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3092

Geological and Geochemical Survey

LAZY CLAIM GROUP

Fort Steele Mining Division, 49°115°NW

82 G / 13 E

TEXAS GULF SULPHUR COMPANY

<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 3092 MAP _____</p>

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GEOLOGICAL AND GEOCHEMICAL SURVEY

LAZY CLAIM GROUP

Fort Steele Mining Division, 49°115°NW

INTRODUCTION

The Lazy Lake property is a copper prospect situated in the southeast region of British Columbia. The property covers occurrences of chalcopyrite mineralization in clastic rocks of Precambrian age.

Texas Gulf Sulphur carried out detailed geological mapping and a limited amount of soil sampling in the period from July 16 to August 21, 1970 to assist evaluation of the property. The survey was conducted by B.D. Chapman, assisted by A.R. Campbell and supervised by R.G. Gifford, P.Eng.

PERSONNEL

The category and time distribution for personnel employed in the field programme were as follows:

Supervision	R.G. Gifford	6 days
Senior Assistant	B.D. Chapman	21 days
Assistant	A.R. Campbell	21 days

The field work was performed in the period July 16-August 21, 1970.

PROPERTY AND OWNERSHIP

The property totals thirty-two claims, named Lazy 1-32 inclusive. Of these, thirty were recorded June 25, 1970 and two were recorded July 6, 1970.

All of the claims are wholly owned by Texas Gulf Sulphur Company.

LOCATION AND ACCESS

The Lazy claim group is in the Fort Steele Mining Division at latitude 49°48', longitude 115°39', and N.T.S. Map Sheet 82G/13 East Half. It is situated west of Lazy Lake at elevation 3,500 feet. The southernmost part of the group is crossed by Lewis Creek.

Access to the prospect is gained by five miles of gravel road which leads from Highway 93 near the the community of Wasa. The nearest supply center is the city of Cranbrook located twenty miles to the southwest.

EXPLORATION AND DEVELOPMENT

Geological mapping of the 32-claim property was done at a scale of 1"=500' by B.D. Chapman and A.R. Campbell. Map control was obtained by chain, compass and altimeter. Surface chip samples were taken in conjunction with the mapping. Analyses were made for copper and silver.

Soil samples were taken at 100-foot intervals along two lines spaced 1,200 feet apart. Coverage totalled 7,400 line-feet with 73 samples. All material was from the "B" horizon and was typically brown in colour. Depth of sample below surface was normally four to twelve inches. Analyses were made for copper by the atomic absorption method employing a 'total' perchloric acid extraction. The minus-80 fraction was processed.

GEOLOGY

The property is situated on the east margin of the Rocky Mountain Trench on the eastern limb of the Purcell geanticline. Sedimentary rocks of Precambrian age dominate the region. The clastics of this sequence in the claim area are distinctly coarse-grained,

cross-stratified and ripple-marked and represent a shoreward facies of the assemblage.

The Lazy claims are underlain by clastic rocks of the Fort Steele Formation. The Fort Steele is Precambrian in age and is the lowest member of the Purcell Series. Intrusives into the property sequence include a sill-like body of quartz diorite and a few dykes and small bodies of acidic rock.

The rocks of the map area have an antiform structure that is block faulted approximately parallel to its north-trending axis. The fold form is broad, open and low-dipping on its limbs. The north-trending faults give the impression of having steep west dips with normal displacement. These repeat the stratigraphy across the main showing area. The discontinuity of lithology across Lewis Creek is interpreted to reflect the presence of northeast striking fault about coincident with the creek.

The rock units mapped in the claim area were: (1) quartzite, (2) interbedded quartzite-argillite, (3) argillaceous quartzite, (4) quartz diorite, and (5) acidic rocks.

(1). Quartzite Unit

Predominantly quartzite in which quartz grains are the principal component. The grains of quartz are subangular to subrounded in shape and vary in size from fine sand through coarse sand to granules and, rarely, pebbles.

Colour of the quartzites includes shades of white, grey, pale green and pink. The colours are usually discontinuous along strike and locally reflect either (a) the development of chlorite (green) associated with the quartz diorite emplacement, (b) the limonite (pinkish brown) residue from the oxidation of sulfides, or (c) the development of muscovite (grey) or biotite (black) associated with shear zones.

