



SAWYER CONSULTANTS INC.

GEOCHEMICAL ASSESSMENT REPORT  
ON THE  
HEMLO WEST NO. 5 and NO. 6 CLAIMS  
Johnny Mountain - Snippaker Creek Area  
Liard Mining Division, B.C.

N.T.S. 104 B/10 9  
Latitude 56°38'N  
Longitude 131°57'W

of

DALE E. WALLSTER (Owner)

and

BLUEGRASS PETROLEUM INC. (Operator)

by

SAWYER CONSULTANTS INC.  
John F. Ricker, B.Sc. (Author)

August 29th, 1983

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,307

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**SAWYER CONSULTANTS INC.**

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## INTRODUCTION

Bluegrass Petroleum Inc. is developing the Hemlo West No. 5 and No. 6 claim block in the Iskut River region, about 100 km. northwest of Stewart, B.C. (Fig. 1). Adjacent claims were worked by Placer and Placer-Skyline in 1982 and they undertook a major program in 1983 to test gold and silver values associated with felsic volcanic content in the "Snippaker Felsic Volcanic Belt."

In May 1983 Sawyer Consultants Inc. were asked to examine the claim block but were unable to reach the property due to bad regional weather from 1st to 3rd June. However, Sawyer Consultants Inc. report of June 23rd, 1983 summarized the current knowledge of the regional geological setting, and mineral deposits, and outlined an exploration program for Bluegrass Petroleum Inc.

This report revises and adds to the report of June 23rd, 1983. It is based on a hurried and brief property examination carried out by John F. Ricker in the period August 10th to 12th, 1983.

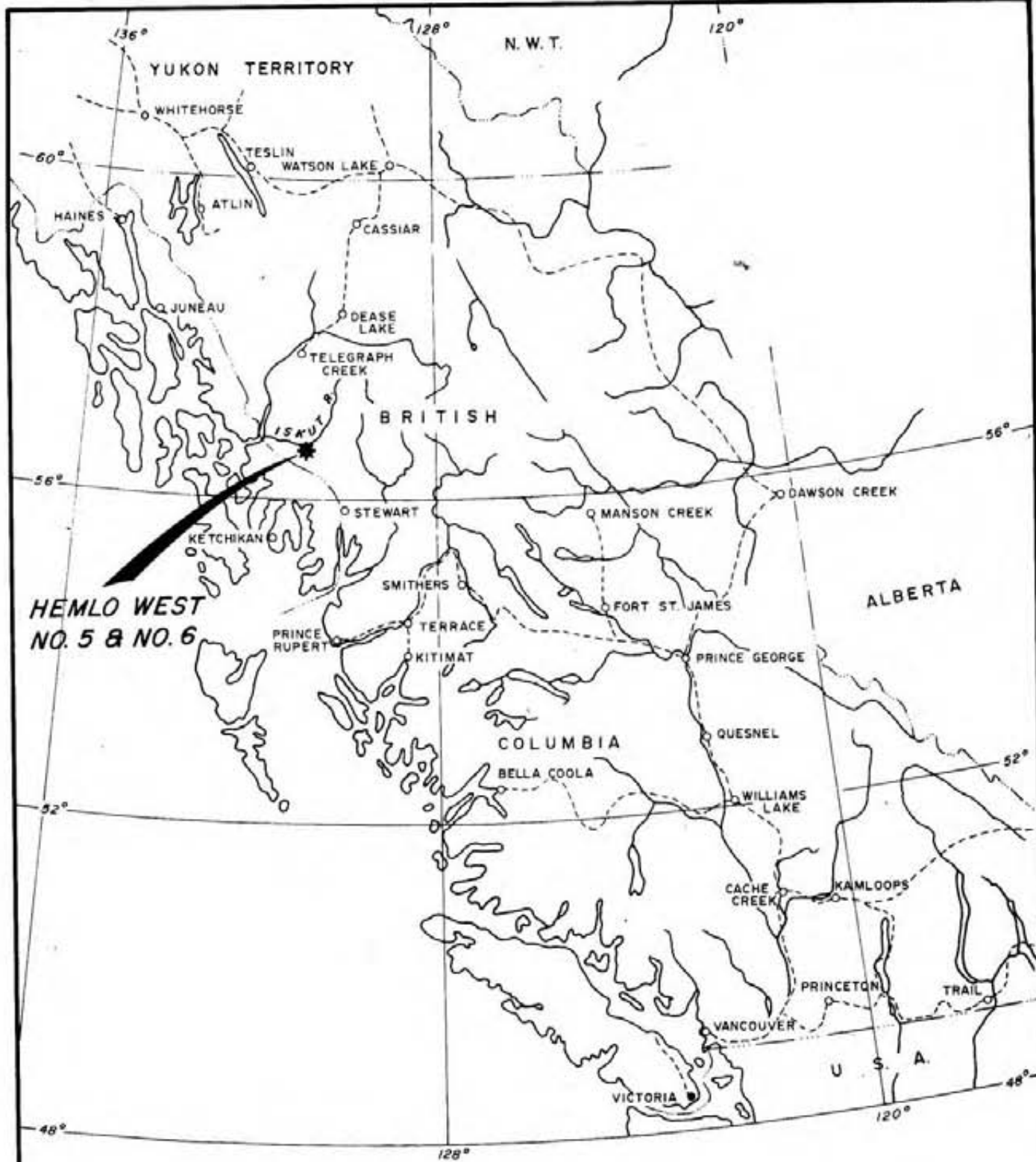
## SUMMARY

Work carried out on the Hemlo West No. 5 and No. 6 claims in the 1983 season has been done partly by personnel of Bluegrass Petroleum Inc. and also by a brief field examination over a period of 2½ days by a geologist of Sawyer Consultants Inc. As a consequence of this division of the work and of the relatively remote location and rugged terrain, preliminary coverage of the property is as yet incomplete. However, the work carried out to date has revealed some sulphide mineral showings of limited extent and has also provided indications of interesting gold content both in soil samples collected over fairly restricted grids and in some of the samples sent for assay. The definition of these occurrences can be considered encouraging and provides justification for completing at least initial stage coverage of the property.

Most of the mineral showings are spatially, and perhaps genetically, related to small intrusive bodies. The sulphides occur in metasedimentary rocks which are cut by these intrusives and to a lesser extent in the intrusives themselves. The significant mineralization in the Snippaker area as a whole is related to volcanic rocks. The limited amount of work completed on the Hemlo West No. 5 and No. 6 claims has so far failed to reveal the existence of any volcanic material. Exactly what, if any, is the relationship between the felsitic intrusives and volcanism in the area has not been established.

Recommendations are made to complete initial coverage of the entire property and to carry out more detailed work on those mineralized showings and geochemically anomalous areas which have been identified to date. Contingent upon favourable results from this work more detailed work would be warranted. The estimated cost of completing this first stage coverage of the entire property with a limited amount of more detailed follow-up work is \$47,915.00.

**SAWYER CONSULTANTS INC.**



**HEMLO WEST  
NO. 5 & NO. 6**

**BLUEGRASS PETROLEUM INC.**

**JOHNNY MOUNTAIN - SNIPPAKER CREEK AREA**  
LIARD MINING DIVISION, NORTHERN B.C.

**GENERAL LOCATION MAP**

Scale: 1" = 125 miles

## PROPERTY AND OWNERSHIP

The Hemlo West No. 5 (Record No. 2511; 18 units) and No. 6 (Record No. 2512; 12 units) were staked on 29th September, 1982 for Alpha Joint Venture and expire on 29th September, 1983. Bluegrass Petroleum Inc. acquired an option on the claims in early 1983.

Due to low visibility, the writer was unable to visit the Legal Corner Posts. However, Bluegrass Petroleum Inc. personnel indicate that on the ground the Legal Corner Post is about  $1\frac{1}{2}$  km. west-southwest of the location indicated on the locator's sketch (Graf, 1982, Fig. 17a).

## LOCATION AND ACCESS

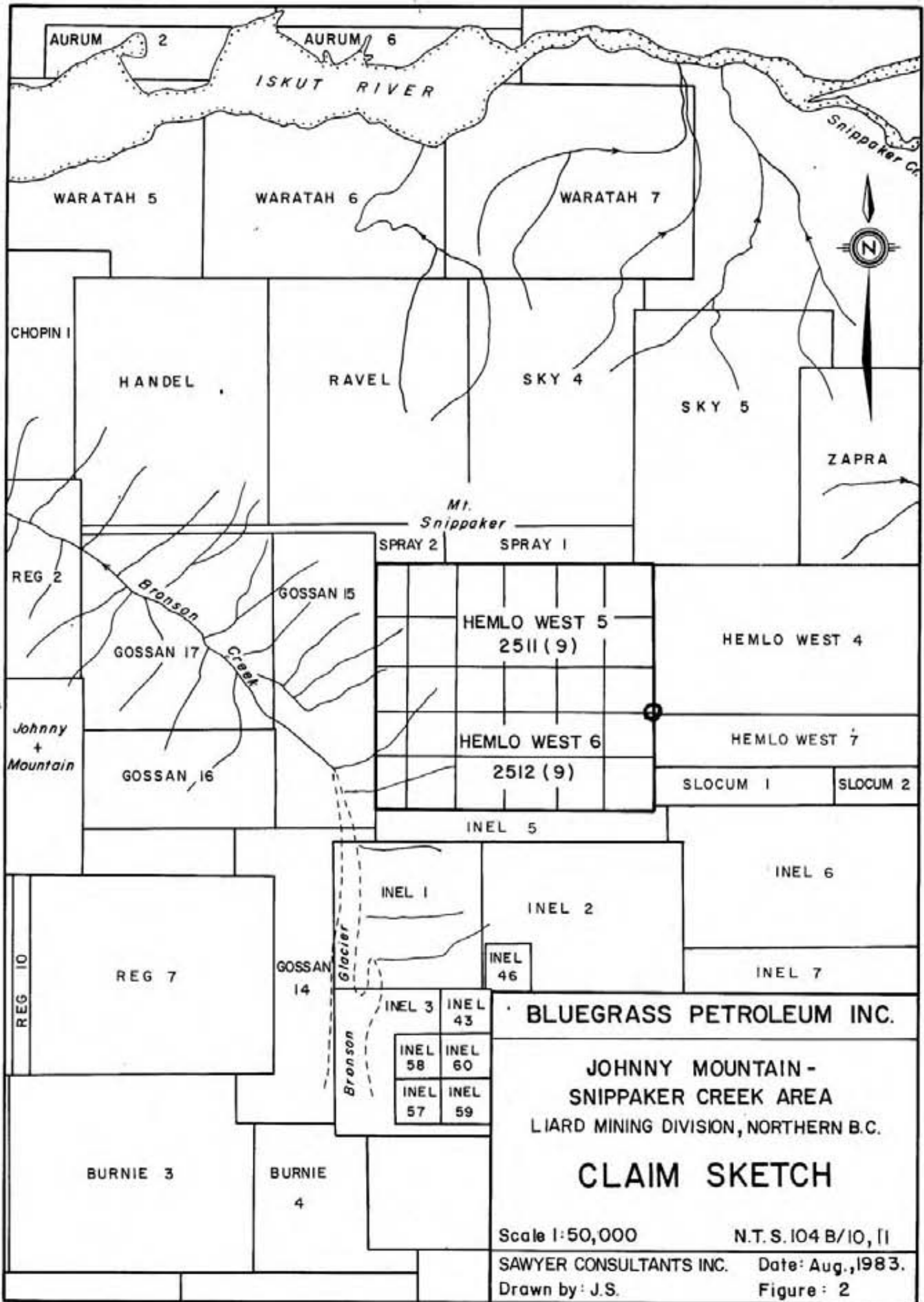
The Hemlo West No. 5 and No. 6 claims are located south of Iskut River between Bronson Glacier tongue and Snippaker Creek, at  $56^{\circ}38'N$  and  $131^{\circ}57'W$ . They are 98 km. northwest of Stewart, B.C. and 75 km. east of Wrangell, Alaska. Elevations on the Hemlo West No. 5 and No. 6 claims range from 2800 feet on the steep slopes above Bronson Glacier on the west to about 6600 feet on the ridge top forming the divide between Bronson Creek and Snippaker Creek. Part of the claims near the ridgetop are covered by permanent snowfields and glaciers.

