2140

GEOPHYSICAL REPORT

Magnetometer and E. M. Surveys

by

Andrew J. Schmidt, P. Eng. (B.C.)
George Podolsky, P. Eng. (Ont.)

on the

ASCOT CLAIM GROUPS 'A', 'B', and 'D'

owned by

TEXAS GULF SULPHUR COMPANY

situated on
DOME MOUNTAIN, 15 miles East of Smithers

in the
OMINECA MINING DIVISION
54°, 126°, S. E.

July 2nd - August 21st, 1969

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REPORT ON GROUND GEOPHYSICAL SURVEYS

on

DOME-ASCOT CLAIM GROUP SMITHERS AREA, BRITISH COLUMBIA

by

TEXAS GULF SULPHUR COMPANY.

INTRODUCTION:

During the months of July and August, 1969, ground geophysical surveys were conducted by Texas Gulf Sulphur Company over portions of a claim group in the Smithers area of British Columbia. These surveys were by way of a follow-up of an airborne survey flown over this claim group (herein referred to as the Dome-Ascot claims) and covered only a number of selected airborne electromagnetic anomalies.

METHOD OF SURVEY:

The geophysical work consisted primarily of electromagnetic surveys run over a cut grid. Two such grids were cut though not all lines were checked. Several magnetic profiles were also taken to check the

