

4762

GEOLOGICAL & GEOCHEMICAL REPORT

ON THE

93L/8W

SWAN CLAIMS

OMINECA MINING DIVISION

BRITISH COLUMBIA

FOR

CITIES SERVICE MINERALS CORPORATION

405-1200 WEST PENDER STREET

VANCOUVER 1, B.C.

WORK PERFORMED JUNE 13 - JULY 7, 1973

LOCATED:

Lat 54° 26' N
Long 126° 22' W
NTS 93L SE
Houston Area

REPORT BY: J. W. MURTON, P. ENG.

NOVEMBER 1973

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO.

4762

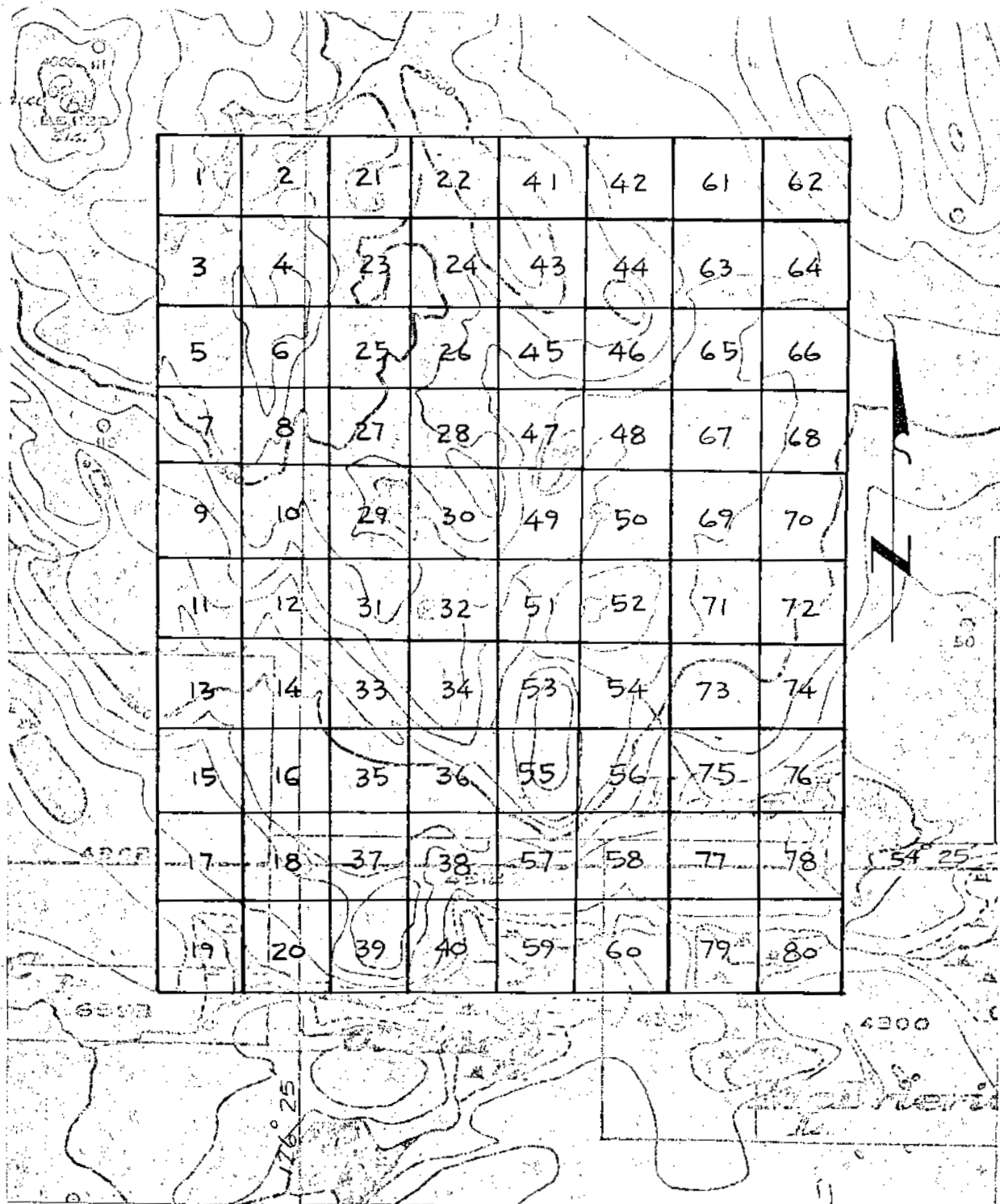
MAP

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Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **4762** MAP # **1**

CITIES SERVICE MINERALS CORP.
 SWAN CLAIMS

SCALE 1" = 1/2 MILE

FIG. 1

INTRODUCTION

The 80 Swan Claims were staked to cover a rock geochemical anomaly and to cover a possible disseminated copper occurrence.

