< 0.5
BS122517	< 0.01	4	0.10	3530	0.03	0.033	< 15	17.5	1.4	< 3	13	4.8	0.02	1.1	< 0.5	4	< 1	1	4.3	< 3	< 5	0.3	< 0.01	< 0.5
BS122518	< 0.01	< 1	0.08	1560	0.01	0.019	< 15	104	0.5	< 3	6	< 0.5	< 0.01	< 0.2	< 0.5	3	< 1	< 1	< 0.5	< 3	< 5	0.1	< 0.01	< 0.5
BS171201	0.29	84	0.90	7500	0.26	0.015	< 15	13.8	4.7	< 3	181	4.1	0.11	4.0	< 0.5	28	< 1	4	18.4	34	14	1.9	< 0.01	< 0.5
LS121901	< 0.01	13	1.02	14800	0.03	0.002	< 15	12.0	2.2	< 3	180	3.0	< 0.01	< 0.2	< 0.5	24	< 1	3	2.9	< 3	< 5	0.8	< 0.01	< 0.5
LS121902	0.01	11	1.03	15600	0.02	0.003	< 15	14.5	1.9	< 3	216	< 0.5	< 0.01	< 0.2	< 0.5	22	< 1	7	4.9	18	12	1.8	< 0.01	< 0.5
LS121904	< 0.01	56	1.23	13200	0.03	0.027	< 15	11.0	6.2	< 3	166	4.2	0.11	10.1	2.3	29	< 1	6	27.6	63	14	4.1	< 0.01	< 0.5
LS121905	< 0.01	36	1.19	15300	0.02	0.002	< 15	11.7	1.7	< 3	159	< 0.5	< 0.01	< 0.2	< 0.5	26	< 1	5	0.7	< 3	< 5	0.6	< 0.01	< 0.5
LS121906	< 0.01	59	0.99	10700	0.02	0.003	< 15	0.8	3.7	< 3	160	< 0.5	< 0.01	< 0.2	< 0.5	27	< 1	5	1.8	< 3	< 5	0.6	< 0.01	0.8
LS121907	< 0.01	13	1.40	15300	0.02	0.008	< 15	7.4	3.2	< 3	240	< 0.5	0.02	1.3	< 0.5	24	< 1	4	6.7	15	7	1.6	< 0.01	< 0.5
LS121908	< 0.01	7	1.59	16800	0.01	0.010	< 15	5.2	1.7	< 3	246	< 0.5	< 0.01	< 0.2	< 0.5	10	< 1	5	2.7	7	< 5	0.8	< 0.01	< 0.5
LS121910	< 0.01	96	1.89	8840	0.02	0.002	< 15	7.5	4.7	< 3	83	< 0.5	0.04	2.1	< 0.5	39	< 1	4	5.9	12	< 5	1.2	< 0.01	< 0.5
LS121911	< 0.01	2	1.16	13000	0.02	0.002	< 15	6.4	0.6	< 3	54	< 0.5	< 0.01	< 0.2	< 0.5	17	< 1	3	3.3	10	< 5	1.0	< 0.01	< 0.5
LS121913	< 0.01	30	0.85	3880	0.02	0.012	< 15	8.0	2.2	< 3	866	0.7	0.04	2.2	< 0.5	5	2	9	7.5	12	< 5	1.4	< 0.01	< 0.5
LS121916	< 0.01	43	1.70	11200	0.07	0.032	< 15	1.9	5.7	< 3	204	< 0.5	0.04	2.3	< 0.5	19	< 1	5	6.6	15	< 5	1.4	< 0.01	< 0.5
LS121917	< 0.01	1	1.12	18200	0.02	0.001	< 15	7.4	1.6	< 3	83	< 0.5	< 0.01	< 0.2	< 0.5	11	< 1	3	1.7	< 3	< 5	0.6	< 0.01	< 0.5
LS121918	0.01	32	0.54	17600	0.02	0.006	60	7.7	2.2	< 3	95	< 0.5	0.03	2.8	< 0.5	35	< 1	2	3.1	6	< 5	0.8	< 0.01	< 0.5
