

BC Geological Survey
Assessment Report
37847



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

**TITLE OF REPORT: REPORT ON PXRf SOIL GEOCHEMISTRY
ON THE SPIKE'S BIG ADVENTURE MINERAL CLAIMS**

TOTAL COST:\$8,325

AUTHOR(S):Sean Kennedy
SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S):5712737

YEAR OF WORK:2018

PROPERTY NAME:Spike's Big Adventure

CLAIM NAME(S) (on which work was done): 1062764, 984342

COMMODITIES SOUGHT:Ag-Pb-Zn

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN:

MINING DIVISION: Ft Steele

NTS / BCGS: 82F011/021

LATITUDE: _____ ° _____ ' _____ "

LONGITUDE: _____ ° _____ ' _____ " (at centre of work)

UTM Zone: 11 EASTING: 585000 NORTHING: 5452000

OWNER(S):Craig Kennedy, Sean Kennedy

MAILING ADDRESS:
2290 DeWolfe Ave, Kimberley BC

OPERATOR(S) [who paid for the work]:Kootenay Silver Inc

MAILING ADDRESS:

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**) Base metal mineralization hosted within Middle Aldridge Fm sediments related to fragmental and tourmaline alteration.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

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		
GEOFYSICAL (line-kilometres)			
	Ground		
	Magnetic		
	Electromagnetic		
	Induced Polarization		
	Radiometric		
	Seismic		
	Other		
	Airborne		
GEOCHEMICAL (number of samples analysed for ...)			
	Soil		
	Silt		
	Rock		
	Other	XRF Soils	\$600 (rental fee)
DRILLING (total metres, number of holes, size, storage location)			
	Core		
	Non-core		
RELATED TECHNICAL			
	Sampling / Assaying	Sample collection wages +ATV	\$6225
	Petrographic		
	Mineralographic		
	Metallurgic		
PROSPECTING (scale/area)			
PREPARATORY / 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/Drafting Supplies	\$1400 \$100

	TOTAL COST	\$8325
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REPORT ON PXRF SOIL GEOCHEMISTRY
ON THE SPIKE'S BIG ADVENTURE MINERAL CLAIMS

FT. STEELE MINING DIVISION
SUNRISE CREEK AREA, SOUTHEAST BRITISH COLUMBIA

NTS 82G 011/021
UTM NAD 83 585,000/5,452,000

Owner: C. Kennedy, S. Kennedy, Kimberley, BC

Operator: Kootenay Silver Inc.
Vancouver BC

Report Written By:
S. Kennedy

December, 2018

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Zn in soils (1:5000)	
Pb in soils (1:5000)	

Summary

This report details pXRF analysis of soil samples collected from the Sunrise Creek area within the Spike's Big Adventure (SBA) mineral claims.

Introduction

Soils samples were collected from the SBA property and analyzed by pXRF for a suite of elements. The area is being explored for both stratabound and discordant Pb-Zn-Ag hosted by Mesoproterozoic Aldridge Fm sediments.

Location and Access

The property is located 35 kilometres south of Cranbrook, BC in the Sundown and Sunrise Creek drainages. Access to the property is by the Sunrise Creek FSR, which branches off Highway 95 approximately 3.5 km south of the village of Moyie and the Sundown Creek FSR which splits from the Sunrise Creek FSR after 2 kilometers. Numerous logging spur roads of various ages provide additional access to the property.