This report describes the results of a geological and geochemical survey executed over the claims during June and July of 1973.

LOCATION, ACCESS & PHYSIOGRAPHY

The claims are located 10 miles ENE from Houston in the Ouineca Mining Division, at an elevation of 3500 feet. Access is by 4 wheeldrive dirt road south and west from Topley on the east-west highway 16.

The area is hilly with plentiful exposure of outcrop on top of hills and in creeks. Logging operations several years previously, have left large open areas and areas of logging debris. Access was facilitated by several old logging roads and trails on the property.

CONTROL GRID

A compass and chained grid was established using an east-west baseline at 0 with N-S grid lines every 1400 feet to both east and west of 0 line which passed through camp. The baseline runs between Swan 9 and 11. A total of 9800' of baseline and approximately 23.6 miles of grid line were run with chainage markers placed at 200' intervals.

GEOCHEMICAL SURVEY

Soil samples were collected from a depth of from 6" to 1 foot using a mattock. Where available, the "B" horizon was sampled. Notes were taken at each sample location regarding topography, soil type, depth, color, etc.

Samples were packed in brown kraft paper bags and sent to Acme Analytical Laboratories Ltd. of Burnaby for analyses. The analytical procedure involves drying samples in an electric oven at 150°F, then screening to -80 mesh. Following this, a $\frac{1}{2}$ gram sample is digested by a perchloric-nitric acid mixture, then analysed for total copper, zinc and arsenic using a Perkin-Elmer 305 Atomic Absorption Unit. Values are reported in parts per million (ppm.).

Approximately 280 soil samples were collected and analysed, and the results for each metal plotted on a plan showing soil sample location. This map, at a scale of 1" = 400' is enclosed with the report.

Copper background is placed at from 0-30 ppm. with threshold values from 30-40 ppm. Weak anomalies occur above 40 ppm. with significant copper anomalies occurring above 90 ppm.

Zinc background is placed at from 0-100 ppm. with threshold values at 100 - 120 ppm. Above 120 ppm. is considered slightly anomalous for zinc with + 200 ppm. significantly anomalous.

Arsenic background is placed at 1-6 ppm. with greater than 15 ppm. considered to be significantly anomalous.

Anomalous concentration of arsenic and zinc occur over the North half of the claim block with spot highs of zinc occurring in the South half of the block. Only spot high of + 90 ppm. Cu occur.

GEOLOGICAL SURVEY

Geologic mapping was completed using airphotos enlarged to 1"=800' on which a grid had been superimposed. Outcrops were located both from the airphotos and from east-west traverses run at 400' intervals between the chained and compasses grid lines.

A strong North-South lineation of rock units became apparent through mapping and this was corroborated by government aeromagnetic maps.

The easternmost exposures on the claim group are of a rather fine-grained, vesicular, somewhat chloritic basalt, alternating with at least 2 horizons of andesite for a total width of at least 4,000 feet.

Next to the west is a mixed belt of grey and white rhyolite which in places forms high bluffs and outcrop. The white glassy type predominates. The grey rhyolite, with visible feldspar grains is locally altered to a bleached sericitic rock with a chalky appearance. Slight to common hematite and limonite, apparently after fine magnetite, is wide-spread. Flow lines dip westerly at about 75° , and strike is generally $N10^{\circ}E$. Width mapped are about 2,000'.

The next interval to the west lying in the centre of the claim group is a belt about 3,500 feet wide, in which rhyolite and andesite flows are inter-mixed with pyroclastics. These pyroclastics are mainly medium coarse grained andesite with fragments up to $\frac{1}{2}$ " in size. Fine grained dacite tuff, forms at least 3 horizons within the central area of the claim group.

At the western edge of the property is another rhyolite flow, at least 2,000 feet in width. It forms a high outcrop just north of the baseline on line 28 W.

Granite porphyry as identified in this section, characterized by medium grained pink feldspars, occurs in small, generally north-south trending outcrops. No mineralization was seen in or adjacent to these dikes.

