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BC Geological Survey
Assessment Report
37921

Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Prospecting and Geological surveying **TOTAL COST:** $9,976.54

AUTHOR(S): Michelle St. Louis, P.Geol. **SIGNATURE(S):**
Carmen Ricard, G.I.T. & Lauren Greenhough

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): 1056368 (11/16/2019), 1056393 (11/16/2019) **YEAR OF WORK:** 2018

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):

PROPERTY NAME: Courvosier - 17-006A

CLAIM NAME(S) (on which the work was done): 1056368 and 1056393

COMMODITIES SOUGHT: Granular silica

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Liard **NTS/BCGS:** 94 P

LATITUDE: 59 ° 9 '39.61 " **LONGITUDE:** 121 ° 40 '53.32 " **(at centre of work)**

OWNER(S):
1) Sil Industrial Minerals 2)

MAILING ADDRESS:
9175 14 Street, Edmonton, AB
T6P 0C9

OPERATOR(S) [who paid for the work]:
1) Sil Industrial Minerals 2)

MAILING ADDRESS:

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Industrial Mineral, Silica, Quaternary, Cretaceous, Glacial-Fluvial, sand, gravel

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

Next Page

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	2.26 km2	1056368 and 1056393	$910.00
Photo interpretation			$0.00
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			$0.00
Electromagnetic			$0.000
Induced Polarization			$0.00
Radiometric			$0.00
Seismic			$0.00
Other			$0.00
Airborne			$0.00
GEOCHEMICAL (number of samples analysed for...)			
Soil			$0.00
Silt			$0.00
Rock			$0.00
Other			$0.00
DRILLING (total metres; number of holes, size)			
Core			$0.00
Non-core			$0.00
RELATED TECHNICAL			
Sampling/assaying	2.26 km2	1056368 and 1056393	$1,000.00
Petrographic			$0.00
Mineralographic			$0.00
Metallurgic			$0.00
PROSPECTING (scale, area)	2.26 km2	1056368 and 1056393	$7,566.54
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:	$9,976.54

Print Form

2018 Exploration Technical Report
Prospecting and Geological Survey

on the

Courvosier Property

near

Fort Nelson, BC

Liard Mining Division

Mineral Claims:

1056368

1056393

NTS 094 P

Latitude 59.161004°N Longitude -121.681479°W

Owned and Operated By:

543077 Alberta Ltd.

9175 14 Street

Edmonton, Alberta T6P 0C9

Author:

Michelle St. Louis, B.Sc, P.Geo.

543077 Alberta Ltd.

Date Submitted:

January 22, 2018

2018 Exploration Technical Report
Mineral Claims: 1056368 and 1056393

Prepared By:

543077 Alberta Ltd.
9175 14 Street
Edmonton, Alberta T6P 0C9

Michelle St. Louis, B.Sc., P. Geo.
Senior Geologist

Jan 12, 2019

EXECUTIVE SUMMARY

The 1,427.37 ha Courvosier Property (the Property) is located in the Liard Mining Division of British Columbia, 70 km northeast of Fort Nelson. Prospecting and geological survey were completed in June 2018 with the purpose of evaluating the location, quality, extent, accessibility and economic potential of any mineral deposits within the Property. The primary focus of work in 2018, was to evaluate the potential of silica deposits for industrial purposes, specifically for use as hydraulic fracture proppant.

The Property contains glaciofluvial delta deposits. The geological conditions and weathering process that created these deposits provided natural mechanical sorting and rounding of silica grains, offering potential for a viable granular silica deposit for use as proppant. Prospecting and geological survey determined that a silica deposit is present on the Property. An analysis of grain size, sphericity and roundness indicate that the silica is potentially viable for use as hydraulic fracture proppant.

To advance the potential of the Property to represent a potential economic venture, additional exploration would be required including the determination of:

- the consistency of quality across the entire silica deposit;
- the size of the deposit to establish quantity;
- the suitability of the silica deposit for use as proppant through additional industry standard analyses; and,
- the potential for other minerals of economic value on the Property.

TABLE OF CONTENTS

LIST OF DRAWINGS

LIST OF APPENDICES

1.0 INTRODUCTION

This Technical Report was prepared by 543077 Alberta Ltd. (hereinafter referred to as "543077"). 543077 is a Canadian mineral exploration company that has identified, explored and developed various industrial minerals.

The Courvosier property consists of two contiguous Mineral Permits totaling 1,427.37 ha as described in Table 1 (hereinafter referred to as the "Property"). The Property is located in northeast British Columbia within the Liard Mining Division, approximately 70 km northeast of Fort Nelson. The property is wholly owned and operated by 543077.

Table 1. Mineral Permit Details for the Courvosier Property.

Mineral Permit Number	Area (ha)	Date of Issue	Good to Date	Owner
1056368	1244.87	11/16/2017	11/16/2019	543077 Alberta Ltd. (100%)
1056393	182.50	11/16/2017	11/16/2019	543077 Alberta Ltd. (100%)

This report describes and summarizes the location and geology of the Property, previous exploration work and, pursuant to the *Mineral Tenure Act Regulation,* describes the technical exploration conducted during the 2018 exploration program.

1.1 Property Location and Access

The Property is situated in northeastern British Columbia, approximately 70 km northeast of Fort Nelson. The centered geographic coordinates of the Property are UTM 10N: 575395.37m E 6558725.17m N (NAD 83). It lies within NTS map sheet 094 P, in the Liard Mining Division.

The Property is accessible via 9 km of paved highway beginning in the city of Fort Nelson and 150 km of gravel road. The gravel roads include the Sierra Yoya Desan Access Road, Courvosier Road and Geetla Road. The Property can be further accessed via various oil and gas roads, forestry roads and existing cutlines.

A Location Map and Claim map have been provided as Drawing 1.

1.2 Property History

Construction of the Alaska Highway lead to the publishing of several road surveys thus providing general geological information for the area (Hage, 1944; Denny, 1952). Quaternary research of the area is limited to Mathews' (1980) large-scale geomorphology and ice flow studies of northern British Columbia and Alberta. The British Columbia Ministry of Energy and Mines and the Geological Survey of Canada have made a combined effort to map the surficial geology and bedrock topography of the Petitot River (NTS 094P) and the Fontas River (NTS 094I) areas (Trommelen *et al.*, 2005; Ferbey *et al.*, 2005; Hickin *et al.*, 2005).

Hickin *et al.* (2010) evaluated the area in a preliminary assessment of potential hydraulic fracture sand (proppant) sources. They describe the Courvosier area as a glaciofluvial delta (approximately 8km^2) formed in a shallow proglacial lake.

1.3 Surrounding Infrastructure and Resource Development

The Project is located within the Peace River region of northeast British Columbia which supports a diverse range of land and resource use activities, including oil and gas exploration and development, mining, hydroelectric projects, forestry, agriculture, outdoor recreation, trapping, and guide outfitting. The Mineral Claims overlap some First Nation Treaty Lands, uranium and thorium reserves and the Fort Nelson Land and Resources Management Resource Plan.

Oil and gas exploration and development in British Columbia is concentrated in the northeast, particularly in the Montney and Horn River Basins (BC OGC 2014). The Horn River Basin is located just north of Fort Nelson and holds an estimated 500 trillion cubic feet of shale gas. As the oil and gas industry grows in the Peace River region, expanded infrastructure is required for development, production, processing, and transportation of natural gas. A network of roads and pipelines are constructed and maintained throughout the area by industry to support access and transportation of oil or gas (BC OGC 2014).