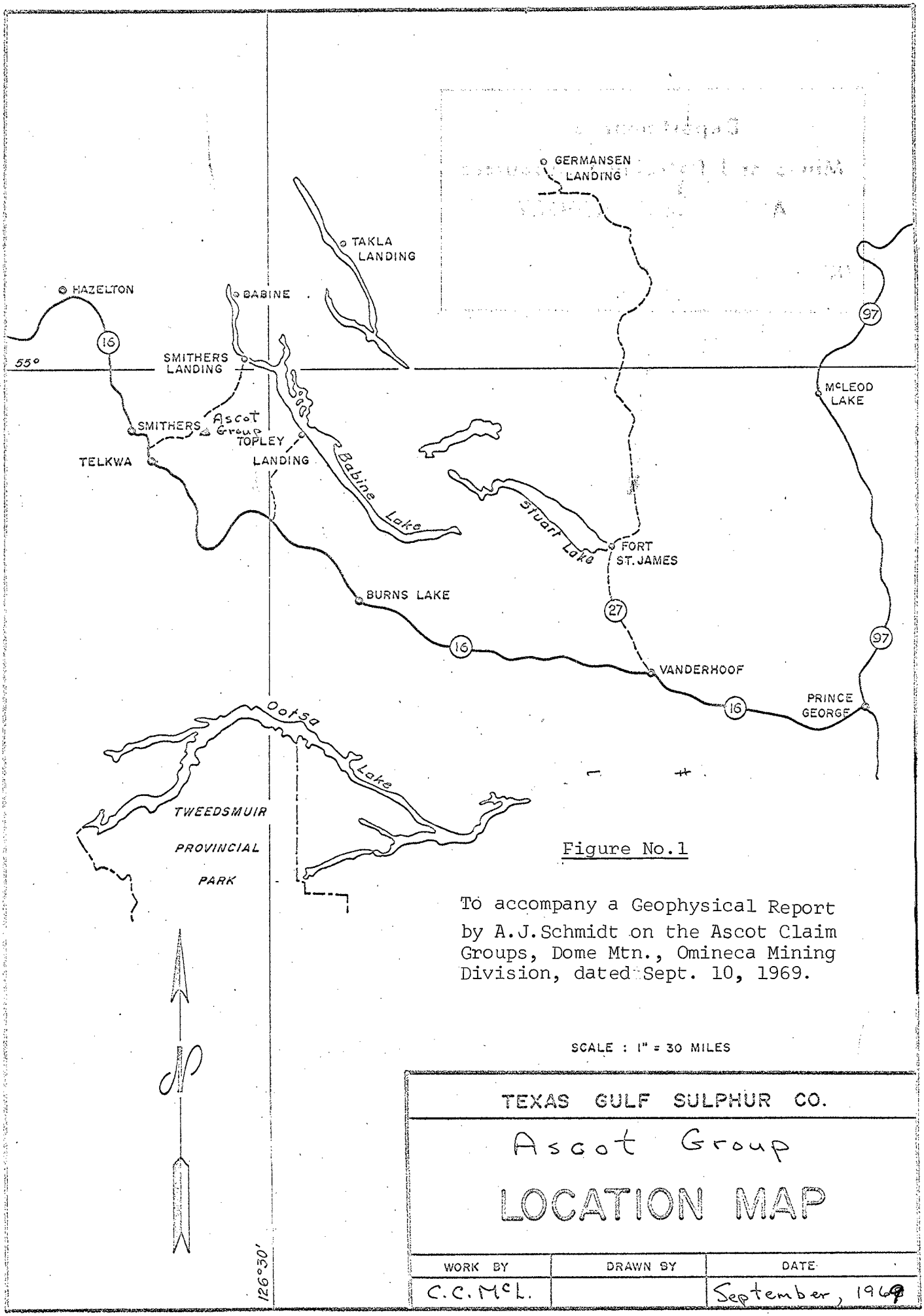


Figure No.1

To accompany a Geophysical Report by A.J.Schmidt on the Ascot Claim Groups, Dome Mtn., Omineca Mining Division, dated Sept. 10, 1969.

SCALE : 1" = 30 MILES

TEXAS GULF SULPHUR CO.

Ascot Group

LOCATION MAP

WORK BY	DRAWN BY	DATE
C.C.McL.		September, 1969

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2140 MAP #1

E.M. results. Lines were at 400 foot intervals, oriented north-south.

The principal electromagnetic instrument used in these surveys was a light weight, vertical coil unit. Intermediate Range E.M. or IREM manufactured by McPhar Geophysics. This was used in a fixed transmitter (vertical coil), movable receiver (tilt coil) configuration wherein readings are taken along lines at 400 and 800 foot distances either side of the transmitter coil while the transmitter coil is rotated about a vertical axis to maintain the receiver coil in the plane of the transmitter coil. The effective range of this unit is about 1,200 feet. Both low and high frequency tilt angles were recorded (400 and 2,000 Hz respectively).

The Crone J.E.M. electromagnetic unit was used as a reconnaissance tool and to provide additional information on the conductors located with the IREM. The method of survey with the JEM was the "shootback" array along the line of profile. Here, the two coils, spaced at a distance of 200 feet advance along a grid line and each coil is used alternatively as both transmitter and receiver in a modified version of the tilt coil method. The resultant "dip angle" represents

the sum of the two receiver coil readings. Again, both low and high frequencies (480 and 1,600 Hz) were read.

The magnetometer used in this work was a McPhar model M-700 Fluxgate Magnetometer. This is a hand levelled unit which measures the vertical component of the magnetic field. Its sensitivity is of the order of ±20 gammas but accuracy is about ±50 gammas.

The work was conducted by Mr. Frank Glass and was under the supervision of Mr. A. Schmidt, project geologist with Texas Gulf. The writer acted in an advisory capacity on this work and spent one day on the property during the course of the work and two days in the field office in Smithers.

The statistical data (i.e., personnel, number of men days and footage) pertaining to this work is given in summary form along with related geological and geochemical data.

PURPOSE OF SURVEY:

The ground work was carried out as a follow-up to an airborne survey flown over the Dome-Ascot claim group by Seigel Associates Limited. This survey had located three anomalous areas within this claim group

Grid B was located to check an anomaly along a long, east south-easterly trend in the north end of the group, and Grid A covered a somewhat larger area encompassing a number of anomalies in the south-west portion of the claim group.

