

REPORT ON

JOE MINERAL CLAIMS

CASSIAR DISTRICT

BRITISH COLUMBIA

LIARD MINING DIVISION

NTS 104P/6W

Long. 129°27'W Lat. 59°18'N

for

GULF TITANIUM LTD.
890 West Pender Street
Vancouver, B.C.

by

JOHN H. KRUZICK, B.Sc.

February 14, 1980

*report from Vancouver Stock Exchange
Statement of Material Facts
Gulf Titanium Ltd (NPL)*

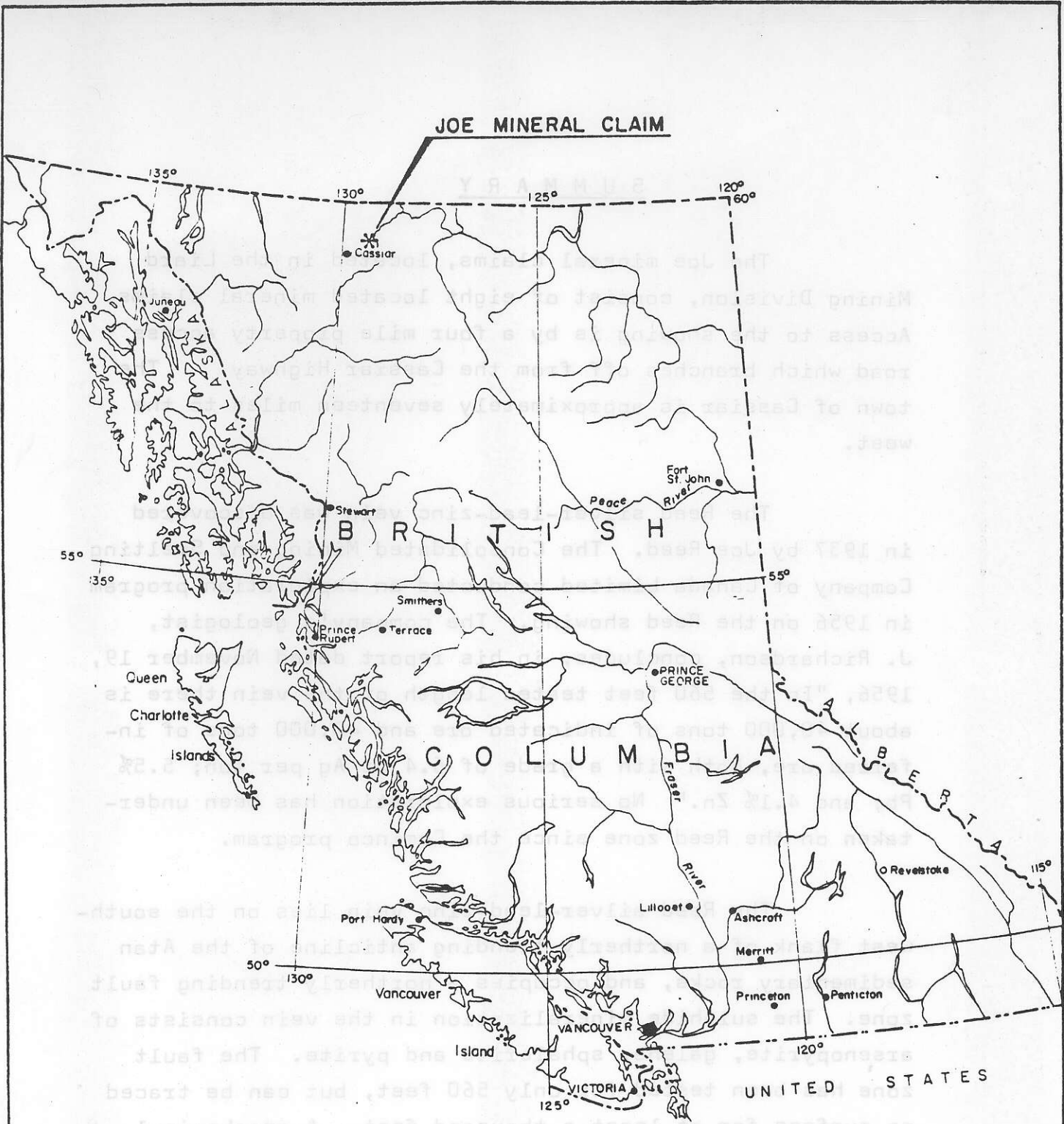
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MAPS

Figure 1 - Location Map.....	(Frontispiece)
Figure 2 - Claim Map.....	(Follows page 1)
Figure 3 - Composite Geology, Geochem, and Magnetics Map.....	(In pocket)



GULF TITANIUM LTD.
 Vancouver B.C.