Cross-bedding, is present and is evidenced by a coarse particle size and 'limonite' colour banding.

Limonite is commonly associated with the coarser grained beds.

(2) Interbedded Quartzite-Argillite Unit:

Quartzite beds one to six feet in thickness alternate with argillite beds six inches or less in thickness. The quartzite is usually reddish brown and the argillite is grey to black.

(3) Argillaceous Quartzite Unit:

Dominantly argillaceous quartzite, laminated and thinly bedded, brown and black colour. Wavy laminations are common.

(4) Quartz Diorite Unit:

Representative of the 'Moyie Intrusion' type of rock considered to be Precambrian in age; dark green to grey, fine to coarse-grained; constituent minerals include 10% quartz (rarely, up to 25%), 30% to 40% feldspar, and 50% to 60% amphibole.

(5) Acidic Rock Unit:

Bufs to grey, medium-grained, intermediate to acid intrusive rock. Subhedral to euhedral feldspar laths are clearly visible but composition uncertain, tentative estimate rock type as quartz monzonite. Commonly 2 to 3% of hematite (?). Rock is comparable to Tertiary rocks of similar composition in the region.

MINERALIZATION

Copper mineralization is present in two styles, that is, in quartz-siderite veins and as disseminations in quartzite. The latter association, offering the possibility of a formationally controlled deposit, is viewed as having the most potential.

The quartz-siderite vein structures contain minor amounts of chalcopyrite, specular hematite and pyrite. Quartzite and argillaceous quartzites are hosts to the vein material. The veins are often spatially

associated with the quartz diorite sills and the acidic intrusive rocks.

The disseminated mineralization occurs in a host of clean, white massive quartzite as sparse amounts of chalcopyrite, pyrite and possibly chalcocite. In the main showing area the quartzites are medium-grained, silicified and well-jointed. Malachite and some azurite is present on weathered surfaces. Oxidation of the sulfide grains is severe.

The quartzite host at the main showing is repeated in exposures by three and possibly four fault blocks. The copper mineralization in these blocks appears to be restricted to the top 75 to 100 feet of quartzite which immediately underlies the interbedded quartzite-argillite unit.

EXPLORATION RESULTS

The copper mineralization appears to favour a particular quartzite unit within a zone in close proximity to overlying argillites. The copper tenor overall at the best exposure is too low to be of commercial interest.

The values for copper in the reconnaissance soil survey were low, and no anomaly of importance was indicated.

June 18, 1971



R.G. Gifford, P.Eng.

APPENDIX

Statement of Expenditures for 1970

Lazy Claim Group, Fort Steele M.D.

PERSONNEL

R.G. Gifford, P.Eng.; supervision, 6 days @ \$80	\$ 480
B.D. Chapman; senior assistant, 21 days @ \$30	630
A.R. Campbell; junior assistant, 21 days @ \$20	420

SUPPORT

Vehicle; four-wheel-drive, 3 weeks @ \$340/mo.	\$ 255
Lodging; 3 men, 48 man-days @ \$10/man-day	480

ANALYSIS

73 soil samples; preparation and total copper analysis @ \$1.20/sample	\$ 88
9 rock chip samples; copper-silver analysis @ \$6/sample	54

Total Expenditure on Lazy Claims, 1970 \$2407

Sworn before me at
Cranbrook, B.C. this
25th day of June, 1971

R Gifford

James Lyle

Commissioner for taking Affidavits
in and for the Province of British Columbia

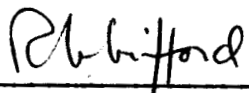
Statement of Qualifications

B.D. Chapman

Mr. B.D. Chapman has obtained creditation for his fourth academic year leading to the degree of Bachelor of Applied Science, University of British Columbia.

He has been employed as a geological assistant with Texas Gulf Sulphur Company's Exploration Division every field season since 1967. He has excelled in his work and has conducted mapping projects for Texas Gulf Sulphur Company since 1969.

June 18, 1971



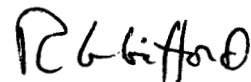
R.G. Gifford, P.Eng.

