GORDON P. E. WHITE & ASSOCIATES LTD.
CONSULTING GEOLOGISTS

926-1530
AREA CODE 604

2975 ALTAMONT CRESCENT
WEST VANCOUVER, B. C.

REPORT ON

SELWYN EXPLORATIONS LTD. (N.P.L.)

SHELL CREEK IRON DEPOSIT

YUKON TERRITORIES

BY

GORDON P.E. WHITE

OCTOBER 18, 1967.

This report has been examined by the Geological Evaluation Unit. Approved as to technical worth by:

RESIDENT GEOLOGIST

Approved as to cost in the amount of: $ 2720.31

RESIDENT MINING ENGINEER

Accepted as representation work under Section 53(4) Yukon Quartz Mining Act.

COMMISSIONER OF YUKON

GEOLOGICAL SURVEY
NOV 27 1968
Resident Geologist
Whitehorse, Y. T.

This report has been examined by the Geological Evaluation Unit. Approved as to technical worth by:

Yukon Quartz Mining Act.

COMMISSIONER OF YUKON

SUMMARY

Iron claims held by Selwyn Explorations Ltd. in the Yukon, cover a sedimentary, banded iron formation which has been traced for five and one half miles along strike. Preliminary assaying and beneficiation tests indicate a possible economic grade ore and concentrate.

A large open pit operation is considered feasible if 200 million tons of 30 - 35% Fe could be proven, and a graduated programme to explore this property is recommended.

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LOCATION MAP SCALE 1" = 4 MILES

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INTRODUCTION

On October 4, 1967 a trip was made by helicopter to a group of iron claims held by Selwyn Explorations Ltd. (N.P.L.) in the Dawson Mining Division of the Yukon Territory.

The discovery of iron was first reported in this locality during 1956, and subsequent exploration work by private industry and Government surveys outlined a large sedimentary iron formation.

Reference has been made to information on this property filed by Asbestos Corporation (Explorations) Ltd. with the Mining Recorder in Dawson City.

LOCATION AND ACCESSIBILITY

The Shell claim group was staked by Selwyn Explorations, at a location approximately 45 miles north-west of Dawson and eight miles along Shell Creek from the north bank of the Yukon River. The claims are 14 miles distant from the Clinton Creek Asbestos Mine which lies to the south-west.

There is a heliport at the base camp, and surface access to the property would be possible by improving a 4 mile road along Forty Mile River from the Clinton Creek Mine road to the Yukon River. From this latter point, transportation would be by barge for 7

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miles downstream on the Yukon River to the mouth of Shell Creek, where an 8 mile road should be contructed to the base camp.

TOPOGRAPHY AND VEGETATION

The claims cover a rolling, elongated dome-shaped hill which is the southern extremity of the Ogilvie Mountains. At Shell Creek, the Yukon River is around 1000 feet above sea level, while the claims are at an elevation of 2500 to 4000 feet. No topographic feature was observed that would hinder road construction or open pit mining.

Tree line varies from 3500 to 4000 feet above sea level, and there is ample timber below this elevation for mining or construction purposes.

CLIMATE

Winters are long and severe, with freeze-up on the Yukon River at Dawson occurring in late October or early November, while break-up is generally in May. Permafrost prevails on north-facing slopes and in sheltered areas.

PROPERTY

The property consists of 27 contiguous iron claims, each measuring 2640' by 2640'. Shell 1 to 11

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inclusive were recorded at Dawson September 11, 1967, and Shell 12 - 27 inclusive on September 25, 1967.

HISTORY OF PROPERTY

Hans and Werner Krause reported this iron discovery in 1956 and their preliminary work showed 300 to 400 foot widths of iron formation east of Shell Creek, from which selected samples assayed as high as 48.7% Fe and 0.15% Ti.

The Krause claims were optioned in October 1957 and during the following field season, Asbestos Corporation established 47,600' of lines, 32 triangulation stations, did geological mapping and dip-needle surveying in addition to a programme of trenching and assaying. The results of their assays, filed with the Dawson Mining Recorder, have been tabulated and appended to this report. Asbestos Corporation reported no conclusions as to possible overall grade and tonnage and terminated their option, after which the Krause claims were allowed to lapse.

Reconnaissance mapping was carried out in this general area by the Geological Survey of Canada in 1961, and in 1966 a G.S.C. aeromagnetic sheet was published. Selwyn Explorations acquired the ground in September of 1967.

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GENERAL GEOLOGY

Roddick and Green, G.S.C. Map 13, 1962, grouped this series of low grade metamorphosed sediments with possible minor volcanics, into a stratigraphic unit of Cambrian or Pre-Cambrian age. On the claims this sequence of bedded rocks is comprised of grey limestone, green chlorite schist, iron formation, phyllite and an epidote-chlorite rich rock, suggested by Asbestos Corporation to be volcanic in origin. The limestone beds are tentatively considered to be basal to this sequence, and lateral and vertical facies changes are evident by the thick interbeds of one rock type within the other in a given section.

Of lesser magnitude, interbeds of siltsone, quartzite, grit and greywacke are present, varying in thickness from thin beds to mere partings.

Asbestos Corporation mapped a small intrusive mass on Mount Simba, possibly of granodiorite composition.

