

GEOLOGICAL, GEOCHEMICAL AND PROSPECTING REPORT

ON THE

JOSH, JOSH 2-4 and MAY 1-4 MINERAL CLAIMS

LOCATED IN THE ISKUT RIVER AREA

LIARD MINING DIVISION

NTS 104B/10 E & W

56°40' N LATITUDE

130°50' W LONGITUDE

PREPARED FOR

GULF INTERNATIONAL MINERALS LTD.

409 - 837 West Hastings Street

VANCOUVER, B.C., V6C 1B6

BY

T. CAMERON SCOTT

Geologist.

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part 1  
of 2

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,306

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## 1.0 Introduction

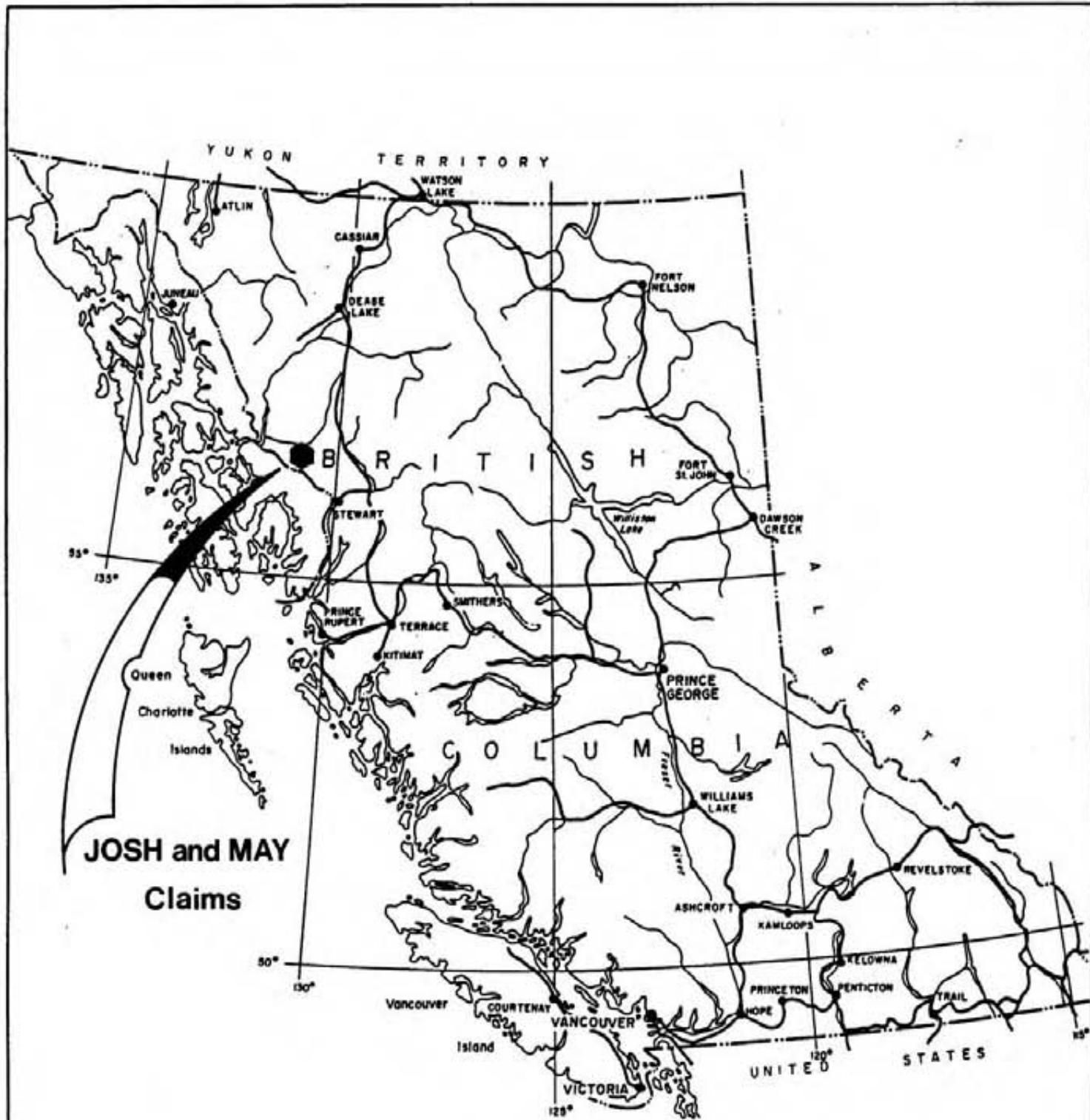
The Josh mineral claims (80 units) were staked in the early Fall of 1982 on the east side of Snippaker Creek, approximately 6 km southeast of its confluence with the Iskut River in northwestern British Columbia. An additional 80 units, known as the May mineral claims, were staked in mid winter of 1983, adjacent to the eastern boundary of the Josh claims. The claims cover several previously discovered copper-zinc occurrences which were not evaluated in the past for precious metals. Recent discoveries of significant gold and silver values in volcanogenic environments in the area suggest that these showings and their host rocks may also contain precious metal concentrations of economic importance.

### 1.1 General Geography and Physiographic Position

The Josh and May mineral claims are located on the east flank of the Coast Range mountains 6 kilometers (4miles) southeast of the confluence of Snippaker Creek and the Iskut River. Telegraph Creek is 137 kilometers (85 miles) to the north, and Stewart is 96 kilometers (60 miles) to the southeast.

Co-ordinates of the property are  $56^{\circ}40'$  N Latitude and  $130^{\circ}50'$  W Longitude. The property falls under the authority of the Liard Mining Division (NTS Reference: 104 B/10).

A gravel airstrip suitable for Beaver or Otter fixed wing aircraft is located 8 kilometers (5 miles) to the south in the Snippaker Valley. There is another gravel airstrip at Bob Quinn Lake 50 kilometers (30 miles) to the northeast of the property. The nearest road is the Stewart-Cassiar Highway that passes just to the east of Bob Quinn Lake.



**JOSH and MAY  
Claims**

<b>GULF INTERNATIONAL MINERALS LTD.</b>			
<b>JOSH and MAY Claims</b>			
<b>PROPERTY LOCATION MAP</b>			
<b>DRAWN</b> TCS	<b>PROJECT</b>	<b>DATE</b> SEPT. 1983	<b>FIG.</b> 1

The claims cover a series of northerly-tending ridges which are separated by steep walled 'U' shaped valleys. The valley walls rise precipitously, from elevations of approximately 350 meters (1,150 feet) to the ridge crest at 1,200 meters (4,000 feet) where the slopes flatten considerably. Glacier encrusted mountain peaks rise above the ridges to an elevation in excess of 1,000 meters (6,000 feet).

The ridges are a series of rolling hummocks traversed by numerous north-easterly tending draws. Areas underlain by limestone have typical Karst topographic features.

The valleys occupied by Snippaker Creek and the Iskut River are heavily timbered with fir and spruce on the more gentle slopes. Steeper areas are covered with dense 'slide' alder and devils club. Thick stands of fir, spruce and balsam, with a scattering of pine, give way at about the 900 meter (3,000 foot) elevation to stunted balsam and alpine flora typical of the Coast Range Mountains. Treeline is approximately 1,200 meters (4,000 feet) in elevation.

The property is located in the transition area between West Coast Marine and Interior dry belt climate divisions. There would be an estimated 200 centimeters (80 inches) of rain and up to 80 centimeters (6 feet) of compacted snow at the higher elevations during the year.

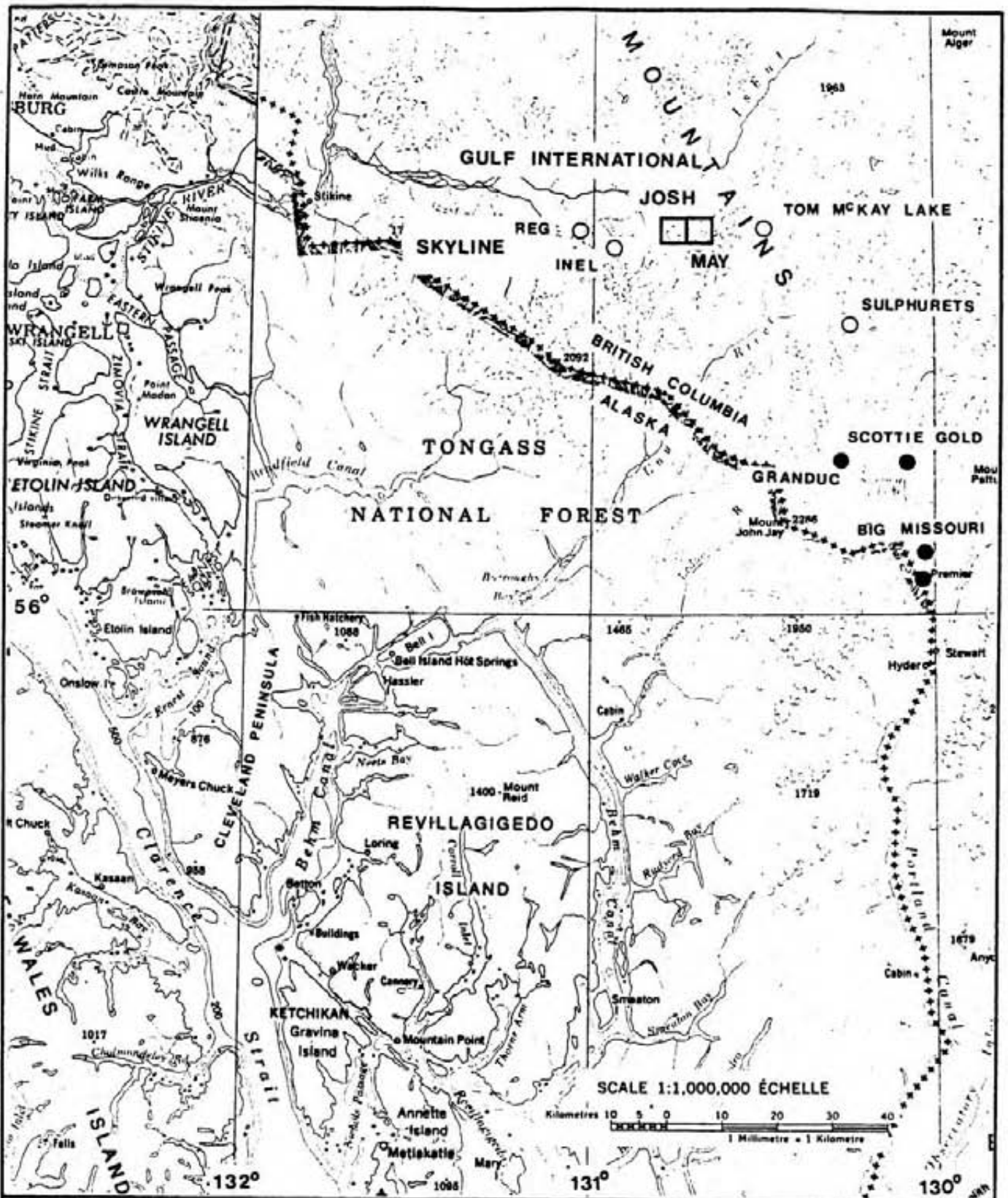
Summer temperatures would range from  $0^{\circ}$  to  $16^{\circ}\text{C}$  ( $+32^{\circ}\text{F}$  to  $60^{\circ}\text{F}$ ) and winter temperatures from  $-35^{\circ}\text{C}$  to  $0^{\circ}\text{C}$  ( $-32^{\circ}\text{F}$  to  $+32^{\circ}\text{F}$ ). The coast weather system has a modifying effect on this area and severe cold temperatures do not prevail for long periods.

## 1.2 Property Definition and History

General mineral exploration activity in the region dates back to the turn of the century and continued on into the 1930's with interest in precious metals centering on the Stewart camp. A revival of activity was seen in the 1950's and 1960's as active exploration progressed throughout the Stikine River area in search for porphyry copper deposits.

In recent years, the marked increase in precious metal prices has prompted renewed interest and exploration activity in the Stewart Camp as well as in adjacent areas of similar geologic setting, namely Lower to Middle Jurassic volcanic and volcanoclastic accumulations with rhyolitic and intrusive components. In addition, current research and documentation, and the geology surrounding other historical precious metal camps, has led to a greater understanding and recognition of the characteristics of epithermal precious metal systems which many of the past producers and present prospects of the Stewart and Iskut camps typify (see Figure 2).

As a result of these events, Skyline Explorations in 1981 resumed field investigations of its REG and INEL properties located 8 km to the west of the Josh and May claims. Their discovery of significant gold values associated with pyritic structures within the volcanic units has led to the revival of the Iskut River Gold Camp.



- Producers (past & present)
- Significant Prospects

## STEWART & ISKUT RIVER GOLD CAMPS

Fig. 2



The Josh and May mineral claims were staked in 1982 and 1983 on behalf of Gulf International Minerals Ltd. and cover previously discovered sulphide occurrence in a geologic setting similar to the REG and INEL properties. These were originally located and staked by Newmont Mining Corporation of Canada in 1963. Newmont carried out an airborne magnetometer survey and limited ground exploration in 1984. The claims were subsequently allowed to lapse.

In the past, little emphasis was put on the possible precious metal content of the original Newmont showings or on the possible precious metal potential of the volcanic rocks and related sediments found on the property. The work undertaken by Gulf International Minerals Ltd. on these Josh and May claims has concentrated on these possibilities.

#### 1.2.1 List of Claims

The following Table lists the mineral claims which make up this property. Gulf International Minerals Ltd., is the recorded owner of all claims (see Figure 3).

