BC Geological Survey
Assessment Report
40355

BRITISH COLUMBIA
The Best Place on Earth

Ministry of Energy, Mines & Petroleum Resources
Mining & Minerals Division
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geochemical Assessment Report **TOTAL COST:** $ 19,000.00

AUTHOR(S): J. T. Shearer, M.Sc., P.Geo. **SIGNATURE(S):**

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): **YEAR OF WORK:** 2022

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5934685

PROPERTY NAME: Sukunka

CLAIM NAME(S) (on which the work was done): 1051055 + 1051192 + 1035182

COMMODITIES SOUGHT: Limestone

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Liard Mining Division **NTS/BCGS:** 93P-4, BCGS 03P.11

LATITUDE: 55 ° 08 ' 30 " **LONGITUDE:** 121 ° 53 ' 00 " **(at centre of work)**

OWNER(S):
1) J. T. Shearer 2)

MAILING ADDRESS:
Unit 5 - 2330 Tyner Street
Port Coquitlam, BC V3B 2Z7

OPERATOR(S) [who paid for the work]:
1) Same 2)

MAILING ADDRESS:
Same

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
The deposit lies within a bed of limestone of the Mississippian Rundle Group underlain by shaley carbonates of Lower Mississippian Banff Formation and overlain by siltstone and shale of the Triassic Sulphur Mountain Formation

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
8407, 38511, 38069, 36853, 34177

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			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	14 rocks	1082463, 1035174	$ 19,000.00
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:	$ 19,000.00

GEOCHEMICAL ASSESSMENT REPORT
on the
SUKUNKA LIME EXTENSION PROJECT
LIARD MINING DIVISION
93P-4, BCGS 93P.011
55° 08' 30" North; 121° 53' 00" West
Claim Tenure 1051055 and 1051192, 1035182
EVENT # 5934685

for

SUKUNKA LIME RESOURCES LTD.
Unit 5 – 2330 Tyner Street
Port Coquitlam, BC V3C 2Z1
Ph: 604-970-6402

by

J.T. SHEARER, M.Sc., P.Geo. (BC & Ontario) FSEG
Consulting Geologist

April 25, 2022

Fieldwork completed between May 10, 2021 and April 25, 2022

TABLE of CONTENTS

LIST of TABLES

LIST of FIGURES

LIST of PHOTOS

SUMMARY

The Sukunka Lime Extension occurrence is situated astride the Sukunka River, just east of its confluence with Baker Creek, 64 kilometres south-southwest of Chetwynd.

The deposit lies within a sequence of limestone of the Mississippian Rundle Group underlain by shaly carbonates of the Lower Mississippian Banff Formation and overlain by siltstone and shale of the Triassic Sulphur Mountain Formation (Spray River Group). The limestone outcrops as a relatively narrow northwestward trending band along the east limb of an overturned syncline. Locally, the limestone is warped into a pair of closely-spaced anticlines trending west-northwest.

The currently mined deposit is comprised of a chemical grade limestone member that passes upward into an overlying impure limestone member. The chemical grade member consists of white speckled micrite and brown to grey-brown, very fine-grained, slightly dolomitic wackestone. The impure member consists of brown-grey to grey, fine to coarse-grained, silty, dolomitic wackestone with minor dolomitic micrite. Veins of white calcite are present in both units. Pyrobitumen is commonly displayed on fractured surfaces.

Locally, two zones of historical resources (not to 43-101 standards)have been defined in the chemical grade limestone member along the crest of each of the two anticlines. The two zones are separated by an 80 to 90 metre wide band of impure limestone preserved along the intervening syncline. Indicated and inferred historical reserves (in tonnes) (not to 43-101 standards) with average grades (in per cent) are given as follows (Industrial Mineral File - W.A. MacLeod, 1988):

Zone	Reserves	CaO	MgO	SiO_2	Al_2O_3	Fe_2O_3
South	1,700,000	54.36	0.67	0.37	0.26	0.01
North	440,000	54.42	0.73	0.48	0.27	trace

The South zone outcrops along the crest of the southern anticline over a length of 260 metres with a width of between 80 and 100 metres. The North zone outcrops for up to 160 metres along the crest of the northern anticline with a width of up to 100 metres.

Average grade is calculated at average 54.36% CaO (97.02% $CaC0_3$), 0.37% $Si0_2$, 0.01% Fe_20_3, and 0.26% $A1_20_3$.

Diamond drilling followed by limited quarry development, bulk sampling, and test marketing is proposed for the property. The recommended program budget will total $ 160,000.00 with a potential sales revenue return from the test marketed lime of $ 80.000.00.

Work in 2019 consisted of Legal Surveys and continued geochemical sampling of the limestone resources.

All samples are of light to dark grey to brown, fine grained limestone with CaO values from a low of 46.59% CaO to a high of 57.46% CaO. Silica ranges from 1.83% Si to 3.47% Si.

Additional follow-up sampling is recommended.

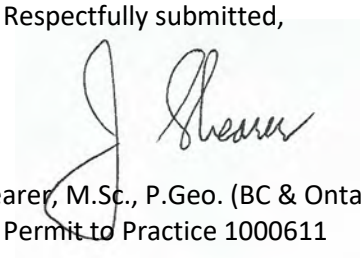
Work in 2021 and 2022 focussed on quantifying the $CaCO_3$ content to the north of the Sukunka River. Sample descriptions and assays are in Appendix III and plotted on Figures 7a and 7b.

There are extremely pure beds of fine grained limestone on claim 1082394 (Golden North) and 1082402 (Golden North 4) for example Su-5 assayed 62.38% CaO (close to 100% $CaCO_3$ with some Ca in addition to CaO_3). Sample Su-5 is a dark grey, very fine grained limestone with smooth fractures with only a trace of white irregular veinlets. It could be termed a ”graphic” limestone. Other samples from the Waypoint 595 area ranged from 55.90% CaO to 59.61% CaO.

An eastern splay of the Rundle Group was also sampled but was characterized by finely clastic limestone conglomerate with silica values ranging from 2.09% Si to 6.32% Si with an outlier of 18.27% Si. The carbonate clasts are small (10 to 15mm) and well rounded. The sparse black chert clasts are larger and angular.

Follow-up sampling is warranted on claim 1082463 to the west and 1035174 to the south to further define the limestone resource.

Respectfully submitted,



J. T. Shearer, M.Sc., P.Geo. (BC & Ontario) FSEG
Permit to Practice 1000611

Figure 1 Location Map

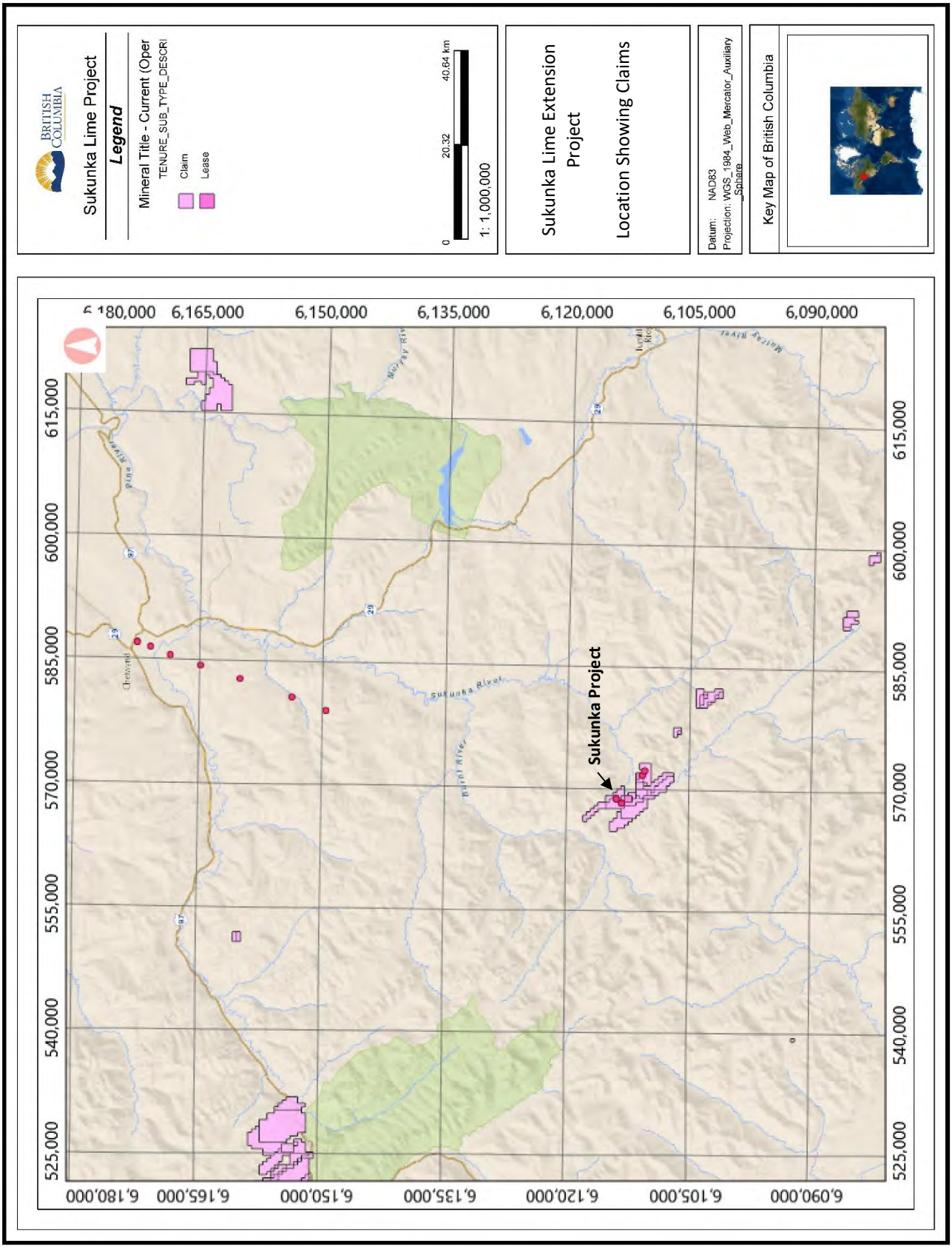


Figure 1a Location Map Showing Claims

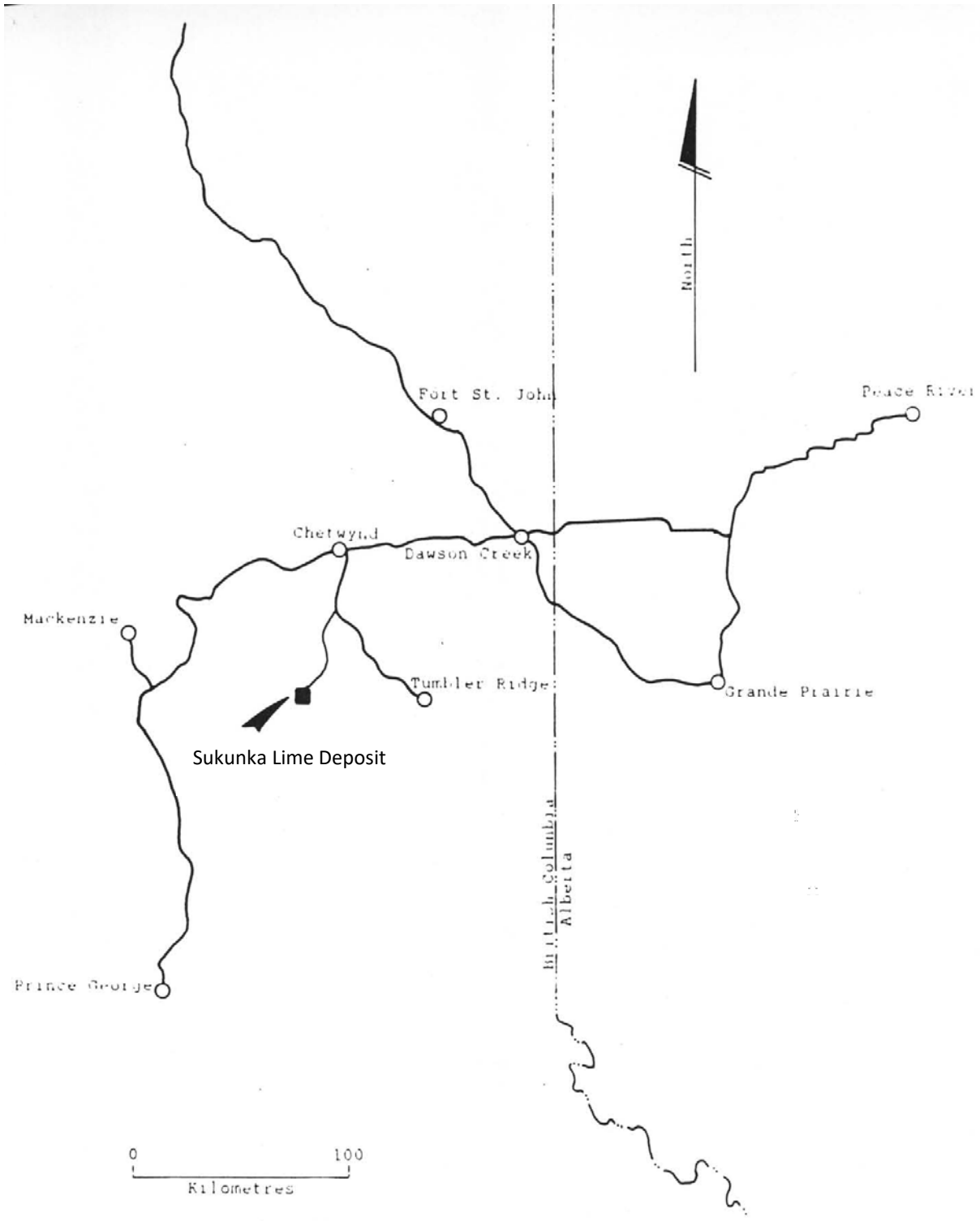


Figure 1b Detail Location Map

INTRODUCTION

This assessment report documents recent sampling on the Sukunka Lime Extension claims located in the Sukunka River Valley in the Liard Mining Division, British Columbia.