1.4 Physiography, Vegetation and Climate

The Peace River region is characterized by a continental climate with low precipitation year-round. Moisture coming from the Pacific Ocean tends to lose its precipitation over the mountain ranges before moving over the Peace River region, while Arctic air masses are uninterrupted. The Property is positioned within the Taiga Plains Ecozone. The Taiga Plains Ecozone is centered around the Mackenzie River, with mountains to the west, arctic to the east and boreal forests to the south. Its climate consists of short, cool summers and long cold winters. Mean annual precipitation ranges from 200 to 500 mm. The vegetation in the Taiga Ecozone includes trembling aspen (*Populus tremuloides*), tamarack (*Larix laricina*), lodgepole pine (*Pinus contorta*), jack pine (*Pinus banksiana*) and black spruce (*Picea mariana*) (Canadian Biodiversity, 2018 a to c).

The Property covers a variety of physiography including hills, streams, ponds, lakes, rivers and forests. The terrain is mostly rugged forest with intermittent lowlands. There are no rivers immediately within the Property's vicinity, however the Fort Nelson River joins the Muskwa River in the community of Fort Nelson to the southwest. These rivers meander through immature ravines filled with unconsolidated glacial debris. Elevation on of the Property varies from 653 masl in the east to 580 masl in the west.

1.5 Summary of 2018 Exploration Work

543077 identified the Property as having potential as a mineral resource following a desktop geological review and field scouting. During June 2018, 543077 conducted preliminary evaluation of the geology of the Property summarized in Table 2.

Table 2. Summary of Exploration Work Completed on the Courvosier Property in 2018.

Type of Work	Mineral Claims Work Performed On	Description
Prospecting	1056368 and 1056393	226 ha prospected
Geological Survey	1056368 and 1056393	226 ha surveyed at a 1:5000 scale

2.0 GEOLOGY

2.1 Bedrock Geology

The Property is situated primarily within the Alberta Plateau Region of the Interior Plains physiographic subdivision of British Columbia and the Fort Nelson Lowland (Church *et al.*, 2010; Holland, 1976). There are three glacial systems that influenced the Property, the Laurentide Ice Sheet from the Canadian Shield to the east, the Cordilleran Ice Sheet from the west and coalescent valley glaciers (Mathews, 1980). Within the Fort Nelson District, some red granite and gneiss erratics, characteristic of the Laurentide Ice Sheet, can be found, but are quite rare (Mathews, 1980). Deglaciation of the Fort Nelson area occurred between 11,500 and 12,200 C^{14} years Before Present (BP) (Rampton, 1986). According to Trommelen *et al.* (2005), all three glacial sources contain quartzite sediments which may have been reworked by Tertiary River systems that drained onto the Alberta and British Columbia plains from the Rocky Mountains.

The underlying geology of the Property contains:

- The Buckinghorse, or Badheart Formation: silty shales and minor sandstones (Thompson, 1977).
- The Sikanni Formation: contains between four to eleven sandstone units separated by silty shales (Thompson, 1977).
- The Dunvegan Formation: deltaic and pro-deltaic sandstone, conglomerate and mudstone succession (Thompson, 1977).

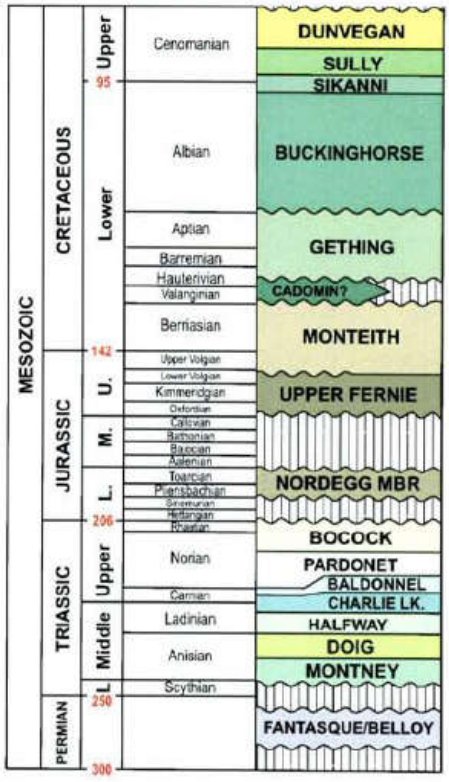

Figure 1 (right). Tentative correlation of Cretaceous formations in Foothills of Alberta and British Colombia (modified from Stockmal 1999, Glass 1997, Pyle and Barnes 2000, and Stott 1991).

2.2 Surficial Geology

Surficial geological mapping by Trommelen *et al.* (2005) has led to the distinction of two diamict units (glacial and glaciofluvial), each containing sand, gravel and silt and clay packages. All surficial units overlie bedrock.

The major surficial material of the area are glacial deposits, typically 1 to 10 m in thickness ranging up to 170 m thick, that are dense, clast-poor silty clay diamicts (Hickin and Kerr, 2005; Trommelen *et al.*, 2005). Clast content is approximately 1 to 5%. Clasts are subangular to subround and granule to cobble sized with occasional boulders. Clast lithology varies and includes potassium feldspar-rich granite and gneiss, limestone, oil-impregnated dolostone, minor mafic and volcanic clasts, siltstone, quartz, quartz sandstone, quartzite, black chert, tan chert, sandstone, shale and ironstone. This diamict is interpreted as a basal till since there are many striated clasts with a high-density and fine-grained matrix sourced from local Cretaceous shales (Trommelen *et al.*, 2005).

Glaciofluvial deposits usually consist of sand and gravel outwash, comprised of cobble to pebble sized clasts. The matrix is clast-supported and contains clay to poorly sorted coarse sand. Clast lithology varies greatly (Trommelen, *et al.*, 2005).

3.0 EXPLORATION

543077 identified the Property as having potential as a mineral resource following a desktop geological review and field scouting. During June 2018, 543077 conducted preliminary evaluation of the geology of the Property. Prospecting included: evaluating access, collection and analysis of surface and near surface rock and geological mapping. The work was undertaken to determine the location, quality, extent, accessibility and potential of any mineral deposits within the Property. The primary focus of work in 2018, was to evaluate the potential of silica deposits for industrial purposes, specifically use as hydraulic fracture proppant.

3.1 Prospecting

Surface Quaternary samples were collected using shovels and hand augers. Outcrops were investigated and surficial geological contacts were defined. Garmin GPS instruments were used to record sample locations and information on surficial geological contacts. Field observations, including geologic descriptions of the surficial material as well as a description of the land vegetation, were recorded at each sample location. Nine vertical auger holes were completed, with total depths ranging from 0 to 2.5 m and thirteen samples were collected. The amount of material collected varied based on the depth of the test hole and the amount of variation in lithology but, on average, ranged from 2 kg to 7 kg of material per test hole. Samples were placed in a labelled plastic bag with the location ID, sample depth, elevation, water table depth and date. UTM coordinates of the sample location were recorded along with a field description of the sample and sample area. Detailed sample information is provided in Appendix A. Prospecting Field Observations have been included in Appendix C.