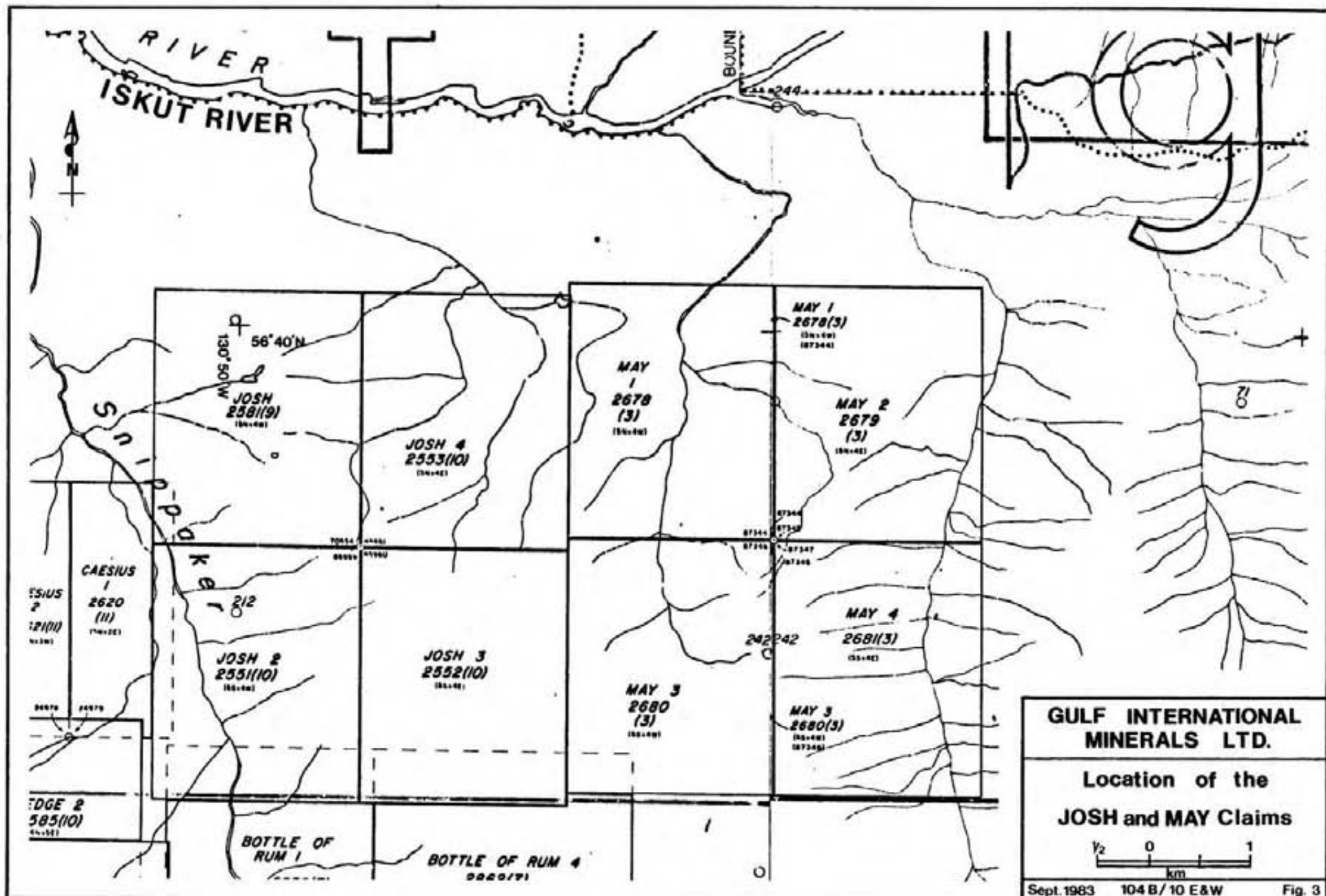


TABLE I

LIST OF JOSH AND MAY MINERAL CLAIMS

<u>CLAIM</u> <u>NAME</u>	<u>NO.</u> <u>UNITS</u>	<u>RECORD NO.</u>	<u>DATE OF RECORD</u>
Josh	20	2581 ( 9)	13 Sept. 1983
Josh 2	20	2551 (10)	13 Oct. 1983
Josh 3	20	2552 (10)	13 Oct. 1983
Josh 4	20	2553 (10)	13 Oct. 1983
May 1	20	2678 ( 3)	3 March 1983
May 2	20	2679 ( 3)	3 March 1983
May 3	20	2680 ( 3)	3 March 1983
<u>May 4</u>	<u>20</u>	2681 ( 3)	3 March 1983
8 claims	160 units		

1.3 **Summary of Work Done**

Work was carried out on the property during the period July 18, 1983 and August 9, 1983. The field crew consisted of the author-geologist, Tom Bell - prospector, and Stan Seney - sampler. A camp was established approximately 1 kilometer northwest of the LCP for the Josh mineral claim. Transportation to more distant areas of the claims was provided by charter helicopter which was based at the Snippaker Creek airstrip. Service for the camp supplies and sample shipments used the same helicopter.

Work on the property consisted of geological mapping, prospecting and reconnaissance rock and steam sediment sampling. Geological mapping was of a reconnaissance nature using an orthophotographic Mosaic at a scale of 1:20,000 as a base map. All geological and geochemical data was transcribed to a 1:10,000 scale topographic base for this report. Prospecting was carried out with special attention being paid to the location of sulphide-bearing rock units and structures which may be indicative of volcanogenic and epithermal mineralizing systems. A total of 161 rock samples were collected and submitted for analysis using ICP Geochemical Analysis techniques. A total of 30 elements were analyzed for using this method.

In addition to the collection of rock samples during prospecting, four of the old trenches were re-sampled. A total of 11 samples were submitted for assay. Five samples collected elsewhere on the property were also submitted for assay. The metals analyzed for included: Au, Ag, Pb, Zn and Cu.

Work also included the collection of stream sediments from creeks draining the property. A total of 53 samples were submitted for analysis using ICP techniques. The analysis of all samples, rock and silt, was carried out by Acme Analytical Laboratories Ltd. of Vancouver, B.C.

Prior to the geological, prospecting and geochemical work on the property, an airborne geophysical survey was carried out over the Josh and May claims. This included magnetic and electromagnetic sensing. As the work was carried out under separate contract with reports and results yet to be received, little can be said about the survey at this time.

#### 1.4 Claims Worked On

The claims upon which the work, covered by this report, was actually done are listed in Table 2.

**TABLE 2**  
**CLAIMS WORKED ON - 1983**

<b>WORK</b>	<b>AMOUNT</b>	<b>CLAIMS</b>	<b>RECORD NOS.</b>	<b>DATE OF RECORD</b>
Geological Mapping and Prospecting		Josh	2581	13 Sept. 1982
		Josh 2-4	2551-2553	13 Oct. 1982
		May 3	2680	
Rock and Stream Sediment Geochemistry		Josh	2581	13 Sept. 1982
		Josh 2-4	2551-2553	23 Oct. 1982
		May 1, May 3	2678, 2680	

It should be noted that the majority of the work was done on the Josh claims. Work done on the May claims amounts to approximately 16.5% of the total work covered in this report.

#### 2.0 Detailed Technical Data and Interpretation

##### 2.1 Purpose of the Work Done

The purpose of the work done was to assess the Josh claims as to their potential for the development of precious metal lode deposits. The work undertaken was based on the recommendations put forth in "Summary Report on the Josh, Josh 2-4, Mineral Claims" prepared by Pamicon Development Ltd. in February 1983, on behalf of Gulf International Minerals Ltd.

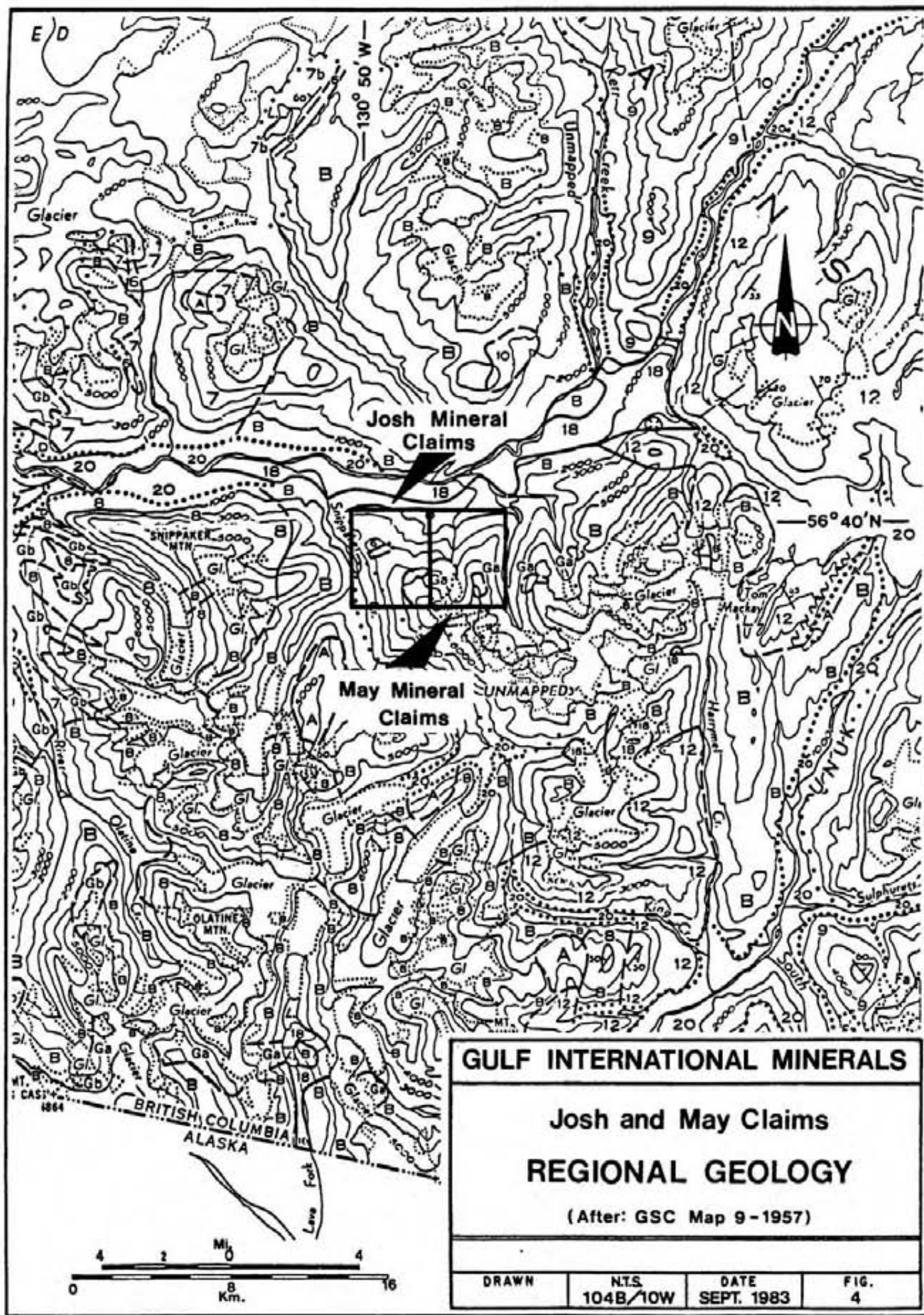
## **2.2 Results and Interpretation of Geological Mapping and Prospecting**

### **2.2.1 Regional Geology**

The Josh mineral claims lie on the east flank of the Coast Plutonic Complex which, in this area, consists mainly of quartz-monzonite stocks with satellitic bodies of syenite and diorite. The area is underlain by mid-Mesozoic and older rocks consisting of shales, limestones and acid, to intermediate volcanics and volcanoclastics which have been intruded by elements of the Coast Intrusions (see Figure 4). This has resulted in the development of several roof pendants. A number of northwest striking felsite dykes cut the above assemblage. The lower portion of the Iskut River Valley, 2 km to the north of the property, contains Tertiary basalt flows and related pyroclastics of the Stikine Volcanic Belt. These probably originated from a vent 13 kilometers to the northeast on the south side of the river.

### **2.2.2 Local Geology**

The Josh and May claims are underlain by a succession of limestone, volcanics and



**GULF INTERNATIONAL MINERALS**

**Josh and May Claims  
REGIONAL GEOLOGY**

(After: GSC Map 9-1957)

DRAWN	NTS	DATE	FIG.
	104B/10W	SEPT. 1983	4

# LEGEND

## SEDIMENTARY AND VOLCANIC ROCKS

CENOZOIC

**18** Olivine basalt, ash, cinders

MESOZOIC

### JURASSIC AND CRETACEOUS

#### UPPER JURASSIC AND LOWER CRETACEOUS

**12** Argillite, greywacke, conglomerate, coal; 12a, andesite, chert, tuff, conglomerate, shale, greywacke

### JURASSIC

#### LOWER AND MIDDLE JURASSIC

**11** Conglomerate, greywacke, grit, siltstone, shale; 11a, may include younger rocks

### TRIASSIC

**8** Tuff, siltstone, limestone, conglomerate, breccia

### PERMIAN AND/OR TRIASSIC

**7** 7. Volcanic and sedimentary rocks undivided; 7a, mainly andesitic and basaltic volcanic rocks; flows, breccia, tuff breccia, tuff; 7b, mainly greywacke, siltstone, conglomerate; 7c, mainly limestone

PALAEOZOIC

### PERMIAN AND (?) EARLIER

**6** Limestone, greenstone, chert, argillite, phyllitic quartzite, greywacke; meta-andesite and meta-diorite locally abundant near ultramafic bodies. May include younger greenstone; 6a, Carboniferous or Permian, mainly andesitic flows, breccia, tuff; minor sedimentary rocks

### JURASSIC AND /OR EARLIER PRE UPPER JURASSIC

**9** **10** 9. Mainly volcanic rocks; minor conglomerate; greywacke, argillite  
10. Mainly sedimentary rocks

## INTRUSIVE ROCKS

**A** Felsite, felsite porphyry

**B** Mainly quartz monzonite, granodiorite, granite

## METAMORPHIC ROCKS

### PERMIAN AND/OR EARLIER

#### PRE MIDDLE PERMIAN

**G** Ga, Gneiss; Gb, phyllite, quartzite, minor crystalline limestone, highly altered and sheared greywacke and volcanic rock



related sediments of probable Paleozoic and Mesozoic age which have undergone age which have undergone numerous periods of deformation and intrusion. The main structural control may be related to resurgent periods of thrusting adjacent to the Iskut River Valley in which Paleozoic strata is thrust southward upon Mesozoic rocks (Dr. E. W. Groves, 1983-pers. comm.). Segmented fossiliferous limestone units occur on the property and specimens are presently being examined by the Geological Association of Canada for identification and dating. The degree of fault dislocation of the various rock units and the contact metasomatism inflicted by intrusive activity have produced a confused picture of the stratigraphic succession on the property. The geological mapping undertaken on the property has thus been of a general nature and is represented on Map 1.

The oldest rocks (lowermost) appear to belong to a thick sequence of andesitic volcanic breccia (Unit 2), which is characterized, in part, by clasts of limestone up to 10 cm in length. This unit also contains minor tuff and argillite beds as well as very minor acidic members. The latter may be a result of intense silicification due to close proximity to intrusive elements. A conspicuous rhyolitic unit (Unit 1) was encountered on the western boundary of Josh 3. It may be a sill or flow representing a differentiated phase of the andesitic volcanism.

A thick unit of light grey, banded, fossiliferous (crinoidal) limestone (Unit 3) is intercalated with the andesitic breccias. It provides a marker horizon from the northwest to the southeast across the property. Carbonaceous andesitic volcanics comprise a minor portion of this unit.

The above units are intruded by elements of the Coast Batholith in the form of a syenodiorite porphyry (Unit 4) and a later granodiorite. The syenodiorite is characterized by 1.0 to 1.5 cm hornblende phenocrysts and 1 to 5.0 cm pink orthoclase phenocrysts in medium-grained subhedral matrix distinctly lacking in quartz. The main body body strikes northeasterly across the Josh and Josh 4 claims. Both the north and south contacts are obscured by overburden. However, it does appear a cross-cutting relationship with the stratified rock exists. Locally, the syenodiorite porphyry occurs as both sills and dykes within the layered units.

The granodiorite (Unit 5) occurs as near vertical northeasterly-trending dykes within the syenodiorite porphyry. It is characterized by a leucocratic fine-grained matrix which contains minor 1 to 3 mm biotite grains. The 3.0 to 30.0 meter wide dykes form conspicuous resistant ridges.

