

RECONNAISSANCE GEOLOGICAL  
AND GEOCHEMICAL REPORT

STIK 1-4 Mineral Claims

Liard Mining Division

N.T.S. 94-E/12E

Latitude 57°35' North  
Longitude 127°32.5' West

British Columbia

February 27, 1986

on behalf of

Operator: DELAWARE RESOURCES CORP.  
Calgary, Alberta

Owner: Golden Rule Resources Ltd.

by

R. K. Netolitzky, M.Sc., P.Geol.

TAIGA CONSULTANTS LTD.  
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FILMED

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

14,465

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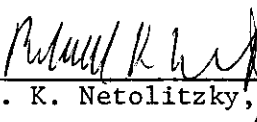
CERTIFICATE

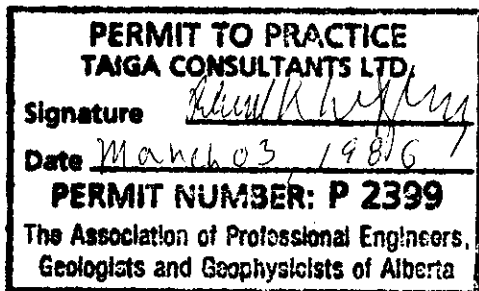
I, Ronald Kort Netolitzky, of 74 Wildwood Drive S.W. in the City of Calgary in the Province of Alberta, do hereby certify that:

1. I am a Consulting Geologist with the firm of Taiga Consultants Ltd. with offices at Suite 100, 1300 - 8th Street S.W., Calgary, Alberta.
2. I am a graduate of the University of Alberta, B.Sc. Geology (1964), and of the University of Calgary, M.Sc. Geology (1967).
3. I have practised my profession continuously since 1967.
4. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
5. I am the author of this report entitled "Reconnaissance Geological and Geochemical Report, STIK 1-4 Mineral Claims, Liard Mining Division, British Columbia" dated October 1985. Exploration work was conducted under my direct supervision. I was in the field in the project area during portions of July and August, 1985.
6. The sources of information supplied in this report include data from published sources and a complete review of the assessment files.

DATED at Calgary, Alberta, this 27 day of February, A.D. 1986.

Respectfully submitted,

  
 R. K. Netolitzky, M.Sc., P. Geol.



SUMMARY

Reconnaissance geochemical sampling of the STIK 1-4 claims, carried out in August 1985, identified several weak Au-and Ag-in-silt anomalies which warrant limited follow-up sampling and prospecting.

Reconnaissance prospecting and geological mapping were carried out over much of the property, resulting in the discovery of a quartz vein and several alteration zones on the STIK 1-4 claims, and an extensive quartz-barite zone adjacent to a gabbro plug located just east of STIK 1.

The latter discovery was staked and recorded as STIK 5, comprised of 3 units north x 1 unit east, situated between existing claims.

These features received only limited rock sampling, mainly due to frozen and/or snow conditions, therefore, it is recommended that further detailed evaluation be completed.

## INTRODUCTION

### Location and Access

The STIK 1-4 claims form a contiguous block of claims located in N.T.S. map-area 94-E-12 E, approximately 520 km northwest of Prince George in the Stikine River area (Figure 1). The approximate geographic coordinates of the claim group are 57°35' North latitude and 127°32' West longitude (Figure 2). The claims are accessible by helicopter.

### Property Status

The STIK 1-4 mineral claims are located in the Liard Mining Division and have been optioned to Delaware Resources Corp. from the owner Golden Rule Resources Ltd., both of Calgary. Pertinent claims data follows:

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record Number</u>	<u>Date of Record</u>
STIK 1	20	6960	4 March 1985
STIK 2	20	6961	4 March 1985
STIK 3	20	6962	4 March 1985
STIK 4	<u>20</u>	6963	4 March 1985
	80		

To the writer's knowledge, the ground currently covered by the STIK 1-4 claims has never been held, either wholly or partially.

### Physiography / Glaciation

The claims lie within the Cassiar Mountains physiographic subdivision of the Interior Plateau. The region is entirely glaciated and is characterized by wide U-shaped valleys filled with glacial deposits and colluvium, and deeply-cut V-shaped upland valleys. Mountain peaks in the area average 1980 - 2000 meters ASL. The claims are drained by unnamed northerly and southerly flowing tributaries of Stikine River and Adoogacho Creek.

