GREAT WESTERN PETROLEUM CORPORATION

GEOLOGICAL AND GEOCHEMICAL REPORT

GRAVES 1 - 8 CLAIMS

OMINECA MINING DIVISION,
BRITISH COLUMBIA

NTS: 94E/7W

LOCATION: 57°21'N, 126°59'W

OWNER: GREAT WESTERN PETROLEUM CORPORATION

AUTHOR: NADIA M. CAIRA
Nadia Caira

DATE: JANUARY, 1982

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

The Graves claims, centred on Mt. Graves, are located approximately 3 kilometres south-southwest of Toodoggone Lake, approximately 300 kilometres due north of Smithers, B.C. (Figure TJV-81-1).

Access to the property is usually by fixed wing aircraft from Smithers or Terrace to Sturdee Valley airstrip and by helicopter from there.

The area is mountainous with elevations ranging between 1500 and 2100 metres. Steep slopes and cliffs occur in cirque headwalls and active talus and felsenmeer prevents vegetation from growing on some hillsides.

Spruce trees and willow buckbrush grow on the lower, more gentle slopes below 1100 metres. Alpine vegetation consists of moss and grasses.

Work done on the claims between June and August 1981 consisted of geological mapping, geochemical contour sampling and rock chip sampling.

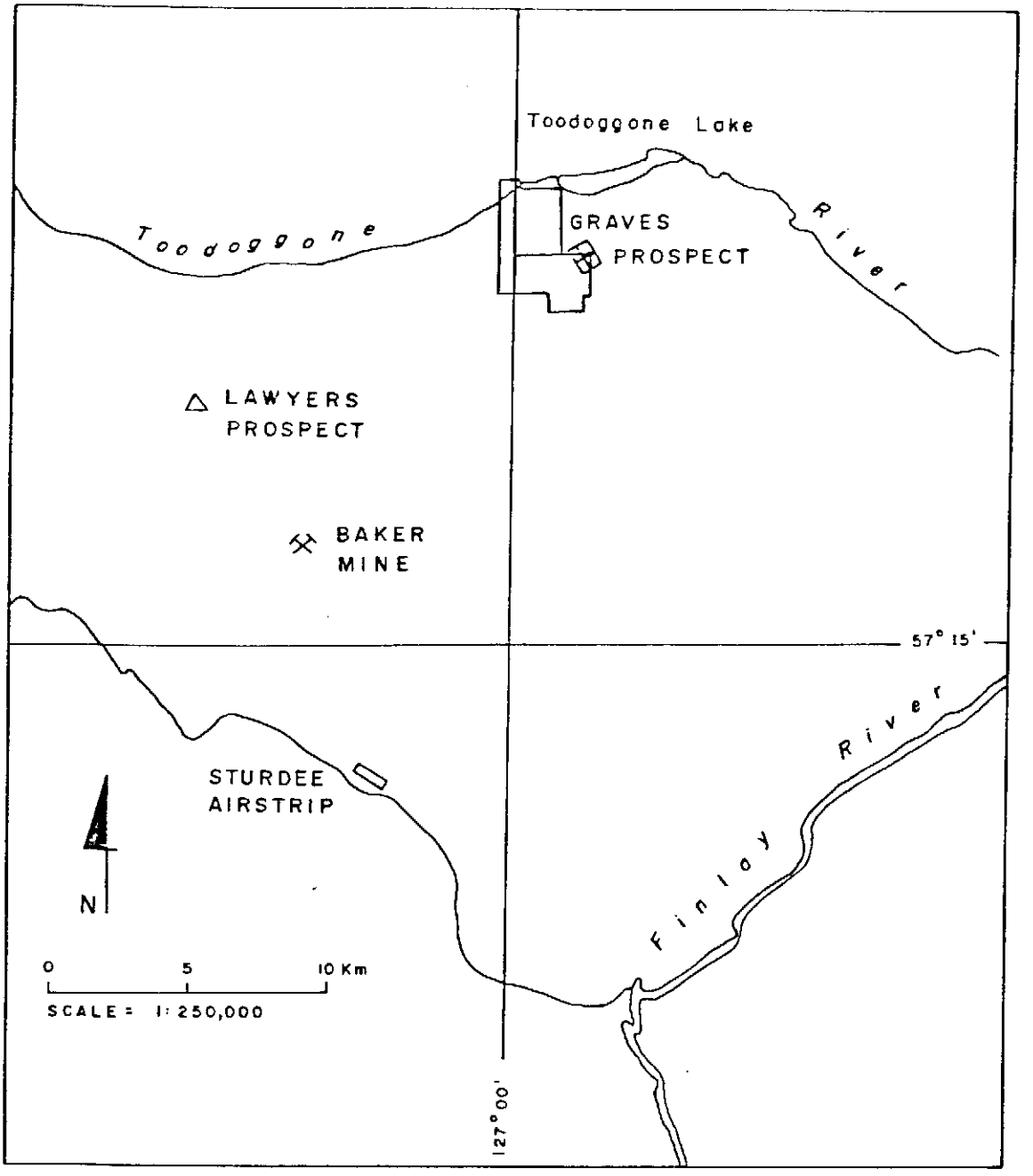


Figure. TJV-81-1 LOCATION OF GRAVES PROSPECT

PROPERTY DEFINITION

History

The area north of Toodoggone River has a history of gold placer mining dating back to the 1920's. In the 1960's interest in porphyry copper and molybdenum deposits spurred companies to explore the widespread gossan zones that exist over much of the region.

The property was staked in January 1981, as part of an option agreement with C.F. Kowall, who had undertaken library research which indicated gold and silver mineralization in quartz float on Mt. Graves in the early 1950's.

In July 1981 detailed soil and rock sampling and geological mapping was done by Great Western Petroleum Corporation to assess the precious metal potential of the Graves claims.

List of Claims

CLAIM NAME	RECORD NUMBER	UNITS	DATE RECORDED
Graves 1	3529	18	Jan. 26/81
Graves 2	3530	20	" "
Graves 3	3531	8	" "
Graves 4	3532	4	" "
Graves 5	3892	1 (2 post)	July 1981
Graves 6	3893	" " "	" "
Graves 7	3894	" " "	" "
Graves 8	3895	" " "	" "

Configuration of claims is shown in Figure TJV-81-2.

Owner and Operator

The claims are currently owned by Charles Kowall and operated by Great Western Petroleum Corporation under a joint venture agreement with E & B Mines Ltd.

