

1672

PART 4

GEOPHYSICAL REPORT

Magnetometer Survey

on

THE CAVZ CLAIMS

CAVZ M.C.'s 1 to 12, 15 to 26,
29 to 40, 45 to 54

Trail Peak, Omineca M.D.
13 miles northeast of Fort Babine
55° , 126° S.E.

by

G. Podolsky
J. Russell Loudon, P. Eng.

owned by

Texas Gulf Sulphur Company

July 1st to September 13th, 1968

GOVERNMENT AGENT
RECEIVED
1968

SMITHERS. B. C.

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1 Location Map

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✓ Magnetometer Map - CAVZ Group

in pocket

MAGNETOMETER SURVEY

TRAIL PEAK - B.C.

INTRODUCTION

A magnetometer survey was completed on the Trail Peak grid using the McPhar Fluxgate magnetometer. This magnetometer measures the vertical component of the magnetic field and the readings are not absolute but relative to a base station reading. The readings were read to the nearest 10 gammas.

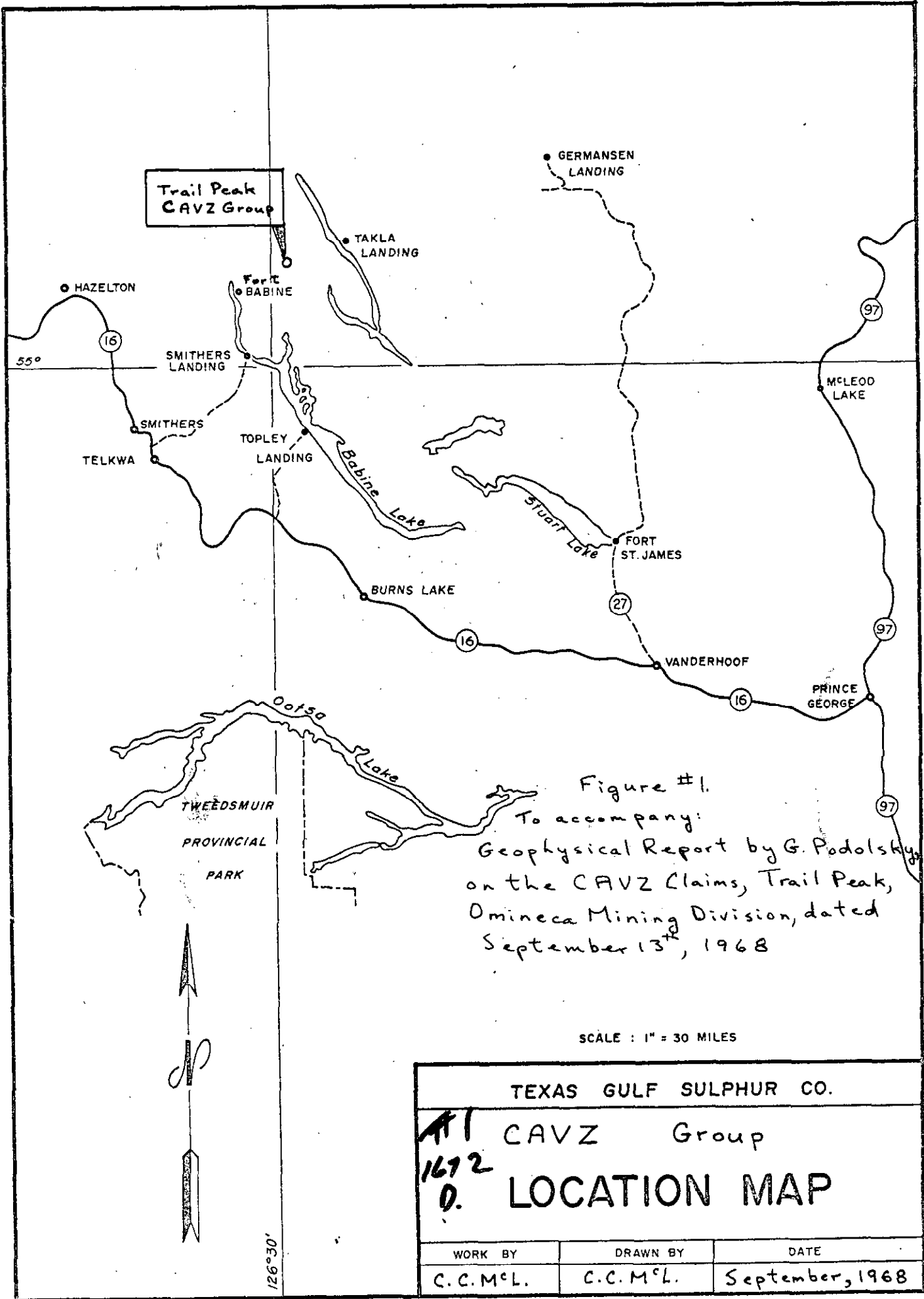
The Fluxgate magnetometer works on the principle that when a sinusoidal magnetic field is impressed in a permalloy (near saturation - by earth's field) the wave form will be distorted. This distortion is then measured through an electronic current by a meter reading.

