

674585

SUMMARY REPORT
ON THE
MEN #1-3 CLAIMS

Located in the Sproat Lake area of Vancouver Island
Alberni Mining Division
NTS 92F/6
49° 18' North Latitude
125° 14' West Longitude

-prepared for-
GAZELLE RESOURCES LIMITED

-prepared by-
Henry J. Awmack, P.Eng.

September, 1989

SUMMARY REPORT ON THE MEN #1-3 CLAIMS

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1.0 INTRODUCTION

The Men #1-3 claims were staked in 1987 and 1988 to cover several narrow gold-bearing quartz-sulphide veins discovered by prospecting above the west end of Sproat Lake, approximately thirty kilometers west of Port Alberni on western Vancouver Island (Figure 1). The Men property adjoins to the east of the Morning-Apex group of crown-granted mineral claims which contains several steeply-dipping auriferous quartz-sulphide veins. These have been explored extensively since 1899. Renewed exploration in the Kennedy River gold camp approximately 15 kilometers southwest of the Men property, and the recent discovery of several gold showings in the Sproat Lake - Taylor River area have revived interest in the precious metal potential of the district.

At the request of the directors of Gazelle Resources Limited, the writer has reviewed all available data and prepared a compilation report on which to base further exploration. The writer examined the property for Snowmount Resources Ltd. in 1988 and the majority of this report has been abridged from a previous report prepared by the author for Snowmount.

2.0 LIST OF CLAIMS

Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the following claims (Figure 2) are owned by Area Explorations Ltd. Separate documents indicate that the claims are under option to Gazelle Resources Limited.



GAZELLE RESOURCES LIMITED			
Men Project			
PROPERTY LOCATION MAP			
EQUITY ENGINEERING LTD.			
DRAWN J.J.E.	PROJECT SMR88-01	DATE Sept., 1989	FIG. I.

Claim Name	Record Number	No. of Units	Record Date	Expiry Year
Men #1	3132	9 (Mod. Grid)	Feb. 25, 1987	1990
Men #2	3532	18 (Mod. Grid)	Mar. 14, 1988	1990
Men #3	3533	<u>18 (Mod. Grid)</u>	Mar. 14, 1988	1990
		45		

The Men #1 claim overlaps the Morning-Apex group of crown-granted mineral claims to the west. The Men #2 and Men #3 claims overlap the pre-existing Sweet, Pea and DA claims. The net area corresponding to the Men property is approximately 39 units, covering 975 hectares (2410 acres).

The locations of the legal corner posts for the Men #1, Sweet and Pea claims have been verified by the author.

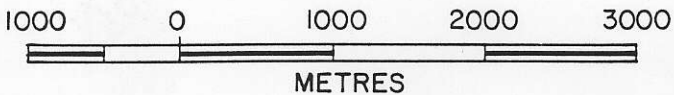
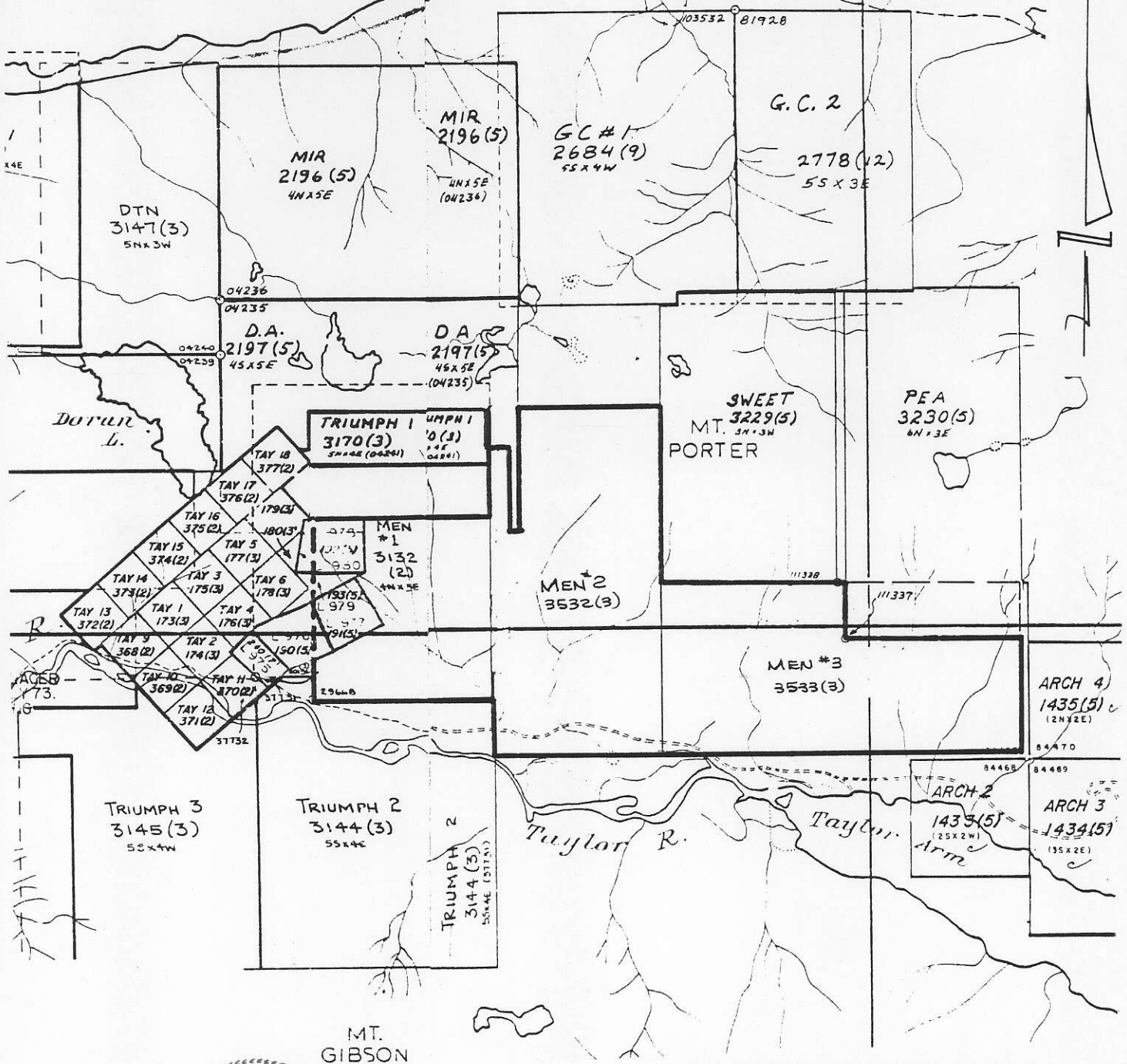
3.0 LOCATION, ACCESS AND GEOGRAPHY

