



GREAT WESTERN PETROLEUM CORPORATION

GEOCHEMICAL REPORT ON THE
LORNE CLAIMS (LORNE GROUP)
WATSON LAKE MINING DISTRICT

Long. $132^{\circ}52'W$

Lat. $61^{\circ}37'N$

NTS: 105F/10

L. Eccles
Author: L.K. Eccles

December 3, 1981

090979

This report was examined by
the Geological Survey Unit
under Section 20 of the Yukon Quartz
Mining Act and is allowed as
representation of work in the amount
of \$ 5500.

P. Watson

Per Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

TABLE OF CONTENTS

	<u>PAGE NO.</u>
INTRODUCTION	1
LOCATION AND ACCESS	2
PHYSIOGRAPHY AND VEGETATION	2
HISTORY	3
LIST OF CLAIMS	3
OWNER AND OPERATOR	4
ECONOMIC ASSESSMENT OF THE PROPERTY	4
GEOCHEMICAL PROGRAM	5
Interpretation	6-7
GEOLOGY AND MINERALIZATION	8-9
CONCLUSIONS AND RECOMMENDATIONS	10-11
COST STATEMENT - Seagull Joint Venture	12-14
QUALIFICATIONS	15
ATTESTATION	16
APPENDIX 'A'	17-19

LIST OF FIGURES

<u>FIGURES</u>		<u>PAGE NO.</u>
SJV-81-1	Sample Locations	In Pocket
SJV-81-2	Gold and Silver Geochemistry	" "
SJV-81-3	Copper, Lead and Zinc Geochemistry	" "
SJV-81-4	General Geology	" "
SJV-81-12	Location of the Lorne and Nex Prospects	Foll. Page 1
SJV-81-13	Location of the Lorne Claims	Foll. Page 3.

INTRODUCTION

A government geochemical survey conducted over NTS Map Sheet 105F in 1978 (O.F. 564) showed anomalous barium, lead, zinc and silver values from a tributary at the headwaters of Groundhog Creek and from one that drains easterly into Seagull Creek.

These tributaries drained opposite sides of a ridge which on government geology maps are shown as being predominantly dolomites, phyllites, greywackes and other sedimentary rocks that may be potential hosts for stratiform sulfide lead/zinc deposits associated with barite horizons. A group of 55 mineral claims was staked to adequately cover both drainages and surrounding ridges.

The Lorne 1-55 claims were staked in April 1981 on behalf of Seagull Joint Venture and preliminary geology and geochemistry was completed in July by Great Western Petroleum Corporation.

A group of 7 claims staked prior to the Lorne claims and called "Jeff 1-4", Jim, 1-2 and HI Grade occupy the central area around which the Lorne claims are staked.