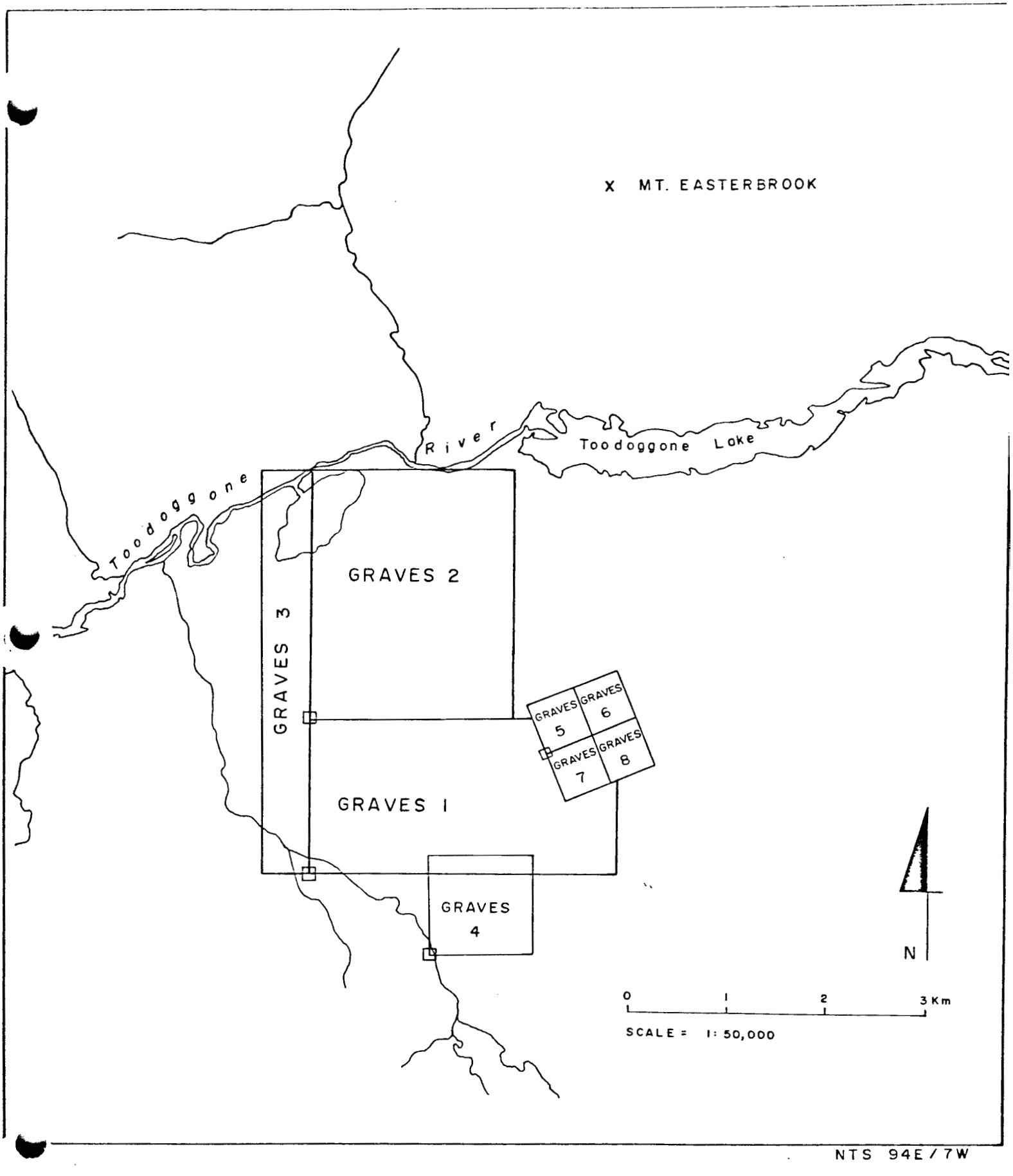


Figure. TJV-81-2 LOCATION OF : GRAVES 1 - 8 MINERAL CLAIMS

Economic Assessment of the Property

A quartz vein structure and a silicified area, both marginal to a quartz porphyry intrusion have high values in gold, silver, lead, zinc and copper. If these zones can be traced beneath felsenmeer and talus, the area may have potential for hosting a precious metal deposit.

GEOCHEMICAL SURVEY

Sample Collection and Preparation

Approximately 81 soil samples were collected from the Graves group of claims. Grid sampling was ruled out due to the cliff-like nature of the terrain, and samples were collected at 100 metre intervals along contour lines at elevations of 1250 metres, 1350 metres, 1700 metres and 1850 metres. All lines were run using hip chains, compasses and altimeters for control. Samples were collected from the B and C horizons using stone mason hammers, from a depth of 5 to 20 centimetres, and placed into gussetted, high-strength, kraft paper sample bags.

Rock samples were collected in many areas where there was no soil cover and also from various areas encountered by geologists during the course of mapping.

A total of 125 rock samples were taken, together with a series of chip samples taken across widths of 3 metres on the main showings.

Soil and rock sample locations are shown in Figures TJV-81-3 and TJV-81-9 respectively.

Interpretation

Rock geochemistry is the most reliable technique on this property due to the abundance of talus cover. The steep nature of the terrain undoubtedly results in a downslope migration of the metallic ions in the soils and must be taken into account in the interpretation.

Generally speaking the prominent gossan near the eastern part of the Graves Claims was highly anomalous in gold and silver in both soils and rocks. Soil values range up to 95 ppb and 90.5 ppm for gold and silver respectively. Rock geochemistry run on samples from this area showed values as high as 11,000 ppb for gold and 7500 ppm.

In most cases high silver values corresponded to high lead values. A cluster of highly anomalous silver-lead values are located in the eastern area of Mount Graves where there are various mafic dykes adjacent to areas of silicified, pyritic Toodoggone Volcanic rocks.

Most areas on the property showing little rock alteration are coincident with low geochemical values for gold and silver. Values seldom are higher than 10 ppb for gold or 1.0 ppm for silver in these areas.

The area of granitic Omineca intrusions yielded the least anomalous values.

Zinc values over the entire property are consistently low.

Values for copper, lead, zinc, gold and silver in both soils and rocks are plotted in Figures TJV-81-4 to 8 and 10 to 14, located in the back pocket of this report.

Statistical Interpretation

The background values for data were obtained by calculating the median value for each element. The median is defined as "the value for which one half the values in the distribution are less and one half are greater". The median was obtained by ranking the results for each element in order of increasing magnitude. By counting along the ranked line of numbers until half the total sample numbers was arrived at, the median or background population was obtained.