STRUCTURAL GEOLOGY

Asbestos Corporation have mapped two limbs of a fold, interpreted as an anticline overturned to the north-east and plunging 10 degrees to 30 degrees south-east. Considerable drag folding has taken place on the crest (or trough) of the fold, as exhibited on the hillside

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east of Shell Creek.

Interpretation of G.S.C. aeromagnetic map 4285 G recently published, suggests a shallow north-east dip on the south limb, a steeper south-west dip on the north limb, and a shallow dip south-east of the crumbled folds east of Shell Creek. Limited field examination of cleavage, jointing, grain gradation and casts in a section north-west of the camp area, suggests tops to the south on this south dipping north limb, which would suggest a syncline. However, detailed study would be required prior to arriving at any solution of the structure.

LITHOLOGY OF THE IRON FORMATION

In outcrops examined, the iron formation may best be described as a well bedded, banded iron formation, with ¼ inch to 2 inch cleanly washed, fine siltstones and quartzites interbedded, which comprise approximately thirty to thirty-five percent of the iron formation. The sharply contacted iron beds are chiefly composed of dense, black, fine grained magnetite, containing occasional octahedra of magnetite.

RESERVE POSSIBILITIES

The iron formation has been mapped by Asbestos Corporation over a strike length in excess of five miles,

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and a G.S.C. aeromagnetic survey appears to confirm this lateral continuity of the banded iron formation. Asbestos Corporation report sections of iron formation 75 and 200 feet true width, separated by 300 feet of phyllite, and assays from trenches in the same area average 25% Fe. Earlier assays from the tightly folded section south-east of Shell Creek, indicated values in excess of 45% Fe.

With the qualification that detailed stratigraphic study with the aid of trenching, drilling and assaying is required to prove grade and tonnage, previous work has indicated possible tonnages well in excess of 200 million tons, which may average 30 - 35% Fe.

BENEFICIATION

To maintain a low unit shipping cost, it would be essential to produce a relatively pure iron oxide concentrate. Preliminary work by Britton Research has indicated a possible 63% Fe concentrate, at a fine grind using a Davis tube, from heads assaying 43.2% Fe. The minor constituent of the rock tested was argillaceous, and as most of the iron appears to be associated with siliceous beds, a better concentrate may be possible using a coarser grind. A total chemical analysis of the iron formation was not available, but this work is

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currently under way.

TRANSPORTATION IN THE YUKON

At present, the Clinton Creek Asbestos and the Anvil base metal mines in the Yukon are preparing to go into production, and if the Shell Creek iron was proven to be economic, this deposit together with the above-mentioned asbestos and base metal mines, might provide sufficient justification for the capital expenditure required to construct a rail line to the coast. Crest Exploration, a subsiduary of Chevron Standard, is reported to have considered the possibility of shipping iron, in the form of slurry, through a pipeline to the coast, and the technological problems involved appear to have been solved.

A further consideration for the future is that iron, coal and limestone are all available in this immediate area, and the manufacture of pig iron in the Yukon is a distinct possibility.

CONCLUSIONS AND RECOMMENDATIONS

Reconnaissance field work by Government and private industry has outlined a banded iron formation of potentially large tonnage. In order to determine

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whether the iron is present in economic grade, a two-stage programme of exploration is recommended.

Stage One would consist of stratigraphic and structural mapping, magnetometer surveying, trenching, assaying and bulk sampling, and roads, base camp, surveyed lines and contours would be necessary before commencing the mapping and geophysical programmes. Stage Two would include a drilling programme and a market and feasibility study, and the expenditures required to carry out this work would be as follows:

STAGE ONE

Roads 20 miles plus	$12,000.00
Camp	5,000.00
Radio communications	2,000.00
Transport	4,000.00
River Barge	2,000.00
Surveying, lines, contours	8,000.00
Geological mapping	6,000.00
Magnetometer survey	4,000.00
Trenching, bulldozer	10,000.00
Sampling, testing	6,000.00
Engineering and contingencies	10,000.00
	$69,000.00

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STAGE TWO

Diamond drilling 6000' @ $15.	$ 90,000.00
Market & feasibility study	6,000.00
Engineering & contingencies	15,000.00
	$111,000.00
Total for the two stages	$180,000.00

In the event that the results of Stage One and Two were favourable, considerably larger sums of money should be made available for preproduction expenses.

Respectfully submitted,

GORDON P.E. WHITE & ASSOCIATES LTD.

Gordon P.E. White, P. Eng.

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I, GORDON PATRICK EARL WHITE, of the Municipality of West Vancouver, in the Province of British Columbia, HEREBY CERTIFY:

1) THAT I am a registered Professional Engineer in the Province of British Columbia.

2) THAT I am a graduate of the University of New Brunswick with a degree of Bachelor of Science (1953)

3) THAT I am a Consulting Geologist, my residential address is 2975 Altamont Crescent, West Vancouver and my office is at 821 West Pender Street, Vancouver, B.C.

4) THAT I have visited the property discussed in this report on October 4, 1967.

5) THAT I have practised as a geologist for more than 14 years, examining and reporting on properties and mines in North America and Africa.

6) THAT a Registered Engineer in the Province of British Columbia, under my direction, on October 4, 1967, checked the staking of the claims and the staking was in order.

