

3655

GEOLOGICAL AND GEOCHEMICAL REPORT

by
J.M. Newell, P.Eng.

on surveys completed during July and August 1971
on the

VULTURE, MAGPIE AND ALBATROSS MINERAL CLAIMS

situated on the
Tulameen River, 6 miles northwest of Princeton

in the

SIMILKAMEEN MINING DIVISION

49°N, 120°W, S.W.
(N.T.S. 92-H-6)

and owned by

TEXAS GULF SULPHUR COMPANY

December 1971

Vancouver, B.C.

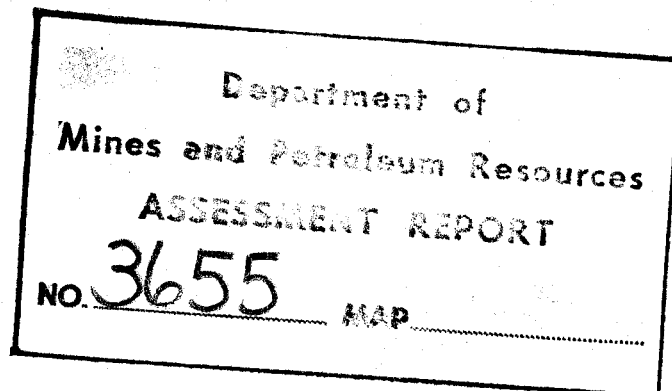


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Geochemistry Map: Vulture Group	1:=400'	in pocket

Geological and Geochemical Report

VULTURE PROPERTY

INTRODUCTION

The property was acquired, by Texas Gulf Sulphur Company, by staking, during June and October of 1971. Subsequent to initial ground acquisition, a chain and compass grid was established with lines flagged at 400-foot intervals. This report is based on data obtained from geochemical soil sampling and geological mapping of the grid area.

LOCATION, ACCESS & OWNERSHIP

The property is comprised of the following mineral claims:

Vulture 1-2	inclusive
Vulture 9 Fr.	"
Magpie 1-8	"
Magpie 9-12 Fr.	"
Nighthawk 1-10	"
Nighthawk 11-12 Fr.	"
Albatross 1-2	"

The Nighthawk claims were staked in October, the remainder in June, 1971. The property is located astride the Tulameen River, some 6 miles northwest of Princeton. An all-weather gravel road, from Princeton to Coalmont and Tulameen passes through the claims.

REGIONAL GEOLOGY

The geologic setting is described in G.S.C. Memoir 243 "Geology and Mineral Deposits of the Princeton Map-area" (Rice, 1947). In summary, the claims are underlain by volcanic rocks of the Triassic Nicola Group, intruded by a small stock of granitic rock.

PROPERTY GEOLOGY

A series of volcanic rocks, trends northwestwards through the property and dips gently to the northeast. The sequence is largely comprised of green, fine to medium-grained tuffs with lesser amounts of coarse agglomerates. Local and discontinuous bands and lenses of porphyritic (sometimes amygdoloidal) andesite are also present. Two persistent bands of porphyritic and tuffaceous rhyolite merge in the southeastern corner of the property to form a dominant mass of acid volcanic rock. In addition several small lenses of rhyolitic rock are intercalated with andesitic tuff elsewhere on the property (see geological map).

Three small plugs of coarse-grained, equigranular granodiorite to quartz diorite intrude volcanic rocks in the valley bottom: the largest is on Nighthawk claims 3, 5, and 7; the other two are mainly on adverse ground, namely Tulameen claim #1 and the Fairmont Crown Grant 1029.

Outcrops of volcanic rock show moderate to strong argillic alteration and surficial limonite stain, the latter being derived from disseminated pyrite. Most outcrops show the effects of deep surface weathering and attendant leaching. The granodiorite is only weakly altered; feldspars are relatively fresh, but the rock shows some development of chlorite and epidote.

Copper mineralization was observed as disseminations in andesitic rock in the south corner of Vulture #1 claim, and in quartz veined granodiorite on Nighthawk #5 claim. Sparse molybdenite was observed in andesitic tuffs near the east corner of Nighthawk #5 claim.

