ASSESSMENT REPORT

GEOCHEMICAL SURVEY

SLAM GROUP

ATLIN MINING DIVISION

Tatsamenie Lake Area, B. C.

N.T.S. 104K/Tulsequah Sheet

58° 14' N

132° 07' W

OWNER: CHEVRON CANADA LIMITED

OPERATOR: CHEVRON CANADA RESOURCES LIMITED

AUTHORS: Mike Thicke
Godfrey Walton

November 1983

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LOCATION AND ACCESS

The SLAM claim group is located at 58°14'N and 132°07'W approximately 200 km southeast of Atlin, B.C. Access to the claims was by helicopter from a base camp at Bearskin Lake, 10 km west of the claims. The claim group is situated mostly on a broad grassy plateau. The western most area of the SLAM Group extends just below treeline.

CLAIMS

The SLAM Group covers previously unstaked ground. Chevron Canada Resources Limited is the operator while Chevron Canada Limited owns the claims.

Claim	Record No.	Record Date	No. of Units
SLAM	2008	September 12,1983	20
GRAND	2053	September 26,1983	20
STRIKE	2052	September 26,1983	16

REGIONAL GEOLOGY

The SLAM claims are underlain by Lower or Middle Triassic(?) foliated diorite and pre-Upper Triassic greenstone and phyllite (Souther, 1971). The contact between the intrusive and greenstone-phyllite package runs diagonally across the claims, southwest to northeast. East and south of the claims lies a large mass of Lower or Middle Triassic(?) diorite while west and north of the claims is an extensive area of pre-Upper Triassic greenstone and phyllite. To the north, and to some extent within the SLAM claims, lie Permian limestone.