Continued sampling was undertaken in 2021 and 2022.

The previous geological mapping and outcrop sampling program described in the history section was planned-and supervised by W. A. McLeod during June, 1988.

This report describes the 2021 and 2022 work performed and the results obtained and further recommends continued exploration by diamond drilling, test quarrying and the test marketing of recoverable chemical grade limestone present on the property.

LOCATION and ACCESS

Project Location and Access

The Sukunka Limestone Small Mine mineral property is located within the Liard Mining Division of north central B.C. approximately 145km northeast of Prince George and 70km northwest of Tumbler Ridge (Figures 1 and 1a). The Sukunka claims are centered at approximately 54.4676 north latitude and 120.6499 west longitude within NTS sheet 93I/07E (BCGS 93I.047). Road access from Tumbler Ridge is by Highway 29 approximately 60km to the north to the Sukunka FSR, then 52km to the claims. The property is 70km by road from Chetwynd.

The project area encompasses Sukunka River (WSC 234-443900) which is part of Pine River watershed. It is within Peace Natural Resource District in Peace River Regional district. To the east of the project site is Hole-in-the-Wall Provincial Park. All development related to this mine will be outside the park boundary.
The land is presently uninhabited. It has been subjected to widespread forest fire in the recent past. Within the total area of the Peace River Regional District, 70.09% is undisturbed wildlands, while the total disturbed footprint is 29.91%. This 29.91% is disturbed by anthropogenic activities including crop/pasture/bare ground (17.05%) and cut blocks (9.29%). Other activities such as seismic lines, pipelines, transmission lines, residential, well sites, roads, trails, borrow-pits and dugouts, mine sites, or rail are less than 0.8% each (Mighty Peace Watershed Alliance 2017).

Climate

The proposed mine site is located within the Finlay-Peace Wet Cool Variant of the Sub-Boreal Spruce zone (SBS wk2). The SBS zone is the third largest forested zone in British Columbia and occupies 10.9% of the province. It is mostly found on the rolling landscape in the central interior portion of the province.
The zone covers a wide latitudinal and longitudinal range and has many bordering zones. It is a montane zone mostly occurring between elevations of 600m and 1300m. Overall, the climate in the SBS zone is mild continental. The diversity of bordering zones is mirrored in the high number of subzones and their climatic variation. Across the zone temperatures range from 12.2°C in southeast to 16.1° in the southern central portion. Mean annual precipitation nearly doubles from 500mm on low lying areas of interior plateau to 950mm on the mountainous terrain in the central western portion of the zone.
Tumbler Ridge is the nearest town to the Sukunka prospect (55km to the east), and the climate of the town is representative for the proposed project area. Tumbler Ridge experiences a continental climate. Arctic air masses tend to move predominantly southwesterly across this region of the province from the Mackenzie Valley towards the Rocky Mountains and through the mountains north of town.

Climatic conditions in the mine area can be described using climate normal data from the Bullmoose meteorological station located near Tumbler Ridge. Daily temperature variations at the Bullmoose station are summarized in the 30-year climate normals from 1981 to 2010. During this period, the average daily maximum temperature was 18.9^{o}C in July and the average daily minimum temperature was -12.6^{o}C in January. Extreme temperatures ranged from a low of -42.5^{o}C to a high of 32.5^{o}C.

Physiography

The proposed mine location is near the toe of the north facing slope below peaks which include Mt. Palsson at 1,800m. The land generally slopes north to the Sukunka River. The proposed mine site extends approximately 200m south from the Sukunka Forest Service Road over which the land rises approximately 90m for an average grade of 45% which is significantly less than other slopes in the area. North of Sukunka Forest Service Road the land is flat and poorly drained as evidenced by mapped marsh areas adjacent to the river.

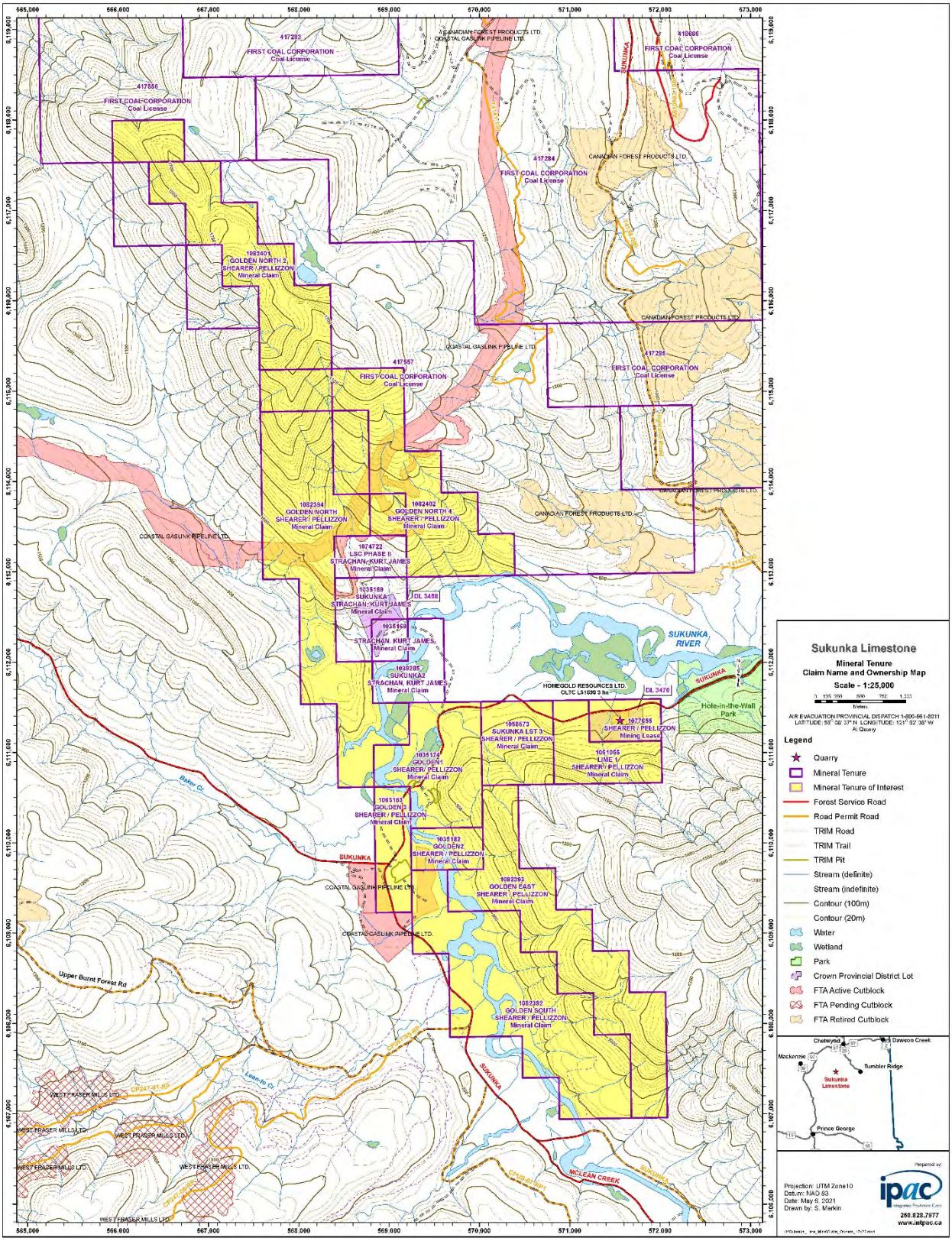


Figure 2 Claim Map

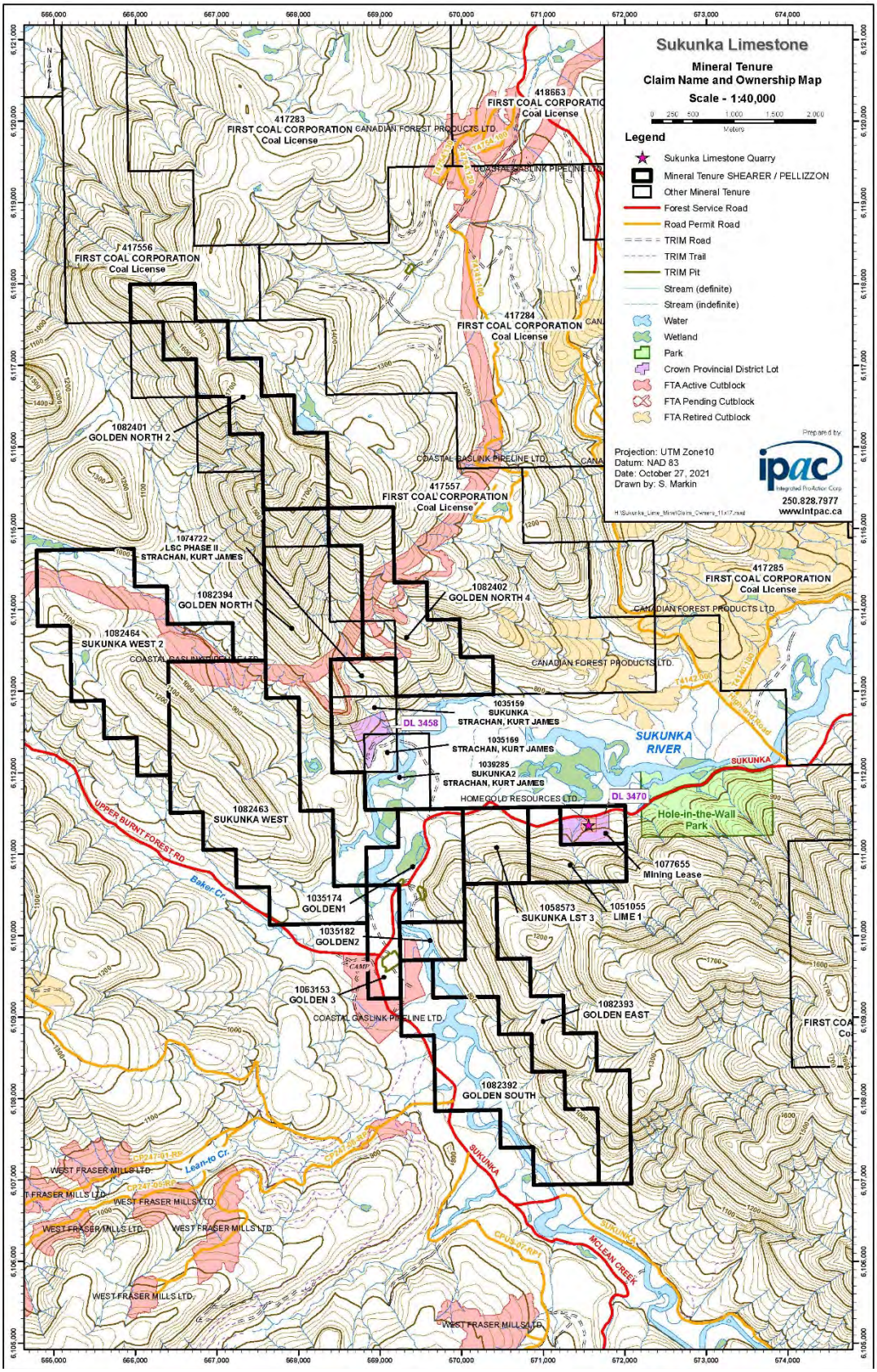


Figure 2a Claim Map

CLAIM STATUS

The Mount Palsson limestone property consists of fourteen (14) MTO Mineral Claims and one (1) Lease which cover the former five-year Lease (Number 802015) granted to Westmin Resources Limited of Calgary, Alberta for the sole purpose of quarrying limestone.