The youngest rocks appear to be narrow, fine-grained, gabbro dykes which also strike northeasterly across the stratified rocks. It is possible that these may represent feeders for the Tertiary Valley basalts of the region.

Rock alteration consists of propylization, silicification, serpentization and contact metasomatism. Contact metasomatism has resulted in the formation of actinolite - epidote skarns within the limestone and carbonaceous volcanics in close proximity to the syenodiorite porphyry. Serpentization is minor and is occasionally observed on faults which cut across the limestone units. It may, in part, be related to the late gabbroic intrusions. Occasionally zones of silicification are observed within the finer grained volcanics. It appears to be related to the intensity of the late quartz veining. Propylitic alteration is widespread and is characterized by quartz veining with epidote and the alteration mafic minerals to epidote and chlorite in all rocks.

Structurally, the property is complexed. The main trend of the layered rocks changes from an easterly strike with 2 moderate northerly dips in the northwest portion of the property to southerly strike with moderated easterly dips in the southern and southeastern portions. These rocks appear to have been truncated by periodic movements along a major northeasterly structure which has allowed the subsequent intrusion of batholithic rocks. While the main mass of syenodiorite porphyry follows this trend, sills and dykes are observed parallel to bedding and crosscutting the layered rocks. The later granodiorite dykes, and most quartz veins, parallel this direction. All display relatively steep dips. Subsequent structural adjustment (occurring contemporaneous with or shortly after the emplacement of the granodiorite) has seen the development of 2 northerly striking fracture direction, which allowed the development of a weak quartz stockwork within the syenodiorite and the segmentation of some of the granodiorite dykes. The strong northeasterly structures appear to have come into play again with the emplacement of the gabbro dykes.

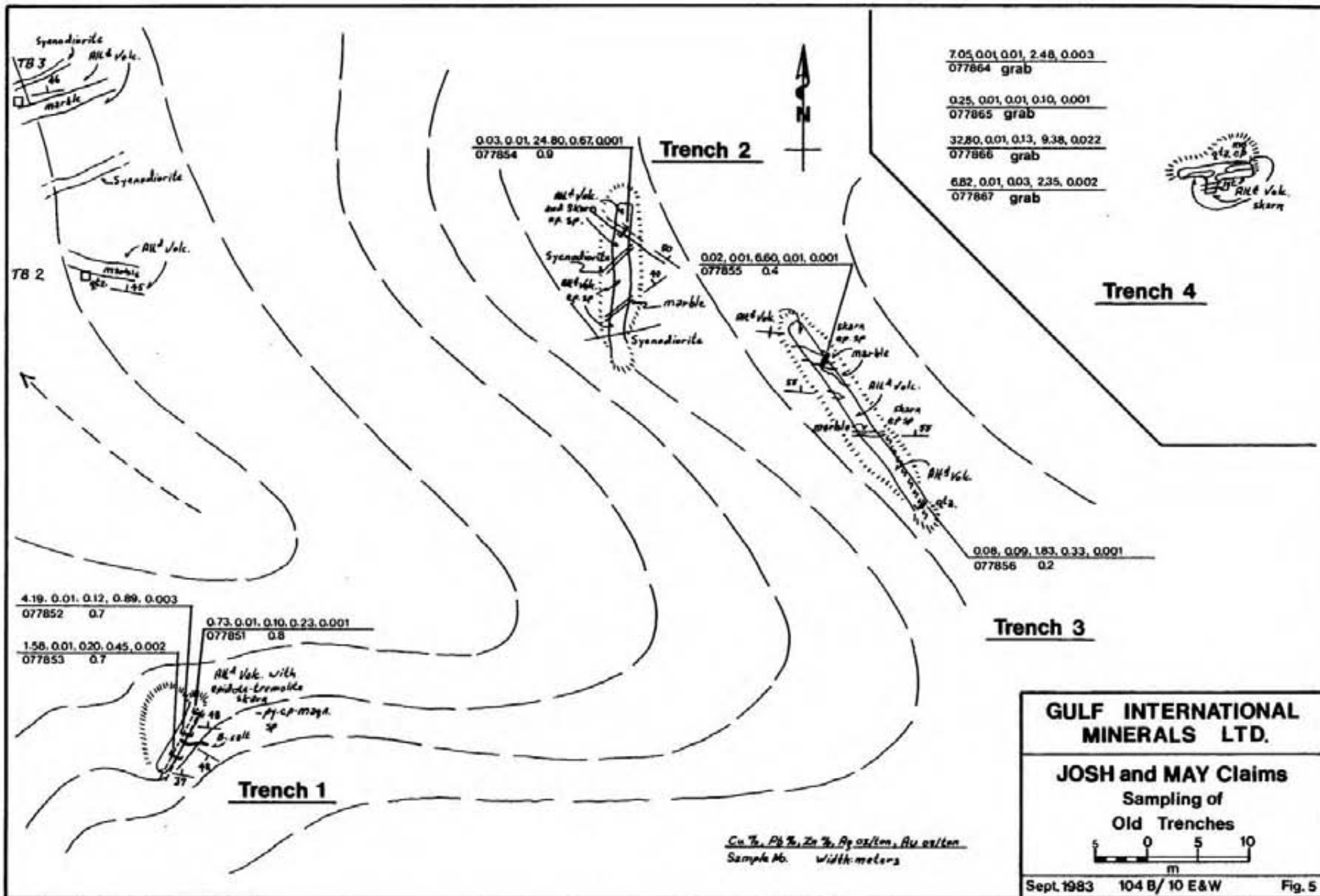
The dominant linear features observed on air

photographs are the southerly strike of the layered rocks and the strong northeasterly structural fabric. On the ground many of the northeasterly trends are topographic lows (draws) and often contain numerous pieces of frost-heaved sugary quartz float. The contacts between most rock units are faulted.

Mineral occurrences on the property can be classified into three categories, namely: skarns, weak quartz stockworks and late quartz veins. Mineralization related to skarns is best developed within the limestone and calcareous volcanic units along the northern margin of the syenodiorite porphyry located on the Josh claim. This is the area of the old trenches which were re-sampled. (Figure 5.)

Trench 1 displays massive pyrite, chalcopyrite, magnetite mineralization in a strong actinolite-epidote skarn within calcareous volcanics. The exposed lense measures approximately 7.0 meters long with a maximum width of 0.8 meters.

Trenches 2 and 3 display irregular discontinuous lenses of light brown, crystalline sphalerite within actinolite-epidote-garnet skarn. The maximum thickness is about 1 meter. Minor pyrite, chalcopyrite and magnetite accompanies the sphalerite. Galena is not present.



**GULF INTERNATIONAL MINERALS LTD.**

**JOSH and MAY Claims**  
 Sampling of  
 Old Trenches

Sept. 1983 104 B/10 E&W Fig. 5

Trench 4 exposes a well weathered actinolite-epidote skarn characterized by 0.3 meter pods of relatively pure chalcopyrite associated with magnetite and vuggy crystalline quartz.

The mineralized skarns can be found in most exposures of lime-rich rock which have been intruded by the syenodiorite and occur throughout the property. Although sections of high grade zinc and copper can be obtained, they are characterized by low silver values, negligible lead and gold values, and by their irregular and discontinuous nature.

The second category of mineralization is the weak quartz stockwork which is developed throughout the main mass of syenodiorite porphyry. Narrow, 5 mm quartz stringers, trending northerly with steep dips, contain minor pyrite with traces of chalcopyrite and molybdenite. Associated rock alteration is predominantly propylitic. It should be noted that the stockwork is more intense adjacent to the granodiorite dykes. Although the dykes are fractured and often segmented, they are not cut by the stockwork. This type of mineral occurrence appears to be of little economic importance because of their overall very low metal content.

The third and most important type of mineralization observed appears to be associated with late, sugar, often vuggy, which contain conspicuous but low amounts of galena and chalcopyrite with very minor sphalerite and pyrite. Typical of these, is the 4 meter wide quartz vein located at TB46. The northeasterly striking, south dipping vein is exposed for 30 meters and can be traced by float for several tens of meters farther to the northeast. Although base metal values are low, rock sample TB46 reported 23.3 ppm Ag and 2430 ppb Au. Exposures of veins such as this are not common; however, similar frost-heaved quartz-barite vein material commonly occupies the recessive northeasterly-trending draws.

The most significant float of this style of mineralization was discovered by prospecting at TB25, near the southwestern corner of Josh 3. The geochemical values obtained were 1.7% Cu, 118.3 ppm Ag and 8250 ppb Au. The occurrence is particularly important as adjacent bedrock samples also reported strongly anomalous gold values.



## 2.3 Results and Interpretation of Geochemistry

Rock and stream sediment samples were routinely collected during the process of geological mapping and prospecting. These were submitted for geochemical analysis using ICP analytical techniques. The results are shown on Maps 2, 3 and 4.

### 2.3.1 Rock Sampling

Bedrock and float samples of mineralized and barren but altered rock were collected from numerous locations on the property. The size and nature of the samples varied greatly, ranging from grab samples to chip samples over larger areas. The descriptions of all samples collected are contained in Appendix I.

Since the character of the various samples varied greatly and an obvious bias in selection was inherent, it was felt that a rigorous statistical analysis of the analytical results would not be meaningful. Instead, arbitrary limits were chosen for weighing the importance of one sample to another. Table 3 lists the limits used for the comparison of the analytical results obtained. As the significance of many of the 30 elements analyzed for is uncertain, only 6 are being considered at this time.

**Table 3**  
**Rock Sample Analysis**

<b>Metal</b>	<b>Significant Range</b>	<b>Anomalous Range</b>
Au	>50 ppb	>200 ppb
Ag	>10 ppm	> 30 ppm
As	>25 ppm	> 75 ppm
Cu	>0.025% ( 250 ppm)	>0.1% ( 1,000 ppm)
Pb	>0.1% (1000 ppm)	>1.0% (10,000 ppm)
Zn	>0.1% (1000 ppm)	>1.0% (10,000 ppm)

Upon review of the analytical results, the following general correlations can be made.

1. Zinc is concentrated with rocks displaying contact metamorphism. It is often accompanied by elevated silver values.
2. Lead concentrations normally do not coincide with the zinc, except in quartz veins.
3. Copper concentrations occur in skarns and quartz veins. In the latter case it is often associated with lead.
4. Gold concentrations appear to be restricted to quartz veins and is often accompanied by anomalous copper and arsenic values.

5. Silver concentrations are found with anomalous copper, lead and zinc values. Except in the case of skarns, high silver values are accompanied by elevated gold values.

### 2.3.2 Stream Sediment Sampling

Stream sediment samples collected in kraft paper sample bags were air dried and submitted for analysis using ICP analytical techniques. As a limited number of samples were collected a statistical analysis of resulting data was not performed. Anomalous and possibly anomalous limits were arbitrarily chosen based on the writer's previous experience. Table 4 lists the limits chosen for interpretation of the Au, Ag, As, Cu, Pb and Zn values obtained.

TABLE 4

#### STREAM SEDIMENT SAMPLE ANALYSIS

METAL	POSSIBLY ANOMALOUS	ANOMALOUS
Au	> 25 ppb	>100 ppb
Ag	>0.5 ppm	>1.0 ppm
As	> 20 ppm	> 75 ppm
Cu	>200 ppm	>500 ppm
Pb	> 50 ppm	>100 ppm
Zn	>200 ppm	>400 ppm

The following correlations can be drawn from the distribution of the above metals in streams draining the Josh and May claims.

1. Anomalous gold values occur in streams draining the TB46 outcrop area and are associated with anomalous values in copper, arsenic, lead, zinc and silver.
2. Anomalous lead and zinc values occur in streams draining areas of skarn development but not areas underlain by syenodiorite porphyry.
3. Anomalous copper values occur in streams draining skarns along the margins of the syenodiorite porphyry.

### 3.0 Conclusions

The field activities carried out during late July and early August of 1983 has resulted in the discovery of rocks containing significant precious metal values. Although several modes of sulphide mineralization are present, the best gold values were obtained from quartz veins, both float and bedrock. The areas of greatest importance occurred at sample sites TB25 and TB46. Gold values obtained were 8225 pb and 2430 ppb, respectively. Associated silver values were 118.6 ppm and 23.3 ppm.

Moderate silver values were obtained from a variety of occurrences and are notably associated with high base metal values. The skarn zones invariably contain the highest base metal values but their irregularity makes them a less

effective target. They also contain only trace amounts of gold. Associated silver values are low, in the 30 to 70 ppm range. This style of mineralization is related to the contact metasomatism of limestone and calcareous volcanics which are in close proximity to the intruding syenodiorite porphyry.

Copper - molybdenum mineralization found associated with the weak quartz stockwork within the syenodiorite is sparse and not of economic importance. Apart from the skarns and minor zones of silicification, the overall rock alteration in the area is weak. Nowhere were zones of pervasive pyritization observed. The sugary, vuggy quartz veins, although probably not of epithermal origin, appear to be the best targets for precious metal concentrations of economic importance at this time.

The program carried out this summer was successful in locating mineral occurrences of significant precious metal values on the Josh claims. Further prospecting, mapping and sampling of untested areas of the Josh and May claims should produce additional showings of importance. In conclusion, it is recommended that a similar program be considered in the future and that the results of the 1983 program be followed up.

4.0 Recommendations

As encouraging results have been obtained from the work done on the Josh and May claims this season, it is recommended that further exploration work be carried out on the property. This work should incorporate the following:

1. Follow up the high gold values obtained in the areas around samples TB25 and TB46 with detailed mapping, prospecting and sampling - both rock and soil sampling.
2. Continue prospecting, mapping and rock and stream sampling in order to cover areas of the Josh an May claims which have yet to be examined.
3. Evaluate results of the airborne geophysical surveys by ground follow-up.