The following tabulation indicates background, weakly, moderately and highly anomalous values for the soil sample results obtained from the Mt. Graves claims.

Element	Median R. Background	Threshold 2 x B.G.	Weak 2-4 x B.G.	Moderate 4-8 x B.G.	Strong 8-16 x B.G.	Extreme 16 x B.G.
Cu	14 ppm	28 ppm	29-56 ppm	57-112 ppm	113-224 ppm	> 225 ppm
Pb	16 ppm	32 ppm	33-64 ppm	65-128 ppm	129-256 ppm	> 257 ppm
Zn	47 ppm	94 ppm	95-188 ppm	189-376 ppm	377-752 ppm	> 753 ppm
Ag	0.9 ppm	1.8 ppm	2.8-3.6 ppm	4.6-7.2 ppm	8.2-14.4 ppm	>15.4 ppm
Au	5 ppb	10 ppb	11-20 ppb	21-40 ppb	41-80 ppb	> 81 ppb

GEOLOGICAL FIELD WORK

Geological mapping was done in conjunction with the soil geochemistry.

Airphoto mosaics and topographic maps at a scale of 1:10,000 served as controls for the mapping. The geology of the Graves group of claims is shown in Figure TJV-81-15, in the back pocket of this report.

GENERAL GEOLOGY

The Graves group, lying within the eastern margin of the Intermontaine Belt is mainly underlain by early Jurassic Upper and Middle units of the Toodoggone Volcanic Assemblage. Massive, coarse pyroclastic rocks in the eastern part of the claims are believed to be part of the Hazelton Group, correlative with the lower Toodoggone unit. Omineca granitic rocks intrude layered rocks on the lower western slopes of Mt. Graves. (See Figure TJV-81-15). Younger mafic dykes, believed to be of Tertiary age, cut the Toodoggone Volcanic rocks.

A total of 10 distinct rock types have been mapped, 6 of which are various phases of the Upper and Middle Units of the Toodoggone Volcanic Assemblage.

DETAILED GEOLOGY

HAZELTON ASSEMBLAGE

The rocks considered to be a part of the Hazelton Group consist of green feldspar porphyries and maroon lithic tuffs. There is a possibility that these rocks belong to the Lower Unit of the Toodoggone Volcanic Assemblage.

Green Porphyry With White Phenocrysts - These rocks have a fine grained green groundmass with 3 mm. white K-feldspar phenocrysts. Mafic phenocrysts, chiefly biotite and hornblende, are often altered to chlorite and/or epidote. These rocks are often weakly magnetic. Galena is common and occurs as fine disseminations and with quartz stringers.

Maroon Lithic Tuff - These rocks commonly have a fine grained maroon groundmass with larger lithic fragments up to 7 cm. Fragments and phenocrysts of feldspar up to 3 mm, and epidotized and/or chloritized hornblende stand out against the darker groundmass. These rocks are often weakly magnetic and occasionally pyrite occurs as fine disseminations.

TOODOGGONE VOLCANIC ASSEMBLAGE

MIDDLE UNIT

The middle Toodoggone Volcanic unit is composed of silicified, pyritic volcanic rocks, rhyolite, quartz-feldspar porphyry and a green hornblende-feldspar crystal tuff. These rocks, except for the rhyolite, are probably closely related to each other and represent different phases of the same parent magma.

Green Hornblende Feldspar Crystal Tuff - These rocks are commonly dark green with 4 mm. orange hematized phenocrysts of feldspar. Mafic minerals in this rock (hornblende and minor biotite) were commonly seen to be altered to chlorite and/or epidote.

Quartz-Feldspar Porphyry - These rocks have an aphanitic pink groundmass although in some cases a green groundmass (or variations between pink and green) were noted. Hornblende, altering to chlorite and epidote often stands out against the pink groundmass. The rock has phenocrysts of white feldspar up to 1 centimetre long which are often hematized and/or epidotized. These rocks are often weakly magnetic and limonite and manganese staining is common.

Silicified Pyritic Volcanic Rocks - These rocks have an aphanitic, siliceous, blue-grey groundmass and often weather to an orangy brown colour. The rocks have major amounts of manganese and limonite stain and contain abundant disseminated pyrite, and less often arsenopyrite with galena blebs. The alteration products include goethite, jarosite and possibly scorodite. The rocks sometimes display concoidal fracturing due to the intense silicification and often have quartz stringers measuring up to 3 inches wide. Occasionally the groundmass is greenish grey with "ghosts" of orange hematized feldspar phenocrysts still visible.

The rock is usually white and bleached. Minor amounts of specularite after magnetite, are common.

UPPER UNIT

The Upper unit of the Toodoggone volcanic group of rocks is composed of lavender and green to grey crystal tuffs. These two rock types can be easily distinguished from one another and mapped as separate entities. They can, however, be completely transitional and should be mapped as a single unit.

Lavender Crystal Tuff - These rocks have an aphanitic lavender groundmass with 3 mm long phenocrysts of white feldspar giving a mottled weathered surface. Hornblende phenocrysts altering to chlorite often stand out against the matrix. Outcrops are often highly fractured and commonly possess veinlets of calcite, quartz and epidote. Barite seen as white radiating crystals was rarely associated with quartz and calcite in scattered localities. These rocks are often weakly magnetic.

Green to Grey Crystal Tuff - The green to grey groundmass of these rocks is composed mainly of hornblende and chlorite. Phenocrysts of feldspar up to 3 mm. long stand out against the darker groundmass. Phenocrysts often make up at least 55 percent of the rock. These rocks are often weakly magnetic and usually lack any mineralization although manganese and limonite staining is common.

RHYOLITE

This rock has an aphanitic pink, siliceous, groundmass with quartz eyes measuring up to 5 mm. The rock exhibits a yellow/orange weathered surface to a very bleached white surface. Remanant boxwork textures, both lined and filled, are common with pyrite and arsenopyrite as fine disseminations and galena commonly as blebs. Quartz stringers up to .5 cm. wide are common. The major mafic mineral in this rock is biotite which occurs as felted books measuring up to 4 mm.

OMINECA INTRUSIONS

Granitic Rocks - Fresh, unaltered medium to coarse grained granitic rocks belonging to the Omineca Intrusions outcrop in the southwest corner of the claims.

This rock is pink to green depending on the degree of propylitization, and is of granitic to quartz monzonite composition with abundant grey quartz and white and pink feldspars. Mafic minerals, often partly altered to chlorite, include hornblende and biotite. The rock is often weakly magnetic due to finely disseminated magnetite. Occasionally the rock was seen to have Quartz Feldspar Porphyry and chert fragments.