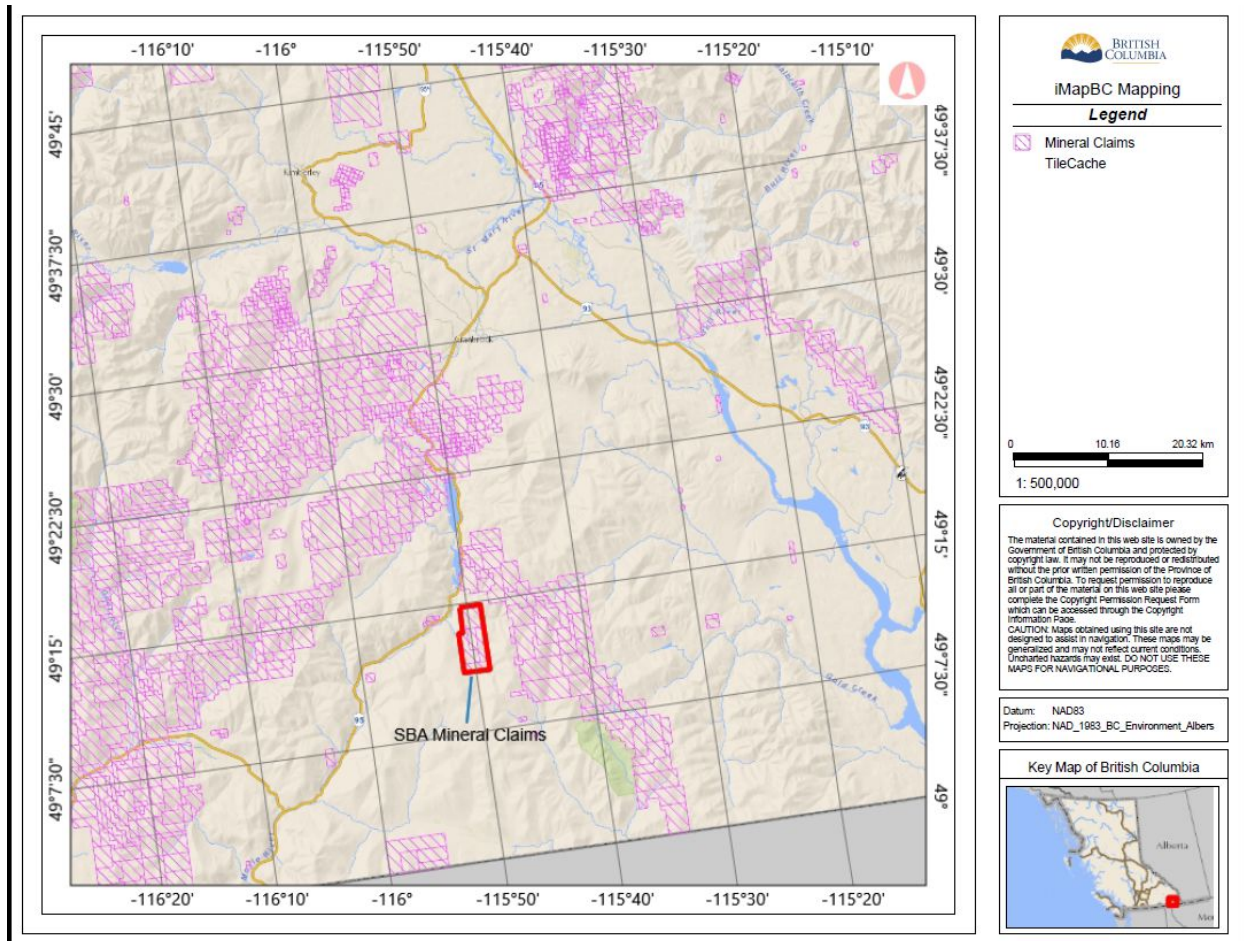


Figure 1 Regional location map.

Physiography

The area is typified by forested and rounded glaciated mountains. Bedrock exposure is sparse and limited to ridgelines and random benches. Elevation on the property ranges from 1000 meters to over 1500 meters. The area is primarily forested with lodgepole pine and douglas fir at lower elevations with spruce and balsam fir at higher ones, small patches of cedar are found in wetter areas, and larch is ubiquitous. Underbrush is typically comprised of rhododendron, mountain alder, kinikinik and some small patches of dwarf huckleberry. The area has seen extensive clear-cut logging and is in various stages of regeneration. The field season can be expected to last from early April, at lower elevations, to late October/mid November with the entire property being snow free from early June to late October.

Property

The property covers 1773 hectares and is comprised of four mineral claims owned by C. Kennedy and S. Kennedy both of Kimberley, BC.

Tenure #	Area (h)	OWNER_NAME	Good To Date	CLAIM_NAME
1020126	253.355	KENNEDY, ROBERT DUNCAN CRAIG	2019 05 08	SPIKE'S BA-04-13
985682	443.2206	KENNEDY, ROBERT DUNCAN CRAIG	2019 05 08	SPIKE'S BA-02-12
985683	337.6723	KENNEDY, ROBERT DUNCAN CRAIG	2019 05 08	SPIKE'S BA-03-12
984342	211.0183	KENNEDY, ROBERT DUNCAN CRAIG	2019 05 08	SPIKE'S BIG ADVENTURE
1062764	527.3321	KENNEDY, JONATHAN SEAN	2019 09 03	SBA 2018

Table 1. Mineral titles details.