7) THAT I have no interest, direct or indirect in any company acquiring or intending to acquire control, nor do I expect to have any interest in Selwyn Explorations Ltd. (N.P.L.). Nor do I have any interest in the claims, direct or indirect, referred to in this report.

DATED AT West Vancouver this 18th day of October, 1967.

Gordon P.E. White, P. Eng.

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TABLE 1

Results of 1958 trenching by Asbestos Corporation (Explorations) Ltd. All sample numbers increase from South to North.

Trench No.	Sample No.	Width	% Fe
1A			
	401	10'	25.0
	402	16'	26.2
	403	8'	28.0
	404	19'	14.4
	405	15'	12.0
	406	21'	7.3
	401 - 406	89'	
	407	20'	21.4
	408	22'	28.9
	409	21'	21.2
	410	14'	29.4
	411	9'	31.9
	412	19'	15.1
	413	14'	26.8
	414	18'	27.8
	407 - 414	137'	24.6% average
	415		
	416		

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Trench No.	Sample No.	Width	% Fe
2	417	8'	17.4
	418	30'	31.6
Trench No.	**Sample No.**	**Width**	**% Fe**
3	424	13'	28.6
		4' Not sampled	
	425	14'	35.2
	426	10'	29.6
	424-426	41'	28.3%
Trench No.	**Sample No.**	**Width**	**% Fe**
4	436	36'	24.2
	437	18'	29.0
	438	17'	14.3
	439	33'	22.6
	440	21'	30.5
	441	22'	29.6
	436-441	147'	25.0%
	442	22'	10.7
	443	14'	22.5
Trench No.	**Sample No.**	**Width**	**% Fe**
5	430	36'	26.7
	431	32'	23.6
	432	31'	26.0
	433	17'	24.9
	430-433	116'	25.5%

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Trench No.	Sample No.	Width	% Fe
5	433-434	26'	No sample, schist
	434	29'	26.5
	435	13'	24.9
	433-435	184'	22%

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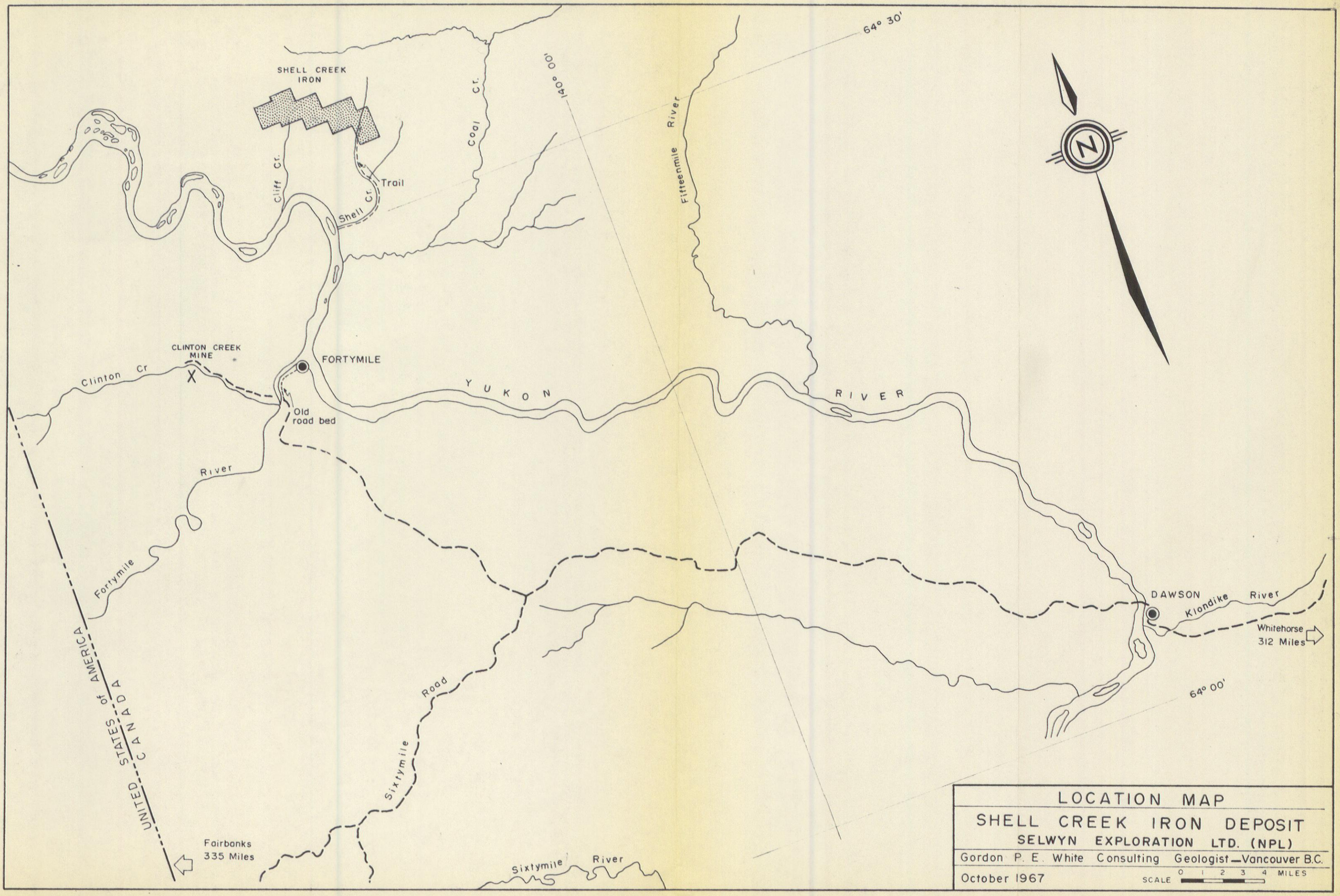