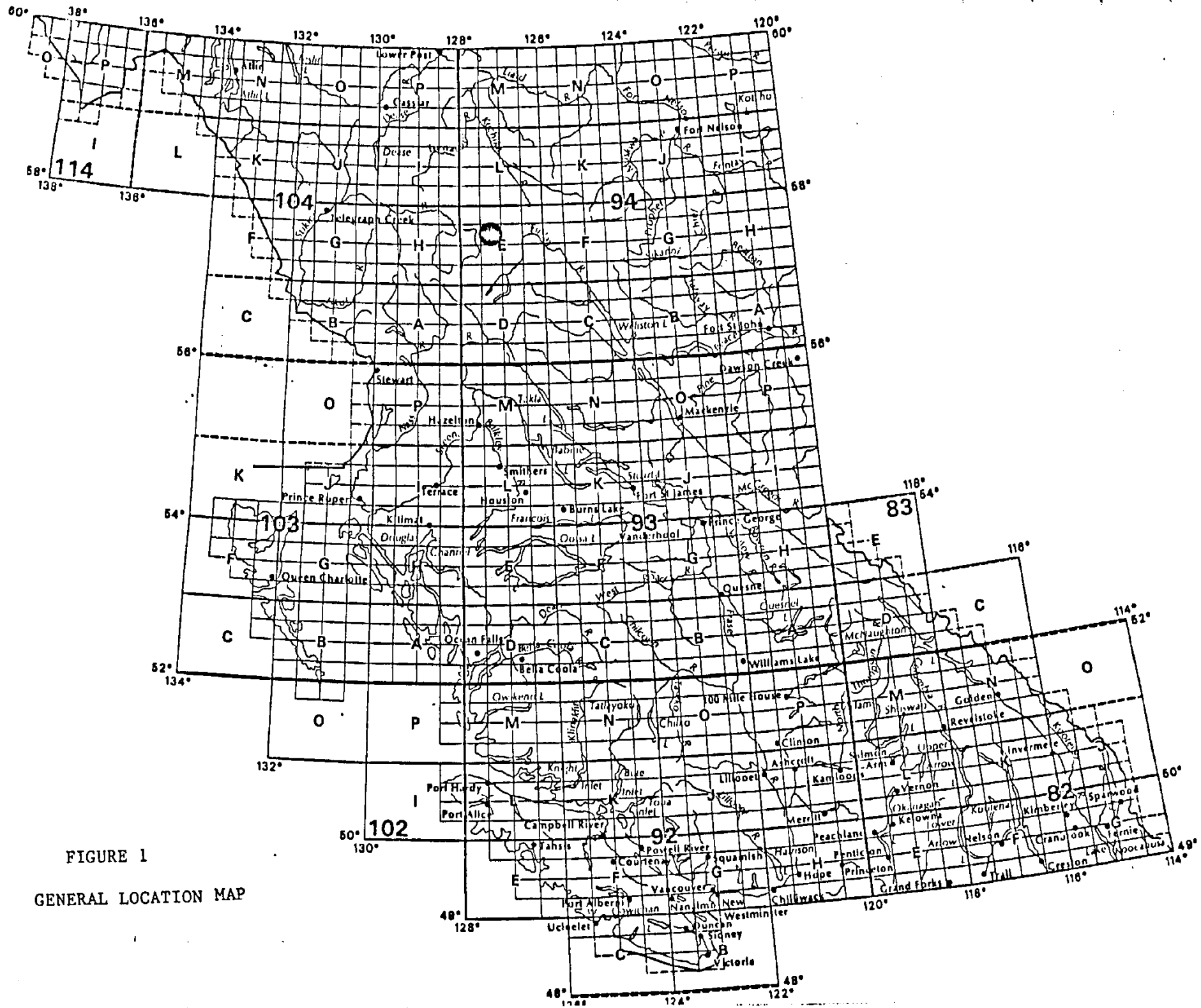
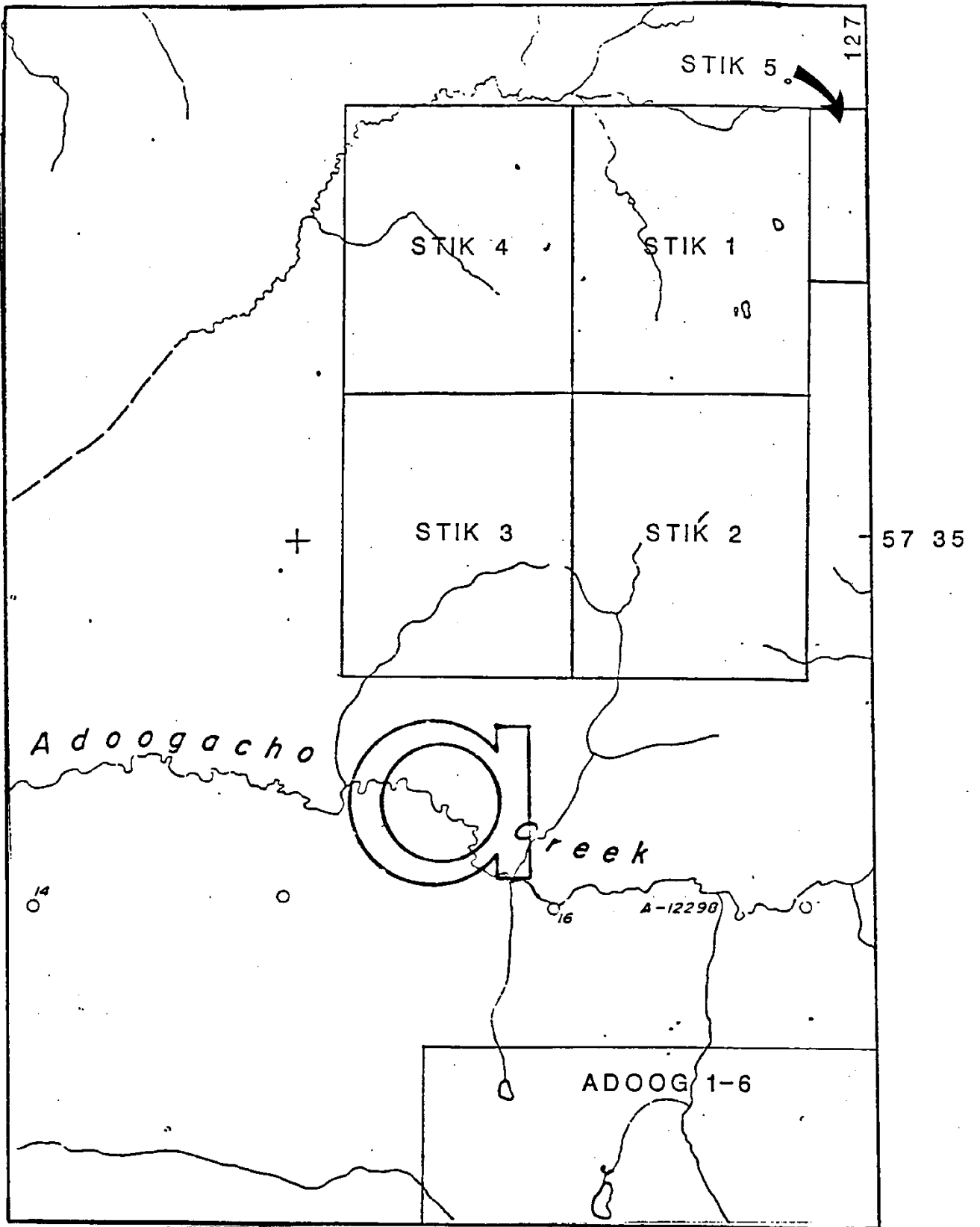