The survey was done using base lines for control; the magnetometer readings were taken every one hundred feet (closer spaced if higher readings encountered) and corrected to the base line readings. There was an attempt to check back into the base line every half hour or less so that reasonable control over the drift of the instrument and the diurnal could be made. The daily drift of the instrument plus the diurnal did not vary in most cases more than 100 gammas.

MAGNETICS

S.W. Quarter: (Lines 239E to 300E. Stns. 240N to 270N)

The one prominent mag feature in the NE corner of this area appears to stem from a series of sills or dykes running east-west (grid co-ords) and terminating between lines 276E and 272E.



Trail Peak
CAVZ Group

Figure #1.
To accompany:
Geophysical Report by G. Podolsky
on the CAVZ Claims, Trail Peak,
Omineca Mining Division, dated
September 13th, 1968

SCALE : 1" = 30 MILES

TEXAS GULF SULPHUR CO.		
CAVZ Group		
D. LOCATION MAP		
WORK BY	DRAWN BY	DATE
C.C.McL.	C.C.McL.	September, 1968

AT
1672
D.

126°30'

The mag feature bears no direct relationship to the geology as mapped, but is likely related to a facies of the group mapped as "Diorite to Monzonite". The abrupt termination of this line of mag highs suggests that either the major fault shown on the geologic map could be displaced further west or the intrusives terminate at the narrow dyke (biotite-feldspar-porphry) as shown between lines 256E and 268E.

N.W.Quarter: (Lines 239E to 300E. Stns. 270N to 300N)

The east-west trending anomalies from the S.W. area continue up to about 278N. One prominent negative anomaly on Line 300E (Stn.296N) appears to relate to a prominent dyke mapped as a "Biotite-Hornblende-Feldspar-Porphry". This dyke, at least along its western contact, is the only feature on the geologic map which shows an obvious relationship to the magnetics. A second alignment of mag lows on lines 284E (296N), 288E (290N) and 292E (280N), appear to be related to a series of dykes which might fall under the heading of "Diorite to Monzonite". In the small area covered by magnetometer survey (lines 280E to 296E, Stn. 300N to 316N), the magnetics also reflect a pattern of NW trending dykes.

East Half: Lines 300E to 360E, Stations 240N to 300N

The area of mag highs in the SE corner of the NW quarter continues into this area to about 320E generally extending from 268N to 280N. The distribution of mag anomalies suggests an intrusive mass cut by a series of NW trending dykes. This area shows more clearly the relationships between the geologic unit labelled as "Biotite-

Hornblende-Feldspar Porphyry" and a fairly prominent mag trend cutting diagonally across the area from the SE corner to the NW corner. A grouping of anomalies in the NW corner of the area, and just northeast of this same diagonal mag trend, cannot be related to geology but it is likely that their distribution reflects structure. There is possibly some relationship between these rocks and those underlying the anomalous area to the south.