The claims are accessible only by helicopter. Charters can be made from Stewart, B.C. However, the Snippaker Creek air strip 12 km. east-southeast of the claims is a base for Frontier Helicopters and Northern Mountain Helicopters (Bell Jet Ranger 206) during the 1983 field season. Trans Provincial Airlines flies a Twin Otter to Snippaker Creek Tuesdays to Saturdays from Terrace and Dease Lake. The air strip is also suitable for DC-3 and Caribou aircraft.

The Stewart-Cassiar Highway, Provincial Highway 37, passes up the Iskut River from Bob Quinn Lake about 60 kms. to the northeast after traversing up the Bell Irving River and Ningunsaw River from Highway 16 at Kitwanga. The closest point which this highway reaches is approximately 50 km. northeast of the claims. The property lies within the area of map sheets Iskut River (1:250,000), N.T.S. 104 B&C, and Snippaker Creek (1:50,000), N.T.S. 104 B/10.

## HISTORY AND PREVIOUS WORK

The history and previous work in the region is described in the Sawyer Consultants Inc. Report of June 23, 1983. Other than regional exploration surveys for porphyry copper deposits in the 1950's and 1960's there has been no exploration reported on the ground covered by the Hemlo West No. 5 and No. 6 claims prior to the current field season.



**BLUEGRASS PETROLEUM INC.**

**JOHNNY MOUNTAIN -  
SNIPPAKER CREEK AREA  
LIARD MINING DIVISION, NORTHERN B.C.**

# CLAIM SKETCH

Scale 1:50,000

N.T.S. 104 B/10, 11

SAWYER CONSULTANTS INC.

Date: Aug., 1983.

Drawn by: J.S.

Figure: 2

### PROPERTY WORK COMPLETED 1983

An attempt by Sawyer Consultants Inc. to carry out a property examination in early June 1983 was unsuccessful due to poor local weather. As a consequence the Recommendations for the initial exploration of the property made in our June 23rd, 1983 Report were based on an interpretation of the general geological setting of the property derived from previous work by other companies and groups on adjacent claims, on published information, and on professional experience in this part of northern British Columbia, including the Schaft Creek and Tulsequah areas. The recommended work included geological mapping and prospecting, geochemical sampling, and later, contingent on favourable results from the geochemical work, some geophysical surveys. The aim of the geological mapping program was primarily to look for the brecciated rhyolitic volcanic units known to host precious metal mineralization elsewhere in the camp, while the geochemical sampling would aid in locating mineralization.

Personnel of Bluegrass Petroleum Inc. were able partially to complete this work in difficult terrain. It was apparent in the field that the terrain was too steep for silt sampling in the gullies thus effort was concentrated on prospecting the gully system in the southwest corner of the claim block. A soil sampling grid was laid out on the gully side and a soil sampling program was undertaken.

Results included the location of several small sulphide showings in the A2 and A3 gullies and high geochemical values for soils in this vicinity (see Fig. 3, Maps 1 to 3).

#### Property Examination

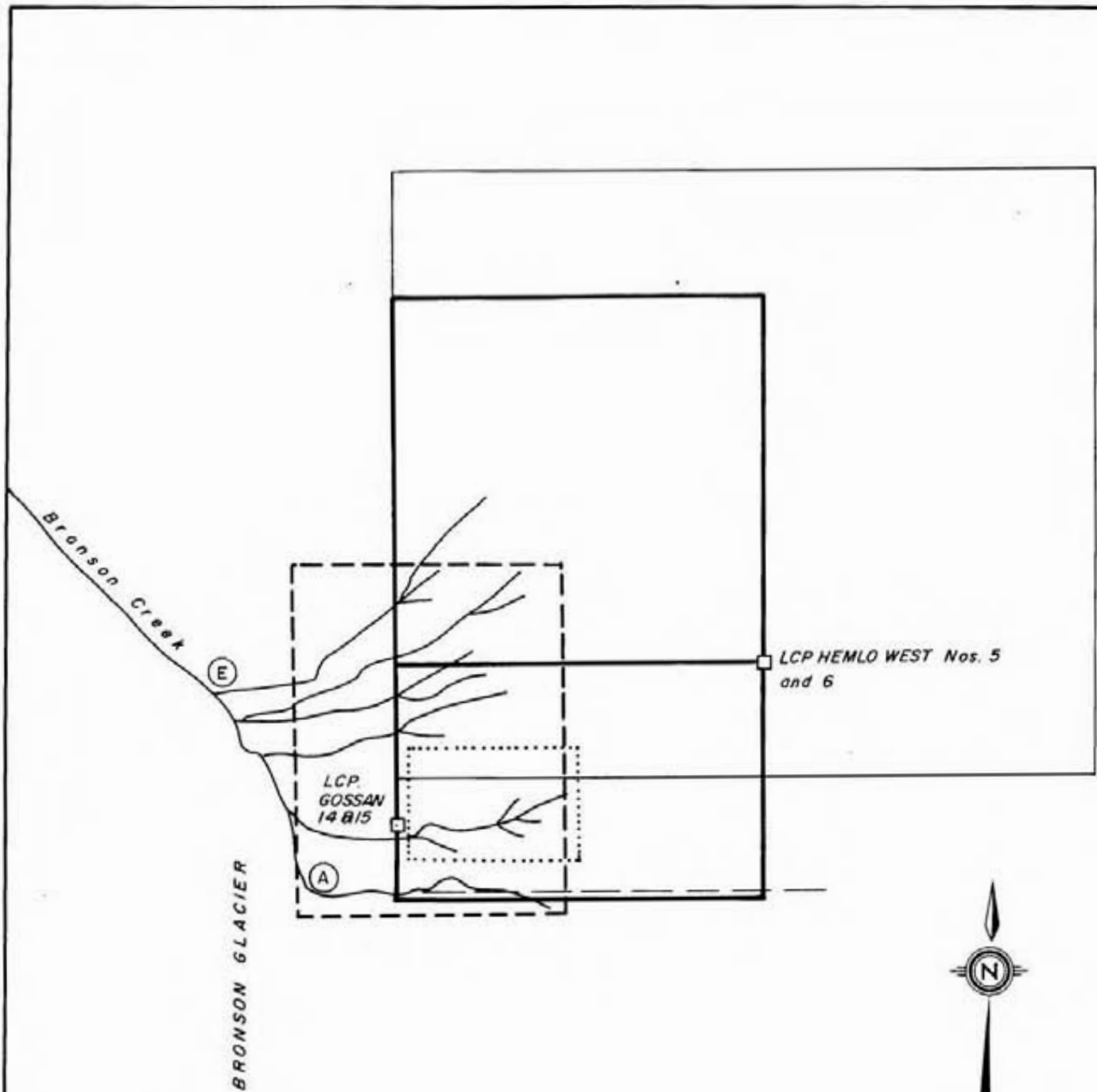
Property examination was carried out by the writer on the evening of August 10th and daily on August 11th and 12th. On August 10th and 11th the A gully showings were examined, the "R-3" was resampled and its extension was prospected to the north and south (see Maps 1 to 3, Figs. 4 to 6). Rock samples collected by Bluegrass Petroleum Inc. up to about the 5500 feet level in "A" gully and its tributaries were examined but locations could not be confirmed. Assay results for some of these rocks are given in Appendix "B" (File No. 83-1745). On August 12th a rapid reconnaissance of the central parts of the claim was made. Rock chip and soil sampling locations and results and geological observations are plotted on Figures 4 to 6.

#### REGIONAL GEOLOGY

For details of the regional geology of the Hemlo No. 5 and No. 6 claims the reader is referred to the June 23rd, 1983 Report by Sawyer Consultants Inc. (see pp. 8-10).

**SAWYER CONSULTANTS INC.**





**LEGEND**

- Figures 4 to 6
- ..... Maps 1 to 3
- Hemlo West 5 & 6 claim boundary as drawn on Locator's sketch (Fig. 17a, Graf, Chris 1982.)
- Inel 182 claim boundary as drawn on Locator's sketch (Fig. 17a Graf, Chris 1982.)
- Approximate claim boundary of Hemlo West 5 & 6 according to Bluegrass Petroleum Inc.



**BLUEGRASS PETROLEUM INC.**

**HEMLO WEST Nos. 5 and 6 CLAIMS**  
**JOHNNY MOUNTAIN - SNIPPAKER CREEK AREA**  
 LIARD MINING DIVISION, NORTHERN B.C.

**LOCATION KEY**

Scale 1: 25,000

SAWYER CONSULTANTS INC.      Date: August, 1983.  
 Figure 3

## PROPERTY GEOLOGY

The property is located in an area along a structural trend of favourable mineral deposits related to the "Snippaker Volcanic Formation" between Johnny Mountain and INEL properties. However at Hemlo West No. 5 and No. 6 claims mineralization examined to date is associated with the occurrence of felsitic intrusives. Numerous tiny stocks are located in the west margin of the property intruding a sequence of metasedimentary rocks. No volcanic rocks have yet been noted.

### Metasedimentary Rocks

The metasediments consist of greenish siltstones and argillites. They carry minor amounts of disseminated pyrite, especially near igneous contacts. The metasediments appear to be most massive and calcareous at an elevation on the west border of the claim area. They appear to be most thin bedded to laminated higher in the section. Disseminated pyrite can be found in either sequence. The metasediments are chloritized in shear zones (e.g. at R-3). Float containing pebble conlomerate seen at B1 gully apparently crop out near the crest of the ridge (Bluegrass Petroleum Inc. personnel). At contact zones the metasediments are indurated hornfels (J-15). Assays of metasediments reveal no economic mineralization (Table 1).

### Intrusive Rocks

#### Felsitic Intrusives

The felsitic stocks are indurated aphanitic intrusives. They are reddish to light grey (even white) weathering depending on the disseminated pyrite content. They were seen to occur in the western part of the property.

At contact zones angular hornfels inclusions may occur in the felsite. At D gully (J-15) a one inch ( $2\frac{1}{2}$  cm.) zone of granular sedimentary relics occur in an igneous groundmass. At B1 gully (J-19) the zone of similarly hybrid rock is several feet wide. No mineralization was noted in these zones.

Assays of the felsitic intrusives revealed no economic mineralization.

