

GEOLOGICAL AND GEOPHYSICAL ASSESSMENT REPORT
KAS AND SAN MINERAL CLAIMS
GREENWOOD MINING DIVISION

◊
49 15' North Latitude
◊
119 05' West Longitude
NTS 82E6E

for

COLD LAKE RESOURCES INC.
314-543 Granville Street,
Vancouver, B.C.

by

Alex Burton, P. Eng.
Burton Consulting Inc.,
5-924 West Hastings Street,
Vancouver, B.C. V6C 1E4

AUGUST, 1978

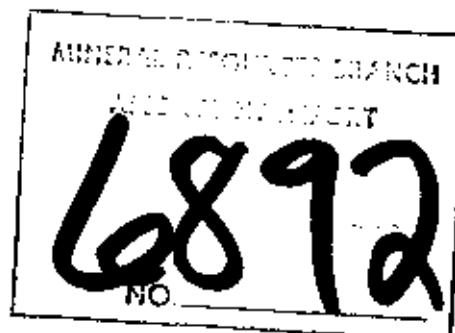


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LOCATION OF CLAIMS & ACCESS

The KAS and SAN Mineral Claims in the Greenwood Mining Division are in the headwaters of Nelse Creek, a tributary which flows east into the Westkettle River. The Claims are at 49 15' N. Latutude and 119 06' West Longitude; and N.T.S. coordinates 82E-6E.

The claims can be reached by road from Rock Creek by going 17.7 km. (11 miles) north on Highway 33 from its start on the bridge at Rock Creek and then leaving the paved highway to follow the Conkle Lake dirt road for eight miles. At the eight mile point take a turn off to the north for 2 km. (1.3 miles) to reach the southern boundary of the KAS Claim and travel another 2.74 km. (1.7 miles) to reach the north boundary of the KAS Claim. The SAN Claims are easiest reached by following the north boundary of the KAS Claim to the east.

The claims are restakings of the D.Y.A. and Raven Claims, so boundary lines, corner and boundary posts, are well blazed and flagged from previous staking. The KAS and SAN legal corner posts were seen in position essentially as portrayed on the claim map.

COLD LAKE RESOURCES INC.
LOCATION MAP
KAS & SAN MINERAL CLAIMS

INDICATING

Claims
Access Road
Stream silt U values

NOTE

Stream silt samples reported
in p.p.m. of U.
From information gathered
from private sources and
believed to be valid.

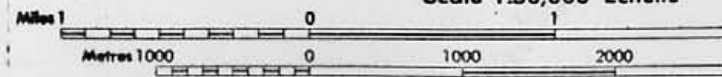
BURTON CONSULTING INC.

ALEX BURTON, P.ENG.
GEOLOGICAL CONSULTANT

BUS. 669-8413
5-924 W. HASTINGS ST.
VANCOUVER, B.C.
CANADA V6C 1E4

BRITISH COLUMBIA

Scale 1:50,000 Échelle



119° 05'

HISTORY

This area is undergoing it's third "rush" for uranium exploration. High uranium values have been found in streams draining the headwaters area between Kelly, Nelse and Ripperto Creeks.

The predessors of the KAS and SAN Claims were staked as tie on claims staked to cover uranium rich stream silt samples. These claims are the ZED staked for Falconbridge Nickel Mines Ltd. and the LOUR Claims staked for a different group at essentially the same time. In the same period (1976) the SCINT Claims of Lion Mines Ltd. were staked to cover high geochemical stream silt sample values in uranium.

Recently (June, 1978) geologists from the B.C. Dept. of Mines have been mapping this and the adjacent Lassie Lake uranium areas.

GEOLOGY

Geology in the area was mapped on a scale of one inch to four miles by H.W. Little of the G.S.C., on Map 15-1961 Kettle River West Half.