GEOCHEMISTRY

A total of 577 soil samples were taken on the property. They were collected at 100-foot intervals on grid lines spaced 400 feet apart. Sampling was extended onto the adjacent Tullameen and Shirley Claims: separate assessment reports have been prepared for these properties.

Samples were collected from shallow holes, dug with a mattock or shovel. The "B" soil horizon was sampled where possible, but due to the steepness of the terrain, only "C" horizon material or talus fines is available at many sample points. The samples were collected in Kraft paper envelopes and shipped to the Bondar-Clegg and Co. Ltd. laboratory in North Vancouver, for total copper and molybdenum analyses.

The analytical technique is summarized as follows: The samples were first dried and sieved to obtain the -80 mesh fraction. Combined metal is extracted from a weighed sample of this fraction with LeFort aqua regia. The resulting solutions are bulked to a 20% acid concentration and analysed by atomic absorption spectrophotometry, in constant comparison with both synthetic and matrix standards. Results are expressed in parts per million total metal content.

A value distribution curve for samples from the Vulture property shows thresholds of interest at 70 ppm copper and 4 ppm molybdenum. Values in excess of 140 ppm copper and 7 ppm molybdenum are regarded as anomalous.

An appreciable number of the samples taken on the Vulture property returned threshold or anomalous values in copper and molybdenum. The strongest two anomalies occur on Vulture 9 Fr. and

Nighthawk #5 claims respectively. In the latter case, weak copper and molybdenum mineralization has been observed in outcrop near the granodiorite contact. Other scattered weak anomalies are probably derived from similar sub-economic mineralization.

The relatively broad areas of threshold copper values can be roughly correlated to underlying andesitic volcanic rocks and may be a formational feature. Rock chip sampling shows the andesitic volcanic rocks to be consistently higher in copper than both the rhyolites and granitic intrusives.

CONCLUSIONS

Several copper and copper-molybdenum anomalies of limited extent has been delineated. The strongest is related to observed weak copper and molybdenite mineralization. The material sampled is in most cases talus fines, a reflection of steep topographic slopes in the area. Values in this material closely reflect values obtained in rock chip samples of underlying bedrock, and the anomalies are not considered indicative of economic mineralization.



J.M. Newell, P.Eng.

STATEMENT OF QUALIFICATIONS

Mr. G.R. Peatfield obtained his B.A.Sc. degree in Geological Engineering, from the University of British Columbia, in 1966. He is currently reading for his Ph.D at Queen's University. In the interim he has been employed by Texas Gulf Sulphur, continuously during the period 1967-1969 and during the summers thereafter, as an exploration geologist.

He has worked on a wide variety of exploration projects in British Columbia and also in Ontario and Mexico. I consider him to be a competent and experienced geologist.

Mr. V.V. Pratico has completed all the geology courses required for his B.Sc. degree at the University of British Columbia. He has been employed by Texas Gulf Sulphur Company, during the summer months, from 1968 to 1971. He had several summers exploration experience prior to 1968. I regard him as competent in geological mapping and related exploration techniques.

Mr. B.C. Ratcliffe is a student at the University of British Columbia, who has six summers' field experience in geochemical sampling, five of them employed by Texas Gulf Sulphur Company.

Mr. C.J. Rockingham is a student of the University of Toronto with three summer's field experience in mineral exploration. I regard both as well-trained, competent and conscientious field assistants.

Mr. G. Berg graduated from Montana School of Mines, with a B.Sc. in Geology, in 1970. He has been employed by Texas Gulf Sulphur Company, as a field assistant, from that time, until returning to university for postgraduate studies, in September 1971. He is well trained and competent in the techniques of geochemical soil sampling, for which he was employed on this property.

Mr. A. Axen is a second year Geology student at the University of British Columbia. He had two summers' field experience in geochemical sampling prior to his employment with Texas Gulf Sulphur Company in 1971. He is a competent and conscientious field assistant.

Mr. D. E. Esau is a second year Geological Engineering student at the University of British Columbia. 1971 was his first summer's field experience. However I regard him as a competent and conscientious field assistant.



J.M. Newell, P.Eng.

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of Assessment Work carried out on the VULTURE GROUP of Mineral Claims situate six miles northwest of Princeton, in the Similkameen Mining Division.