The Men property is located on the northwestern tip of Sproat Lake approximately thirty kilometers west of Port Alberni on west-central Vancouver Island (Figure 1). It lies within the Alberni Mining Division, centered at 49° 18' north latitude and 125° 14' west longitude.

Highway 4 runs through the southern part of the Men property along the shore of Sproat Lake and in the Taylor River valley. A network of old logging roads climbs northward from Highway 4 providing good access to the eastern and western portions of the claim group. Helicopter service based in Port Alberni provides access to the more inaccessible parts of the property.

The Men claims cover the southern flank of Mount Porter along the northern shore of Sproat Lake. Topography is moderate to rugged with elevations ranging from 28 meters above sea level on

FLOODING RESERVE
 500' CONTOUR MIN. & PLACEK
 76 2817, 6. DEC. 55
 NO STAKING



GAZELLE RESOURCES LIMITED			
 Men Property 			
ALBERNI MINING DIVISION N.T.S. 92F/3W, F/6			
EQUITY ENGINEERING LTD.			
DRAWN J.J.E.	PROJECT SMR88-01	DATE Sept., 1989	FIGURE 2

Sproat Lake to over 1200 meters near the summit of Mount Porter. Outcrop exposure is excellent throughout.

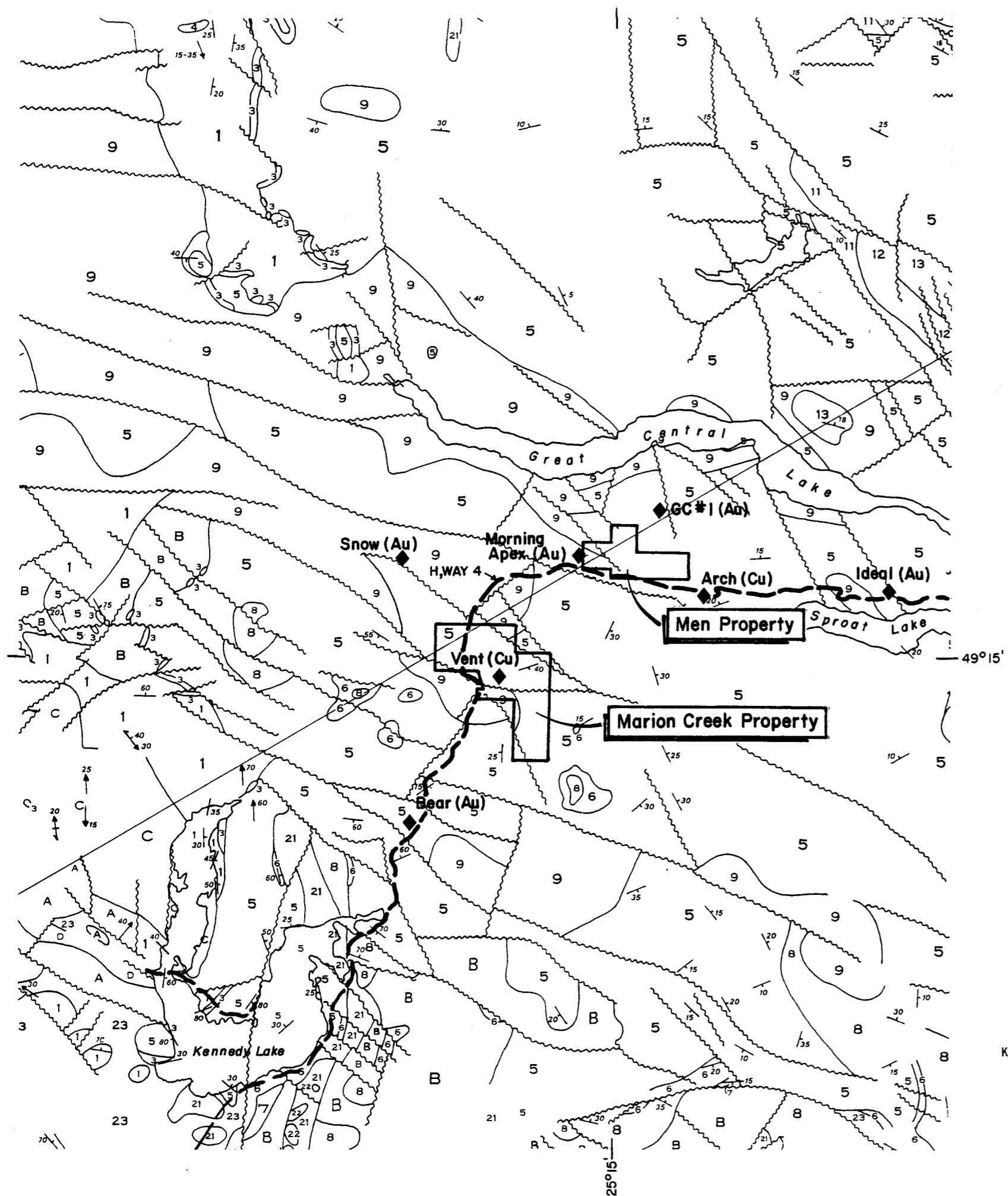
Mature forest covers most of the property with hemlock, red cedar, fir and a moderate undergrowth of salal, huckleberry and salmonberry. Lower elevations were logged more than twenty years ago and are covered by dense second-growth timber.