MAFIC DYKES

Mafic dykes cut the Toodoggone volcanic assemblage in several locations. These rocks have a very fine grained, dark green/blue, silicified, slightly magnetic matrix and display carbonate alteration. The outcrops are usually highly fractured and seem to have many sheared and slickensided surfaces. The dykes have local limonite and minor malachite staining.

STRUCTURE

Stratification is not easily distinguishable in the volcanic rocks but the general bedding attitude appears to be striking eastward. and dipping moderately to steeply (between 20^{o} and 50^{o}) southeast. There were also bedding attitudes which appeared to be striking eastward and dipping moderately to the northwest.

Faults in the area are oriented in two dominant directions with attitudes of $150/90^{o}$ and $070/90^{o}$. The overall fracture system has the same general orientation as the faulting, and seems to increase in intensity marginal to faults.

The mafic dykes that cut the Toodoggone volcanic assemblage have slickensided surfaces along the contacts with the silicified volcanic rocks.

ALTERATION AND MINERALIZATION

The Graves claims cover two mineralized areas bearing interesting values in gold, silver and lesser copper, lead and zinc. A detailed study of the claims discloses an intensely faulted area in which andesitic and rhyolitic rocks have been intensely altered and silicified. Most of the mineralization appears to have been developed in a 15 metre wide quartz vein structure on the east contact of the rhyolite. Above this is a silicified area with precious metal values.

There are two interesting gossans on Mt. Graves. These gossans are associated with various degrees of carbonitization, silicification, pyritization, epidotization and hematization with the latter occurring more often near the surface while all of the former occur at depth. One gossan located on the south west side of Mt. Graves measures 50 metres by 25 metres and is a bright red colour. It is silicified and pyritic with major amounts of hematite. Part of the Toodoggone Assemblage, mainly the quartz - feldspar porphyry, lies just above the gossan while the upper unit of the Hazelton Group, the lithic maroon crystal tuff, lies just below it. This gossan may mark a stratigraphic contact between the two volcanic units representing a period of quiescence between the deposition of the individual tuff beds, where a period of time, caused oxidation of the lower unit. The contact between the individual units may be a zone of weakness that allows mineralizing solutions to migrate through the volcanic pile causing silicification and pyritization in this area.

Gangue minerals include, amethystine to white quartz, calcite, chalcedony, hematite, manganese, and rare barite. The above minerals most commonly occur as vein fillings, stockworks and on rare occasion the amethystine quartz was seen in a brecciated fault zone.

A second major gossan dominantly yellow in colour is located on the easternmost ridge in the cirque wall facing the single tarn lake and is highly anomalous in silver values with a major clustering around the locality of the silicified gossan. A series of mineralized areas were found to be associated with various andesite and rhyolite intrusions in the area. Occasionally copper mineralization can be seen along the contacts. Thin quartz stockworks with disseminated pyrite and blebs of galena and copper mineralization occur also. Limonite, hematite, and manganese staining is widespread.

CONCLUSIONS AND RECOMMENDATIONS

Most of the ore minerals were found east and west of the rhyolite sill in the cirque headwall. Mineralized bands of chalcedonic quartz veins were often seen along contacts of dyke and tuff units. The andesite and rhyolite dykes were often highly fractured, silicified and mineralized.

Geochemistry and geological mapping indicate these two target areas as warranting further work. The areas are gossanous, silicified, and pyritic. Various quartz vein stockworks with galena, copper and pyrite were found in float, in great abundance, which also warrant for further work.

Trenching and drilling in these areas is recommended to test the precious metal potential.

COST STATEMENT - GRAVES 1-8 CLAIMS

Geochemical Surveys and Geological Mapping

1. WAGES

NAME	PER DIEM RATE	SPECIFIC DATES	NO. DAYS	AMOUNT
N. Carter (geologist)	$200.00	June 13, July 18, Aug. 20	3	$600.00
L. Eccles (geologist)	116.58	June 14, 20, 22, 24	4	466.32
D. Forster (geologist)	93.73	July 5, 6, 18, Aug. 11.	4	374.92
N. Caira (geologist)	83.51	July 1, 4-6, 18	5	417.55
R. Green	52.85	June 22, 29	2	105.70
K. Hudson	52.85	Aug. 20	1	52.85
C. Leupold	57.96	June 15, 22, Aug. 10, 17, 21	5	289.80
L. Connolly	73.28	July 1	1	73.28
I. Hribar (cook)	66.38	(proportioned amongst other claims: 6.89% x 61 days)	4.20	278.99
C. Carter (Lab Technician)	52.85	(proportioned amongst other claims: 6.89% x 38 days)	2.62	138.37
Proportion of General Camp Days allocated to this Group: 6.89% x 256 days @ $85.00 per day			17.63	1498.53
		TOTAL =	49.45	$4446.07

2. TRANSPORTATION

A. Mobilization

Charter Aircraft Smithers - Sturdee Strip (total of $6970.60 - Kelowna Flightcraft Aircharter) Invoice No. 4723B and Trans-provincial Airlines Invoice No. 67308, split between properties	$480.27

B. Demobilization

Charter Aircraft Sturdee Strip - Smithers (part of Aviar Aviation Invoice No. 0450)	51.26
Air Fares (5 crew, Smithers to Vancouver $510.25) proportioned	35.15
	86.42

C. Helicopter Support

Viking Helicopters

(Total 95.25 hours split between properties = 6.56 hours @ $428.00/hr. including fuel): June 13, 14, 20, 22, 24, 29, July 1, 5, 6, 18, Aug. 10, 11, 17, 20, 21	$2808.85

ALC Airlift Corporation

(Total 12.18 hours split between properties = .84 hours @ $415/hr. including fuel): Between July 30 - Aug. 1	348.27
	$3157.12

3. CAMP COSTS

A. Room and Board

49.45 man days at $50.00 per day (including all or parts of June 13, 14, 20, 22, 24, 29, July 1, 5, 6, 18, Aug. 10, 11, 17, 20, 21):	$2472.50

B. Expediting

(Split between properties) Total $1411.13 Bema Industries Invoice Nos. 0990 - July 15/81 0934 - June 30/81 0852 - June 15/81 0805 - May 31/81	$97.22