RESULTS:

GRID B:- This grid was checked with both the McPhar IREM and Crone JEM units along with several mag profiles. The E.M. work located an anomalous trend along a direction of about N 60° E crossing the base line (298N) in the vicinity of 314E. The IREM work indicated good cross-overs on lines 316E (about 2N) and 320E (about 4N) but the relative frequency response on both the IREM and JEM results indicates a zone of poor to moderate conductivity. The mag results show one or more sharply peaked anomalies in the vicinity of the E.M. conductor on lines 320E and 324E. The mag profiles also show a general increase in magnetic intensity north of the conductor.

From these results, one can conclude that the E.M. conductor is a narrow, near surface feature lying along a contact between basic (to the north)

and acidic rocks. From the persistence of the conductor as evidenced by the airborne work, this probably represents a sedimentary horizon. There is good geophysical (IREM) and geological evidence that the conductor has a relatively shallow dip to the south.

GRID A:- The IREM work has outlined a series of east west trending conductors corresponding to a number of rather randomly scattered airborne anomalies in the area. This distribution of the airborne anomalies can be attributed to various errors arising in the compilation of the airborne data. The two strongest conductors lying south of the base line between lines 145E to 173E appear to be of moderate to good conductivity but narrow in width. The more northerly - about 200 feet south of the base line - extends from about 151E to 171E. The profiles suggest a shallow dip to the north. The other good conductor lies from 600 to 800 feet south of the base line and extends from line 141E to about 173E. The dip information is somewhat ambiguous, complicated by the parallel conductor to the north, but it appears to be more steeply dipping and may actually dip to the south. The remainder of the E.M cross-overs result from relatively poor conductors. These latter are probable caused by structural features (e.g. faults and shears) whereas the

two stronger conductors appear to be formational.

The Crone JEM profiles confirmed the IREM work except that the poorer anomalies north of the base line (see lines 153E and 157E) showed up more prominently. This would suggest that these poorer anomalies may also be overburden effects. Magnetic data for Grid A is not available.

Recommendations for drilling the two Grid A and the one Grid B anomalies have been made and it is understood that this work is in progress. If results of this drilling prove disappointing no further geophysical work is recommended on these grids.

GP/an

G. Podolsky

REGISTERED PROFESSIONAL ENGINEER
G. PODOLSKY
PROVINCE OF ONTARIO

Qualifications of George Podolsky

Texas Gulf Sulphur Co.

Toronto Office

Present Status:

Employed by the Texas Gulf Sulphur Co. as Senior Geophysicist in the Exploration Division. Responsibilities include planning, direction, and supervision of geophysical surveys and evaluation and interpretation of their results.

Academic Qualifications:

Graduated from Queen's University in 1954 with a degree of Bachelor of Science taken in Engineering Physics.

Memberships:

Registered with Association of Professional Engineers of the Province of Ontario as a Professional Engineer.

Have also been registered (1964-66) as a Professional Geophysicist with the Association of Professional Engineers of Alberta but currently maintain only non-resident status.

Active member: Society of Exploration Geophysicists (from 1960); European Association of Exploration Geophysicists (from 1958); and Canadian Exploration Geophysical Society (from 1958 and current Secretary-Treasurer).

Continued...

Experience:

Pre-graduation:

Summer 1953 - Technician, radar lab, National Research Council, Ottawa

Post graduation:

Summer 1954 - magnetometer operator on field party in northern Quebec for Hollanah Mines Ltd.,

1954-1955 - Jr. Electronics Engineer, Guided Missile Lab, DeHavilland Aircraft Co. Ltd., Downsview, Ontario.

1955-1957 - Geophysicist with Labrador Mining and Exploration Co. (and affiliates) working in Labrador and N. Quebec

1957-present - Geophysicist - Texas Gulf Sulphur Co. (and subsidiaries) working in Cuba, United States, and throughout Canada including four years (1962-66) in Calgary in petroleum exploration. Principal activity has been in mining exploration and experience has been gained in virtually every type of airborne and ground geophysical method currently in use.