The claims are located some seventy kilometres south southwest of Chetwynd, British Columbia in the Sukunka River Valley within the Liard Mining Division in N.T.S. grid 93 P/4 at 55°08'30" N.; 121°53'00''W.

The property is accessible from Chetwynd via Provincial Highway No. 29 and the all-weather- Sukunka Forestry Access Road.

The property consists of the following mineral claims as tabulated in Table 1 and illustrated on Figure 2 and 2a.

The staked claims are recorded as follows:

Table 1
List of Claims

Claim Name	Tenure No.	Size (ha)	Located Date	*Current Expiry Date
Lease	107765	36.98	Lease	By Payment - July
Lime 1	1051055	73.96	March 30, 2017	July 30, 2025
Golden1	1035174	129.43	April 2, 2015	July 2, 2025
Golden2	1035182	36.99	April 2, 2015	July 2, 2025
Sukunka LST 3	1058573	73.96	February 11, 2018	July 11, 2025
Golden 3	1063153	55.48	September 17, 2018	September 17, 2025
Sukunka West	1082463	462.16	May 6, 2021	July 6, 2024
Golden North	1082394	369.61	May 1, 2021	July 1, 2024
Golden East	1082393	240.48	May 1, 2021	July 1, 2024
Golden South	1082392	296.02	May 1, 2021	July 1, 2024
Sukunka West 2	1082464	332.62	May 6, 2021	July 6, 2024
Golden North 4	1082402	203.25	May 1, 2021	July 1, 2024
Golden North 2	1082401	221.60	May 1, 2021	July 1, 2024
Golden 77	1093228	36.96	February 12, 2022	February 12, 2023
Lime 3	1085758	277.39	November 27, 2021	November 27, 2022

Total 2,846.89 ha

* with application of assessment work documented in this report.

Cash may be paid in lieu if no work is performed. Following revisions to the Mineral Tenures Act on July 1, 2012, claims bear the burden of $5 per hectare for the initial two years, $10 per hectare for year three and four, $15 per hectare for year five and six and $20 per hectare each year thereafter.

Figure 3 Google Image, Property Area

HISTORY

Limestone Sampling

Surface sampling was carried out on the property during June, 1988 by W. McLeod and Mr. R.D. Gilchrist.

Thirty-seven representative chip samples were collected on a nominal fifty metre line spacing perpendicular to strike over most of the quarryable limestone in order to verify and augment previous sampling carried out by Westmin Resources Ltd. in 1983.

The sample locations are presented in Figure No.3 with the earlier Westmin samples referred to as the "A" Series and the 1988 work shown as Series "B".

Individual sample volumetrics are assumed to be constant and representative f o r the purpose of defining average limestone grades.

The samples were microscopically examined and subsequently forwarded to Loring Labs Ltd. of Calgary for assay. The assay results are discussed in the following section.

Limestone Resources and Production

Two zones of chemical grade limestone have been previously defined on the property.

The "South Zone", by far- the larger of the two, is located along a northwest trending anticlinal axis in the southern portion of the lease. Assuming a quarry floor elevation of 765 metres and a stable quarry wall configuration attainable at sixty degrees, planimeter measurements indicate that some 1.7 million tonnes recoverable chemical grade resources are present without incurring any dilution from the overlying assay-defined low grade limestone.

Sampling results inclusive of both the 1983 Westmin assays and the current survey over the "South Zone" are tabled below (Table I):

Sample #	Assay #	% CaO	% MgO	% SiO_2	% $Fe2O_3$	% Al_2O_3
A-1		53.43	0.68			
A-2		53.94	0.53			
A-3		53.09	1.21			
A-4		54.86	0.45			
A-5		54.77	0.46			
A-6		54.54	0.58			
A-7		54.50	0.56			
A-8		54.42	0.90			
A-9		54.89	0.63			
A-10		54.54	0.65			
A-11	200+00	54.70	0.37	0.35	0.01	0.26
A-12	200+10	55.00	0.43	0.15	trace	0.24
A-13	200+17	54.88	0.52	0.07	trace	0.24
A-14	200+50	54.76	0.50	0.21	trace	0.24
A-15	300+00	55.00	0.48	0.11	trace	0.28
A-16	300+30	54.27	0.59	0.81	0.03	0.31
B-1	33776	55.82	1.07	0.04		
B-2	33777	64.35	0.89	0.04		
B-3	33752	54.92	0.44	0.16		
B-4	33753	54.52	0.63	0.42		

B-5	33754	54.82	0.42	0.28		
B-36	33763	53.21	1.18	1.20		
B-37	33764	53.91	1.31	0.72		
B-6	33501	53.31	0.56	0.76		
B-7	33502	54.12	0.58	0.50		
B-8	33503	54.82	0.74	0.12		
B-9	33504	53.71	0.79	0.68		
B-10	33505	54.32	0.60	0.56		
B-11	33506	53.81	0.48	0.16		
B-12	33507	54.52	0.73	0.38		
B-13	33755	54.82	0.45	0.30		
B-14	33756	53.41	0.96	0.58		
B-15	33757	54.52	0.88	0.20		
B-16	33758	54.54	0.77	0.26		
B-17	33759	54.12	0.79	0.74		
B-18	33509	54.29	0.58	0.28		
B-19	33510	54.62	0.54	0.12		
B-20	33513	54.62	0.58	0.20		

The "South Zone" assays average 54.36% CaO (97.02% $CaC0_3$), MgO, 0.37% $Si0_2$, 0.01% Fe_20_3, and 0.26% $A1_20_3$.

The "North Zone" is also situated along a northwest trending anticlinal axis and is located near the Sukunka Forestry Road in the northern portion of the lease. It is limited to some 440,000 tonnes recoverable resources with a quarry floor elevation of 756 metres and similar development geometry to that proposed for the southern zone.

Sampling results inclusive of the Westmin assays are tabled below (Table II):

Sample #	Assay #	% CaO	% MgO	% SiO_2	% $Fe2O_3$	% Al_2O_3
A-17	200+210	54.92	0.44	0.16	trace	0.31
A-18	300+160	55.04	0.44	0.21	trace	0.26
A-19	300+220	54.92	0.41	0.24	trace	0.24
B-21	33512	54.52	0.58	0.28		
B-22	33765	55.12	0.84	0.10		
B-23	33766	54.02	0.93	0.18		
B-24	33767	54.52	0.89	0.31		
B-25	33768	54.22	0.90	0.22		
B-26	33769	52.51	0.96	1.93		
B-27	33770	54.42	0.87	1.20		

Analysis of t h e "North Zone" sample data indicates average assay values of: 54.42 % CaO (97.13% $CaC0_3$), 0.73% MgO, 0.48% SiO_2, trace Fe_20_3, and 0.27%.$A1_20_3$.

Resources on both deposits are presently classified as “Possible/Inferred” with a diamond drilling and bulk sampling program required to define prove tonnages.

Grade variance is apparent across strike on both zones and appears to be related to either localized diagenesis or the enfolding of the gradationally overlying impure carbonates. In either case, the dolomitic and silicic material has been included within the calculated recoverable historical resources (not to 43-101 standards)to allow for lower grade sections which may be present elsewhere in the deposits.

Sampling of the lower grade silicic and dolomitic carbonates adjacent to the “North” and “South” zones is summarized below (Table III)

Sample #	Assay #	% CaO	% MgO	% SiO_2	% $Fe2O_3$	% Al_2O_3
A-20		54.85	0.49			
A-21	200+80	52.78	1.66	1.17	0.03	0.28
A-22	200+110	54.15	0.63	1.21	trace	0.24
A-23	200+150	54.01	0.53	1.69	0.01	0.31
A-24	300+90	53.14	1.05	2.22	0.03	0.26
A-25	300+123	54.19	0.62	1.20	0.01	0.24
B-28	33508	53.21	1.62	0.73		
B-29	33760	53.21	1.36	2.29		
B-30	33761	53.31	1.35	1.16		
B-31	33762	54.02	0.47	1.71		
B-32	33511	51.00	1.56	2.76		
B-33	33778	53.28	0.63	0.88		
B-34	33751	54.25	0.41	0.14		
B-35	33514	53.11	0.76	2.10		

The low grade material averages 53.47% CaO (95.48 CaC03), 0.94% MgO, 1.38% Si02, 0.02% Fe203, 0.27% A1203.

The Sukunka property has been developed to a limited extent to date but the good access and relative proximity to the Grande Prairie and Peace River bleached chemical kraft mills clearly enhances the potential economic viability if those markets can be established.

Relatively thin overburden cover coupled with steep outcrop slopes, most notably on the "South Zone", will facilitate ultimate quarry development.

Limestone grades at the Sukunka property compare favourably with material produced from the Peace River Lime Ltd. Quarry located 2.5 kilometres northwest of the Sukunka Deposits (figure 2). Peace River Lime quarry-run samples obtained by McLeod in 1987 (assay numbers: 17013 to 17015 inclusive) averaged 54.65% CaO, 0.51% MgO, 0.39% Al_2O_3, 0.08% Fe_2O_3 and 0.81% SiO_2.

Peace River Lime Ltd. was supplying the Grande Prairie market until early 1988 when it lost the contract because of failure to adequately supply for the Proctor & Gamble Mill. The Peace River Lime operation has subsequently passed into receivership and recently in 2018 resumed local shipments.

The Geological Survey of Canada has been geological mapping and conducting structural/stratigraphic investigations in the Monkman Pass area since the mid- 1960’s. Gibson (1972, 1975) produced a comprehensive account of the Triassic strata of the area.

The claims were examined in 2017 west of the Hole-In-The-Wall Park and several samples were collected.

Sample #1 (grab sample) a dark grey fragmental limestone assayed 53.05% to 56.19% CaO. Sample #2, a limestone specimen similar to sample #1 assayed 54.59% CaO. Silicon runs between 1.8 to 3.5% along with low P_2O_5 of 0.45%. Iron is also low at 0.12% along with 0.0015% Sr. Sample #3 is a schistose, fine grained silty shale that is very low in CaO, high Si at 24.53% and 8.17% Al. Potassium is 2.7% and Fe 2.3%.

These results confirm the range of carbonate values obtained by previous work in the 1980’s

Work in 2018 focussed on Bulk and geochemical sampling.

Water Samples 2018

From the dissolved and total metals analyses and the anion analyses, the hardness concentrations ($CaCO_3$) were slightly elevated and ranged from 90 to 160 mg/L in the four samples analyzed which includes one duplicate sample. The field pH levels were also found to be at 9.0 to 9.6. Sample SWSK18-1 and its duplicate sample SWSK18-A are at the maximum BC Water Quality Guidelines (WQG) range of between >6.5 to <9. Samples SWSK18-2 and SWSK18-3 have pH values greater than the recommended BCWQG ranges with pHs of 9.6 and 9.3 respectively. These samples were collected from natural, undisturbed streams during the spring Freshet. The hardness and pH levels are likely due to the natural underlying geological formations that may contain limestone units in the immediate area; however, more geological information is required. From the more alkaline pH level to the elevated calcium concentrations, it is likely that carbonate is derived by nearby limestone formations as indicated by total and dissolved calcium concentrations (Tables 1 and 2). Conductivity of the four samples as measured in the field is 0 *u*S. These readings are due to the presence of snow melt water entering the streams during Freshet.

The ABA Sample was collected as a composite of the XRF samples, refer to sample locations and descriptions. (Sukunka #6 to Sukunka #11)

Chemistry (Acid/Base Accounting)

Acid-Base Accounting analysis of a representative limestone sample from the Sukunka Limestone Quarry suggests there will be no acid rock drainage potential since the primary rock from drillhole samples assays up to 50% CaO. Net Neutralization Potential ran 923 t $CaCO_3$/1kT with sulphur at 0.2% and paste pH at 8.0. Each sample was fresh in-situ rock.

The two representative samples of limestone were submitted to ALS for Acid-Base Accounting (ABA). This was to gain a sense of the likelihood of acid rock drainage.