FIGURE 1

GENERAL LOCATION MAP

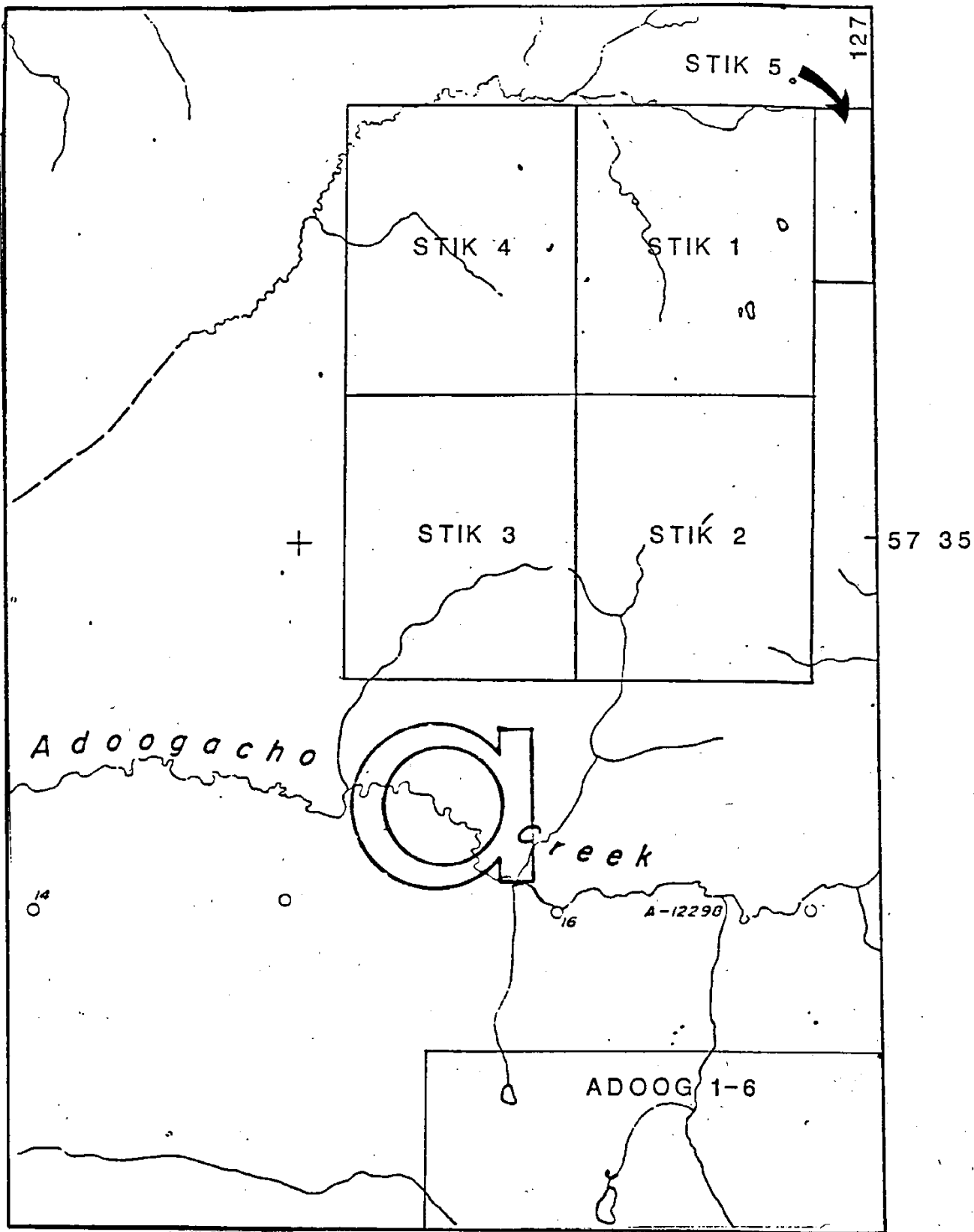


SCALE:1:50,000

N.T.S. 94-E-12E

### CLAIM LOCATION MAP

FIGURE 2



SCALE:1:50,000

N.T.S. 94-E-12E

### CLAIM LOCATION MAP

FIGURE 2



SUMMARY OF 1985 WORK

1985 exploration consisted of helicopter-supported reconnaissance geological mapping, prospecting, routine rock sampling, and stream silt sampling.

**Geochemical Survey:**

A total of 134 stream silt samples were collected at 100 metre intervals along first, second, and some third order streams. During geological mapping and prospecting, a total of 26 rock samples and 6 soil samples were routinely collected. All silts and soils were submitted to TerraMin Research Labs Ltd. in Calgary for Au/Ag-in-silt analysis; rock samples were submitted to Barringer Magenta Laboratories (Alberta) Ltd. in Calgary for Au/Ag-in-rock analysis. STIK 1-4

**Geological Survey:**

Geological mapping was carried out over approximately 3000 hectares, presented on Map 1 at a scale of 1:10,000. STIK 1-4

**Prospecting:**

Approximately 4000 hectares were prospected in detail. STIK 1-4

## REGIONAL GEOLOGY

The claims are underlain by intermediate to acidic volcanics of the Lower to Middle Jurassic Toodoggone Formation and sediments of the Tango Creek Formation (Sustut Group). The Toodoggone volcanics form a belt 5 to 20 km wide and 100+ km long, and are the subject of continuing precious metals exploration. The belt hosts a number of precious metals and base metals occurrences, including the Baker Mine (a past gold/silver producer operated by DuPont); the Amethyst Gold Breccia Zone (being developed by Serem); and the Bonanza-Verrenass, BBX, Thesis I-III, and Ridge (being explored by Energex). Other significant occurrences include the Mets (being explored by Manson Creek Resources Ltd.), the JD, Pit, Golden Rod, and the Metsantan.

The reader is referred to B.C. Ministry of Energy, Mines and Petroleum Resources preliminary map 61, "Geology of the Toodoggone River Area, NTS 94E" (1985) for up-to-date regional geological mapping of the region. Previously to the above-mentioned mapping, four principal subdivisions of the Toodoggone Formation were recognized, simply classified as the Lower volcanic division, the Middle volcanic division, the Upper volcanic-intrusive division, and the Upper volcanic-sedimentary division, all after the work of T. Schroeter, 1981.

Since 1981, mainly between 1981-1984, the Toodoggone volcanics have been re-examined and re-classified, resulting in a more comprehensive breakdown consisting of twenty formational members (Schroeter, 1985). Bedrock mapped in the area of the STIK claims include the following:

Cretaceous (Upper Cretaceous)

Sustut Group (Tango Creek Formation)

- 3 polymictic conglomerate, shale

Lower to Middle Jurassic, Toodoggone Volcanics

McClair Creek Formation

- 2 purple, lavender, grey; fine- to medium-grained plagioclase porphyritic flows; rarely lapilli tuffs

Adoogacho Creek Formation

- 1 pale reddish grey to dark red-brown quartzose biotite hornblende phyric ash flows; contain minor sanidine and rare augite; welding is widespread and ranges from incipient to eutaxitic; locally orange to brown vitrophyric clasts are common, includes lapilli tuff and breccia units as well as minor layered ground surge deposits.
- 1A crystal ash tuff, lapilli tuff, and rare agglomerate with interspersed epiclastic beds, tuffaceous sediments, and minor conglomerate that locally contains granitic clasts; minor hornblende plagioclase phyric flows forming single or thin composite flow units.

Intrusive Rocks

Lower to Middle Jurassic

- A biotite-hornblende-diorite gabbro

PROPERTY GEOLOGY

Reconnaissance geological mapping has determined that the claims are underlain by three members of the Toodoggone Formation, by the Tango Creek member of the Cretaceous Sustut Group, and intruded in one area by a small plug of Middle Jurassic gabbro.

The northern portion of the STIK 3 and the eastern corner of the STIK 1 are underlain by the purple, fine- to medium-grained plagioclase porphyry member of the McClair Creek Formation. This narrow belt is in contact with the Adoogacho Creek Formation volcanics to the south. Contact relationships are both fault and normal.

The Adoogacho Creek Formation underlies most of the STIK 2, 3, and 4. On the STIK 1, bedrock exposures are restricted to ridges where the unit is also mapped. The contact relationship between this unit and the above described McClair Creek Formation on the west side of the claim is not known, due to overburden conditions. Map unit IA (Adoogacho Creek Formation) occupies the south-central area of the STIK 3, the north and north-central areas of STIK 4, the northern half of the STIK 2, and as currently mapped, much of the south and east areas of the STIK 1. The rocks consist of a series of interbedded purple to grey crystal tuffs and rare purple agglomerate which underlies the tuff where encountered. The tuff varies from dark grey to maroon in colour. The agglomerate consists of purple, fine-grained to aphanitic volcanic clasts cemented by light grey chalcedonic silica.

The southeastern part of the STIK 4 and much of the southern part of the STIK 2 are underlain by a younger member of the Adoogacho Creek Formation (Map unit 1), consisting of pale reddish grey to dark red-brown quartzose biotite-hornblende phyric ash flows with rare occurrences of lapilli tuff and very narrow breccia units. These rocks are generally in fault contact with Unit 1A, with the exception of an extensive exposure on the STIK 2 where a conformable contact relationship is observed.

Massive aphanitic leucocratic red altered rhyolitic dykes cut Units 1 and 1A as observed along ridges on the STIK 2 and 3.

STRUCTURAL AND ECONOMIC GEOLOGY

On the STIK 3, rocks of Unit 1A are gently folded into an anticlinal structure, the axis of which is oriented northwest-southeast, extending southerly from the northern part of the STIK 3, passing just west of Cirque Lake (see Map 1) and into the STIK 4. On the eastern limb bedding dips vary from  $12^{\circ}$  to  $16^{\circ}$ E, and on the western limb they are fairly uniform at  $34^{\circ}$ W.

Faulting is both common and complex on the property. On the STIK 2, a fault complex has been partially mapped. The feature consists of an intricate system of intersecting faults of the same age with subsidiary fracturing and shearing associated. On the STIK 2 and 4, block faulting is responsible for most of the contacts between Units 1 and 1A. On the STIK 3, contacts are similar between the McClair Creek and Adoogacho Creek Formations.

Associated with these primary fault systems are a number of secondary fracture/fault zones consisting of moderate to intense fracturing and related shearing. In places, these zones are persistent and extensive, and are characterized by a strong degree of alteration, most commonly clay and/or red hematitic alteration, and rarely silica/clay alteration where barite is present in moderate quantities as on the STIK 5. Gossan or limonite zone development is common along some of these features.