3.2 Sample Processing and Analysis

Samples collected during the exploration program were recorded in a database and processed prior to analysis. Samples were cleaned by washing them in a wash sieve to remove both organics and clays and were dried using an oven. Once washed and dried, samples were analyzed for their physical characteristics including grain size distribution, silica content, average sphericity and roundness of the grains. Physical analysis was performed in-house by 543077 personnel using Standard C136, established by ASTM International, at the Cloverbar Laboratory (13304 Meridian St. NW, Edmonton, Alberta).

Grain size distribution analysis was completed using sieves. Samples were dried in a pan, then allowed to cool for ten to fifteen minutes. Raw samples were then repeatedly split in a uniform splitter until the sample size was reduced to between 400 to 500 grams. The final sample was washed then dried a second time on a hot plate. The representative samples were then passed through a series of sized sieves. The increments of sand retained on each sieve were weighed and their mass recorded. The information was processed and converted to percentages by weight based on the pre-wash mass. Grain size distribution results are presented in Appendix B.

Physical aspects of the samples were analyzed visually using a basic microscope. Silica content and modal percentage was estimated to identify impurities for select samples. Silica grains were analyzed for fractures, staining, cementation, microstructure, sphericity and roundness. To estimate sphericity and roundness, samples were compared to a sphericity and roundness estimation chart (modified from Krumbein and Sloss, 1963). Samples were analyzed and given a numerical value from 1 to 9, representing their sphericity and roundness. Individual grains were analyzed for fracturing and the amount of fracturing in each sample was recorded. A photograph was taken of selected samples.

3.3 Geological Mapping

Geological maps were created from a database containing lithological descriptions of surface and subsurface samples collected while prospecting within the area. Samples included various glacial (esker), and fluvial deposits. GPS coordinates were taken at each sample point and silica deposit thickness was measured or height was visually estimated and recorded at various sample points.

From sample descriptions and measurements, lateral extents of silica deposits were extrapolated from sample points, following land form and vegetation trends using SPOT WCSB Imagery© in geoSCout© software. Surface and shallow subsurface lithology was also interpreted using changes in vegetation or tree species that can typically be associated with substrate type.

4.0 RESULTS AND DISCUSSION

Glaciofluvial deposits containing a granular silica deposit were identified on the Property. Physical and chemical properties of the granular silica deposit are summarized in Table 3.

Table 3. Physical and chemical properties of the granular silica deposit on the Courvosier Property.

Physical or Chemical Property	Results
Impurities	Minor to Moderate: 10 to 30%
Grain Size	59% falls within the desired 40/70 and 100 mesh size range
Color	Light Brown
Roundness	Moderately-Rounded: 5 to 6
Sphericity	Moderately High: 6 to 9
Clusters	None
Fracturing	Minor to moderately fractured

4.1 Grain Size and Quality

Grain size distribution is presented in Figure 4. Greater than 50% of the material passed through the 50 mesh sieve, signifying that the majority of the deposit on the Property is finer than 50 mesh.

The grain size distribution was evaluated based on typical proppant products (16-40, 40/70 and 100 mesh). Given current market conditions, 40/70 and 100 mesh products are the most desirable. The deposit on the Property is comprised of approximately 88% of grains that fall within the 16/40, 40/70 and 100 mesh size range (Figure 2).

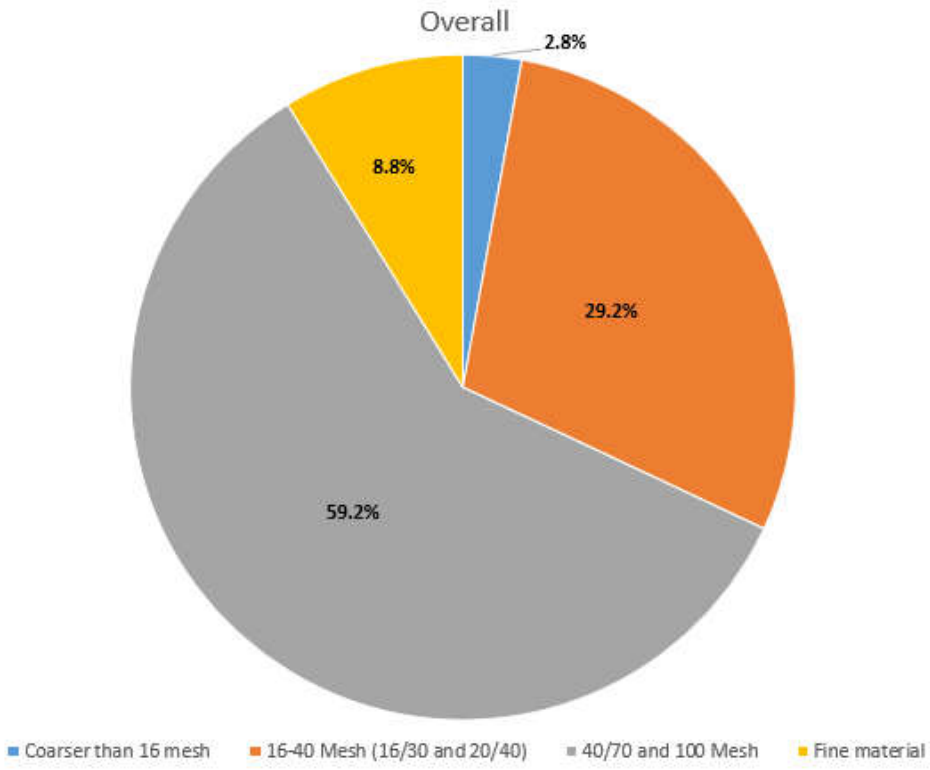

Figure 2. Overall grain size distribution of the deposit on the Property.

Based on the grain size distribution within the 16/40 and 100 mesh product sizes, the deposit on the Property would create primarily fine gradation products. The entire 16/40 mesh product and almost 60% of the 100/140 mesh product is comprised of finer material (Figure 3).

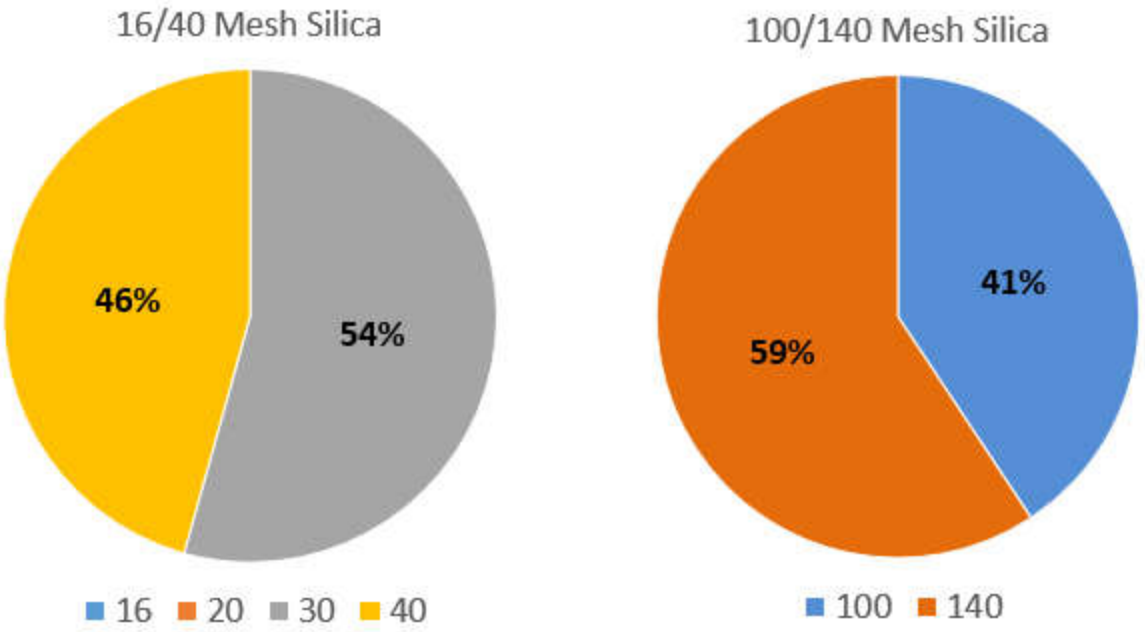

Figure 3. Grain size distribution of the 16/40 mesh product and 100/140 mesh product created from the deposit on the Property.