Respectfully submitted,



T. Cameron Scott,  
Geologist.

**APPENDIX I**

**ROCK SAMPLE DESCRIPTIONS**

SAMPLE NO.	FLOAT BEDROCK				WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
TB-R1	X					py in syenodiorite	
-R2				X	0.6	qtz vein below trenches; sugary	072°/83° E
-R3				X	0.1	skarn; sp, cp, py, mg, mn	135°/50° E
-R4				X	4.3	skarn; sp, py, mg	
-R5	X					qtz. with cp	
-R6		X				skarn; sp	
-R7				X	1.3	skarn; py, sp	160°/40° E
-R8				X	1.3	skarn; py, sp, hm, mn	160°/40° E
-R9				X	4.0	qtz. stockwork in volcanics; py	
-R10				X	0.6	Sp, py	
TB-R11		X			2.0	qtz. vein	
-R12	X					qtz. with cp	
-R13				X	0.3	qtz. vein; py, cp	
-R14	X					qtz. vein in syenodiorite	
-R15				X	0.6	qtz. vein in altered andesite; y, gn, mn, lm	
-R16	X				0.6	qtz. vein in altered syenodiorite; py, lm	
-R17			X		5.0	qtz. vein in syenodiorite; py	270°/V
-R18	X					altered andesite (skarn?); cp, sp, hm	
-R19				X	5.0	qtz vein in syenodiorite; 15 cm wide; py hm	046°/20W



SAMPLE NO.	FLOAT BEDROCK				WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
TB-R1	X					py in syenodiorite	
-R2				X	0.6	qtz vein below trenches; sugary	072°/83° E
-R3				X	0.1	skarn; sp, cp, py, mg, mn	135°/50° E
-R4				X	4.3	skarn; sp, py, mg	
-R5	X					qtz. with cp	
-R6		X				skarn; sp	
-R7				X	1.3	skarn; py, sp	160°/40° E
-R8				X	1.3	skarn; py, sp, hm, mn	160°/40° E
-R9				X	4.0	qtz. stockwork in volcanics; py	
-R10				X	0.6	Sp, py	
TB-R11		X			2.0	qtz. vein	
-R12	X					qtz. with cp	
-R13				X	0.3	qtz. vein; py, cp	
-R14	X					qtz. vein in syenodiorite	
-R15				X	0.6	qtz. vein in altered andesite; y, gn, mn, lm	
-R16	X				0.6	qtz. vein in altered syenodiorite; py, lm	
-R17			X		5.0	qtz. vein in syenodiorite; py	270°/V
-R18	X					altered andesite (skarn?); cp, sp, hm	
-R19				X	5.0	qtz vein in syenodiorite; 15 cm wide; py hm	046°/20W

SAMPLE NO.	FLOAT BEDROCK				WIDTH m.	ROCK SAMPLE DESCRIPTION
	GRAB	CHIP	GRAB	CHIP		
-R20	X					qtz.-vuggy, weathered; silicified skarn, py, hm, ep
TB-R21			X		1.0	qtz. vein in syenodiorite; py, hm, mn, ep
-R22	X					qtz. vein in syenodiorite; py
-R23				X	1.0	altered volcanics (skarn?); py, hm
-R24				X		altered andesite with qtz; gossan; py, gn cp
-R25	X					qtz. vein in andesite
-R25a	X					qtz. vein in andesite
-R26			X		15.0	qtz.-carb. stringers in altered andesite; cp, py, hm, mn, ml
-R27				X	1.0	qtz. vein - sugary; weathered; py
-R28			X			altered andesite; gossan; py, hm, (cp, sp)
-R29				X	0.4	barite in silicified volcanic breccia; gn, sp
-R30	X					qtz. in andesite; py, mo
TB-R31			X			qtz. -barite vein
-R32			X			qtz. - barite vein; lm, ml, mn
-R33			X			qtz. - carb. stringers in altered andesite; py, cp

SAMPLE NO.	FLOAT		BEDROCK		WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
-R49			X		0.5	qtz.- barite vein in altered volcanics	
-R50			X		0.3	qtz. veins in altered volcanics; massive py	
TB-R51			X		6.0	qtz. veins in altered volcanics ?; gossan	
-R52			X			qtz. vein in altered volcanics; crushed; gossan; py, carb., chl.	
-R53	X					silicified volcanics; strong cp	
-R54			X		1.0	altered volcanics; gossan; qtz, py	
-R55			X			qtz. vein in limey volcanics; gossan	
-R56			X		1.6	barite-carb. stringers in syenodiorite	020°/20° E
-R57			X			qtz. stringers in syenodiorite; py	
-R58			X			syenodiorite in volcanics; 5.0 m; pyritic	030°/25° S
-R59			X			syenodiorite with qtz. stockwork, py, mo, chl.	060°/30° E
-R60			X			skarn, chl, ep, carb., py, hm, sp; silicified	
TB-R61			X			skarn; chl, ep, carb, py, hm, sp; silicified	
-R62			X			skarn; chl, ep, carb; sp, py, mo	

SAMPLE NO.	FLOAT		BEDROCK		WIDTH m.	ROCK SAMPLE DESCRIPTION
	GRAB	CHIP	GRAB	CHIP		
-R63			X			skarn; chl, ep, sp, py
-R64			X		0.5	qtz. vein in brecciated altered volcanics; cp, py
-R65	X					qtz. stockwork in skarn; 30 m; c, py mn
-R66			X			qtz. stockwork in skarn - volcanics cp, gn, py
-R67	X					pyritic boulder with qtz
-R68	X					qtz. stringers; py, gn, cp
-R68			X			altered volcanics; py, ep
-R70			X		15.0	qtz. stockwork in skarn; mn, cp, gn, sp, py, az, ml.
-R71	X					qtz. stockwork in altered volcanics; gn, cp, py, honey sp
-R72	X					altered andesitic volcanics; chl, sp, gn, cp, py, qtz-carb
-R73			X		10.0	qtz. -carb stringers in argillite (limoy) py, cp, gn, sp; bedding
-R74			X			qtz. vein in altered volcanics py

130°/V

040°/80°E

SAMPLE NO.	FLOAT		BEDROCK		WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
-R34			X			qtz. vein in altered syenodiorite; cp, py, hm	030°/30° E
-R35	X					qtz. - barite boulder; gn, sp	
-R36			X			qtz. in limestone -volcanic contact; sugary; py, cp, ml, az; bedding	064°/20° E
-R37	X					qtz. -barite boulders; py, cp, sp, gn.	
-R38	X					qtz. vein; gn, py, green sp	
-R39	X					limestone with serpentine	
-R40			X		15.0	qtz.-carb. stringers in limey volcanics gn, sp, py	
TB-R41				X	0.5	skarn in limey volcanics; py, gn, cp	
-R43						No sample	
-R44			X			qtz. vein and wallrock in altered volcanics; gossan; py, cp; 7 cm	
-R45			X			altered volcanics; gossan; mg, py, po	
-R46			X			qtz. vein in syenodiorite; py; 2.0 m wide	070°/?W
-R47			X			qtz. vein in silicified volcanics; porous; py	
-R48			X		2.5	qtz. vein in altered volcanics; py	

SAMPLE NO.	FLOAT		BEDROCK		WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
-R75			X			qtz. vein in altered volcanics; silicified; ep, cp	
-R76			X			qtz. veins in altered volcanics, vuggy; py; lm	
-R77			X			qtz. vein associated with skarn; cp, hm	
-R78			X			qtz.-barite vein in serpentized limestone	045° / V
-R79			X			qtz. vein; cp, hm	
-R80						No Sample	
-R81						No Sample	
-R82						No Sample	
-R83						No Sample	
-R84			X			Silicified syenodiorite	030° / 15° E
-R85			X			Skarn; py	
-R86			X			Skarn; limestone and volcanics; py, cp, mn, lm, az, ml	
-R87			X			qtz. stringers in silicified volcanics; py	

SAMPLE NO.	FLOAT BEDROCK				WIDTH m.	ROCK SAMPLE DESCRIPTION
	GRAB	CHIP	GRAB	CHIP		
-R88			X		2.0	qtz.-barite stringers in limestone; gn, sp, py, cp
-R89			X		1.0	limonitic vein material; py, cp
-R90			X		2.0	qtz. vein and silicified wall-rock; gn, cp, py
TB-R91			X		5.0	Silicified limestone; gn, py
CS-R1		X			2.0	manganiferous, ferruginous wad
-R2		X			2.0	limy volcanic breccia; py, as
-R3	X					porous limonitic rock with qtz. fragments
-R4	X					altered syenodiorite; limonitic
-R5	X					sheared ksyenodiorite; py
-R6		X				granodiorite; py
-R7		X				syenodiorite; py
-R8		X				syenodiorite; kao, hm, py
-R9	X					syenodiorite breccia; bleached limonitic; contact
-R10		X				wad; lm, mn

060° / 45° N

SAMPLE NO.	FLOAT BEDROCK				WIDTH m.	ROCK SAMPLE DESCRIPTION
	GRAB	CHIP	GRAB	CHIP		
-R11		X				altered andesite; ml, cp, mg, py
-R12	X					barite; gn, fine black mineral
-R14			X			altered limey volcanic (skarn); py
-R15	X					volcanic breccia in limestone (skarn); py, cp
-R16						No Sample
-R17						No Sample
-R18						No Sample
-R19				X	1.0	qtz.-barite vein; py
-R20	X				10.0	qtz.-barite; py
-R21	X					banded siliceous volcanic; py
-R22	X					qtz. pebble conglomerate, carb matrix; qtz. gashes; py
-R23			X		0.15	silicified syenodiorite; py
-R24	X					qtz. vein; vuggy; py, gn, ep
-R25	X					skarn; py, gn, cp, mg, mn, qtz., calc.
-R26			X			qtz. vein in syenodiorite

080° / 85° N

032° / V



SAMPLE NO.	FLOAT		BEDROCK		WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
-R27	X					recrystallized limestone	
-R28			X			sheared andesite; cp	050°/v
-R29			X		1.0	altered volcanic breccia; py	
-R30	X					argillite; py, cp	
-R31	X					qtz. vein; py, cp, gn	
-R32			X		1.5	sheared silicified limestone; breccia; py, mn, qtz, calc;	095°/56S
-R33	X					qtz. - boulder, 30 cm; py, cp sp, gn	
-R34			X			dark fine-grained volcanic; py, as	
-R35			X		5.0	altered syenodiorite; py	
-R36					8.0	crushed altered volcanic; py; silicified	
-R37					20.0	silicified andesite (rhyolite?) py, foliation	125°/85°E
-R38			X			silicified volcanic (as above)	
-R39					5.0	qtz. vein; vuggy; 35 cm wide; py	067°/75°S

SAMPLE NO.	FLOAT BEDROCK				WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
-R40			X		6.0	altered syenodiorite; limonitic; py, mo	
CS-R41	X					argillaceous volcanoclastic; limonitic; 10 m	
-R42			X			skarn; sp	080° / 55° N
-R43				X	2.0	skarn; sp, py	
-R44				X		syenodiorite; bleached; chl, ser, py	
-R45						No Sample	
-R46	X					altered limey rock; gossan; py, as	
-R47				X	12.0	qtz.-barite stringers; gn, cp py; bedding	110° / 75° N
-R48			X		1.0	silicified andesite	
-R49			X		1.0	qtz. cemented argillite breccia; py, cp, gn, sp; contact 020° / ?	
-R50			X			breccia zone; silicified limey fragments; py;	130° / 80° N
CS-R51	X					qtz. boulder; (bedrock-argillite and limestone)	

SAMPLE NO.	FLOAT		BEDROCK		WIDTH m.	ROCK SAMPLE DESCRIPTION	
	GRAB	CHIP	GRAB	CHIP			
-R52			X			altered felsite; py, cp, ml; adjacent to fossil horizon	
-R53			X			rhyolitic lapilli tuff; po; contact with syenodiorite	
-R54			X		1.0	porous siliceous vein; frost heave; py, cp	
-R55			X		0.5	footwall of altered syenodiorite; bedding 40 m north	110°/77° N
-R56			X			skarn; py	
-R57	X					recrystallized qtz-carb; red sp, as, py	
-R58				X	3.0	sideritic gossan; cp, py, hm; adjacent to fault zone - 30 m	050°/65° S
-R59		X				silicified volcanic breccia; cp, py	
-R60	X					qtz vein; vuggy, sugary; py	
GS-R61				X	1.0	calcareous volcanic breccia; skarn; py, po	
-R62				X	1.0	silicified argillite; py, cp	

SAMPLE NO.	FLOAT BEDROCK				WIDTH ■.	ROCK SAMPLE DESCRIPTION
	GRAB	CHIP	GRAB	CHIP		
-R63	X					qtz; sugary; gn
-R64	X					qtz; sugary; py, gn, black specks
-R65			X			qtz vein in fault; ep, py
-R66				X	1.0	qtz vein in syenodiorite; ep; 355° / V
-R67				X	1.0	skarn; yellow to chocolate brown; py, cp
-R68			X			skarn; adjacent TB-R46; cp
-R69				X	1.0	qtz. stringers in syenodiorite; vuggy, cockscomb 010° / V
CS-R70			X			qtz-barite in limestone
SS-R1			X			qtz-carb stringers in andesite; py
-R2			X			qtz-carb stringers in altered andesite; py
-R3			X			qtz-carb stringers in altered andesite; py
-R4			X			qtz vein in limonitic shear within syenodiorite; py
-R5			X			silicified andesite; py
-R6			X			qtz vein in altered syenodiorite
-R7			X			qtz -sericite shear zone; py
-R8			X			qtz vein in syenodiorite; py

**APPENDIX II**

**CERTIFICATES OF ANALYSIS**



To: Gulf International Minerals Ltd.,  
409 - 837 West Hastings St.,  
Vancouver, B.C.  
V6C 1B6  
c.c. Mr. T.C. Scott, Terrace, B.C.

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone: 253 - 3158

File No. 83-1444 B

Type of Samples Rock

Disposition \_\_\_\_\_

## ASSAY CERTIFICATE

No.	Sample	Cu%	Pb%	Zn%	Ag oz/ton	Au oz/ton		No.
1	077851	.73	.01	.10	.23	.001		1
2	077852	4.19	.01	.12	.89	.003		2
3	077853	1.58	.01	.20	.45	.002		3
4	077854	.03	.01	24.80	.67	.001		4
5	077855	.02	.01	6.60	.10	.001		5
6	077856	.08	.09	1.83	.33	.001		6
7	077857	.15	.01	.12	.04	.001		7
8	077858	.01	.01	.08	.01	.001		8
9	077859	.01	.01	.01	.01	.001		9
10	077860	.01	.01	.01	.01	.001		10
11	077861	.01	.01	.01	.03	.001		11
12	077862	.01	.09	.04	.12	.003		12
13								13
14								14
15								15
16								16
17								17
18								18
19								19
20								20

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DATE SAMPLES RECEIVED Aug. 2, 1983

DATE REPORTS MAILED Aug. 6, 1983

ASSAYER

*D. Toye*

DEAN TOYE, B.Sc.  
CHIEF CHEMIST  
CERTIFIED B.C. ASSAYER



To: Gulf International Minerals Ltd.,  
409 - 837 W. Hastings St.,  
Vancouver, B.C.

ACME ANALYTICAL LABORATORIES LTD.  
Assaying & Trace Analysis  
852 E. Hastings St., Vancouver, B. C. V6A 1R6  
Telephone: 253 - 3158

83-1575 B

File No. -----  
Type of Samples ----- Rock  
Disposition -----

# ASSAY CERTIFICATE

No.	Sample	Cu%	Pb%	Zn%	Ag oz/ton	Au oz/ton		No.
1	77864	7.05	.01	.01	2.84	.003		1
2	77865	.25	.01	.01	.10	.001		2
3	77866	32.80	.01	.13	9.38	.022		3
4	77867	6.82	.01	.03	2.35	.002		4
5								5
6								6
7								7
8								8
9								9
10								10
11								11
12								12
13								13
14								14
15								15
16								16
17								17
18								18
19								19
20								20

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ASSAYER

DEAN TOYE, B.Sc.  
CHIEF CHEMIST  
CERTIFIED B.C. ASSAYER

ICP GEOCHEMICAL ANALYSIS

A .300 GRAM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO3 TO H2O2 AT 90 DEG.C. FOR 1 HOUR. THE SAMPLE IS DILUTED TO 10 ML5 WITH WATER.  
THIS LEACH IS PARTIAL FOR: Ca,P,Mg,Al,Ti,La,Na,K,W,Ba,Sr,Cr AND B. Au DETECTION 3 ppm.  
AUX ANALYSIS BY AA FROM 10 GRAM SAMPLE. SAMPLE TYPE - P1-3 ROCK CHIP P4-50.