SHELL CREEK IRON
Cliff Cr.
Coal Cr.
140° 00'
64° 30'
Fifteenmile River
Trail
Shell Cr.
N
CLINTON CREEK MINE
Clinton Cr
FORTYMILE
YUKON
RIVER
Old road bed
River
Fortymile
UNITED STATES of AMERICA
CANADA
Road
Sixtymile
DAWSON
Klondike River
Whitehorse 312 Miles
64° 00'
Fairbanks 335 Miles
Sixtymile River
LOCATION MAP
SHELL CREEK IRON DEPOSIT
SELWYN EXPLORATION LTD. (NPL)
Gordon P. E. White Consulting Geologist—Vancouver B.C.
October 1967
SCALE 0 1 2 3 4 MILES

CONCENTRATION TESTS

ON A SAMPLE OF IRON ORE

submitted by

SELWYN EXPLORATIONS LTD.

Date: October 25, 1967

Project No: B161

Investigation by: John W. Britton, B.Sc., A.R.S.M., P. Eng.,
Consulting Metallurgist.

BRITTON RESEARCH LIMITED

INTRODUCTION

A 10 lb. sample of iron ore was received from Dr. Peter H. Sevensma, on behalf of Selwyn Explorations Ltd., 715-850 West Hastings Street, Vancouver 1, B.C., on September 21, 1967.

Dr. Sevensma requested us to carry out a magnetic separation test on the sample after grinding to approximately 85% minus 325 mesh.

SUMMARY

1. The sample as received assayed 43.2% total iron.

2. The whole of the sample was crushed to minus 10 mesh and a 2,000 gram sample was ground for 60 minutes in a ball mill at 65% solids. The product was treated in a Sala wet magnetic separator and the concentrate was retreated three times in the same machine. The tailings from the four stages were combined for assay. The final concentrate weighed 65.5% of the feed and assayed 59.4% Fe, 14.55% SiO_2, 0.01% S, 0.09% P, 0.21% TiO_2, 0.08% Mn, 0.91% MgO and a trace of silver. The iron recovery was 90.1%.

3. 86.2% of the concentrate was finer than 325 mesh; this fraction assayed 60.8% Fe.

4. Retreatment of the concentrate in a Davis tube tester increased the iron assay to 61.6%. The tailing from the Davis tube test contained a high proportion of gangue slimes.

5. In practice, stage grinding and separation would be used and it is expected that a higher grade of final concentrate would be produced. If necessary, the concentrate could be ground finer before the final stage of separation.

Respectfully submitted,
BRITTON RESEARCH LIMITED

John W. Britton, P. Eng.

John W. Britton, P. Eng.,
Consulting Metallurgist.

DETAILS OF TESTS

(a) Crushing

The whole of the sample was crushed to minus 10 mesh and riffled.

(b) Grinding

A 2000 gram sample of crushed ore was ground in a ball mill for 60 minutes at 65% solids.

(c) Magnetic separation

The ground ore was treated in a Sala wet magnetic separator and the concentrate was retreated 3 times in the same machine. The rougher and cleaner tailings were combined for assay. Results are shown in table 1.

The grade of concentrate, 59.4% Fe, was lower than desired. In order to determine whether additional magnetic separation steps would improve the grade, a Davis tube test was carried out on a sample of the concentrate. Results are shown in table 2.

Retreatment increased the grade to 61.6% Fe. Most of the improvement appeared to be due to the removal of gangue slimes but some low-grade middling particles were also removed.

A screen analysis of the original concentrate (see table 3) showed that 86.2% was finer than 325 mesh; this fraction assayed 60.8% Fe. The coarser fractions (+ 200 mesh and minus 200 plus 325 mesh) assayed only 47.7% and 51.1% Fe respectively. A Davis tube test on the minus 325 mesh fraction (see table 4) increased the grade to 63.2% Fe.

In practice, stage crushing, grinding and magnetic separation would be carried out. This would not only reduce the energy requirements considerably but would also improve the grade of the final concentrate, by eliminating gangue and low-grade middling particles earlier in the treatment. If necessary, the concentrate could be ground finer before the last stages of separation.

Table 1 - Magnetic separation results

#	Product	Weight %	Fe assay % *	Fe distribution %
1	Final concentrate	65.5	59.4	90.1
2	Combined tailings	34.5	12.4	9.9
3	Head (calculated)	100.0	43.2	100.0

* All iron assays shown in this report refer to total Fe.