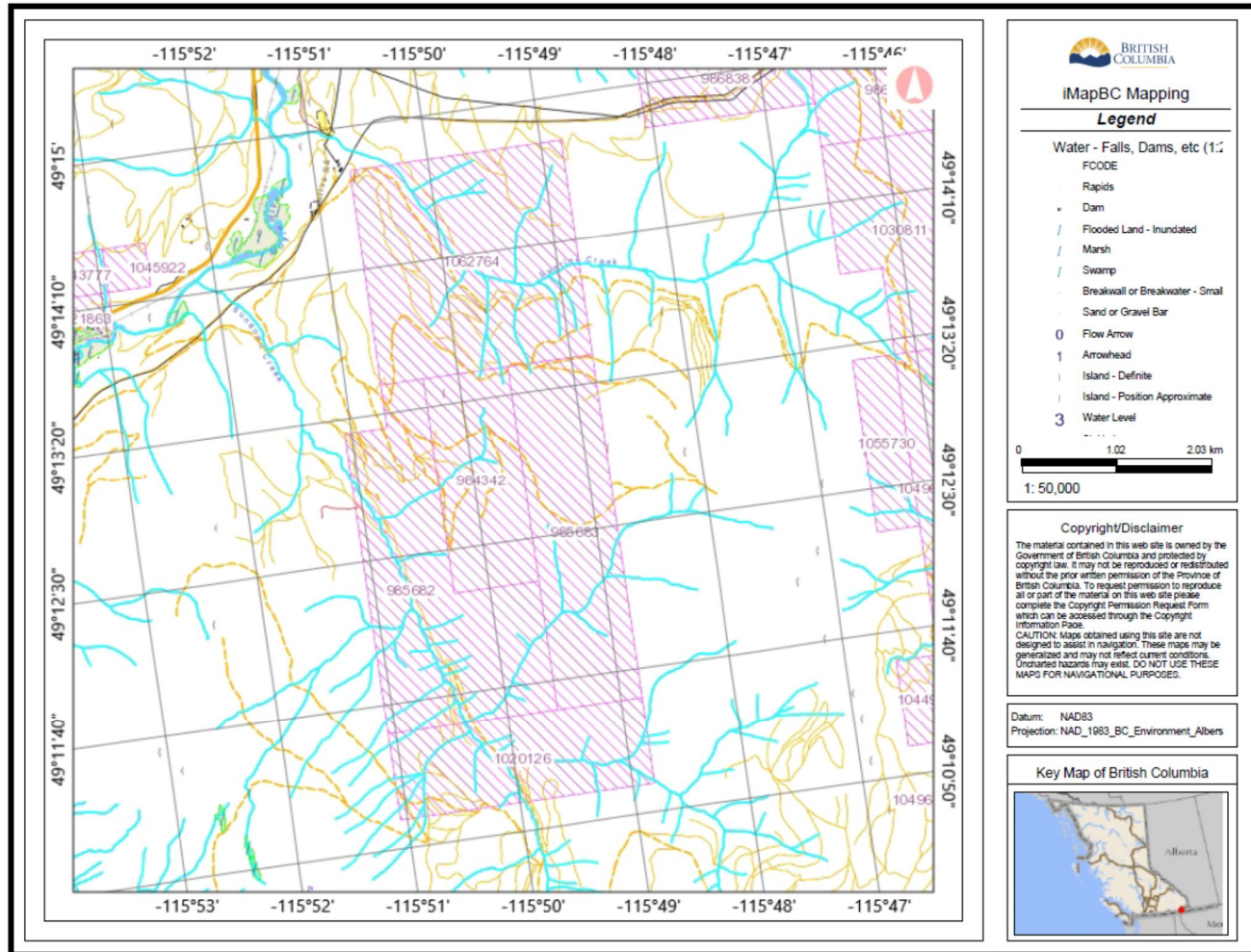


Figure 2 Claim map.

History

The property was acquired by C. Kennedy of Kimberley BC in 2012 after prospecting discovered a large area of sedimentary fragmental rocks and minor sphalerite fracturing. Subsequent prospecting discovered a series of massive sulphide (galena dominant) boulders with associated garnet and chlorite alteration. Mapping, prospecting, and rock and soil geochemistry was later undertaken to better define the area and locate the boulders in place. These programs were successful in delineating a large area of sedimentary fragmental rocks and associated hydrothermal alteration interpreted to represent a hydrothermal vent system but failed to locate the source of the boulders.

Regional and Property Geology

The East Kootenay region of southeast BC is predominantly underlain by the Mesoproterozoic Purcell Supergroup, a thick accumulation of dominantly clastic, carbonate and lesser mafic volcanic rocks that are interpreted to have been deposited in and above a branching intracontinental rift within an Archean and Paleoproterozoic craton. The main branch of the basin (Purcell branch) formed during extension along a northwest axis and was rapidly infilled with turbidites. The Moyie intrusive suite, a large mafic

complex was intruded during this extensional period as thick gabbro-diorite sills and dykes. Rift sedimentation was followed by deposition of fine grained clastics and carbonates. During Mesozoic compression the supra-crustal Purcell Supergroup was displaced northeastward along transverse basement structures towards its current location. The major economic ore deposit in the Purcell basin is the giant Sullivan sedex lead-zinc-silver deposit which contained over 160 million tons of ore at 6.5%Pb, 5.6% Zn, and 67 g/t Ag.

Rocks of the Purcell Supergroup are exposed in the core of the Purcell anticlinorium, a major north trending open fold complex that is cut by numerous northeast trending transverse structures. The Aldridge Formation which was deposited during the rift-phase of the basin, is the lowest exposed member of the Purcell Supergroup and can be subdivided into a Lower, Middle, and Upper member. It is a succession of turbiditic quartz-wacke with lesser argillaceous siltstone that was intruded by a series of thick syn-depositional gabbroic sills and dykes referred to as Moyie intrusions. Overlying the Aldridge is the shallow-water, clastic, Creston Formation and carbonate rich Kitchener Formation. Above the Kitchener are the Nicol Creek basalts and overlying shallow-water to sub-aerial clastic rocks of the Upper Purcell Supergroup.

The surface geology of the property is entirely comprised of Middle Aldridge Fm sediments (argillite, siltite, quartzite) that has been intruded by gabbro-diorite dykes and sills (Moyie suite). The area is host to significant deposits of sedimentary fragmental units (sedimentary breccias) formed in part due to dewatering (clastic dykes, mound deposits etc.) and active faulting during deposition (slump breccias etc.). Structurally the area is near the culmination of the Moyie Anticline, a broad/regional shallow NNE plunging, upright, open fold structure that is cut by sub-vertical axial planar parallel faults and sub-vertical NW and NE transverse faults.

Hydrothermal minerals/alteration consisting of actinolite, albite, biotite, chlorite, garnet, muscovite, tourmalinite, tremolite and associated sulphides (FeS, ZnS, PbS, CuS) are spatially associated with fragmental rocks and structural zones.