I, JOHN M. NEWELL, agent to TEXAS GULF SULPHUR COMPANY

of 701-1281 West Georgia Street, Vancouver 5, B.C.

in the Province of British Columbia, do solemnly declare that since June 18th, 1971 I have caused assessment work to be done on the Vulture Group of Mineral Claims, to the value of \$5262.15. The expenses were incurred as follows:

<u>Grid Preparation and Geochemical Sampling</u>		
B.C. Ratcliffe	3 days @ \$25	75.00
C.J. Rockingham	3 days @ \$20	60.00
D.E. Esau	30 days @ \$20	600.00
A. Axen	7 days @ \$25	175.00
G. Berg	26 days @ \$25	650.00
577 soil sample analyses @ \$2.20		1269.40
21 rock chip analyses @ \$2.75		<u>57.75</u>
		\$2887.15
<u>Geological Mapping</u>		
V.V. Pratico	16 days @ \$35	560.00
		560.00
<u>Field Supervision, Report Writing, etc.</u>		
G.R. Peatfield	3 days @ \$45	135.00
J.M. Newell	3 days @ \$75	<u>225.00</u>
		360.00
<u>Room & Board</u>		
88 man-days @ \$10		880.00
<u>Transportation</u>		
1 month vehicle rental @ \$450		450.00
<u>Drafting, etc.</u>		
		<u>125.00</u>
		\$5262.15

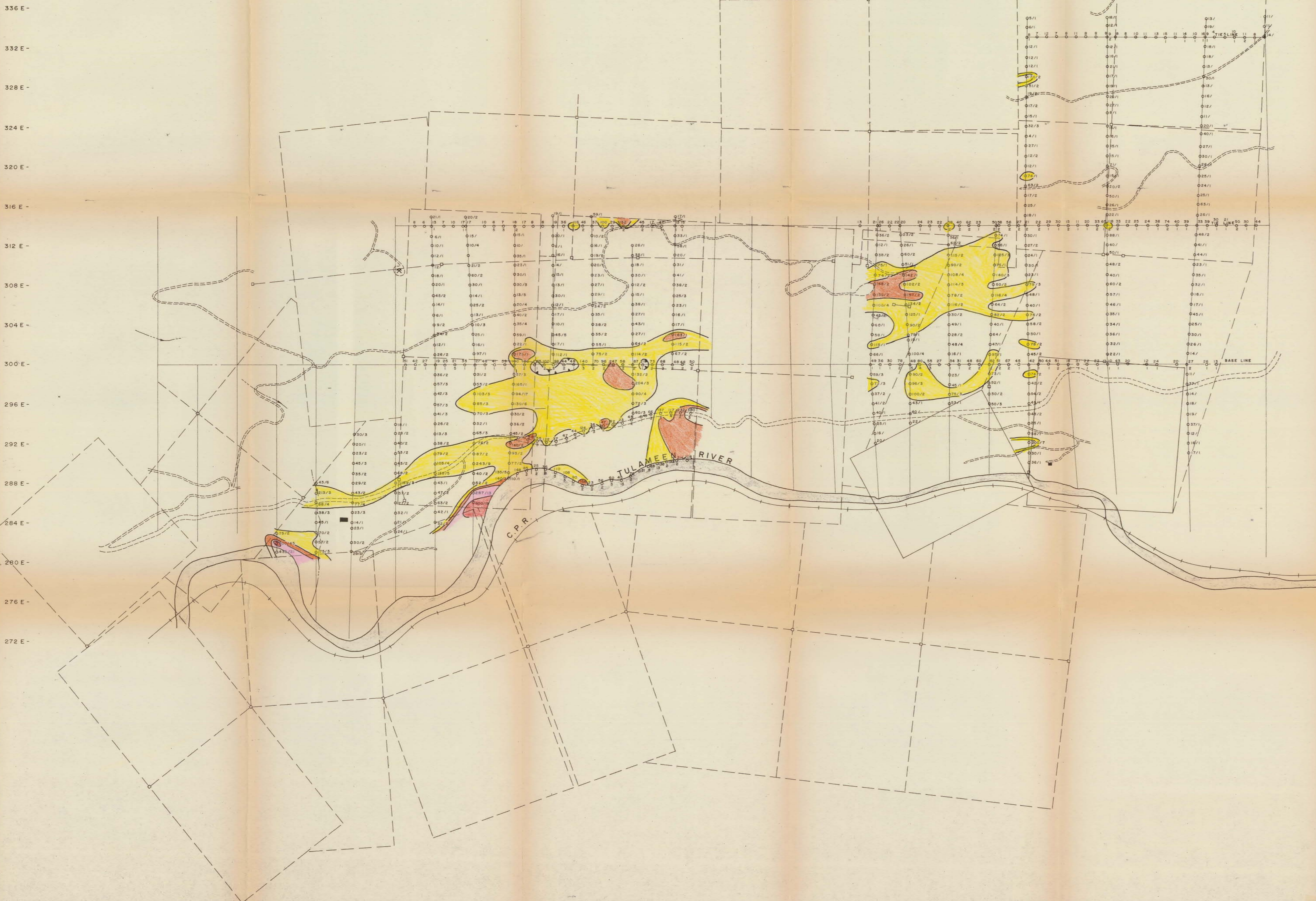
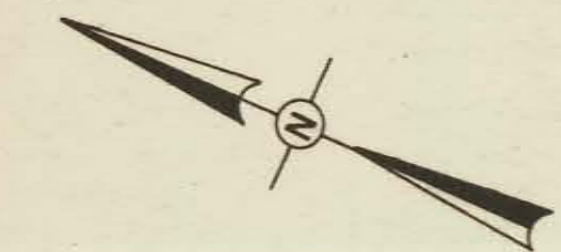
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
 of Vancouver, in the
 Province of British Columbia, this 26
 day of May, 1972, A.D.