Assay of final concentrate:

		%
Iron (total)	(Fe)	59.4
Silica	(SiO_2)	14.55
Sulphur	(S)	0.01
Phosphorus	(P)	0.09
Titanium	(TiO_2)	0.21
Manganese	(Mn)	0.08
Magnesia	(MgO)	0.91
Silver	(Ag)	Trace

Table 2 - Davis tube test on concentrate

#	Product	Weight %	Fe assay % *	Fe distribution %
1	Concentrate	94.6	61.6	98.1
2	Tailing (calc.)	5.4	20.9	1.9
3	Head	100.0	59.4	100.0

Table 3 - Screen analysis of Sala concentrate

#	Fraction	Weight %	Fe assay %	Fe distribution %
1	Plus 200 mesh	3.4	47.7	2.7
2	- 200 + 325 mesh	10.4	51.1	9.0
3	Minus 325 mesh	86.2	60.8	88.3
4	Head (calc.)	100.0	59.3	100.0

Table 4 - Davis tube test on minus 325 mesh fraction

#	Product	Weight %	Fe assay %	Fe distribution %
1	Concentrate	94.3	63.2	98.0
2	Tailing (calc.)	5.7	21.1	2.0
3	Head	100.0	60.8	100.0

JWB/ih

BRITTON RESEARCH LIMITED
Consulting Metallurgists
1612 WEST THIRD AVENUE
VANCOUVER 9, B.C.

JOHN W. BRITTON, A.R.S.M., B.Sc., P.ENG.,
President

PHONE: 738-7195

November 25, 1967

Dr Peter H. Sevensma, P.Eng.,
Selwyn Explorations Limited,
715 - 850 West Hastings Street,
Vancouver 1, B.C.

Dear Peter,

Re: Concentration of iron ore

We enclose a copy of Coast Eldridge's assay report No. 38075, giving the silica, titanium and phosphorus assays on the Davis tube concentrate made from the minus 325 mesh fraction of the concentrate made in the Sala separator (see our report dated October 25, 1967).

As expected, the silica and phosphorus assays are lower than in the Sala concentrate, which assayed 14.55% silica, 0.09% phosphorus and 59.4% iron. The titanium assay (0.26%) is higher than in the Sala concentrate (0.21%), indicating that at least part of the titanium in the ore is intimately associated with magnetite.

Yours sincerely,
BRITTON RESEARCH LIMITED

John W. Britton, P.Eng.

John W. Britton, P.Eng.
Consulting Metallurgist

Enclosures (assay report
and invoice)

JWB/t

Dr. P. H. Jennens

Silvergen Exploration

To:

Britton Research Ltd.,

1612 West Third Avenue

Vancouver, B.C.

Certificate of Assay

COAST ELDRIDGE

ENGINEERS & CHEMISTS LTD.

125 EAST 4TH AVE. VANCOUVER 10, CANADA

ACCTLC

Member Canadian Testing Association

PHONE: 876-4111

CABLE ADDRESS "ELDRICO"

FILE NO. A.3-B.6-67-33075

DATE November 24, 1967

We Hereby Certify *that the following are the results of assays made by us upon submitted* Pulps *samples*

MARKED	GOLD OUNCES PER TON	GOLD VALUE PER TON	SILVER OUNCES PER TON	Silica PER CENT. (SiO_2)	Titanium PER CENT. (TiO_2)	Phosphorus PER CENT. (P)	PER CENT.	PER CENT.	PER CENT.
Project B - 161		$							
44032 Davis Tube Con - 325 Mesh				10.21	0.26	0.06			

Gold calculated at $ ..... *per ounce*

/jp

Note. Rejects retained one week.
Pulps retained one month.
Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gains inherent in the fire assay process.