LS122401	0.22	51	1.25	12000	0.04	0.014	< 15	7.9	8.2	< 3	315	< 0.5	0.01	2.1	< 0.5	33	< 1	8	15.6	38	12	3.3	< 0.01	< 0.5
LS122405	< 0.01	111	1.50	12100	0.02	0.003	36	6.7	6.6	< 3	171	< 0.5	0.01	< 0.2	< 0.5	41	< 1	5	1.1	< 3	< 5	0.6	< 0.01	< 0.5
LS122406	< 0.01	103	1.47	5420	0.02	0.005	< 15	6.4	3.8	< 3	73	< 0.5	0.01	0.6	< 0.5	48	< 1	1	1.4	< 3	< 5	0.3	< 0.01	< 0.5
LS122410	< 0.01	73	1.20	11300	0.03	0.001	< 15	6.5	2.6	< 3	200	< 0.5	< 0.01	< 0.2	1.8	40	< 1	3	< 0.5	< 3	< 5	0.3	< 0.01	< 0.5
LS122414	< 0.01	65	1.78	13800	0.02	0.005	< 15	7.8	3.8	< 3	449	< 0.5	0.01	0.8	< 0.5	35	< 1	3	6.9	16	< 5	1.0	< 0.01	< 0.5
LS122415	< 0.01	42	0.75	13400	0.02	0.012	< 15	6.7	4.2	< 3	112	< 0.5	< 0.01	1.0	< 0.5	30	< 1	3	4.0	9	< 5	1.0	< 0.01	< 0.5
LS122419	< 0.01	63	1.52	11900	0.02	0.014	< 15	6.3	4.2	< 3	277	< 0.5	0.09	4.3	1.8	27	< 1	5	13.7	27	< 5	1.4	< 0.01	< 0.5
LS122421	< 0.01	30	1.39	15000	0.02	0.003	< 15	3.7	2.6	< 3	276	< 0.5	< 0.01	< 0.2	< 0.5	20	< 1	5	2.4	< 3	< 5	0.8	< 0.01	< 0.5
LS122422	< 0.01	37	0.86	9300	0.02	0.012	< 15	1.3	3.0	< 3	609	< 0.5	0.01	< 0.2	< 0.5	25	< 1	7	6.7	13	< 5	1.9	< 0.01	< 0.5
LS1224CS01	0.01	42	0.83	19400	0.02	0.007	< 15	2.8	5.1	< 3	97	< 0.5	< 0.01	< 0.2	< 0.5	38	7	4	8.0	21	9	2.2	< 0.01	< 0.5
PS121803	0.07	1	0.95	14700	0.04	0.027	< 15	96.8	1.0	< 3	101	< 0.5	< 0.01	< 0.2	1.9	8	< 1	2	2.6	10	< 5	0.4	< 0.01	< 0.5
PS121804	< 0.01	< 1	0.43	8750	0.01	0.011	< 15	5.1	2.6	< 3	1010	3.3	< 0.01	< 0.2	< 0.5	< 2	< 1	7	7.1	17	< 5	3.0	< 0.01	< 0.5
PS121805	0.02	1	0.67	15300	0.02	0.029	< 15	166	0.6	21	52	2.8	< 0.01	< 0.2	< 0.5	7	< 1	1	2.0	< 3	< 5	0.2	< 0.01	< 0.5
PS121807	0.01	1	1.76	12900	0.02	0.021	< 15	3.1	0.7	< 3	288	2.6	< 0.01	< 0.2	< 0.5	2	< 1	4	1.8	< 3	< 5	2.1	< 0.01	< 0.5
PS121810	0.03	3	0.71	13700	0.06	0.029	< 15	8.9	0.8	< 3	56	< 0.5	0.02	< 0.2	3.1	9	< 1	2	4.5	< 3	< 5	0.8	< 0.01	< 0.5
PS121812	0.04	2	0.94	15000	0.03	0.010	< 15	1.8	1.3	< 3	186	3.3	< 0.01	< 0.2	< 0.5	6	< 1	2	1.0	< 3	< 5	1.0	< 0.01	< 0.5