Good sphericity and roundness of proppant grains will enhance conductivity of oil and gas in targeted reservoirs. The analyzed sphericity and roundness of the tested grains meet or exceed current recommended values, ranging from 7 to 9 for sphericity and 5 to 7 for roundness (on a scale of 1 to 9). Image 1 shows a photo of the grains found on the Property.

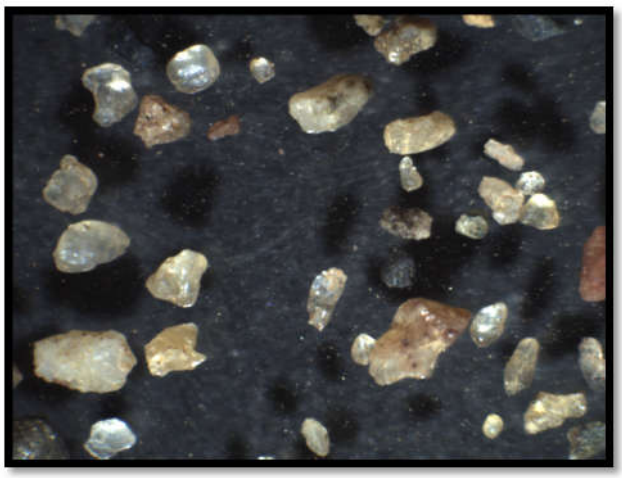

Image 1. Viewing a granular silica sample from the Property.

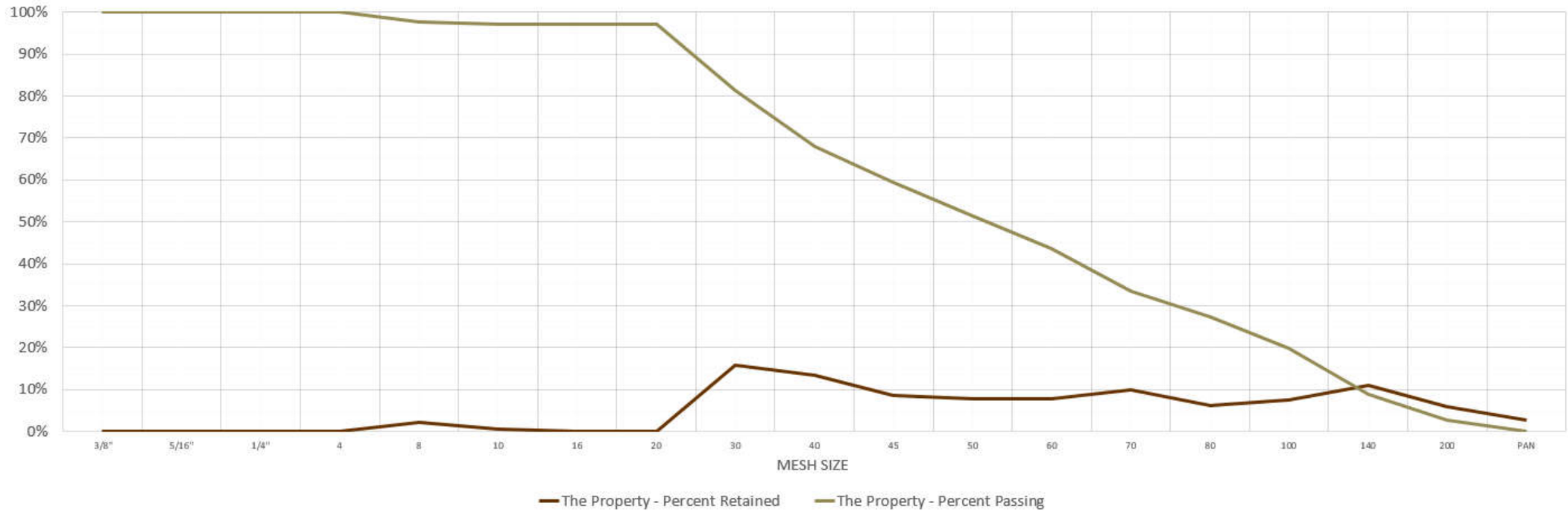

Figure 4. Grain size distribution for the deposit on the Property.

4.2 Grain Strength

The degree of fracturing within the silica grain and the amount of silica grain clusters within the tested samples can be a good indication of the potential crush resistance of the silica grains within the deposit. Crush resistance is the ability of the proppant to resist breaking down under pressure. Microscope analysis indicates minor fracturing of silica grains, and no to few silica clusters in samples collected.

5.0 CONCLUSION

The Property contains a granular silica deposit that offers potential for a viable granular silica deposit for use as proppant.

Additional work is required to:

- analyze the suitability of the silica deposit for use as proppant through additional industry standard testing
- quantify the size of the silica deposit
- characterize other minerals on the Property.

6.0 STATEMENT OF COSTS

Work on tenures 1056368 and 1056393 of the Property was completed on November 26, 2018 to the value as follows:

Prospecting and Sampling

Labour

Brandon Stoner – June 25, 2018 – June 29, 2018 – 25.5 Hours @ $120/hour ----------	$3,060.00
Mitchell McCaig – June 25 – June 29, 2018 – 25.5 Hours @ $100/hour ----------	$2,550.00

Travel & Transportation

Truck – 2 days @ $200/day ----------	$400.00
Quad - 4 days @ $123.35/day ----------	$493.40
Trailer - 2 days @ $60/day----------	$120.00
Fuel (from gas receipts) ----------	$364.32

Food/Lodging

Actual Costs of Food and Lodging ----------	$578.82
Subtotal ----------	**$7,566.54**

Technical Assessment

Sample Analysis

Size Analysis of 3 Samples Analyzed @ $265.00/sample ----------	$795.00
Microscopic Analysis 3 of Samples Analyzed @ $100.00/sample----------	$300.00
Sample Handling and Storage 3 @ $50.00/sample ----------	$150.00
Krumbein Shape Factor 3 Samples Analyzed @ $85.00/sample ----------	$255.00
Subtotal ----------	**$1,000.00**

Mapping and Volumetrics

Michelle St. Louis –October 2, 2018– 6.5Hours @ $140/hour ----------	$910.00
Report Writing 2 days @ $500/day ----------	$1,000.00
Subtotal ----------	**$1,910.00**
Total ----------	**$9,976.54**

7.0 STATEMENT OF QUALIFICATIONS

7.1 Report Compilation, Geological Interpretation and Conclusions

As author of this report, I, Michelle St. Louis, P.Geo. hereby certify that:

1. I am currently the Senior Geologist of 543077Alberta Ltd., with a registered busniess address at 9175 14 Street, Edmonotn, Alberta.
2. I am the author of this report entitled “2018 Exploration Technical Report – Mineral Claims: 1056366 and 1056367 dated November 30, 2018 to which this statement of qualifications applies.
3. I graduated with a Bachelor of Science in Geology in 2001 from the University of Saskatchewan.
4. I am registered with the Association of Professional Engineers and Geoscientists of Alberta since 2009.
5. I have been practicing geology continuously for 19 years.