Silicification usually accompanies these structures to varying degrees. In places, silicification has progressed into a weak vein

development phase, producing a quartz stockwork-vein system.

"A" Zone; Quartz-Barite Zone STIK 1, STIK 5

A zone of quartz-barite float and subcrop were discovered along a ridge just east of the STIK 1. An initial examination showed a narrow silicified zone exposed in cliff edge outcrop containing two subparallel quartz-barite veinlets striking southwest for 14 metres from the point of discovery and 6 metres in a northeasterly direction under glacial debris and recent snow cover. On the southerly extension, a major northwesterly crosscutting fault (Map 1) appears to have offset the vein system. To the northeast, the system is traceable through quartz float and altered subcrop for 400 metres where it is exposed again along a cliff (Photo 2). At this point, the alteration zone is 8 metres wide and consists of strongly (silica, clay) altered plagioclase porphyry, hosting at least four narrow parallel quartz-barite veinlets cutting through a core of moderate to intense siliceous alteration. Gossan development along this section is moderate to intense, and pyritization is uniformly present throughout as well. Freshly broken rock revealed disseminated pyrite, galena (to 1%), and minor sphalerite. Along several silicified fractures, blebs of chalcopyrite were noted.

Further to the northeast, the system is traceable for 20 metres in float and then is lost in heavy glacial deposits.

A small gabbro plug has intruded the country rock just south of the vein system, which presumably is responsible for the splintering effect on the intruded volcanics.

"B" Zone STIK 2

On the STIK 2, a quartz vein 1.5 to 2.3 metres wide was discovered striking northwest and dipping  $43^{\circ}$  SW. Rust altered quartz containing up to 1% disseminated pyrite occurs in broken form for 5 metres in subcrop. Snow cover masked most of the remaining occurrence area. The vein appears to be hosted by a secondary zone of shearing associated with a primary east-west trending fault mapped to the north. Further detailed evaluation of the vein system is warranted at a more seasonal time.

"C" Zone STIK 3

On the STIK 3, just west of Cirque Lake, there is a northerly striking silicified fracture zone cutting the altered crystal tuff unit. A very thick cover of last year's snow prevented a complete examination; however, pyrite, chalcopyrite, and galena bearing quartz float was discovered further downslope to the north. Quartz float concentrations increase upslope to solid bedrock which passes under the snow cover. On the south side of the ridge, there is a concentration of rusty boulders consisting primarily of angular quartz. Presumably the source of these boulders are the steep bluffs where the above described float samples occur.



GEOCHEMISTRY

Sampling and Analytical Procedures

Geochemical sampling consisted of the collection of 134 stream silt samples, 6 soil samples, and 26 rock samples. Stream silt samples were collected every 100 metres along major streams; the soils were collected along a line over the "A" Zone (quartz-barite) on the STIK 5; and the rock samples were routinely collected during prospecting and mapping traverses. All silt and soil samples were submitted to TerraMin Research Labs Ltd. in Calgary for Au/Ag-in-silt/soil analyses, performed by standard atomic absorption technique (see Appendix I). All rock samples were submitted to Barringer Magenta Laboratories (Alberta) Ltd. in Calgary for Au/Ag-in-rock analyses, performed by a combined fire assay and atomic absorption technique.

Interpretation of Results

No anomalous Au or Ag values were obtained from silt samples submitted in 1985. Elevated Au-in-silt values occurred at:

<u>Sample</u>	<u>ppb Au</u>	<u>Claim Location</u>
RS 16+00	10	STIK 4
RS 17+00	10	STIK 4
RS 18+00	10	STIK 4
RS 0+00	12	STIK 1
RS 1+00	12	STIK 3
RS 2+00	10	STIK 3
RS 2+50	18	STIK 3
RS 25+00	10	STIK 2
RS 29+00	12	STIK 2
RS 30+00	12	STIK 2
RS 41+00	32	STIK 2
RS 47+00	24	STIK 2
GW-S-22	10	STIK 1
GW-S-23	10	STIK 1
GW-S-24	12	STIK 1

Elevated Ag-in-silt values occurred at:

<u>Sample</u>	<u>ppm Ag</u>	<u>Claim Location</u>
RS 16+00	3.95	STIK 4
RS 18+00	1.28	STIK 4
GW-S-35	1.04	STIK 1

The source responsible for the elevated values has yet to be defined in the limited amount of work completed.

Values returned for Au/Ag-in-soils from the samples collected from the "A" Zone (quartz-barite) were not of interest.

Five rock samples returned elevated and/or anomalous Au-in-rock values:

<u>Sample</u>	<u>ppb Au</u>	<u>Claim Location</u>
RS 48+00	355	STIK 4 quartz boulder
GW-ST-6	553	STIK 4 quartz boulder
GW-ST-8	124	STIK 4 quartz boulder
GW-ST-12	8810	STIK 5 quartz-barite
GW-ST-13	151	STIK 5 quartz-barite

Samples RS 48+00, GW-ST-6, and GW-ST-8 were collected from the quartz boulder concentration on the south side of the ridge where a northerly trending silicified fracture zone occurs. Follow-up detailing is highly recommended, but during a more seasonal time.

Samples GW-ST-12 and GW-ST-13 were collected on the south end of the "A" Zone (quartz-barite). On the north end of the structure, the best exposure is along a cliff edge, making follow-up detailing difficult.

Elevated and anomalous Ag-in-rock values were returned from the following samples:

<u>Samples</u>	<u>value Ag</u>	<u>Claim Location</u>
GW-ST-9	0.96 oz/ton	STIK 4 quartz vein
GW-ST-10	4.62 ppm	STIK 4 quartz vein
GW-ST-14	6.21 ppm	STIK 5 quartz-barite
GW-ST-15	1.03 ppm	STIK 5 quartz-barite

Rock samples GW-ST-9 and GW-ST-10 were collected from quartz vein float, occurring on the north side of a snow covered ridge where a silicified fracture zone has been mapped. Au-in-rock samples RS 48+00, GW-ST-6, and GW-ST-8 appear to have the same source as GW-ST-9 and GW-ST-10.

Rock samples GW-ST-14 and GW-ST-15 were collected from the quartz-barite "A" Zone located on the STIK 5, indicating together with GW-ST-12 and GW-ST-13, that the structure is weakly enriched with Au and Ag along strike.

## CONCLUSIONS AND RECOMMENDATIONS

A number of elevated and anomalous Au- and Ag-in-rock values occur at various locations of the claim block. The primary target is the quartz-barite vein system on the STIK 5. Further detailed work is warranted on this structure, and could best be completed by manual or blast trenching along strike. The best exposures currently are along cliff edges, making effective sampling difficult. The structure is traceable along strike through frost boils and subcrop. Several well placed trenches would effectively expose the quartz-barite veins enabling safe and effective channel sampling to take place.

On the STIK 2, a weak quartz stockwork-vein system occurs which again would be best explored by manual trenching. Additional evaluation work is required to fully evaluate the potential of the target.

The silicified fracture zone on the STIK 2 is a favourable exploration target; however, further detailing will be difficult due to remaining snow cover. A series of government air photographs continue to show a thick snow bed. Some of this could be mechanically removed to allow further examination and sampling. Returned elevated Au/Ag-in-rock values from float and boulders enhance this target.