4. GEOCHEMICAL ANALYSIS

81 soil samples analyzed for Cu, Pb, Zn, Ag. and Au @ $10.55 per sample (Min-En Labs Invoices):	$854.55
125 rock samples analyzed for Cu, Pb, Zn, Ag, and Au (Min En Labs Invoices) at $11.95 per sample:	$1493.75
Sample shipment costs and supplies (Min-En Labs Invoices) - Total 1431.45 proportioned	$98.63
	$2446.93

5. REPORT PREPARATION

Writing and drafting	$400.00
Airphoto mosaics and maps (Burnett Resource Surveys Ltd. - Total 4242.11 proportioned):	292.28
	$692.28

SUMMARY OF COSTS

1.	Wages		$4446.07
2.	Transportation - A.	Mobilization	480.27
	- B.	Demobilization	86.42
	C.	Helicopter Support	3157.12
3.	Camp Costs - A.	Room and Board	2472.50
	- B.	Expediting	97.22
4.	Geochemical Analysis		2446.93
5.	Report Preparation		692.28
		TOTAL =	$13,878.81

APPENDIX "A"

Analytical Procedures

APPENDIX 'A'

ANALYTICAL PROCEDURES

Samples are processed by Min-En Laboratories Ltd. in North Vancouver employing the following procedures:

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer.

1.0 gram of the samples are digested for six hours with HNO_3 and $HClO_4$ mixture.

After cooling samples are diluted to standard volume. The solutions are analyzed by Atomic Absorption Spectrophotometers.

Copper, Lead, Zinc and Silver are analyzed using the CH_2H_2 - Air flame combination on these sample solutions.

For gold geochemical samples, a suitable weight 5.0 or 10.0 grams are pretreated with HNO_3 and $HClO_4$ mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCI to suitable volume.

At this stage of the procedure copper, silver and zinc can be analyzed from suitable aliquot, by Atomic Absorption Spectrophotometric procedure.

Further oxidation and treatment of a least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solutions, gold is analyzed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.

QUALIFICATIONS

I, Nadia M. Caira, do hereby certify that:

1. I am a graduate of the University of British Columbia (B.Sc. Geology).

2. I have worked, for the past three field seasons, doing geological field work in British Columbia and the Yukon.

3. Between July and August 1981, I assisted in conducting a field program on the Graves claim group on behalf of Great Western Petroleum Corporation.

Nadia M. Caira

Nadia Caira

ATTESTATION

I, Nicholas C. Carter of Victoria, British Columbia, do 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 on the Graves Group of Claims and will attest to the authenticity of data contained in this report.

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

TOODOGGONE LAKE

GRAVES 2

GRAVES 1

GRAVES 3

GRAVES 4

GRAVES 5

GRAVES 6

GRAVES 7

GRAVES 8

SEE INSET A

I-L-5425
I-L-5428
I-L-5426
I-L-5427
I-L-5430
I-L-5431
N.S.
N.S
N.S
I-L-5433
I-L-5434
I-L-5435
N.S.
N.S.
I-L-5423
I-L-5422
N.S.
N.S
N.S.
N.S.
I-L-5424
I-L-5421
I-L-5420
N.S.
N.S.
N.S.
I-L-5416
I-L-5415
N.S.
I-G-8252
I-G-8253
I-G-8249
I-G-8255
I-G-8260
I-G-8263
I-G-8264
I-G-8265
I-G-8240
I-G-8239
I-L-5300
I-L-5301
I-L-5302
I-L-5303
I-L-5304
I-L-5305
I-L-5306
I-L-5307
I-L-5308
I-L-5436
I-L-5437
I-L-5438
I-L-5439
I-L-5440
I-L-5441
I-L-5442
I-L-5443
I-L-5445
I-L-5447
I-L-5448
I-L-4402
I-L-4401
I-L-4403
I-L-4400
I-L-4404
I-L-4398
I-L-4399
I-L-4405
I-L-4406
I-L-4407
I-L-4408
I-L-4409
I-L-4410
I-L-4411
I-L-4412
I-L-4413
I-L-4414
I-L-4415
I-L-4416
I-L-4417
I-L-4418
I-L-4419
I-L-4420

1200
1400
1700
1900
1600
1500
2061
1781
1952
1683
1941
1889
1901
1845

N

INSET A

I-L-5309	I-L-5314	I-L-5313
I-L-5310	I-L-5311	I-L-5317
I-L-5316	I-L-4398	I-L-5315
I-L-5317	I-L-5318	I-L-5319
I-L-5322	I-L-5321	I-L-5320

METRES 0 10 20 30 40 50
SCALE: 1 : 1250

ASSESSMENT REPORT
10,050
NO.

LEGEND

- SOIL SAMPLE LOCATION
- FOLLOW-UP SAMPLE
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE
GRAVES 1-8 CLAIM GROUP
SOIL SAMPLE LOCATION MAP

METRES 100 0 100 200 300 400 500 700 900 METRES
FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Nadia Cabra	DATE: DEC., 1981	TJV-81-3
REVISED BY:	N.T.S. 94 E / 7W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 5

GRAVES 6

GRAVES 7

GRAVES 8

GRAVES 3

GRAVES 1

GRAVES 4

SEE INSET A

1200 1400 1600 1700 1800 1900 1500

2061 1781 1952 1683 1941 1901 1889 1845

N.S.

INSET A

METRES
0 10 20 30 40 50
SCALE: 1 : 1250

LEGEND

- SOIL SAMPLE LOCATION
- 015 GOLD (PARTS PER BILLION)
- FOLLOW-UP SAMPLE
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE
GRAVES 1-8 CLAIM GROUP
SOIL GEOCHEMISTRY-GOLD (PPB)

METRES 100 0 100 200 300 400 500 700 900 METRES
FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Nadia Gouin	DATE: DEC, 1981	TJV-81-4
REVISED BY:	N.T.S. 94 E / 7W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 5

GRAVES 6

GRAVES 8

GRAVES 7

SEE INSET A

GRAVES 3

GRAVES 1

GRAVES 4

INSET A

2.9	4.8	1.4
3.7	1.6	2.2
1.1		2.0
1.6	1.7	6.9
0.7	2.2	1.8

METRES 0 10 20 30 40 50

SCALE: 1 : 1250

LEGEND

- SOIL SAMPLE LOCATION
- 1.5 SILVER (PARTS PER MILLION)
- FOLLOW-UP SAMPLE
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE

GRAVES 1-8 CLAIM GROUP

SOIL GEOCHEMISTRY-SILVER (PPM)

METRES 100 0 100 200 300 400 500 700 900 METRES

FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Madia Cairo.	DATE: DEC., 1981	TJV-81-5
REVISED BY:	N.T.S. 94E/7W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 6

GRAVES 5

GRAVES 8

GRAVES 7

GRAVES 3

GRAVES 1

GRAVES 4

SEE INSET A

N.S.