As a co-author of this report, I Carmen Ricard, G.I.T. hereby certify that:

1. I am currently a Junior Geologist-in-Training at 543077 Alberta Ltd., with a registered business address at 9175 14 Street, Edmonton, Alberta.
2. I am a co-author of this report entitled “2018 Exploration Technical Report – Mineral Claims”: 1056366 and 1056367 dated November 30, 2018 to which this statement of qualifications applies.
3. I graduated with a Bachelor of Science in Geology in 2016 from the University of Alberta.
4. I am registered with the Association of Professional Engineers and Geoscientists of Alberta since 2013.
5. I have been practicing geology for 1.5 years.

7.2 Field Work

Field Lead Nathan Holden, B.Sc. GIT, – 2.5 Years Exploration Experience
Field Geologist Brandon Stoner, B.Sc. GIT, - 1.5 Year Exploration Experience
Field Geologist Cody Lazowski, B.Sc. GIT, – 11 Months Exploration Experience
Field Geologist Mitchell McCaig, B.Sc. GIT, – 6 Months Exploration Experience
Field Geologist Carmen Ricard, B.Sc. GIT, – 1.5 Year Exploration Experience
Field Geologist Angela Wu, B.Sc. GIT, – 1 Year Exploration Experience

8.0 LIST OF SOFTWARE PROGRAMS

The following software programs were used in support of the exploration and development and the preparation of this report:

- Microsoft Word
- Microsoft Excel
- Foxit PhantomPDF
- ArcMap 10.5.1
- Google Earth Pro

9.0 REFERENCES

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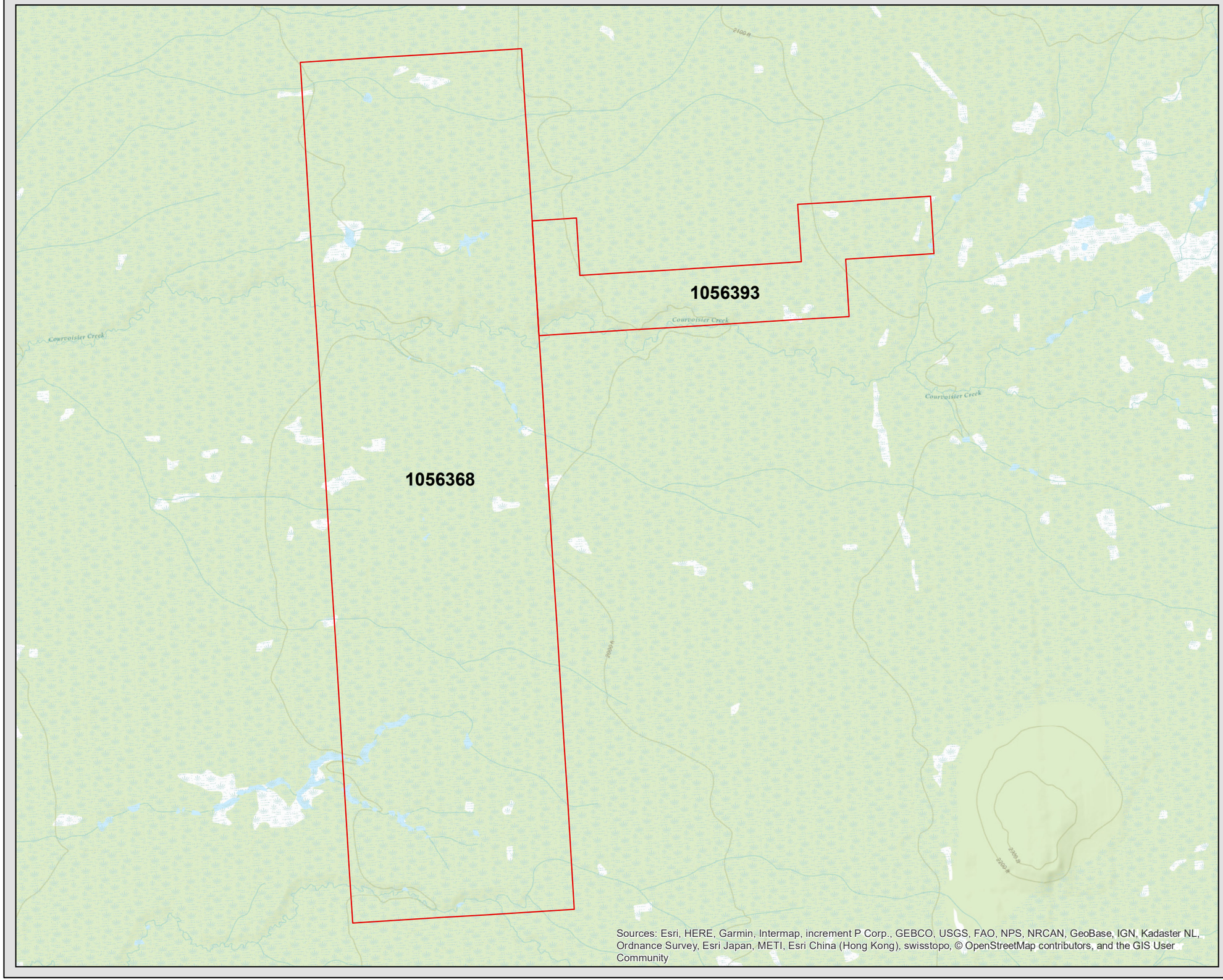
DRAWINGS