Essentially, the current results being limestone have very high net neutralizing potential. In summary, the % total sulphur is very low (mainly <0.04% calculated). Presumably, due to the rock being mainly of calcite in the rock, the "Paste pH" is over 10 in every case (Alkaline). The neutralizing Potential (also a reflection of calcite content) is 925 $CaCO_3$/1kt equivalent per metric tonne.

Acid-Base Accounting analysis suggests there will be no acid rock drainage potential since the primary rock from drillhole samples assays up to 50% CaO. Net Neutralization Potential ranges up to 966 kg $CaCO_3$ (per 1000 kg) with sulphur at 0.2% and paste pH at 8.6.

The three samples of lower grade limestone were submitted to ALS for Acid-Base Accounting (ABA). This was to gain a sense of the likelihood of acid rock drainage generation if any waste generated, however, no waste is expected to be generated during the bulk sample.

Essentially, the current results being limestone have high net neutralizing potential. In summary, the % total sulphur is very low (mainly <0.04% calculated). Presumably, due to the small amount of calcite in the rock, the "Paste pH" is over 10 in every case (Alkaline). The neutralizing Potential (also a reflection of calcite content) varies from 953 to 966 $CaCO_3$/1kt equivalent per metric tonne.

Exploration 2019

Work in 2019 focussed on continued sample collection to determine grade to the west of previous sample locations.

Field Collection Methods:

All rock samples were selected by site geologists. Rock samples are collected during traverses on foot with 4x4 truck assistance. The rock sampling locations are chosen by geologists based on the potential source areas of MINFILE locations. The massive cliffs are typically chosen for the easier location of rock outcrops, sub-outcrips, talus and float. The sample sites are chosen in the field by a geologist or prospector based on changes in lithology and/or the potential for limestone occurrences.

The rock grab samples are selective in nature and extracted using a rock hammer to expose fresh surfaces and to acquire a sample. All sample sites are flagged with biodegradable flagging tape and marked with the sample number. All sample sites are recorded using hand-held GPS units (accuracy 1-10m) and the following information is recorded on all-weather paper: sample ID, easting, northing, elevation, type of sample (outcrop, subcrop, float) and a brief description.

Assays were conducted by using an XRF Unit factory calibrated (Cert No. 0154-0557-1) on October 30, 2013, Instrument #540557 Type Olympus DPO-2000 Delta Premium. The instrument was calibrated using Alloy Certified reference materials by ARM1 and NIS5 standards. Only certified operators were employed and that were experienced in XRF assay procedures. Read times were 120 seconds or greater.

Four representative samples were collected. All samples are of light to dark grey to brown, fine grained limestone with CaO values from a low of 46.59% CaO to a high of 57.46% CaO. Silica ranges from 1.83% Si to 3.47% Si.

GEOLOGY

Published geological maps show the Sukunka Limestone Deposit to be located on the eastern limb of a thrust block syncline in the Rocky Mountain Front Range and underlain by thrusted and folded Triassic and Mississippian aged marine sediments.

Northwest striking Mississippian Rundle Group limestones underlie at least the eastern two-thirds of the lease and host the potential chemical grade limestone quarry historical resources (not to 43-101 standards).

Geological mapping and sampling carried out during 1982 has shown the Rundle carbonate to consist of two gradationally distinct folded limestone lithofacies.

Chemical grade brown to grey-brown carbonates are continuously transitional from a very "clean" white speckled micrite through very fine grained detrital wackestone to a slightly dolomitic and silty courser grained wackestone.

Impure limestones gradationally overlie the chemical grade material and consist of brown-grey to grey fine through course grained detrital (with lessor crinoidal) silty and dolomitic wackestones and minor dolomitic micrite.

White crystalline calcite veins and stringers are present in both limestone units, but are more prevalent in the finer grained chemical grade material. Dolomite crystals in both units are typically very fine grained and appear to represent diagenetic overgrowth whereas the silica component, while equally fine grained, could either be primary or diagenetic and may therefore be indicative of depositional environment.

All limestones are relatively "tight" with only minor fracture porosity being present. Pyrobitumen is commonly observed on many of the fracture surfaces.

In the absence of a clearly defined marker horizon, structural definition is tentative at best and is only supported by opposed sedimentary layering attitudes and rock type distribution as best defined by assay data. Resolution of the detailed structure must await future drill core analyses.

Regional Geology

Geological mapping and sampling carried out during 1988 has shown the Rundle carbonate to consist of two gradationally distinct folded limestone lithofacies. Chemical grade brown to grey-brown carbonates are continuously transitional from a very "clean" white speckled micrite through very fine grained detrital wackestone to a slightly dolomitic and silty courser grained wackestone.

Impure limestones gradationally overlie the chemical grade material and consist of brown-grey to grey fine through coarse grained detrital (with lessor crinoidal) silty and dolomitic wackestones and minor dolomitic micrite.

White crystalline calcite veins and stringers are present in both limestone units, but are more prevalent in the finer grained chemical grade material. Dolomite crystals in both units are typically very fine grained and appear to represent diagenetic overgrowth whereas the silica component, while equally fine grained, could either be primary or diagenetic and may therefore be indicative of depositional environment.

All limestones are relatively "tight" (massive) with only minor fracture porosity being present. Pyrobitumen is commonly observed on many of the fracture surfaces.

In the absence of a clearly defined marker horizon, structural definition is tentative at best and is only supported by opposed sedimentary layering attitudes and rock type distribution as best defined by assay data. Resolution of the detailed structure must await future drill core analyses.

Rundle Group

The Rundle Group is a stratigraphic unit of Mississippian age in the Western Canadian Sedimentary Basin.

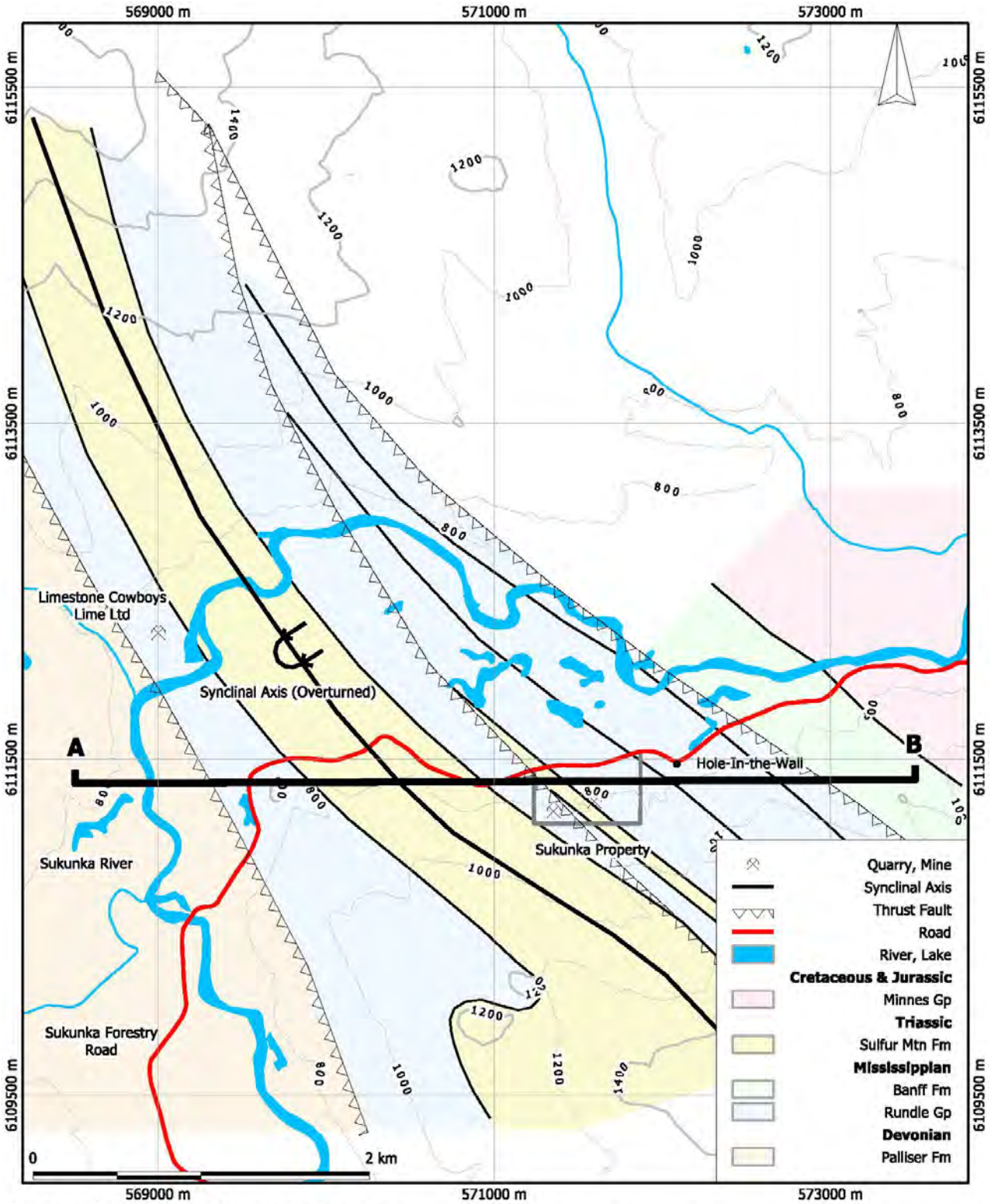
It takes the name from Mount Rundle (itself taking the name from Robert Terrill Rundle), and was first described in outcrops at the northern side of the mountain in Banff National Park by R.J.W. Douglas in 1953.

Lithology

The Rundle Group consists of massive limestone interbedded with dark argillaceous limestone. Chert nodules are observed in the shaley beds, and crinoids and brachiopods are observed in the clean massive beds. Dolomitization is observed in the Elkton Member of the Turner Valley Formation.

Relationship to other units

The Rundle Group is disconformably overlain by the Rocky Mountain Formation in the front ranges of the Canadian Rockies and by the Fernie Formation in the foothills and by Cretaceous beds in the prairies. It conformably overlies the Banff Formation. The Rundle Group can be correlated with the Mission Canyon Formation in southern Saskatchewan, northeastern Montana and North Dakota.



Sukunka Lime Resources Inc

Universal Transverse Mercator - Zone 10 (N)
Lon: 121°53'08" W, Lat: 55°09'12" N
1:30000
Printed at: 2021-05-25

Regional Geology

Figure 4 Regional Geology

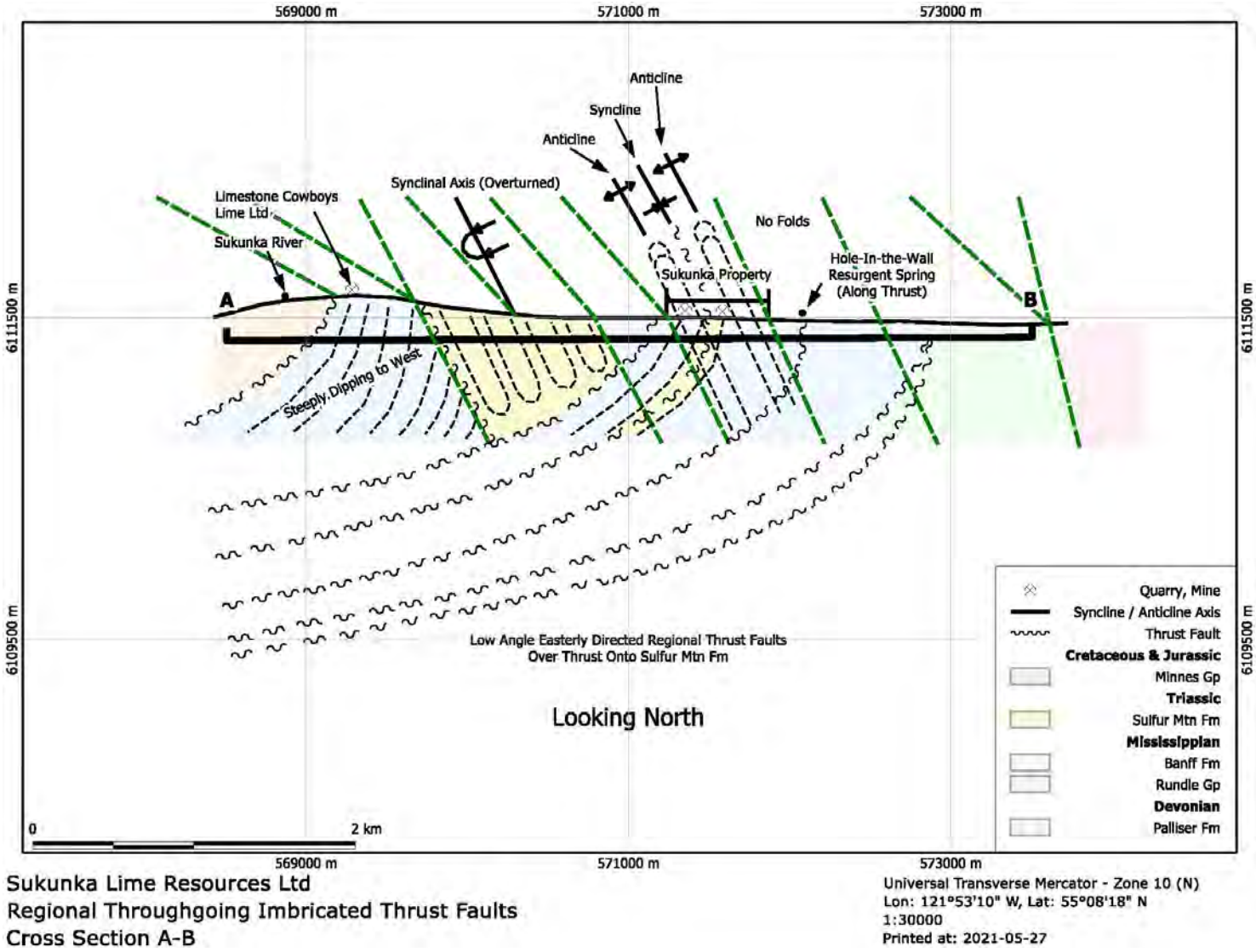


Figure 5 Cross-Section A – B from Regional Geology Map shown on Figure 4

Air photo 15BCC05122 No 014 located below shows the intense northwest grain of the country. This marked northwest grain reflects the thrust faults and associated folding which keeps each limestone panel separated geologically and hydraulically from the adjacent panel. The overlying "weak" Triassic Spray River Rocks are 200 million years old and often are the locus for these regional thrust faults.