LOCATION MAP

John Kruzick February, 1980

SCALE 1" = 136 MILES

FIG 1.

S U M M A R Y

The Joe mineral claims, located in the Liard Mining Division, consist of eight located mineral claims. Access to the showing is by a four mile property access road which branches off from the Cassiar Highway. The town of Cassiar is approximately seventeen miles to the west.

The Reed silver-lead-zinc vein was discovered in 1937 by Joe Reed. The Consolidated Mining and Smelting Company of Canada Limited conducted an exploration program in 1956 on the Reed showing. The company's geologist, J. Richardson, concludes, in his report dated November 19, 1956, "In the 560 feet tested length of the vein there is about 40,000 tons of indicated ore and 40,000 tons of inferred ore, both with a grade of 6.4 oz Ag per ton; 5.5% Pb; and 4.1% Zn." No serious exploration has been undertaken on the Reed zone since the Cominco program.

The Reed silver-lead-zinc vein lies on the southwest flank of a northerly trending anticline of the Atan sedimentary rocks, and occupies a northerly trending fault zone. The sulphide mineralization in the vein consists of arsenopyrite, galena, sphalerite and pyrite. The fault zone has been tested for only 560 feet, but can be traced on surface for at least a thousand feet. A geochemical survey for silver, lead and zinc has given an anomalous zone for over a thousand feet in the north direction and for 3,500 feet in the south direction. Both anomalies are located on trend of the vein structure.

A program of detailed prospecting, geological mapping, geochemical sampling, an electromagnetic survey

and Cat trenching is recommended for an initial exploration phase at a cost of \$30,000. A follow-up phase of diamond core drilling, based on initial results, is recommended, and costing a minimum of \$59,000.