Newell

S. Genrotte
 A Commissioner for taking Affidavits for British Columbia or
 A Notary Public in and for the Province of British Columbia.

- 336 N
- 332 N
- 328 N
- 324 N
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- 260 N
- 256 N
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- 244 N
- 240 N
- 236 N
- 232 N
- 228 N
- 224 N



LEGEND

- SOIL SAMPLE LOCATION
- ppm Cu / ppm Mo
 - ppm Cu / ppm Mo
- Cu CONTOURS
- 560 + ppm
 - 280 - 559 ppm
 - 140 - 279 ppm
 - 70 - 139 ppm
- CLAIM POST and location line
- ROADS
- RAILROAD
- CREEK
- ✱ QUARRY
- BUILDING

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3655 MAP #2

TO ACCOMPANY: Geological and Geochemical Report, Vulture, Magpie and Albatross Mineral Claims; by J.M. Newell.

SCALE: ONE INCH = 400 FT.

TEXAS GULF SULPHUR CO.

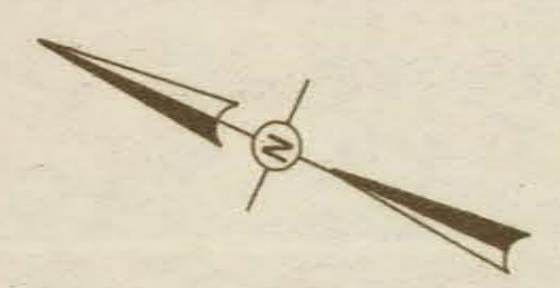
GEOCHEMISTRY
VULTURE GROUP

WORK BY	DRAWN BY	DATE
V.P., D.E., G.B., B.R., A.A. & C.R.	L. BELL	FEB., 1972













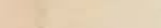
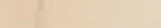
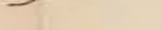
Newell