BIBLIOGRAPHY

Schroeter, T.G. (1985)

Geology of the Toodoggone River Area, NTS 94E.  
BCDM Prelim. Map 61

Schroeter, T.G. (1981): Toodoggone River (94E)

B.C. Ministry of Energy, Mines and Petroleum Resources,  
Geological Fieldwork, 1980, paper 1981-1.

SUMMARY OF EXPENDITURESSTIK 1-4 Mineral ClaimsPersonnel

R.K.Netolitzky, P.Geol.			
Aug.-Oct.	3.00 days @ \$325/diem	975.00	
G.L.Wilson, geologist			
Aug.-Sep. office	5.00 days @ \$240/diem	1,200.00	
Sep. field	2.75 days @ \$220/diem	605.00	
D.D.Dancer, assistant			
Aug.-Sep.	2.50 days @ \$135/diem	337.50	
R.Stefik, assistant			
Aug.	5.00 days @ \$135/diem	675.00	
S.Dancer, cook			
Aug.-Sep.	3.50 days @ \$120/diem	<u>420.00</u>	4,212.50

Helicopter Support ALC Airlift Corp., Pitt Meadows, B.C.

Aug. 26/85	Flight ticket #3178	412.00	
Aug. 27/85	Flight ticket #3182	412.00	
Aug. 28/85	Flight ticket #3186	412.00	
Aug. 29/85	Flight ticket #3191	463.50	
Aug. 30/85	Flight ticket #3195	<u>463.50</u>	2,163.00

Fixed-Wing Support Central Mountain Air, Smithers, B.C.

Aug. 26/85	Flight ticket #3482	313.42	
Aug. 29/85	Flight ticket #3487	214.87	
Sep. 6/85	Flight ticket #3632	105.00	
Sep. 15/85	Flight ticket #3704	<u>105.00</u>	738.29

Camp and Food

Camp Food	15 man days @ \$23/diem	345.00	
Camp Rental	15 man days @ \$12/diem	180.00	
Disposable supplies and fuel		165.89	
HF radio-telephone	2 x 2.5 days @ \$ 9/diem	45.00	
Generator	2.5 days @ \$ 7/diem	<u>17.50</u>	753.39
Expediting, Courier, Freight			170.60

Geochemical Analyses

TerraMin Research Labs, Calgary, Alberta

140 silts prepared @ \$0.80/each	112.00		
140 Au,Ag analyses @ \$6.80/each	<u>952.00</u>	1,064.00	
26 rocks prepared @ \$3.80/each	98.80		
26 Au,Ag analyses @ \$9.00/each	<u>234.00</u>		
	332.80		
less 10%	<u>33.28</u>	<u>299.52</u>	1,363.52

Post-Field Expenditures

Miscellaneous (telephone, reproductions)		421.54	
Handling Charges on 3rd party expenses		158.04	
Drafting Charges 20 hours @ \$24/hr		480.00	
Data compilation, report writing		<u>2,292.43</u>	<u>12,753.21</u>
Grand Total			<u>\$12,753.31</u>

LIST OF PERSONNEL

R. K. Netolitzky, P.Geol 74 Wildwood Drive S.W. Calgary, AB T3C 3C4	Aug.26 (1/2), Aug.28 (1/2), Sep.02 (1/2), Sep.23 (1/2) Oct.15 (1/2), Oct.30 (1/2)
G. L. Wilson, B.Sc. 60 Ranchridge Rd. N.W. Calgary, AB T3G 1V8	Aug.26,27,28,29,30, Sep.1, Sep.2 (1/2), 9 (1/2), 12 (1/2) Sep.13, 30 (1/4)
D. D. Dancer (field assistant) #2, 519 - 4a St. N.E. Calgary, AB T1Y 3V9	Aug.29,30, Sep.1 (1/2)
Ron Stefik (field assistant) #406, 690 - 28 St. West Prince Albert, Sask. S6V 6Z7	Aug.26,27,28,29,30
S. P. Dancer (camp cook) #2, 519 -4a St. N.E. Calgary, AB T1Y 3V9	Aug.28,29,30, Sep.1 (1/2)



A P P E N D I X I

Analytical Techniques



42008 - 10 STREET N.E.  
CALGARY, ALBERTA  
T2E 6K3  
PHONE: (403) 250-1901

August 22, 1985

Taiga Consultants Ltd.,  
Suite 100 - 1300 - 8 St. S.W.,  
Calgary, Alberta  
T2R 1B2

Attention: Mr. Claude Aussant

Dear Claude:

As per your recent request, following are descriptions of the sample preparation and subsequent analysis for gold and silver soil and rock samples submitted by you in 1985.

Rock samples are routinely crushed, split and pulverized to minus 150 mesh. Soils are sieved to minus 80 mesh.

For the determination of gold and silver, the procedure followed by Barringer Laboratories utilizes a one assay-ton (29.16 gram) of material. This is mixed with the standard charge and an aliquot of known concentration of palladium. The palladium acts as an inquant to enhance the collection of trace amounts of gold. Following cupellation, the bead is completely dissolved in aqua regia. The gold is extracted into methyl isobutyl ketone (MIBK) and subsequently analysed by atomic absorption spectrophotometry (A.A.S.). A detection limit of 2 ppb is achieved.

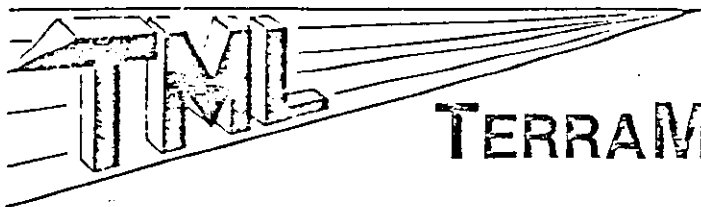
Silver is determined by direct aspiration of the solution by A.A.S. prior to the extraction stage. The detection limit for silver is 10 ppb.

Should you have any further questions please do not hesitate to contact me.

Yours truly,

C. Douglas Read,  
Manager, Analytical Services

CDR/th



# TERRAMIN RESEARCH LABS LTD.

14-2235 - 30th Avenue N.E. Calgary, Alberta T2E 7C7  
(403) 276-8668

## ANALYTICAL METHOD FOR GOLD AND SILVER

Approximately 1 assay ton of prepared sample is fused with a litharge/flux charge to obtain a lead button. The lead button is cupelled to obtain a prill. The prill is dissolved in nitric/hydrochloric acids (aqua regia), and the resulting solution is analysed by atomic absorption spectroscopy.

A P P E N D I X   I I

Certificates of Analysis



4200B - 10 STREET N.E.  
 CALGARY, ALBERTA  
 T2E 6K3

PHONE: (403) 250-1901  
 10-SEP-85  
 PAGE: 1 OF 2  
 COPY: 1 OF 3

AUTHORITY: R. NETOLITZKY

DELAWARE RESOURCES LTD.  
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 CALGARY, ALBERTA T2R 1B2

WORK ORDER: 6320D-85

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: ROCK

SAMPLE NUMBER	FIRE ASSAY	FIRE ASSAY	FIRE ASSAY
	AU PPB	AG PPM	AG OZ/TON
RS- :23+70	2.0	<0.02	NA
RS- :37+60	36.0	<0.02	NA
RS- :26+00	2.0	0.18	NA
RS- :24+25	9.0	<0.02	NA
RS- :29+25	12.0	<0.02	NA
RS- :38+10	53.0	<0.02	NA
RS- :48+00	353.0	0.18	NA
GW-ST :1	12.0	<0.02	NA
GW-ST :2	6.0	<0.02	NA
GW-ST :3	19.0	0.02	NA
GW-ST :5	11.0	<0.02	NA
GW-ST :6	553.0	0.43	NA
GW-ST :7	4.0	<0.02	NA
GW-ST :8	124.0	<0.02	NA
GW-ST :9	45.0	NA	0.96
GW-ST :10	14.0	4.62	NA
GW-ST :11	23.0	0.31	NA
GW-ST :12	8810.0	0.31	NA
GW-ST :13	151.0	<0.02	NA
GW-ST :14	8.0	6.21	NA
GW-ST :15	14.0	1.03	NA
GW-ST :16	17.0	<0.02	NA
DD-ST :01	12.0	0.08	NA
DD-ST :02	5.0	<0.02	NA
DD-ST :03	10.0	0.03	NA
DD-ST :04	8.0	0.36	NA