#### Quartz Veins

At least three ages of quartz vein cut the felsitic intrusive and metasedimentary rocks high in D gully. One of these contains galena in open space fillings. Assays indicate the galena carries silver values.

Field No.	Sample No.	A S S A Y					Comment	Bluegrass Petroleum Inc. Description
		Cu %	Pb %	Zn %	Ag oz./ton	Au oz./ton		
R-1	Not Assayed						100 m. S of SS location 0N 1.5E. Pyrite mineralization in bedrock.	
R-2	83001	.21	-	-	-	.011	A3 gully grid.	Located 20 m. E of Sample R-1. Malachite and pyrite in 1 m. wide band exposed 4 m. long in creek bottom. Striking NE. Dipping SE.
R-2	83002	2.62	-	-	-	.078	A3 gully grid.	
R-3	83003	.03	-	-	-	.002	A3 gully grid.	Located at about same elevation as SS location 0.5N 2.5E up creek from R-2. 10 m. wide mineralized area containing bands of massive pyrite up to .3 m. wide. All rock carrying some pyrite. Zone striking NE.
R-3	83004	.63	.01	.02	.61	.042	A3 gully grid.	
R-4	83005	-	-	-	-	.001	A2, A3 gully divide; A gully grid; felsite.	100 m. NE of R-3 on north side of ridge. Pyrite found in massive country rock.
R-5	83006	-	-	-	-	.001		Pyrite in float on N side of main creek. Minor copper stains in place above. Located below station 0.5N 4.5E.
R-6	83007	-	-	-	-	.001		Located 50 m. W of station 0.5N 0E. Pyrite in grey rock in place.
R-7	83008	-	-	-	-	.001		Location 0.5N 0.5E. Fresh float carrying pyrite believed to have originated from hillside to ENE.
0.5N 1.25E	83009	-	-	-	-	.001	A gully grid.	Location 0.5N 1.25E. Pyrite in place.
0.5N 2.25E	83010	.62	-	-	-	.030	A gully grid.	Location 0.5N 2.25E. Malachite stains in fractures and on surface in place.
-	83011	-	-	-	-	.059	Approximately 50 m. East of 1N 4.5E.	Location about 50 m. east of 1N 4.5E. Pyrite in place in two locations on north bank of main creek.
HJR-3	HJR-3	.01	-	-	-	.001	A3 gully grid above R-3.	
HJR-4	HJR-4	.01	-	-	-	.002	A3 gully grid above R-3.	
HJR-5	HJR-5	.01	-	-	-	.001	A3 gully.	
HJR-12	HJR-12	.01	-	-	-	.004	A gully grid.	
HJR-13	HJR-13	.01	-	-	-	.001	A gully grid.	
HJR-14	HJR-14	.01	-	-	-	.001	A gully grid; felsite.	
HJR-16	HJR-16	.01	-	-	-	.001	High up in A gully; altered felsite.	
HJR-19	HJR-19	.01	-	-	-	.001	High up in A gully; feldspar porphyry.	
HJR-21	HJR-21	.01	-	-	-	.001	Igneous rock.	
HJR-22	HJR-22	.01	-	-	-	.002	Above R-3 in A3 gully; calcareous metasediment.	
HJR-23	HJR-23	.02	-	-	-	.014	Above R-2 in A3 gully; silicified rock.	
R-3A	68001	.18	.01	.04	.21	.024	R-3 showing. A3 gully.	
R-3B	68002	.05	.01	.28	.30	.028	R-3 showing. A3 gully.	
R-3C	68003	.03	.01	.04	.06	.005	R-3 showing. A3 gully.	
J-1	68004	.01	.01	.01	.06	.004	A2-A3 divide in A gully grid area. Grab sample of most altered rock.	
J-3	68005	.01	-	-	-	.001	A2-A3 divide in A gully grid area. Felsite.	
J-4B	68006	.27	.01	1.15	.45	.018		
J-6	68007	.01	-	-	-	.001	A3 gully; metasediment.	
J-7B	68008	.02	-	-	-	.001		
J-11	68009	.01	-	-	-	.001	Ridge C/D; metasediment.	
J-12	68010	.01	-	-	-	.001	Ridge C/D; shear zone.	
J-13	68011	.01	-	-	-	.001	Gully D; felsite.	
J-13A	68012	.01	-	-	-	.001	Gully D; altered rock.	
J-15A	68013	.01	3.38	.01	1.48	.001	Gully D; quartz vein with galena cutting felsite.	
J-15B	68014	.01	2.14	1.33	1.79	.001	Gully D; quartz vein with galena cutting metasediments.	
J-18	68015	.01	-	-	-	.001	Gully C2; shear zone.	
J-18A	68016	.01	-	-	-	.001	Gully C2; pebble conglomerate in float.	
J-20	68017	.01	-	-	-	.067	B1 gully; altered rock.	
J-20A	68018	.01	-	-	-	.013	B1 gully; altered rock.	
J-22A	68019	.02	.01	.01	.29	.216	B gully; pyrite in altered rock.	

Note: All samples grab samples unless indicated otherwise.

### Hornblende-rich Intrusives

The hornblende-rich dyke (Fig. 4) at the base of D gully strikes toward the claim area but was not seen in outcrop on the claims. It is foliated. Pyritization occurs around it but not within the dyke itself. It cuts metasediments but the contact with felsite intrusive was not seen.

### Structure

Shear or fault zones are well defined on the property at R-3 showing; at B gully and D gully (Fig. 4). So far no consistent structural alignments are noted. The trend of sulphide mineralization at J-22A and its alignment with the shear zone in B gully may be fortuitous. The same rough alignment links most of the felsitic intrusive zones visited.

Thus far the shear zones do not appear to act as conduits for the massive sulphides seen in outcrop. At C1 gully the shear zone sampled had no significant mineralization (J-18, HF-14).

No regional trends were noted in platy cleavage or schistosity in the metasedimentary rocks.

### Mineralization

So far, mineralization (pyrite mostly) appears confined mainly to the felsitic intrusive environment — disseminated in the intrusives or in the neighbouring metasediments. The massive pyritic sulphide pods appear confined to the metasedimentary rocks but in locations near felsite bodies.

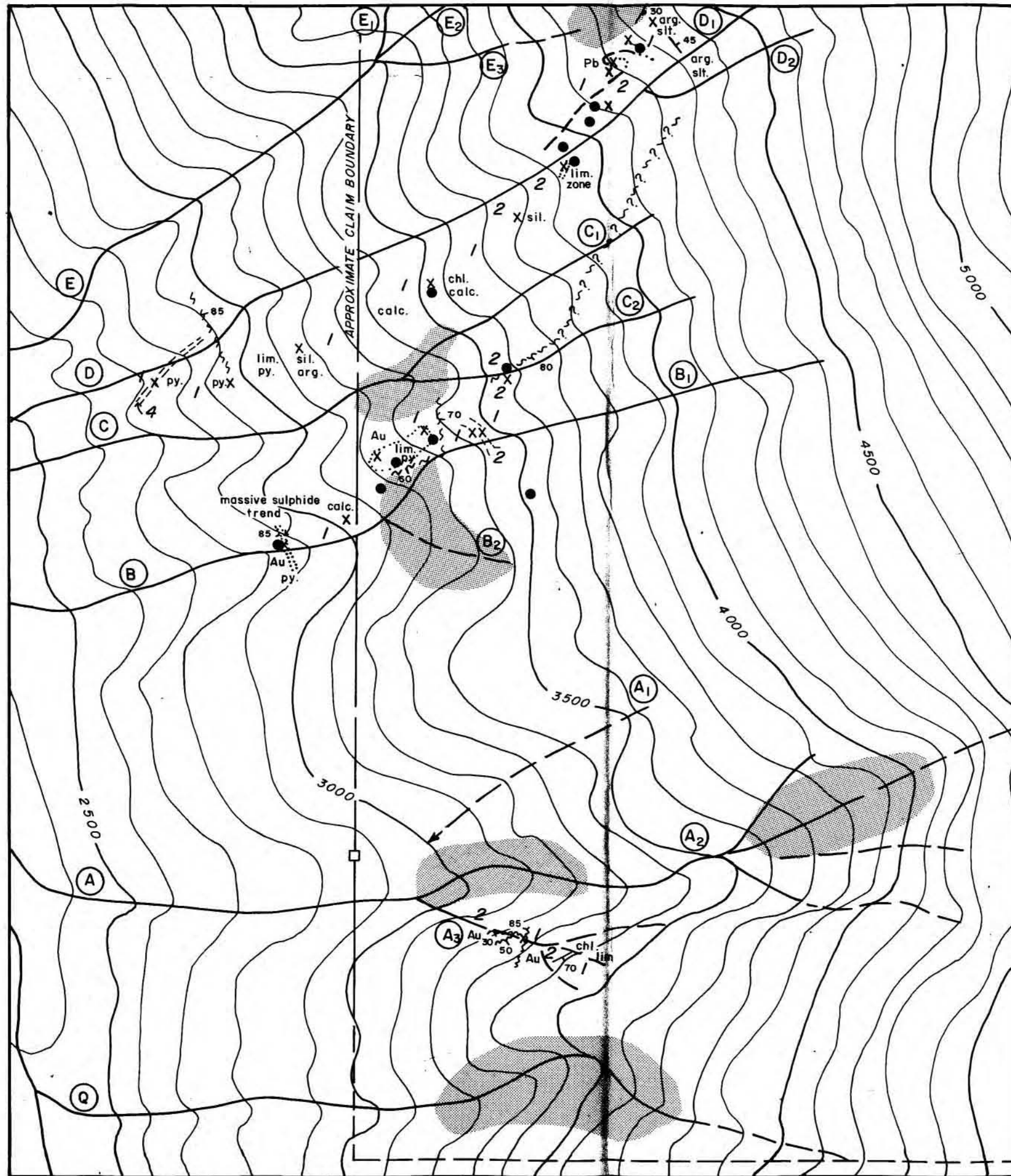
Quartz veining, containing galena, cuts both metasedimentary and felsitic intrusives and again is found in the vicinity of the intrusives.

### R-3 Sulphide Body (Fig. 5 & Fig. 7)

Massive pyrite is the most dominant mineral in a pod of sulphide mineralization seen crossing A3 gully at R-3 (Map 1, Fig. 5). The pod is truncated by a joint face striking  $020^{\circ}$ , dipping  $85^{\circ}$  NW on the downstream side. It is about 5-6 m. long crossing the creek and up to 100 cm. thick. It appears to pinch out in the creek bed to the south. Alteration zones were noted and attempts to locate this body were made to the south. To the north colluvium and possibly till occupy the ground up to the divide between A3 and A2. Soils HF-1 to HF-7 and rock sample J-1 are attempts to trace extensions of the mineralization. Sample R-3B is a chip channel sample across massive pyrite. R-3A is a grab sample in massive pyrite. Chip channel sample R-3C is across the shear zone in greenish country rock below the sulphide pod.

The mineralization appears to be truncated by two planes. Calcite stringers later than the sulphides occur in fractures.

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**LEGEND**

TRIASSIC (?)

INTRUSIVE ROCKS

- 4 Hornblende - rich dyke.  
(age relation not confirmed)
- 3 Quartz veining.
- 2 Felsitic intrusive.

PRE TRIASSIC TO MID-TRIASSIC (?)