Subdivisions

The Rundle Group comprises the Mount Head Formation and Livingstone Formation in the Rocky Mountains; by the Turner Valley Formation, Shunda Formation and Pekisko Formation in the foothills and plains. It is equivalent to the Debolt Formation and Prophet Formation in north-eastern British Columbia and west-northern Alberta. Debolt, Shunda and Pekisko Formations are staked in the Fort Nelson area.

Canadian Rockies

Sub-unit	Age	**Lithology**	**Max. Thickness**
Mount Head Formation	Visean	Wileman Member - silty dolomite Baril Member - ooid grainstone, dolomite Salter Member - dolomite, boundstone and wackestone, ooid grainstone, anhydritechert Loomis Member - massive grainstone Marston Member - microcrystalline dolomite, boundstone, breccia, ooid limestone, shale, marlstone Opal Member - grainstone, subordinate marlstone, chert packstone and wackestone, shale, marlstone, breccia Carnarvon Member - wackestone to packstone, shale interbeds	7.6 m (20 ft) 39 m (130 ft) 67 m (220 ft) 101 m (330 ft) 68 m (220 ft) 161 m (530 ft) 90 m (300 ft)
Livingstone Formation	Tournaisian to Visean	crinoidal limestone, massive limestone, thin argillaceous limestone beds, dolomite	452 m (1,480 ft)

Deep basin

Sub-unit	Age	**Lithology**	**Max. Thickness**
Debolt Formation	Meramecian	Upper Debolt - crystalline dolomite, anhydrite, micritic limestone Lower Debolt - cherty bioclastic (crinoidal) limestone, argillaceous in the north	366 m (1,200 ft)
Prophet Formation	middle Tournaisian to late Visean	chert, skeletal to ooid limestone, shale, marlstone, dolomite	760 m (2,490 ft)

Lower Carboniferous rocks of the uppermost Banff Formation and the Rundle Group of southwestern Alberta contain an abundant foraminiferal microfauna and algal microflora, from which the distribution and relative abundance of 95 taxa have been determined. Foraminifera, which are most common in mixed skeletal and oolitic calcarenites, less common in micritic limestones, and least common in echinoderm-bryozoan limestones, permit recognition of Zones 7 to 16 of a widely applied zonal scheme derived initially from Carboniferous rocks of Europe. Vertical variations in foraminiferal families include an upward decrease in the abundance of endothyrids, tournayellids, and earlandiids, corresponding with an upward appearance and increase in the abundance of cornuspirids, forschiids, tetrataxids, palaeotextulariids, archaediscids, and others, and are similar to familial variations in Lower Carboniferous platform rocks in other parts of the world. The more precise correlations derived from the 95 microfaunal and microfloral taxa are in agreement with correlation of the Rundle Group, Pekisko, Shunda, and Turner Valley formations with the Rundle Group, Livingstone Formation, as recently indicated by lithostratigraphic and macrofaunal studies.

Preliminary foraminiferal zonation suggests the following ages: The uppermost Banff Formation is middle Tournaisian, whereas the overlying Pekisko Formation and the lower part of the Livingstone Formation are late middle Tournaisian. Foraminiferal data are as yet too meagre to delineate the precise Kinderhook-Osage boundary, in terms of the American Midcontinent stages. The Shunda Formation, and the middle part of the Livingstone Formation, is of late Tournaisian age. The Shunda - Turner Valley contact closely corresponds to the Tounaisian-Viséan boundary, which is approximately equivalent to the Osage-Meramec boundary of the American Midcontinent Lower Carboniferous. The upper Livingstone Formation (type area only) and the Turner Valley Formation are of early Visean age. Overlying rocks of the Mount Head Formation (type area) are late early Viséan to middle late Viséan (Meramec). The Mount Head - Etherington contact corresponds to the base of the Aux Vases Sandstone (type Chester) of the Midcontinent. The transitional nature of the Mount Head - Etherington

foraminiferal microfauna does not support the presence of a Meramec-Chester hiatus as previously postulated. The Lower Etherington Formation is latest Viséan in age.

Bedded phosphate deposits in British Columbia occur in marine strata from Helikian to Lower Jurassic age rocks. The sediments were deposited along the western margin of the stable craton (Douglas and Price, 1972) with deposition of phosphate within platformal or shelf-edge facies environments. Triassic sedimentation in northeastern British Columbia including the Triassic Sulphur Mountain Formation took place on a stable shelf characterized by a pattern of embayments and platforms. A minor embayment developed south of Fort St. John during early Triassic (McCrossan and Glaister, 1964) which was flanked to the South by the Wapiti platform and to the north by the Nig Creek platform. These conditions prevailed into early Middle Triassic and provided a good environment for phosphate deposition.

During Early Triassic there was a rapid marine transgression. Deposition was continuous through the early and middle Triassic except in the Wapiti area where there is a disconformity of short duration between the Vega-Phroso and Whistler members of the Sulphur Mountain Formation. Good grades of phosphorite occur above this disconformity.

Early Triassic deposition took place in a stable shelf environment, the eastern limits of which are marked by bar and deltaic deposits (McCrossan and Glaister, 1964; Douglas et al., 1970). During Middle Triassic deposition took place under partial restricted stagnant conditions. Lower and Middle sediments are characterized by good continuity of stratigraphic units.

The Spray River Group of Triassic age within the Tumbler Ridge area is composed of the Whitehorse and Sulphur Mountain Formations. The Whitehorse Formation is composed of inter-bedded silty dolostone, sandstone, siltstone, sandy limestone, intra-formational conglomerate, solution breccias, anhydrite, limestone and cherty dolostone.

The Sulphur Mountain Formation in northeastern British Columbia consists of brown-weathering sequence of medium-bedded siltstones, calcareous and dolomitic siltstones, silty dolomite, limestone and minor shale. Attaining a thickness of 100 to 500m, it thickens northward and was deposited in a shallow marine deltaic environment (Gibson, 1974). The Sulphur Mountain Formation is phosphatic in northern British Columbia although it is non-phosphatic in southern British Columbia. The Sulphur Mountain Formation is divided into Vega-Phroso, Whistler and Llama members.

The Rocky Mountains where the bedded phosphorites occur are characterized by thrust faults and concentric folds. Thrust faults are generally southwest dipping, concave upward and imbricate. In the northern British Columbia the thrusts are more widely spaced with more numerous concentric folds as compared to the southern Rocky Mountains.

Figure 6 Air photo 15BCC05122 No 014

Property Geology

The Peace River Arch (PRA) is a large cratonic uplift in northwestern Alberta and northeastern British Columbia. It is one of only a few large-scale tectonic elements in the Western Canada Sedimentary Basin that has significantly disturbed the Phanerozoic cover of the craton. The structure has influenced the location of oil and gas accumulations in strata ranging from the Middle Devonian to the Upper Cretaceous, and has long been a focus of hydrocarbon exploration in the region.

The PRA is one of four major positive cratonic features that developed at the western The Sulphur Mountain Formation in northeastern British Columbia that consists of brown-weathering sequence of medium-bedded siltstones, calcareous and dolomitic siltstones, silty dolomite, limestone and minor shale at the edge of the North American craton, bordering the lower Paleozoic passive margin. The PRA is the largest of these structures, and has the longest recorded history of tectonic activity. The West Alberta Arch paralleled the passive margin and formed a

southern continuation of the PRA landmass until its burial during the Late Devonian (Frasnian)(Moore, 1989). The Tathlina High, which is parallel to the PRA, formed an uplifted area in northwest Alberta and the District of Mackenzie from the Cambrian until its burial in the Middle Devonian (Givetian) (van Hees, 1964; Moore, 1989). In southern Alberta the Sweetgrass Arch (Lorenz, 1982; Podruski, 1988) and Montania (Norris and Price, 1966) formed smaller cratonic uplifts from the Late Proterozoic onward.

Carboniferous

The Carboniferous succession in the area is divided into three main stratigraphic units: the lower to middle Tournaisian Banff Formation, the middle Tournaisian to upper Viséan Rundle Group, and the upper Viséan to Serpukhovian Stoddart Group. During deposition of the Banff Formation and the lower part of the Rundle Group (the Pekisko Formation) the maximum subsidence within the PRE was developed to the north of the crest of the Devonian arch, and reflects a continuation of Devonian subsidence trends (Lavoie, 1958; O'Connell, 1990). The upper part of the Rundle Group and the Stoddart Group were deposited in a basin, whose axis overlies the central region of the PRA, representing a tectonic inversion of the uplift that formed the arch.

Banff Formation

The Banff Formation consists of a progradational, shallowing-upward succession of argillaceous shales, carbonates, and siliciclastics (Bamber et al., 1980; Chatellier, 1988). The Banff Formation thins to less than 180 m over the crest of the Devonian arch, between Twps. 79 and 83 W6M. The thickest accumulation of Banff Formation sediments within the PRE (over 300 m) is to the north of the axis of the Devonian arch between Twps. 86 and 96. This thickening consists mainly of basinal shales and carbonate ramp deposits that formed during lower Banff deposition and outline the central axis of the PRE (O'Connell, 1990). By the end of lower Banff deposition, differential subsidence throughout the Peace River area appears to have ceased and shallower water, middle and upper Banff units prograded across the area with little variation in overall sediment thickness (O'Connell, 1990).

Rundle Group

The Rundle Group forms a progradational shallowing-upward succession in which deep-water carbonates and shales pass upward into restricted shelf carbonates, siliciclastics and evaporites. Renewed subsidence prior to and during the deposition of the Pekisko Formation (at the base of the Rundle Group) gave rise to a second phase of the PRE. This was a semi-enclosed, east-west-trending embayment, the axis of which is centered along Twp. 86, to the north of the crest of the underlying Devonian Arch, as outlined by an upper Pekisko shale member (O'Connell, 1990). The Pekisko Formation represents the final phase of basinal deposition in the area north of the Devonian arch. Subsequent to Pekisko deposition maximum differential subsidence occurred to the south, directly overlying the crest of the arch.

Subsidence patterns at the western edge of the area, in British Columbia, indicate that the main structural elements that later dominated during Stoddart and Belloy deposition were initiated during deposition of the Banff Formation (Macauley et al., 1964; Barclay et al., 1990). Local syndepositional thickening and thinning of the Banff and Pekisko formations is present in the area overlying the central region of the PRA, indicating that the arch-related structures were active during deposition (O'Connell, 1990). Barclay et al. (1990) demonstrated that the main graben structures that controlled Stoddart deposition were developing as the Debolt Formation was accumulating (see also Macauley et al., 1964).