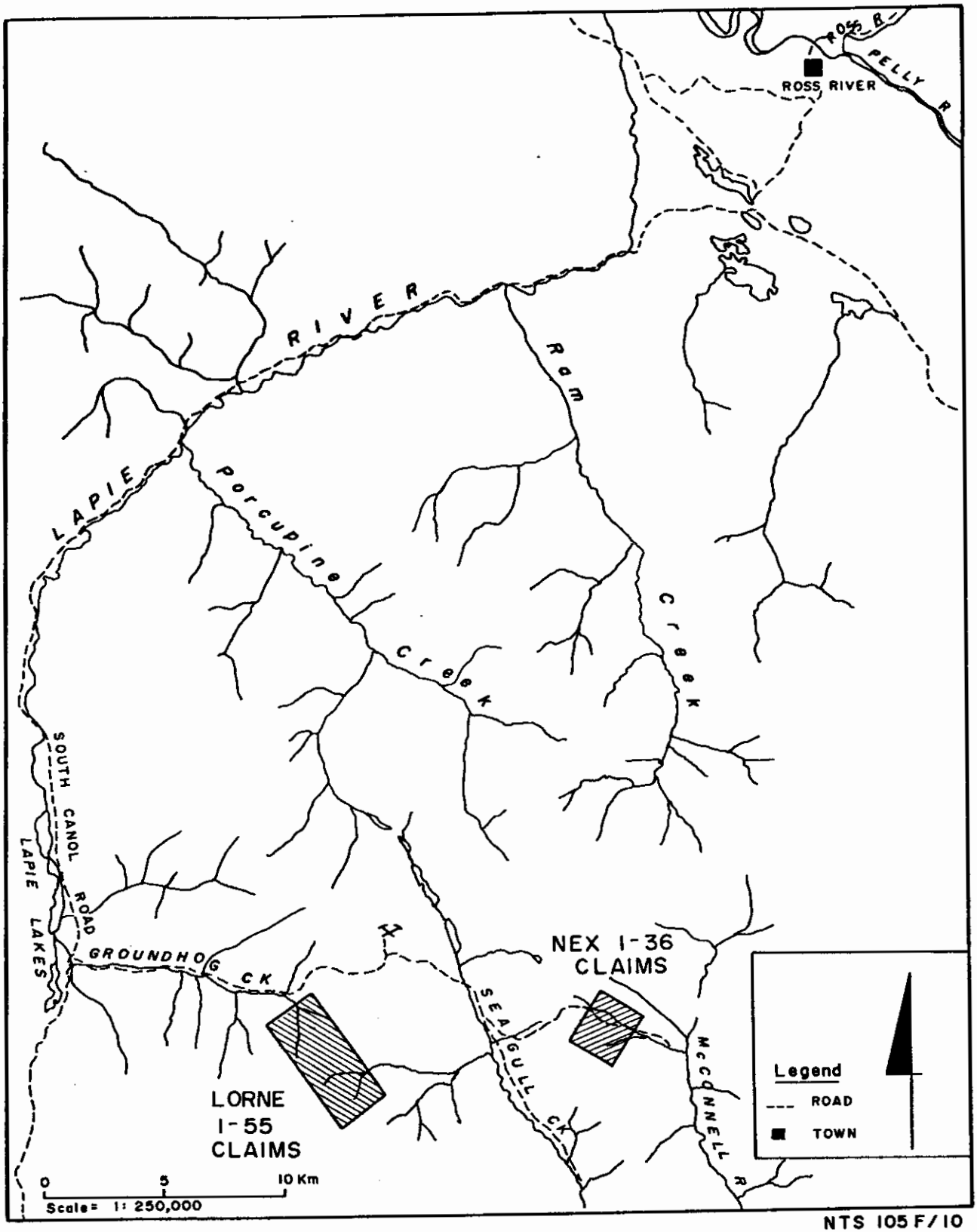


Figure SJV-81-12 SEAGULL JOINT VENTURE
 LOCATION OF LORNE AND NEX CLAIMS

NTS 105 F/10

LOCATION AND ACCESS

The Lorne 1-55 claims are located about 50 kilometers southwest of the town of Ross River, Yukon and are accessible by road and helicopter (see Figures SJV-81-12 and 13).

About 75 kilometers along the South Canal Road from Ross River, a mining road in good condition, branches off to the east and follows Groundhog Creek to its headwaters, then over a pass and into the Seagull Creek Valley. At 10.6 kilometers along the mining road from the turn-off, the camp for the Lorne claims was located. All traverses were accessible by foot from camp.

PHYSIOGRAPHY AND VEGETATION

The claims cover a ridge between two north flowing tributaries at the headwaters of Groundhog Creek and one easterly flowing tributary that flows into Seagull Creek.

Elevations on the claims range from 1500 to 2100 meters. The lower elevations, especially along the creeks are covered in dense buckbrush. Patches of black spruce grow on some of the sidehills up to an elevation of about 1600 meters. Above that alpine grasses and mosses are prevalent. Vegetation of any kind is sparse on hillsides that are underlain by dolomite.

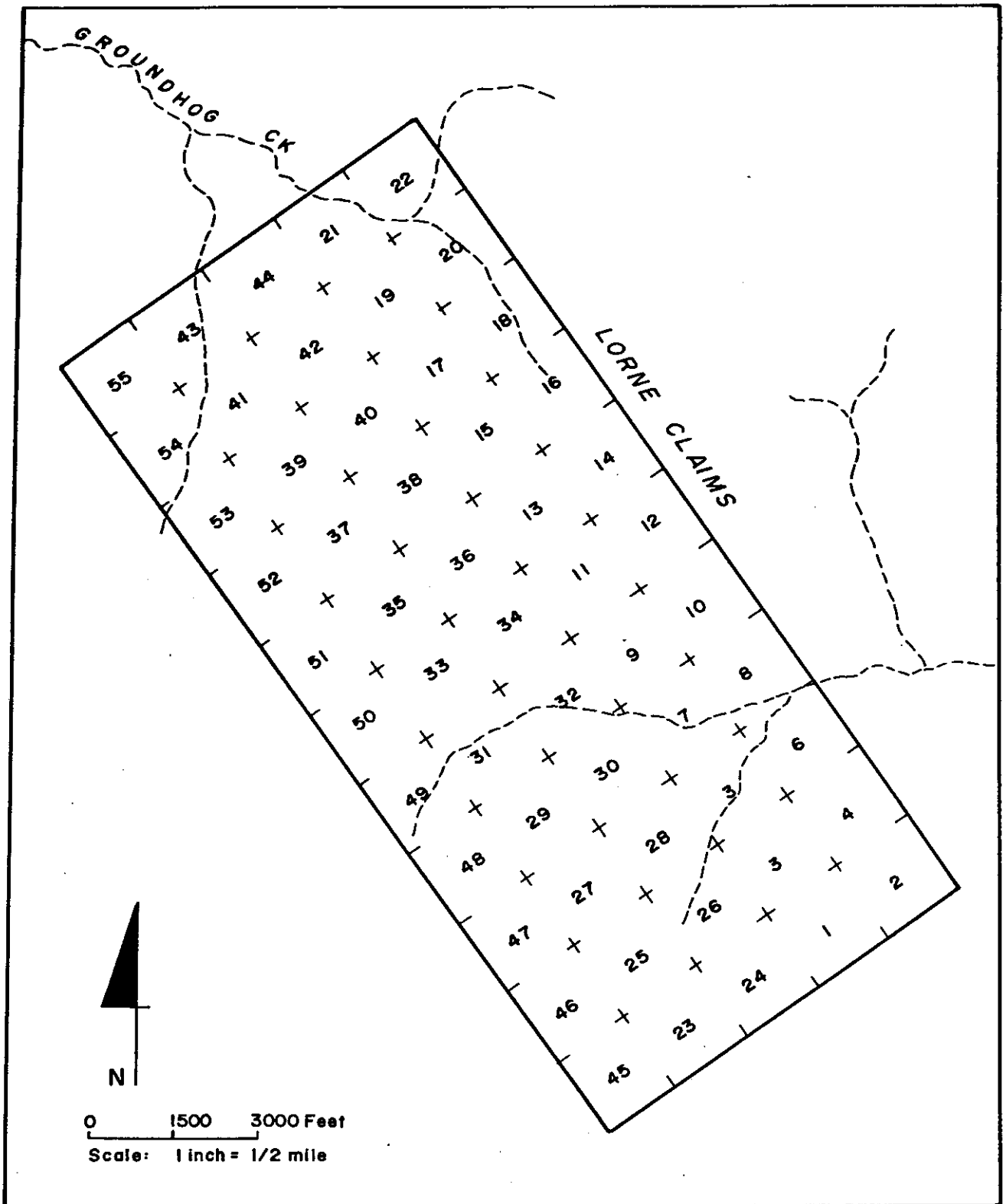
Many of the ridges underlain by dolomite have steep cliffs rising tens of meters above blocky talus slopes. Hillsides composed dominantly of phyllite and shaley sediments are less steep.