METASEDIMENTS

- 1 Siltstone, argillite, conglomerate

- x Observation or sample point, Sawyer Consultants Inc. 1983
- Soil sample location, Sawyer Consultants Inc. 1983.
- Quartz vein, strike and dip
- Bedding - strike and dip
- Alteration zones
- Geological contact - approximate, assumed
- ~ Shear zone / fault zone - approximate, assumed
- Au = gold; arg.=argillite; calc.= calcareous; chl.=chloritic;  
phy= phyllitic; py.= pyrite; lim.= limonitic; sil.= silicified;  
slt.= siltstone.
- (A<sub>1</sub>) Gully identification
- Exploration targets

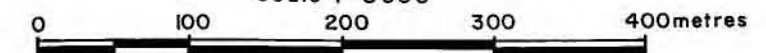
BLUEGRASS PETROLEUM INC.

**HEMLO WEST Nos. 5 and 6 CLAIMS**

JOHNNY MOUNTAIN-SNIPPAKER CREEK AREA  
LIARD MINING DIVISION, NORTHERN B.C.

**GEOLOGY AND EXPLORATION  
TARGETS**

Scale 1:5000



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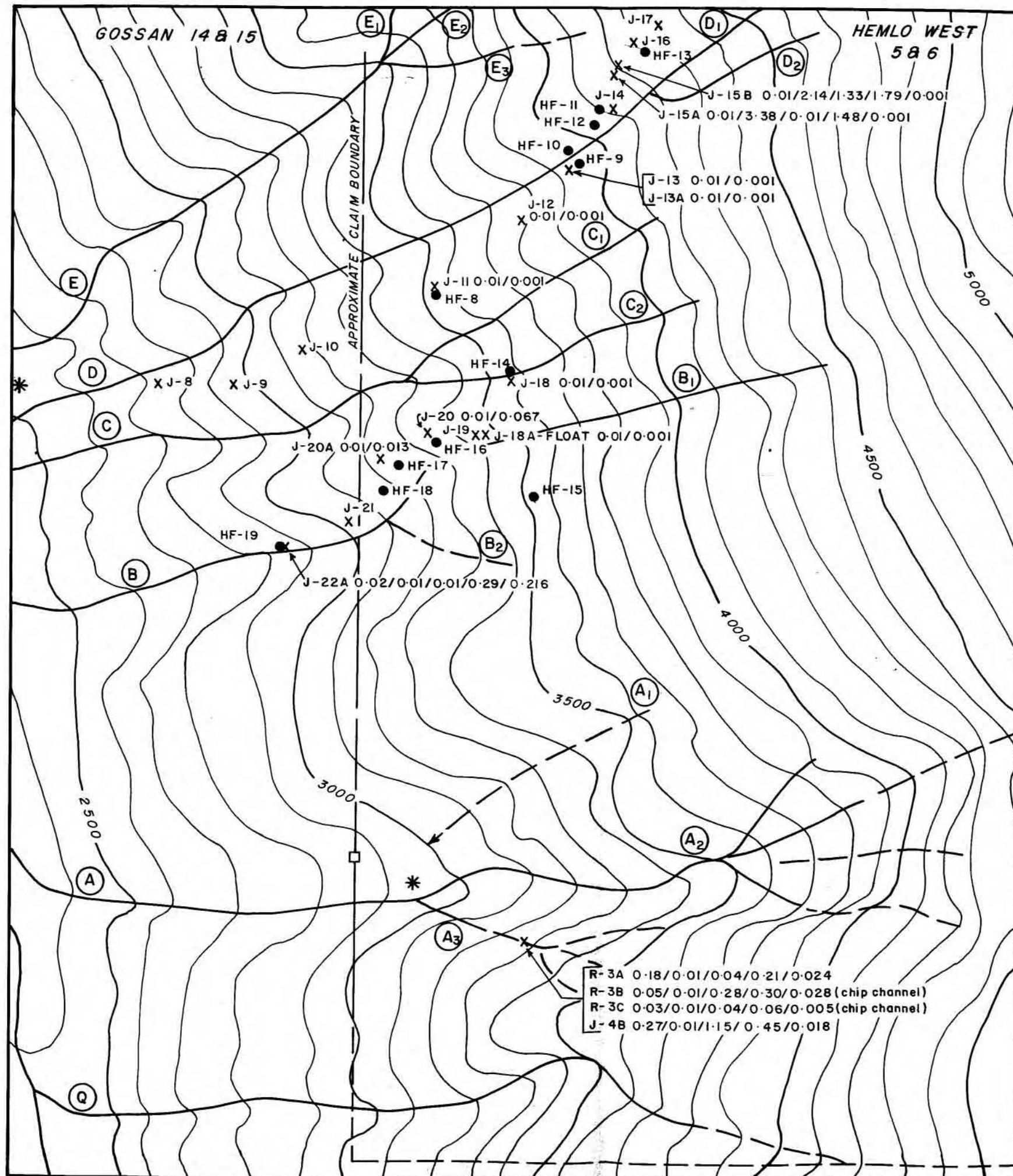
Date: August, 1983.

Drawn by: J.S.

Figure: 4

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,307



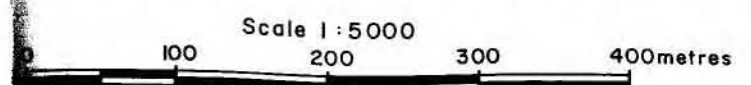
**LEGEND**

- Soil sample
- X Rock sample. All samples are grab samples unless indicated.
- X 0.01/2.14/1.33/1.79/0.001 Rock sample giving assay values: (% Cu / (% Pb / (% Zn / Ag(oz.per ton)/Au(oz.per ton)
- X 0.01/0.001 (% Cu / Au(oz. per ton)
- \* Helicopter landing area
- Legal corner post Gossan 14 & 15 claims (position approximate)

BLUEGRASS PETROLEUM INC.

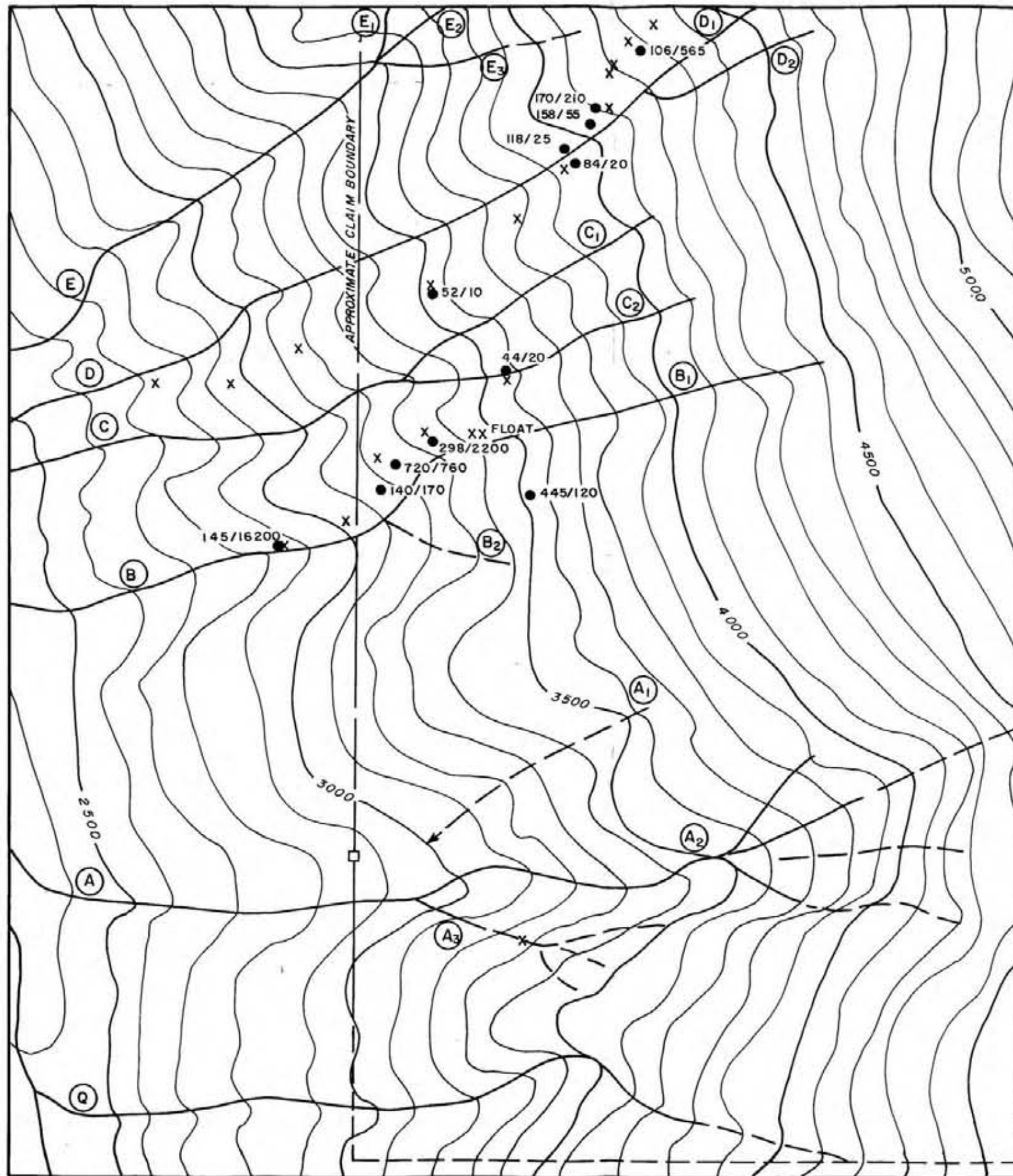
**HEMLO WEST Nos. 5 and 6 CLAIMS**  
 JOHNNY MOUNTAIN-SNIPPAKER CREEK AREA  
 LIARD MINING DIVISION, NORTHERN B.C.

**SAMPLING AND ASSAY PLAN**



SAWYE CONSULTANTS INC.  
 Drawn by J.S.

Date: August, 1983.  
 Figure: 5

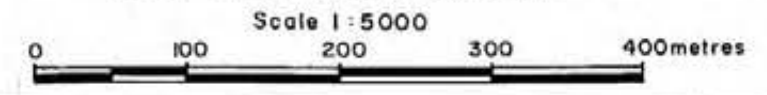


**LEGEND**

- Soil sample
- 720/760 Copper ppm and gold ppb in soils.