INTRODUCTION

General

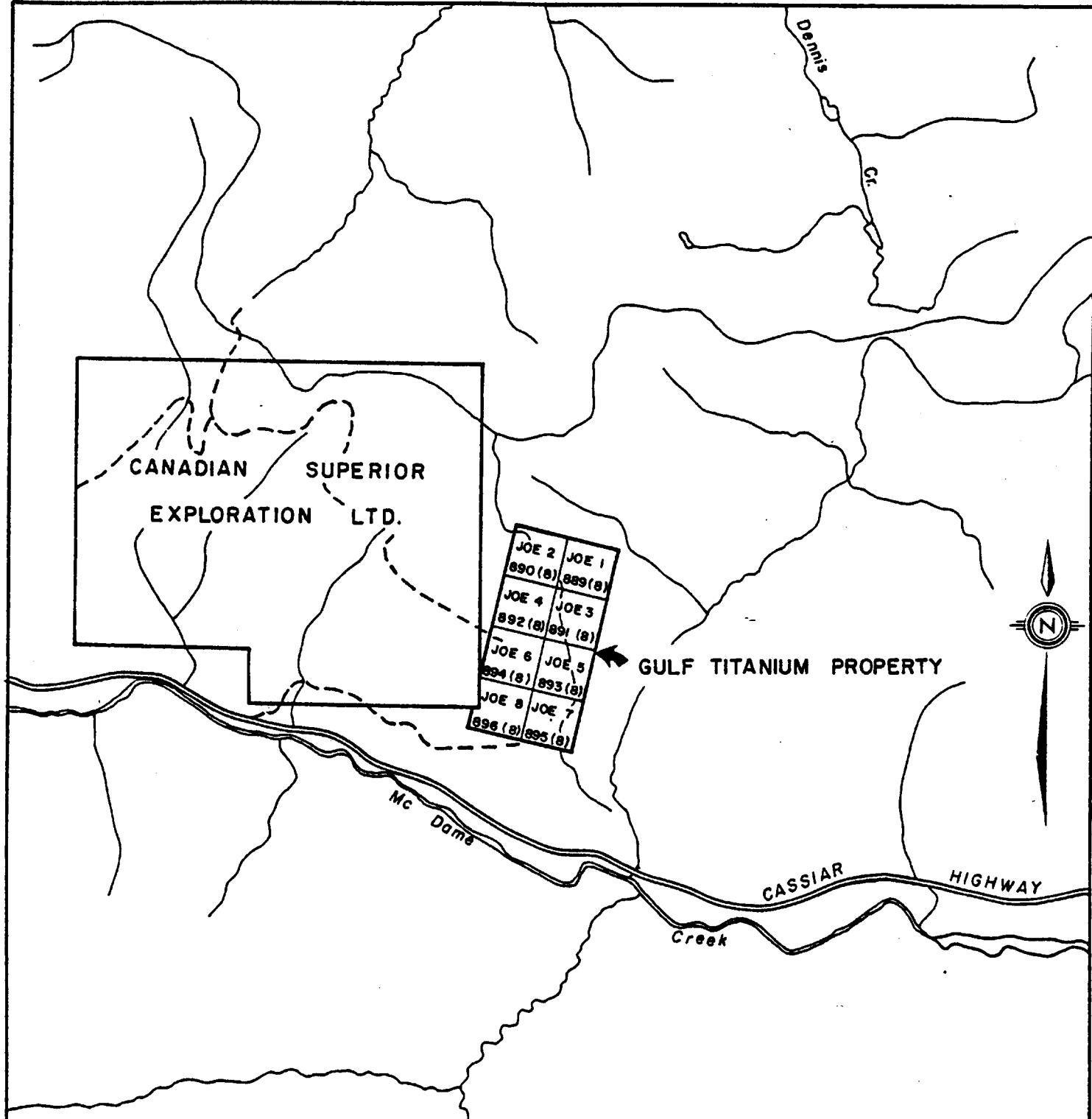
The writer conducted a field exploration program during the 1969 field season on the Mount Reed property, which at this time consisted of over 150 mineral claims located to cover a number of mineral showings. This report will be concerned with the silver-lead-zinc showing, known as the "Joe Reed Vein". The mineral exploration program consisted of line-cutting, a geochemical survey, an induced polarization survey, trenching, surveying and geological mapping and prospecting. The conclusions and recommendations in this report are from my personal observations made in the field during this program and from documentation of previous operator's work. This report is written at the request of the President of Gulf Titanium Ltd., Vancouver, B.C.

Property [refer to Figure No. 2]

The Joe 1-8 mineral claims are held in trust by G. Brett for Totem Investments Syndicate of Vancouver, B.C. The eight mineral claims, staked by the two post method to cover the Joe Reed Vein, were recorded on August 2, 1979 and have record numbers 889[8] to 896[8] assigned to them.

Location and Access

The Joe claims group is located approximately seventeen miles east of Cassiar, B.C., and one mile north of the Cassiar Highway. The Reed Vein is located on the south slope of Mount Reed at elevations 4600 feet to 4800



CANADIAN SUPERIOR
EXPLORATION LTD.

JOE 2 890 (8)	JOE 1 889 (8)
JOE 4 892 (8)	JOE 3 891 (8)
JOE 6 894 (8)	JOE 5 893 (8)
JOE 8 896 (8)	JOE 7 895 (8)

GULF TITANIUM PROPERTY



GULF TITANIUM LTD.
Vancouver B.C.

JOE MINERAL CLAIM

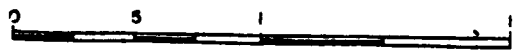
(From J. Kruzick Dec. 1969)

LIARD M.D. — BRITISH COLUMBIA
NTS 104 P / 6 W

John Kruzick February, 1980
Scale 1" = 50,000

JKR

FIG. 2



feet above sea level. Access to the showing area is by four mile access road branching off from the Cassiar Highway and travelling north on a gentle grade up the south slope of Mount Reed.

HISTORY

The Reed silver-lead-zinc vein was discovered in 1937 by Joe Reed and subsequently staked by him in 1947 as the Iron Cap mineral claim. In 1949, the property was optioned to Yukon Range Explorations Ltd., who carried out limited exploration, consisting of trenching and sampling.