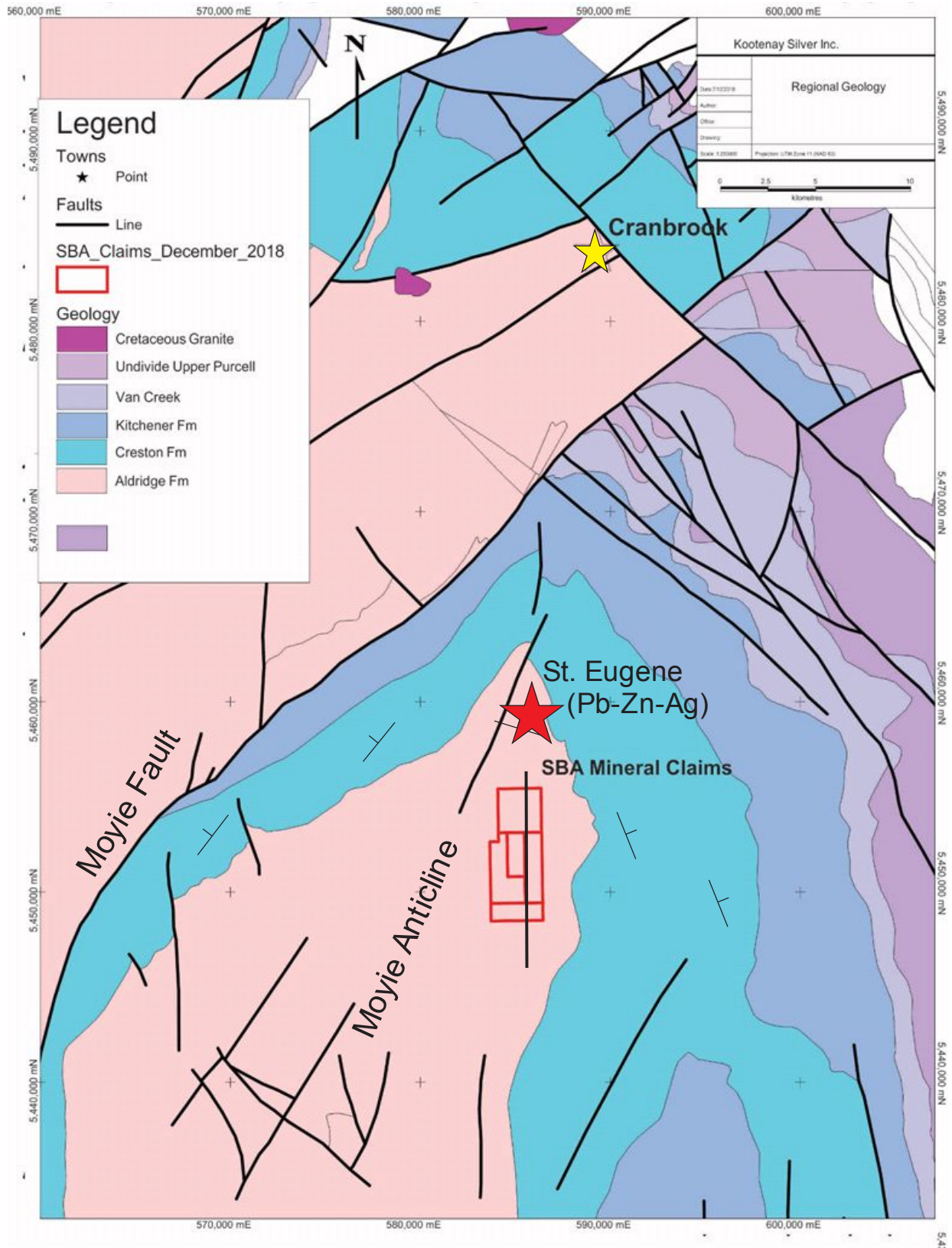


Figure 3 Regional geological map.

pXRF Analysis

Procedure

Soils samples were collected at 50 m spacings above a series of roads on the north and south side of Sunrise Creek as well as along an NS trending ridge which transects a number of sedimentary fragmental units using grub-hoe and shovel (see maps below). Soil samples were collected when possible from the 'b' horizon. In many instances the material was entirely comprised of mixed till with no discernable profile. Samples were marked in the field with flagging and located and marked by GPS. Samples were screened in the field and placed in plastic bags. They were transported off site and analyzed by a handheld Niton pXRF with a 30 second shot duration for Mo, Zn, Sr, U, Rb, Th, Pb, Au, Se, As, Hg, Zn, W, Cu, Ni, Co, Fe and Mn in ppm.

Anomalous values for Zn, Pb, Cu, and Mn have been plotted below. Anomalies were chosen based on the 'natural break' method which distributes the values so that the average of each range is as close as possible to each of the range values in that range ensuring that the ranges are well-represented by their averages, and that the data values within each of the ranges are fairly close together. Results from the pXRF analysis, sample locations, and sample ID and thematic maps are included in the Appendix.

Discussion

Values up to 313 ppm Zn, 64 ppm Pb, and 155 ppm Cu were returned from the program. Plots of the geochemistry show some multi-element anomalies as shown below. Anomaly 'A' is located on the south side of Sunrise Creek near the top of a NE trending drainage. It shows elevated values for Zn, Pb, Cu and spotty Mn over a poorly defined area of approximately 175 x 350 m. Anomalies 'B' and 'C' are on the north side of Sunrise Creek at low elevations. Both anomalies are multi-element with overlapping Zn, Pb, Cu, and Mn. Both of these anomalies are approximately 150 x 75 m in area. There are additional overlapping anomalies within the data set, some of which are spot anomalies and some of which occur along one line. The NS oriented line appears to show elevated base metal and Mn values which may correspond to particular stratigraphic intervals.