A fault is postulated, trending slightly south of east, and running through the centre of the property. It is felt that there is a horizontal offset of about 1000' with the north side of the fault shifted to the west, and probably uplifted. Minor chalcopyrite and pyrite have been located at

diverse location throughout the property, seemingly controlled by the fault or break.

CONCLUSIONS & RECOMMENDATIONS

The Swan Claims are underlain by basalt, andesites and rhyolites of probably Eocene to Mesozoic age. Certainly the basalts on the east side of the claim group probably fall within the Swan Lake phase of the Buck Creek volcanics as mapped by N. Church. A bleaching-magnetite alteration has affected certain areas of the rhyolites and additional mapping plus a magnetometer and I. P. survey would be the next logical step to outline areas of interest on the Swan Claims.



J. W. Murton, P. Eng.

JWM/ntc



STATEMENT OF EXPENDITURE INCURRED FOR ASSESSEMENT PURPOSES
ON SWAN 1-80 DURING THE PERIOD JUNE 13 - JULY 7, 1973.

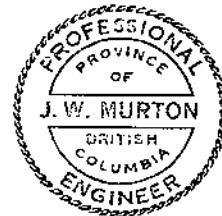
Personnel

W. B. Loring, mapping & supervision 25 days @ \$65/day	\$1625.00
J. Gajda, linechaining & sampling 25 days @ \$26/day	650.00
C. Hallwood, linechaining & sampling 25 days @ \$26/day	650.00
W. Murton, Supervision & report 3 days @ 75/day	225.00
Camp Cost 75 man days @ \$11.50/man day	862.50
Assaying 280 samples @ \$2.00/sample	560.00
Truck Rental 25/30 x \$550.00/month	458.00
Miscellaneous	200.00
	<hr/>
	\$5230.50

Declared before me at the
City of Cherise
in the Province of British Columbia
this 7 day of December 1973 A.D.

J. Phillips
SUB-MINING RECORDER

J. W. Murton
J. W. Murton, P. Eng.



CERTIFICATION

I, J. W. Murton, of North Vancouver, British Columbia, do hereby certify that:

I am a member of the Association of Professional Engineers of the Province of British Columbia, registered in 1972, No. 8324.

I am a graduate of the University of Manitoba with a B. Sc. in Geology.

I have been a practising Engineer and Geologist since 1960 in Manitoba, Saskatchewan, British Columbia, South Western U.S.A. and Alaska.

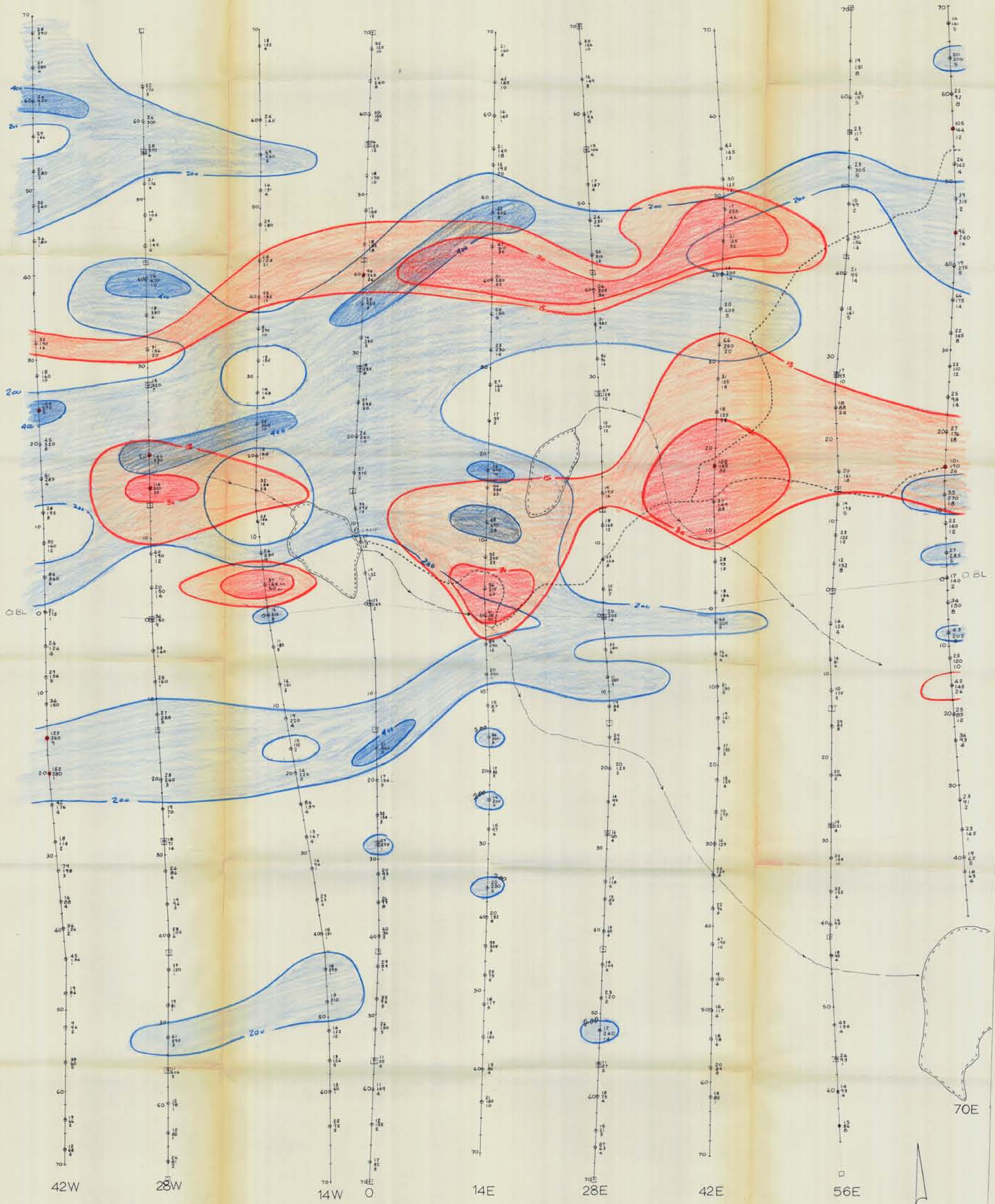
Vancouver, B. C.