HISTORY

As was mentioned in the introduction, several claims exist within the central area of the Lorne claims. It is not known what kind of work has been done on these claims but evidence of a small camp and sampling in the area of the main showing (refer to map SJV-81-4) was present. The main showing is covered by the Jeff 1-4 claims, owned by H. & P. Holdings Ltd. who have filed assessment on them, keeping them in good standing until Sept. 12, 1985. The Jim 1 and 2 claims, tied onto the Jeff claims on the southwest were supposed to have lapsed Sept. 4, 1981. The claim called the Hi Grade, located to the east of Jeff 1-4 is owned by Norman Hennel who has paid cash in lieu and they are in good standing till August 6, 1982.

LIST OF CLAIMS

<u>Group</u>	<u>Claim Name</u>	<u>Grant Number</u>	<u>Units</u>	<u>Date of Record</u>
Lorne	Lorne 1-55	YA 58134-58188	55	April 23, 1981



NTS: 105 F / 10

Figure. SJV-81-13 SEAGULL JOINT VENTURE
LOCATION OF LORNE 1-55 CLAIMS

OWNER AND OPERATOR

The claims are currently owned and operated by Great Western Petroleum Corporation for Seagull Joint Venture under an agreement with Lornex Mining Corporation.

ECONOMIC ASSESSMENT OF THE PROPERTY

Boulders (up to 30cm. across and 5cm. thick) of massive galena were found in float, consisting of dolomite and quartz veins. Unfortunately, the main showing of this massive sulfide float is situated within the Jeff 1-4 claims.

Several other localities entirely within the Lorne claims, were seen to have small shows of galena as blebs several centimeters across within dolomite. These areas yielded anomalous geochemical values.

The large amount of scree and overburden on some of the sidehills could be covering more pods of massive sulfide.

GEOCHEMICAL PROGRAM

Sidehill and stream sediment sampling was undertaken in order to get some useful information on the Lorne claims. Sidehill samples were collected every 200 meters, 30-60 meters above the valley floor at the "break in slope", where the steep sidehill merges with the valley topography. Soil samples were collected with stonemason hammers and put into gusseted, high strength kraft paper bags.

Stream sediments were collected every 100 meters using small scoops and similar sample bags. All tributaries to the main creeks and dry gullies were also sampled.

Altimeters, hip chains and 1:10,000 scale blow-ups of the government topographic maps, were used for control in the surveys and sample stations were flagged and labelled.

Some rock samples were also collected and analyzed geochemically. If galena mineralization was present the rocks were also assayed.

A total of 101 silt, 78 soils and 12 rocks were collected from the Lorne claims.

Samples were analyzed at Vangeochem Labs in North Vancouver for copper, lead, zinc, silver and gold. Rock assays were completed at Acme Analytical Laboratories.

Procedures for geochemical analysis and assaying can be found in Appendix A in the back of this report.

Interpretation

Background, weakly anomalous, moderate and highly anomalous values for each element analyzed were calculated for both silt and soil samples and are tabulated below:

<u>Element</u>	<u>Background</u>	<u>Weak</u>	<u>Moderate</u>	<u>High</u>
Au soil) ppb	<10	10-20	21-80	>80
silt) ppb	<10	10-20	21-80	>80
Ag soil) ppm	.5	1.0-2.0	2.1-4.0	>4.0
silt) ppm	.6	1.2-2.4	2.5-4.8	>4.8
Zn soil) ppm	196	392-784	785-1568	>1568
silt) ppm	226	452-904	905-1808	>1808
Pb soil) ppm	41	82-164	165-328	> 328
silt) ppm	70	140-280	281-560	> 560
Cu soil) ppm	30	60-120	121-240	> 240
silt) ppm	29	58-116	117-232	> 232

Usually where any galena was observed, rock and soil samples were anomalous in silver and lead.

Silver values ranged between 'not detected' to as high as 2.2 ppm. As a rule the higher silver values occurred where the phyllites outcropped at the southernmost extent of the property or where galena was seen in the dolomite.

Lead values ranged between 8 ppm and 660 ppm, the higher values often being coincident with high silver values.