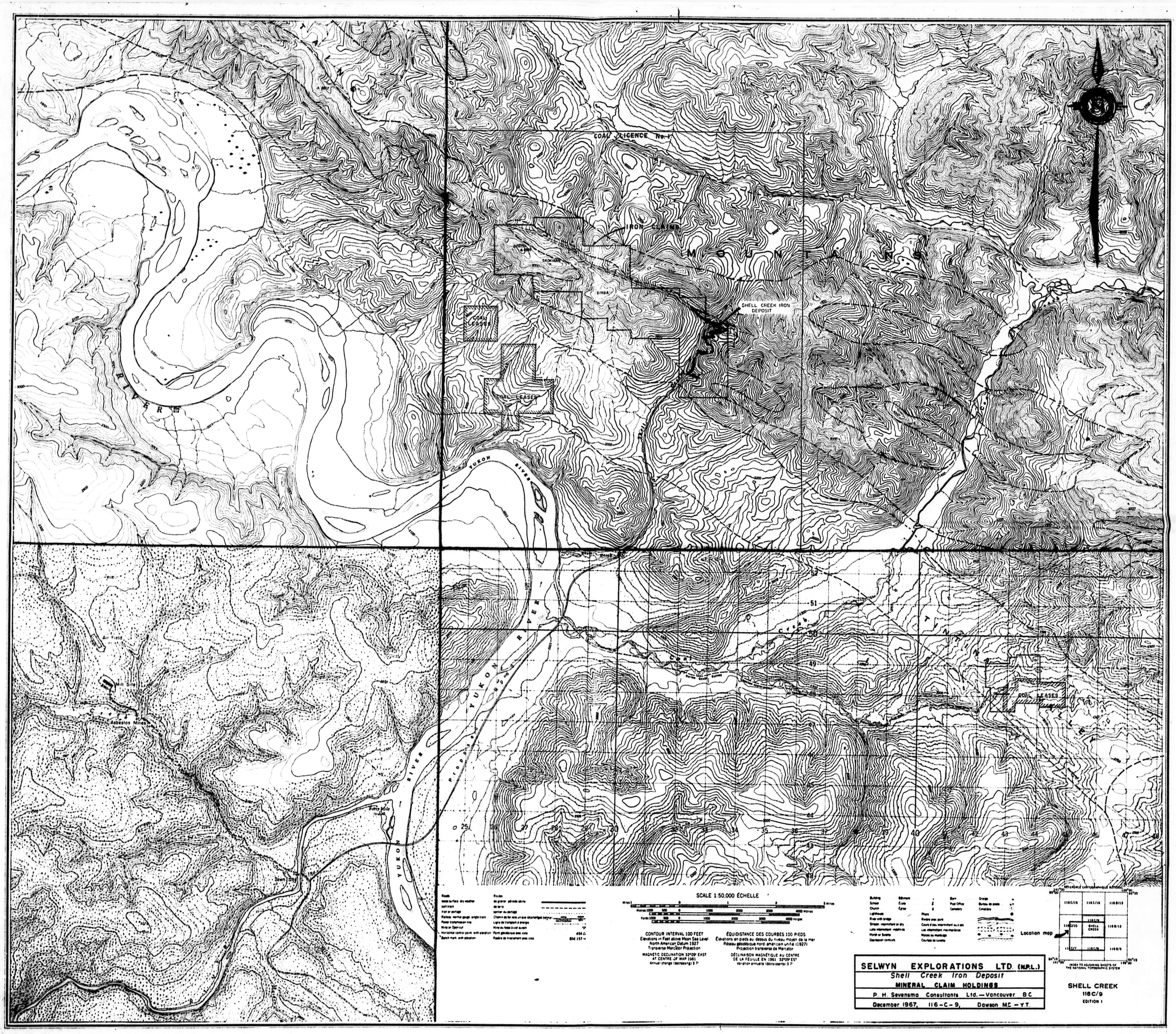
BRITTON RESEARCH LIMITED
1612 WEST THIRD AVENUE
VANCOUVER 9, B. C.

H. Sharpe

Provincial Assayer

RECEIVED NOV 2 5 1967

C96


COAL LICENCE No. 1
IRON CLAIMS
SHELL CREEK IRON DEPOSIT
COAL LEASES
COAL LEASES
COAL LEASES
M O U N T A I N S
YUKON RIVER
YUKON RIVER
YUKON RIVER
Air Field
Mill Site
Asbestos Mines
Forty Mile
Town Site
Coal
Roads
Routes
SCALE 1:50,000 ÉCHELLE
CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection
MAGNETIC DECLINATION 32°09' EAST
AT CENTRE OF MAP 1961
Annual change (decreasing) 3.7'
ÉQUIDISTANCE DES COURBES 100 PIEDS
Élévations en pieds au-dessus du niveau moyen de la mer
Réseau géodésique nord-américain unifié (1927)
Projection transverse de Mercator
DÉCLINAISON MAGNÉTIQUE AU CENTRE
DE LA FEUILLE EN 1961 32°09' EST
Variation annuelle (décroissante) 3.7'
Location map
SELWYN EXPLORATIONS LTD. (N.P.L.)
Shell Creek Iron Deposit
MINERAL CLAIM HOLDINGS
P. H. Sevensma Consultants Ltd. — Vancouver B.C.
December 1967, 116-C-9, Dawson M.C. — Y.T.
SHELL CREEK
116C/9
EDITION 1

SELWYN EXPLORATIONS LTD. (N.P.L.)

~~XXXXXXXXXX~~ WEST HASTINGS STREET - VANCOUVER 1, B.C.
1106-1111 TELEPHONE 682-7155

Vancouver, April 10th, 1968

CONFIDENTIAL

Mr. A.D. Hunt
Director Resource & Economic
Development Group
Department of Indian Affairs
and Northern Development
400 Laurier
Ottawa/Ontario

I.A. & N.D.
CENTRAL SERVICES REGISTRY
APR 16 1968
FILE No.
CORR. No.
REFER. TO Mr Hunt

Dear Sir,

Mr. Cunningham and myself appreciated the time you spent with us while we were in Ottawa last week. This letter will outline to you -to our best knowledge- the current situation in the Yukon Territory. In oder to complete your files enclosed please find a report by our Geologist Mr. Gordon B.E. White, dated October 17th, 1967. The report as well as his letter of January 22nd, 1968 indicate our reasons why we consider this project is economically feasible.

One point we would like to clarify is that Gordon White's estimate of railrates and loading of vessels should not be taken as final figures as we are awaiting the CNR's official letter as what they (CNR) consider to be a realistic railroad rate.

Insofar as cost of loading of the vessels is concerned we have commissioned an Engineering Company to perform a study on the actual costs of loading iron-ore pellets in large bulk carrier ocean vessels.

As explained to you, we are negotiating with Friedrich Krupp Industries for a long-term sales contract as well as with Metalimex, a Czeckoslovakian Government controlled group and Sumitomo, a Japanese trading company purchasing for various japanese companies.