Sept. 10th, 1969.

GEORGE PODOLSKY

GP/lam

REGISTERED PROFESSIONAL ENGINEER
G. PODOLSKY
PROVINCE OF ONTARIO

APPENDIX A

Qualifications of George Podolsky, P. Eng., Geophysicist.

APPENDIX "B"

PERSONNEL AND QUALIFICATIONS:

I, Richard O. Crosby, of the City of Vancouver, Province of British Columbia, hereby certify that:

1. I am a geologist-geophysicist with offices at Seigel Associates Limited, 750 - 890 W. Pender Street, Vancouver, British Columbia.

2. I am a graduate of Washington State University, B.Sc. (Geology) 1951.

3. I have been actively and continuously engaged in mineral and petroleum exploration for 18 years.

4. I am a member of the Association of Professional Engineers of British Columbia and the Yukon Territory.

5. I have no interest, directly or indirectly, nor in the securities of, nor do I expect to receive any such interest in Texas Gulf Sulphur Company.

Dated this 27th day of October, 1969, in the City of Vancouver, Province of British Columbia.

Richard O. Crosby

Richard O. Crosby, B.Sc., P.Eng.

QUALIFICATIONS

John P. Steele, Project Geophysicist

1. Graduate of the University of Toronto, B.Sc. (Mathematics and Physics) 1967.

2. Presently a geophysicist with Seigel Associates Limited, 750 - 890 W. Pender Street, Vancouver, British Columbia and attending graduate school University of British Columbia.

3. Two years' experience directing and performing geophysical surveys in Canada and the United States for Geoterrex Ltd. and Seigel Associates Ltd.

Russell A. Hillman, Geophysicist

1. Graduate of the University of British Columbia, B.Sc. (Geophysics) 1967.

2. Presently a geophysicist with Seigel Associates Limited, 750 - 890 W. Pender Street, Vancouver, British Columbia.

James Mabley, Electronic Technician

1. Senior Electronic Technician. Seigel Associates Limited, 79 Martin Ross Ave., Downsview, Ontario.

2. Fifteen years' experience in airborne geophysical systems for Aero Service Corporation, Barringer Research Limited and Seigel Associates Limited.

A. Szanto, Electronic Operator and Technician

1. Graduate Ryerson Polytechnical Institute (Electronics) 1968.

2. Electronic operator and technician, airborne geophysical systems. Seigel Associates Limited, 79 Martin Ross Ave., Downsview, Ontario.

Michael Dyment, Survey Assistant

1. Graduate Halibury School of Mines, 1965.

2. Two years' experience in underground mining operations and six months shift foreman.

3. Two years geophysical operator and technician. Seigel Associates Limited, 750 - 890 W. Pender Street, Vancouver, B.C.

Ronald Gibbons, Survey Assistant

1. Student-University of British Columbia, majoring in engineering.

2. Two summers' experience as geophysical field assistant for Seigel Associates Limited, 750 - 890 W. Pender Street, Vancouver, British Columbia.

Qualifications of F. S. Glass, Student Geophysicist
Texas Gulf Sulphur Company
Vancouver, B. C.

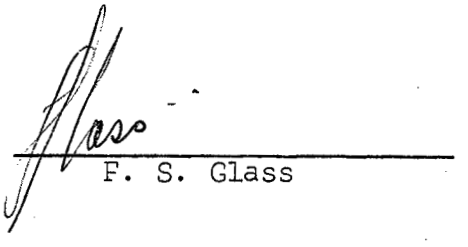
Academic Qualifications

1966 Graduate, Bulawayo Technical College, Rhodesia, in Applied Mining Geology.

Two years towards Bachelor of Science, in Geophysics, from the University of British Columbia

Experience

1964 - 1967	Kamativi Tin Mines Ltd., Rhodesia Mine Geologist and Mine Surveyor.
May - Sept. 1968	Texas Gulf Sulphur Company, Geophysical Assistant - magnetometer and E. M. surveys, Babine and Coast Districts.
May, June 1969	Texas Gulf Sulphur Company, Assistant Geophysicist - magnetometer and E. M. surveys, Ontario and Newfoundland. Received close supervision and instruction from Mr. G. Podolsky, Chief Geophysicist.