The Sproat Lake area receives approximately 500 centimeters of precipitation annually in a moderate climate, with cool temperatures year-round. Heavy snowfalls occur at higher elevations.

4.0 PREVIOUS WORK

The crown-granted mineral claims immediately west of the Men property (Figure 4) were first worked in 1899 as the Jingo Bird Group. They were explored sporadically for gold over the next several years as the Columbia and Morning-Apex Groups. By 1927, two quartz-sulphide veins had been developed by one "short" adit, an adit of 105 meters and several open-cuts (BCDM, 1927). No subsequent work on the Morning-Apex claims is reported until the 1960's, when several hundred meters of diamond drilling were done on the veins by Silurian Chieftain Mining Company Limited (BCDM, 1960-1961). Results of this drilling and of further underground development on the Morning vein in the 1970's by Teck Corp. are not available (Cukor, 1979 and Von Rosen, 1979).

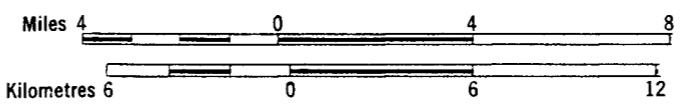
Dalmatian Resources Ltd. has done considerable work since 1979 to extend the Morning-Apex mineralization westward onto their Tay group. Geological mapping and several hundred meters of diamond drilling in 1980 and 1983 uncovered several showings and drill intersections up to 24.1 grams gold per tonne (Cukor, 1979-83).



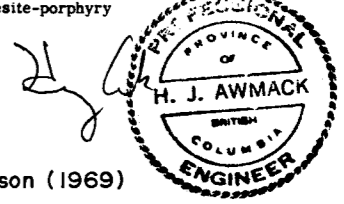
LEGEND

- 'WESTCOAST CRYSTALLINE COMPLEX' (A-D)
'BASIC ROCKS'
- D** Gabbro, peridotite
- 'TOFINO INLET PLUTON'
- C** Hornblende-biotite quartz diorite, granodiorite
- 'WESTCOAST DIORITES'
- B** Hybrid hornblende diorite, quartz diorite, agmatite; includes masses of hornfelsic volcanic rocks
- 'WESTCOAST GNEISS COMPLEX'
- A** Hornblende-plagioclase gneiss, amphibolite, hornfels
- Geological boundary (approximate)
- Bedding (inclined, vertical, overturned)
- Schistosity, foliation (inclined)
- Schistosity, foliation and minor fold axes (inclined, vertical, arrow indicates plunge)
- Lineation (axes of minor folds)
- Fault (approximate); lineament
- Mineral Occurrence

- QUATERNARY**
PLEISTOCENE AND RECENT
- 23** Glacial and alluvial deposits
- TERTIARY**
- 22** Rhyolitic, to dacitic tuff, breccia, ignimbrite
- 21** Hornblende quartz diorite, leucoquartz monzonite, porphyritic dacite, breccia
- UPPER CRETACEOUS**
- 13** EXTENSION-PROTECTION FORMATION: sandstone, conglomerate, shale, coal
- 12** HASLAM FORMATION: shale, siltstone, fine sandstone
- 11** COMOX FORMATION: sandstone, conglomerate, shale, coal: 11a is BENSON MEMBER: mainly coarse conglomerate
- JURASSIC**
MIDDLE TO UPPER JURASSIC
- 9** ISLAND INTRUSIONS: biotite-hornblende granodiorite, quartz diorite
- TRIASSIC AND JURASSIC**
LOWER JURASSIC(?)
- VANCOUVER GROUP (5-8)
BONANZA SUBGROUP (7, 8)
- 8** VOLCANIC DIVISION: andesitic to latitic breccia, tuff and lava; minor greywacke, argillite and siltstone
- UPPER TRIASSIC**
- 6** QUATSINO FORMATION: limestone, mainly massive to thick bedded, minor thin bedded limestone
- UPPER TRIASSIC AND OLDER**
- 5** KARMUTSEN FORMATION: pillow-basalt and pillow-breccia, massive basalt flows; minor tuff volcanic breccia. Jasperoid tuff, breccia and conglomerate at base
- TRIASSIC OR PERMIAN**
- 4** Gabbro, peridotite, diabase
- PALEOZOIC**
PENNSYLVANIAN, PERMIAN AND OLDER
LOWER PERMIAN
- SICKER GROUP (1-3)
- 3** BUTTLE LAKE FORMATION: limestone, chert
- PENNSYLVANIAN AND OLDER**
- 1** Volcanic breccia, tuff, argillite; gneiss, greenschist; dykes and sills of andesite-porphyry