C E R T I F I C A T I O N

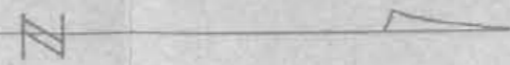
I, Robert G. Gifford certify that:

1. I am a practising geological engineer with residence at 1256 Alderside Road, Port Moody, B.C.
2. I am a graduate of the University of British Columbia with a degree of Bachelor of Applied Science.
3. I am a member of the Association of Professional Engineers of British Columbia, and have been engaged continuously in mining and exploration geology for thirteen years.
4. I supervised the evaluation programme for the Lazy Claim Group, Fort Steele Mining Division near Cranbrook, British Columbia during July and August 1970.

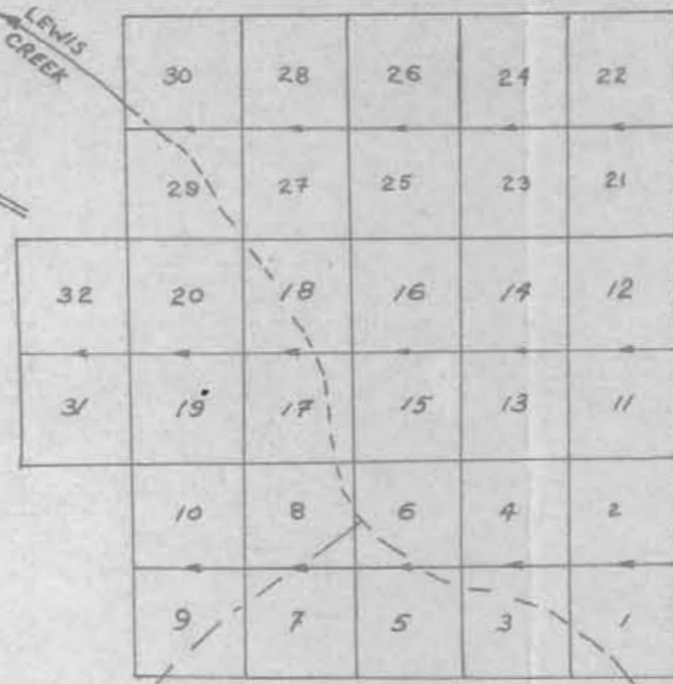
June 18, 1971



R.G. Gifford, P.Eng.



LEWIS CREEK
20 MILES TO CRAWBROOK



PRE CLAIMS
(COMINCO)

TRACY CREEK

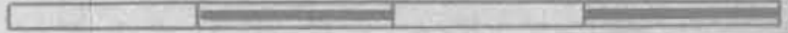
LAZY 1-32 CLAIMS
(TEXAS GULF SULPHUR)