30 November 1973



A handwritten signature in black ink, appearing to read "J. W. Murton".

J. W. Murton, B. Sc. P. Eng.



Contours
 — Zn 200, 400
 — As 15, 30
 • Cu 100-2 x 90

LEGEND
 • SOIL SAMPLE SITE
 --- ROAD
 --- CREEK
 □ CLAIM POLY
 1 - Cu
 2 - Zn
 4 - As
 VALUES IN PPM

TO ACCOMPANY GEOLOGICAL & BIOCHEMICAL REPORT ON THE SWAN CLAIMS BY J.W. HUNTER, P. ENG. DATED NOVEMBER 1973, VANCOUVER, B.C.

J. W. Hunter
 J.W. HUNTER
 Professional Engineer
 B.C. SOCIETY OF ENGINEERS

A-762-M2
 CITIES SERVICE MINERALS CORP.
 VANCOUVER, B.C. CANADA

SWAN CLAIMS HOUSTON B.C.
 GEOCHEMISTRY

SCALE IN FEET	0	200	400	600	800	1000
DATE	MAY 1973		NTS. No.	111-12		
DRAWN BY	NSB		DRAWING No. of	1		
REVISION			Mines and Petroleum Resources			

ASSESSMENT REPORT
 NO. 4762 #2



SWAN CLAIMS
1 IN = 400 FT

- GEOLOGICAL LEGEND**
- A ENVOHITE - WHITE
 - B ENVOHITE - GRAY
 - C SACSITE TUFF
 - D ANDOSITE TUFF - LIGHT GREEN
 - E ANDOSITE TUFF - C.B. - BLACK
 - F ANDOSITE TUFF - R.G. - REDDISH BROWN
 - G REDDISH PORPHYRY GRANITE PORPHYRY DIKES
 - H BASALT

- LEGEND**
- OUTLINE AREA
 - - - - GEOLOGICAL BOUNDARY ASSUMED
 - o ROCK SPECIMEN LOCATION
 - STREAM
 - o SWAMP
 - - - - FAULT ASSUMED

TO ACCOMPANY GEOLOGICAL & GEOPHYSICAL REPORT ON THE SWAN CLAIMS BY SAM MATHIAS KING DATED NOVEMBER 1973, OREGONIA A.D.

CITIES SERVICE MINERALS CORP.	
Department of VANCOUVER BC CANADA	
Mines and Petroleum Resources, HOUSTON, B.C.	
ASSESSMENT	
GEOLOGICAL PLAN	
NO. 4762-#3	SCALE IN FEET
DATE: May 1973	NTS No. 95L 85
DRAWN BY: G.S. - B.L.	DRAWING No. 3
REVISION	

4762-M3