Gold and copper values over the entire property were low, ranging between 'not detected' and 20 ppb for gold and between 5 ppm and 93 ppm for copper.

High zinc values were scattered over the entire property with no preference for rock type except that if the rock had visible galena then it would always have a high zinc value associated with it. Values for zinc ranged between 24 ppm and 890 ppm.

Refer to maps SJV-81-01 to 03, for sample locations and results.

GEOLOGY AND MINERALIZATION

Rocks that outcrop on the Lorne claims are lustrous grey phyllites, with some gradations to greywacke and/or tuffs, and massive grey to buff weathering, thick bedded dolomite.

According to the government geology map for Quiet Lake, (GSC Map 7-1960), the phyllites (Unit 1a, b, c, on map #SJV-81-4) are believed to be the older of the two units and are considered to be Cambrian in age. Most of the rock observed was in talus and felsenmeer except for on cliff faces and small canyons in the creek beds.

Quartz veins measuring up to 1 meter wide were seen to cut both rock units but occurred more frequently in the dolomite, often showing vugs with well developed crystals.

Galena mineralization was seen in several locations around the claims, always associated with the massive buff weathering dolomite. The occurrences are mostly small and usually found as narrow fracture fillings and as blebs up to 3 cm. across in the dolomite.

The best showing observed had large pods of galena up to 10 cm. thick and 30 cm. long. Pieces of this rock were found only as scree and were traced up to a snow patch, just below a cliff. In some cases the mineralized boulders were rusty and easy to recognize against the grey dolomites but often pods of solid galena were masked by a grey, powdery cerussite coating. In the same area as the main showing quartz veins were also found to contain galena and chalcopyrite. This area appears to be faulted and slightly folded.

CONCLUSIONS AND RECOMMENDATIONS

Unit 1b, the interbedded phyllites and greywackes, which is located in the eastern part of the Lorne claims has low geochemical values associated with it except for some high in zinc.

The dolomite was the only rock seen to have galena present, however, several areas within the lustrous phyllite Unit (1a) showed anomalous lead and silver values. This combined with the fact that phyllite is in close contact to the dolomite in the area of the main showing suggests the lustrous phyllites warrant closer examination.

Unfortunately, the most impressive showing on the Lorne claims is situated in an area that was prestaked by other people and is still occupied by them, therefore the areas that remain of interest on the Lorne claims are a few high lead and silver geochemical values located around the Lorne 31, 32, 33, and 34 claims. Further prospecting on some of the small galena showings that occurred between Lorne 33 and 50 and Lorne 51 and 35 should also be followed up.

If follow-up on these areas proves to be significant then an attempt should be made to option the Jeff 1-4 claims covering the main showing.

Re-analysis of some of the soil samples (say every third one) for barium may show the area to be on trend with typical, barium rich sediments that often contain or bound stratiform sulfide deposits. If this is the case a detailed geochemical program within this belt of rocks is warranted to determine other sources of massive sulfide mineralization.

-12-
 FIELD COSTS - SEAGULL JOINT VENTURE
Lorne, Nex, Ncc Claims - July 1981

1. Personnel

<u>Name</u>	<u>Specific Dates</u>	<u>Per Diem Rate</u>	<u># Days</u>	<u>Total</u>
L. Connolly	July 4-6, 8-17, 21-23	\$73.37	16	\$1173.92
L. Eccles	July 4-6, 8-17, 21-23	116.62	16	1865.92
R. Green	July 4-6, 8-17, 21-23	52.95	16	847.20
C. Muir	July 6, 8-16	52.95	10	529.50
R. Riedel	July 4-6, 8-17, 21-23	58.06	16	928.96
				\$5345.50

2. Transportation

A. Truck

GWP Company truck: Rates: \$30/day, 17¢/km + gas	
16 days @ \$30.00 (includes insurance)	\$480.00
3378 km @ \$0.17	574.26
Gas	468.10
	\$1522.36

B. Helicopter Charter

<u>Company</u>	<u>Invoice #</u>	<u>Date</u>	<u>Amount</u>
Trans North	54836	July 15, 1981	\$983.16
" "	56275	July 16, 1981	245.79
			1228.95

3. Expediting

MacPheat Expediting - Ross River	\$100.00
Ross River Store - Groceries	648.60
Radio Rental - 8 days @ 3.50/day	28.00
	\$776.60

4. Travel Expenses - Hotel, Meals, Airfare: July 4-23/81
 Total - \$1236.95

5. Sample Shipment Costs - Greyound
 Total - \$176.50

Seagull Joint Venture - Cost Statement (contd.)

6. Geochemical Assay Costs

<u>Company</u>	<u>Date</u>	<u>Invoice #</u>	<u># Samples</u>	<u>Total</u>
Vangeochem	Aug. 7/81	6363	1	\$ 24.50
"	"	6365	9	49.50
"	Aug. 17/81	6396	10	105.50
"	"	6395	9	153.00
"	Aug. 20/81	6410	142	1272.00
"	Aug. 21/81	6412	175	1560.80
"	Aug. 24/81	6414	159	850.65
"	Aug. 21/81	6415	86	1089.55
				<hr/>
				\$5103.50

7. Report Writing & Drafting

\$250.00

Summary of Costs

Personnel	\$5345.50
Transportation - Truck	1522.36
- Helicopter	1226.95
Expediting	776.60
Travel Expenses	1236.95
Sample Shipment	176.50
Geochem/Assay Costs	5103.50
Report Writing	250.00
	<hr/>
Total -	<u>\$15,640.36</u>

Distribution

Lorne Claim Group	55 claims
Nex Claim Group	36 claims
Ncc Claim Group	<u>64 claims</u>
Total	= 155 claims
Average	\$ 100.90/claim

Seagull Joint Venture Cost Statement (contd.)