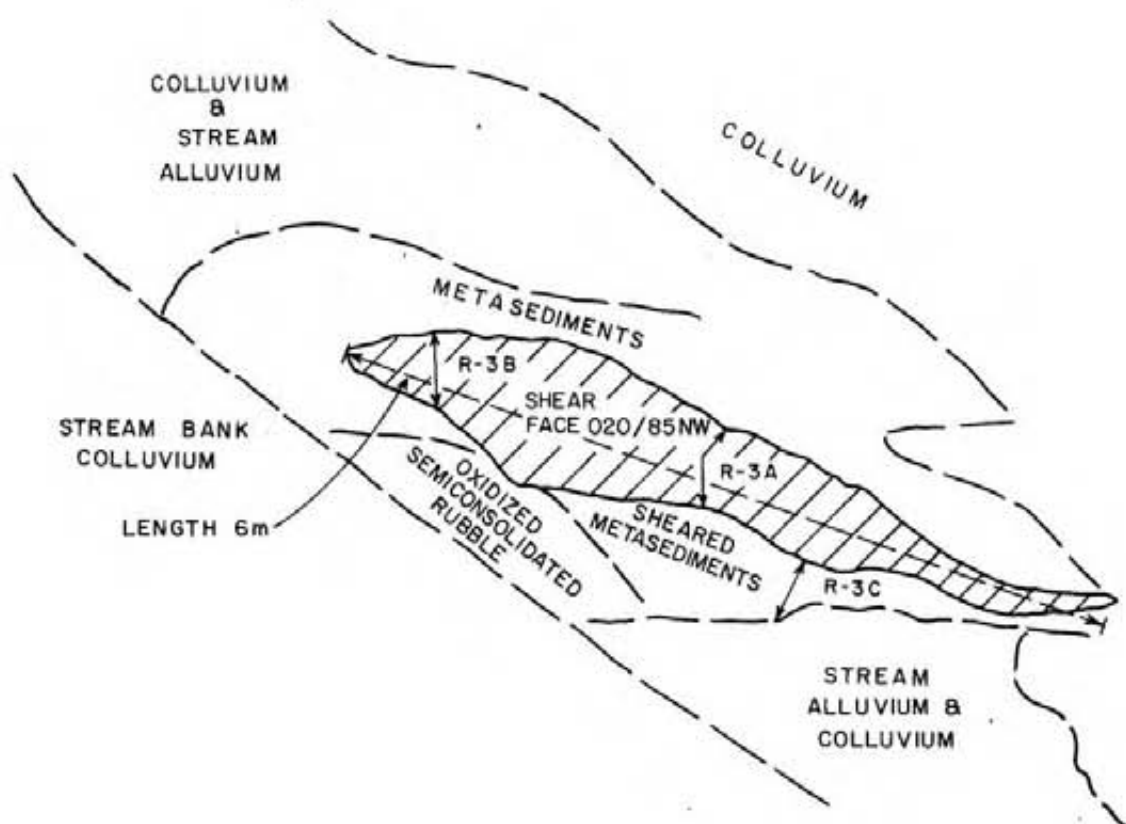
BLUEGRASS PETROLEUM INC.

**HEMLO WEST Nos. 5 and 6 CLAIMS**  
JOHNNY MOUNTAIN-SNIPPAKER CREEK AREA  
LIARD MINING DIVISION, NORTHERN B.C.  
**GEOCHEMICAL PLAN**  
**COPPER AND GOLD**



SAWYER CONSULTANTS INC.  
Drawn by: J.S.

Date: August, 1983.  
Figure: 6



<b>BLUEGRASS PETROLEUM INC.</b>	
<b>HEMLO WEST Nos.5 and 6 CLAIMS</b> JOHNNY MOUNTAIN - SNIPPAKER CREEK AREA LIARD MINING DIVISION, NORTHERN B.C.	
<b>R-3 SULPHIDE SHOWING LOOKING UPSTREAM ESE INTO A<sub>3</sub> GULLY</b>	
SAWYER CONSULTANTS INC.	Date: August, 1983. Figure 7



### B Gully Mineralization (J20/J20A)

On the ridge slope in the north side of B1 and B gully are gossanous outcrops of lenses and pods of sulphide mineralization (see Fig. 4) occurring in an area of 100 m. by about 30 m. Sample J-20 carries gold values. Soils HF-16 and HF-17 carry high gold values and HF-17 carries high copper. This area may trend into B2 gully and should be sampled there.

### D Gully Mineralization

Quartz veins of up to three distinct ages cut the felsite stock and the metasediments on the ridge between D and E gullies at about 4000 feet to 4100 feet. Galena occurs as open space fillings in quartz veins cutting felsite (J-15B) and metasediments (J-15C). The galena carries slight silver content.

### Alteration

Transported gossans derived from disseminated pyrite in all rock types as well as massive sulphides covers felsitic intrusive outcrops and metasedimentary outcrops. Chloritization and calcification and some silicified areas occur in the metasediments. Disseminated pyrite is abundant in felsitic outcrops and in adjacent metasedimentary outcrops.

### Geochemistry

The property is steep and has little or no soil at higher elevations (above 3500 feet). Above 3500 feet approximately the slopes are covered mainly by talus. Creeks are torrential and contain little silt.

Colluvium is the main valley component at 3000 feet to 3500 feet along with ancient moraine debris. Much of the soil in this area is derived from transported material from higher up. The large most recent lateral moraines on the Bronson Glacier do not occur on the property.

Soil samples were taken during the geological reconnaissance on August 12th in B, C, and D gullies as an aid to prospecting (HF-7 to 19) and in the attempt to extend the R-3 mineralized zone to the north (HF-1 to 7).

### Soil Grid System

The soil grid was established by Bluegrass Petroleum Inc. personnel. Maps 1 to 3 show sample locations and assay results, and soil geochemical values for copper and for gold, over the grid at A gully.

Low values at higher elevations on lines 3N, 4N, 0+6S, and 1+1S, probably reflect low values in transported debris. A thin

soil is developed on the ridge and on tops of protected outcrops. Samples HF-1 to HF-7 taken by Sawyer Consultants Inc. are of material developed in situ over shallow outcrops (equivalent to C horizon material). The other highest values on this grid (from Bluegrass Petroleum's sampling), at 2N 3E, 1N 0+25E, 1N 3+25E, 1N 4+75E, 0+6S 1+5E, 0+6S 2+00E, 1+1S 1+5E, probably represent similar conditions.

#### DISCUSSIONS AND CONCLUSIONS

A short field season, conditions of terrain and weather have resulted only in a limited areal coverage of the total property. In those areas where prospecting and limited sampling have been completed several mineralized zones are indicated. This suggests that complete coverage of the property could reveal additional mineralization. Suggested target areas indicated in the western half of the property (Fig. 4) are based on limited personal observation.

Presently known showings, and any other showings discovered as a result of prospecting of the whole property, should be investigated in more detail by trenching and more sampling, etc. Further detailed soil sampling may possibly prove useful in extending the mineralized zones in areas of limited exposure.

The relatively remote location and rugged terrain make for high cost exploration, thus it is important that initial work on the property be directed at geological evaluation of mineralized areas. More detailed and possibly expensive geochemical work should only be undertaken if the geological evaluations suggest potential for development of significant volume of mineralized rock.

These factors should be taken into consideration in planning future programs. A suitable program for completion of the initial exploration phase could include the work outlined below.

#### RECOMMENDATIONS

1. Reconnaissance geological mapping/prospecting and reconnaissance soil sampling in the indicated zones, (see Fig. 4), and in the eastern parts of the property should be completed.
2. The geochemically high values in soils on the north bank of gully A2, and the areas surrounding gully A3 should be prospected in some detail.
3. Any anomalous areas indicated by the reconnaissance coverage of the remainder of the property recommended in 1. above should be covered by more detailed work which may include more detailed soil sampling, possibly requiring establishment of additional grids for control, followed by physical investigation -- trenching and sampling, etc. It may be desirable to have a rock drill and blasting powder available on the property for this phase of the work.

**SAWYER CONSULTANTS INC.**

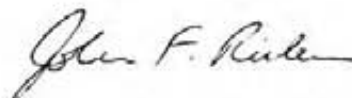
4. The claim boundaries of the Hemlo West No. 5 and No. 6 claims should be established on the ground with greater accuracy than presently known.
5. Aerial photography and/or suitable satellite imagery covering the general area should be obtained. Detailed photography of the claims area which is available from the Provincial and/or Federal Governments will aid in general prospecting and geological mapping. The cost of this photography is very modest but there is sometimes a delay in its availability.
6. The availability and cost of Dighem System airborne geophysical data covering the property area should be investigated.

COST ESTIMATES

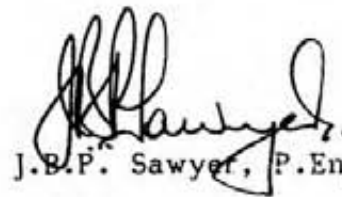
The estimated costs for completion of the work recommended above are set out below.

1. Completion of geology and geochemical reconnaissance; detailed work in A2 and A3 gully areas	\$ 7,500.00
2. Additional follow up sampling and prospecting in areas defined by 1. above, including provision for establishment of new grids	4,000.00
3. Geochemical analyses - estimate 400 samples total @ \$9.60 (Au, Ag, Cu or Pb)	3,840.00
4. Assaying - estimate 50 samples @ \$13.50 (Au, Ag)	675.00
5. Acquisition of aerial photography, and air photo interpretation	400.00
6. Provision for acquisition of airborne geophysical data	2,500.00
Support Costs	
Camp/accommodation, equipment, supplies	2,500.00
Travel	2,500.00
Helicopter support (assumes base at Snippaker strip) estimate 20 hours @ \$475.00/hour	9,500.00
Engineering and Supervision; Reporting	4,000.00
Consulting	6,000.00
Contingency	<u>4,500.00</u>
<u>Total</u>	<u>\$47,915.00</u>

Respectfully submitted,  
SAWYER CONSULTANTS INC.



John F. Ricker, B.Sc.



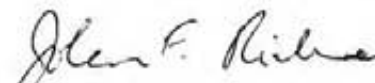
J.B.P. Sawyer, P.Eng.

**SAWYER CONSULTANTS INC.**

CERTIFICATE OF QUALIFICATION

I, John F. Ricker of Vancouver, B.C., do hereby certify:

1. That I am a Consulting Geologist, graduate of The University of British Columbia, with a B.Sc. in geology and zoology.
2. That I have practised my profession as a Geologist since 1960 in British Columbia, Yukon, Northwest Territories, South America, New Zealand and Antarctica.
3. That the information, opinions and recommendations in the attached report are based on a visit to the Hemlo West No. 5 and No. 6 claim block from August 10th to 12th, 1983, and Sawyer Consultants Inc. Report of June 23rd, 1983.
4. That I own no interest in the Hemlo West No. 5 and No. 6 claims, nor in the shares or securities of Bluegrass Petroleum Inc. nor do I expect to receive any such interest.

  
John F. Ricker, B.Sc.

Dated at Vancouver, British Columbia, this 29th day of August, 1983.

**SAWYER CONSULTANTS INC.**

CERTIFICATE

I, J.B.P. Sawyer, DO HEREBY CERTIFY:

1. That I am a Consulting Geologist with business office at 1201 - 675 West Hastings Street, Vancouver, B.C., V6B 1N2, and President of Sawyer Consultants Inc.
2. That I am a graduate in Geology of Manchester University (B.Sc. - 1953) and of the University of Western Ontario (M.Sc. - 1957).
3. That I am a Registered Professional Engineer (geological) in the Association of Professional Engineers of the Province of British Columbia, and a Registered Chartered Engineer with the Council of Engineering Professions, London.
4. That I am a Fellow of the Geological Association of Canada, a Member of the Canadian Institute of Mining and Metallurgy, a Fellow of the Geological Society of London, and Fellow of the Institution of Mining and Metallurgy, London.
5. That I have practised my profession as a Geologist for the past twenty-eight years.
6. That the information, opinions and recommendations in the attached report are based on research of published maps and reports on the area, on discussions with other geologists who have worked in the area, and on a review and discussion with John F. Ricker of the field data collected and observations made on site by him. I have not been on the Hemlo West No. 5 and No. 6 claims.
7. That I own no interest in the Hemlo West No. 5 and No. 6 claims, nor in the shares or securities of Bluegrass Petroleum Inc. nor do I expect to receive any such interest.