Analyte Symbol	K	Li	Mg	Mn	Na	P	Rb	Sb	Sc	Se	Sr	Ta	Ti	Th	U	V	W	Y	La	Ce	Nd	Sm	Sn	Tb
Unit Symbol	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
Detection Limit	0.01	1	0.01	1	0.01	0.001	15	0.1	0.1	3	1	0.5	0.01	0.2	0.5	2	1	1	0.5	3	5	0.1	0.01	0.5
Analysis Method	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA
PS121817	0.01	5	1.65	20500	0.03	0.016	< 15	0.9	0.5	< 3	33	3.0	< 0.01	< 0.2	2.9	8	< 1	2	2.1	8	< 5	1.0	< 0.01	< 0.5
PS121818	0.02	2	1.34	16800	0.03	0.018	< 15	0.6	0.6	< 3	70	3.5	< 0.01	< 0.2	< 0.5	9	< 1	2	1.6	< 3	< 5	0.8	< 0.01	< 0.5
PS121820	0.11	10	1.06	16600	0.21	0.010	< 15	0.9	0.9	< 3	310	2.3	< 0.01	< 0.2	< 0.5	13	< 1	3	1.6	< 3	< 5	0.9	< 0.01	< 0.5

Analyte Symbol	Yb	Lu	Mass	Ag	Zn	Pb
Unit Symbol	ppm	ppm	g	ppm	%	%
Detection Limit	0.2	0.05		3	0.001	0.003
Analysis Method	INAA	INAA	INAA	ICP-OES	ICP-OES	ICP-OES
BS121702	< 0.2	< 0.05	1.04			
BS121704	0.8	0.08	31.7			
BS121705	0.6	< 0.05	36.3			
BS121706	0.6	0.11	31.3			
BS121710	< 0.2	0.17	31.4			
BS121711	< 0.2	0.13	25.5			
BS122501	< 0.2	< 0.05	25.0			1.42
BS122502	< 0.2	< 0.05	25.7			
BS122503	0.6	< 0.05	23.7			0.591
BS122507CS	< 0.2	< 0.05	1.05	273		30.9
BS122507	< 0.2	< 0.05	1.08	87		24.4
BS122508	< 0.2	0.13	31.7			20.9
BS122509	< 0.2	< 0.05	29.0			9.78
BS122510	< 0.2	< 0.05	23.9			5.98
BS122511	< 0.2	< 0.05	23.5			1.47
BS122512	< 0.2	< 0.05	25.8			0.912
BS122513	< 0.2	< 0.05	24.2			
BS122514	0.4	< 0.05	26.8			
BS122515	1.3	0.20	25.9			5.72
BS122516	< 0.2	< 0.05	21.0			2.29
BS122517	< 0.2	< 0.05	22.7			1.85
BS122518	< 0.2	< 0.05	1.09	91	13.8	24.8
BS171201	1.3	0.17	25.1			
LS121901	0.8	< 0.05	23.9			
LS121902	0.6	0.09	1.06			
LS121904	1.6	0.27	25.5			
LS121905	0.7	0.15	29.6			
LS121906	0.9	0.17	28.6			
LS121907	0.9	0.18	26.8			
LS121908	0.6	< 0.05	1.01			
LS121910	0.8	< 0.05	31.2			
LS121911	< 0.2	< 0.05	35.8			
LS121913	0.7	0.11	25.6			
LS121916	0.6	< 0.05	1.01			
LS121917	< 0.2	0.09	28.9			
LS121918	0.7	< 0.05	29.5			
LS122401	1.5	0.29	28.5			
LS122405	0.6	0.14	28.0			
LS122406	0.3	0.06	33.3			
LS122410	0.6	< 0.05	34.1			
LS122414	< 0.2	< 0.05	29.9			
LS122415	0.8	0.19	33.2			
LS122419	1.2	0.22	33.8			
LS122421	0.9	0.15	31.0			
LS122422	1.2	0.22	29.0			
LS1224CS01	0.8	0.19	30.9			
PS121803	< 0.2	< 0.05	24.9	101		5.55
PS121804	0.6	< 0.05	28.3			
PS121805	< 0.2	< 0.05	36.0	127		18.2
PS121807	< 0.2	< 0.05	30.8			
PS121810	0.4	< 0.05	1.05			
PS121812	< 0.2	< 0.05	26.9			