Geology after Muller & Carson (1969)



GAZELLE RESOURCES LIMITED			
REGIONAL GEOLOGY			
ALBERNI MINING DIVISION N.T.S. 92F/3W, F/6			
EQUITY ENGINEERING LTD.			
DRAWN J.J.E.	PROJECT SMR88-01	DATE Sept., 1989	FIGURE 3

Several copper showings in the Sproat Lake - Kennedy River area were explored in the 1960's and 1970's by geological mapping, geochemistry, geophysics and diamond drilling. One of these, the Arch showing, lies 200 meters south of the eastern boundary of the Men #3 claim. Several X-ray diamond drill holes were apparently drilled before 1972, but no reliable information is available for them. Soil geochemistry and geological mapping in 1972 (Singhai, 1972) were followed by 200 meters of diamond drilling (Sookochoff, 1974). The best drill intersection reported from this program was 8.4 meters averaging 0.52% Cu (Verley, 1983). The property was remapped and sampled by Lear Oil and Gas Corporation in 1983 (Verley, 1983), before lapsing once more.

Since the early 1980's, interest in the Sproat Lake area has been renewed by gold discoveries on the Ideal, G.C. #1 and Snow properties, by the extension of the Morning-Apex mineralization westward onto the Tay property and by the re-evaluation of several former producers and gold prospects clustered around the Bear property in the Kennedy River camp (Figure 3).

Limited geological mapping and prospecting were carried out over the Men #1 claim in early 1988, leading to the discovery of three gold-bearing quartz-pyrite veins (Sayer, 1988). Later that year, some hand trenching was completed on the Men property to fulfil assessment work requirements, but no samples were submitted for assay (Paterson, pers. com.). These trench locations have not been examined by the author, but apparently did not test any of the known mineral occurrences.

5.0 REGIONAL GEOLOGY

The Sproat Lake district lies within the Insular Tectonic Belt of the Canadian Cordillera. Thick northwesterly trending sequences

of Upper Triassic Karmutsen Formation oceanic basalts have been intruded by dioritic batholiths of the Lower Jurassic Island Intrusions, with attendant low-grade regional metamorphism (Figure 3).

The Karmutsen Formation consists of up to 6,000 meters of basaltic pillow lavas, pillow breccias, lava flows and basaltic pyroclastics with some intervolcanic sediments (Unit 5). Locally, the Karmutsen Formation is overlain by erosional remnants of Upper Triassic Quatsino Formation crystalline limestone (Unit 6) and Lower Jurassic Bonanza Group volcanic flows and pyroclastics (Unit 8).

Lower Jurassic Island Intrusion batholiths (Unit 9) are generally moderately-grained quartz diorites to granodiorites and may be cogenetic with the Bonanza volcanics (Muller, 1977). In the Sproat Lake - Kennedy River area, the Island Intrusions exhibit both intrusive and fault contacts with the older Karmutsen Formation basalts (Muller and Carson, 1968). One of these batholiths extends along the southern shore of Great Central Lake a few kilometers north of the Men property.

The Karmutsen basalts are relatively flat-lying, occupying large open folds which trend northwesterly. All rock units are disrupted and offset by numerous northwesterly and northeasterly faults of unmeasured displacement.

The Sproat Lake - Kennedy River area hosts a number of important gold occurrences (Figure 3). All are quartz-sulphide veins hosted by Karmutsen volcanics near intrusive contacts with the Island Intrusions. This suggests a genetical relationship between gold mineralization and intrusive emplacement. The Apex-Morning property, which adjoins the Men property to the west, has several parallel quartz veins which trend northeasterly and dip

steeply to the northwest. These structures may be conjugate shears related to the northwesterly trending Doran Lake Fault (Figure 4). Gold occurs with heavy pyrite and pyrrhotite, and with lesser galena, sphalerite and chalcopyrite mineralization. The Morning Vein varies from 0.3 to 1.8 meters in width with a reported average grade of 10 grams gold per tonne (BCDM, 1932). It has been explored underground along seventy-five meters of strike length. A second vein occurs nearby:

"About 200 feet west of the [Morning] tunnel another vein similar in every way has been opened up by an open-cut and short tunnel. Good gold values are reported in the heavy sulphides in this vein" (BCDM, 1932).

The Apex Vein, located approximately 800 meters north of the Morning Vein and parallel to it, has reported grades averaging 5.0 grams gold per tonne across 1.95 meters in surface trenches, and 3.9 grams gold per tonne across a true width of 2.4 meters in drill core (Von Rosen, 1979).

A quartz stockwork hosted by carbonate-altered Karmutsen volcanics has recently been discovered on the GC #1 claim approximately 1300 meters north of the Men #2 claim. Massive pyrite containing lesser chalcopyrite within the quartz stockwork assays up to 17.1 grams gold per tonne with 0.34% Cu and 0.23% As (Bilquist, 1987).