The property was idle until August 1955 when the Consolidated Mining and Smelting Company of Canada Limited "Cominco" optioned the mineral claims from Mr. Reed, and conducted an exploration program during the 1955 and 1956 field season. The program consisted of five diamond drill holes, for a total of 1,498 feet, and geological mapping and prospecting.

The results and conclusions of this program are recorded in "Geological Report, Reed Property" by J. Richardson, November 19, 1956. Richardson's conclusions are as follows:

" The showing on the property is a vein deposit which has been exposed for a length of 560' by trenching and diamond drilling. The vein has been tested to a depth of 200' below surface and it has an average width of five feet.

" the grade of the vein obtained from only four surface samples and four drill holes is 6.4 ozs. Ag per ton; 5.5% Pb; and 4.1% Zn.

In the 560' tested length of the vein there is about 40,000 tons of indicated ore and 40,000 tons of inferred ore, both with a grade of 6.4 ozs Ag per ton; 5.5% Pb; and 4.1% Zn.

The best intersection in the drill holes is in hole No. 3 where there is 10.8' of ore averaging 7 ozs Ag per ton; 4.6% Pb; and 6.9% Zn. This ore is at the intersection of the main fault and a branch fault, hence it may be a small local shoot controlled by the faults.

The fault is a strong, steeply-dipping structure which has been traced for nearly 1,000'. The displacement is not known. The fault is occupied by a vein consisting of about two feet of quartz, with considerable arsenopyrite, on the hanging wall and up to five feet of iron, lead and zinc sulfides in breccia on the footwall. "

During the period from 1956 to May 1969 no exploration was recorded until Brettland Mines Ltd. and Glen Copper Mines Ltd. jointly optioned the Reed property from Mr. Reed. Most of the exploration work was concentrated on the molybdenum and tungsten mineralization located immediately to the west of the Reed Vein. Subsequently, in November 1969 Brettland and Glen Copper entered into a joint venture with Pacific Petroleum Ltd. A program was carried out during the 1970 field season, and most of the work was concentrated on the molybdenum tungsten mineralized areas. This agreement was terminated in October 1970, and the property reverted back to Joe Reed.

In 1971, Glen Copper Mines Ltd. re-optioned the property from Mr. Reed and drilled two diamond drill holes

on the "Reed" vein approximately 140 feet apart at -55° , $N60^{\circ}W$ and at -55° , $N55^{\circ}W$, for a total footage of 1,195 feet. The drill holes appear to have been drilled about parallel to the dip of vein and opposite to Cominco's direction of drilling. No heavily mineralized sulphide zones were encountered and only minor assay values for silver, lead and zinc were obtained. It appears that the drilling carried out here did not intersect the vein zone.

GEOLOGY

General Geology

The Reed silver-lead-zinc vein lies on the southwest flank of a northerly trending anticline of Lower and Middle Cambrian sedimentary rocks of the Atan Group, which borders the Cassiar Batholith to the west. The sedimentary rocks are composed of thin to medium bedded quartzites, siltstones, limestones and dolomites. Bedding attitudes are usually westerly to north-westerly with moderate to steep southerly dips. Major faulting has occurred along northerly trending directions, and one of these fault zones is occupied by the Reed vein.

Local Geology and Silver-Lead-Zinc Mineralization

The Reed showing is a vein-type of deposit occupying a strong fault zone cutting the Atan group of siltstones, quartzites and carbonates. The fault trends in a northerly direction, and dips from 65° to 85° west. The fault has been traced on surface for approximately a thousand feet where it trends into the overburden. The vein consists of approximately two feet of quartz on the hanging-wall side and up to five feet of sulphides on the footwall side, averaging about 5 feet in width. Sulphide mineralization, consisting of arsenopyrite, minor pyrite and galena, are present in the quartz vein while pyrite, galena and sphalerite are abundant in the brecciated footwall of the vein. The grade of the vein obtained from four surface sample locations and four diamond drill holes which cut the

vein at depth and are located over a strike length of 560 feet and 200 feet of downdip extension is as follows: Silver - 6.4 oz/ton; Lead - 5.5%; Zinc 4.1% [Cominco 1956].