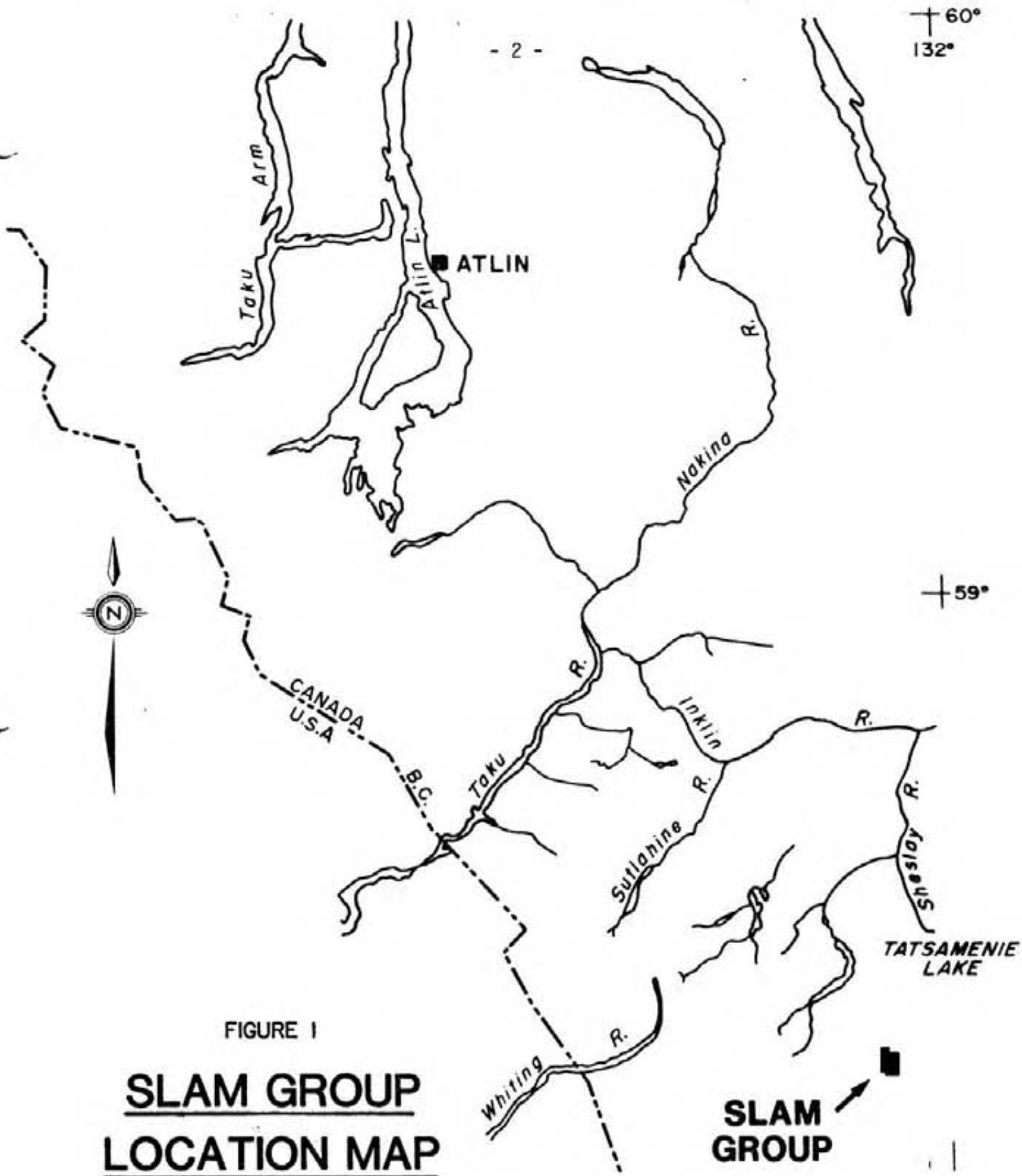

FIGURE 1

SLAM GROUP LOCATION MAP

LOCATION MAP

M 504

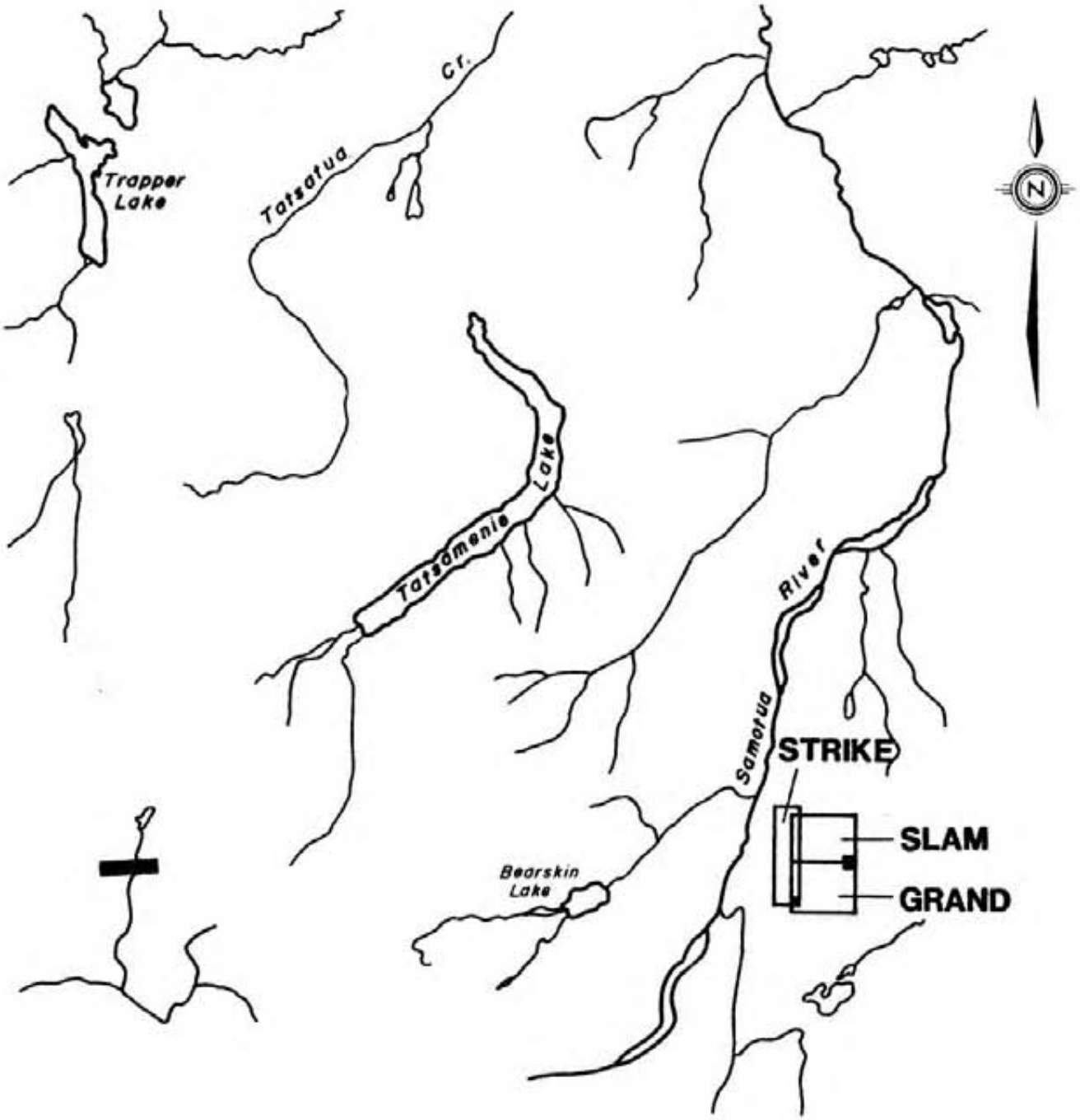

FIGURE 2

SLAM GROUP CLAIM MAP

0 10 Km

M 504

GEOCHEMICAL SURVEY OF CLAIMS

Fourteen rock samples and 190 soil samples were collected from the SLAM claim group (Figure 3). Rock samples were placed in heavy duty plastic sample bags. Soil development is very irregular. Well developed soil is mostly confined to the broad plateau. B-horizon soil was collected whenever possible otherwise C-horizon or talus fines were collected. Soil samples were placed in kraft wet strength soil bags then air dried. Both rock and soil samples were boxed and shipped to Chemex Labs Limited of North Vancouver, B. C.

Soil samples were further dried and sieved, with the -80 mesh fraction retained for analysis. Rock samples were crushed, dried and pulverized to -100 mesh. For Au determination, a fire assay - atomic absorption technique is used with the fire assay bead being dissolved in HCl and HNO_3 then analyzed by conventional atomic absorption techniques. For Ag, a mixture of $HClO_4$ and HNO_3 is used to digest the sample, which is followed by atomic absorption spectrophotometry. For arsenic a 1.0 gram sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digest is acidified, reduced with KI and mixed. A portion of the reduced solution is converted to arsine with $NaBH_4$ and the arsenic content determined using flameless atomic absorption. For Sb a 2.0 gm sample is digested with conc. HCl in hot water bath. The iron is reduced to $Fe^{\pm 2}$ state and the Sb complexed with I^-. The complex is extracted with TOPO-MIBK and anlayzed via A.A.

For rock assay silver and gold analyses are done by standard fire assay techniques. In the sample preparation stage the screens are checked for metallics which, if present, are assayed separately and calculated into the results obtained from the pulp assay.

0.5 assay ton sub samples are fused in litharge, carbonate and siliceous fluxes. The lead button containing the precious metals is cupelled in a muffle furnace. The combined Ag and Au is weighed on a microbalance, parted, annealed and again weighed as Au. The difference in the two weighings is Ag.