INTERPRETATION

Because of the complex distribution of the mag anomalies and the uncertainty regarding their relationship to clearly defined geologic features (with one or two exceptions), it was considered inadvisable to present a contoured interpretation of the magnetic results. Nor has any attempt been made at calculating any of the physical parameters such as width, dip, depth, or magnetic susceptibility. The magnetic profiles indicate that the anomalies must be caused by narrow, near surface dykes having only a moderate susceptibility contrast with the country rock. The exception is the large area of magnetic highs (268N to 280N, 272E to 320E) which appears to be an area of moderate to low susceptibility contrast giving rise to a relatively low (1200 to 1500 gammas), broad anomaly on which is superimposed a series of narrow magnetic peaks and troughs. These latter are characteristic of a series of narrow and randomly oriented dykes.

CONCLUSIONS

The magnetic anomalies can be ascribed to:

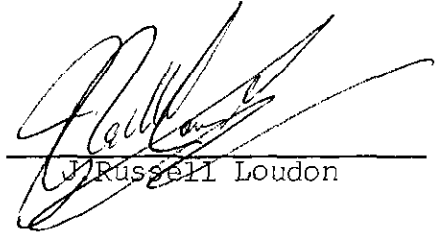
- a. a series of narrow dykes generally trending northwest,
- and b. a broad, intrusive mass - probably a diorite-extending

from 272E to 320E and from about 268N to 278N which is
itself cut by a series of dykes.

The only direct correlation of magnetics and geology is the
nearly continuous mag trend extending from around 240N on line 356E
in a NW direction up to about 296N on line 300E. This trend corresponds
to a unit mapped as a "Biotite-Hornblende-Feldspar Porphyry" - the
only such feature on the map.

George Podolsky

per



J. Russell Loudon

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.,

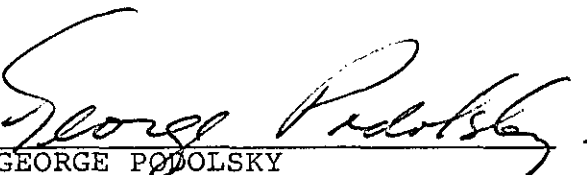
1954-1955 - Jr. Electronics Engineer, Guided Missile Lab, DeHavilland Aircraft Co. Ltd., Downsview, Ontario.

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. 17th, 1968.

GP/lam


GEORGE PODOLSKY



Canada

Province of British Columbia

To Wit:

In the Matter of

The attached report, "Geophysical Survey of the CAVZ Claims, Trail Peak, Omineca Mining Division" by G.Podolsky

I, J. Russell Loudon, P.Eng. of 701 - 1281 West Georgia Street Vancouver 5, British Columbia in the Province of British Columbia.

Do Solemnly Declare that I have supervised the work carried out and described in the attached report and that:

a. The work was carried out during the period - July 1st to August 7th, 1968 by

b. F.Glass, Texas Gulf Sulphur crew, July 1st to August 7th

38 days @ \$550/month \$ 698.75

and that his

c. Living Expenses were at the rate of \$8.00/day/man

for 38 man/days 304.00

Total \$ 1,002.75

The equipment used was a McPhar M700 Magnetometer

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 Vancouver in the Province of British Columbia.

this 19 day of Sept. A.D. 1968

[Handwritten signature]

[Handwritten signature] A Notary Public in and for the Province of British Columbia A Commissioner for taking affidavits for British Columbia Sub-mining Recorder



TO ACCOMPANY A GEOPHYSICAL REPORT
 BY G. PODOLSKY, GEOPHYSICIST, ON THE CAVZ GROUP,
 TRAIL PEAK, OMINCA MINING DIVISION
 DATED SEPTEMBER 13, 1968



SCALE ONE INCH = 400 FEET

TEXAS GULF SULPHUR CO.			
CAVZ GROUP			
MAGNETOMETER SURVEY			
DRAWN BY	DATE		
F. GLASS	SEPTEMBER, 1968		

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