The Arch copper showings, located 200 meters south of the eastern boundary of the Men #3 claim, occur in two forms within the Karmutsen Formation volcanics. Chalcopyrite and bornite occur with quartz and calcite in the interstices between pillows in the areally restricted Zone A. Verley (1983) reports a grab sample grading 9.6% Cu with no significant gold or silver. Fractures and quartz stringers within a "chert" bed, which may in fact be intensely silicified argillite, contain pyrite and chalcopyrite in Zones B and C. Again, no significant gold or silver is reported

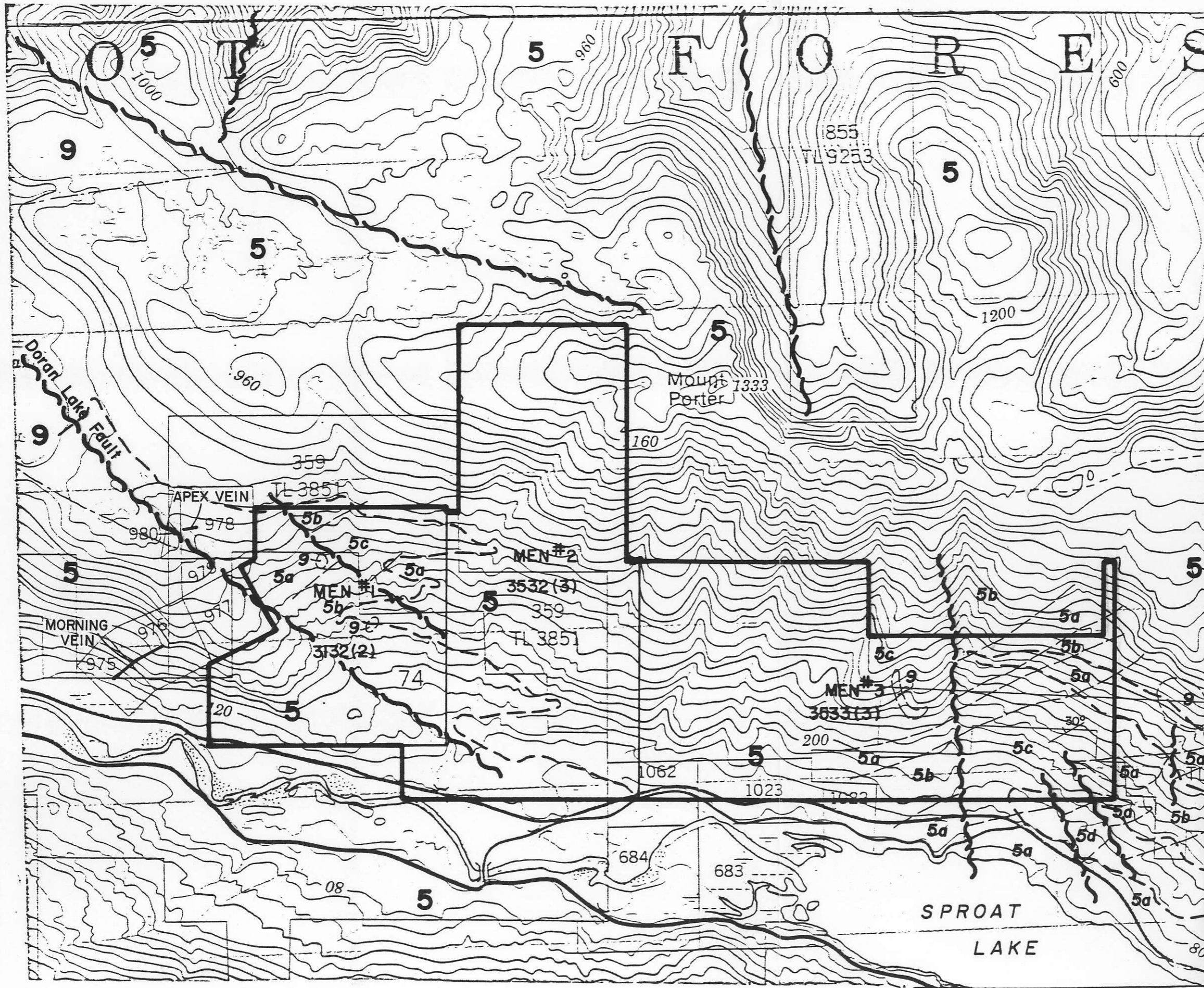
with copper mineralization which assays up to 1.34% Cu across 1.1 meters (Verley, 1983).

6.0 PROPERTY GEOLOGY AND GEOCHEMISTRY

6.1 Geology

Geological mapping over portions of the Men property (Figure 4) has been conducted by Sayer (1988) in the west and Verley (1983) to the southeast. Reconnaissance mapping by Caulfield and Awmack (1989) confirms Verley's work on the northern portion of the Men #3 claim. Regional mapping has been conducted at a scale of 1:250,000 by Muller and Carson (1969) and Muller (1977).