Distribution of Work to Claims:

N.B. Costs prorated on basis of total numbers of claims worked while in the area.

	<u>CLAIM GROUP</u>		
	<u>Lorne</u>	<u>Nex</u>	<u>Ncc</u>
1. Wages	\$1896.79	\$1241.64	\$2207.36
2. Transportation A.	540.19	353.52	628.48
B.	436.15	285.48	507.52
3. Expediting	275.57	180.36	320.64
4. Travel	438.92	287.28	510.72
5. Shipment Costs	62.45	40.68	72.32
6. Geochemical Cost	1810.93	1185.48	2107.52
7. Report Writing and Drafting	88.71	57.96	103.04
	<hr/>		
TOTAL =	\$5549.71	\$3632.40	\$64 57.60
	<hr/> <hr/>		

Louise K. Eccles
September 11, 1981

GREAT WESTERN PETROLEUM CORPORATION

PERSONNEL EMPLOYED FOR THE SURVEYS

L. Connolly, Box 53, Atlin, B.C. V0N 1A0
(Sampler)

L. Eccles, 3rd Floor, 744 W. Hastings Street, Vancouver, B.C. V6C 1A5
(Geologist)

R. Green, 466 Hermosa Avenue, North Vancouver, B.C. V7N 3C1
(Sampler)

C. Muir, 4307 Britannia Drive, Calgary, Alberta
(Sampler)

R. Riedel, 529 Yorston Street, Williams Lake, B.C. V2G 1H3
(Sampler)

QUALIFICATIONS

I, Louise K. Eccles, do hereby certify that:

1. I am a geologist residing at 782 West 22nd Avenue, Vancouver, British Columbia and was employed by Great Western Petroleum Corporation at the time the geochemical and geological work on the Lorne claims was performed.
2. I am a graduate of the University of British Columbia with a B.Sc. (Honours) degree in geology.
3. I have practised by profession in geology continuously for the past five years in British Columbia, Ontario, the Yukon, and Northwest Territories.
4. Between July 10 and July 12, 1981, I directed a field program on the Lorne property on behalf of Great Western Petroleum Corporation.

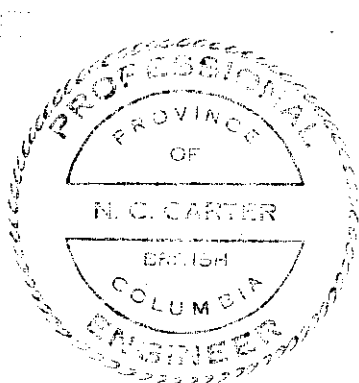


L.K. Eccles

ATTESTATION

I, Nicholas C. Carter of Victoria, British Columbia, hereby certify that:

1. I am a practising geologist, registered with the Association of Professional Engineers of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc. (1960); Michigan Technological University with M.S. (1962) and the University of British Columbia with Ph.D. (1974).
3. I have practised my profession in British Columbia and Eastern Canada and the Western United States for the past 21 years.
4. I personally oversaw the geological and geochemical program carried out by Ms. Eccles on the Lorne Claims and will attest to the authenticity of data contained in this report.



A handwritten signature in cursive script that reads "N.C. Carter".

N.C. Carter, Ph.D., P.Eng.

APPENDIX 'A'

Analytical Procedures for Gold, Silver, Lead, Zinc and Copper

Analytical Procedure Used To Determine Hot Acid Soluble
Pb, Zn, Cu, Ag in geochemical silt, soil and rock samples

1. Sample Preparation

- (a) Geochemical soil, silt or rock samples were received in the laboratory in wet-strength 3½ x 6½ Kraft paper bags and rock samples in 4" x 6" Kraft paper bags.
- (b) The wet samples were dried in a ventilated oven.
- (c) The dried soil and silt samples were sifted by hand using a 8" diameter 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- (d) The dried rock samples were crushed by using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for later analysis.

2. Methods of Digestion

- (a) 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.
- (b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).
- (c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

3. Method of Analysis

Pb, Zn, Cu and Ag analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamps. The digested samples were aspirated directly into an air and acetylene flame. The results, in parts per million, were calculated by comparing a set of standards in a strip chart recorder.

4. The analyses were supervised or determined by Mr. Conway Chun or Mr. Eddie Tang and the laboratory staff.

Analytical Procedure Used To Determine Aqua Regia Soluble Gold in Geochemical Samples

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received in the laboratory in wet-strength 4" x 6" Kraft paper bags or rock samples sometimes in 8" x 12" plastic bags.
- (b) The dried soil and silt samples were sifted by hand using a 8" diameter 80-mesh stainless steel seive. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- (c) The dried rock samples were crushed by using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for later analysis.