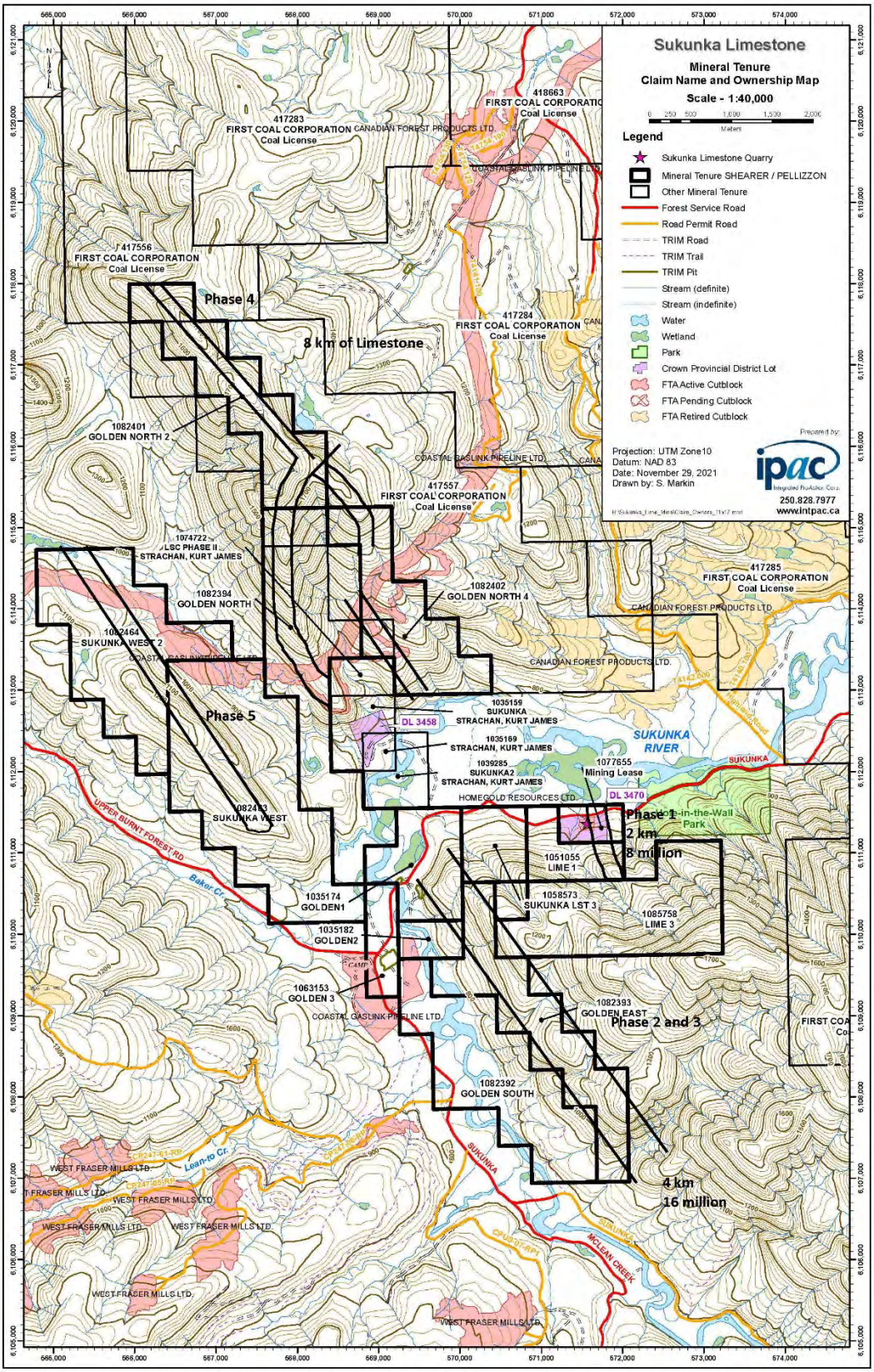
The Sukunka property is underlain in part by Spray River Group of Triassic age which includes the Whitehorse and Sulphur Mountain Formations, Permian Belcourt and Mowich Formations, Lower Carboniferous Rundle Group and Upper Devonian Exshaw and Banff Formations. The Formations form a northwest–southeast trending belt of rocks that have been traced the full extent of the property. The units have been folded into northwest-southeast trending tight anticlines and relatively broad synclines. In general the northeast limbs, of the synclines are more

gently dipping to the southwest and the southwest limbs are steeply dipping to the northeast. Many valley floors trace major synclinal axes.

Attaining a thickness of 100 to 500m, it thickens northward and was deposited in a shallow marine deltaic environment (Gibson, 1974). Although the Sulphur Mountain Formation is phosphatic in northern British Columbia, it is non-phosphatic in southern British Columbia. The Formation is divided into Vega-Phroso, Whistler and Llama members.

The Sulphur Mountain Formation is underlain by the thin Permian Belcourt and Mowich Formations (1991). The Belcourt Formation includes skeletal limestone, dolostone with chert and carbonate pebble conglomerate while the Mowich is composed of calcareous sandstone and thin chert pebble conglomerate at the base. Note that online Geofile maps (2005-6) indicate that Belcourt and Mowich in the location southeast of Wapiti Lake correlate within the Stoddart Group, Fantasque and Kindle Formations.

The Permian strata are, in turn underlain by Lower Carboniferous Rundle Group limestone with locally abundant chert nodules and dolostone and Upper Devonian Exshaw and Banff Formations. The Exshaw Formation is composed of black rusty weathering shale with minor sandstone and limestone and minor volcanic tuff while the Banff Formation is indicative of rhythmic interbeds of black shale and brown weathering wackestone.



14km strike length of limestone; Minimum 57 million tonnes potential of Limestone depending on access and mineability

Figure 7 Distribution of Limestone

Photo 1 Pipeline and Waypoint 600 N55 10.033 W121 55.217

EXPLORATION 2021 and 2022

Work in 2021 and 2022 focussed on quantifying the $CaCO_3$ content to the north of the Sukunka River. Sample descriptions and assays are in Appendix III and plotted on Figures 7a and 7b.

Assays were conducted by using an XRF Unit factory calibrated (Cert No. 0154-0557-1) on October 30, 2013, Instrument #540557 Type Olympus DPO-2000 Delta Premium. The instrument was calibrated using Alloy Certified reference materials by ARM1 and NIS5 standards. Only certified operators were employed and that were experienced in XRF assay procedures. Read times were 120 seconds or greater.

There are extremely pure beds of fine grained limestone on claim 1082394 (Golden North) and 1082402 (Golden North 4) for example Su-5 assayed 62.38% CaO (close to 100% $CaCO_3$ with some Ca in addition to $CaCO_3$). Sample Su-5 is a dark grey, very fine grained limestone with smooth fractures with only a trace of white irregular veinlets. It could be termed a ”graphic” limestone. Other samples from the Waypoint 595 area ranged from 55.90% CaO to 59.61% CaO.

An eastern splay of the Rundle Group was also sampled but was characterized by finely clastic limestone conglomerate with silica values ranging from 2.09% Si to 6.32% Si with an outlier of 18.27% Si. The carbonate clasts are small (10 to 15mm) and well rounded. The sparse black chert clasts are larger and angular.

Follow-up sampling is warranted on claim 1082463 to the west and 1035174 to the south to further define the limestone resource.

Photo 2 Limestone Conglomerate at Waypoint 600 N55 10.033 W121 55.217

Photo 3 Large Limestone Exposure East of Sukunka River

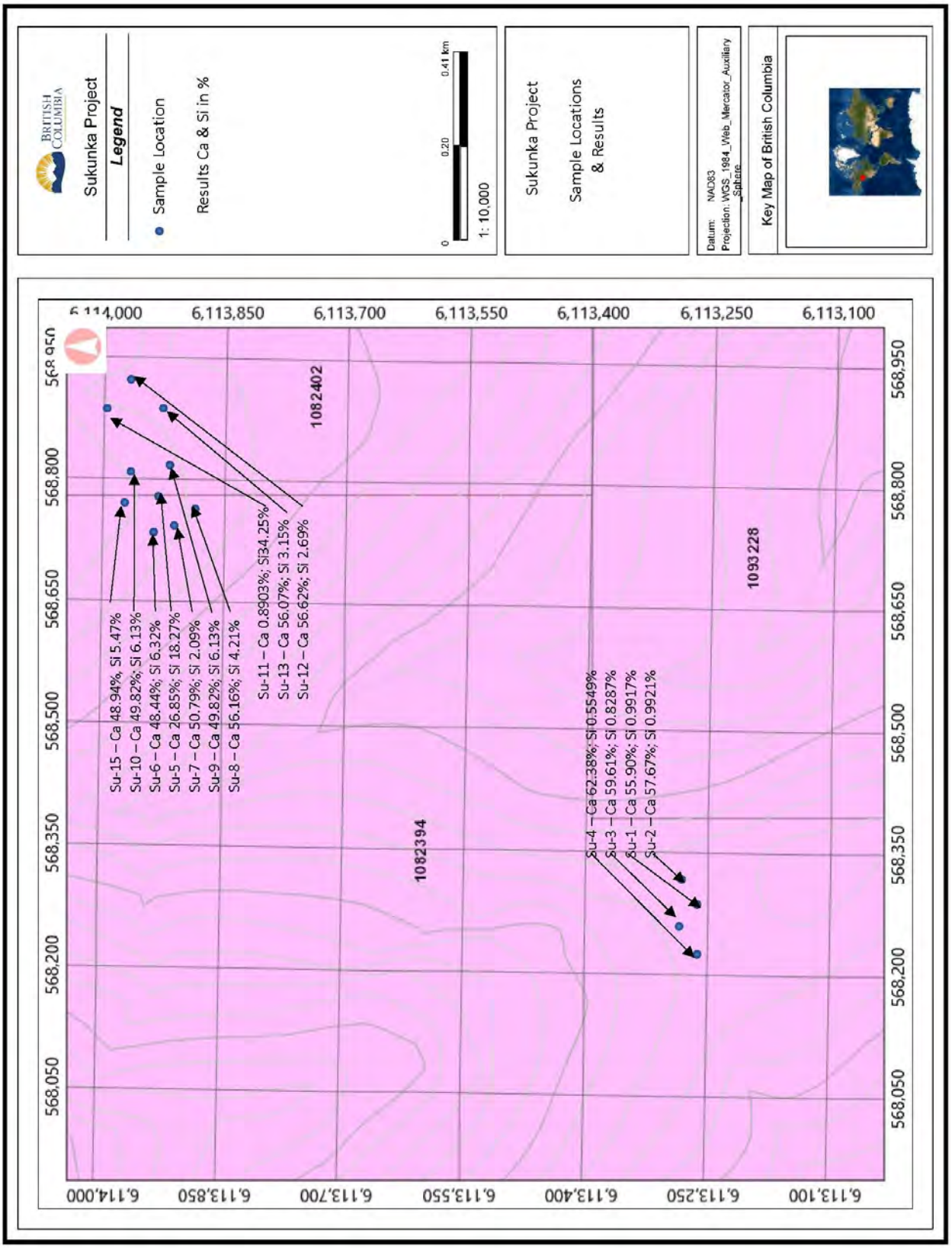


Figure 8 Sample Locations and Results

CONCLUSIONS and RECOMMENDATIONS

The subject property is underlain by northwest striking folded and thrusted marine sediments of Triassic and Mississippian age. Rundle Group limestones outcropping on the property host significant potential industrial chemical grade limestone historical resources.

Representative chip sampling completed during 1988 in conjunction with an earlier sampling program carried out by Westmin successfully defined two quarryable zones of chemical grade limestone historical resources (not to 43-101 standards).

The largest zone at, some 1.7 million tonnes of "probable" historical reserves (not to 43-101 standards), is located in the southern portion of the Westmin Lease while the second deposit is limited to 440,000 tonnes in the northeastern corner of the property. Average assay grades at both exceed designated limerock specifications for the bleached kraft mill markets located in Grande Prairie and Peace River.

Silicic and dolomitic limestones adjacent to the two high grade deposits will meet agricultural specifications and could therefore be recovered for Peace River aglime market.

The Peace River Lime Ltd. quarry, located near the Sukunka property was in receivership thereby allowing increased access to both the chemical and aglime markets. However this quarry has recently reopened.

All samples are of light to dark grey to brown, fine grained limestone with CaO values from a low of 46.59% CaO to a high of 57.46% CaO. Silica ranges from 1.83% Si to 3.47% Si.

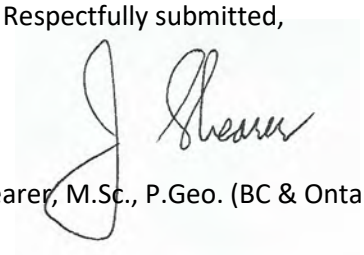
Work in 2021 and 2022 focussed on quantifying the $CaCO_3$ content to the north of the Sukunka River. Sample descriptions and assays are in Appendix III and plotted on Figures 7a and 7b.