**BARRINGER MAGENTA**  
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PAGE: 1 OF 2

COPY: 1 OF 2

AUTHORITY: R. NETOLITSEY

DELAWARE RESOURCES LTD.  
100, 1300 - 8 STREET S.W.  
CALGARY, ALBERTA T2R 1B2

WORK ORDER: 8330D-85

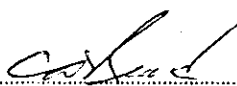
\*\*\* FINAL REPORT \*\*\*

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**GEOCHEMICAL LABORATORY REPORT**

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SIGNED: \_\_\_\_\_

  
C. Douglas Read,  
LABORATORY MANAGER

FOOTNOTES:

P=QUESTIONABLE PRECISION; \*=INTERFERENCE; TR=TRACE; ND=NOT DETECTED;  
IS=INSUFFICIENT SAMPLE; NA=NOT ANALYZED; MS=MISSING SAMPLE



# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

Job # 85-228

Delaware Resources

Date Sept.27, 1985

Client Project DLW-BC-2

Page 1/1

Sample No. <u>Silt</u>	Au ppb	Ag ppb	
GW-S-17	-2	310	
19	-2	330	
20	2	310	
21	2	290	
Stik 10+00 RS	8	440	(-40)
11+00	4	520	"
12+00	4	660	"
13+00	8	940	"
14+00	6	410	"
14+60 L	2	390	"
15+00	4	420	"
16+00	10	3950	"
17+00	10	130	"
18+00	16	1280	"
19+00	8	240	"
20+00	4	480	"
B Zone 0+00 m	6	360	
0+4	8	380	
0+6	-2	330	
0+8	2	290	
0+10	2	200	
2	-2	450	

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# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

Job # 85-215

Delaware Resources

Date Sept.25, 1985

Client Project "STIK" DLW-BC-2

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Sample No.			Au	Ag
<u>Silt</u>			ppb	ppb
Stik	RS	0+00	12	400
		1+00 (-40)	12	160
		2+00 (-40)	10	170
		2+50 (-40)	18	430
		3+00 (-40)	8	80
		4+00 (-40)	4	240
		5+00 (-40)	8	360
		6+00 (-40)	4	160
		7+10 (-40)	4	300
		7+20 (-40)	2	200
		8+00 (-40)	4	140
		9+00	4	140
		21+00	6	220
		22+00	8	110
		23+00 (-40)	6	110
		24+00	4	120
		25+00 (-40)	10	70
		26+00 (-40)	2	60
		27+00 (-40)	-2	100
		28+00 (-40)	4	80
		29+00 (-40)	12	80
		30+00 (-40)	12	100
		31+00 (-40)	8	160
		32+00 (-40)	4	90
		33+00	8	130





# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

Job # 85-215

Date

Client Project STIK

Page 2/5

Sample No.				Au ppb	Ag ppb
Stik	RS	34+00	(-40)	-2	200
		35+00	(-40)	-2	80
		36+00	(-40)	2	80
		37+00	(-40)	8	280
		37+60 R1	(-40)	-2	320
		37+60 R2	(-40)	6	100
		38+00	(-40)	2	70
		38+ <del>00</del> <sup>50</sup>	(-40)	-2	30
		39+00	(-40)	2	80
		40+00	(-40)	6	60
		40+50	(-40)	2	100
	RL	41+00	(-40)	32	40
		41+70 R	(-40)	8	50
		41+70 R2	(-40)	4	80
		41+70 R3		8	120
		41+70 R4	(-40)	4	40
		41+70 R5	(-40)	6	60
		41+70 R6	(-40)	2	80
		42+00	(-40)	2	80
		43+00	(-40)	6	60
		44+00	(-40)	4	40
		45+00	(-40)	2	40
		46+00	(-40)	4	60
		47+00	(-40)	24	40
		48+00		-2	60

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# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

Job # 85-215

Date

Client Project Stik

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Sample No.	Au ppb	Ag ppb
Stik RL 49+00	-2	120
50+00	2	240
51+00	2	100
52+00 (-40)	8	150
RS 53+00	4	270
54+00 (-40)	8	120
55+00 (-40)	2	120
56+00 (-40)	8	120
57+00 (-40)	2	50
58+00 (-40)	-2	80
59+00 (-40)	8	120
60+00 (-40)	2	70
61+00 (-40)	-2	70
62+00 (-40)	2	110
63+00 (-40)	-2	70
GW-S-01	6	250
02 (-40)	4	90
03 (-40)	8	220
04 (-40)	2	240
05 (-40)	-2	70
06 (-40)	2	60
07 (-40)	8	120
08 (-40)	4	110
09 (-40)	2	120
10	2	200

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# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

Job # 85-215

Date

Client Project Stik

Page 4/5

Sample No.	Au ppb	Ag ppb
Stik GW-S-11 (-40)	6	200
12 (-40)	-2	210
13	-2	30
14	2	160
15	2	230
16	6	200
21	8	420
22	10	280
23	10	330
24	12	310
25	6	260
26	6	360
27	8	920
28	2	560
29 (-40)	2	600
30 (-40)	4	420
31 (-40)	-2	200
32 (-40)	-2	640
33 (-40)	4	240
34 (-40)	2	1040
35 (-40)	4	620
36	4	400
37 (-40)	-2	20
38 (-40)	2	420
39	8	320

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# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

Job # 85-215

Date

Client Project Stik

Page 5/5

Sample No.	Au ppb	Ag ppb
Stik GW-S-40	2	60
41	-2	30
42	2	100
43	-2	40
44	4	60
45	2	270
46	4	150
47	-2	400
48	4	120
49	-2	160
50	2	180
51	2	480
52	-2	220
53	2	170
54 (-40)	-2	60
55	2	310
56	4	230
57	4	220