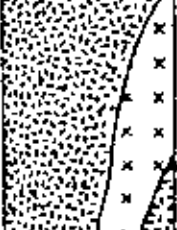
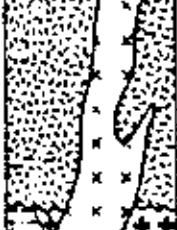


All the intrusive rocks (Nelson, Valhalla, and Coryell) are somewhat radioactive with the Valhalla having a significantly greater uranium content than the Nelson, and the Coryell being proportionately greater than the Valhalla.

Younger formations which have collected and kept the uranium shed from these rocks during the weathering processes have generally been the exploration targets in the Hydraulic Lake - Lassie Lake Uranium Camps.

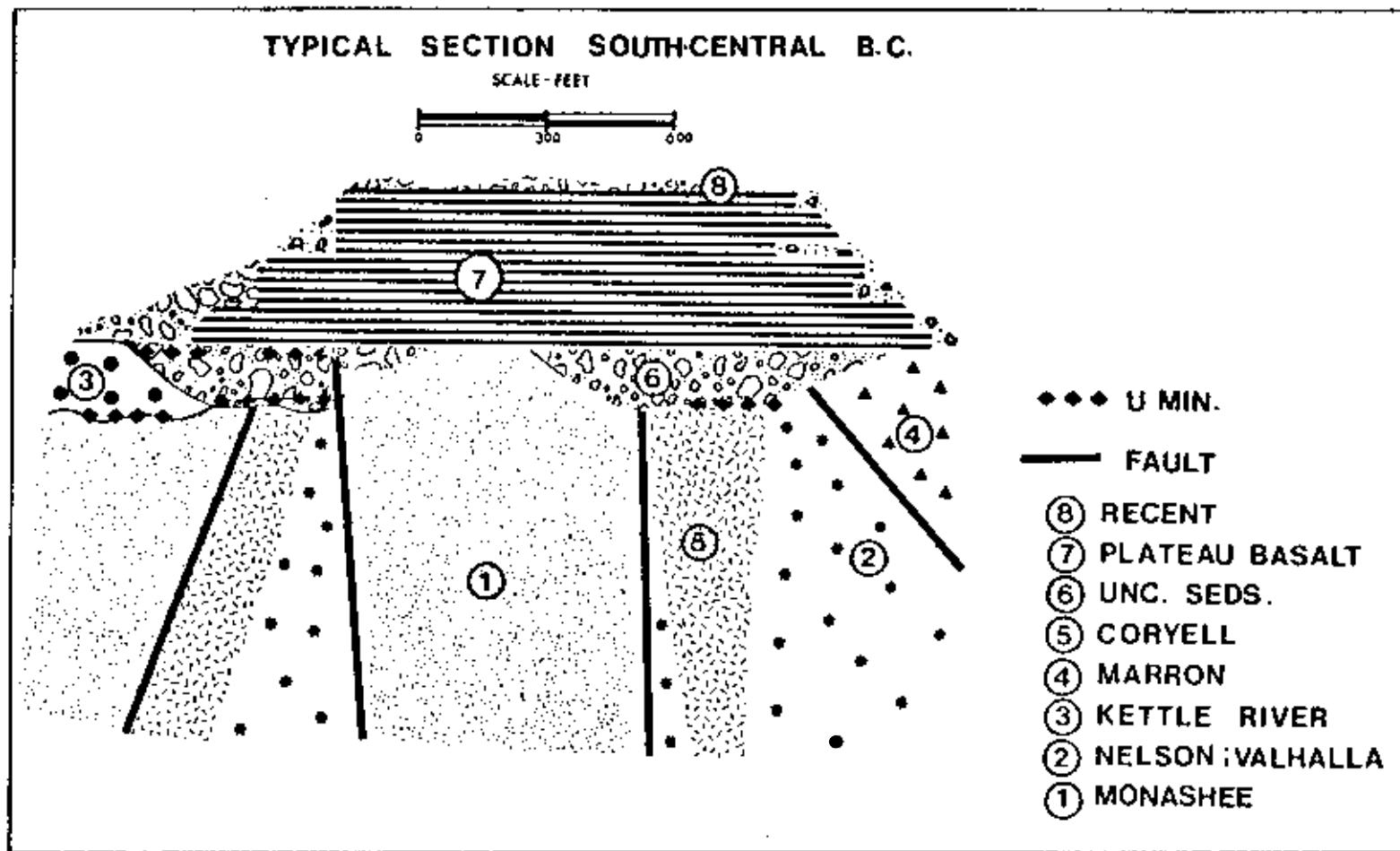
Table 1 shows the Stratigraphic Column in more detail than on Little's Map.