F. S. Glass

APPENDIX B

Affadavit of expenses incurred.

SEIGEL ASSOCIATES LIMITED
GEOPHYSICAL CONSULTANTS & CONTRACTORS
A DIVISION OF SCINTREX LIMITED

August 28, 1969

Invoice No. 9804

Texas Gulf Sulphur Company Inc.
701 - 1281 West Georgia Street
Vancouver 5, B.C.

Attention: Mr. A.J. Schmidt

FOR PROFESSIONAL SERVICES RENDERED

To execute an airborne electromagnetic-magnetometer survey, Smithers area, B.C. as per contract dated May 21, 1969.

Geophysical Survey:		
1 day @ $500.00		500.00
138 line miles @ $15.00		2,070.00
Helicopter:		
7 hours @ $175.00		1,225.00
Truck:		
Seigel Econoline Truck		
1 day @ $15/day	$15.00	
250 miles @ 15¢/mile	$37.50	52.50
Field Expenses		
Room & Board	129.15	
Miscellaneous	19.85	
	149.00	
Plus 10%	14.90	163.90
		$4,011.40
Less down payment		1,000.00
		$3,011.40

E.&O.E.

Form No. Z 1 - 220 WILLSON STATIONERS

Canada

Province of British Columbia

To Wit:

In the Matter of

The attached report, "Geophysical Report, Magnetometer and E. M. Surveys, on the Ascot Claim Groups", by George Podolsky.

I, **Andrew J. Schmidt, agent for Texas Gulf Sulphur Company**, of **701 - 1281 West Georgia St. Vancouver 5, B. C.** in the Province of British Columbia.

Do Solemnly Declare that **during the period July 2nd - August 21st, 1969, caused assessment work to be done to the value of $1512.00. The expenses were incurred as follows:**

a. Magnetometer Survey - 1 day's work (Aug. 15, 1969) by F. Glass TGS, at $20.00 per day, plus $7.00 per man-day camp costs	**$ 27.00**
b. Crone Jr. E. M. Surveys - 23 man-days work by F. Glass and assistant at $20.00 per man-day, plus $7.00 per man-day camp costs.	**621.00**
c. McPhar I.R.E.M. Surveys - 32 man-days work by F. Glass and assistants at $20.00 per man-day, plus $7.00 per man-day camp costs.	**864.00**
	$1512.00

Please note that these expenses were distributed as follows:

- ASCOT Group 'A' - on Grid A	**$ 594.00**
- ASCOT Group 'A'	**675.00**
- ASCOT Group 'D'	**243.00**
	$1512.00

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. J. SCHMIDT

And I make this solemn Declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath, and by virtue of the Canada Evidence Act.

Declared before me

at

in the Province of British Columbia.

this day of

A.D. 19

A. Schmidt

A Notary Public in and for the Province of British Columbia
A Commissioner for taking affidavits for British Columbia

Dated 19

In the Matter of

Statutory Declaration

Form No. Z 1 - 220 WILLSON STATIONERS

ASCOT GROUP 'A', 40 claims

ASCOT GROUP 'B' 40 claims

ASCOT GROUP 'C', 39 claims

ASCOT GROUP 'D', 40 claims

Grid 'A'

Grid 'B'

Grid 'C'

BABINE 2

BABINE 1

1969 T.G.S. Camp 20

ASCOT EXPLORATION M.C. 1

Canyon Creek

Cecilia Creek

Dome Mtn.