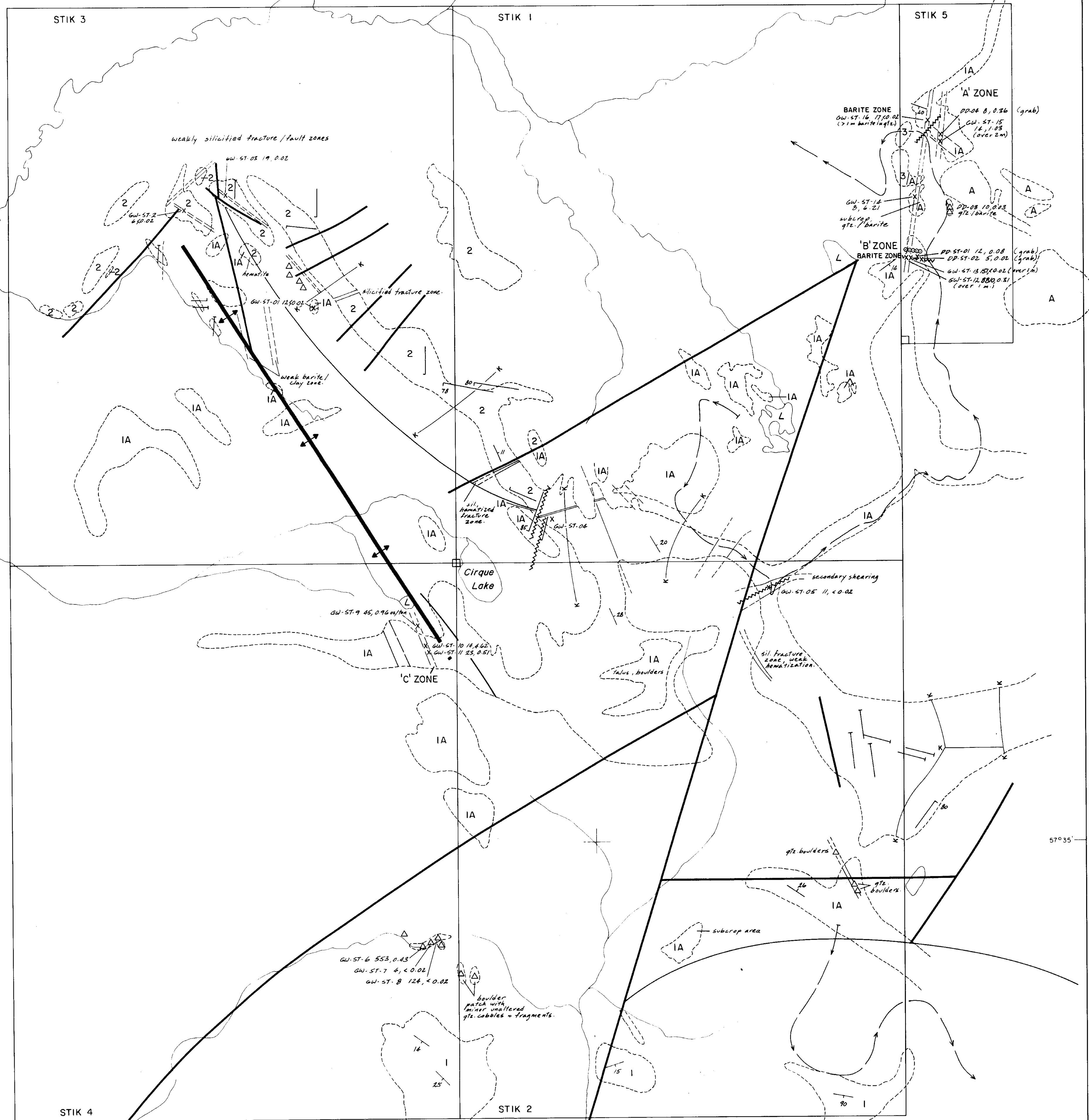
A P P E N D I X   I I I

Rock Sample Descriptions

ROCK SAMPLE DESCRIPTIONS

GW-ST-01	outcrop	Very fine-grained, strongly hematized andesite dyke rock. Moderately silicified, carrying disseminated pyrite to 2%.
GW-ST-02	outcrop	Silicified purple porphyritic trachy-andesite. Some quartz from fracture fillings. Disseminated pyrite to 1%, minor galena and malachite.
GW-ST-03	outcrop	Rusty quartz, collected from silicified fracture zone which contains narrow veinlets and quartz-flooded fractures. Galena occurs along fracture surfaces and disseminated through quartz to 2%. Pyrite and malachite are disseminated to 2% through silicified trachy-andesite wallrock for 2 metres on either side of veined or quartz-stockwork zone.
GW-ST-04	outcrop	Silicified red-altered (hematized) porphyritic trachy-andesite; disseminated pyrite to 1% throughout.
GW-ST-05	outcrop	Silicified / red-altered trachy-andesite; disseminated pyrite to 2%. Quartz stringers occur through this fracture zone.
GW-ST-06	float	Angular, rusty quartz with pyrite, galena, sphalerite, and malachite (minor) occurring as blebs throughout.
GW-ST-07	float	as above
GW-ST-08	boulder	as above, but samples collected from quartz boulders.
GW-ST-09	float	Intensely silicified trachy-andesite, abundant pyrite and malachite. Float trend traceable upslope and under snow bank.
GW-ST-10	float	Rusty quartz, galena, minor sphalerite, abundant malachite stain throughout (30%).
GW-ST-11	float/boulder	Sub-rounded to angular piece of quartz, limonite stained and mineralized with galena, pyrite, and malachite (stain) to 10%.
GW-ST-12	float Zone "B"	Sample of orange weathering white clay altered and silicified (uniformly) andesite with disseminated pyrite to 1% throughout. Sample contains rust-altered quartz collected from a weakly developed vein. Observed by overburden, deeply decomposed barite/clay-rich debris and snow.
GW-ST-13		as above

GW-ST-14	boulder/ float	Collected from a sub-angular piece of quartz containing minor barite(?); no visible sulphides.
GW-ST-15 -16	outcrop	Silicified clay-altered trachyte porphyry; disseminated pyrite to 2%; calcite-barite occurs through fractured sections.
RS 48+00	boulder	Limonitic quartz, highly hairline fractured and weakly brecciated. Minor pyrite (to 1%) noted along fractures. Sample collected from quartz boulder train along a major stream on STIK 4.
RS 23+70	outcrop	Limonitic, brecciated quartz vein material; collected from stream-cut bedrock on STIK 2.
RS 37+60 (R2)	boulder	Limonitic, fractured quartz carrying minor disseminated pyrite; collected from quartz boulder deposit on STIK 2.
RS 26+00	outcrop	Silicified andesite flow rock; some rust stain; no visible sulphides.
RS 38+10	boulder	Limonitic quartz; minor disseminated pyrite and galena; collected from stream bank on STIK 2.
RS 29+25	outcrop	Intensely silicified tuff; limonitic; no visible sulphides; collected from a small outcrop on STIK 2.
RS 48+00	boulder	Rust-stained quartz breccia; disseminated galena and pyrite to 5%; collected from quartz boulder train on STIK 4.
RS 24+25	boulder	Silicified andesite flow rock; weakly hematized and pyritic; collected from subcrop on STIK 2.
DD-ST-01	outcrop	Silicified andesitic (porphyritic) flow rock; weakly disseminated pyrite to 1%.
DD-ST-02	outcrop	Intensely silicified andesitic tuff, almost completely replaced by silica; galena and pyrite to 5%; possibly some barite included.
DD-ST-03	outcrop	Quartz/barite(?) zone sample, weakly limonitic quartz with minor barite clay. Disseminated pyrite to 3% throughout.
DD-ST-04	outcrop	Silicified trachy-andesite, weakly hematized, disseminated pyrite to 1%.