The Men property is almost entirely underlain by Karmutsen Formation volcanics (Unit 5). Verley (1983) subdivided the Karmutsen into four lithologies on the eastern part of the Men claims. Dark green, aphanitic, massive basaltic flows (Unit 5a) average one meter in thickness and form sequences roughly 150 meters thick, capped by thin lenses of intervolcanic limestone and siltstone which strike northeasterly and dip 14 - 41° to the northwest. Green, amygdaloidal and porphyritic pillow basalts (Unit 5b) form sequences in excess of 200 meters in thickness which pinch out laterally into massive flows. A thick unit of basaltic matrix-supported agglomerate (Unit 5c) is sandwiched between two pillow basalt/massive volcanic packages on the eastern part of the Men #3 claim. A chert bed (Unit 5d) from one to twelve meters in thickness, mineralized with pyrite and chalcopyrite along fractures and in quartz stringers, hosts the B and C zones of the Arch copper showing 200 meters south of the Men #3 claim. This "chert" may be an intensely silicified intervolcanic argillite bed (Verley, 1983). Units corresponding closely to Verley's massive flows, pillow basalts and basaltic pyroclastics have been described by Sayer



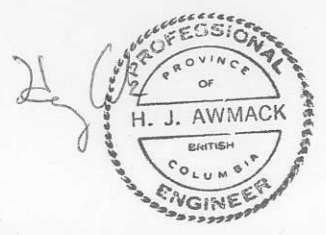
LEGEND

JURASSIC
9 Island Intrusions : granodiorite, quartz diorite

UPPER TRIASSIC
5 Karmutsen Formation (undifferentiated)
5a Massive Basalt Flows
5b Pillow Basalt
5c Basalt Pyroclastics
5d Chert

FAULT
 CONTACT (Inferred, Defined)
 VEIN
 BEDDING

Geology after Verley (1983), Sayer (1988) and Muller & Carson (1969)



GAZELLE RESOURCES LIMITED			
MEN Property			
GEOLOGY			
ALBERNI MINING DIVISION N.T.S. 92F/3W, F/6			
EQUITY ENGINEERING LTD.			
DWN. BY J.J.E.	PROJECT SMR88-01	DATE Sept., 1989	FIGURE 4

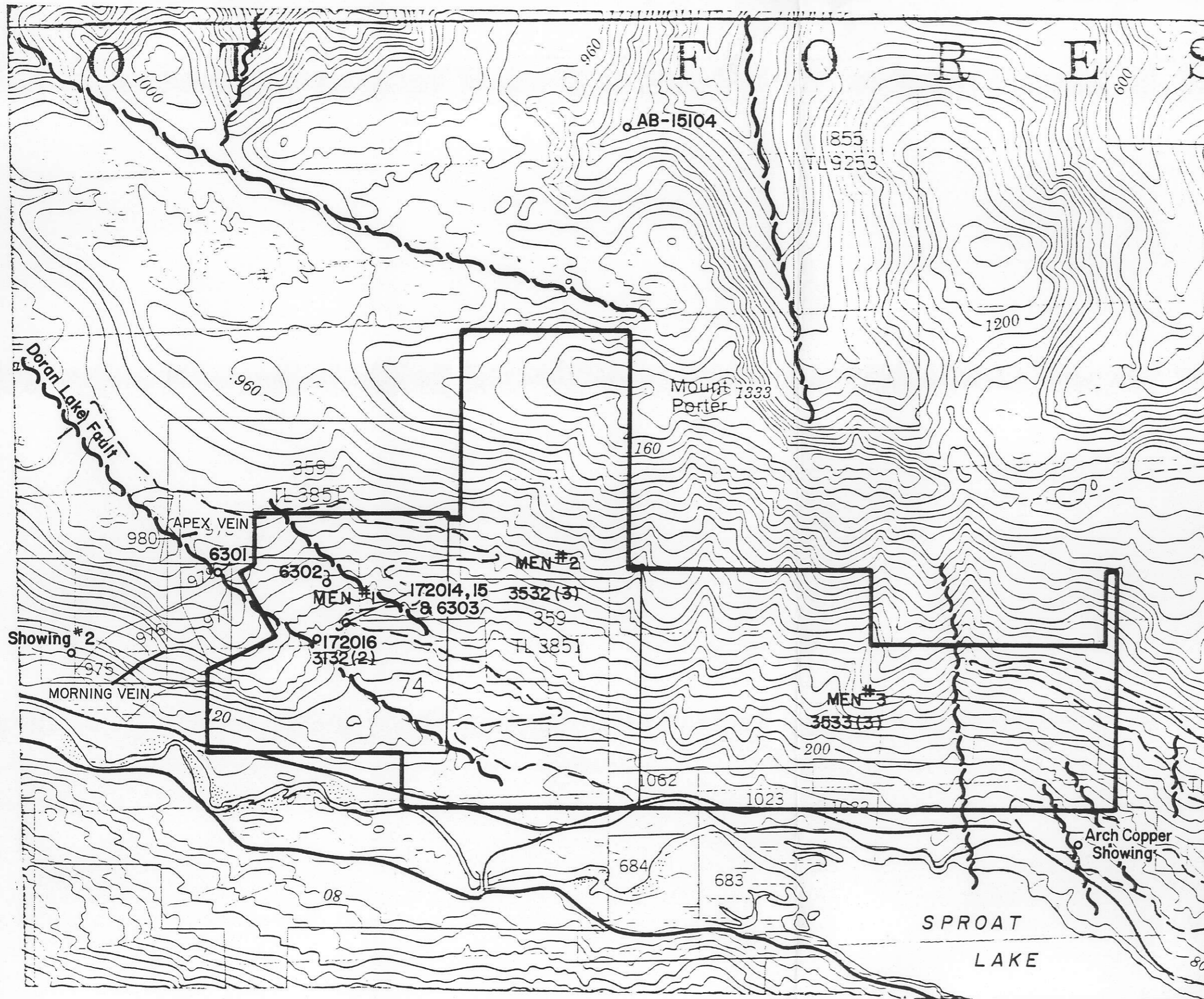
(1988) on the Men #1 claim, and can probably be traced across the entire Men property (Figure 4).