J.B.P. Sawyer, P.Eng.

Dated at Vancouver, British Columbia, this 29th day of August, 1983.

**SAWYER CONSULTANTS INC.**

SELECTED REFERENCES

- Birkeland, A.O., 1973: Geological and Geophysical Report, Inel and Hiho Mineral Claims, Liard Mining Division; Assessment Report No. 4732, (B.C. Ministry of Energy, Mines and Petroleum Resources).
- Douglas, R.J.W., 1971: Iskut River, British Columbia-Alaska; 1:1,000,000 Geological Atlas, Sheet 104,114, General Coordinator R.J.W. Douglas, G.S.C. Map 1418A.
- Eisbacher, G.H., 1974: Sedimentary History and Tectonic Evolution of Sustut and Sifton Bains, North-Central British Columbia; G.S.C. Paper 73-31.
- Graf, C., 1982: Summary Report on Claims, Mineral Occurrences and Geology in the Snippaker Felsic Volcanic Belt in the Unuk and Iskut Rivers Region of Skeena and Liard Mining Divisions, British Columbia; Active Mineral Explorations, Dec. 1982.
- Hodgeson, C.J.,  
Chapman, R.S.G., and  
MacGeehan, P.J., 1982: Application of Exploration Criteria for gold deposits in the Superior Province of the Canadian Shield to gold exploration in the Cordillera; in Precious Metals in the Northern Cordillera, Association of Exploration Geochemists Special Publication No. 10, pp. 173-206.
- House, G.D., 1983: Report on Hemlo West No. 5 and No. 6 Claims, Johnny Mountain - Snippaker Creek Areas, Liard Mining Division, B.C.; Sawyer Consultants Inc., Consultants Report to Bluegrass Petroleum Inc., June 23rd, 1983.
- Parsons, G., 1966: Geological Report on Bronson Creek Nos. 1-3 Claim Groups, Liard Mining Division; Assessment Report No. 769, B.C. Ministry of Energy, Mines and Petroleum Resources.
- Sevensma, P.H., 1972: Johnny Mountain, a Timmins type felsic volcano?; Western Miner, Vol. 55, No. 6, pp. 28-30, June 1982.

**SAWYER CONSULTANTS INC.**

- Souther, J.G., 1971: Geology and Mineral Deposits of Tulsequah Map Area, British Columbia; G.S.C. Memoir 362, 1971.
- , 1972: Telegraph Creek Map Area, British Columbia; G.S.C. Paper 71-44, 1972.
- Souther, J.G., and Lambert, M.B., 1972: Volcanic Rocks of the Northern Canadian Cordillera; Field Excursion A12, XXIV Session, International Geological Congress, Guidebook, 1972.



APPENDIX A

Copies of Assay Certificates and  
Geochemical Assay Certificates

**SAWYER CONSULTANTS INC.**

## APPENDIX A

### NOTE:

#### File No. 83-1745

Rock samples collected to about the 5500 foot level and A gully and its tributaries could not be located precisely.

Soil samples from the upper A gully area could also not be precisely located (File No. 83-1668: soils S0 to S750 and SJ1 to SJ4). Data from Files No. 83-1276A and No. 83-1276B cannot be used due to lack of information on location but are included here for completeness.

**SAWYER CONSULTANTS INC.**

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS, VANCOUVER B.C.  
 PH: 253-3158 TELEX: 04-53124

DATE RECEIVED AUG 16 1983

DATE REPORTS MAILED *Aug 29/83*

## ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.

ASSAYER *Al Jey* DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM

FILE # 83-1678

PAGE# 1

SAMPLE	CU %	PB %	ZN %	AG OZ/TON	AU OZ/TON
68001	.18	.01	.04	.21	.024
68002	.05	.01	.28	.30	.028
68003	.03	.01	.04	.06	.005
68004	.01	.01	.01	.06	.004
68005	.01	-	-	-	.001
68006	.27	.01	1.15	.45	.018
68007	.01	-	-	-	.001
68008	.02	-	-	-	.001
68009	.01	-	-	-	.001
68010	.01	-	-	-	.001
68011	.01	-	-	-	.001
68012	.01	-	-	-	.001
68013	.01	3.38	.01	1.48	.001
68014	.01	2.14	1.33	1.79	.001
68015	.01	-	-	-	.001
68016	.01	-	-	-	.001
68017	.01	-	-	-	.067
68018	.01	-	-	-	.013
68019	.02	.01	.01	.29	.216

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DATE REPORTS MAILED Aug 22/83

**ASSAY CERTIFICATE**

SAMPLE TYPE : ROCK - CRUSHED AND PRULVERIZED TO -100 MESH.

ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM

FILE # 83-1745

PAGE# 1

SAMPLE	CU	
	%	OZ/TON
HJR-3	.01	.001
HJR-4	.01	.002
HJR-5	.01	.001
HJR-12	.01	.004
HJR-13	.01	.001
HJR-14	.01	.001
HJR-16	.01	.001
HJR-19	.01	.001
HJR-21	.01	.001
HJR-22	.01	.002
HJR-23	.02	.014

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ACME ANALYTICAL LABORATORIES LTD.  
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DATE RECEIVED AUG 8 1983  
DATE REPORTS MAILED Aug 4/83

### ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.

ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM PROJECT # SNIPPAKER FILE # 83-1520B PAGE# 1

SAMPLE	CU %	PB %	ZN %	AG OZ/TON	AU OZ/TON
83001	.21	-	-	-	.011
83002	2.62	-	-	-	.078
83003	.03	-	-	-	.002
83004	.63	.01	.02	.61	.042
83005	-	-	-	-	.001
83006	-	-	-	-	.001
83007	-	-	-	-	.001
83008	-	-	-	-	.001
83009	-	-	-	-	.001
83010	.62	-	-	-	.030
83011	-	-	-	-	.059

### GEOCHEMICAL ASSAY CERTIFICATE

A .500 GM 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. ELEMENTS ANALYSED BY AA : CU.  
SAMPLE TYPE : SOIL - DRIED AT 60 DEG C., PULVERIZED.  
AU\* - 10 GM, IGNITED, NOJ, AQUA REGIA LEACH MIXT EXTRACTION, AA ANALYSIS.

ASSAYER *D. J. Toy* DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GROSS PETROLEUM

FILE # B3-1520A

PAGE# 1

SAMPLE	CU PPM	AU* PPB
2N 1+50E	330	110
2N 1+75E	450	220
2N 2E	180	60
2N 2+50E	400	270
2N 3E	1670	3300
2N 3+50E	132	40
2N 4E	132	40
2N 4+50E	154	40
1N 0+25E	29	15
1N 0+75E	60	15
1N 1E	144	25
1N 1+25E	190	60
1N 1+50E	154	40
1N 1+75E	355	115
1N 1E*	385	185
1N 2+25E	1320	1020
1N 2+50E	1320	350
1N 2+75E	750	230
1N 3E	345	105
1N 3+25E	2125	710
1N 3+50E	410	190
1N 3+75E	575	305
1N 4E	225	140
1N 4+25E	400	205
1N 4+50E	540	440
1N 4+75E	2780	1950
0N 0E	220	125
0N 0+25E	210	45
0N 0+50E	235	115
0N 0+75E	385	225
0N 1E	365	160
0N 1+25E	250	90
0N 1+50E	260	105

\* plotted as 1N 2E

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DATE RECEIVED AUG 15 1983

DATE REPORTS MAILED *Aug 18/83*

## GEOCHEMICAL ASSAY CERTIFICATE

A .500 GR SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO<sub>3</sub> TO H<sub>2</sub>O AT 90 DEG.C. FOR 1 HOUR.  
 THE SAMPLE IS DILUTED TO 10 MLS WITH WATER. ELEMENTS ANALYSED BY AA : CU.  
 SAMPLE TYPE : SOIL - DRIED AT 60 DEG C., -80 MESH.  
 AU\* - 10 GR, IGNITED, HOT AQUA REGIA LEACH HIGH EXTRACTION, AA ANALYSIS.

ASSAYER *Dean Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM

FILE # 83-1658

PAGE# 1

SAMPLE	CU PPM	AU* PPB
HF 1	642	240
HF 2	624	150
HF 3	1240	355
HF 4	170	560
HF 5	220	80
HF 6	520	135
HF 7	116	80
HF 8	52	10
HF 9	84	20
HF 10	118	25
HF 11	170	210
HF 12	158	55
HF 13	106	565
HF 14	44	20
HF 15	445	120
HF 16	298	2200
HF 17	720	760
HF 18	140	170
HF 19	145	16200

### GEOCHEMICAL ASSAY CERTIFICATE

A .500 GM 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 MLG WITH WATER. ELEMENTS ANALYSED BY AA : AG.  
SAMPLE TYPE : SOIL - DRIED AT 60 DEG C., -80 MESH.  
AU\* - 10 GM, IGNITED, HOT AQUA REGIA LEACH MIBK EXTRACTION, AA ANALYSIS.

RECEIVED JUL 27 1983

ASSAYER *D. J. Toy* DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM

FILE # 83-1276A

PAGE# 1

SAMPLE	AG PPM	AU* PPB
1	1.3	70
2	1.0	10
3	1.1	35
4	1.0	20
5	1.5	50
6	1.0	30
7	1.0	35
8	1.7	15
9	1.2	105
10	2.9	30
H-1	.5	5
H-2	.4	5
H-3	.7	5
H-4	.3	5
H-5	.8	5
1N 0E	2.1	125
1N 0+50E	1.8	170
1N 1E	2.6	85
1N 1+50E	5.3	5
ON 0E	2.3	85
ON 1E	1.2	70
ON 1+50E	1.3	90
ON 2E	1.6	140
ON 2+50E	2.1	295
ON 3E	2.6	465
ON 3+50E	2.0	180
ON 5+50E (ROCK)	1.6	75



**ASSAY CERTIFICATE**

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.

ASSAYER *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM INC FILE # B3-1276B PAGE# 1

SAMPLE	CU %	AG OZ/TON	AU OZ/TON
59710C	-	.01	.001
59711C	-	.10	.001
59712C	-	.01	.001
59713C	-	.01	.001
59714C	-	.01	.001
59715C	-	.01	.001
59716C	-	.02	.001
59717C	.81	1.76	.003
59730C	-	.06	.001
59731C	-	.04	.001
59732C	-	.04	.001
59733C	-	.06	.001
59734C	-	.01	.001
59735C	-	.01	.001
59736C	-	.01	.001
59737C	-	.04	.001
59738C	-	.04	.001
59739C	-	.06	.001
59740C	-	.01	.001
59741C	-	.02	.001
59742C	-	.04	.001

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS, VANCOUVER B.C. PH:253-3158 TELEX:04-53124

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 DILLETED TO 10 MLS WITH WATER.  
 THIS LEACH IS PARTIAL FOR: Ca, P, Mg, Al, Ti, La, Na, K, Rb, Ba, Sr, Cr AND B. Au DETECTION 3 ppm.  
 SAMPLE TYPE - ROCK CHIPS

DATE RECEIVED JULY 20 1983 DATE REPORTS MAILED July 25/83 ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM FILE# 83-1276E

PAGE # 1

SAMPLE #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Tl	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	M
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm
59712C	3	33	15	77	.1	8	7	244	6.85	4	3	ND	2	20	1	2	2	42	.09	.10	2	21	1.21	44	.01	4	2.38	.02	.09	2
59737C	3	59	155	504	1.0	21	14	943	4.63	87	4	ND	2	38	4	2	2	16	1.54	.11	2	12	.94	48	.05	3	.96	.01	.17	2

Rev. Aug. 23

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DATE RECEIVED AUG 16 1983

DATE REPORTS MAILED Aug 19/83

### GEOCHEMICAL ASSAY CERTIFICATE

A .500 GM 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. ELEMENTS ANALYSED BY AA : CU.  
SAMPLE TYPE : SOIL - DRIED AT 60 DEG C., -80 MESH.  
AU\* - 10 GM, IGNITED, HOT AQUA REGIA LEACH MIBK EXTRACTION, AA ANALYSIS.