DATE RECEIVED AUG 2 1983 DATE REPORTS MAILED Aug 6/83 ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

GULF INTERNATIONAL FILE # 83-1444A

PAGE # 1

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Tb	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	M	Au#
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb
TB-R1	12	54	27	48	.8	4	10	252	5.44	18	2	ND	2	24	1	8	10	52	.29	.09	3	4	.54	275	.11	4	.97	.03	.19	2	95
TB-R2	3	10	12	32	.1	3	1	265	.54	2	2	ND	2	3	1	2	2	3	.26	.01	2	6	.03	10	.01	2	.07	.01	.01	2	10
TB-R3	4	2155	19	4846	2.8	7	51	4581	8.22	54	2	ND	2	165	33	2	4	27	13.30	.02	2	5	.42	12	.02	2	.57	.01	.01	2	5
TB-R4	2	41	6450	23265	48.0	1	9	23555	1.31	31	2	ND	14	43	220	10	195	18	4.63	.02	2	2	.11	6	.02	21	.20	.01	.01	2	5
TB-R5	11	4765	111	142	32.4	1	2	791	.85	11	2	ND	2	63	2	3	305	5	12.86	.01	2	2	.12	7	.01	9	.07	.01	.01	2	5
TB-R6	9	53	356	42937	18.3	1	36	5966	1.50	2	2	ND	2	42	651	2	140	8	3.03	.03	2	6	.10	6	.01	6	.16	.01	.01	2	5
TB-R7	1	74	1735	26201	38.0	2	16	28135	2.38	34	3	ND	11	32	301	2	195	14	4.55	.02	2	1	.05	15	.01	26	.07	.01	.01	2	5
TB-R8	70	26	17	38009	.1	3	31	2487	1.25	2	2	ND	2	76	501	2	19	10	1.91	.04	2	5	.09	20	.04	2	.28	.01	.01	2	5
TB-R9	2	14	36	1072	.8	3	3	1600	1.55	4	2	ND	4	8	8	2	3	12	.33	.05	5	1	.48	112	.01	4	.99	.02	.27	2	5
TB-R10	117	26	702	34890	72.0	2	40	17007	2.87	4	2	ND	6	21	430	2	801	15	1.93	.05	2	4	.19	50	.01	20	.16	.01	.01	2	40
TB-R11	11	117	42	25604	9.1	2	26	7442	1.20	14	2	ND	2	98	267	2	93	8	7.39	.03	2	5	.13	8	.02	4	.29	.01	.01	2	5
TB-R12	180	48330	163	714	71.5	32	127	522	17.59	65	2	ND	2	2	9	73	340	44	.07	.11	2	5	.88	10	.01	2	1.41	.01	.01	100	60
TB-R13	7	1036	19	544	2.7	17	66	1338	7.48	49	2	ND	2	21	5	2	20	22	1.93	.02	2	16	.48	6	.01	5	.75	.01	.01	2	5
TB-R14	7	486	10	117	1.3	4	25	144	4.48	3	2	ND	4	6	1	6	6	13	.13	.07	5	3	.08	104	.01	3	.57	.01	.39	2	20
TB-R15	19	24	9	103	.1	4	4	675	4.75	2	3	ND	2	3	1	2	2	14	.05	.02	3	2	.78	147	.01	3	1.68	.01	.32	2	140
TB-R16	23	93	9	82	.3	3	10	267	3.03	2	15	ND	2	8	1	2	2	12	.08	.04	3	2	.30	210	.01	6	.72	.02	.19	22	20
TB-R17	30	16	23	54	.9	3	28	130	4.37	7	2	ND	5	3	1	2	2	10	.69	.07	7	1	.05	115	.01	4	.57	.01	.36	2	10
TB-R18	3	15	10	42	.5	6	15	581	6.72	6	2	ND	5	19	1	4	2	23	.65	.07	6	1	.30	90	.01	2	1.29	.01	.38	2	5
TB-R19	15	18	14	38	.5	7	6	207	9.60	2	2	ND	3	13	1	6	2	31	.17	.07	2	1	.21	47	.02	3	.69	.02	.24	8	5
TB-R20	3	16	6	45	.2	3	2	2023	2.31	6	2	ND	2	15	1	2	2	5	3.57	.01	2	5	.94	28	.01	4	.22	.01	.01	2	5
TB-R21	4	8	7	19	.3	7	8	574	4.65	8	2	ND	2	17	1	3	2	10	1.15	.04	2	1	.26	103	.01	3	.55	.02	.35	2	5
TB-R22	2	24	9	43	.3	6	18	435	5.68	25	2	ND	2	10	1	6	2	10	.11	.01	5	4	.10	44	.01	4	.47	.01	.18	2	20
TB-R23	24	580	59	122	1.9	12	14	500	16.27	31	3	ND	2	130	1	18	2	121	.57	.13	3	2	.50	46	.16	2	1.78	.01	.04	2	100
TB-R24	15	35	6	66	.2	2	4	208	3.30	9	2	ND	2	3	1	2	2	6	.84	.01	2	1	.43	93	.01	5	.10	.01	.01	22	205
TB-R25	51	17118	910	72	116.6	6	3	2964	4.42	16	2	B	2	6	3	25	474	15	.21	.03	2	3	.21	17	.01	4	.70	.01	.01	2	822
TB-R25A	4	7997	2252	393	36.8	2	2	3931	2.13	17	2	ND	3	12	5	15	46	7	.88	.01	2	2	.09	120	.01	4	.28	.01	.01	2	168
TB-R26	3	766	20	65	1.3	9	12	734	12.60	2	2	ND	2	7	1	2	2	61	.13	.01	2	1	.16	216	.01	2	.58	.01	.16	2	10
TB-R27	3	195	68	33	1.4	2	1	170	1.21	15	2	ND	2	2	1	2	4	4	.03	.01	2	6	.01	25	.01	2	.13	.01	.08	2	50
TB-R28	29	849	15	58	2.0	10	16	335	10.06	37	3	ND	2	40	1	4	2	144	.43	.10	3	7	1.07	63	.18	2	1.95	.04	.16	2	125
TB-R29	34	30	21000	216	3.6	2	2	190	1.73	5	2	ND	32	416	2	20	3	8	.06	.02	2	3	.96	210	.01	3	.30	.01	.18	2	23
TB-R30	252	124	30	1147	.6	3	8	3682	3.46	11	2	ND	4	113	17	2	2	26	2.82	.13	7	1	1.79	252	.03	3	2.58	.01	.34	2	5
TB-R31	36	21	20425	5414	4.3	2	2	207	.36	4	2	ND	31	271	15	19	3	2	.02	.01	2	6	.01	1241	.01	6	.07	.01	.03	2	30
TB-R32	3	568	34	35	.2	1	3	432	.50	2	2	ND	2	1338	1	2	2	4	.10	.01	3	1	.14	1603	.01	4	.29	.01	.04	2	5
TB-R33	2	9	130	62	.2	6	15	737	6.14	4	2	ND	2	32	1	3	2	23	1.12	.05	4	1	.67	58	.01	3	1.13	.02	.24	2	5
TB-R34	45	12485	83	15	19.2	8	18	181	13.01	11	2	ND	2	47	1	28	107	18	.05	.03	2	2	.05	21	.01	2	.37	.01	.07	2	1180
TB-R35	2	636	23453	20959	12.3	2	2	591	.58	8	2	ND	35	73	201	23	24	2	1.66	.01	2	3	.02	126	.01	2	.05	.01	.01	2	20
TB-R36	6	13704	108	4149	11.5	10	13	1333	4.25	12	2	ND	2	24	36	11	7	20	2.09	.08	2	20	1.09	184	.02	2	1.08	.01	.01	2	15
STD A-1	1	30	38	181	.5	36	12	1032	2.83	9	2	ND	2	37	1	2	2	38	.62	.10	8	74	.73	293	.08	8	2.09	.02	.21	2	485

10000 ppm = 1%

34300 ppb = 103/1000



SAMPLE #	Mo	Cu	Pb	Zn	Ag	Mi	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	W	Au†
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb
TB-R37	4	1389	30108	13473	22.1	1	1	2515	.44	80	2	ND	44	129	94	36	34	2	10.63	.01	5	1	.04	224	.01	3	.05	.01	.01	2	5
TB-R38	12	134	49220	5397	12.1	2	1	78	.41	28	2	ND	80	46	19	36	8	2	.14	.01	2	3	.11	227	.01	2	.05	.01	.01	2	5
TB-R39	1	10	95	93	.8	1	1	415	.47	45	2	ND	2	142	1	7	2	4	26.03	.01	2	2	5.36	14	.01	23	.08	.01	.01	2	5
TB-R40	6	159	23314	10400	22.6	2	3	1265	1.01	63	2	ND	35	38	68	25	38	7	4.21	.03	4	2	.26	114	.01	2	.51	.01	.22	2	5
TB-R41	8	1151	4834	1889	15.5	3	14	2419	2.26	52	2	ND	3	64	11	8	11	13	10.77	.01	7	3	.27	53	.01	2	.46	.01	.08	2	85
TB-R42	54	47269	26416	45167	44.0	16	88	4365	11.66	93	10	ND	40	36	843	57	153	34	1.30	.12	2	13	.76	12	.02	2	1.40	.01	.09	2	315
TB-R44	27	2403	619	6689	14.2	37	55	723	16.62	85	2	ND	2	28	42	16	9	44	1.36	.05	2	10	.35	33	.03	2	.78	.01	.01	289	5
TB-R45	4	1567	32	162	3.9	29	49	571	15.26	2	2	ND	2	18	1	17	2	54	.31	.05	2	8	.48	35	.04	2	1.18	.01	.01	430	5
TB-R46	226	310	192	168	23.3	11	8	394	5.36	409	2	2	2	5	1	19	3	24	.07	.02	4	44	.14	18	.01	2	.42	.01	.01	3	2430
TB-R47	95	64	14	47	.3	5	6	359	6.12	5	3	ND	2	9	1	3	2	51	.07	.06	2	4	.77	97	.03	2	1.44	.04	.20	2	30
TB-R48	118	14	16	17	.8	5	24	212	5.04	5	2	ND	2	10	1	2	5	14	.53	.03	3	5	.17	64	.01	5	.49	.02	.21	2	75
TB-R49	8	913	9	33	.7	3	2	820	2.27	8	2	ND	2	557	1	2	2	17	1.30	.01	3	1	.58	739	.01	2	.94	.01	.10	2	5
TB-R50	100	960	31	15	.9	34	48	280	35.21	80	2	ND	2	6	1	29	2	92	.04	.02	6	3	.35	10	.01	2	.75	.01	.01	3	260
TB-R51	18	145	23	31	.7	47	225	259	17.03	10	2	ND	2	10	1	9	2	57	.07	.06	3	3	.37	19	.01	2	.82	.03	.19	2	25
TB-R52	4	22	8	27	.1	4	9	207	3.46	9	5	ND	2	21	1	2	2	47	.24	.07	6	6	.47	144	.09	4	.73	.06	.15	2	35
TB-R53	59	28976	18	173	31.0	6	94	249	5.75	45	2	ND	2	8	4	28	104	21	.05	.08	2	7	.14	64	.01	6	.55	.01	.14	2	80
TB-R54	24	406	14	9	.1	7	12	92	8.90	28	2	ND	2	6	1	3	2	18	.02	.02	2	3	.05	75	.01	3	.32	.01	.07	2	70
TB-R55	3	148	10	33	.5	4	4	3494	3.64	18	2	ND	2	106	1	2	2	18	11.97	.01	4	4	2.23	35	.01	2	1.07	.01	.01	2	5
CS-R1	1	17	7796	11234	18.5	1	5	38107	1.36	67	7	ND	24	9	104	17	24	19	.72	.01	2	2	.15	6	.01	38	.17	.01	.01	2	5
CS-R2	1	680	391	1615	2.4	5	9	931	1.91	24	2	ND	2	96	11	2	2	54	16.60	.07	2	6	.52	41	.09	3	1.13	.05	.05	2	5
CS-R3	12	12	46	51	1.0	5	2	168	8.67	28	5	ND	2	28	1	2	2	88	.15	.07	2	6	.11	39	.12	2	.50	.01	.03	2	5
CS-R4	1	3	6	17	.1	2	2	117	1.86	7	3	ND	2	142	1	2	2	17	.34	.08	4	2	.14	64	.06	4	.76	.11	.09	3	10
CS-R5	12	22	22	26	1.4	2	3	269	2.83	11	5	ND	2	45	1	2	2	36	2.08	.10	5	5	.45	116	.06	5	2.16	.05	.03	2	5
CS-R6	2	10	10	55	.2	2	6	297	2.37	6	3	ND	3	52	1	2	2	31	.34	.12	5	1	.54	311	.04	4	.96	.06	.17	2	5
CS-R7	1	677	5	77	.1	2	6	572	1.85	2	2	ND	4	60	1	2	2	39	1.28	.10	12	1	.65	76	.04	3	1.08	.05	.15	2	10
CS-R8	99	26	17	14	.6	3	2	43	6.49	2	2	ND	2	72	1	2	2	8	.10	.04	3	2	.04	229	.02	7	.59	.22	.54	418	10
CS-R9	1	27	10	109	.2	2	3	151	5.88	2	5	ND	4	15	1	2	2	44	.09	.15	3	2	.50	101	.06	4	.89	.03	.25	2	5
CS-R10	156	43	32	100	.6	23	9	391	47.03	213	2	ND	2	38	1	7	2	172	.12	.53	14	13	.07	39	.07	2	1.00	.01	.04	22	40
CS-R11	1	1186	5	17	8.1	3	5	6216	3.35	50	2	ND	2	146	1	2	2	12	20.15	.01	9	3	.46	22	.01	2	.47	.01	.02	2	5
CS-R12	1	204	35	412	5.1	11	29	1063	9.90	147	9	ND	2	92	3	2	10	38	2.47	.04	2	11	.97	33	.06	3	1.84	.01	.11	2	20
CS-R13	1	2	6623	545	.7	1	2	9	.66	26	2	ND	7	339	5	12	2	2	.01	.01	2	1	.01	1893	.01	2	.01	.01	.01	2	5
CS-R14	1	113	39	52	.4	7	6	965	4.01	39	7	ND	2	130	1	2	2	107	2.18	.06	2	37	1.20	789	.27	4	1.67	.03	.01	2	5
CS-R15	1	14428	21	2414	9.5	11	29	2533	2.83	43	2	ND	2	110	21	6	6	7	10.77	.04	2	2	.65	293	.01	4	.34	.01	.01	2	5
STD A-1	1	30	39	182	.3	36	12	1024	2.82	9	2	ND	2	37	1	2	2	60	.64	.10	8	77	.77	301	.08	8	2.10	.02	.20	2	480