Both Verley and Sayer mapped dioritic dikes and irregular masses of the Jurassic Island Intrusions (Unit 9) within the Karmutsen volcanics. These may be related to the large batholith mapped by Muller and Carson (1969) along Great Central Lake a few kilometers north of the Men property.

The Men property is cut by numerous northerly and northwesterly trending faults which offset lithologies and may be related to mineralization. The Apex and Morning Veins, located 400 meters west of the Men #1 claim, appear to be hosted by conjugate shears of the Doran Lake Fault. The Doran Lake fault itself continues southeast onto the Men #1 claim and a parallel fault has been mapped by Sayer (1988) five hundred meters northeast of the Doran Lake fault, also on the Men #1 claim. Three gold-bearing quartz-pyrite veins on the Men #1 claim, also apparently hosted by conjugate shears to these two faults, will be discussed below in Section 7. Verley (1983) notes pyritic quartz-carbonate alteration envelopes around northwesterly trending faults and shear zones on the Men #3 claim. To the north, on the G.C. #1 claim, similar quartz-carbonate alteration hosts a gold-bearing quartz stockwork.

6.2 Geochemistry

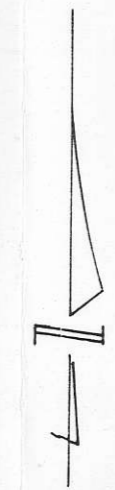
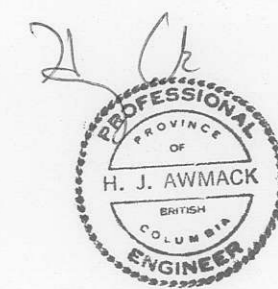
Six silt samples taken from the streams in the immediate area of the Arch copper showings returned background values for gold, silver, copper, arsenic, antimony, tungsten and molybdenum (Verley, 1983). Ten panned silt samples from one stream on the Men #1 claim returned background values of up to 15 ppb gold (Sayer, 1988).



SAMPLE NUMBER	Au (g/t)	Width (m)	REFERENCE
AB-15104	17.1	Grab	Bilquist, 1986
Showing 2	7.7	Grab	Cukor, 1979
6301	4.67	0.10	Sayer, 1988
6302	2.02	0.30	" "
6303	4.32	0.10	" "
Apex Vein	5.04	1.95	Rosen, 1979
Morning Vein	11.66	Grab	BCDM, 1927
172014	4.32	0.50	Awmack, 1988
172015	6.75	Grab	" "
172016	5.97	Grab	" "
Arch - A Zone	9.6%Cu	Grab	Verley, 1983
- B Zone	0.33%Cu	Grab	" "
- C Zone	1.34%Cu	1.1	" "

LEGEND

FAULT
 VEIN



GAZELLE RESOURCES LIMITED

MEN Property
GEOCHEMISTRY

ALBERNI MINING DIVISION
N.T.S. 92F/3W, F/6

EQUITY ENGINEERING LTD.

DWN. BY J.J.E.	PROJECT SMR88-01	DATE Sept., 1989	FIGURE 5.
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A soil geochemical survey was carried out over the Arch copper showings in 1972, with copper analysis only. Results were quite erratic, with values up to 4750 ppm Cu (Singhai, 1972).

7.0 MINERALIZATION

Three narrow gold-bearing quartz-sulphide veins were discovered in 1988 on the Men #1 claim (Figure 5). A pyritic shear zone with a true width of 50 centimeters is exposed in a road-cut near the center of the Men #1 claim. It strikes 047° and dips 85° to the southeast. From footwall to hangingwall, it is composed of:

- 10 cm. barren fault gouge;
- 15 cm. gouge with drusy quartz and 30% fine-grained, sheared pyrite;
- 15 cm. massive, unsheared pyrite-quartz vein with 50 to 70% pyrite and trace malachite;
- 10 cm. yellow sheared basalt without sulphides.

Sample #172014, a chip sample taken by the author across the entire 50 centimeters, returned 4.32 grams gold per tonne (0.13 oz/ton). Sample #172015, a grab of the pyritic material, assayed 6.75 grams gold per tonne (0.20 oz/ton). Sayer (1988) reports a grab sample from this vein with 4320 parts per billion (0.13 oz/ton) gold.

Two irregular quartz-pyrite lenses from four to fifteen centimeters in width are exposed for two meters in a creek bed approximately 200 meters west of sample #172014. These lenses, which strike towards 055° and dip 70° to the northwest, are composed of 10% pyrite in locally vuggy white quartz. Grab sample #172016, taken by the author, assayed 5.97 grams gold per tonne (0.17 oz/ton).

Another thirty to forty centimeter pyritic quartz vein, exhibiting banding and brecciation, is reported by Sayer (1988), approximately 300 meters northeast of sample #172014. She reports

a grab sample containing 2020 parts per billion (0.06 oz/ton) gold from this vein.

8.0 DISCUSSION

Three auriferous pyrite-quartz veins have been discovered on the Men property during the course of limited prospecting and geological mapping. Their northeasterly trend, steep dip and style of mineralization are similar to those of the Apex and Morning veins located immediately to the west of the Men property. All of these veins appear to be hosted by conjugate shears related to two major northwesterly trending faults which cross the Men #1 claim. The limited amount of prospecting carried out to date on the Men property indicates that similar mineralized shear zones, possibly of the significance of the Apex or Morning veins, remain to be discovered.