LAZY LAKE

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3092 MAP #1

SCALE: ONE INCH = 1/2 MILE

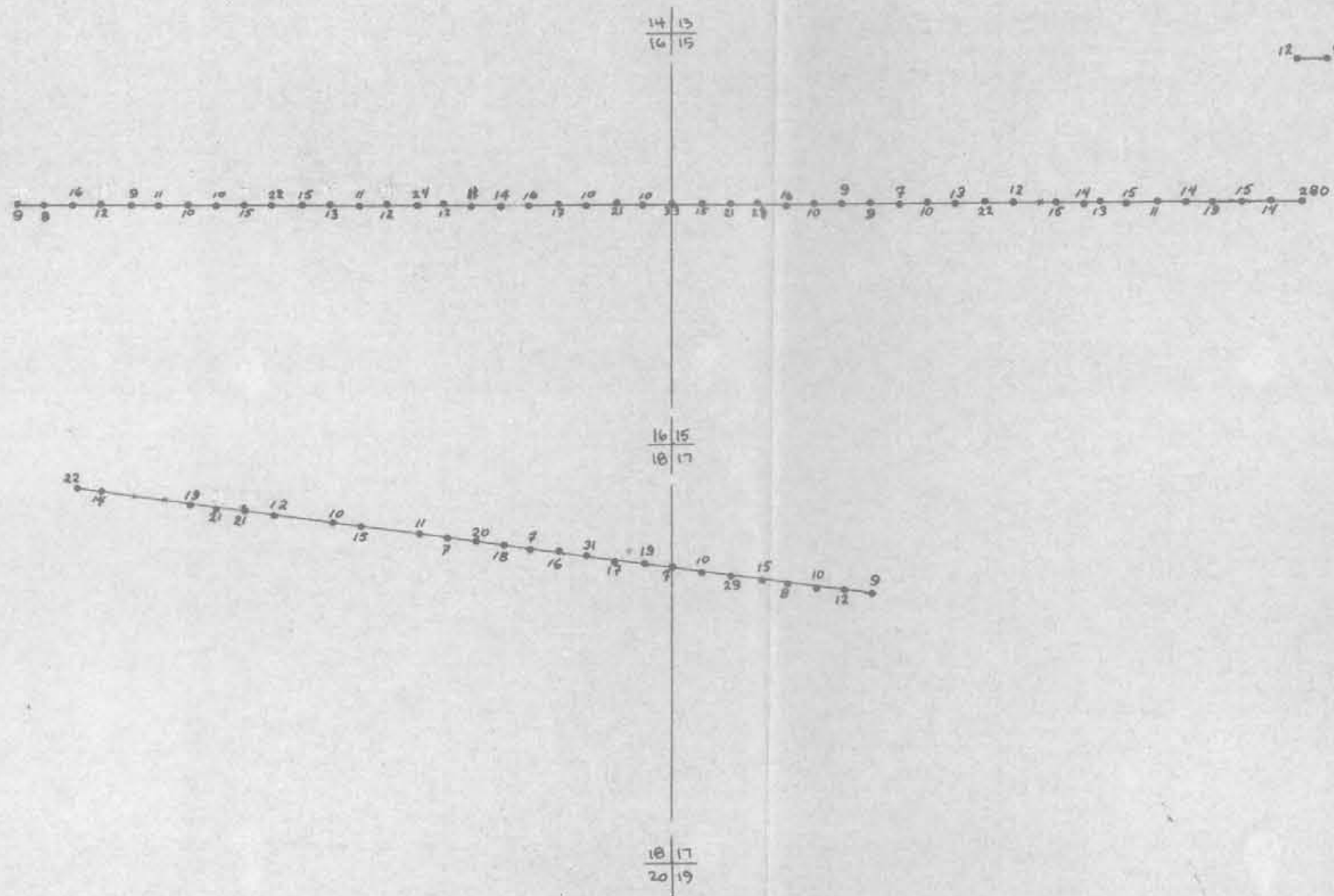


LEGEND

"ACCOMPANIES GEOLOGICAL & GEOCHEMICAL
REPORT BY R.G. GIFFORD, P. ENG.
ON THE LAZY GROUP, NEAR LAZY LAKE,
FORT STEELE MINING DIVISION,
DATED JUNE 18, 1971."

R. Gifford

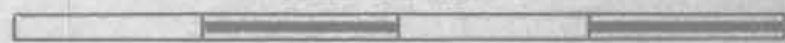
TEXAS GULF SULPHUR CO.		
LAZY LAKE PROPERTY		N.T.S. 82 G/13
CLAIM MAP		
FORT STEELE M.D.		FIGURE I
WRK BY	DRAWN BY	DATE
B.D. CHAPMAN	B.D. CHAPMAN	AUG. 21, 1970



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3092 MAP #2



SCALE: ONE INCH = 500 FEET



LEGEND

TOTAL COPPER (ppm) ● 15
 POST, SHOWING CLAIM CORNERS 14 13 / 16 15 / 18 17

*ACCOMPANIES GEOLOGICAL AND GEOCHEMICAL REPORT BY R.G. GIFFORD P. ENG. ON THE LAZY GROUP, NEAR LAZY LAKE FORT STEELE MINING DIVISION, DATED JUNE 18, 1971."

R.G. Gifford

TEXAS GULF SULPHUR CO.

LAZY LAKE PROPERTY NTS 82 G/13

SOIL GEOCHEMISTRY

FORT STEELE M.D. FIGURE II

WORK BY	DRAWN BY	DATE
B.D. CHAPMAN	B.D. CHAPMAN	AUG. 21, 1970