543077 Alberta Ltd.

Courvosier Property Location and Claim Map

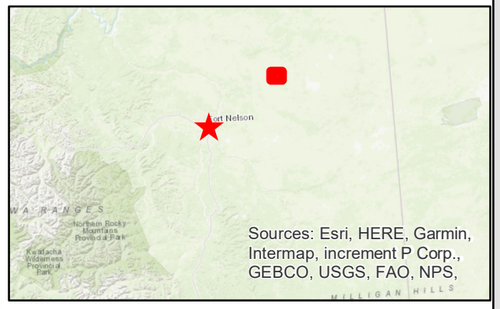
Mineral Claim: 1056368, 1056393



Legend

- Fort Nelson
- Mineral Claim
- Water bodies

NTS Zone: 94 P



DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

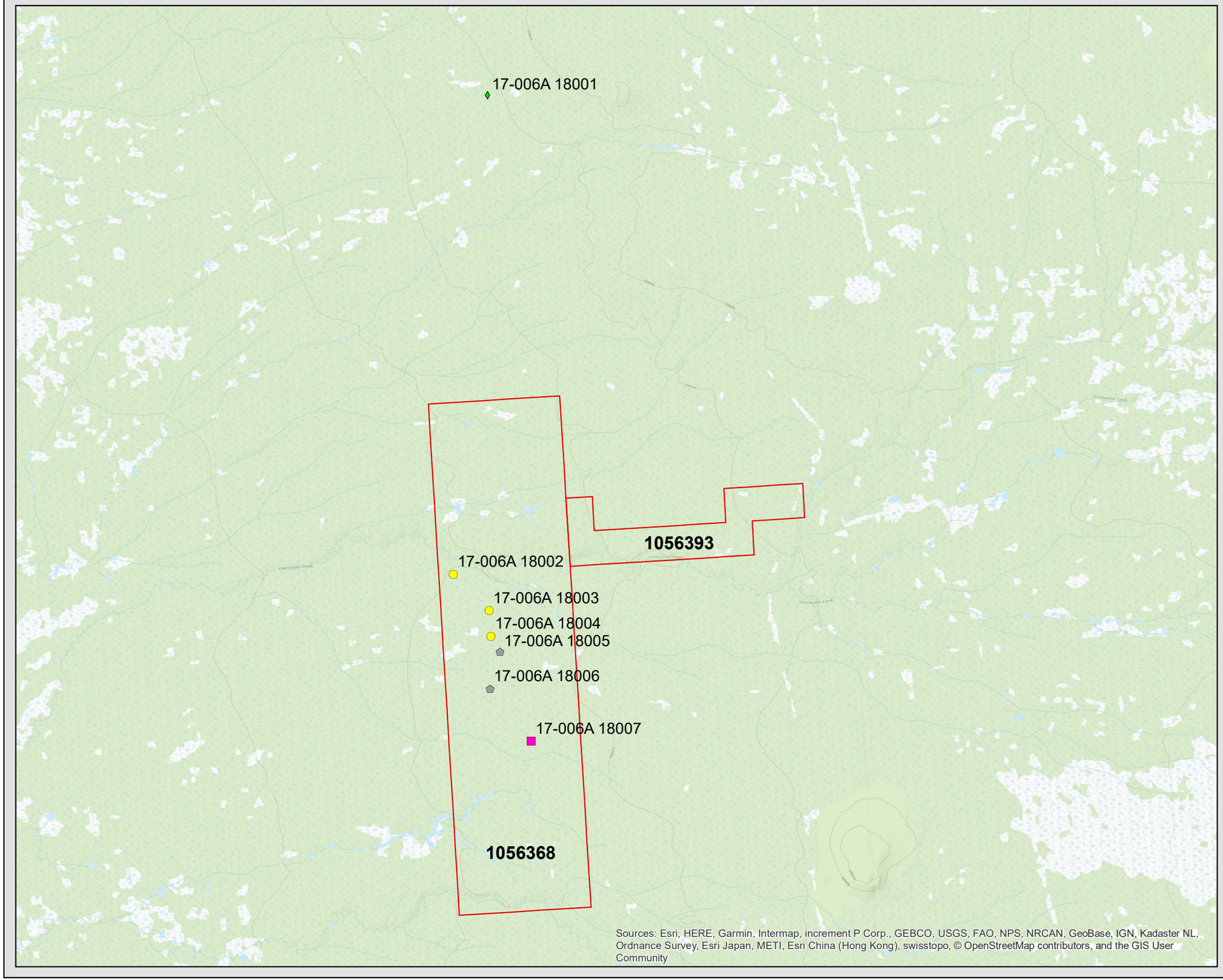
MAP SCALE 1:30,000

0 300 600 1,200 m

N

Sil Industrial Minerals — We're Ready.

ISO Registered



543077 Alberta Ltd.

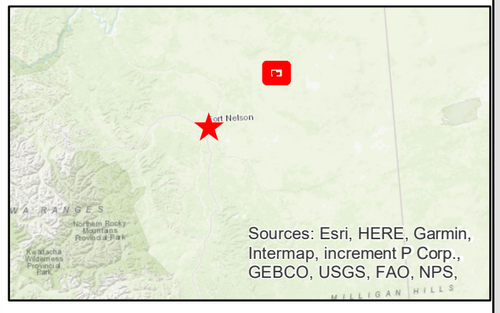
Courvosier Property Testhole Locations Map

Mineral Claim: 1056368, 1056393

Legend

- Silica
- Gravel
- Clay
- Clay&Gravel
- Fort Nelson
- Mineral Claim
- Water bodies

NTS Zone: 94 P



DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

MAP SCALE 1:50,000

0 500 1,000 2,000 m

N

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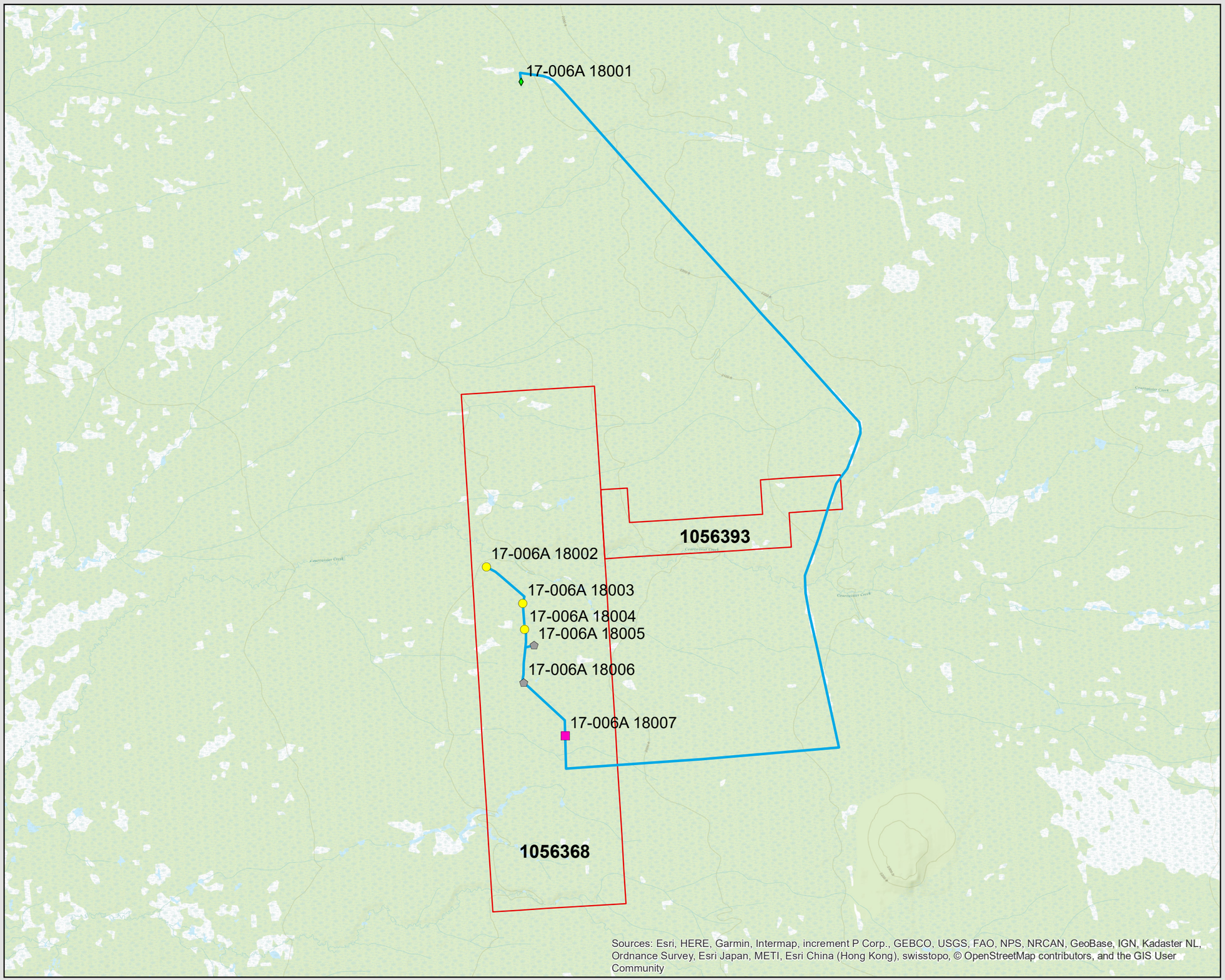
ISO Registered