ASSAYER Dean Toy DEAN TOYE, CERTIFIED B.C. ASSAYER

BLUE GRASS PETROLEUM

FILE # B3-1668

PAGE# 1

SAMPLE	CU PPM	AU* PPB
S 0	47	40
S 50	52	10
S 100	23	5
S 150	50	20
S 200 P	16	5
S 250	35	30
S 300	32	25
S 350	33	10
S 400	29	20
S 450	34	13
S 500	39	20
S 550	29	10
S 600	41	15
S 650	77	20
S 700	28	5
S 750	45	10
SJ 1	94	40
SJ 2	180	25
SJ 3	73	30
SJ 4	64	15
SJ 5	94	10
4N 0E	92	20
4N 0+50E	56	10
4N 1E	44	25
4N 1+50E	40	20
4N 2E	58	25
4N 2+50E	110	15
4N 3E	118	35
4N 3+50E	122	40
4N 4E	86	20
3N 0E	48	60
3N 0+50E	31	100
3N 1E	86	40
3N 1+50E	44	30
3N 2E	54	15
3N 2+50E	56	10
3N 3E	52	15

SAMPLE	CU PPM	AU* PPB
3N 3+50E	140	45
3N 4E	245	140
3N 4+50E	350	75
2N 0E	70	15
2N 0+25E	225	20
2N 0+50E	80	10
2N 0+75E	48	20
2N 1E	112	10
0+60S 1+50E	630	650
0+60S 2E	1820	180
0+60S 2+50E	710	210
0+60S 3E	180	75
0+60S 3+50E	114	100
0+60S 4E	390	75
0+60S 4+50E	54	15
0+60S 5E	62	5
0+60S 5+50E	74	10
0+60S 6E	118	10
0+60S 6+50E	270	25
1+10S 1+50E	480	380
1+10S 2E	64	65
1+10S 2+50E	190	85
1+10S 3E	250	90
1+10S 3+50E	315	80
1+10S 4E	130	25
1+10S 4+50E	170	15

**APPENDIX B**

**Statement of Expenditure and  
List of Personnel for Assessment Purposes**

**SAWYER CONSULTANTS INC.**



# BLUEGRASS PETROLEUM INC.

708 - 700 West Pender Street, Vancouver, B.C., Canada, V6C 1G8 - (604) 669-9307

## STATEMENT OF EXPENDITURE

The expenditures itemized below were incurred on behalf of Dale E. Wallster by Bernard Fitch in connection with a geochemical and geological exploration program carried out on the Hemlo West No. 5 and No. 6 claims during the period 4th to 13th August, 1983.

### Field Work (August 4th-13th, 1983 inclusive)

Mobilization, demobilization, geological mapping, geochemical sampling

1 geologist, 3 days @ \$300.00/day	\$ 900.00
1 field technician, 8½ days @ \$130.00/day	1,105.00
1 field assistant, 10 days @ \$100.00/day	1,000.00

### Field Crew Expenses

Travel to and from Snippaker Creek airstrip	1,733.80
Camp supplies and equipment	756.00

### Analyses, Assays

Assays for Cu, Pb, Zn, Ag, Au	1,306.45
-------------------------------	----------

### Helicopter Charter

Travel to property and return from Snippaker airstrip and local, 10 hours @ \$425.00/hour plus fuel	4,775.00
---	----------

### Office Compilation (August 14th-21st, 1983 inclusive)

1 geologist, 8 days @ \$300.00/day	2,400.00
Secretarial service	263.50
Report preparation, drafting, map printing, photocopying and disbursement costs	498.64

\$14,738.39

Bernard Fitch  
Agent for Dale E. Wallster

LIST OF PERSONNELSawyer Consultants Inc.

John F. Ricker, B.Sc.  
Consulting Geologist

Geological mapping and geochemical sampling (August 10th-13th, 1983 inclusive) 3 days @ \$300.00/day	\$ 900.00
Report compilation, preparation (August 14th-21st, 1983 inclusive) 8 days @ \$300.00/day	2,400.00

Bluegrass Petroleum Inc.

John McDonald  
Field Technician

Geochemical sampling (August 4th-12th, 1983 inclusive) 8½ days at \$130.00/day	1,105.00
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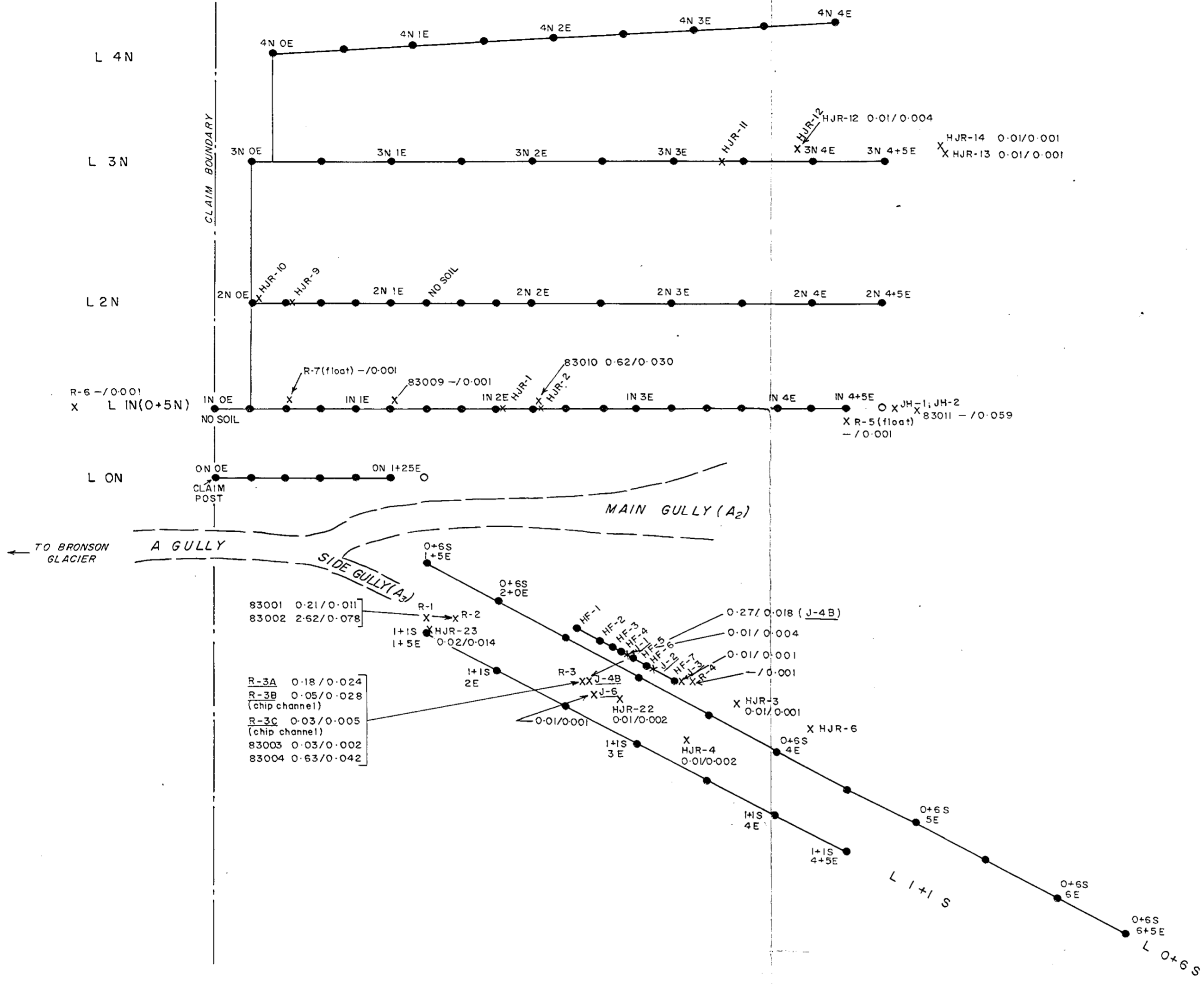
Howard Fitch  
Field Assistant

Geochemical sampling (August 4th-13th, 1983 inclusive) 10 days @ \$100.00/day	<u>1,000.00</u>
---	-----------------

\$5,405.00

  
\_\_\_\_\_  
Bernard Fitch  
Agent for Dale E. Wallster

**SAWYER CONSULTANTS INC.**



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,307**

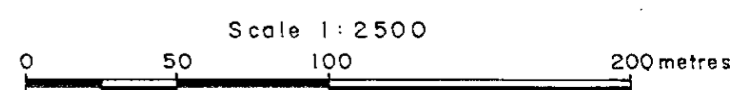
BASED ON DATA SUPPLIED BY BLUEGRASS PETROLEUM INC.

**LEGEND**

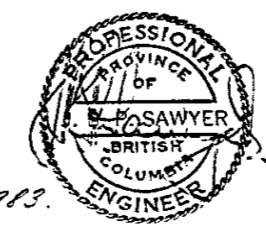
- SOIL SAMPLE : IDENTIFIED BY GRID REFERENCE (IN 1+5E) OR BY NUMBER (HF-4).
- SOIL SAMPLE, NO FIELD DATA
- X ROCK SAMPLE (R-2; HJR-9; J-3; JH-2). UNLESS INDICATED ALL SAMPLES ARE GRAB SAMPLES. COPPER(%) / GOLD(OZ/TON) IN ROCK SAMPLE ASSAYS.
- CLAIM BOUNDARY
- - - - APPROXIMATE GULLY BORDER

NOTE : GRID AND SAMPLE LOCATIONS APPROXIMATE.  
NO SLOPE CORRECTION.  
UNDERLINED SAMPLES TAKEN BY SAWYER CONSULTANTS INC.