GEOCHEMICAL-GEOPHYSICAL RESULTS

Anomalous geochemical stream sediment and soil values were obtained for silver, lead and zinc in the area immediately north and south of the Reed vein. Prospecting and geological mapping to date has not found the source of these anomalous values because talus and overburden to the north and south of the vein obscures the outcrop.

To the north of the Reed vein and on trend, a coincident lead-zinc-tungsten anomaly is present for over a thousand feet. To the south of the vein and on strike a much broader lead-zinc anomaly is present for 3,500 feet. This southern anomaly has a smaller coincident magnetic anomaly associated within it. A smaller geochemical anomaly approximately 600 feet to the west of the Reed vein is located in a fault controlled gully.

CONCLUSIONS

The diamond drilling and trenching program conducted by Cominco in 1956 on the Reed silver-lead-zinc vein has outlined a structure 560 feet in length and 200 feet in depth, with an average width of 5 feet. Tonnage potential calculated by Cominco is 40,000 tons of indicated ore, and 40,000 tons of inferred ore with a grade of 6.4 oz silver per ton, 5.5% lead per ton, and 4.1% zinc per ton.

Translated into dollar value per ton at present metal prices, this ore is valued at between \$325 to \$350 per ton.

The vein has only been tested for 560 feet of strike length while the fault zone can be traced for at least a thousand feet. A geochemical survey for lead and zinc has outlined an anomalous zone for 1,000 feet beyond the vein in the north direction and for 3,500 feet in the south direction. This southern anomaly has a smaller coincident magnetic anomaly related to it. These two north and south anomalies may represent geochemical expression of on-strike extension of the Reed vein in these two directions. To the west of the Reed vein a coincident lead-zinc geochemical anomaly was obtained in a fault controlled gully which may be a geochemical expression of a parallel vein structure.

RECOMMENDATIONS

Further exploration work on the Reed vein should be implemented to investigate the entire thousand feet of strike length of the fault zone and the geochemical anomalies to the north and to the south of the vein.

Some attention should also be given to the lead-zinc anomaly immediately to the west of the Reed vein. The field exploration program should consist of detailed geochemical sampling on an established grid with a north-south base line and east-west grid lines at 200 foot intervals over the entire claim area.

A detailed electromagnetic survey should be carried out on the established grid at 25 foot intervals. Detailed prospecting and geological mapping should be implemented initially in the area of the Reed vein and on corresponding geochemical anomalies. The entire claim area should be mapped and prospected in detail. The old trenches and workings on the Reed vein should be uncovered, and a re-sampling program carried out. To investigate the continuity of the vein, Cat-trenching should be implemented along the known vein structure. The corresponding north and south anomalies should be trenched to investigate the possible on-strike extension of the vein zone. Trenching should also be carried out on the geochemical anomaly to the west of the Reed vein.

If the results of the initial program prove favorable, and the on-strike extension of the Reed vein is established, then a second phase of exploration should be undertaken. This second phase should be diamond core drilling at 100 foot intervals along the established strike of the Reed vein. At least 2,000 feet of diamond drilling is recommended to properly evaluate the structure.

COST ESTIMATEPhase I [one month program - 4 men]

Supervision and geological mapping	\$ 4,500.00	
Prospecting	3,000.00	
Line Installation	2,500.00	
Electromagnetic Survey	2,000.00	
Detailed Soil and Silt Sampling	3,000.00	
Soil Analyses and Assaying	2,500.00	
Cat Rental [road clearing & trenching]	6,000.00	
Mobilization, de-mobilization and Vehicle Rental	1,500.00	
Food & Camp Accommodations	2,000.00	
Equipment and Supplies	1,000.00	
Reports, Maps, Compilation of Data, Drafting, Reproduction & Secretarial	<u>2,000.00</u>	
Total Phase I		\$30,000.00

Phase II [one month program]

BQ Diamond Core Drilling 2,000 feet @ \$25/foot	50,000.00	
Core preparation and Core Boxes	1,000.00	
Assaying	500.00	
Cat work [for drill setup]	1,000.00	
Supervision and Core Logging	4,500.00	
Food and Camp Accommodations	1,000.00	
Report and Compilation of Drilling Results	<u>1,000.00</u>	
Total Phase II		<u>59,000.00</u>
Total Phase I and Phase II		<u>\$89,000.00</u>