543077 Alberta Ltd.

Courvosier Property Traverse Map

Mineral Claim: 1056368, 1056393

Legend

- Silica
- Gravel
- Clay
- Clay&Gravel
- Fort Nelson
- 17-006A Traverse
- Mineral Claim
- Water bodies

NTS Zone: 94 P

DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

MAP SCALE 1:50,000

0 500 1,000 2,000 m

N

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Courvosier Property Bedrock Geology Map

Mineral Claim: 1056368, 1056393

Legend

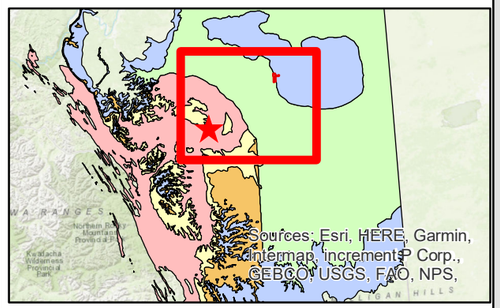
Fort Nelson

Mineral Claim

Bedrock Geology

- Dunvegan Formation
- Fort St. John Group
- Buckinghorse or Badheart Formation
- Sikanni Formation
- Sully Formation

NTS Zone: 94 P



Fort Nelson

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

MAP SCALE 1:350,000

0 3,450 6,900 13,800 m

N

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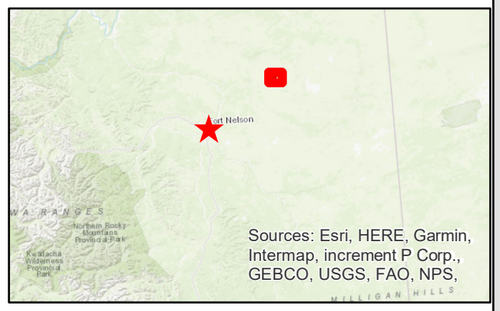
Courvosier Property General Surficial Geology Map

Mineral Claim: 1056368, 1056393

Legend

- Fort Nelson
- Mineral Claim
- Water bodies
- Silica
- Gravel
- Clay
- Silica
- Gravel
- Clay

NTS Zone: 94 P



1056393

17-006A 18002

17-006A 18003

17-006A 18004

17-006A 18005

17-006A 18006

17-006A 18007

1056368

Courvoisier Creek

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

MAP SCALE 1:35,000

0 350 700 1,400 m

N

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17-006A 18002

17-006A 18003

17-006A 18004

17-006A 18005

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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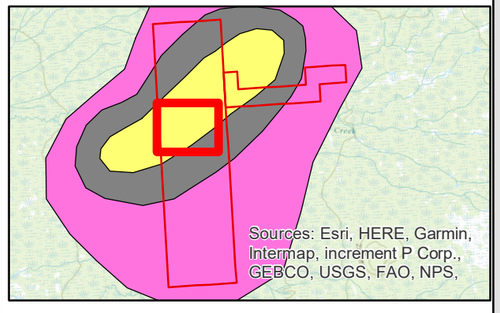
Courvosier Property General Surficial Geology Map - Map A

Mineral Claim: 1056368, 1056393

Legend

- Mineral Claim
- Water bodies
- Silica
- Gravel
- Clay
- Silica
- Gravel
- Clay

NTS Zone: 94 P



DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

MAP SCALE 1:5,000

0 50 100 200 m

N

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ISO Registered

17-006A 18004

17-006A 18005

17-006A 18006

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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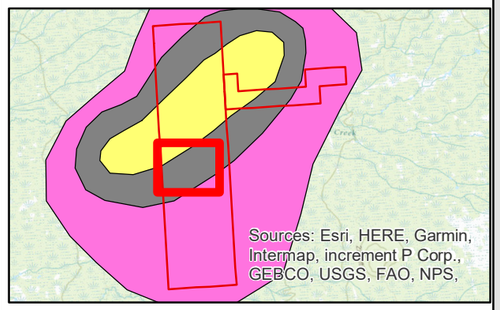
Courvosier Property General Surficial Geology Map - Map B

Mineral Claim: 1056368, 1056393

Legend

- Mineral Claim
- Water bodies
- Silica
- Gravel
- Clay
- Silica
- Gravel
- Clay

NTS Zone: 94 P



DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

MAP SCALE 1:5,000

0 50 100 200 m

N

Sil Industrial Minerals We're Ready.

ISO Registered

17-006A 18006

17-006A 18007

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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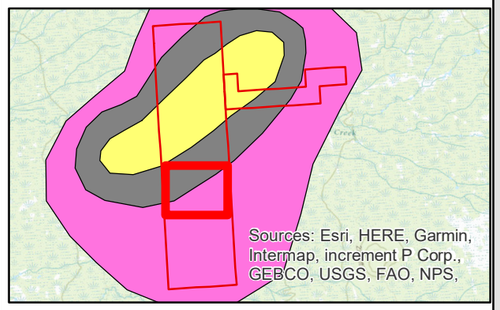
Courvosier Property General Surficial Geology Map - Map C

Mineral Claim: 1056368, 1056393

Legend

- Mineral Claim
- Water bodies
- Silica
- Gravel
- Clay
- Silica
- Gravel
- Clay

NTS Zone: 94 P



DATE: December 19, 2018	BEARINGS: Decimal Degrees North Azimuth
DRAWN BY: Carmen Ricard	PROJECTION: NAD 1983 BC Environment Albers Units in meters
VERSION: 1.0	DATUM: NAD 83

MAP SCALE 1:5,000

0 50 100 200 m

N

Sil Industrial Minerals We're Ready.