Quartz-carbonate alteration around northwesterly trending faults has been noted on the eastern part of the Men claim group by Verley (1983). A pyritic quartz stockwork hosted within similar alteration contains up to 17.1 grams gold per tonne on the G. C. #1 claim, 1300 meters north of the Men #2 claim. Again, no exploration for gold has been directed at these quartz-carbonate alteration zones on the Men property.

To date, only very limited geochemical sampling has been conducted over the Men property. Sayer (1988) and Bilquist (1987) note the correlation between high gold, copper and arsenic values in mineralized rock samples, and these may prove valuable geochemical pathfinder elements in the search for precious metals. Soil sampling results are expected to be erratic, due to local glacial till cover.

9.0 RECOMMENDATIONS

9.1 Program

A two phase exploration program is recommended for the Men property. Advancement to the second phase will proceed only if warranted by favorable results from Phase I.

9.1.1 Phase I

Geological mapping and prospecting should be done over the entire property, using an orthophoto for topographical control. Special attention should be paid to the Men #1 claim, where the three newly-discovered gold showings are located and to quartz-carbonate alteration zones around northwesterly trending faults.

Heavy mineral samples should be taken from each major drainage at about 150 meters elevation and silt samples should be taken from all side drainages and smaller creeks. All samples should be analysed geochemically for gold and 32-element ICP, with special attention paid to anomalous gold, silver, copper and arsenic values.

Soil geochemistry should be conducted over an area of 1000 meters by 1200 meters on the Men #1 claim. Soil lines 100 meters apart should be run perpendicular to a cut 1000-meter baseline trending northeasterly, with samples taken every 25 meters. This orientation cuts across the strike of all known veins and lithology. Samples should be analysed geochemically for gold, silver, arsenic and copper.

The gold-bearing shear zone exposed in the road cut on Men #1 should be traced by trenching along strike to determine its width and grade potential. Other significant veins discovered during the

course of the Phase I exploration program should be trenched as well.

9.1.2. Phase II

Contingent upon favorable results from the first phase, the second phase of exploration will consist of further trenching and diamond drilling of the best mineralized zones.

9.2 Budget

9.2.1 Phase I

WAGES

Project Geologist			
20 days @ \$350/day	\$	7,000	
Prospector			
20 days @ \$250/day		5,000	
Samplers			
2 @ 20 days @ \$175/day		<u>7,000</u>	
			\$ 19,000

CHEMICAL ANALYSES

Pan Concentrate Stream Sediment			
8 @ \$17.75	\$	142	
Silt			
40 @ \$14.75		590	
Soil			
560 @ \$19.00		10,640	
Rock Geochemical			
140 @ \$17.50		2,450	
Assay			
25 @ \$20.00		<u>500</u>	
			14,322

ORTHOPHOTO

2,500

MATERIALS AND SUPPLIES

Geochemical Supplies		100	
Explosives		500	
Expendables		<u>250</u>	
			850

SUPPORT

Communications	100	
Room and Board		
80 mandays @ \$50/day	4,000	
Helicopter and Travel	2,500	
Truck Rental		
20 days @ \$60/day	1,200	
Automotive	500	
Freight	<u>300</u>	
		8,600

REPORT PREPARATION5,000

\$ 50,272

CONTINGENCY @ 10%5,027

\$ 55,299

MANAGEMENT FEE

15% on expenses only

4,691

\$ 59,990

=====

The recommended Phase I exploration program will cost approximately \$60,000 to implement.

9.2.2 Phase II

The second phase budget will depend upon the results of the Phase I exploration program. However, an additional \$40,000 should be made available to cover Phase II expenditures.

Respectfully submitted,
EQUITY ENGINEERING LTD.


Henry J. Awmack, P.Eng.



Vancouver, British Columbia
September, 1989

APPENDIX A

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APPENDIX B

CERTIFICATES OF ANALYSIS



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Analytical Chemists • Geochemists • Registered Assayers
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406 - 675 W. HASTINGS ST.
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Project:

Comments: CC: SNOW MOUNTIAN RESOURCES

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Date : 7-MAR-88
Invoice #: I-8811930
P.O. #: SMR88-01

CERTIFICATE OF ANALYSIS A8811930

SAMPLE DESCRIPTION	PREP CODE	Cu %	Mb %	Pb %	Zn %	Ag g/tonne	Au g/tonne				
172014	207	---	-----	-----	-----	11.5	4.32				
172015	207	---	-----	-----	-----	15.0	6.75				
172016	207	---	-----	-----	-----	1.5	5.97				

APPENDIX C

ENGINEER'S CERTIFICATE

ENGINEER'S CERTIFICATE

I, HENRY J. AWMACK, of 12-1346 Nelson Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geological Engineer with offices at Suite 207, 675 West Hastings Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of British Columbia with an honors degree in Geological Engineering.
3. THAT I am a member in good standing of the Association of Professional Engineers of British Columbia.
4. THAT this report is based on property examinations in May 1987 and February 1988, on government publications and on assessment reports filed with the Province of British Columbia.
5. THAT I have no interest, nor do I expect to acquire any interest in the property or securities of Gazelle Resources Limited or any of its affiliates.
6. THAT I consent to the use by Gazelle Resources Limited of this report in a Prospectus, 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 _____ day of September, 1989.

Henry J. Awmack, P.Eng.