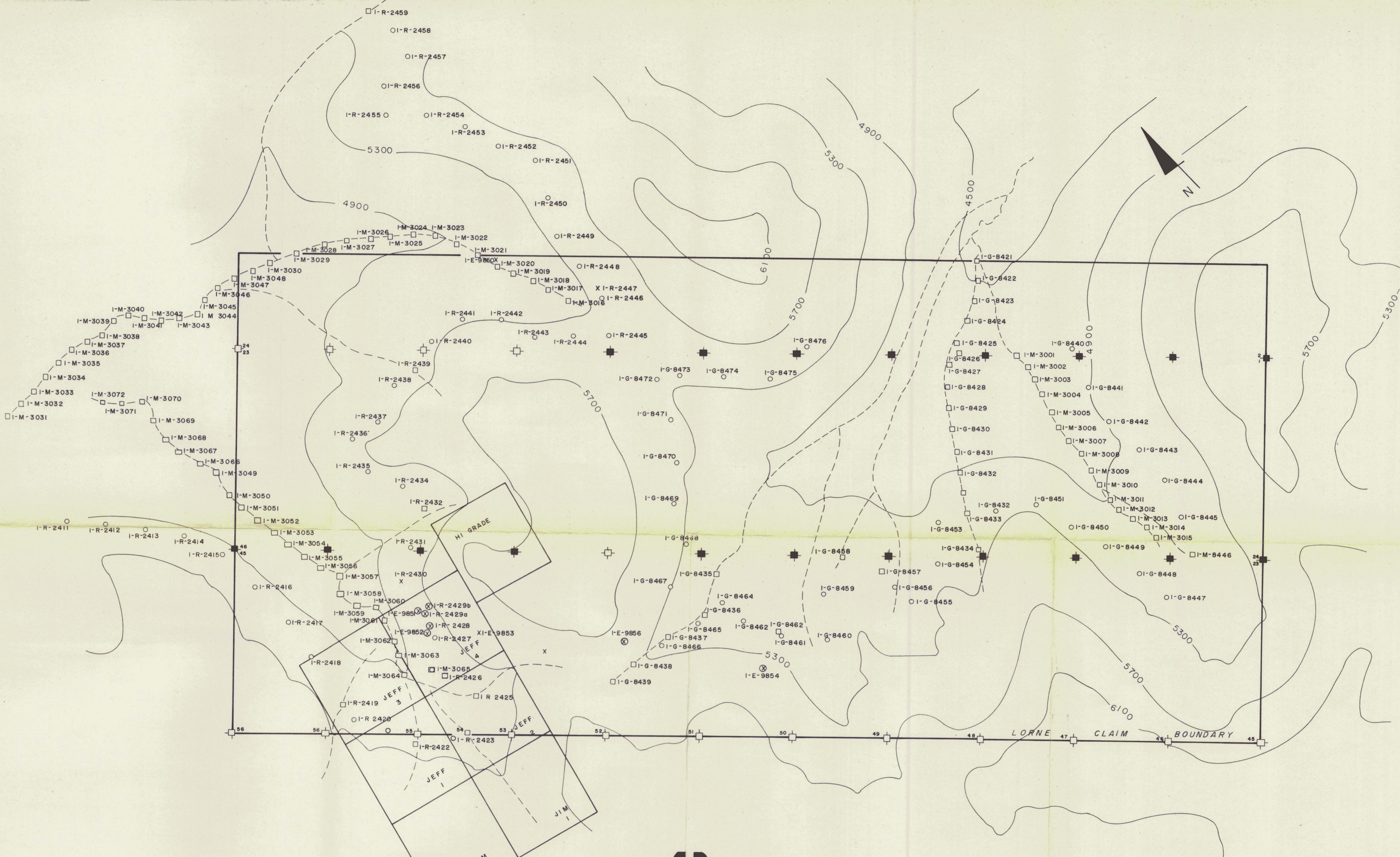
2. Method of Digestion

- (a) 5.00 - 10.00 grams of the minus 80-mesh samples were used. Samples were weighed out by using a top-loading balance into beakers.
- (b) 20 ml of Aqua Regia (3:1 HCl:HNO₃) were used to digest the samples over a hot plate vigorously.
- (c) The digested samples were filtered and the washed pulps were discarded and the filtrate was reduced to about 5 ml.
- (d) The Au complex ions were extracted into diisobutyl ketone and thiourea medium. (Anion exchange liquids "Aliquot 336").
- (e) Separate Funnels were used to separate the organic layer.

3. Method of Detection

The gold analyses were detected by using a Techtron model AA5 Atomic Absorption Spectrophotometer with a gold hollow cathode lamp. The results were read out on a strip chart recorder. A hydrogen lamp was used to correct any background interferences. The gold values in parts per billion were calculated by comparing them with a set of gold standards.