ISO Registered

APPENDIX A

Detailed Sample Logs

Exploration Drill Hole Results Summary
17-006A - Courvosier - November 2018

Drill Hole	Year Drilled	Easting (UTM)	Northing (UTM)	Collar Elevation MSL (m)[1]	Overburden Thickness (m) Deposit Top Elevations MSL (m)	Deposit Top Elevation MSL (m)	Deposit Bottom Elevation MSL (m)*	Deposit Thickness (m)**	Sample Description
17-006A 18001	2018	575217	6566864	597		597.00	596.39	0.61	0-0.6m: medium granular silica (60%), gravel (40%)
17-006A 18002	2018	574427	6559780	584		584.00	583.09	0.91	0-0.9m: silt to very fine granular silica; >0.9m: clay
17-006A 18003	2018	574891	6559269	598		598.00	596.02	1.98	0-2m: medium brown granular silica (95%), gravel (5%)
17-006A 18004	2018	574902	6558922	596		596.00	595.70	0.30	0-0.3m: medium to coarse granular silica (50%), gravel (50%)
17-006A 18005	2018	575018	6558703			0.00		0.30	0-0.3m: gravel
17-006A 18006	2018	574860	6558211	598		598.00	597.70	0.30	0-0.3m: gravel
17-006A 18007	2018	575390	6557473					0.30	0-0.3m: clay

* - Adjusted based on hole location and topographic data (topographic contours or LIDAR elevation data)
** - Includes non-silica layers or parting such as clay, gravel, etc.

APPENDIX B

Grain Size Distribution Results

Sieve Results by Mass

TEST DATE	TEST NUMBER	DEPTH FEET	MASS (%) RETAINED SIZE 3/8"	MASS (%) RETAINED SIZE5/16"	MASS (%) RETAINED SIZE 1/4"	MASS (%) RETAINED SIZE 4	MASS (%) RETAINED SIZE 8	MASS (%) RETAINED SIZE 10	MASS (%) RETAINED SIZE 16	MASS (%) RETAINED SIZE 20	MASS (%) RETAINED SIZE 30	MASS (%) RETAINED SIZE 40	MASS (%) RETAINED SIZE 45	MASS (%) RETAINED SIZE 50	MASS (%) RETAINED SIZE 60	MASS (%) RETAINED SIZE 70	MASS (%) RETAINED SIZE 80	MASS (%) RETAINED SIZE 100	MASS (%) RETAINED SIZE 140	MASS (%) RETAINED SIZE 200	MASS (%) RETAINED PAN	TOTAL
July 10, 2018	17-006A 18004 TH	0-1	10.0	6.5	9.5	18.0	40.5	7.0	24.5	15.5	13.0	6.5	3.0	3.0	5.0	2.0	1.5	2.0	2.5	1.5	0.0	100%
July 10, 2018	17-006A 18003 TH	3-3.5	4.5	1.0	1.5	0.0	1.5	0.0	5.5	9.0	24.0	37.5	26.5	20.5	17.5	8.0	4.0	3.5	3.0	2.0	0.0	100%
Average Mass Retained (Mass %)			4.3%	2.2%	3.2%	5.3%	12.3%	2.1%	8.8%	7.2%	10.9%	12.9%	8.7%	6.9%	6.6%	2.9%	1.6%	1.6%	1.6%	1.0%	0.0%	
Mass Passing (Mass %)			95.7%	93.5%	90.3%	85.0%	72.7%	70.7%	61.9%	54.7%	43.8%	30.9%	22.3%	15.4%	8.8%	5.9%	4.3%	2.6%	1.0%	0.0%	0.0%	

Coarser than 16 mesh	0.29
16-40 Mesh (16/30 and 20/40)	39.7%
40/70 and 100 Mesh	29.9%
Fine material	1.0%

Sieve Results by Volume

TEST DATE	TEST NUMBER	DEPTH FEET	Volume (%) RETAINED SIZE 3/8"	Volume (%) RETAINED SIZE5/16"	Volume (%) RETAINED SIZE 1/4"	Volume (%) RETAINED SIZE 4	Volume (%) RETAINED SIZE 8	Volume (%) RETAINED SIZE 10	Volume (%) RETAINED SIZE 16	Volume (%) RETAINED SIZE 20	Volume (%) RETAINED SIZE 30	Volume (%) RETAINED SIZE 40	Volume (%) RETAINED SIZE 45	Volume (%) RETAINED SIZE 50	Volume (%) RETAINED SIZE 60	Volume (%) RETAINED SIZE 70	Volume (%) RETAINED SIZE 80	Volume (%) RETAINED SIZE 100	Volume (%) RETAINED SIZE 140	Volume (%) RETAINED SIZE 200	Volume (%) RETAINED PAN	TOTAL
August 16, 2018	17-006A 18003	3.5-6.5	0.0	0.0	0.0	0.0	4.0	1.5	0.0	0.0	34.9	25.4	12.0	7.5	5.2	4.6	1.3	1.0	1.3	0.9	0.5	100%
September 7, 2018	17-006A 18002	1.5-3.5	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	12.6	13.9	9.9	9.4	9.2	12.7	5.5	5.2	9.2	6.8	2.7	100%
July 13, 2018	17-006A 18###	1.5-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.1	6.6	9.4	12.6	12.1	16.4	22.4	10.6	5.1	100%
Average Volume Retained (Vol %)			0.0%	0.0%	0.0%	0.0%	2.3%	0.5%	0.0%	0.0%	15.8%	13.3%	8.7%	7.8%	7.9%	10.0%	6.3%	7.5%	11.0%	6.1%	2.8%	
Volume Passing (Vol %)			100.0%	100.0%	100.0%	100.0%	97.7%	97.2%	97.2%	97.2%	81.3%	68.0%	59.3%	51.5%	43.6%	33.6%	27.3%	19.8%	8.8%	2.8%	0.0%	

Coarser than 16 mesh	2.8%
16-40 Mesh (16/30 and 20/40)	29.2%
40/70 and 100 Mesh	59.2%
Fine material	8.8%

APPENDIX C

Prospecting Field Observation Sheets

Prospecting Field Observations

Project Name and Location: 17-006 A

Date Range: June 26/2018

Weather Conditions: Warm, Sunny, approximately 18°C

Personnel and Equipment: Brandon Stoner, Mitchell McCaig, Truck, 2 ATVs

Description of Prospecting Activities: From Fort Nelson, B.C. we drove on Sierra Yoyo DeSan for 112 Km, turned left on Komie road and travelled 32 Km, then turned left onto Cavvosier Creek Road and travelled for 3 Km and parked the truck off the side of the road near an old gravel. Area was very wet and swamp-like in general, and the vegetation was predominantly black spruce and aspen. We launched the ATVs and travelled as far south as we could (before the ground became too wet) and used our dutch Auger to collect Sample 18001. This gravel pit, along with the oil/gas lease road that runs north of Cavvosier Creek Road are on obvious topographic highs. We next travelled north along the oil/gas lease road and followed it until the end. We followed an old cutline and travelled approximately 500m NW, until the ground became too wet to continue. Here we collected Sample 18002. We then back-tracked ~350 m and collected Sample 18003, with the dutch auger, on the west side of the road. Next we travelled ~400 m further south and collected sample 18004, ~~on~~ west of the road. We then travelled 100 m further South, and turned east onto an old cutline and excavated location 18005 (with the dutch auger). We then headed back to the road and travelled ~450m further South and excavated location 18006 just east of the road. We then travelled 1 Km further south and

excavated location 18007. Lastly, we headed back to Couvosier Creek road and travelled west of the property to see if there was any aggregate deposits we may have missed. However we only found low-lying swamp. Lastly we travelled east of our property and confirmed there were no deposits of interest there. We plotted our findings on a field map, then packed up and headed back to Fort Nelson.

X Brandon Stanek
Signature
Field Geologist:

X
Signature
Field Geologist: Mitchell McCaig