Respectfully submitted,


John H. Kruzick, B.Sc.
Geologist

February 14, 1980

REFERENCES

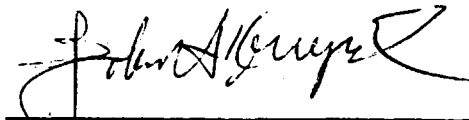
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George Lamont, August 1971

CERTIFICATE

I, JOHN H. KRUZICK, of 2000 Arbury Avenue, Coquitlam, British Columbia, do hereby certify:

- 1] I am a graduate geologist of the University of British Columbia [B.Sc., in Geology, 1969].
- 2] I am a member of the Geological Association of Canada.
- 3] I have been actively engaged in mineral exploration since my graduation.
- 4] I have been self-employed as a geologist in the mineral exploration field since January, 1972.
- 5] The findings in this report are derived from data acknowledged under "References" and from personal observations made in the field during the course of the 1969 exploration season.
- 6] I have no direct or indirect interest in the property described in this report, nor in the securities of Gulf Titanium Ltd., and I do not expect to receive any such interest as a result of writing this report.

DATED at Coquitlam, British Columbia, this fourteenth day of February, 1980.



John H. Kruzick, B.Sc.

JOHN H. KRUZICK
2000 Arbury Avenue
Coquitlam, B.C.
V3J 3K1

February 14, 1980

Superintendent of Brokers
1050 West Pender Street
Vancouver, B.C.

Dear Sir:

Re: Report on JOE Mineral Claims
for Gulf Titanium Ltd.

I give my consent to make use of this report
on the JOE Mineral Claims, dated February 14, 1980 for
the Gulf Titanium Ltd. Statement of Material Facts.

Respectfully submitted,



John H. Kruzick, B.Sc.

JHK/LA
Encls.

20. STATUTORY RIGHTS OF RESCISSION

Sections ⁶⁰61 and ⁶¹62 of the Securities Act (British Columbia) provides in effect, that where a security is offered to the public in the course of primary distribution:

- (a) A purchaser has a right to rescind a contract for the purchase of a security, while still the owner thereof, if a copy of the last Statement of Material Facts, together with financial statements and a summary of engineering reports as filed with the Vancouver Stock Exchange, was not delivered to him or his agent prior to delivery to either of them of the written confirmation of the sale of the securities. Written notice of intention to commence an action for rescission must be served on the person who contracted to sell within 60 days of the date of delivery of the written confirmation, but no action shall be commenced after the expiration of three months from the date of service of such notice.
- (b) A purchaser has the right to rescind a contract for the purchase of such security, while still the owner thereof, if the Statement of Material Facts or any amended Statement of Material Facts offering such security contains an untrue statement of material fact or omits to state a material fact necessary in order to make any statement therein not misleading in the light of the circumstances in which it was made, but no action to enforce this right can be commenced by a purchaser after expiration of 90 days from the later of the date of such contract or the date on which such Statement of Material Facts or amended Statement of Material Facts is received or is deemed to be received by him or his agent.


Reference is made to the said Act for the complete text of the provisions under which the foregoing rights are conferred.

21. CERTIFICATE OF THE DIRECTORS AND PROMOTERS OF THE ISSUER:


The foregoing constitutes full, true, and plain disclosure of all material facts relating to the securities offered by this Statement of Material Facts.

OCTOBER 1, 1980

(Date)



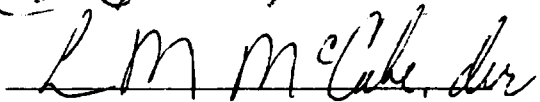
DON FARRELL
President & Director & Promoter



D. CREMONESE
Director



GUILFORD BRETT
Director & Promoter



L.M. MCCABE
Secretary-Treasurer & Director

CERTIFICATE OF THE UNDERWRITER(S):

To the best of our knowledge, information, and belief, the foregoing constitutes full, true, and plain disclosure of all material facts relating to the securities offered by this Statement of Material Facts.

OCTOBER 2 1980

(Date)

JONES, GABLE & COMPANY LIMITED