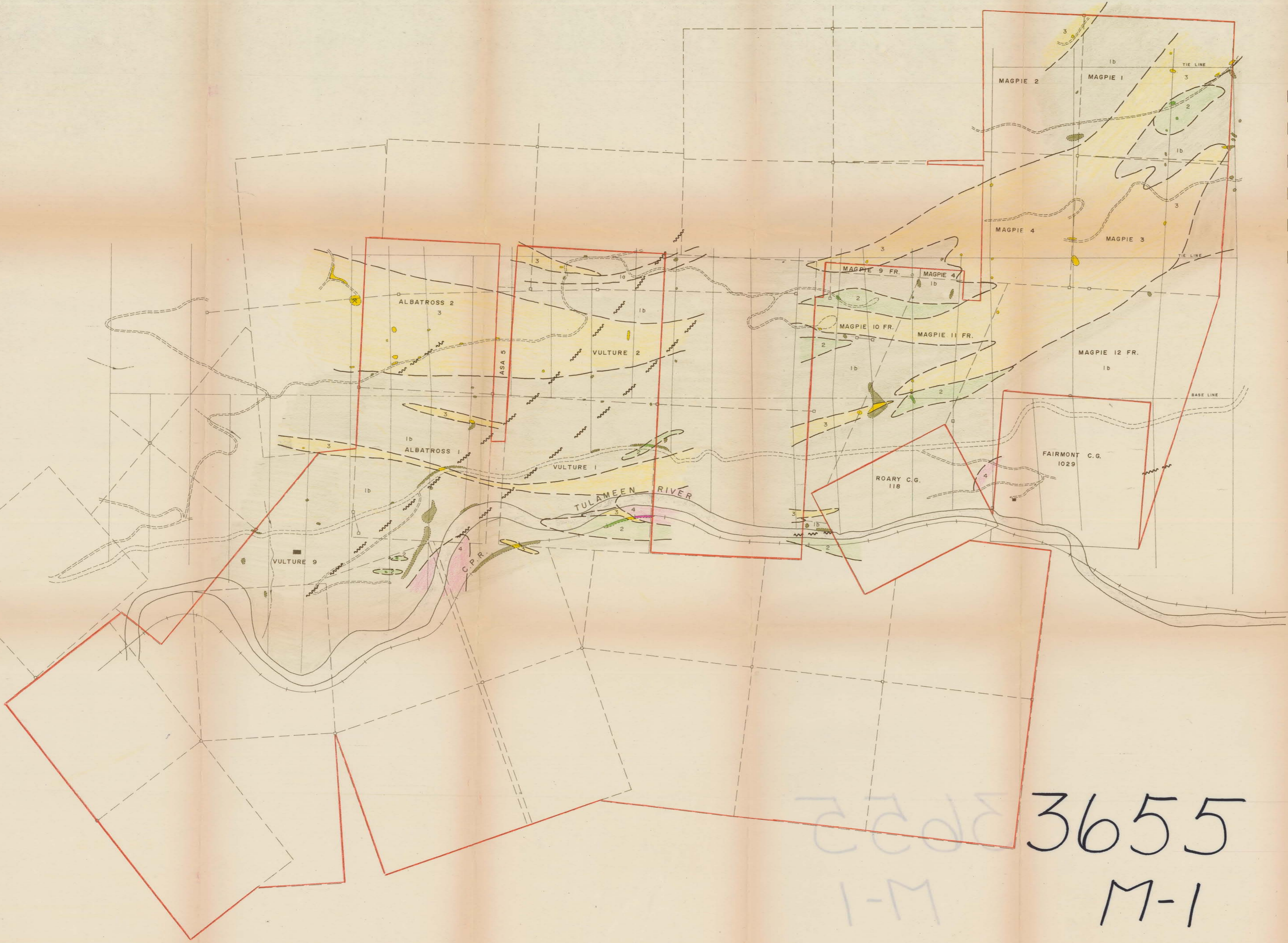
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336 E
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276 E
272 E



LEGEND

-  TERTIARY DYKES - Diorite and syenitic feldspar porphyry.
-  QUARTZ-FELDSPAR PORPHYRY DYKES - Light coloured with fine grained to aphanitic matrix.
-  GRANDIORITE - Grey-green, coarse grained, equigranular granodiorite and /or quartz diorite.
-  RHYOLITE - White to light grey, porphyritic and tuffaceous rhyolite.
-  ANDESITE - Green, porphyritic andesite, sometimes amygdaloidal.
-  ANDESITE FRAGMENTALS - Green, (a) coarse grained agglomerates and (b) fine to medium grained tuffs.
-  OUTCROP
-  GEOLOGICAL CONTACT
-  FAULT, assumed
-  CLAIM POST and location line
-  QUARRY
-  ROADS
-  RAILROAD
-  CREEK
-  BUILDING



3655
M-1

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3655 MAP #1

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GEOLOGY
VULTURE GROUP

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