There are extremely pure beds of fine grained limestone on claim 1082394 (Golden North) and 1082402 (Golden North 4) for example Su-5 assayed 62.38% CaO (close to 100% $CaCO_3$ with some Ca in addition to $CaCO_3$). Sample Su-5 is a dark grey, very fine grained limestone with smooth fractures with only a trace of white irregular veinlets. It could be termed a ”graphic” limestone. Other samples from the Waypoint 595 area ranged from 55.90% CaO to 59.61% CaO.

An eastern splay of the Rundle Group was also sampled but was characterized by finely clastic limestone conglomerate with silica values ranging from 2.09% Si to 6.32% Si with an outlier of 18.27% Si. The carbonate clasts are small (10 to 15mm) and well rounded. The sparse black chert clasts are larger and angular.

Follow-up sampling is warranted on claim 1082463 to the west and 1035174 to the south to further define the limestone resource.

Respectfully submitted,



J. T. Shearer, M.Sc., P.Geo. (BC & Ontario)

RECOMMENDATIONS

The results of the work have been encouraging to date, but quarryable historical resources (not to 43-101 standards) remain to he defined on the Sukunka claims.

Two northeast trending fences of diamond drill holes are proposed for the western end of the "South" zone in order to define sufficient initial "proven" historical reserves (not to 43-101 standards) from which to base limited site development, a bulk sampling program, trial marketing, and initial limestone quarrying.

Concurrent trial production (bulk sampling) and test marketing would be contingent upon a successful drill program.

The proposed budget for the drilling and bulk sampling program is presented below:

Proposed Budget

	Amount
Contract Diamond Drilling – 200m @ $110/m	$22,000.00
Mob/Demob/Accommodation/Meals	$10,000.00
Contract Bulldozing	$10,000.00
Contract Blasting and Crushing	$39,000.00
Contract Trucking	$42,000.00
Assay and Lab Services	$7,500.00
Equipment Rentals – vehicles/survey equipment/production equipment	$5,000.00
Project Supervision	$12,000.00
Report Preparation and Reproduction	$1,500.00
Subtotal	$ 149,000.00
Contingency 10%	15,000.00
Operating Total	$164,000.00
Less sales revenue on 2,000 tonnes limerock @ $40/tonne	($80,000.00)
Possible Net Project Cost	$84,400.00

REFERENCES

Bamber, E.W., Macqueen, R.W., and Richards, B.C. 1980: Facies relationships at the Mississippian carbonate margin, western Canada. Geological Survey of Canada, Open File Report OF674, 18 p.

Beaudry, L., Coupe, R., DeLong, C., and J. Pojar. 1999. Plant Indicator Guide for Northern British Columbia: Boreal, Sub-Boreal, and Subalpine Biogeoclimatic Zones (BWBS, SBS, SBPS, and northern ESSF). *BC Ministry of Forests Research Program.*

BC Ministry of Energy, Mines and Petroleum Resources. 2008/09. Handbook for Mineral and Coal Exploration in British Columbia 2008-2009. A working field guide. Available at: http://www.llbc.leg.bc.ca/public/PubDocs/bcdocs/442136/MXHandbook2008-09.pdf

BC Ministry of Forests; 2003: Karst Management Handbook for British Columbia, May 2003, 8a pages

British Columbia Mine Waste Rock Pile Research Committee, 1991: Mined Rock and Overburden Piles Investigation and Design Manual – Interim Guidelines, May 1991.

BC Timber Sales, 2016: Karst Management Protocol for BCTS Straight of Georgia, February 4, 2016

Buchanan, Robert G., 2004: BC Ministry of Transportation and Infrastructure – Technical Circular T-10/04 – ARD Testing at Quarry and Rock Cut Sites

Butrenchuk, S.; 1996: Phosphate Deposits in British Columbia, British Columbia Ministry of Employment and Investment Energy and Minerals Division Geological Survey Branch, Bulletin 98.

Butrenchuk, S.; 1997: Phosphate deposits in British Columbia; BC Ministry of Energy, Mines and Petroleum Resources, Bulletin 97.

Butrenchuk, S.; 1987a: Phosphates in southeastern British Columbia (82G and 82J); BC Ministry of Energy, Mines and Petroleum Resources, Open File 1987-16, 103p.

Butrenchuk, S.; 1987b: Phosphate Inventory (82G and J); in Geological Fieldwork, 1986, BC Ministry of Energy, Mines and Petroleum Resources Paper 1987-1, pp. 289-302.

Cant, D.J. 1988: Regional structure and development of the Peace River Arch, Alberta: a Paleozoic failed-rift system? Bulletin of Canadian Petroleum Geology, v. 36, p. 284-295.

Chatellier, J.-Y. 1988: Carboniferous carbonate ramp, the Banff Formation, Alberta, Canada. Bulletin des Centres de Recherches Exploration - Production Elf-Aquitaine, v. 12, p. 569-599.

Christie, R. L.; 1978: Sedimentary Phosphate Deposits, Geological Survey Paper 78-20.

Christie, R. L.; 1979: Phosphorites in Sedimentary Basins of Western Canada; in Current Research, Part B, Geological Survey of Canada, Paper 79-1B, pp. 253-258.

DeLong C., D. Tanner, and M.J. Jull. 1994. A Field Guide for Site Identification and Interpretation for the Northern Rockies Portion of the Prince George Forest Region. © 1994 Province of British Columbia.

Department of Fisheries and Oceans/Ministry of the Environment (DFO/MOE). 2015. Riparian Vegetation. Available at: http://www.dfo-mpo.gc.ca/Library/315523.pdf

Freebold, H., 1957: The Jurassic Fernie Group in the Canadian Rocky Mountains and Foothills; Geological Survey of Canada, Memoir 287, 197p.

Geldsetzer, H.H. 1988: Ancient Wall reef complex, Frasnian age, Alberta. In: Reefs, Canada and Adjacent Areas. H.H. Geldsetzer, N.P. James and G.E. Tebbut (eds.). Calgary, Canadian Society of Petroleum Geologists, Memoir 13, p. 431-439.

GeoFile; 2005-6: British Columbia Government Website, Map Place

Gibson, D.W. and Edwards D.E. 1990: An overview of Triassic stratigraphy and depositional environments in the Rocky Mountain Foothills and Western Interior Plains, Peace River Arch area, northeastern British Columbia. Bulletin of Canadian Petroleum Geology, v. 38A, p. 146-158.

Heffernan, K.J.; 1980:
Report on Geological Mapping, Sampling and Drilling Wapiti #1-25 Claims Liard Mining Division, Esso Resources Canada, Assessment Report 8407, Minerals Resources Branch, Dept. of Mining and Petroleum Resources of British Columbia.

Invasive Alien Plant Program (IAPP). Available at: http://maps.gov.bc.ca/ess/hm/iapp/.

Keystone Environmental. 2017. Erosion and Sediment Control Plan. Sukunka Phosphorite Small Mine Project, Red Deer Creek Area, BC. Project No. 11764.

Land Resources Network Ltd. 1993. Organic materials as soil amendments in reclamation: A review of the literature. Alberta Conservation and Reclamation Council Report. No. RRTAC 93-4. ISBN 0-7732-0887-9. 228 pp.

Macdonald, D.E., 1987: Geology and resource potential of phosphates in Alberta: Alberta Research Council, Earth Sciences Report 87-2, 65p.

MacLeod, W.A., 1989:Geological Report on the Westmin Lease No. 802015, Mount Palsson Area, for Knox Western Capital Inc. dated February 8, 1989.

McMechan, M.E. & Thompson, R.I.; 1995: Belcourt Lake, Map 1869A, Geological Survey of Canada.

McMechan, M.E. & Thompson, R.I.; 1995: Wapiti Pass, Map 1872A, Geological Survey of Canada.

McMechan, M.E., R.I.; 1995: Dawson Creek, Map 1858A, Geological Survey of Canada.

McMechan, M.E. & Thompson, R.I.; 1983: Open File 1150, Geological Survey of Canada.

Mighty Peace Watershed Alliance. 2017. Available at: www.mightypeacewatershedalliance.org. Accessed on September 28, 2017.

Norman, G. & Renning, M.; 2008A: 2008 Reconnaissance Exploration and Hand Trenching Assessment Report on the Wapiti Phosphate Prospect, for Pacific Ridge Exploration Ltd. and Lateegra Gold Corp. Submitted February, 2009.

Norman, G. & Renning, M 2008B: 2008 Reconnaissance Exploration and Hand Trenching Assessment Report on the Tumbler Ridge Phosphate Prospect, for Pacific Ridge Exploration Ltd. Submitted February, 2009.

O'Connell, S.C., Dix, G.R., and Barclay, J.E. 1990: The origin, history, and regional structural development of the Peace River Arch, Western Canada. Bulletin of Canadian Petroleum Geology, v. 38A, p. 4-24.

Price, R.A., 1965: Flathead map area, British Columbia and Alberta: Geological Survey of Canada Memoir 336.

Price, R.A., 1964: Flathead (Upper Flathead, east half), British Columbia-Alberta, Geological Survey of Canada Map 1154A (1:50,000).

Price, R.A., 1962: Fernie map area, east half, Alberta and British Columbia, 82G/E /2: Geological Survey of Canada, Paper 61-24.

Price, R.A., 1961: Fernie (East half) Geological Survey of Canada Map 35-1961 (1:126,720).

Price, William A., 2009: Prediction Manual for Drainage Chemistry from sulphidic geologic Materials: http://www.mend-nedem.org/reports/details-e.aspx?pub_id=1.20.1

Pugh, D.C. 1973: Subsurface lower Paleozoic stratigraphy in northern and central Alberta. Geological Survey of Canada, Paper 72-12, 54 p.

Resources Inventory Standards Committee (RISC); 2003: Karst Inventory Standards and Vulnerability Assessment Procedures for British Columbia Victoria, BC. (http://srmwww.gov.bc.cca/risc/pbs/earthsc/karst/index.htm)

Runka, G. G.; 1992: Stewardship of Cave and Karst Resources in British Columbia: A Review of Legislation, Policy and Management, BC Ministry of Forests Recreation Branch, Victoria, BC

Shearer, J. T.; 2012: Geological and Airphoto Interpretation Assessment Report on the Wapiti Phosphorite Zones, for Fertoz International Inc., April 18, 2012

Shearer, J. T., 2013: Prospecting Assessment Report on the Barnes Lake Property, dated July 30, 2013 for Fertoz International Inc.

Shearer, J. T., 2014a: Geological and Geochemical Assessment Report on the Barnes Lake Property, dated July 3, 2014

Shearer, J. T., 2014b: Geological, Geochemical, Trenching and Prospecting Assessment Report on the Wapiti West Project, for Fertoz International Inc., January 9, 2014

2014c: Geological, Geochemical, Trenching and Prospecting Assessment Report on the Wapiti West Project (formerly Tunnel Project) for Fertoz International Inc. dated January 10, 2014

Shearer, J. T., 2014d: Assessment Report on the Marten Property for Fertoz International Inc. dated October 2, 2014

Shearer, J. T., 2016: Geochemical Assessment Report on the Wapiti West Project (formerly Tunnel Project), for Fertoz International Inc. dated March 22, 2016

Shearer, J.T., 2017. Prospecting Assessment Report on the Sukunka Limestone Deposit, Liard Mining Division for Sukunka Lime Resources Ltd., 2017-05-10

Shearer, J. T., 2018:
Assessment Report on the Sukunka Limestone Deposit, for Sukunka Lime Resources Ltd. dated December 14, 2018

Shearer, J.T., 2018a. Assessment Report on the Sukunka Limestone Deposit, Liard Mining Division for Sukunka Lime Resources Ltd., 2018-12-14

Shearer, J.T., 2018b. Management Plan Sukunka Limestone Deposit, Liard Mining Division for Sukunka Lime Resources Ltd., 2018-11-29

Shearer, J.T., 2019. Geochemical Assessment Report on the Sukunka Limestone Deposit, Liard Mining Division for Sukunka Lime Resources Ltd., 2018-08-23

UBC. n.d. Subzone/variant climate data. *Centre for Forest Conservation Genetics.*

APPENDIX 1

STATEMENT of QUALIFICATIONS

April 25, 2022

STATEMENT of QUALIFICATIONS

J. T. Shearer, M.Sc., P.Geo, Homegold Resources Ltd.

I, JOHAN T. SHEARER, of 3572 Hamilton Street, in the City of Port Coquitlam, in the Province of British Columbia, do hereby certify:

1. I am a graduate of the University of British Columbia (B.Sc., 1973) in Honours Geology, and the University of London, Imperial College (M.Sc., 1977).