1200

1400

1600

1700

1800

1900

1500

2061

1781

1952

1941

1901

1889

1845

1683

INSET A

METRES
0 10 20 30 40 50
SCALE: 1 : 1250

LEGEND

- SOIL SAMPLE LOCATION
- 78 COPPER (PARTS PER MILLION)
- FOLLOW-UP SAMPLE
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,050
NO.

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE
GRAVES 1-8 CLAIM GROUP
SOIL GEOCHEMISTRY - COPPER (PPM)

METRES 100 0 100 200 300 400 500 700 900 METRES
FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Nadia Cairon	DATE: DEC., 1981	TJV-81-6
REVISED BY:	N.T.S. 94 E / 7W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 6

GRAVES 5

GRAVES 8

GRAVES 7

SEE INSET A

GRAVES 3

GRAVES 1

GRAVES 4

INSET A

METRES 0 10 20 30 40 50

SCALE: 1 : 1250

LEGEND

- SOIL SAMPLE LOCATION
- 245 LEAD (PARTS PER MILLION)
- FOLLOW-UP SAMPLE
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

MINERAL INVENTORY BRANCH
ASSESSMENT REPORT
10,050

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE

GRAVES 1-8 CLAIM GROUP

SOIL GEOCHEMISTRY- LEAD (PPM)

METRES 100 0 100 200 300 400 500 700 900 METRES

FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Nadia Cava	DATE: DEC., 1981	TJV-81-7
REVISED BY:	N.T.S. 94E / 7W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 6

GRAVES 5

GRAVES 8

GRAVES 7

GRAVES 3

GRAVES 1

GRAVES 4

SEE INSET A

1200 1400 1600 1700 1800 1900 1500

INSET A

520 74 84
138 79 131
81 134
93 183
176

METRES 0 10 20 30 40 50
SCALE: 1 : 1250

N

LEGEND

- SOIL SAMPLE LOCATION
- 93 ZINC (PARTS PER MILLION)
- FOLLOW-UP SAMPLE
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

GREAT WESTERN PETROLEUM CORPORATION

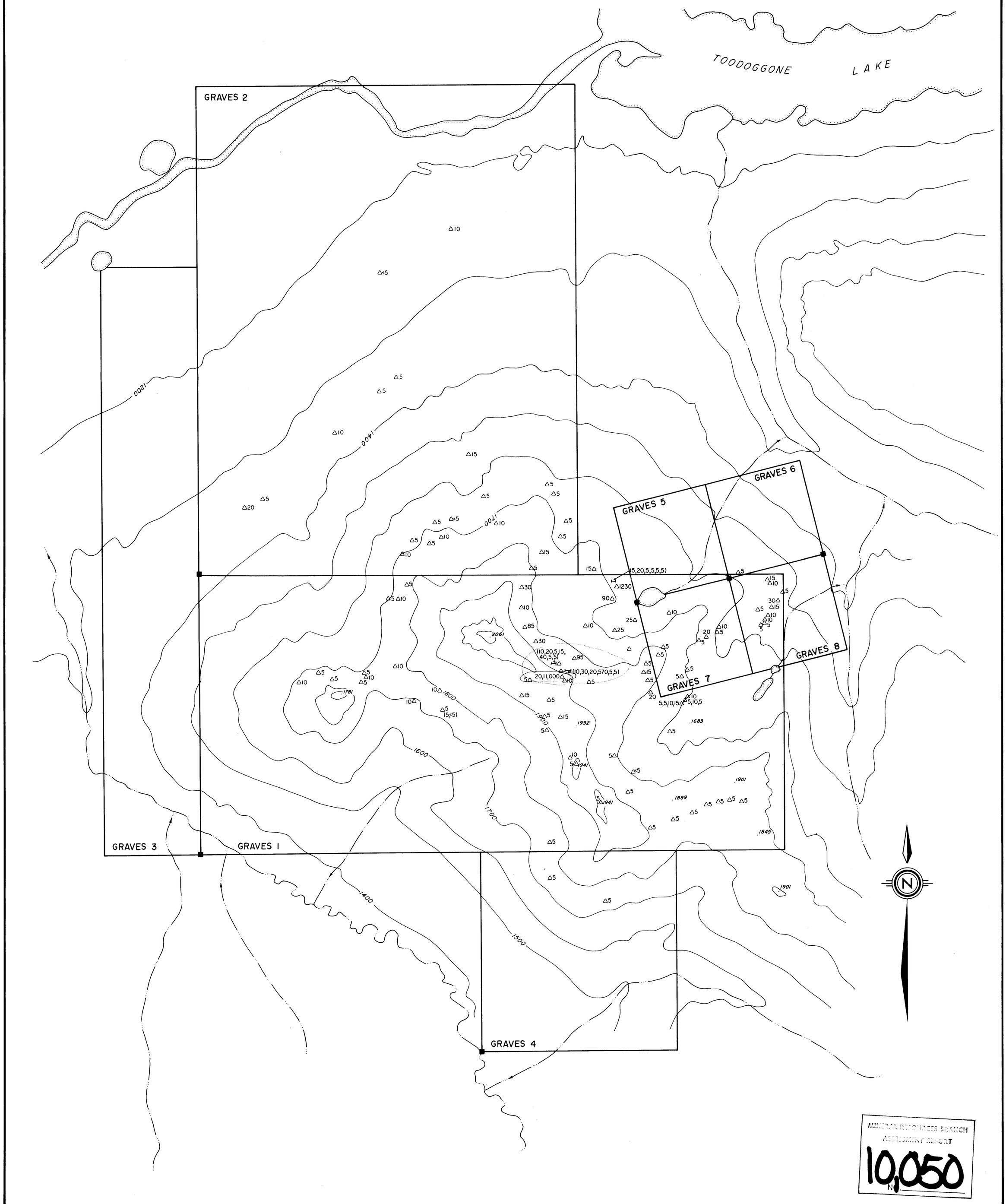
TOODOGGONE JOINT VENTURE

GRAVES 1-8 CLAIM GROUP

SOIL GEOCHEMISTRY - ZINC (PPM)

METRES 100 0 100 200 300 400 500 700 900 METRES
FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Madeline Cavier	DATE: DEC., 1981	TJV-81-8
REVISED BY:	N.T.S. 94E/7W	