Analyte Symbol	Yb	Lu	Mass	Ag	Zn	Pb
Unit Symbol	ppm	ppm	g	ppm	%	%
Detection Limit	0.2	0.05		3	0.001	0.003
Analysis Method	INAA	INAA	INAA	ICP-OES	ICP-OES	ICP-OES
PS121817	< 0.2	< 0.05	25.8			
PS121818	0.3	< 0.05	30.7			
PS121820	< 0.2	< 0.05	29.5			

Quality Control

Analyte Symbol	Au	Ag	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	Be	Bi	Ca	Ir	K	Li	Mg	Mn	P	Sr	Ti	V	Y
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppb	%	ppm	%	ppm	%	ppm	%	ppm	ppm
Detection Limit	2	0.3	5	1	0.3	1	3	1	1	0.01	0.01	1	2	0.01	5	0.01	1	0.01	1	0.001	1	0.01	2	1
Analysis Method	INAA	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	3270	31.0	32	1090	3.3	17	711	44	750	0.23	3.91	1	1400	0.87		0.05	10	0.28	912	0.055	282		83	25
GXR-1 Cert	3300	31.0	31.0	1110	3.30	18.0	730	41.0	760	0.257	3.52	1.22	1380	0.960		0.050	8.20	0.217	852	0.0650	275		80.0	32.0
GXR-1 Meas		31.5		1130	3.9	15	731	45	761	0.24	4.59	1	1410	0.90		0.05	10	0.30	946	0.058	292		87	26
GXR-1 Cert		31.0		1110	3.30	18.0	730	41.0	760	0.257	3.52	1.22	1380	0.960		0.050	8.20	0.217	852	0.0650	275		80.0	32.0
GXR-4 Meas		3.6		6540	0.5	311	48	56	96	1.78	6.47	2	< 2	1.02		3.40	10	1.69	154	0.132	211		90	13
GXR-4 Cert		4.00		6520	0.860	310	52.0	42.0	73.0	1.77	7.20	1.90	19.0	1.01		4.01	11.1	1.66	155	0.120	221		87.0	14.0
GXR-4 Meas		3.7		6680	0.4	315	49	57	82	1.77	6.57	2	3	1.03		3.57	11	1.72	159	0.131	211		91	13
GXR-4 Cert		4.00		6520	0.860	310	52.0	42.0	73.0	1.77	7.20	1.90	19.0	1.01		4.01	11.1	1.66	155	0.120	221		87.0	14.0
CZN-3 Meas																								
CZN-3 Cert																								
SDC-1 Meas		< 0.3		29	< 0.3	4	23	42	108	0.07	8.40	3	< 2	1.07		2.90	36	1.04	933	0.057	181	0.27	56	32
SDC-1 Cert		0.0410		30.00	0.0800	0.250	25.00	38.0	103.00	0.0650	8.34	3.00	2.60	1.00		2.72	34.00	1.02	880.00	0.0690	180.00	0.606	102.00	40.0
SDC-1 Meas		< 0.3		31	< 0.3	3	23	40	105	0.07	7.98	3	< 2	1.04		2.26	34	0.99	912	0.056	171	0.35	68	31
SDC-1 Cert		0.0410		30.00	0.0800	0.250	25.00	38.0	103.00	0.0650	8.34	3.00	2.60	1.00		2.72	34.00	1.02	880.00	0.0690	180.00	0.606	102.00	40.0
SCO-1 Meas		< 0.3		28	0.4	1	29	33	107	0.08	7.22	2	< 2	1.91		3.01	43	1.61	420	0.085	164	0.36	135	19
SCO-1 Cert		0.134		29	0.140	1.4	31.0	27	100	0.0630	7.24	1.80	0.37	1.87		2.30	45	1.64	410	0.0900	170	0.380	130	26
SCO-1 Meas		< 0.3		37	< 0.3	1	30	33	105	0.08	7.12	2	< 2	1.90		2.22	43	1.60	414	0.083	159	0.36	134	19
SCO-1 Cert		0.134		29	0.140	1.4	31.0	27	100	0.0630	7.24	1.80	0.37	1.87		2.30	45	1.64	410	0.0900	170	0.380	130	26
GXR-6 Meas		0.5		73	< 0.3	4	99	28	137	0.02	13.4	1	< 2	0.19		2.09	35	0.62	1150	0.038	43		196	13
GXR-6 Cert		1.30		66.0	1.00	2.40	101	27.0	118	0.0160	17.7	1.40	0.290	0.180		1.87	32.0	0.609	1010	0.0350	35.0		186	14.0