GEOCHEMICAL RESULTS

Gold, silver, arsenic and antimony geochemical values are plotted on Figures 4 to 7 respectively. Rock samples were collected mostly from silicified limestone. Only one rock sample collected contained significant Au or Ag mineralization, 2400 ppb and >100 ppm respectively. This rock sample was from a silicified limestone containing malachite staining. Few rock samples contain anomalous arsenic mineralization (>300 ppm) though most rocks contain anomalous antimony mineralization (>10.0 ppm). Generally it appears that most silicified limestone contains little or no Ag-Au mineralization but is anomalous in arsenic and especially antimony. Silicification accompanied with a sulphide phase are likely the most favourable conditions for the presence of gold and silver in limestone.

The soil samples collected contain few Au or Ag anomalies (>100 ppb and >1.5 ppm). Soil sampling delineated a zone of anomalous As and Sb (>300 ppm and >10.0 ppm) over a 200 m length below the prominent silicified limestone cliffs in the central area of the SLAM claim. The zone of anomalous As and Sb mineralization becomes more irregular with increasing distance west of the cliffs.

CONCLUSIONS AND RECOMMENDATIONS

Eight man days were spent collecting 190 soil and 14 rock samples from the SLAM Group. Outcrops on the claim group are not abundant but a few prominent knobs and a cliff-face of silicified limestone is present. Gold mineralization in rock appears associated with a silica-sulphide phase of alteration within limestone. Soil sampling delineated a zone of As - Sb mineralization below the silicified limestone cliffs.

It is recommended that detailed mapping, paying close attention to structure such as faults, be performed in conjunction with intensive prospecting and chip sampling. Trenching may also be warranted if chip sampling is positive. It is also recommended that a resistivity and I.P. survey be performed to delineate possible conductive structures at depth.

REFERENCE

Souther, J.G. (1971). Geology and mineral deposits of Tulsequah map-area, British Columbia. Geological Survey of Canada Memoir 362, 84 p.

1983 EXPLORATION PROGRAM

SLAM GROUP

COST STATEMENT

PERIOD: September 3 to September 23, 1983.