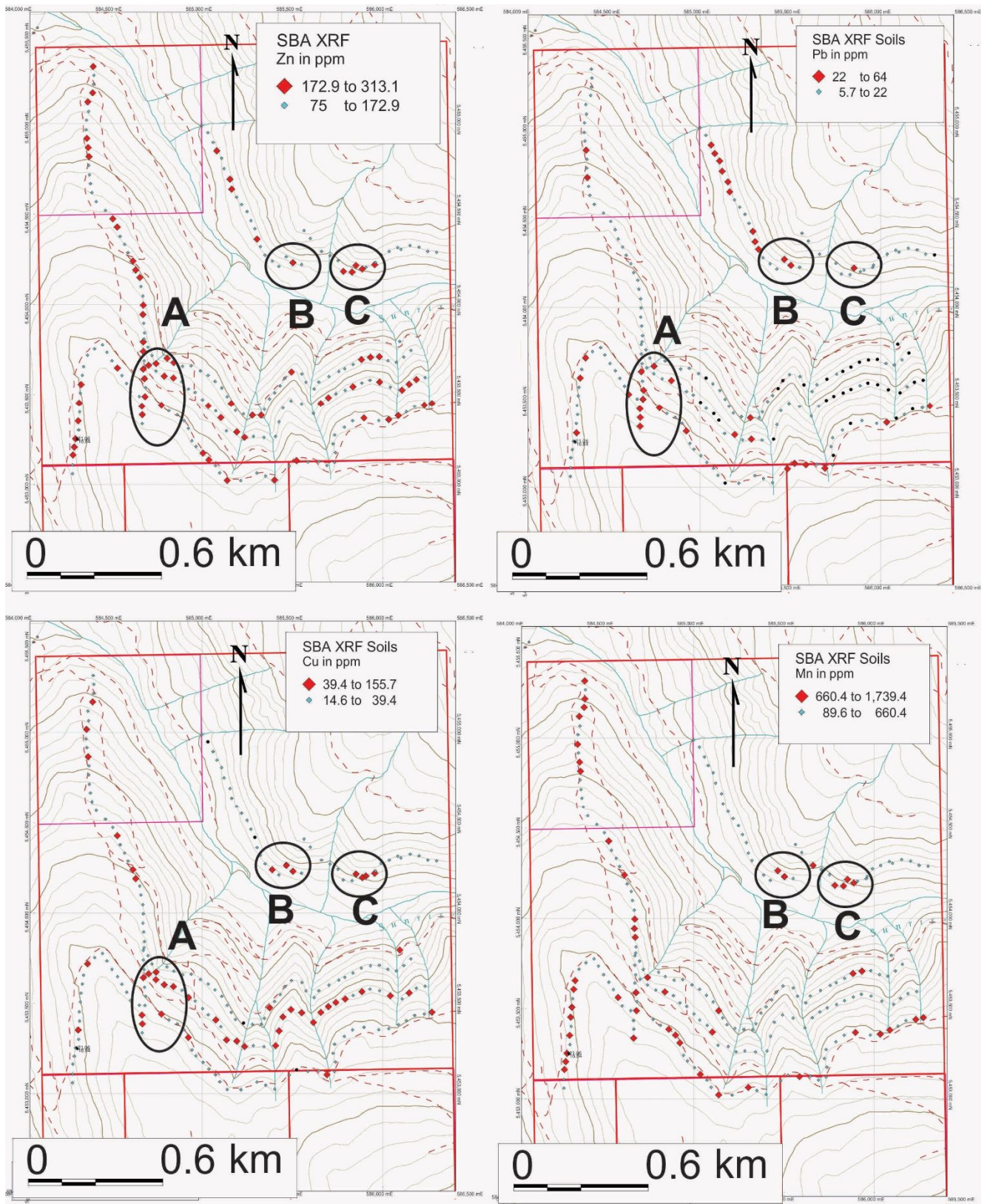


Figure 4 Bubble map showing multi-element anomalies.

Conclusions and Recommendations

A program of pXRF analysis of soil samples collected from the SBA property was conducted in 2018. Samples were collected above existing roads to provide the maximum amount of coverage possible for a short program. Results show low to weakly elevated values for Zn, Pb, Cu, and Mn. However, results do show some multi-element anomalies.

The use of the pXRF for limited geochemical analysis is a fast way to evaluate a large number of samples. Additional analysis is recommended for the property particularly in areas of multi-element anomalies as defined by the program. This should be completed with a follow up program of mapping and prospecting.

Statement of Costs

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8
Geochemical Program Fall 2018							
Mike Kennedy: Sept 8, 9, 10, 11, 12, 13, 14							
	7 Man days @ 400				\$	2,800.00	
	5 Truck days @ 150					750.00	
Isaac Crombach: Sept 8, 9, 10, 11, 12, 13, 14							
	7 Man days @ 275					1,925.00	
	240 Soil Samples ~ pXRF Rental					600.00	
	Misc Supplies					100.00	
	ATV Rate 5 days @ 150					750.00	
	Sean Kennedy Report					1,400.00	
	Total Costs					\$8,325.00	