LEGEND

- △ ROCK CHIP SAMPLE LOCATION
- △ 10 GOLD (ppb)
- CONTINUOUS (5m) ROCK CHIP CHANNEL SAMPLING
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE

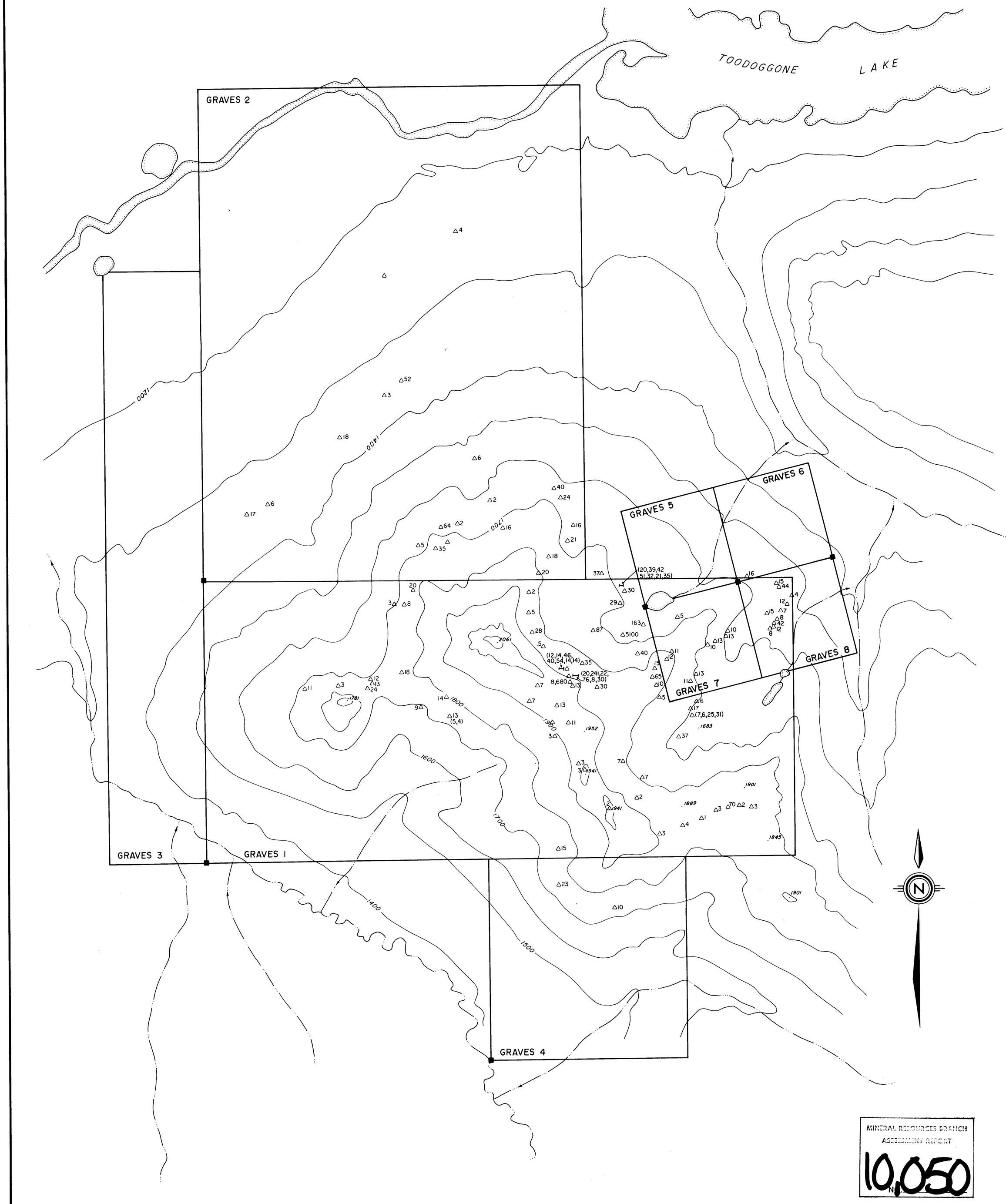
GRAVES 1-8 CLAIM GROUP

ROCK GEOCHEMISTRY - GOLD (ppb)

METRES 100 0 100 200 300 400 500 700 900 METRES

FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Madiel Cano	DATE: DEC., 1981	TJV-81-10
REVISED BY:	N.T.S. 94 E / 7 W	



LEGEND

- △ ROCK CHIP SAMPLE LOCATION
- △ 30 COPPER(ppm)
- CONTINUOUS (5m) ROCK CHIP CHANNEL SAMPLING
- LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,050

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE

GRAVES 1-8 CLAIM GROUP

ROCK GEOCHEMISTRY-COPPER(ppm)

METRES 100 0 100 200 300 400 500 700 900 METRES

FEET FEET

MAPPED BY: N.C., L.K.E, D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Martin Cava	DATE: DEC., 1981	TJV-81-12
REVISED BY:	N.T.S. 94 E /7 W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 5

GRAVES 6

GRAVES 8

GRAVES 7

GRAVES 3

GRAVES 1

GRAVES 4

1200 1400 1600 1700 1800 1900 1500

.2061 .1781 .1952 .1683 .1941 .1901 .1889 .1845

(6.7,9.1,3.8, 84,9.3,1.5,0.6) 90.5

(6.9,6.9,0.13.9, 20.2,0.2,2.6,8.4) 8.5

5.9,7.5,0.0,0.0

1050 1365

1,0,2.0,1.4,1.8 2.0,1.6,5.0,7.2

0.8,1.1,1.3

N

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,050

LEGEND

- △ ROCK CHIP SAMPLE LOCATION
- △ 1.5 SILVER (ppm)
- ⊢⊣ CONTINUOUS (5m) ROCK CHIP CHANNEL SAMPLING
- ■ LEGAL CORNER POST
- ——— CLAIM BOUNDARY
- ~···~ CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE

GRAVES 1-8 CLAIM GROUP

ROCK GEOCHEMISTRY-SILVER (ppm)

METRES 100 0 100 200 300 400 500 700 900 METRES

FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Nadia Conner	DATE: DEC., 1981	TJV-81-11
REVISED BY:	N.T.S. 94 E / 7 W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 5

GRAVES 6

GRAVES 8

GRAVES 7

GRAVES 3

GRAVES 1

GRAVES 4

(22,24,26, 40,70,74,23)

(88,90,154 241,270,47,11)

(100,1750,150, 660,16,323)

15,15,13,13 114,49,220,1390

(58,56)

1200 1400 1700 1600 1800 1900 1500

2061 1781 1952 1683 1941 1889 1901 1845

N

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,050
NO.