4. The analyses were supervised or determined by Mr. Conway Chun or Mr. Eddie Tang and his laboratory staff.



GREAT WESTERN PETROLEUM
CORPORATION
SEAGULL JOINT VENTURE

SAMPLE LOCATION
Lorne I-55 Claims

Date: November 1981 NTS: 105F/10
Figure: SJV-81-1

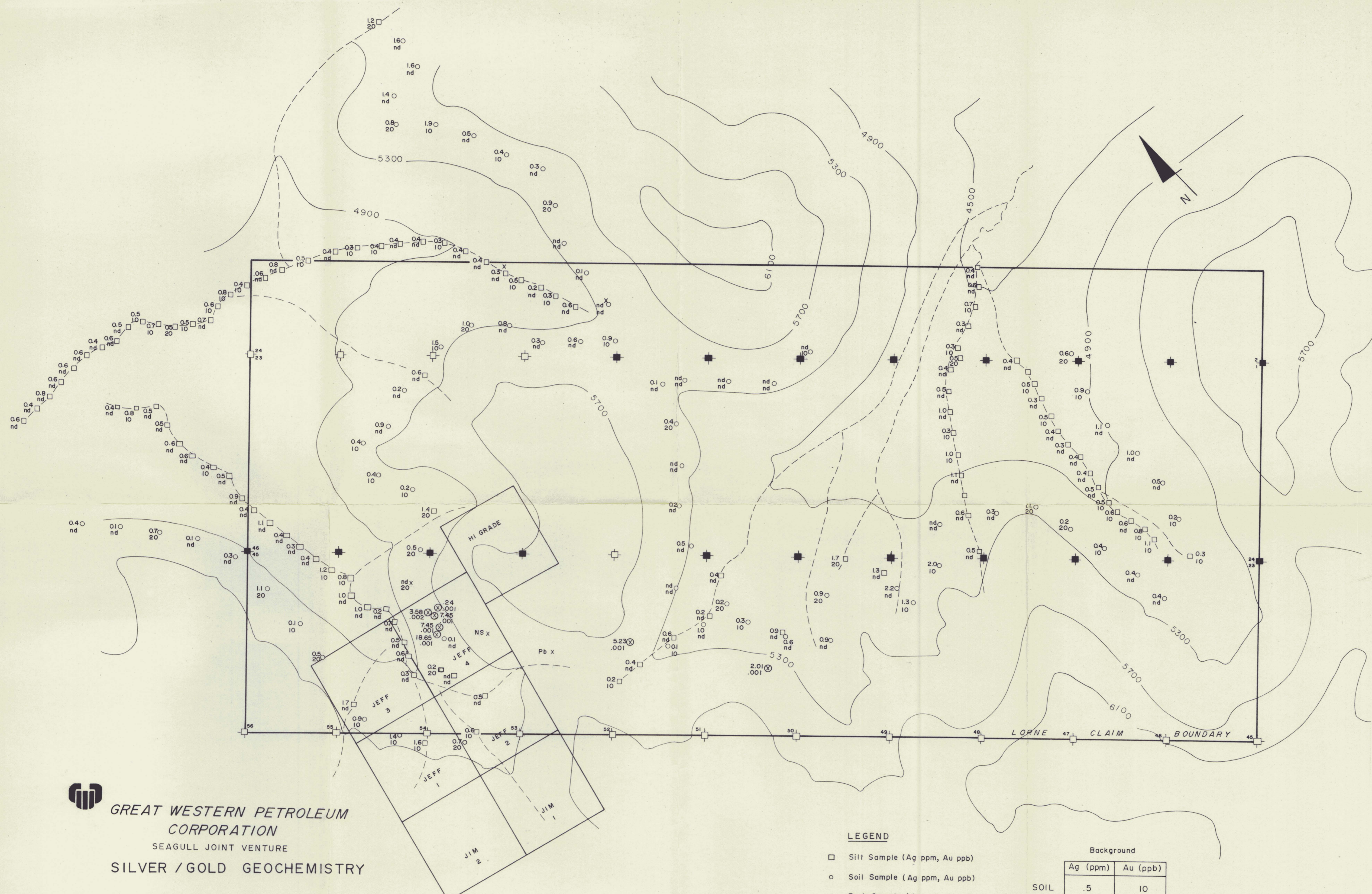
0 100 200 300 400 500 600 700 800 900 1000 meters
SCALE = 1:10,000

LEGEND

- Silt Sample
- Soil Sample
- x Rock Sample
- ⊗ Rock Assay Sample
- Located Claim Posts
- Unlocated Claim Post