2. I have over 40 years' experience in exploration for base and precious metals and industrial mineral commodities in the Cordillera of Western North America with such companies as McIntyre Mines Ltd., J.C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd.

3. I am a fellow in good standing of the Geological Association of Canada (Fellow No. F439) and I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (Member No. 19,279). I am a fellow of the Society of Economic Geologists.

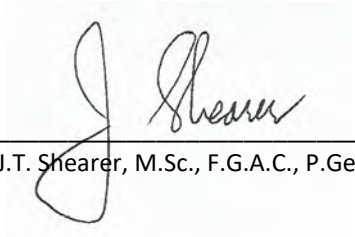
4. I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. at #5-2330 Tyner St., Port Coquitlam, B.C.

5. I am the author of a report entitled "Geochemical Assessment Report on the Sukunka Lime Extension Project" dated April 25, 2022.

6. I have visited the property on May 18+19 and August 2+3, 2019, June 6-8, July 29-31 and August 1, 2021 and April 3-5, 2022. I have carried out mapping and sample collection and am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Sukunka claims by examining in detail the available reports and maps and have discussed previous work with persons knowledgeable of the area.

7. I have an Mines Supervisor Ticket (#835903) for daily supervision duties in the Limestone Sampling.

Dated at Port Coquitlam, British Columbia, this 25th day of April 2022.



J.T. Shearer, M.Sc., F.G.A.C., P.Geo.

APPENDIX II

STATEMENT of COSTS

April 25, 2022

STATEMENT of COSTS
SUKUNKA LIME EXTENSION PROJECT 2021-2022

Wages & Benefits	Without GST
J. T. Shearer, M.Sc., P.Geo; 8 days @ $800/day	$6,400.00
June 6-8, July 29-31 and August 1, 2021 and April 3-5, 2022	
J. E. Pellizon, RPF, 4 days @ $800/day	3,200.00
Subtotal	$9,600.00
Transportation	
Fully equipped 4x4 truck, 8 days @ $150/day	$1,200.00
Fully Equipped 4x4 truck, 4 days @ $150/day	600.00
Fuel	1,800.00
Helicopter – Ridge Rotors	1,888.88
Hotel, 12 man days	1,325.00
Meals & Food, 12 man days x $80/day	960.00
Radios/GPS/Satellite Phone	600.00
XRF Rental, 8 days @ $62.50	500.00
Data Compilation	800.00
Report Preparation	1,600.00
Word Processing	400.00
Subtotal	$11,673.88
Grand total	$21,273.88

Event #	5934685
Filed	April 25, 2022
Amount	$ 19,000.00
PAC	$ 7,741.91
Total Filed	$ 26,741.91

APPENDIX III

ASSAY RESULTS and SAMPLE DESCRIPTIONS

April 25, 2022

Appendix III
Sample Descriptions

Sample #	Location	Al %	Ca %	Si %	P_2O_5 %	Description
Su-1	WP595 10 U 568305 6113279	0.1894	55.90	0.9917		Dark grey, very fine grained limestone, traces of white hairline, trace of sparry crystals
Su-2	Near WP595 10 U 568276 6113302	0.3032	57.67	0.9921		Dark grey, slightly brownish hue, very fine grained limestone, concoidal fractures
Su-3	Near WP595 10 U 568320 6113315	0.1519	59.61	0.8287		Dark grey, very fine grained, white veinlets, traces of sparry blebs, limestone
Su-4	WP596 10 U 568259 6113273	0.2091	62.38	0.5549		Dark grey, very fine grained, smooth fractures, trace of white irregular veinlets, “Graphic” limestone
Su-5	WP600 10 U 568883 6113970	0.1958	26.85	18.27		Dark grey limestone, cherty conglomerate, clasts well rounded up to 15mm in length, sparry patches common, very siliceous
Su-6	WP600 10 U 568737 6113927	0.9628	48.44	6.32		Dark rounded limestone clasts in a slightly lighter matrix, 10mm in length, sparry crystals, minor fossils on weathered surface, conglomerate
Su-7	WP600 10 U 568754 6113889	0.4750	50.79	2.09		Cherty clasts in dark fine grained limestone, white hairlines common, limestone conglomerate
Su-8	WP600 10 U 568812 6113892	0.8072	56.16	4.21		Dark fine grained limestone, elongated darker clasts up to 15mm, white hairlines common
Su-9	WP600 10 U 568819 6113932	1.37	49.82	6.13		Buff brown weathering, conglomeratic limestone, dark grey fine grained matrix, groundmass, some chert
Su-10	Near WP600 10 U 568807 6113981	0.3040	51.82	5.12		Large specimen of limestone conglomerate, abundant sparry patches, some large rounded fragments up to 50mm
Su-11	Float 10 U 568865 6113996	1.63	0.8903	34.25		Black fine graned shale, siliceous, tabular cleavage
Su-12	10 U 568922 6113990	0.6285	56.62	2.69		Dark grey, fine grained limestone, fossiliferous
Su-13	10 U 568909 6113929	0.7015	56.07	3.15		Dark gray, fine grained limestone, fossiliferous
Su-15	WP600 10 U 568771 6113986	0.6517	48.94	5.47		Black fine grained, uniform limestone

Sukunka XRF 2022

All Values in %

Sample #	Mg	Mg +/-	Al	Al +/-	Si	Si +/-	P	P +/-	S	S +/-	Cl	Cl +/-	K	K +/-	Ca	Ca +/-
Su-1	ND		0.1894	0.0409	0.9917	0.0158	0.1926	0.025	ND		ND		0.0431	0.0023	55.9	0.39
Su-2	ND		0.3032	0.04	0.9921	0.0152	0.1598	0.0243	ND		ND		ND		57.67	0.38
Su-3	ND		0.1519	0.0431	0.8287	0.0155	0.2146	0.0268	ND		ND		0.0092	0.0024	59.61	0.44
Su-4	ND		0.2091	0.0393	0.5549	0.0124	0.1023	0.0241	ND		ND		ND		62.38	0.39
Su-5	ND		0.1958	0.038	18.27	0.12	ND		ND		ND		ND		26.85	0.17
Su-6	ND		0.9628	0.0437	6.3199	0.0478	0.2093	0.0255	ND		ND		0.2815	0.0035	48.44	0.31
Su-7	ND		0.48	0.05	2.0943	0.0277	0.2806	0.03	ND		ND		0.1259	0.0034	50.79	0.45
Su-8	ND		0.8072	0.0452	4.2122	0.0365	0.198	0.0268	ND		ND		0.2018	0.0032	56.16	0.38
Su-9	ND		1.37	0.05	6.13	0.05	0.2755	0.0291	ND		0.7548	0.0413	0.3836	0.0047	49.82	0.37
Su-10	ND		0.304	0.0408	5.1155	0.0431	0.1819	0.0264	ND		ND		0.069	0.0027	51.82	0.36
Su-11	ND		1.6299	0.0428	34.25	0.18	0.8495	0.0249	0.0835	0.0033	ND		0.4402	0.0049	0.8903	0.0076
Su-12	ND		0.6285	0.0433	2.6907	0.0267	0.1589	0.0257	0.045	0.0025	ND		0.1294	0.0028	56.62	0.39
Su-13	ND		0.7015	0.0429	3.1545	0.0289	0.1461	0.0252	0.0941	0.0027	ND		0.2976	0.0036	56.07	0.37
Su-15	ND		0.6517	0.0425	5.4697	0.0459	0.2162	0.0264	0.0188	0.0025	ND		0.0966	0.0028	48.94	0.34

Ti	Ti +/-	V	V +/-	Cr	Cr +/-	Mn	Mn +/-	Fe	Fe +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-
0.0627	0.0197	ND		ND		ND		0.0953	0.0058	ND		ND		ND		ND	
0.1056	0.0199	ND		ND		ND		0.084	0.0052	ND		ND		ND		ND	
ND		ND		ND		ND		0.0901	0.0061	ND		ND		ND		0.002	0.0006
ND		ND		ND		ND		0.0816	0.0052	ND		ND		ND		ND	
ND		ND		ND		ND		0.1046	0.0054	ND		ND		ND		ND	
0.104	0.0197	ND		ND		ND		0.3176	0.0094	ND		ND		ND		0.0037	0.0006
0.0881	0.0254	ND		ND		ND		0.1419	0.0082	ND		ND		ND		0.0026	0.0007
0.0888	0.021	ND		ND		ND		0.2086	0.0083	ND		ND		ND		0.0019	0.0006
0.1157	0.0238	ND		ND		ND		0.2869	0.0104	ND		ND		ND		0.0054	0.0008
ND		ND		ND		ND		0.1636	0.0074	ND		ND		ND		0.0029	0.0006
0.1486	0.0167	0.0446	0.0084	ND		0.0116	0.0028	0.9044	0.0124	ND		0.0077	0.0009	ND		0.0025	0.0004
0.0654	0.0202	ND		ND		0.0148	0.004	0.2377	0.0088	ND		ND		ND		ND	
0.0971	0.021	ND		ND		0.0117	0.0038	0.354	0.0105	ND		ND		ND		0.0018	0.0006
0.0978	0.021	ND		ND		ND		0.4157	0.0114	ND		ND		ND		ND	

As	As +/-	Se	Se +/-	Rb	Rb +/-	Sr	Sr +/-	Y	Y +/-	Zr	Zr +/-	Mo	Mo +/-	Ag	Ag +/-	Cd	Cd +/-	Sn
ND		ND		0.0005	0.0002	0.0532	0.0008	ND		0.001	0.0003	ND		ND		ND		ND
ND		ND		ND		0.0375	0.0006	0.0007	0.0002	ND		ND		ND		ND		ND
ND		ND		ND		0.027	0.0006	ND		ND		ND		ND		ND		ND
ND		ND		ND		0.0211	0.0004	ND		ND		ND		ND		ND		ND
ND		ND		ND		0.0139	0.0003	ND		ND		ND		ND		ND		ND
ND		ND		0.001	0.0002	0.0214	0.0004	0.0007	0.0002	ND		ND		ND		ND		ND
ND		ND		ND		0.0261	0.0006	0.0013	0.0003	ND		0.0012	0.0003	ND		ND		ND
ND		ND		0.0008	0.0002	0.0245	0.0005	0.0007	0.0002	ND		ND		ND		ND		ND
ND		ND		ND		0.0264	0.0006	0.0007	0.0002	0.001	0.0003	0.001	0.0003	ND		ND		ND
ND		ND		0.0006	0.0002	0.026	0.0005	0.0012	0.0002	ND		ND		ND		ND		ND
0.0007	0.0002	ND		0.0029	0.0002	0.0115	0.0002	0.0019	0.0002	0.0029	0.0002	0.0011	0.0002	ND		ND		ND
ND		ND		ND		0.0605	0.0008	0.0006	0.0002	ND		0.0008	0.0002	ND		ND		ND
ND		0.0014	0.0002	0.0009	0.0002	0.0559	0.0008	0.0006	0.0002	ND		ND		ND		ND		ND
ND		ND		0.0008	0.0002	0.1417	0.0015	0.0011	0.0002	0.0023	0.0005	ND		ND		ND		ND

Sn +/-	Sb	Sb +/-	W	W +/-	Hg	Hg +/-	Pb	Pb +/-	Bi	Bi +/-	Th	Th +/-	U	U +/-	LE	LE +/-
	ND		ND		ND		0.0017	0.0004	ND		ND		ND		42.47	0.29
	ND		ND		ND		ND		ND		ND		ND		40.65	0.28
	ND		ND		ND		ND		ND		ND		ND		39.06	0.32
	ND		ND		ND		ND		ND		ND		ND		36.65	0.28
	ND		ND		ND		ND		ND		ND		ND		54.56	0.25
	ND		ND		ND		0.0013	0.0004	ND		ND		ND		43.34	0.27
	ND		ND		ND		ND		ND		ND		ND		45.98	0.35
	ND		ND		ND		ND		ND		ND		ND		38.09	0.31
	ND		ND		ND		ND		ND		ND		ND		40.82	0.33
	ND		ND		ND		0.0017	0.0004	ND		ND		ND		42.31	0.3
	ND		ND		ND		0.0011	0.0003	ND		ND		0.001	0.0003	60.72	0.2
	ND		ND		ND		ND		ND		ND		ND		39.35	0.3
	ND		ND		ND		ND		ND		ND		ND		39.01	0.3
	ND		ND		ND		ND		ND		ND		ND		43.94	0.3