LEGEND

- △ ROCK CHIP SAMPLE LOCATION
- △ 60 LEAD (ppm)
- CONTINUOUS (5m) ROCK CHIP CHANNEL SAMPLING
- ■ LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE
GRAVES 1-8 CLAIM GROUP
ROCK GEOCHEMISTRY-LEAD(ppm)

METRES 100 0 100 200 300 400 500 700 900 METRES
FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Nadia Cano	DATE: DEC., 1981	TJV-81-13
REVISED BY:	N.T.S. 94 E /7 W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 6

GRAVES 5

GRAVES 8

GRAVES 7

GRAVES 3

GRAVES 1

GRAVES 4

1200 1400 1600 1700 1800 1900 1400 1500

N

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,050
NO.

LEGEND

- △ ROCK CHIP SAMPLE LOCATION
- △ 96 ZINC (ppm)
- CONTINUOUS (5m) ROCK CHIP CHANNEL SAMPLING
- ■ LEGAL CORNER POST
- CLAIM BOUNDARY
- CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE

GRAVES 1-8 CLAIM GROUP

ROCK GEOCHEMISTRY - ZINC (ppm)

METRES 100 0 100 200 300 400 500 700 900 METRES

FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1: 10,000	DRAWING NUMBER
DRAWN BY: Nadia Cerra	DATE: DEC., 1981	TJV-81-14
REVISED BY:	N.T.S. 94 E / 7 W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 5

GRAVES 6

GRAVES 8

GRAVES 7

GRAVES 3

GRAVES 1

GRAVES 4

1200 1400 1700 1800 1600 1700 1400 1500

.2061 .1781 .1683 .1952 .1901 .1889 .1941 .1845 .1901

I-L-5432 I-L-5419 I-L-5418 I-L-5417 I-L-5414 I-L-5444 I-L-5446 I-L-5449

I-E-9824 I-E-9793 I-E-9798 I-E-9799 I-E-9794 I-E-9792 I-E-9797 I-E-9796 I-E-9795 I-E-9825 I-E-9821 I-E-9822 I-E-9791 I-E-9806

I-G-8251 I-G-8250 I-G-8248 I-G-8247 I-G-8246 I-G-8245 I-G-8244 I-G-8243 I-G-8242 I-G-8241 I-G-8261 I-G-8262 I-G-8257 I-G-8256 I-G-8258 I-G-8259 I-G-8268 I-G-8269 I-G-8266

I-F-9425 I-F-9424 I-F-9423 I-F-9422 I-F-9421 I-F-9420 I-F-9419 I-F-9418 I-F-9417 I-F-9416 I-F-9415 I-F-9413 I-F-9414 I-F-9412 I-F-9411 I-F-9410 I-F-9409 I-F-9408 I-F-9407 I-F-9406

I-C-9128 I-C-9130 I-C-9129 I-C-9131 I-C-9127 I-C-9126 I-C-9081 I-C-9080 I-C-9082 I-C-9125 I-C-9124 I-C-9123 I-C-9122 I-C-5070 I-C-5071 I-C-6069 I-C-9068 I-C-9067 I-C-9066 I-C-9065 I-C-9064 I-C-9063 I-C-9059 I-C-9058 I-C-9060 I-C-9061 I-C-9062 I-C-9075 I-C-9072 to I-C-9075 I-C-9076 to I-C-9079 I-C-9083

I-H-7437 to I-H-7443

I-C-12501 to I-C-12507

I-F-12020 to I-F-12025

I-F-12181

I-F-12178 I-F-12179

I-E-9815 I-E-9816 I-E-9814 I-E-9818

N

LEGEND

- △ ROCK CHIP SAMPLE LOCATION
- I-E-9818 ROCK CHIP SAMPLE NUMBER
- ⊢⊣ CONTINUOUS (5m) ROCK CHIP CHANNEL SAMPLING
- ■ LEGAL CORNER POST
- ——— CLAIM BOUNDARY
- ~~~ CREEK

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE

GRAVES 1-8 CLAIM GROUP

ROCK CHIP SAMPLE LOCATIONS

METRES 100 0 100 200 300 400 500 700 900 METRES

FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Marie Cova	DATE: DEC., 1981	TJV-81-9
REVISED BY:	N.T.S. 94E / 7W	

TOODOGGONE LAKE

GRAVES 2

GRAVES 5

GRAVES 6

GRAVES 7

GRAVES 8

GRAVES 3

GRAVES 1

GRAVES 4

1200

1400

1600

1700

1800

1900

1901

1941

1952

1781

2061

1683

1889

1845

Py,As

Py,Ba

Ba,Mn

As,Py

N

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,050
NO.

1-E-9797 △ ROCK CHIP SAMPLE LOCATION

⊢ CONTINUOUS (5 m) CHANNEL SAMPLING

■ LEGAL CORNER POST

CREEKS

CLAIM BOUNDARY

OUTCROP

GEOLOGIC CONTACT

\40 JOINTS

\10 BEDDING

Py PYRITE
Ba BARITE
Pb LEAD
As ARSENOPYRITE

TERTIARY
- MAFIC DYKES [11]

LOWER-MIDDLE JURASSIC
- GRANITE [10]
- QUARTZ BRECCIA [9]
- RHYOLITE [8]

TOODOGGONE VOLCANIC ASSEMBLAGE
- SILICIFIED PYRITIC VOLCANIC ROCKS [7]
- QUARTZ FELDSPAR PORPHYRY [6a]
- GREEN MATRIXED TOODOGGONE PORPHYRY [6b]
- GREEN HORNBLENDE FELDSPAR CRYSTAL TUFF [5]
- LAVENDER CRYSTAL TUFF [4]
- GREEN TO GREY CRYSTAL TUFF [3]

HAZELTON ASSEMBLAGE
- MAROON LITHIC TUFF [2]
- GREEN PORPHYRY WITH WHITE PHENOCRYSTS [1]

GREAT WESTERN PETROLEUM CORPORATION

TOODOGGONE JOINT VENTURE
GRAVES 1-8 CLAIM GROUP
GEOLOGY

METRES 100 0 100 200 300 400 500 700 900 METRES
FEET FEET

MAPPED BY: N.C., L.K.E., D.F.	SCALE: 1 : 10,000	DRAWING NUMBER
DRAWN BY: Madeline Cowan	DATE: DEC., 1981	TJV-81-15
REVISED BY:	N.T.S. 94E / 7W	