LABOUR:

	Position	Field Days	Office Days
H. Wober	Geologist	.5	
K. Shannon	Geologist	.5	
M. Thicke	Geologist	1.5	2
M. Gray	Assistant	2.5	
D. Hodge	Sampler	1	
R. Daniel	Sampler	1	
W. Hewgill	Sampler	1	
	TOTAL	8	2

8 field man days @$100.00 per day	$ 800.00
2 office man days @$150.00 per day	300.00
CAMP:	
8 days @$60.00 per day	480.00
GEOCHEMISTRY:	
1 rock assay @$10.50	10.50
13 rock @$17.65	229.45
190 soils @$16.15	3,068.50
HELICOPTER:	
2.7 hrs. @$500/hr. including fuel	1,350.00
DRAFTING:	
1 day @$100. per day	100.00
	$6,338.45

STATEMENT OF QUALIFICATIONS

I, Mike Thicke, graduated from the University of British Columbia in May, 1980 with a B.Sc. degree in geology. Six seasons have been spent working in exploration geology in B.C., including four since graduation. I am presently employed as a geologist by Chevron Canada Resources Limited of Vancouver, B. C.

Mike Thicke

Mike Thicke

STATEMENT OF QUALIFICATIONS

I, Godfrey Walton, have worked as a geologist in British Columbia, Yukon, Northwest Territories, Alberta and Ontario since 1973. A B.Sc. (Hons. Geology) was received in 1974 from the University of Alberta and followed by a M.Sc. degree in geology from Queen's University in 1978. I am currently employed as a geologist with Chevron Canada Resources Limited of Vancouver, B. C.

I am a member of the Canadian Institute of Mining and Metallurgy, Exploration Geochemists and Mineralogical Association of Canada.

The work on the SLAM Group was carried out by me under my supervision.

Godfrey Walton

GODFREY WALTON

PIG
LAKE

STRIKE

SLAM

GRAND

LCP

LCP

1100
1200
1300
1400
1500
1600
1700
1800
900
1000

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,818

LEGEND

■ ROCK SAMPLE

• SOIL SAMPLE

0 400 800 M

SCALE 1:10 000

Chevron Canada Resources Limited
Minerals Staff

SLAM CLAIM GROUP

GEOCHEMISTRY, Ag. ppm.

FIGURE No 5		PROJECT No. M504	
DATE NOV. 1983	REVISIONS		SCALE 1:10 000
NTS No 104 K			FILE No M-56
COMPILED BY MT			

PIG LAKE

STRIKE

SLAM

GRAND

LCP

LCP

1100 1200 1300 1400 1500 1700 1600 1700 1500 1700 900 1000 1100 1200 1300 1500 1700 1600 1700 1800 1700

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,818

LEGEND

■ ROCK SAMPLE

• SOIL SAMPLE

0 400 800 M

SCALE 1:10 000

Chevron Canada Resources Limited
Minerals Staff

SLAM CLAIM GROUP

GEOCHEMISTRY, As. ppm.

FIGURE No 6		PROJECT No M504	
DATE NOV. 1983	REVISIONS		SCALE 1:10000
NTS No 104 K			FILE No M-56
COMPILED BY MT			

PIG
LAKE

STRIKE

SLAM

GRAND

LCP

1100
1200
1300
1400
1500
1600
1700
1800
900
1000

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,818

LEGEND

■ ROCK SAMPLE

• SOIL SAMPLE

0 400 800 M

SCALE 1:10000

Chevron Canada Resources Limited
Minerals Staff

SLAM CLAIM GROUP

GEOCHEMISTRY, Sb. ppm.

FIGURE No 7		PROJECT No M504	
DATE NOV. 1983	REVISIONS		SCALE 1:10000
NTS No 104 K			FILE No M-56
COMPILED BY M T			

PIG LAKE

STRIKE

SLAM

GRAND

LCP

DH-1310 DH-1312 DH-1305 DH-1300 DH-1296 DH-1292 DH-1288 DH-1283 DH-1280 DH-1275 DH-1272 DH-1268

BD-256 BD-253 BD-250 BD-245 BD-240 BD-235 BD-230 BD-225 BD-220 BD-216

MG-460 MG-455 MG-450 MG-445 MG-440 MG-434 MG-430 MG-425 MG-420

KS-45 MG-461,462 MG-463

MT-278,279 MT-277 MT-345 MT-340 MT-336 MT-320 MT-315

MT-356 MT-352 MT-333 MT-335 MT-329 MT-325 MT-312 MT-308 MT-304 MT-300 MT-294

MG-413 WH-518 MG-415 MG-414 WH-519 MG-416 MG-417

900 1000 1100 1200 1300 1400 1500 1600 1700 1800

LEGEND

- ■ ROCK SAMPLE
- • SOIL SAMPLE

0 400 800 M

SCALE 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,818

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SLAM CLAIM GROUP
SAMPLE LOCATION MAP