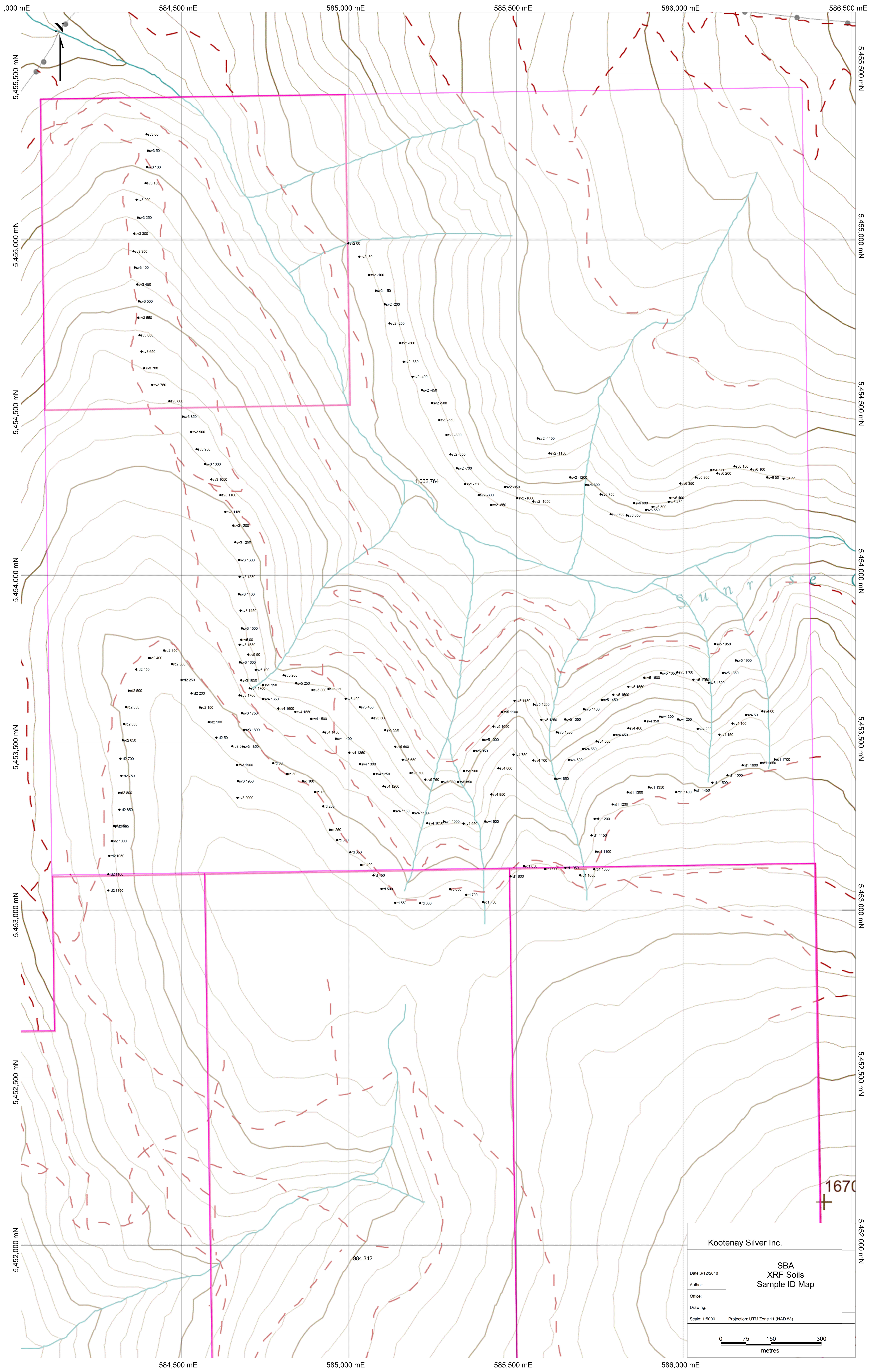
Statement of Qualifications

I, Sean Kennedy, certify that:

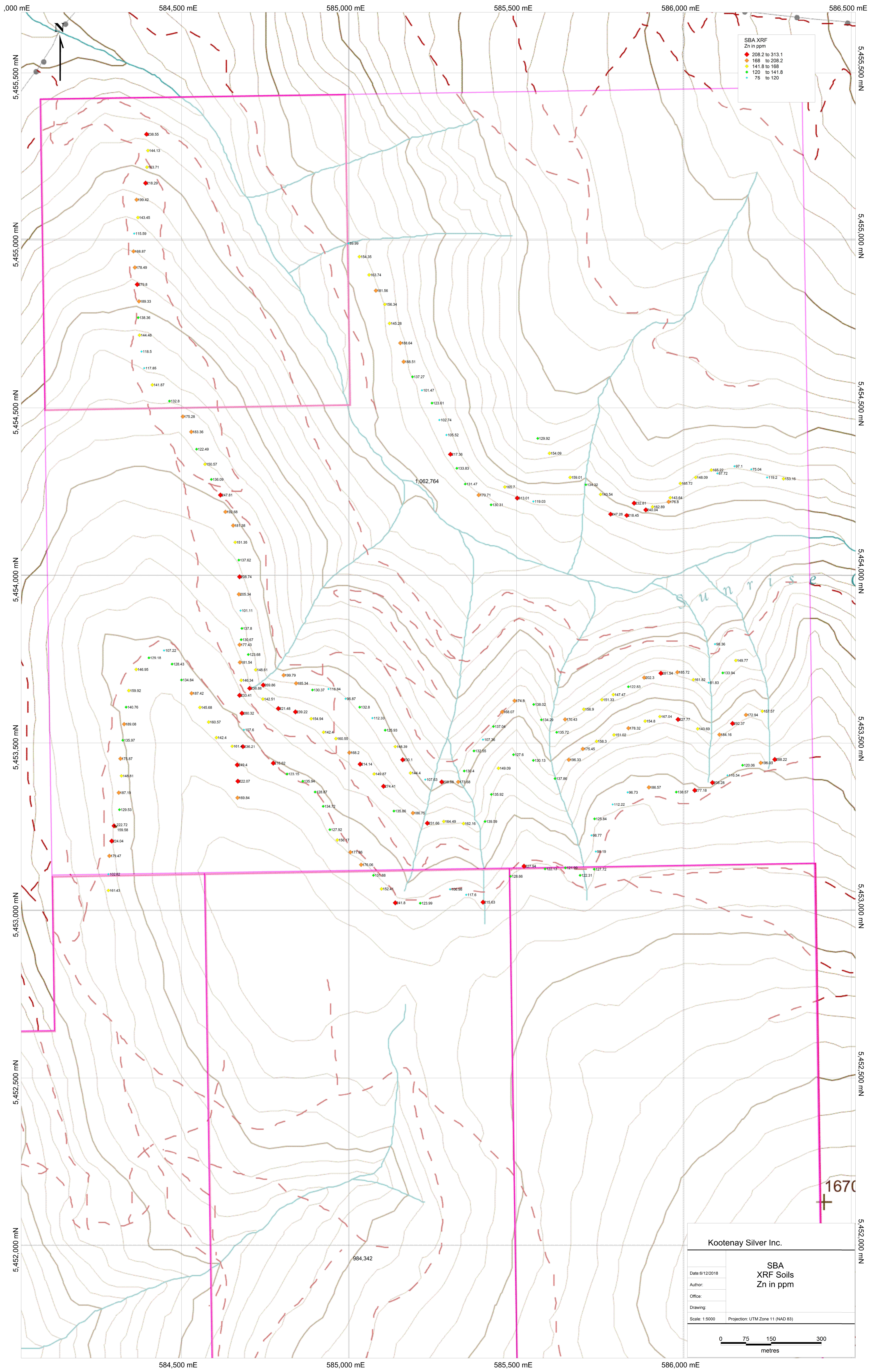
1. I am an independent consulting prospector residing at 107 6th Ave, Kimberley, BC.
2. I have been actively prospecting and mapping throughout BC, Nevada, and Mexico for the past 17 years
3. I have been employed as a professional prospector by junior mineral exploration companies.
4. I have been employed as a field mapper by junior mineral exploration companies.
5. I have supervised and managed various levels of exploration programs.
6. I own and maintain mineral claims in BC