GXR-6 Meas		0.5		85	0.3	3	101	30	135	0.02	13.7	1	< 2	0.19		2.17	35	0.62	1120	0.036	41		134	14
GXR-6 Cert		1.30		66.0	1.00	2.40	101	27.0	118	0.0160	17.7	1.40	0.290	0.180		1.87	32.0	0.609	1010	0.0350	35.0		186	14.0
PTC-1a Meas																								
PTC-1a Cert																								
MP-1b Meas																								
MP-1b Cert																								
DNC-1a Meas				98				265	60								5				133		141	15
DNC-1a Cert				100.0				247	70.0								5.20				144.0		148.0	18.0
DNC-1a Meas				96				260	59								5				129		138	14
DNC-1a Cert				100.0				247	70.0								5.20				144.0		148.0	18.0
OREAS 13b (4-Acid) Meas																								
OREAS 13b (4-Acid) Cert																								
CCu-1d Meas																								
CCu-1d Cert																								
CZN-4 Meas																								
CZN-4 Cert																								
DMMAS 113 Meas	1770																							
DMMAS 113 Cert	1665																							
DMMAS 113 Meas	1730																							
DMMAS 113 Cert	1665																							
BS122509 Orig		51.0		139	4.2	< 1	> 5000	5	2430	4.34	0.29	< 1	< 2	0.02		0.03	2	< 0.01	214	0.021	15	0.01	6	< 1
BS122509 Dup		50.0		141	4.1	< 1	> 5000	6	2400	4.28	0.28	< 1	< 2	0.02		0.03	2	< 0.01	207	0.022	15	0.01	5	< 1
BS122518 Orig																								
BS122518 Dup																								
LS121905 Orig		0.6		352	1.6	< 1	18	16	23	0.12	2.04	< 1	< 2	5.74		< 0.01	36	1.19	15700	0.002	161	< 0.01	27	5
LS121905 Dup		0.5		328	1.8	< 1	13	16	21	0.11	2.31	< 1	< 2	5.66		< 0.01	37	1.19	15000	0.002	156	< 0.01	25	5
PS121803 Orig		> 100		308	3.1	1	> 5000	31	27	5.16	0.23	< 1	< 2	2.81		0.07	1	0.95	14700	0.027	100	< 0.01	7	2
PS121803 Dup		> 100		308	3.4	2	> 5000	32	33	5.19	0.23	< 1	< 2	2.81		0.07	1	0.95	14700	0.028	101	< 0.01	8	2
PS121807 Orig	121	0.4	< 5	4	0.7	< 1	15	12	37	0.78	0.08	< 1	< 2	11.2	< 5	0.01	1	1.76	12900	0.021	288	< 0.01	2	4
PS121807 Split	132	0.4	< 5	3	0.8	< 1	18	14	41	0.79	0.08	< 1	< 2	11.4	< 5	0.01	1	1.78	13100	0.022	291	< 0.01	6	4
PS121820 Orig	105	0.7	< 5	103	1.4	< 1	29	24	40	2.12	0.99	< 1	3	5.25	< 5	0.11	10	1.06	16600	0.010	310	< 0.01	13	3
PS121820 Split	113	0.7	< 5	102	1.0	< 1	26	25	39	2.16	1.00	< 1	5	5.28	< 5	0.11	10	1.06	16600	0.010	305	< 0.01	11	3
Method Blank		< 0.3		< 1	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01	< 1	< 2	< 0.01		< 0.01	< 1	< 0.01		< 0.001	< 1	< 0.01	< 2	< 1
Method Blank		< 0.3		< 1	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01	< 1	< 2	< 0.01		< 0.01	< 1	< 0.01		< 0.001	< 1	< 0.01	< 2	< 1
Method Blank		< 0.3		< 1	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01	< 1	< 2	< 0.01		< 0.01	< 1	< 0.01		< 0.001	< 1	< 0.01	< 2	< 1
Method Blank		< 0.3		< 1	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01	< 1	< 2	< 0.01		< 0.01	< 1	< 0.01		< 0.001	< 1	< 0.01	< 2	< 1