Suggest - Assay Cu, Pb, Zn 7 10,000 ppm  
 Ag 7 30 ppm  
 Au 7 1000 ppb

SAMPLE #	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	N ppm	Au# ppb
CS-R19	2	49	4	54	.2	3	4	763	1.02	2	2	ND	4	155	1	2	2	13	.36	.10	24	2	.21	2655	.01	6	.75	.02	.27	2	5
CS-R20	6	26	15	41	.5	3	21	252	3.46	11	2	ND	2	378	1	2	2	7	.16	.04	4	1	.02	84	.01	6	.29	.01	.19	2	15
CS-R21	8	72	10	113	.3	54	5	163	1.47	16	2	ND	2	19	1	2	2	24	1.77	.02	4	11	.03	176	.07	4	1.06	.02	.03	2	5
CS-F22	1	15	9	55	.1	24	5	165	1.54	6	2	ND	2	30	1	2	2	16	.05	.03	3	15	.31	541	.01	6	.60	.02	.64	2	5
CS-R23	4	36	7	18	.3	4	7	117	2.43	2	2	ND	5	11	1	2	2	9	.18	.06	5	2	.09	267	.01	5	.52	.01	.29	2	5
CS-R24	1	15	70	323	.9	1	1	1410	.46	2	2	ND	2	94	2	2	2	3	19.79	.01	2	5	.24	132	.01	5	.29	.01	.02	2	5
CS-R25	1	249	2766	19962	12.9	4	40	12347	7.82	16	2	ND	6	49	164	2	14	13	12.28	.01	2	2	.04	26	.01	9	.19	.01	.01	2	5
CS-R26	10	287	43	85	2.8	4	5	210	5.83	69	2	4	2	5	1	2	18	11	.35	.02	2	5	.05	85	.01	8	.38	.01	.12	2	2900
CS-R27	1	3	15	122	.5	1	1	189	.17	2	2	ND	2	69	1	2	2	2	26.50	.01	2	3	.10	11	.01	2	.01	.01	.01	2	20
CS-R28	17	5344	25	170	4.3	10	13	2548	10.90	21	7	ND	2	5	1	4	33	94	.30	.07	2	6	.92	163	.02	2	2.99	.01	.27	2	880
CS-R29	3	382	18	52	.5	15	34	648	9.07	41	2	ND	2	24	1	2	2	108	1.09	.07	2	6	1.14	44	.12	3	2.13	.12	.07	2	5
CS-R30	1	212	18	100	.5	14	16	2488	3.66	4	2	ND	2	82	1	2	2	94	5.59	.06	5	20	1.36	27	.01	5	2.04	.02	.22	2	5
CS-R31	4	17	20	60	.8	6	6	4844	10.36	9	2	ND	2	136	1	2	2	33	22.34	.01	2	3	1.35	365	.01	2	.38	.01	.01	26	10
CS-R32	1	2007	3172	2465	6.7	3	13	2092	1.95	10	2	ND	2	34	104	8	9	8	4.48	.01	2	4	.25	84	.01	3	.28	.01	.02	2	5
CS-R33	10	14016	2324	5864	43.8	9	59	3366	8.36	29	2	ND	2	116	56	12	99	11	11.55	.03	2	7	.29	5	.01	2	.35	.01	.01	2	50
CS-R34	1	839	79	57	1.2	6	6	678	8.75	3	3	ND	2	5	1	3	220	78	.16	.06	2	5	.92	94	.02	5	2.03	.01	.27	2	5
CS-R35	5	153	34	148	1.0	3	4	790	3.92	2	2	ND	4	37	1	2	7	24	.45	.08	3	3	.82	204	.09	3	1.37	.03	.13	2	5
CS-R36	31	136	13	172	.9	4	6	928	5.58	7	2	ND	2	19	1	2	4	82	.36	.12	3	3	1.03	74	.15	5	1.68	.03	.16	2	5
CS-R37	16	62	10	91	1.1	3	5	372	2.82	12	2	ND	2	69	1	2	6	14	.24	.02	2	3	.28	497	.05	5	.88	.01	.16	2	5
CS-R38	22	34	2	33	.1	2	1	218	1.17	2	2	ND	2	9	1	2	2	3	.08	.01	6	4	.18	106	.01	6	.53	.02	.23	2	5
CS-R39	7	19	9	11	.4	4	9	113	6.00	9	2	ND	2	18	1	2	29	13	.02	.02	2	6	.07	427	.01	5	.31	.01	.12	2	10
CS-R40	107	44	10	46	.5	4	11	662	5.86	16	2	ND	3	100	1	2	4	29	.51	.08	4	1	.59	108	.05	5	1.59	.01	.17	2	5
CS-R41	1	51	13	27	.1	9	6	712	4.85	22	4	ND	2	13	1	2	2	168	.27	.07	6	26	1.44	51	.19	6	1.92	.07	.05	2	5
CS-R42	2	3	792	27863	11.3	1	11	6368	.80	2	2	ND	2	12	287	3	33	4	1.41	.01	2	6	.07	22	.01	4	.03	.01	.91	2	5
CS-R43	5	7	3	16783	.4	1	5	5377	1.00	2	2	ND	2	49	152	2	15	5	1.70	.02	2	5	.09	12	.03	9	.21	.01	.01	2	5
STD A-1/AU 0.5	1	29	38	181	.3	35	12	1012	2.79	10	2	ND	2	36	1	2	2	60	.64	.10	8	76	.77	290	.08	8	2.06	.02	.20	2	480

SAMPLE #	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	# ppm	Au# ppb
TB-ST-1	11	74	17	76	.2	14	11	601	5.40	15	8	ND	3	13	1	2	2	59	.15	.12	20	18	.47	84	.17	5	3.18	.04	.09	2	5
TB-ST-2	2	21	14	85	.1	16	13	490	4.43	18	4	ND	2	60	1	2	2	78	.66	.11	35	22	1.12	99	.37	3	2.96	.29	.16	2	5
TB-ST-3	2	29	18	102	.1	17	12	500	4.44	16	4	ND	2	52	1	2	2	78	.60	.12	21	23	.91	189	.37	6	3.40	.21	.14	2	25
TB-ST-4	56	622	12	82	.2	15	76	1757	5.83	23	2	ND	2	27	1	2	2	58	.32	.13	21	17	.85	71	.17	6	3.87	.12	.09	2	30
SS-ST-1	16	148	23	272	.2	16	20	1584	4.99	11	25	ND	3	34	4	2	2	52	.49	.13	58	16	.76	282	.15	6	2.38	.10	.12	2	25
SS-ST-2	57	155	18	251	.4	14	22	1162	5.08	11	27	ND	2	34	3	2	2	48	.48	.10	32	15	.74	428	.11	5	1.98	.05	.09	2	20
SS-ST-3	60	210	15	274	.3	12	28	1387	5.27	7	30	ND	2	39	4	2	2	53	.55	.11	35	11	.80	671	.10	5	2.12	.05	.13	2	15
SS-ST-4	79	243	8	139	.1	12	40	1307	4.63	12	64	ND	2	35	2	2	2	60	.61	.07	35	13	.87	172	.16	6	2.48	.04	.11	2	10
SS-ST-5	92	878	7	123	.1	13	40	956	6.36	12	19	ND	2	37	2	2	2	134	.68	.11	19	12	1.99	166	.21	9	2.64	.02	.19	2	30
SS-ST-6	69	234	15	223	.2	12	29	1199	5.56	8	20	ND	3	35	2	2	2	64	.46	.10	26	11	.98	528	.09	8	2.30	.05	.13	2	5
SS-ST-7	38	177	12	62	.6	10	34	424	2.28	11	4	ND	2	27	1	2	2	35	.37	.10	102	12	.29	130	.12	7	6.48	.03	.04	2	5
SS-ST-8	68	254	21	212	.2	15	34	1531	5.79	13	35	ND	2	46	3	2	2	67	.63	.12	42	16	1.01	406	.16	10	2.83	.09	.12	2	5
SS-ST-9	81	398	7	101	.1	9	32	837	4.73	8	30	ND	3	38	1	2	2	94	.83	.17	20	8	1.44	111	.15	6	2.20	.02	.12	2	5
SS-ST-10	151	527	264	1118	.8	17	35	1954	5.20	13	30	ND	3	59	10	2	2	51	.79	.11	42	14	.71	916	.10	6	2.59	.06	.11	2	5
SS-ST-11	64	273	80	510	.3	15	27	1326	4.93	11	19	ND	2	42	5	2	2	53	.58	.11	33	12	.86	577	.11	5	2.16	.05	.11	2	15
SS-ST-12	50	207	21	716	.3	12	30	1225	3.83	4	33	ND	2	57	6	2	3	47	1.01	.10	37	-12	.55	378	.04	4	3.01	.02	.06	2	5
SS-ST-13	17	40	6	171	.2	18	16	1316	2.79	14	11	ND	2	46	2	2	2	38	.90	.09	29	21	.50	243	.06	5	1.92	.03	.07	2	5
SS-ST-14	52	219	47	591	.2	17	30	1622	5.23	11	14	ND	3	53	6	2	2	58	.68	.12	30	15	.99	660	.09	4	2.32	.05	.14	2	5
SS-ST-15	17	1323	12	639	1.0	13	91	1624	3.43	5	106	ND	2	132	9	2	2	32	2.05	.11	116	12	.34	487	.06	5	2.63	.03	.08	2	5
SS-ST-16	15	149	30	186	.3	15	24	1264	6.57	13	13	ND	3	51	2	2	2	94	.58	.12	20	17	1.32	194	.20	7	2.67	.11	.15	2	25
SS-ST-17	41	141	30	159	.4	13	21	1629	6.58	11	16	ND	3	56	2	2	2	66	.56	.14	22	12	.94	268	.10	6	1.97	.05	.13	2	40
SS-ST-18	7	216	107	404	1.0	11	23	1603	4.94	17	5	ND	2	41	3	2	2	66	2.24	.12	5	7	1.33	221	.05	6	1.64	.01	.06	2	1150
SS-ST-18A	3	182	95	370	1.0	10	19	1467	4.28	18	2	ND	2	53	3	2	2	60	4.88	.11	4	8	1.18	213	.05	10	1.52	.02	.06	2	60
SS-ST-19	7	204	114	419	1.0	11	21	1832	4.86	13	2	ND	2	38	4	2	2	67	1.17	.12	7	8	1.36	250	.06	7	1.73	.02	.07	2	295
SS-ST-20	4	154	95	342	1.1	9	18	1371	3.95	13	4	ND	2	35	3	2	2	54	2.38	.10	4	7	1.12	176	.04	5	1.39	.01	.05	2	25
SS-ST-21	5	195	99	366	1.0	10	20	1561	4.53	15	2	ND	2	35	3	2	2	61	1.78	.12	5	9	1.31	210	.05	7	1.59	.02	.06	2	40
SS-ST-22	5	182	102	371	.8	10	20	1530	4.45	16	2	ND	2	37	3	2	2	60	2.11	.11	5	7	1.25	212	.05	6	1.50	.02	.06	2	470
SS-ST-23	5	190	86	389	1.0	10	19	1657	4.43	10	2	ND	2	32	3	2	2	62	1.27	.11	5	9	1.35	213	.05	7	1.58	.01	.07	2	20
SS-ST-24	22	188	22	154	.2	15	18	1192	6.03	14	14	ND	4	26	2	2	2	53	.36	.17	43	13	.81	149	.13	6	2.26	.09	.11	2	40
SS-ST-25	8	270	70	394	.7	9	22	1960	4.33	12	3	ND	2	74	3	2	2	79	6.21	.16	8	7	1.12	487	.06	3	1.78	.01	.09	2	20
SS-SL-1 SOIL	37	104	17	63	.8	12	9	873	7.41	5	3	ND	5	12	1	2	2	45	.07	.20	10	18	.52	290	.01	7	3.18	.01	.08	4	10
SS-SL-2 SOIL	100	45	9	33	.2	6	9	389	4.12	4	2	ND	2	10	1	2	2	33	.09	.11	18	8	.29	71	.02	5	1.67	.01	.14	2	5
STD A-1/AU 0.5	1	30	38	182	.1	35	12	1017	2.82	10	2	ND	2	37	1	2	2	60	.64	.11	8	78	.78	291	.09	9	2.07	.02	.21	2	480

ICP GEOCHEMICAL ANALYSIS

A .500 GRAM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 90 DEG.C. FOR 1 HOUR. THE SAMPLE IS DILUTED TO 10 MLS WITH WATER. THIS LEACH IS PARTIAL FOR: Ca, P, Mg, Al, Ti, La, Ce, K, W, Ba, Si, Sr, Cr AND B. Au DETECTION 3 ppm. Au ANALYSIS BY AA FROM 10 GRAM SAMPLE. SAMPLE TYPE - P1-2 ROCK P3-SILT

DATE RECEIVED AUG 10 1983 DATE REPORTS MAILED Aug 15 1983 ASSAYER [Signature] DEAN TOYE, CERTIFIED B.C. ASSAYER

GULF INTERNATIONAL MINERAL FILE # 83-1575A

Table with columns: SAMPLE #, No ppm, Cu ppm, Pb ppm, Zn ppm, Ag ppm, Ni ppm, Co ppm, Mn ppm, Fe ppm, As ppm, U ppm, Au ppm, Tl ppm, Sr ppm, Cd ppm, Sb ppm, Bi ppm, V ppm, Ca ppm, P ppm, La ppm, Cr ppm, Mg ppm, Ba ppm, Ti ppm, B ppm, Al ppm, Na ppm, K ppm, Rb ppm, Au ppm. Rows include samples TB-R56 through CS-R47.