Appendix

Soil	30 ppm	rd1 950	585646	5453127	5.43	2.33	232.96	4.52	158.69	3.62	0	5.83	72.65	2.99	6.68	2.53	7.73	3.96	0	5.09	0	2.91	7.71	3.23	0	7.19	121.99	8.84	0	31.27	28.28	9.92	0	24.88	0	110.61	22683.36	186.5	422.04	46.11
Soil	30 ppm	rd1 1000	585690	5453105	6.11	2.31	218.85	4.47	228.64	4.26	0	6.02	75.96	3.04	7.22	2.62	27.53	4.77	0	4.89	0	2.82	7.56	3.76	0	7.1	122.31	8.77	0	30.89	39.68	10.22	0	24.74	134.4	75.29	23910.8	189.72	338.97	43.77
Soil	30 ppm	rd1 1050	585732	5453123	3.63	2.32	227.65	4.51	162.92	3.68	0	6.73	111.6	3.63	10.23	2.76	7.33	4.01	0	4.86	0	3	4.99	3.15	0	7.39	127.72	9.03	0	31.84	37.91	10.32	38.58	17.45	153.25	76.61	24046.08	192.68	388.26	45.77
Soil	30 ppm	rd1 1100	585737	5453176	5.42	2.4	260.17	4.8	149.86	3.58	0	6.61	102.53	3.54	12.12	2.84	0	5.97	0	5.12	0	3.08	0	4.69	0	7.62	98.19	8.33	0	31.83	24.82	10.02	0	25.54	0	105.07	19679.22	176.81	326.96	44.17
Soil	30 ppm	rd1 1150	585724	5453224	4.37	2.47	303.34	5.15	111.87	3.19	0	7.19	136.05	4.07	14.26	3.04	11.69	4.34	0	5.43	0	3.13	0	5.06	0	7.89	98.77	8.54	36.48	22.51	34.22	10.54	36.1	17.87	0	116.28	23736.1	196.76	239.89	43.36
Soil	30 ppm	rd1 1200	585733	5453274	4.65	2.37	247.03	4.68	154.41	3.62	0	7.02	128.62	3.89	8.56	2.75	12.82	4.3	0	5.1	0	3.05	0	5.04	0	7.43	125.84	9.04	0	31.65	26.09	10.08	0	25.93	0	110.98	22263.46	187.15	615.11	51.23
Soil	30 ppm	rd1 1250	585787	5453317	6	2.46	309.8	5.16	145.85	3.55	0	6.53	101.53	3.52	14.45	2.96	10.09	4.19	0	5.33	0	3.03	6.45	3.34	0	7.46	112.22	8.7	0	31	26.85	10.15	28.18	17.45	0	109.25	21212.12	183.71	311.21	44.22
Soil	30 ppm	rd1 1300	585832	5453353	3.68	2.34	261.56	4.74	158.17	3.62	0	6.3	97.7	3.4	7.83	2.61	0	5.68	0	4.95	0	2.91	0	4.48	0	7.17	96.73	8.12	0	30.12	30.66	9.98	0	24.99	0	107.27	21835.5	183.4	382.71	45.31
Soil	30 ppm	rd1 1350	585895	5453368	0	3.44	242.91	4.59	158.93	3.61	0	6.25	90.96	3.29	7.46	2.59	9.21	4.03	0	4.84	0	2.84	0	4.67	0	7.16	186.57	10.37	0	31.33	27.81	9.9	0	24.86	0	106.46	21124.93	179.96	872.5	55.85
Soil	30 ppm	rd1 1400	585977	5453354	0	3.48	243.44	4.58	125.53	3.26	0	6.58	110.04	3.59	14.21	2.92	9.88	4.12	0	4.92	0	2.91	0	4.84	0	7.22	138.57	9.27	0	30.91	27.28	10	0	25.52	146.49	79.04	25799.25	199.35	342.14	44.63
Soil	30 ppm	rd1 1450	586032	5453359	5.78	2.35	200.22	4.36	159.3	3.7	0	6.23	90.77	3.35	11.15	2.9	32.33	5.12	0	5.15	0	2.96	0	5.79	0	7.73	277.18	12.54	0	34.06	32.39	10.54	79.92	18.65	0	123.62	27820.15	210.75	739.27	55.29
Soil	30 ppm	rd1 1500	586085	5453382	0	3.47	246.05	4.67	197.94	4.01	0	6.3	91.15	3.3	8.36	2.63	0	5.85	0	4.72	0	2.98	7.19	3.16	0	7.29	208.28	10.87	0	32.04	21.31	9.71	0	24.57	0	109.05	22052.03	183.88	661.66	51.65
Soil	30 ppm	rd1 1550	586130	5453404	3.76	2.36	243.2	4.66	152.57	3.61	0	6.63	110.56	3.64	7.75	2.7	12	4.27	0	5.04	0	3.02	6.91	3.4	0	7.34	116.54	8.78	0	30.53	29.98	10.12	0	25.89	118.71	77.96	24581.59	196.98	321.69	44.59
Soil	30 ppm	rd1 1600	586175	5453434	5.19	2.37	240.7	4.64	161.41	3.69	0	6.62	107.47	3.59	9.35	2.71	0	5.75	0	4.92	0	2.92	5.42	3.06	0	7.35	120.06	8.86	0	31.03	26	10.04	0	25.56	0	109.38	21547.46	183.94	445.15	47.16
Soil	30 ppm	rd1 1650	586229	5453441	0	3.39	222.82	4.48	227.32	4.23	0	6.08	82.32	3.13	7.93	2.58	8.13	3.95	0	4.75	0	2.81	5.89	3.15	0	7.12	196.03	10.47	0	30.84	27.59	9.83	26.07	16.91	167.58	71.8	21483.53	179.74	784	53.6
Soil	30 ppm	rd1 1700	586271	5453451	0	3.52	202.93	4.43	174.04	3.88	0	7.11	125	3.91	12.51	3	24.15	4.87	0	5.14	0	3.13	0	5.62	0	7.44	288.22	12.8	0	32.89	49.16	11.09	84.15	18.86	0	124.87	27870.95	212.51	1010.64	61.33