Quality Control

Analyte Symbol	Au	Ag	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	Be	Bi	Ca	Ir	K	Li	Mg	Mn	P	Sr	Ti	V	Y
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppb	%	ppm	%	ppm	%	ppm	%	ppm	ppm
Detection Limit	2	0.3	5	1	0.3	1	3	1	1	0.01	0.01	1	2	0.01	5	0.01	1	0.01	1	0.001	1	0.01	2	1
Analysis Method	INAA	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank		< 0.3		3	< 0.3	< 1	< 3	1	< 1	< 0.01	< 0.01	< 1	< 2	< 0.01		< 0.01	< 1	< 0.01		< 0.001	< 1	< 0.01	< 2	< 1
Method Blank																								

Quality Control

Analyte Symbol	Mass	Ni	Zn	As	Ba	Br	Co	Cr	Cs	Eu	Fe	Hf	Hg	Na	Rb	Sb	Sc	Se	Ta	Th	U	W	La	Ce
Unit Symbol	g	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit		20	50	0.5	50	0.5	1	2	1	0.2	0.01	1	1	0.01	15	0.1	0.1	3	0.5	0.2	0.5	1	0.5	3
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
GXR-1 Meas		< 20	760	423	720	< 0.5	9	12	3	0.7	23.6	< 1	< 1	0.05	< 15	121	1.6	18	< 0.5	2.6	34.9	168	8.7	18
GXR-1 Cert		41.0	760	427	750	0.500	8.20	12.0	3.00	0.690	23.6	0.960	3.90	0.0520	14.0	122	1.58	16.6	0.175	2.44	34.9	164	7.50	17.0
GXR-1 Meas																								
GXR-1 Cert																								
GXR-4 Meas																								
GXR-4 Cert																								
GXR-4 Meas																								
GXR-4 Cert																								
CZN-3 Meas			> 100000																					
CZN-3 Cert			509000																					
SDC-1 Meas																								
SDC-1 Cert																								
SDC-1 Meas																								
SDC-1 Cert																								
SCO-1 Meas																								
SCO-1 Cert																								
SCO-1 Meas																								
SCO-1 Cert																								
GXR-6 Meas																								
GXR-6 Cert																								
GXR-6 Meas																								
GXR-6 Cert																								
PTC-1a Meas																								
PTC-1a Cert																								
MP-1b Meas			> 100000	23000							8.04					54.9						1110		
MP-1b Cert			166700.00	23000.00							8.19					54.0						1100.000		
DNC-1a Meas																								
DNC-1a Cert																								
DNC-1a Meas																								
DNC-1a Cert																								
OREAS 13b (4-Acid) Meas																								
OREAS 13b (4-Acid) Cert																								
CCu-1d Meas																								
CCu-1d Cert																								
CZN-4 Meas																								
CZN-4 Cert																								
DMMAS 113 Meas				1500	1610		37	79			3.03			1.75			6.6				17.2		15.6	25
DMMAS 113 Cert				1468	1519		36	75			2.86			1.82			5.8				15.6		14.5	24
DMMAS 113 Meas				1620	1530		39	82			2.92			1.83			6.4				17.0		16.1	25
DMMAS 113 Cert				1468	1519		36	75			2.86			1.82			5.8				15.6		14.5	24
BS122509 Orig																								
BS122509 Dup																								
BS122518 Orig																								
BS122518 Dup																								
LS121905 Orig																								
LS121905 Dup																								
PS121803 Orig																								
PS121803 Dup																								
PS121807 Orig	30.8	< 20	240	117	< 50	< 0.5	7	< 2	< 1	0.8	22.7	< 1	< 1	0.02	< 15	3.1	0.7	< 3	2.6	< 0.2	< 0.5	< 1	1.8	< 3
PS121807 Split	25.6	< 20	190	117	< 50	< 0.5	6	< 2	< 1	0.8	22.0	< 1	< 1	0.02	< 15	4.4	0.7	< 3	2.8	< 0.2	< 0.5	< 1	1.7	9
PS121820 Orig	29.5	< 20	200	118	< 50	< 0.5	29	14	< 1	< 0.2	37.8	< 1	< 1	0.21	< 15	0.9	0.9	< 3	2.3	< 0.2	< 0.5	< 1	1.6	< 3
PS121820 Split	29.1	< 20	220	115	< 50	< 0.5	29	13	< 1	< 0.2	38.3	< 1	< 1	0.20	< 15	1.0	1.0	< 3	2.0	< 0.2	< 0.5	< 1	1.5	< 3
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Mass	Ni	Zn	As	Ba	Br	Co	Cr	Cs	Eu	Fe	Hf	Hg	Na	Rb	Sb	Sc	Se	Ta	Th	U	W	La	Ce
Unit Symbol	g	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit		20	50	0.5	50	0.5	1	2	1	0.2	0.01	1	1	0.01	15	0.1	0.1	3	0.5	0.2	0.5	1	0.5	3
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA

Method Blank

Method Blank

Quality Control

Analyte Symbol	Nd	Sm	Sn	Tb	Yb	Lu	Ag	Zn	Pb
Unit Symbol	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%
Detection Limit	5	0.1	0.01	0.5	0.2	0.05	3	0.001	0.003
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	ICP-OES	ICP-OES	ICP-OES
GXR-1 Meas	< 5	2.7	< 0.01	< 0.5	1.9	0.28			
GXR-1 Cert	18.0	2.70	0.00540	0.830	1.90	0.280			
GXR-1 Meas									
GXR-1 Cert									
GXR-4 Meas									
GXR-4 Cert									
GXR-4 Meas									
GXR-4 Cert									
CZN-3 Meas									
CZN-3 Cert									
SDC-1 Meas									
SDC-1 Cert									
SDC-1 Meas									
SDC-1 Cert									
SCO-1 Meas									
SCO-1 Cert									
SCO-1 Meas									
SCO-1 Cert									
GXR-6 Meas									
GXR-6 Cert									
GXR-6 Meas									
GXR-6 Cert									
PTC-1a Meas							54		0.050
PTC-1a Cert							56.0		0.05
MP-1b Meas			1.61				48	16.8	2.09
MP-1b Cert			1.610				47.0	16.67	2.091
DNC-1a Meas									
DNC-1a Cert									
DNC-1a Meas									
DNC-1a Cert									
OREAS 13b (4-Acid) Meas							< 3	0.019	
OREAS 13b (4-Acid) Cert							0.86	0	
CCu-1d Meas							119	2.63	0.255
CCu-1d Cert							120.7	2.63	0.262
CZN-4 Meas							50	55.2	0.182
CZN-4 Cert							51.4	55.24	0.1861
DMMAS 113 Meas		2.1							
DMMAS 113 Cert		2.2							
DMMAS 113 Meas		2.1							
DMMAS 113 Cert		2.2							
BS122509 Orig									
BS122509 Dup									
BS122518 Orig							90	13.6	24.4
BS122518 Dup							92	14.0	25.1
LS121905 Orig									
LS121905 Dup									
PS121803 Orig									
PS121803 Dup									
PS121807 Orig	< 5	2.1	< 0.01	< 0.5	< 0.2	< 0.05			
PS121807 Split	< 5	2.3	< 0.01	< 0.5	< 0.2	< 0.05			
PS121820 Orig	< 5	0.9	< 0.01	< 0.5	< 0.2	< 0.05			
PS121820 Split	< 5	0.9	< 0.01	< 0.5	< 0.2	< 0.05			
Method Blank									
Method Blank									
Method Blank									
Method Blank									

Quality Control

Analyte Symbol	Nd	Sm	Sn	Tb	Yb	Lu	Ag	Zn	Pb
Unit Symbol	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%
Detection Limit	5	0.1	0.01	0.5	0.2	0.05	3	0.001	0.003
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	ICP-OES	ICP-OES	ICP-OES
Method Blank									
Method Blank							< 3	< 0.001	< 0.003