Can Be Zn > 10,000 ppm  
4 Ag > 30 ppm  
Legends require, Assay

GULF INTERNATIONAL MINERAL FILE # 83-1575A

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Tl	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	W	Ant
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb
CS-R50	1	37	8	42	.1	4	1	495	2.82	6	2	ND	2	25	1	2	2	11	2.02	.01	3	11	.33	38	.01	5	.61	.01	.01	2	5
CS-R51	3	319	19	33	9.4	7	3	106	11.59	38	2	ND	2	3	1	2	2	22	.02	.02	2	4	.02	49	.01	2	.20	.01	.01	6	5
CS-R52	2	4809	43	244	8.4	13	4	623	4.17	22	2	ND	2	3	2	2	2	16	.14	.08	2	6	.48	16	.01	7	1.25	.01	.01	2	5
CS-R53	1	68	11	21	.4	4	12	370	2.76	16	2	ND	2	69	1	2	2	60	2.08	.10	2	1	.40	120	.24	11	2.26	.25	.05	2	5
CS-R54	14	144	31	55	1.0	11	22	1264	4.37	39	2	ND	2	4	1	2	2	11	.11	.02	2	4	.05	104	.01	4	.29	.01	.10	2	5
CS-R55	3	306	36	102	3.1	16	9	279	10.17	1228	2	ND	2	3	1	3	3	49	.02	.01	2	6	.10	44	.01	2	.52	.01	.03	2	5
CS-R56	5	490	14	229	3.3	20	34	932	20.22	43	2	ND	2	3	1	2	2	55	3.05	.04	4	16	.58	10	.07	2	1.44	.01	.01	4	5
CS-R57	13	755	1442	17784	44.8	21	6	3142	9.35	29016	13	ND	4	108	191	44	9	18	7.76	.02	2	3	1.89	173	.01	5	.33	.01	.13	2	5
CS-R58	1	39	17	115	3.4	4	3	8016	5.99	449	2	ND	2	70	3	2	6	27	16.30	.01	3	2	3.40	44	.01	6	.23	.01	.01	2	5
CS-R59	1	205	39	193	.8	7	20	715	2.61	46	2	ND	2	54	8	2	2	31	1.34	.03	2	4	.66	26	.05	5	1.34	.01	.09	2	5
CS-R60	13	27	33	130	1.4	6	5	285	5.09	125	2	ND	2	8	1	2	2	19	.21	.03	2	4	.17	48	.01	4	.64	.01	.09	2	5
CS-R61	1	142	6	339	.3	9	19	1294	2.47	18	2	ND	2	155	3	2	2	21	5.37	.06	2	9	.34	7	.09	4	.85	.01	.01	2	5
CS-R62	1	1863	8	129	2.6	18	25	797	5.01	30	2	ND	2	52	2	2	2	113	1.70	.08	2	32	1.82	40	.14	7	3.41	.11	.08	2	5
CS-R63	8	306	23604	2636	12.8	3	2	124	.58	9	2	ND	28	49	21	2	4	4	.08	.01	2	3	.06	917	.01	4	.14	.01	.03	2	5
CS-R64	1	16	84	96	.3	13	12	838	2.86	36	2	ND	2	13	1	2	2	10	.49	.04	2	6	.44	144	.01	3	.83	.01	.22	2	5
CS-R65	21	179	187	167	1.3	5	12	455	4.09	16	2	ND	2	27	2	2	2	34	1.16	.01	2	4	.29	100	.02	5	.71	.01	.01	3	5
CS-R66	10	21	75	248	1.3	4	3	337	4.27	42	2	ND	2	66	2	2	11	17	.70	.03	2	11	.02	23	.08	3	.44	.01	.01	2	10
CS-R67	1	92	19	18	.8	7	5	6244	7.19	12	2	ND	2	43	2	2	2	22	10.28	.03	4	33	2.24	6	.01	4	1.04	.01	.01	2	5
CS-R68	2	21659	39	1233	57.4	10	31	2075	10.67	42	2	ND	2	54	11	2	2	22	4.86	.06	2	25	.12	10	.01	2	.18	.01	.01	2	10
CS-R69	2	1095	8	12	.7	3	4	513	.99	3	2	ND	2	12	1	2	2	16	.96	.03	2	6	.17	23	.02	10	.37	.02	.09	2	5
CS-R70	2	180	41	73	.9	4	5	554	1.81	3	2	ND	2	45	1	2	2	33	.24	.05	4	4	.72	2269	.02	3	.98	.03	.05	2	5
SS-R1	15	404	13	66	.1	6	15	783	6.90	9	2	ND	2	6	1	2	2	39	.12	.06	2	2	1.11	177	.07	5	2.23	.01	.26	2	5
SS-R2	2	127	4	19	.2	6	9	252	4.16	13	2	ND	2	34	1	3	2	72	.27	.08	3	6	.76	106	.12	5	1.20	.06	.29	2	5
SS-R3	172	382	5	29	.1	10	8	618	8.81	5	2	ND	2	4	1	2	2	115	.11	.07	2	8	1.23	42	.02	6	2.50	.01	.25	2	5
SS-R4	8	62	12	22	1.7	5	8	176	6.65	20	2	ND	3	53	1	2	11	17	.12	.06	6	2	.09	1039	.01	6	.56	.01	.26	4	35
SS-R5	20	24	4	18	.1	4	6	296	3.88	5	2	ND	2	16	1	2	2	52	.14	.06	3	6	.77	116	.09	4	1.18	.06	.16	2	5
SS-R6	40	12	6	5	.1	5	3	118	4.93	6	2	ND	2	11	1	2	3	10	.30	.03	5	3	.04	58	.01	4	.34	.04	.18	2	5
SS-R7	13	12	8	5	.3	10	9	48	5.65	2	2	ND	2	7	1	2	4	13	.02	.01	27	2	.03	55	.01	5	.40	.05	.24	2	380
SS-R8	65	7	5	19	.1	7	4	219	9.06	7	3	ND	2	10	1	2	2	56	.29	.04	4	5	.54	33	.03	2	.77	.06	.12	2	10
STD A-1/NO 0.5	1	30	40	186	.3	36	13	1055	2.84	9	2	ND	2	36	1	2	2	58	.41	.12	7	77	.79	273	.08	7	2.07	.02	.20	2	490

GULF INTERNATIONAL MINERAL FILE # 83-1575A

SAMPLE #	No ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Hg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au ppm
SS-51-26	4	97	27	176	.3	8	15	1689	3.56	14	3	ND	6	52	2	2	2	41	1.63	.14	11	8	1.41	566	.06	8	1.43	.03	.10	3	55
SS-51-27	2	60	11	83	.1	11	17	1019	4.09	16	2	ND	3	21	1	2	2	63	.43	.11	12	13	1.29	174	.06	5	1.90	.02	.12	2	10
SS-51-28	4	130	71	325	1.1	15	21	1132	4.12	49	2	ND	2	24	3	2	2	62	.75	.12	6	12	1.10	179	.06	8	1.63	.03	.07	2	50
SS-51-29	5	55	28	92	.3	6	11	697	3.02	8	4	ND	5	64	1	2	2	51	1.87	.15	10	5	.71	509	.05	5	.97	.02	.07	7	25
SS-51-30	1	49	16	83	.1	6	10	695	2.48	11	2	ND	3	54	1	2	2	40	1.63	.11	7	6	.74	456	.05	6	.99	.03	.07	2	20
SS-51-31	3	121	32	473	.4	13	14	1122	3.51	24	2	ND	2	32	5	2	2	53	1.00	.11	7	14	.99	123	.06	3	1.48	.02	.08	2	40
SS-51-32	2	51	24	88	.1	5	9	709	2.34	9	3	ND	4	63	1	2	2	38	1.88	.12	8	5	.77	545	.05	5	1.01	.03	.07	2	5
SS-51-33	3	134	72	299	.6	12	18	1588	4.29	26	2	ND	2	41	3	2	2	68	1.24	.11	6	11	1.24	221	.08	8	1.81	.03	.08	2	110
SS-51-34	2	106	70	264	.8	11	16	1242	3.81	28	2	ND	2	44	3	2	2	64	1.92	.10	6	12	1.11	164	.08	6	1.72	.03	.08	2	10
SS-51-35	2	100	63	231	.7	9	14	1083	3.40	26	4	ND	2	43	2	2	2	58	2.31	.10	5	10	1.04	135	.08	6	1.57	.03	.07	2	15
SS-51-36	2	101	64	245	.6	10	16	1057	3.64	30	7	ND	2	42	3	2	2	58	2.09	.10	5	11	1.03	142	.07	5	1.56	.03	.07	2	50
SS-51-37	1	82	49	205	.6	9	13	949	3.26	22	4	ND	2	38	2	2	2	56	2.25	.09	4	11	1.03	110	.07	4	1.48	.02	.05	2	110
SS-51-38	1	89	56	214	.6	9	15	1003	3.54	26	2	ND	2	39	2	2	2	59	2.29	.09	4	11	1.06	121	.07	6	1.53	.03	.06	2	25
SS-51-39	1	85	49	205	.5	9	14	991	3.32	24	4	ND	2	40	2	2	2	57	2.41	.09	4	9	1.02	118	.07	7	1.49	.02	.06	2	20
SS-51-40	2	55	15	96	.1	6	9	772	2.46	12	2	ND	3	59	1	2	2	41	1.73	.12	8	6	.85	513	.05	5	1.12	.03	.07	2	25
SS-51-41	2	62	20	107	.3	7	11	819	3.10	14	2	ND	5	55	1	2	2	53	1.60	.14	8	8	.91	473	.05	8	1.19	.03	.08	2	195
SS-51-42	2	56	33	119	.1	8	12	810	3.12	15	2	ND	3	55	1	2	2	53	1.51	.13	8	8	.90	475	.06	4	1.19	.03	.08	3	45
SS-51-43	1	21	8	39	.7	12	8	613	1.66	4	2	ND	2	49	1	2	2	27	.60	.34	60	20	.24	629	.04	6	2.56	.05	.04	2	5
18-51-5	17	54	15	203	.3	23	16	1633	3.57	15	23	3	2	78	3	2	2	44	.86	.13	48	23	.58	275	.09	5	3.15	.04	.13	2	5
18-51-6	23	52	14	215	.2	27	19	1725	3.62	17	26	3	2	93	3	2	2	51	1.21	.13	40	26	.71	231	.15	6	2.90	.10	.09	2	5
18-51-7	3	197	129	429	1.0	14	20	1439	4.75	39	2	ND	2	30	4	2	2	75	.71	.10	6	14	1.26	98	.09	10	1.88	.03	.05	2	130
18-51-8	2	100	65	246	.6	11	17	1084	3.71	28	3	ND	2	41	3	2	2	60	2.32	.10	5	10	1.03	117	.07	5	1.57	.03	.07	2	70
18-51-9	7	158	93	427	1.0	13	22	2651	4.99	21	3	ND	5	54	4	2	2	75	.67	.14	18	14	1.24	384	.13	6	2.49	.12	.19	2	65
STD A-1/RU 0.5	1	30	38	186	.3	36	13	1042	2.82	10	2	ND	3	35	1	2	2	57	.59	.12	7	78	.78	273	.08	8	2.06	.02	.20	2	485

APPENDIX III

STATEMENT OF QUALIFICATION

I, T. Cameron Scott, of 32-1243 Thurlow Street, Vancouver, B.C., in the Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am a self-employed Geologist with offices in my residence at 32-1243 Thurlow Street, Vancouver, B.C., V6E 1X4.
2. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.
3. My primary employment since 1963 has been in the field of mineral exploration, mainly as a Field and Project Geologist.
4. My experience has covered a wide range of geological environments and has allowed considerable familiarization with geophysical, geochemical and diamond drilling techniques.
5. This report is based on information supplied by Gulf International Minerals Ltd. and data generated during the course of my field work on the property between July 18, 1983 and August 9, 1983.
6. I am not a holder of any securities in Gulf International Minerals Ltd. nor do I expect to acquire any such securities.
7. I consent to the use of Gulf International Minerals Ltd. of this report in a Prospectus or Statement of Material Facts or any other such document as may be required by the Vancouver Stock Exchange or the Office of the Superintendent of Brokers.

DATED AT VANCOUVER, BRITISH COLUMBIA this 19th day of September 1983.



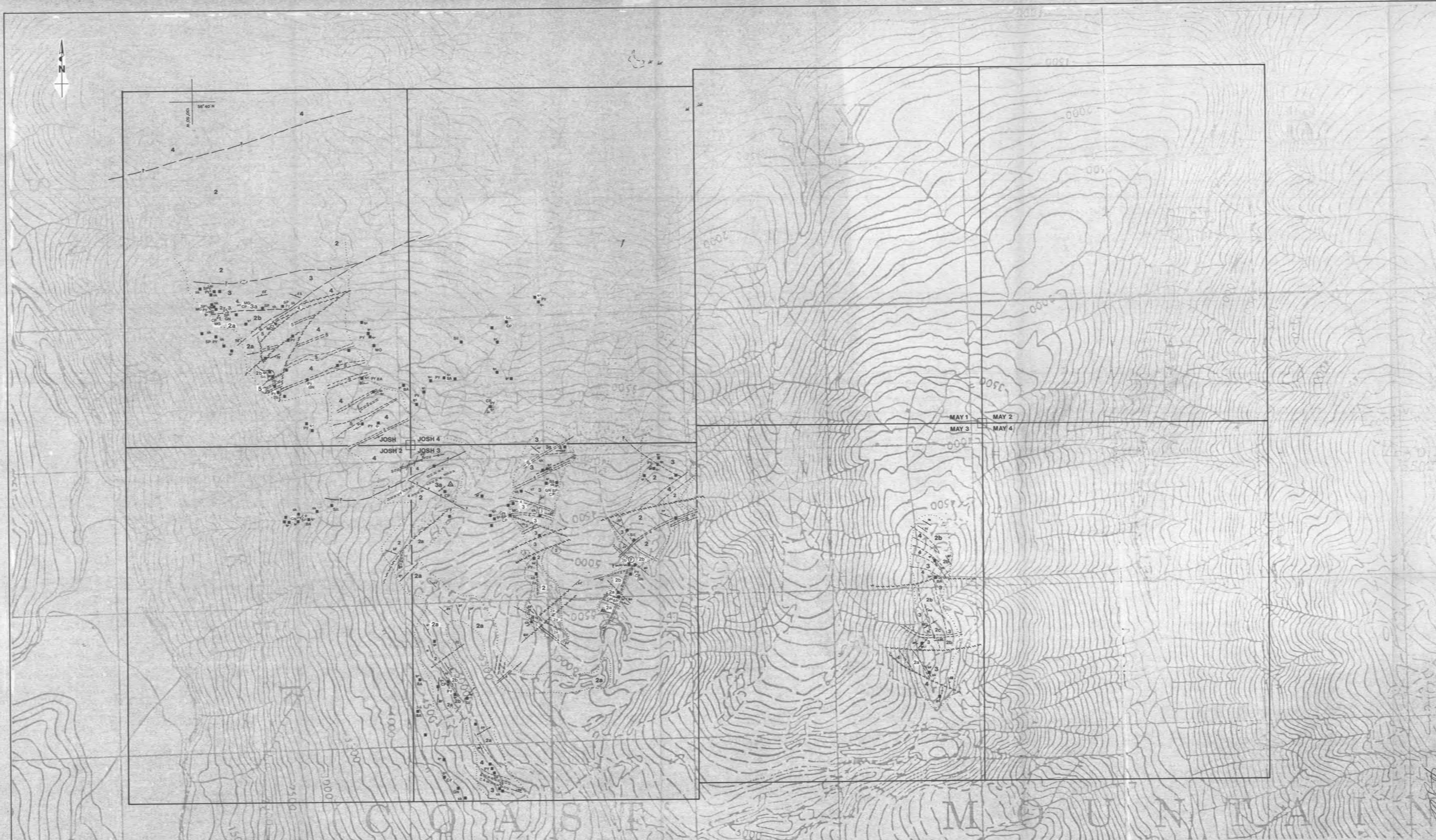
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T. Cameron Scott, Geologist.