Kootenay Silver Inc.	
Date: 6/12/2018	SBA XRF Soils Sample ID Map
Author:	
Office:	
Drawing:	
Scale: 1:5000	Projection: UTM Zone 11 (NAD 83)



5,455,500 mN
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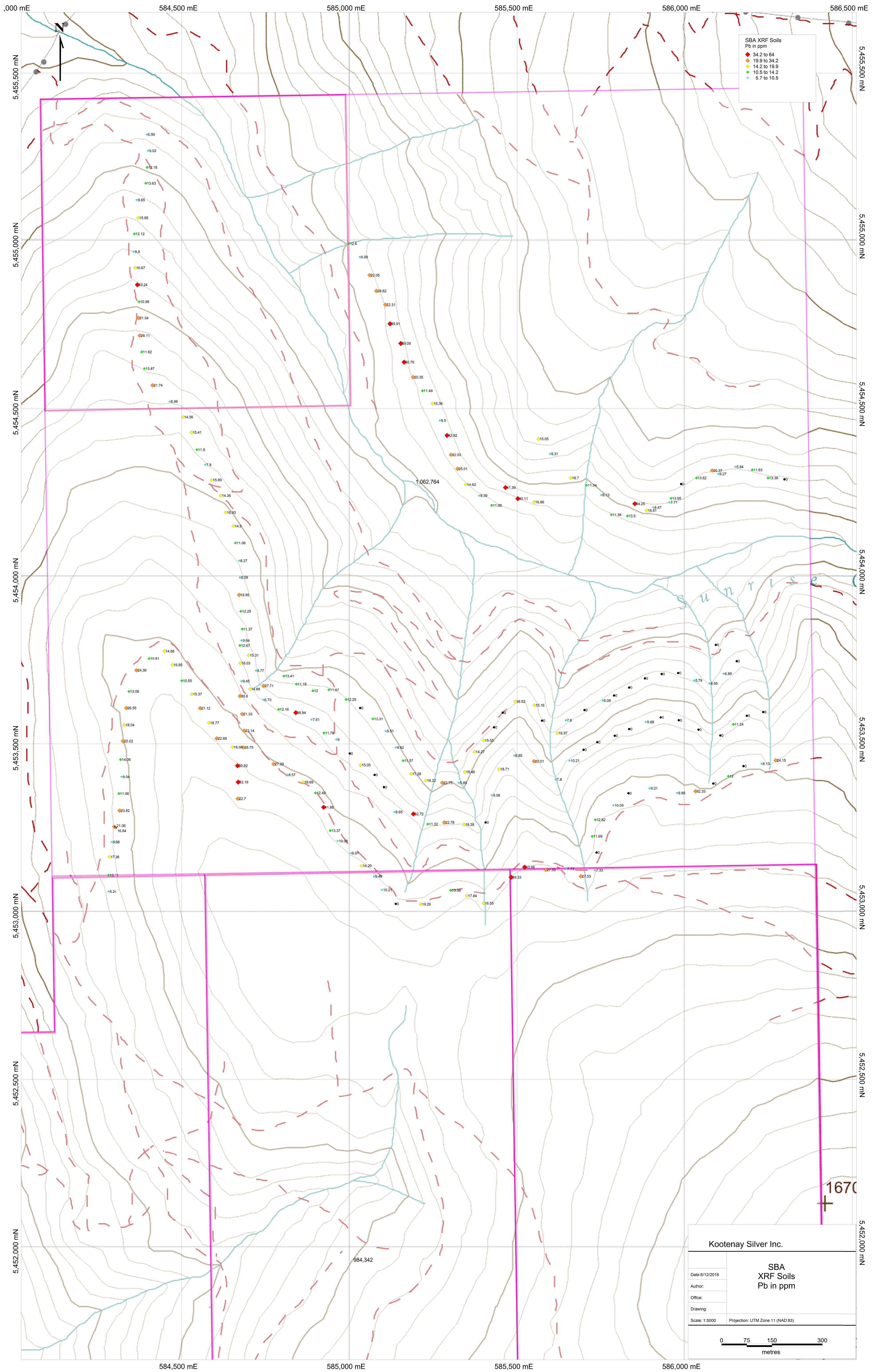
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984,342

1670

SUNRISE



SBA XRF Soils
Pb in ppm

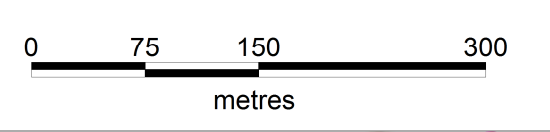
- ◆ 34.2 to 64
- ◆ 19.9 to 34.2
- ◆ 14.2 to 19.9
- ◆ 10.5 to 14.2
- ◆ 5.7 to 10.5

Kootenay Silver Inc.

SBA
XRF Soils
Pb in ppm

Date: 6/12/2016
Author:
Office:
Drawing:

Scale: 1:5000 Projection: UTM Zone 11 (NAD 83)



1670

984,342

1,062,764