Lines cut in 1969.

Lines cut in 1968.

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Figure No. 2

N

To Accompany a Geophysical Report by A. J. Schmidt, P. Eng. on the ASCOT Claim Groups, Dome Mountain OMINECA Mining Division.

dated September 10, 1969

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. J. SCHMIDT

Scale: One Inch = 1000 Feet.

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 2140 MAP #2

TEXAS GULF SULPHUR CO.

DOME-ASCOT CLAIMS AND GRID LAYOUT. and Claim Grouping

	Drawn By:	Date:
	J.R. Fraser	August 21, 1969.

261 N
257 N
253 N
247 N
245 N
241 N
237 N
233 N
229 N
225 N
221 N
217 N
213 N

125 E
129 E
133 E
137 E
141 E
145 E
149 E
153 E
157 E
161 E
165 E
169 E
173 E
177 E
181 E
185 E
189 E
193 E
197 E
201 E
205 E

LEGEND:

- EM CROSS-OVER (PLATE I)
- EM CROSS-OVER (PLATE II)
- WEAK OR POSSIBLE EM CROSS-OVER FROM PLATE I
- WEAK OR POSSIBLE EM CROSS-OVER FROM PLATE II

FIGURE Nº 3
TO ACCOMPANY A GEOPHYSICAL REPORT
BY A.J. SCHMIDT ON THE ASCOT GROUPS,
DOME MTN., OMINECA MINING DIVISION,
DATED SEPTEMBER 10, 1969

△ TRANSMITTER SET-UP
—— HIGH FREQUENCY
-·-·- LOW FREQUENCY

SOUTH READING ← | → NORTH READING

N

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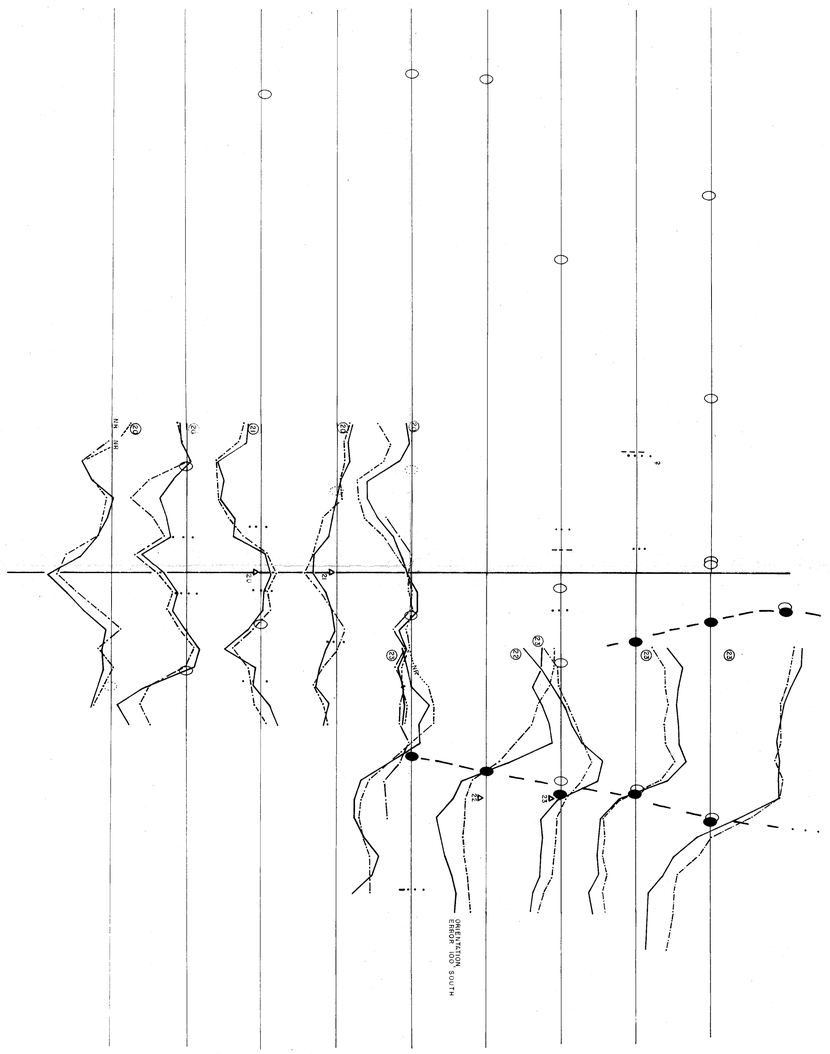
SCALE: ONE INCH = 400' = 40°