As we already advised you, we have had preliminary discussions with Mr. MacIsaac, Chief of Development, Research & Development Department of the Canadian National Railway in Montreal, who has indicated that he will provide us within the next few months with a copy of CNR's estimated costs for building a railway from our deposit at Shell Creek to Haines/Alaska or any other suitable Ocean Port. We have suggested to Mr. MacIsaac that your department

../..

APR 16 1968
Rec'd at
Mr. Hunt's
Office

SELWYN EXPLORATIONS LTD. (N.P.L.)
#715 - 850 WEST HASTINGS STREET - VANCOUVER 1, B.C.
TELEPHONE 682-7155

would be prepared to assist the CNR to secure market information as to other potential traffic so that the CNR is able to evaluate future traffic that would gravitate to a railway line.

To clarify certain points in a letter written to the Honourable A. Laing on February 16th, 1968 regarding foreign participation (Rudny project) in this project, Selwyn Explorations Ltd. will not at this time or in future, sell common shares to Czechoslovakia or any other iron-curtain country. While our previous correspondence may have inferred this, this is not correct. Our dealings with the czeck companies have to do with utilizing their advanced technology in the areas of pelletizing and coal studies. Selwyn Explorations will be hiring these various foreign companies wherever it appears to be in the best interest of Selwyn Explorations Ltd.

Regarding the financing, of course, it is understood that in order to secure the large amount of capital involved to put the mine in operation, we will float debentures on the world money market.

We hope to start our first stage of exploration study within the next week. It will be our special attention to keep you closely informed about our project and we will supply you with concrete information from time to time.

I expect to be in Europe within the next month at which time I will advise the czeck companies of our discussion with you and that it is the desire of your department to meet Czeck Government Officials in Ottawa to discuss the Canadian Government's policies.

For any further information please do not hesitate to contact me.

Thanking you for your kind attention to this matter, I remain,

Yours very truly,
SELWYN EXPLORATIONS LTD. (N.P.L.)

Werner P. Kaufmann
ManagingDirector

NOTED BY
A. D. Hunt
Date 17.4.68.

Encls.

GORDON P. E. WHITE & ASSOCIATES LTD.
CONSULTING GEOLOGISTS

OFF: 688-4134
RES: 926-1530

821 WEST PENDER STREET
VANCOUVER 1, B.C.

January 22, 1968.

Dr. P. Sevensma, President,
Selwyn Explorations Ltd,
7th Floor, 850 W. Hastings Street,
VANCOUVER, 1. B.C.

Dear Sir:

Re: Shell Creek Iron, Yukon Territory

Further to our meeting of January 19, 1968, the following preliminary cost estimates are herein submitted, based on the limited information available concerning grade and mineralogy.

At the outset, it is assumed that 100 million tons of iron formation can be proven, of not less than 25% Fe, open-pit mineable, stripping ratio 1:1, with economically permissable TiO_2, P & S content, and of such granularity and mineralogy as to allow pelletization, and/or to manufacture pig iron. A mining rate of 40,000 short tons per day minimum is considered, and based on initial study and testing, the impression is gained that the foregoing conditions are possible with one exception, that being the 25% Fe factor, which would require detailed field work to substantiate.

Therefore, based on the foregoing, ore to product would be in a ratio of 3 to 1, and this would produce a pellet with a minimum 70% Fe.

	CANADIAN FUNDS	
	Cost/Sh. T. Mined	Cost/Sh. T. Pellets
Exploration & Development	0.06	0.18
Stripping & Mining	1.00	3.00
Crushing (Min. 3 stages)	0.25	0.75
Milling (Flotation & Mag. wet sep.)	1.25	3.75
Pelletization	1.00	3.00
Amortization of Capital (Exclusive of R.R. & Port facilities)	1.60	4.80

	Cost/Sh. T. Mined	Cost/Sh. T. Pellets.
Supervision & operating expense	0.02	0.06
Head Office & Marketing	0.005	0.015
Rail transport (~~5~~470 miles, assume 20¢ cwt. min. 140,000 lb. cars & unit trains)	1.33	4.00
Loading at Port	0.50	1.50
	$7.015	$21.055
or	$7.02	$21.06

Some of these figures are purposely high, as for example the allowance of $6,000,000 for development and exploration, also the stripping and mining may actually be carried out for half this figure based on a minimum 40,000 tons/day.

Conservative estimates of cost at this stage are considered advisable due to the numerous variables.

A pellet containing minimum 70% Fe should command a price F.O.B. vessel Pacific coast well in excess of $21.06/T. For example, a Mesabi Range pellet is quoted at $0.25.2 USF per ltu, or approximately Can. $24.20/ short ton.

$17.64/lt U.S
15.75
17.01

The Shell Creek iron has been traced by float, outcrop and aerial magnetometer survey for a strike length of 5 miles, and therefore tonnages in excess of 100 million tons may be possible. The two most important variables viz. grade and tonnage, could considerably change the economics of this prospect one way or the other. Of particular concern, if larger tonnages of 25% plus Fe were present, is limestone and a low ash, relatively high B.T.U. lignite located in the immediate vicinity of the iron. The manufacture of pig iron, subject to testing of all required raw materials, should therefore be considered prior to the purchase of pelletizing plants. The manufacture of pig iron would considerably decrease the unit shipping and loading cost, based on a ton of ore mined.