090979

Rhodes



GREAT WESTERN PETROLEUM CORPORATION
 SEAGULL JOINT VENTURE
 SILVER / GOLD GEOCHEMISTRY

Lorne 1-55 Claims

Date: November 1981 NTS: 105F/10
 Figure: SJV-81-2

090979

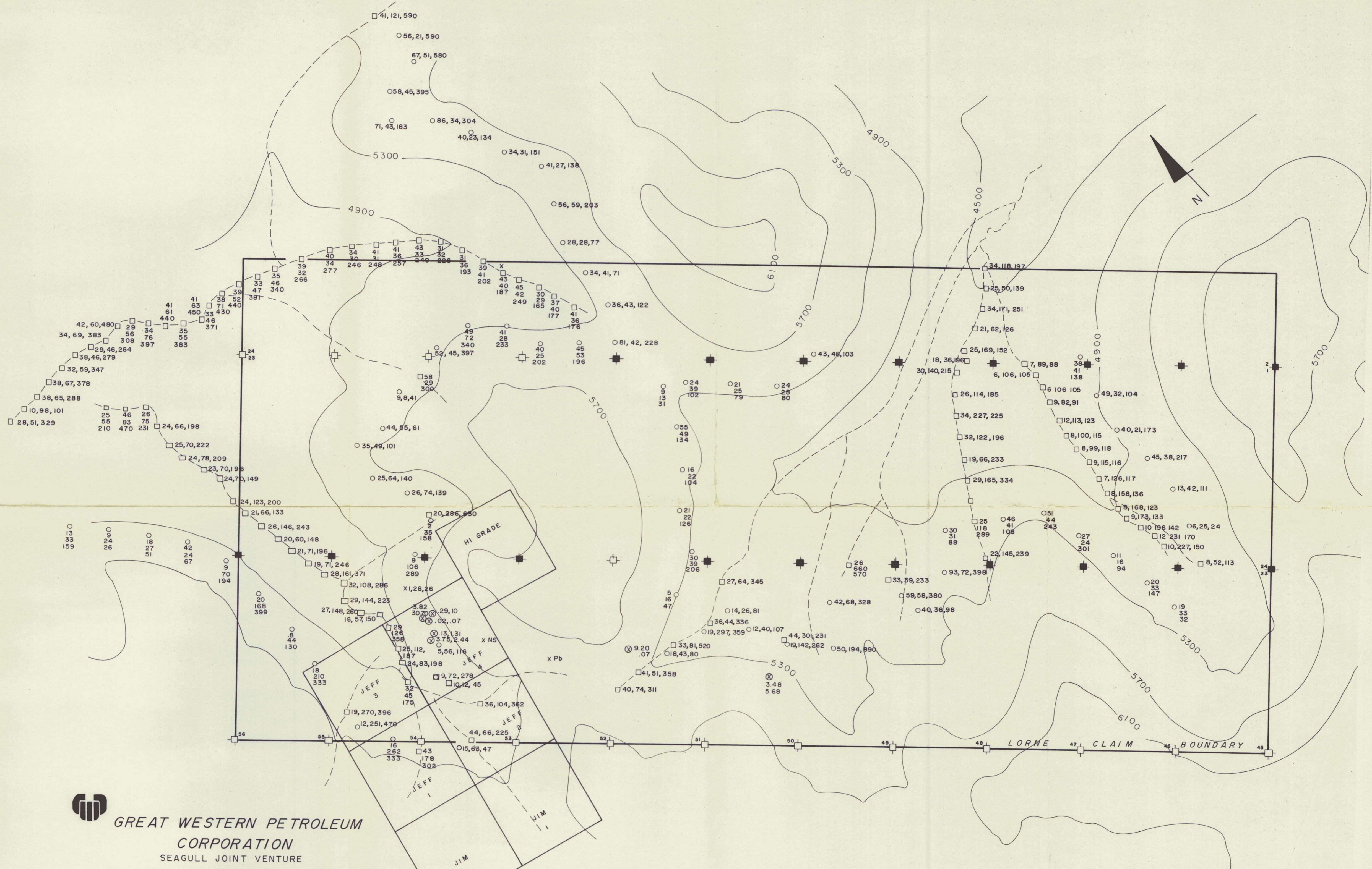
0 100 200 300 400 500 600 700 800 900 1000 meters
 Scale = 1:10,000

L. Neel

LEGEND

- Silt Sample (Ag ppm, Au ppb)
- Soil Sample (Ag ppm, Au ppb)
- x Rock Sample (Ag ppm, Au ppb)
- ⊗ Rock Assay Sample (oz / ton)
- Located Claim Post
- Unlocated Claim Post

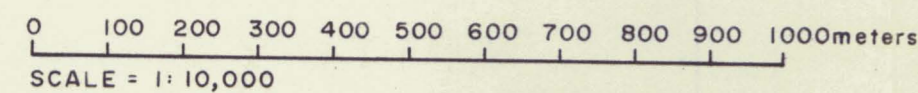
Background	
Ag (ppm)	Au (ppb)
SOIL	.5 10
SILT	.6 10



GREAT WESTERN PETROLEUM
CORPORATION
SEAGULL JOINT VENTURE
COPPER, LEAD, ZINC GEOCHEMISTRY

Lorne I-55 Claims

Date: November 1981 NTS: 105 F/10
Figure: SJV-81-3



LEGEND

- Silt Sample (Cu, Pb, Zn, ppm)
- Soil Sample (Cu, Pb, Zn, ppm)
- x Rock Sample (Cu, Pb, Zn, ppm)
- ⊗ Rock Assay Sample (Cu, Pb, Zn, %)
- Located Claim Posts
- Unlocated Claim Posts

Background

	Cu (ppm)	Pb (ppm)	Zn (ppm)
SOIL	30	41	196
SILT	29	70	226



GREAT WESTERN PETROLEUM
CORPORATION
SEAGULL JOINT VENTURE

GENERAL PROPERTY GEOLOGY
Lorne 1-55 Claims

Date: November 1981 NTS: 105F/10
Figure: SJV-81-4

0 100 200 300 400 500 600 700 800 900 1000 meters

Scale = 1:10,000
090979

R. Hecker

LEGEND

- | | | | |
|--|--|--|--------------|
| | 1a Lustrous grey-orange weathering phyllite | | Pb Galena |
| | 1b Interbedded phyllite and greywackes | | Cu Copper |
| | Grey limestone | | Py Pyrite |
| | 2 Massive, thick bedded dolomite, buff grey weathering | | Creek |
| | Qtz vein | | Outcrop Area |
| | Bedding attitude | | Fault |