**GEOLOGICAL LEGEND**

- Pleistocene and Recent
- Cretaceous (Upper Cretaceous)
  - 3 Sustut Group / Tango Creek Formation
  - polymictic conglomerate, shale
- Lower to Middle Jurassic / Toodogone Volcanics
  - McClair Creek Formation
  - 2 purple, lavender, grey; fine- to medium-grained plagioclase porphyritic flows; rarely lapilli tuffs
  - Adoogacho Creek Formation
  - 1 pale reddish grey to dark red-brown quartzose biotite hornblende phyric ash flows; contain minor sandstone and rare augite; welding is widespread and ranges from incipient to eutaxitic; locally orange to brown vitrophyric clasts are common, includes lapilli tuff and breccia units as well as minor layered ground surge deposits.
  - IA crystal ash tuff, lapilli tuff, and rare agglomerate with interspersed epiclastic beds, tuffaceous sediments, and minor conglomerate that locally contains granitic clasts; minor hornblende plagioclase phyric flows forming single or thin composite flow units.
- Intrusive Rocks
  - Lower to Middle Jurassic
  - A biotite-hornblende-diorite gabbro

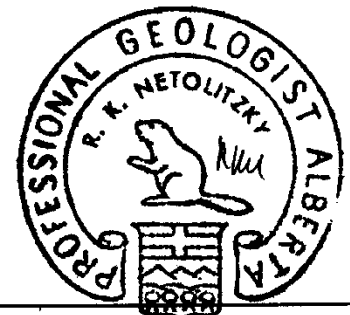
**LEGEND**

- 0100 SOIL SAMPLE LOCATION
- x GW-ST-15 ROCK SAMPLE LOCATION (outcrop) (Au ppb, Ag ppm)
- △ DP-03 ROCK SAMPLE LOCATION (boulder) (Au ppb, Ag ppm)
- LEGAL CORNER POST
- BEDDING; inclined
- PROPERTY BOUNDARY
- GEOLOGICAL CONTACT
- OUTCROP or SUBCROP BOUNDARY
- KEY BED (photogeologic marker bed)
- JOINTING; inclined, vertical
- ZONE BOUNDARY; intense fracturing, siliceous alteration, and mineralization
- SHEAR ZONE
- PROSPECTING TRAVERSE
- FAULT
- ANTIFORM WITHOUT PLUNGE

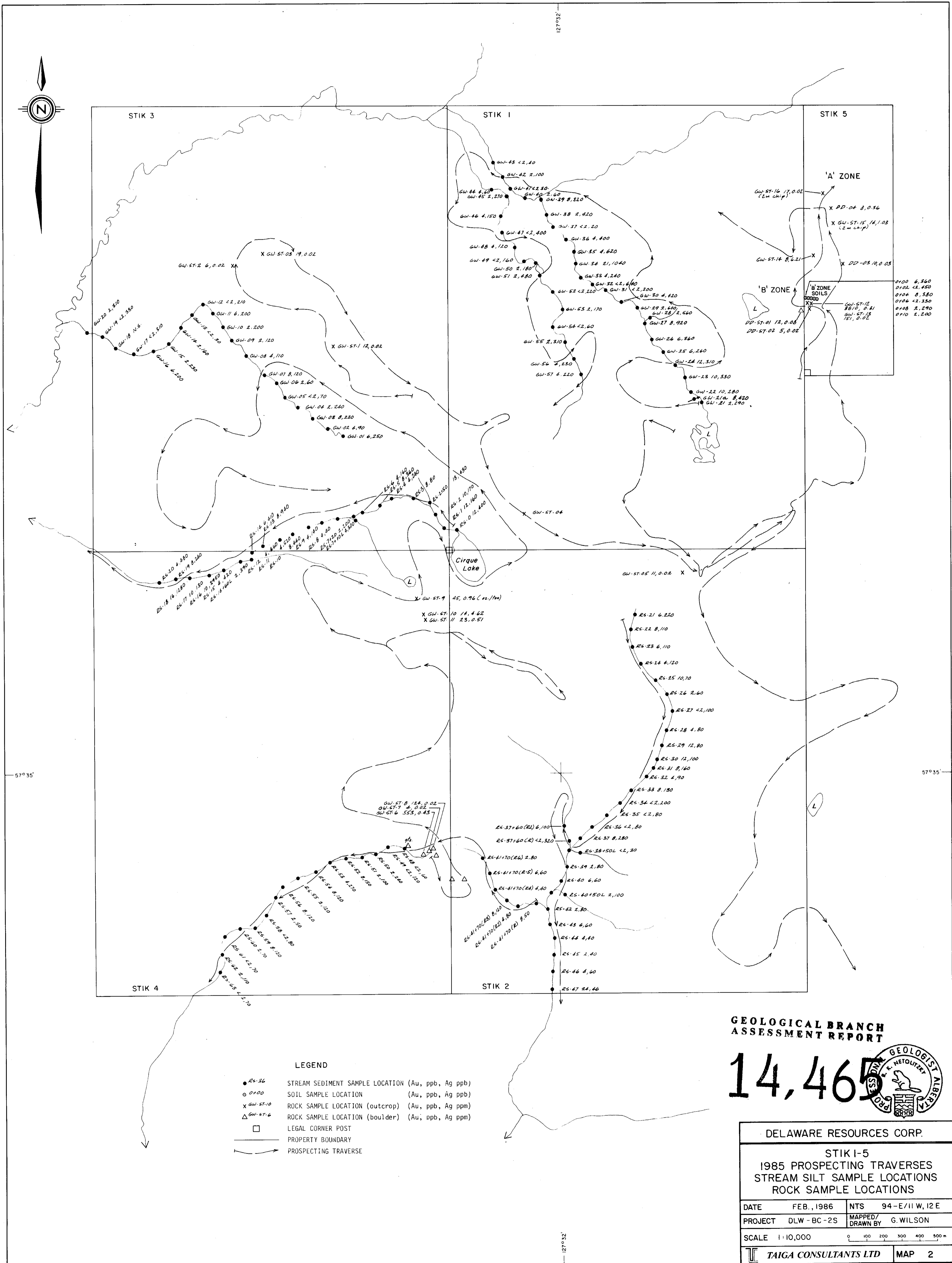
**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**14,465**

DELAWARE RESOURCES CORP.		
STIK I-5		
RECONNAISSANCE GEOLOGY & ROCK GEOCHEMISTRY		
DATE	FEB. 1986	NTS 94-E/11 W, 12 E
PROJECT	DLW - BC - 2S	MAPPED/DRAWN BY G. WILSON
SCALE	1:10,000	0 100 200 300 400 500 m
TAIGA CONSULTANTS LTD		MAP 1

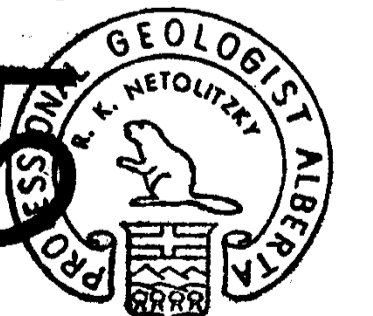






**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**14,465**



DELAWARE RESOURCES CORP.

STIK I-5  
1985 PROSPECTING TRAVERSES  
STREAM SILT SAMPLE LOCATIONS  
ROCK SAMPLE LOCATIONS

DATE	FEB., 1986	NTS	94-E/11 W, 12 E
PROJECT	DLW - BC - 2S	MAPPED/ DRAWN BY	G. WILSON
SCALE	1:10,000	0 100 200 300 400 500 m	
TAIGA CONSULTANTS LTD		MAP 2	

- LEGEND**
- R5-36 STREAM SEDIMENT SAMPLE LOCATION (Au, ppb, Ag ppb)
  - 0100 SOIL SAMPLE LOCATION (Au, ppb, Ag ppb)
  - X GW-ST-10 ROCK SAMPLE LOCATION (outcrop) (Au, ppb, Ag ppm)
  - △ GW-ST-6 ROCK SAMPLE LOCATION (boulder) (Au, ppb, Ag ppm)
  - LEGAL CORNER POST
  - PROPERTY BOUNDARY
  - PROSPECTING TRAVERSE