FIGURE No. 3		PROJECT No. M504	
DATE NOV. 1983	REVISIONS		SCALE 1:10 000
NTS No. 104 K			FILE No. M-56
COMPILED BY M T			

PIG LAKE

STRIKE

SLAM

GRAND

LCP

2400,30

1100 1200 1300 1400 1500 1700 1600 900 1000 1800

N

LEGEND

■ ROCK SAMPLE

• SOIL SAMPLE

0 400 800 M

SCALE 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,818

Chevron Canada Resources Limited
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SLAM CLAIM GROUP

GEOCHEMISTRY, Au. ppb.

FIGURE No 4		PROJECT No M504	
DATE NOV. 1983	REVISIONS		SCALE 1:10000
NTS No 104 K			FILE No M-56
COMPILED BY M T			

NCI - 560

BEARSKIN LAKE

TAN 6

TAN 4

TAN 3

TAN 5

SUN 1

ORO 1

LONESOME LAKE

POND

SAMOTUA RIVER

LCP

MG-385

MG-386

MG-204

MG-205
MG-206

MG-381

MG-378
MG-379

MG 377

MG-376

MG-375

1000 1100 1200 1300 1400 1500 1600 1700 1800 1900

900 800

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,820

LEGEND

QUATERNARY

9 — FLUVIAL DEPOSITS; GRAVEL, TILL ETC.

TERTIARY

QUARTZ-IRON CARBONATE ALTERATION

JURASSIC

8 — HORNBLENDE DIORITE - MEDIUM TO COARSE GRAINED, GABBROIC IN PLACES, PLUGS (?)

PRE-UPPER TRIASSIC

—STIKINE ASSEMBLAGE ROCKS—

7 — MAFIC FELDSPAR PORPHYRY; DARK GREEN TO GRAY, 1-2 CM FELDSPAR PHENOCRYSTS

6 — GREENSTONE; MEDIUM GREEN FRESH, LAYERED IN PLACES, OTHERWISE MASSIVE

5 — TUFFS; INCLUDES ASH TUFFS, CRYSTAL TUFFS AND LAPPILLI TUFFS

LIMY BED; CRINOIDAL, LAYERED

4 — FOLIATED AUGITE PORPHYRY; INCLUDES BASALT (?) FRAGMENTS IN CERTAIN SECTIONS

4a — SERPENTINIZED AUGITE PORPHYRY

3 — ARGILLACEOUS SEDIMENTS; BLACK WITH GOOD PARTING

PERMIAN (?)

2 — SERPENTINITE; DARK GRAY, FINE GRAINED.

—AGE UNCERTAIN—

1 — GABBRO ? / DIABASE ? FINE TO MEDIUM GRAINED MAFIC INTRUSION

SYMBOLS

- GEOLOGICAL CONTACT; DEFINED APPROXIMATE
- LIMIT OF OUTCROP
- FRACTURE ATTITUDE
- VEIN ORIENTATION
- FOLIATION ATTITUDE
- FRACTURE TRACE
- FAULT; DEFINED, APPROXIMATE
- PORPHYRY
- SWAMP

GEOCHEMISTRY

□ MG = 1983 ROCK SAMPLE

	Ag	As	Sb	Au
MG 3T1 - 204	0.1	53	1.2	<5
MG 3T1 - 205	0.1	170	150.0	5
MG 3T1 - 206	0.1	45	94.0	<5
MG 3T1 - 375	0.1	7	9.0	265
MG 3T1 - 376	0.1	245	31.0	135
MG 3T1 - 377	0.1	445	29.0	40
MG 3T1 - 378	0.1	1200	30.0	75
MG 3T1 - 379	0.1	230	10.8	100
MG 3T1 - 384	0.1	11	0.9	25
MG 3T1 - 385	19.5	300	2.4	380
MG 3T1 - 386	2.8	3	0.1	55

0 100 200 300 400 500 600 700 800 900 1000 M

SCALE 1:10000

Chevron Canada Resources Limited
Minerals Staff

TAN CLAIM GROUP
GEOLOGY
AND
ROCK SAMPLE GEOCHEMISTRY & LOCATIONS

FIGURE No 3		PROJECT No M 504	
DATE OCT. 1983	REVISIONS		SCALE 1:10000
NTS No 104 K			FILE No
COMPILED BY			