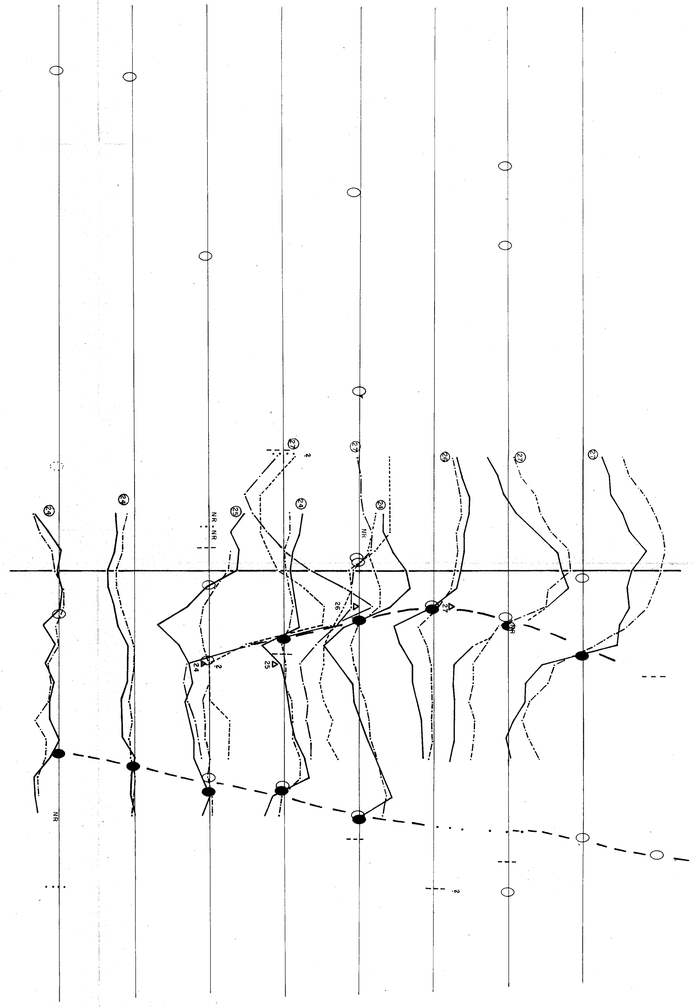
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. J. SCHMIDT

TEXAS GULF SULPHUR CO.

DOME ASCOT PROPERTY
IREM SURVEY RESULTS
GRID 'A'
PLATE I

WORKED BY	DRAWN BY	DATE
F. GLASS	F. GLASS	SEPT. 4, 1969





245 N
241 N
237 N
233 N BASE LINE
229 N
225 N
221 N
217 N
213 N

125 E 129 E 133 E 137 E 141 E 145 E 149 E 153 E 157 E

141 E 145 E 149 E 153 E 157 E 161 E 165 E 169 E

LEGEND:

- ○ EM CROSS-OVER (PLATE I)
- ● EM CROSS OVER (PLATE II)
- ¦ WEAK OR POSSIBLE EM CROSS-OVER FROM PLATE I
- : WEAK OR POSSIBLE EM CROSS-OVER FROM PLATE II