22.50
24.30

Pig iron manufactured in Japan is currently reported to cost USF $52.00/ short ton delivered to consumer's plant, although Yawata Iron are believed to be receiving pig from South Africa at a lower price on a 10 year contract. The ingredients to manufacture pig iron are present in the immediate vicinity of

Shell Creek, and studies should be carried out with this idea in mind.

No allowance has been made for rail or port loading facilities, as we feel that private industry would provide these if production was slated. At any rate, the Canadian Government looks with favour on any viable proposal to open up the north of Canada and would probably render all possible assistance in this venture.

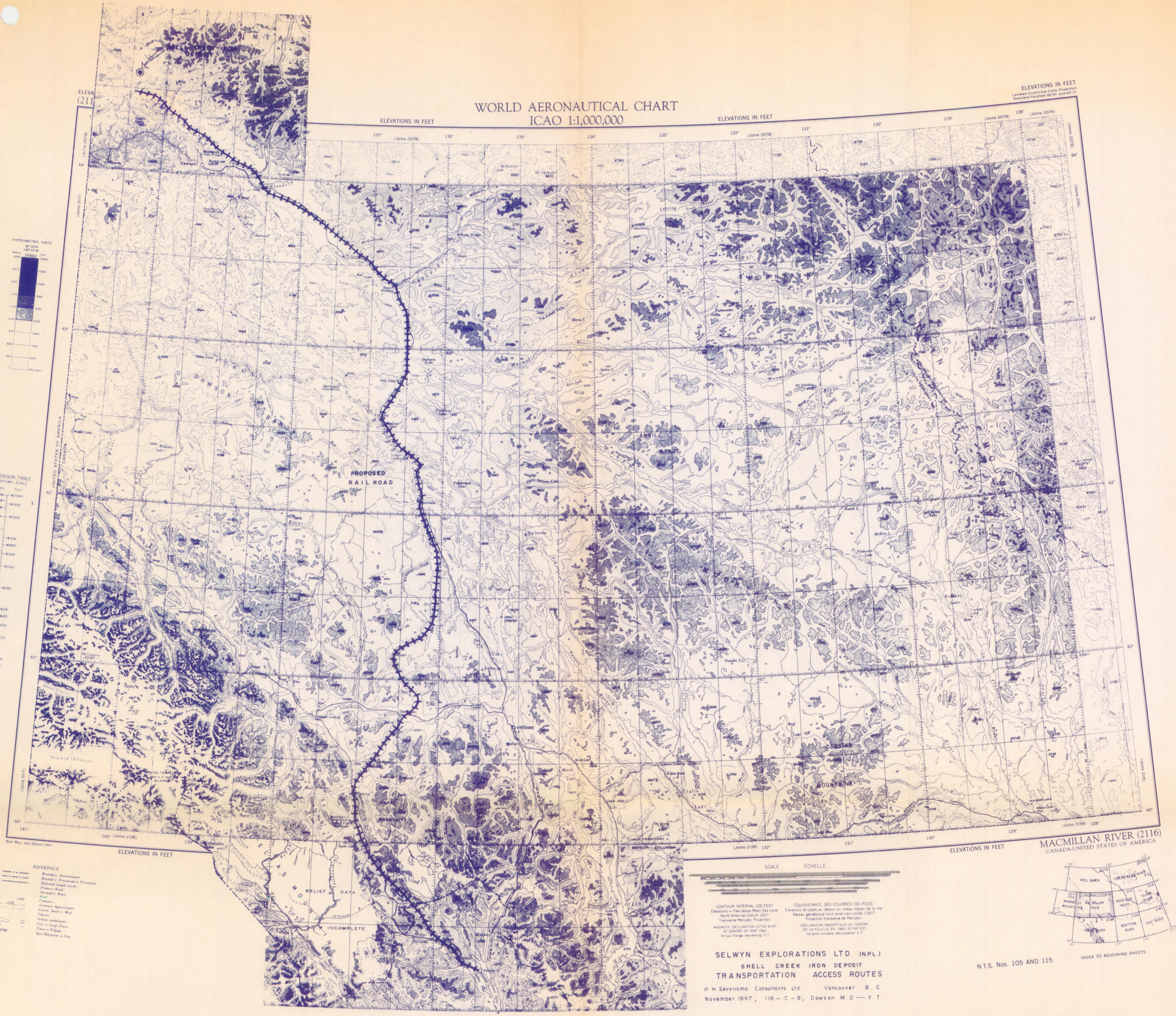
Yours truly,

GORDON P.E. WHITE & ASSOCIATES LTD.

Gordon P.E. White, P. Eng.

c.c. Mr. W. P. Kaufman,
Vice President,
VANCOUVER, B.C.

WORLD AERONAUTICAL CHART
ICAO 1:1,000,000



MACMILLAN RIVER (2116)
CANADA-UNITED STATES OF AMERICA

SELWYN EXPLORATIONS LTD. (N.P.L.)
SHELL CREEK IRON DEPOSIT
TRANSPORTATION ACCESS ROUTES

P.H. Sevensma Consultants Ltd. Vancouver B.C.
November 1967, 116 — C — 9, Dawson M.D — Y.T.

N.T.S. Nos. 105 AND 115