**APPENDIX IV**

**ITEMIZED STATEMENT OF COSTS**





**LEGEND**

- ⊕ Legal Corner Post
  - △ Survey Cairn
  - ⋆ Swamp
  - Sample Location - bedrock
  - ⋈ Old Trench
- GEOLOGY**
- 6 GABBRO
  - 5 GRANODIORITE
  - 4 SYENODIORITE PORPHYRY
  - 3 LIMESTONE  
a. minor volcanics
  - 2 ANDESITIC VOLCANICS  
a. breccia with limestone clasts  
b. tuff and argillite  
c. acidic components
  - 1 RHYOLITIC VOLCANICS
- Strikes and Dip  
bedding, veins, faults  
joints and fractures  
shearing
  - Fault
  - Geologic Contact
  - Fossil Locality
- PY Pyrite
  - CP Chalcopyrite
  - GN Galena
  - SP Sphalerite
  - MO Molybdenite
  - MG Magnetite
  - BA Barite
  - Sil Silicification
  - sk Skarn

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,306

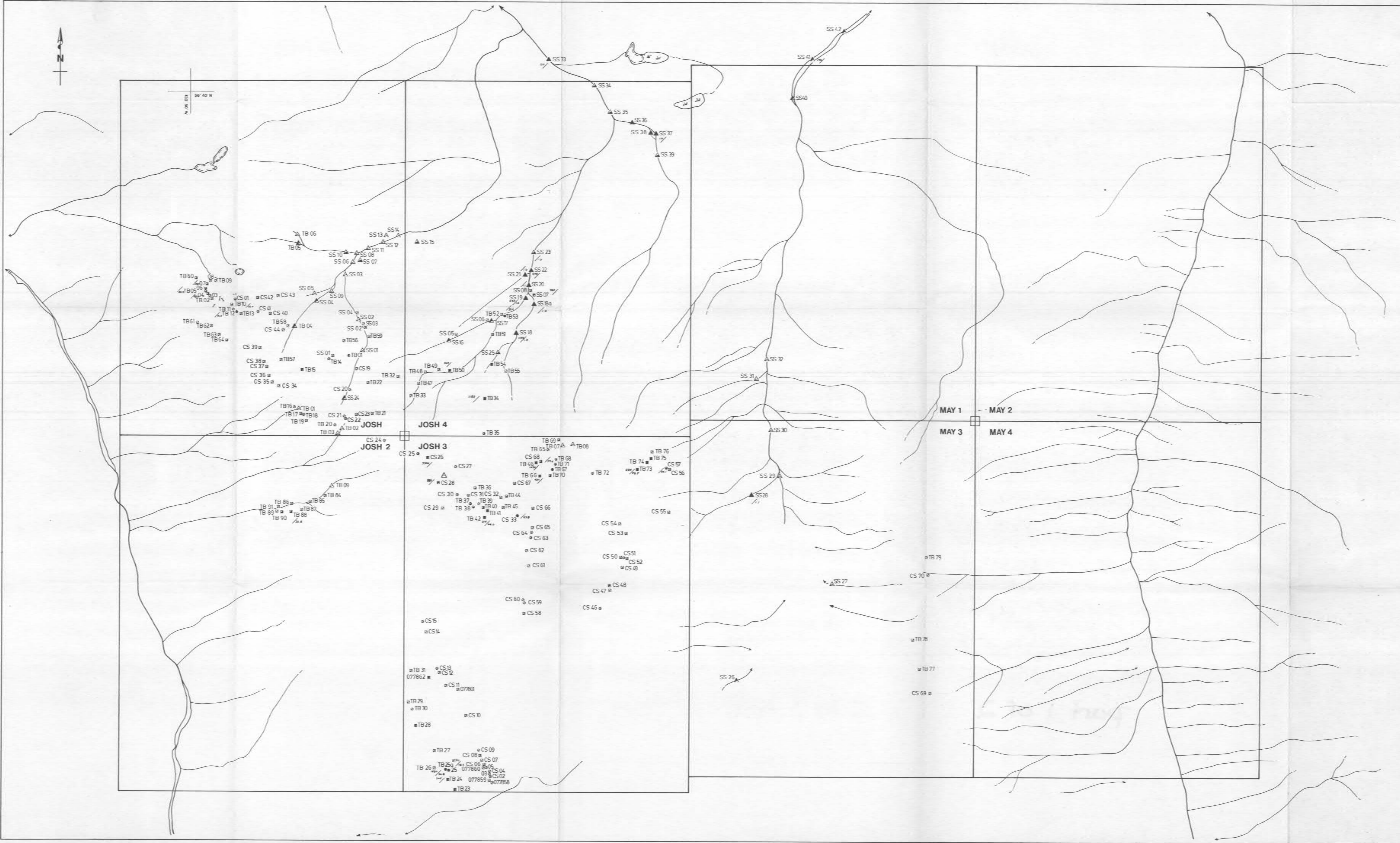
part 1 of 2

GULF INTERNATIONAL  
MINERALS LIMITED

JOSH and MAY CLAIMS

Geology

Map: 1



**LEGEND**

- ⊕ Legal Corner Post
  - △ Survey Cairn
  - ⋈ Swamp
  - Sample Location
    - - bedrock
    - - float
    - △ - stream sediment
  - TB 63 Sample Number
- NOTE: 'W' and 'S' deleted from number, eg TBW163

**ASSAYS**

- > 50 ppb Au, > 200ppb Ag
- > 10 ppm Ag, > 30ppm Au
- △ > 25 ppb Au, > 100ppb Ag
- ▲ > 0.5 ppm Ag, > 1ppm Au

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

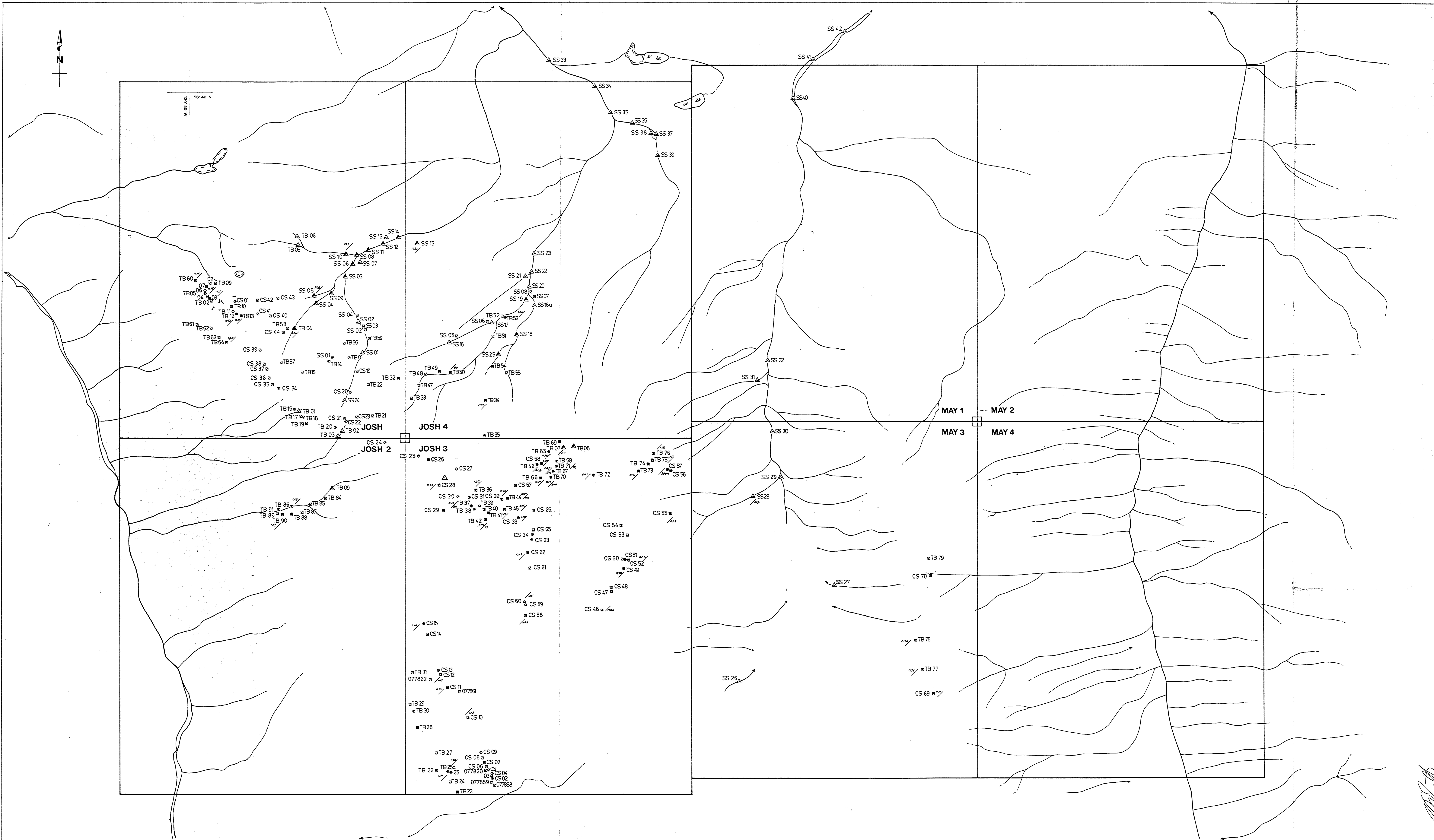
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part 1 of 2

GULF INTERNATIONAL  
MINERALS LIMITED  
JOSH and MAY CLAIMS

Rock and Silt  
Geochemistry  
Gold - Silver

Map: 2



**LEGEND**

- ⊕ Legal Corner Post
- △ Survey Cairn
- ⋆ Swamp
- Sample Location
  - - bedrock
  - - float
  - △ - stream sediment
- TB 63 Sample Number

NOTE: 'R' and 'S' deleted from number, eg: TB(R) 53

**ASSAYS**

- Cu > 0.025 % , > 0.1 %  $\frac{oz}{ton}$
- As > 25 ppm , > 75 ppm  $\frac{oz}{ton}$
- △ Cu > 200 ppm , > 500 ppm  $\frac{oz}{ton}$
- △ As > 20 ppm , > 35 ppm  $\frac{oz}{ton}$

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,306**

100 0 500  
meters

Part 1 of 2

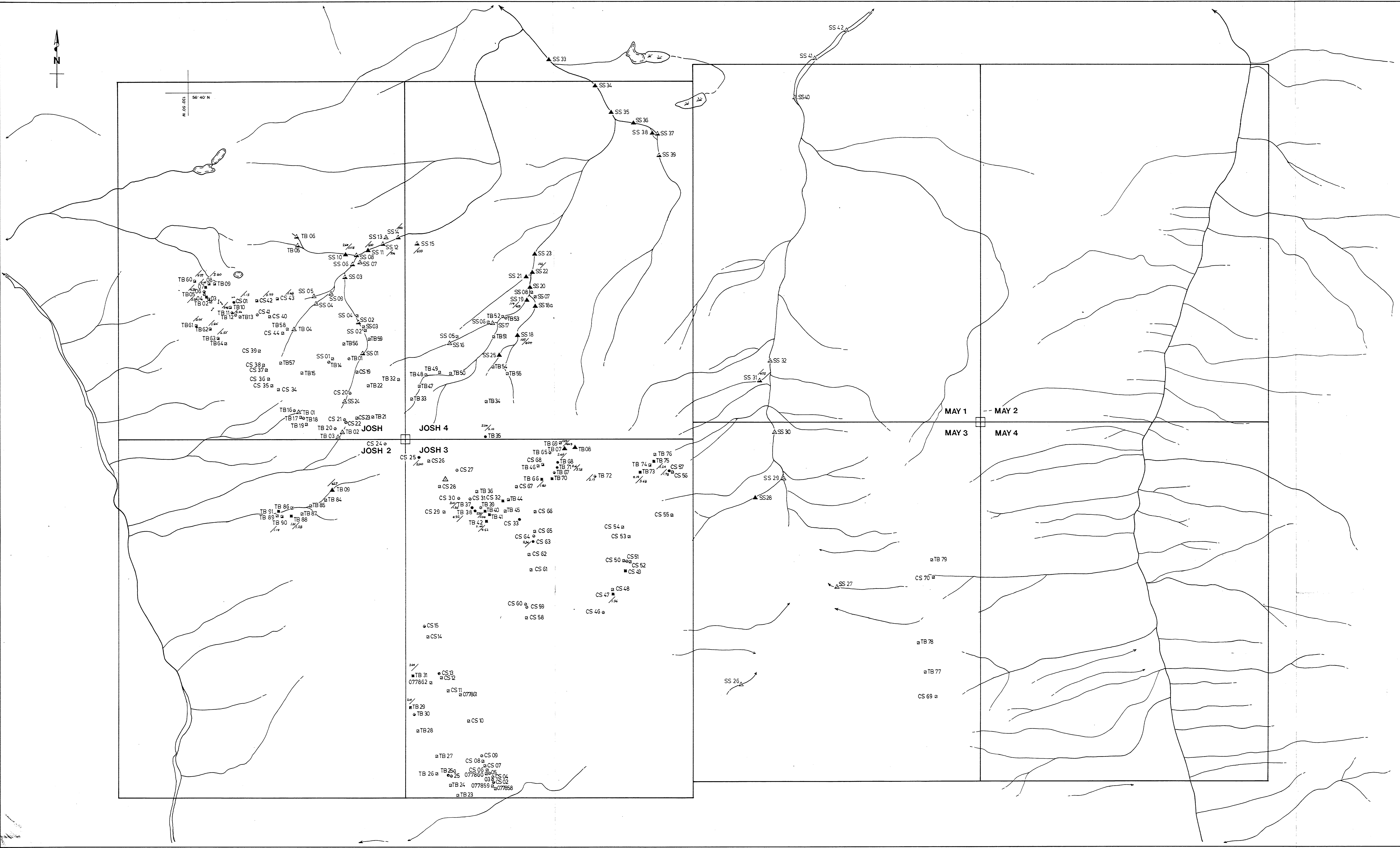
GULF INTERNATIONAL  
MINERALS LIMITED

JOSH and MAY CLAIMS

Rock and Silt  
Geochemistry

Copper - Arsenic

Map: 3



**LEGEND**

- ⊕ Legal Corner Post
- △ Survey Cairn
- ⋈ Swamp
- Sample Location
  - - bedrock
  - - float
  - △ - stream sediment
- TB 63 Sample Number

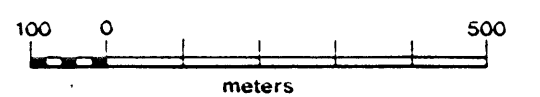
NOTE: 'R' and 'S' deleted from number, e.g. TB(R) 63

**ASSAYS**

- ○ Pb > 0.10 % , > 1.0 % <sup>27</sup>
- ○ Zn > 0.10 % , > 1.0 % <sup>17</sup>
- △ Pb > 50 ppm , > 100 ppm <sup>27</sup>
- △ Zn > 200 ppm , > 400 ppm <sup>17</sup>

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,306**



*part 1 of 2*

GULF INTERNATIONAL  
MINERALS LIMITED

JOSH and MAY CLAIMS

Rock and Silt  
Geochemistry

Lead - Zinc

Map: 4