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2140 MAP #4

FIGURE Nº 4
TO ACCOMPANY A GEOPHYSICAL REPORT
BY A.J. SCHMIDT ON THE ASCOT GROUPS,
DOME MTN., OMINECA MINING DIVISION,
DATED SEPTEMBER 10, 1969

△ TRANSMITTER SET-UP
— HIGH FREQUENCY
-·-·- LOW FREQUENCY

SOUTH READING ← | → NORTH READING

N

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SCALE: ONE INCH = 400' = 40°

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. J. SCHMIDT

TEXAS GULF SULPHUR CO.

DOME ASCOT PROPERTY
IREM SURVEY RESULTS
GRID 'A'
PLATE II

WORKED BY	DRAWN BY	DATE
F. GLASS	F. GLASS	SEPT. 4, 1969

261 N
257 N
253 N
249 N
245 N
241 N
237 N
233 N
229 N
225 N
221 N
217 N
213 N
209 N
205 N

263 N
261 N
259 N
257 N
255 N
253 N
251 N
249 N
247 N
245 N
243 N
241 N
239 N
237 N
235 N
233 N
231 N
229 N
227 N
225 N
223 N
221 N
219 N
217 N
215 N
213 N
211 N
209 N
207 N
205 N
203 N
202 N

M-0
M-4
M-8
M-12
M-16
M-20
M-22

RECOMP. LINE WISE
(COMPASSED & PACED)

141 E
145 E
149 E
153 E
157 E
161 E
165 E
169 E
173 E
177
181 E
185 E
189 E
193 E
197 E
201 E
205 EAST

DOME-ASCOT EM CRONE
11TH JULY 1969
1" = 200 FT. = 20°
HIGH FREQUENCY ——
LOW FREQUENCY ⁘
WORK BY :- F. GLASS

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. J. SCHMIDT

FIGURE Nº 5
TO ACCOMPANY A GEOPHYSICAL REPORT BY A.J. SCHMIDT ON THE ASCOT GROUPS, DOME MTN. OMINECA MINING DIVISION, DATED SEPTEMBER 10, 1969

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PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. J. SCHMIDT

SCALE: ONE INCH = 400' = 40°

TEXAS GULF SULPHUR CO.

DOME ASCOT PROPERTY
CRONE JR. EM SURVEY RESULTS
GRID 'A'

WORKED BY	DRAWN BY	DATE
F. GLASS	F. GLASS	SEPT. 4, 1969

CRONE

1"=200'=20*

480 c.p.s.

1800 c.p.s.

238 N

336 E

332 E

328 E

324 E

320 E

316 E

312 E

Strike of conductor.

I.REM.

1"=200'=20*

238 N

336 E

332 E

328 E

324 E

320 E

316 E

312 E

Strike of conductor.

1968 Geochemistry Cx En.

E.M. Crossover.

400 c.p.s.

2000 c.p.s.

△ Transmitter Setup.

MAGNETICS

1"=200'=500γ

238 N

336 E

332 E

328 E

324 E

320 E

316 E

312 E

GEOLOGY

1" = 200'

LEGEND.

5 Grey volcanic breccia.

4 Black shale, siltstone

3 Rhyolite

2 Andesite

1 Diorite.

Strike and dip of bedding.

Strike and dip of joints.

Vertical joints.

Contact - inferred.

Outcrop.

Diamond drill hole.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. J. SCHMIDT

TEXAS GULF SULPHUR CO.

DOME-ASCOT PROPERTY
MAG, EM, GEOLOGY SURVEYS
GRID 'B'

WORK BY.	DRAWN BY.	DATE.
J.R.F., F.S., I.S.	J.R.F., F.S.	Sept. 4, 1969.

FIGURE NO. 6

To accompany a Geophysical Report by A. J. Schmidt, P.Eng. on Ascot Group "D", Dome Mountain dated September 10, 1969.

238 N

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