**BLUEGRASS PETROLEUM INC.**  
HEMLO WEST Nos. 5 and 6 CLAIMS  
JOHNNY MOUNTAIN - SNIPPAKER CREEK AREA  
LIARD MINING DIVISION, NORTHERN B.C.  
**SAMPLING AND ASSAY PLAN  
AT "A" GULLY**

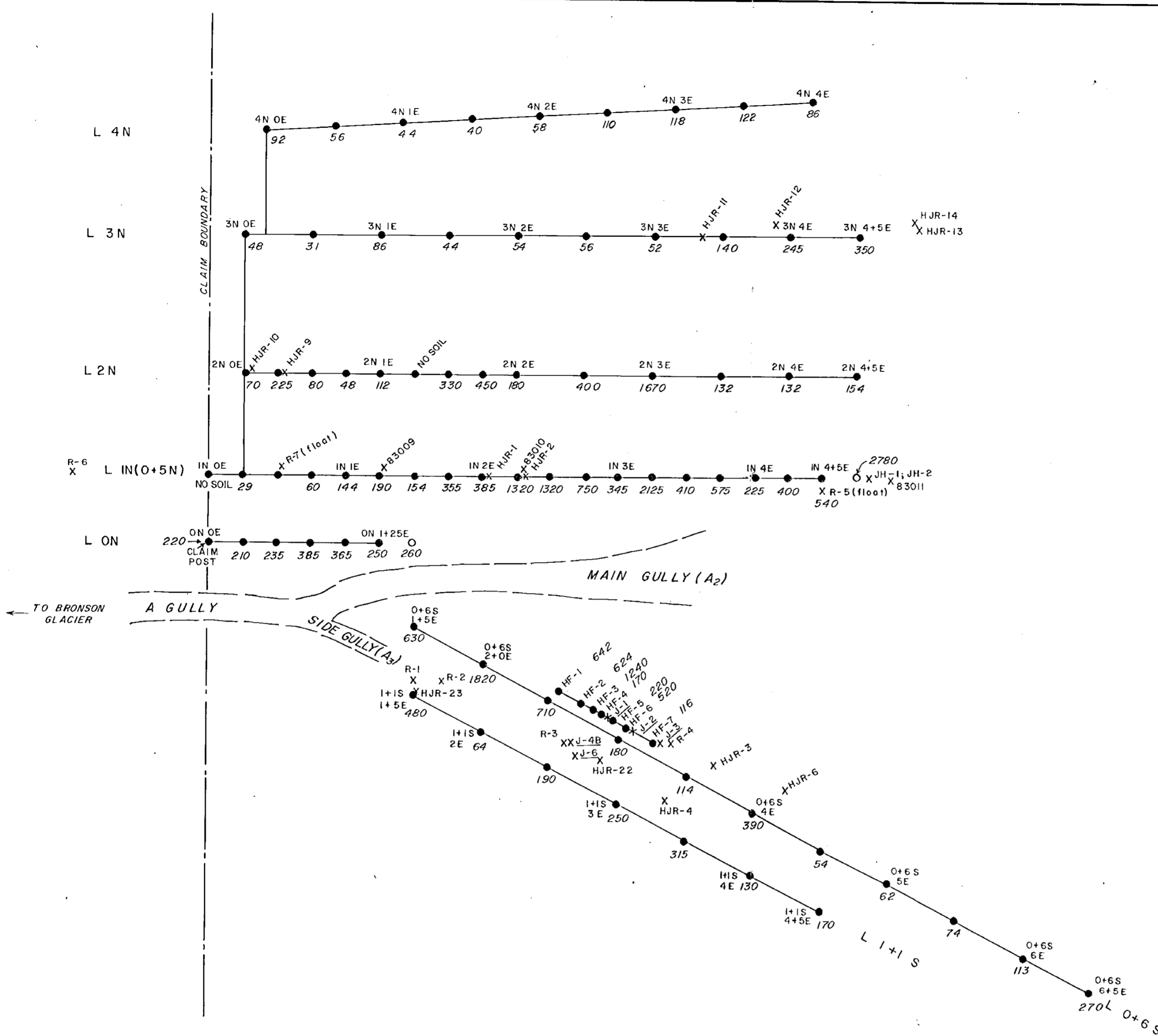
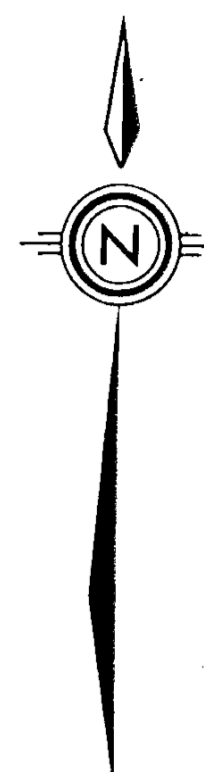


TO ACCOMPANY REPORT  
BY J.B.P. SAWYER, P. ENG.,  
DATED August 29th, 1983.



SAWYER CONSULTANTS INC. Date: August, 1983.  
Drawn by: J.S. N.T.S. 104 B/10W Map: 1





**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,307**

BASED ON DATA SUPPLIED BY BLUEGRASS PETROLEUM INC.

**LEGEND**

- SOIL SAMPLE: IDENTIFIED BY GRID REFERENCE (IN 1+5E) OR BY NUMBER (HF-4).
- SOIL SAMPLE, NO FIELD DATA
- COPPER PPM IN SOILS
- X ROCK SAMPLE (R-2; HJR-9; J-3; JH-2)

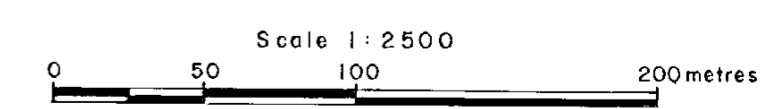
- CLAIM BOUNDARY
- APPROXIMATE GULLY BORDER

**NOTE:** GRID AND SAMPLE LOCATIONS APPROXIMATE.  
NO SLOPE CORRECTION.  
UNDERLINED SAMPLES TAKEN BY SAWYER CONSULTANTS INC.

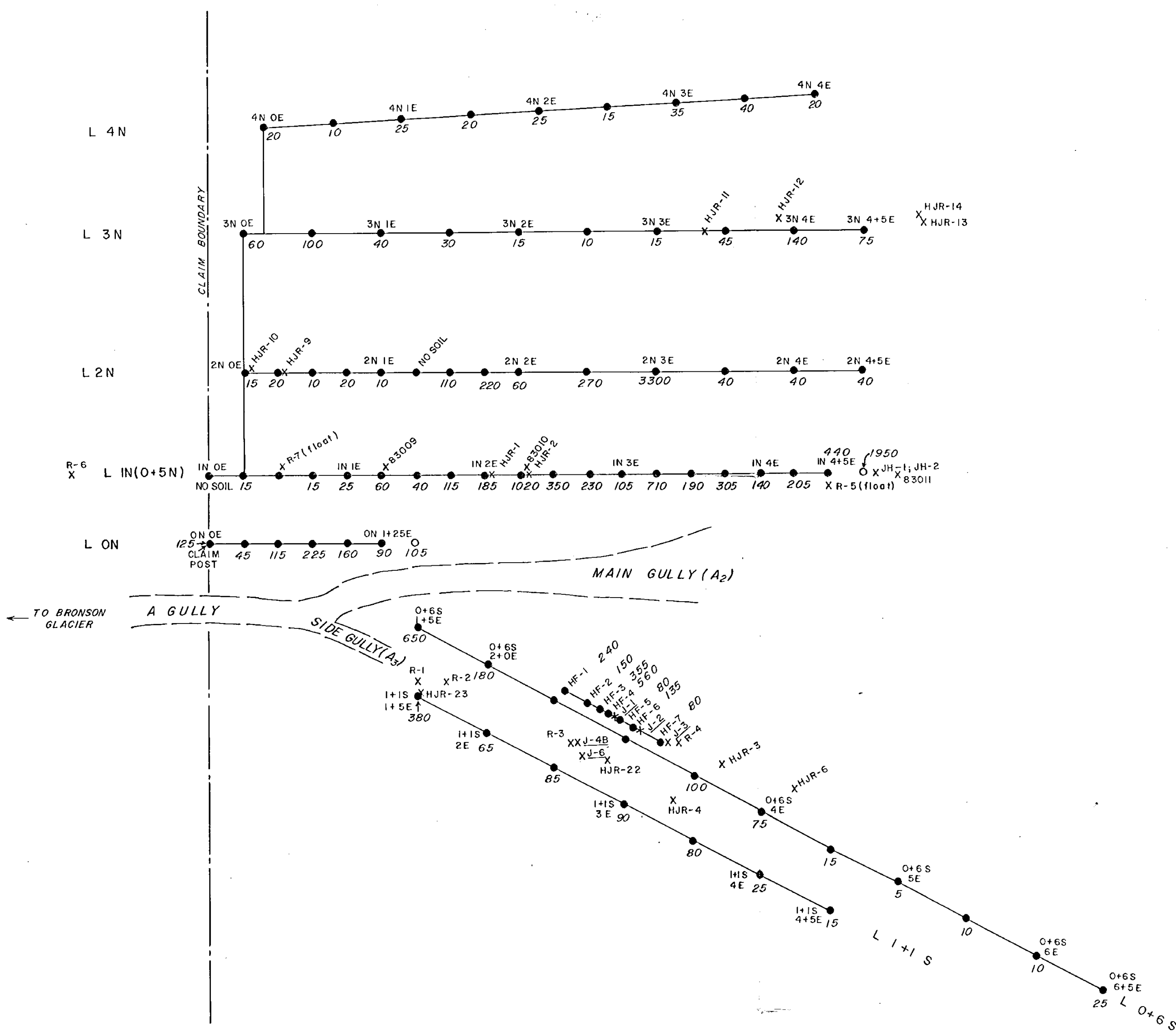
TO ACCOMPANY REPORT  
BY J.B.P. SAWYER, P. ENG.,  
DATED August 29th, 1983.



**BLUEGRASS PETROLEUM INC.**  
**HEMLO WEST Nos. 5 and 6 CLAIMS**  
JOHNNY MOUNTAIN - SNIPPAKER CREEK AREA  
LIARD MINING DIVISION, NORTHERN B.C.  
**GEOCHEMICAL PLAN - COPPER**  
**AT "A" GULLY**



SAWYER CONSULTANTS INC. Date: August, 1983.  
Drawn by: J.S. N.T.S. 104 B/10W Map: 2



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,307**

BASED ON DATA SUPPLIED BY BLUEGRASS PETROLEUM INC.

**LEGEND**

- SOIL SAMPLE: IDENTIFIED BY GRID REFERENCE (IN I+5E) OR BY NUMBER (HF-4).
- SOIL SAMPLE, NO FIELD DATA
- 270 GOLD PPB IN SOILS.
- X ROCK SAMPLE (R-2; HJR-9; J-3; JH-2)
- CLAIM BOUNDARY
- - - APPROXIMATE GULLY BORDER

**NOTE:** GRID AND SAMPLE LOCATIONS APPROXIMATE.  
NO SLOPE CORRECTION.  
UNDERLINED SAMPLES TAKEN BY SAWYER CONSULTANTS INC.

**BLUEGRASS PETROLEUM INC.**  
HEMLO WEST Nos. 5 and 6 CLAIMS  
JOHNNY MOUNTAIN - SNIPPAKER CREEK AREA  
LIARD MINING DIVISION, NORTHERN B.C.

**GEOCHEMICAL PLAN - GOLD  
AT "A" GULLY**

Scale 1:2500  
0 50 100 200 metres

SAWYER CONSULTANTS INC. Date: August, 1983.  
Drawn by: J.S. N.T.S. 104 B/10W Map: 3

TO ACCOMPANY REPORT  
BY J.B.P. SAWYER, P. ENG.,  
DATED August 28th, 1983.