An idealized cross section is shown, taken from P.A. Christopher's Report on pages 11-14 of the 1976 Geological Fieldwork by the B.C.D.M. and Petroleum Resources.

Table 1 Stratigraphic Units

Column	Explanation		Age	Thick- ness
	Recent	Gravel, Sand and Soil.	Quarter- nary	50'
	Upper Cup Lake Basalt	Trachytic olivine basalt.	Tertiary	550'
	Middle Cup Lake Basalt	Coarse-frained olivine basalt, Mudstone, Sand- stone and Conglomerate.		
	Lower Cup Lake Basalt	Trachytic olivine basalt, Mudstone, Sandstone and Conglomerate.		
	Coryell Intrusions	Syenite, Granite and Granite porphyry	Eocene-Oligocene	1500'
	Phoenix Group	Biotite andesite and its tuff breccia.		
	Valhalla Intrusions Nelson Intrusions	Biotite granite and Quartz monzonite. Granodiorite and Gneissose granite.	Cretace- ous	
	Anarchist Group	Sandstone, Shale and Limestone.	Paleo- zoic	

● Occurrence of uranium.



Typical section showing the setting of basal type uranium deposits in south-central British Columbia.

ECONOMIC GEOLOGY ON THE CLAIMS

The main north-south road which runs about 200-300 metres west of the east boundary of the KAS Claim is along a convenient topographic boundary which marks the eastern edge of the Valhalla intrusive body shown on Little's Map. To the west bold bluffs and cliffs of bare rock outline the main massive of the Valhalla intrusive. No other rock types were seen in this area with the exception of one trachyte dyke at the jog in the logging road at 1,210 metres (3,970 ft.) just above the first switchback.

The Valhalla was generally a pink granite with chalky white to pink feldspars some fresh and some altered, unobtrusive quartz, and minor to moderate black biotite. On weathering the rock became chalky and the minerals separated into a coarse sand of mineral grains. Only a few narrow pink feldspar aplite veins were seen. No mineralization of any sort was noticed.

To the east of the main N.S. logging road there are two noticeable N-S topographic regions - first a zone 200 to 300 metres wide of Nelson granodiorite and then trachyte to and beyond the eastern boundary of the claims.

The Nelson granodiorite is broken, sheared, faulted and altered wherever seen. It only occurs as lenses or septa ranging from one metre to ten or twenty metres wide and ten to a few tens of metres long. From ten to fifty percent of the exposed rock is dyke material.

Extremely detailed mapping on a scale not warranted would be required to accurately portray the situation. The Nelson appears to have been cut by a N20E to N40E bearing vertical to (-)85° W swarms of dykes. The dykes fall into three main classes, a pinkish-white weathering, a grey black to whitish weathering and a less important type of greenstone or lamprophyre dyke. The lamprophyre is a narrow, recessive weathering dyke and is not commonly seen in outcrop. The pink to white weathering dykes are variable in composition and character. They may appear porphyritic with a finer grained matrix which is the visual equivalent of the Valhalla or as an aphanitic matrix with pink to white trachytic feldspar crystals.

The darker trachyte dykes are grey to greyish black in the matrix which is made up of a mesh of finer grained feldspar and biotite crystals. The long bladed feldspar show off well on the weathered surface but tend to be somewhat lost when the freshly broken surface is viewed. This dark trachyte is similar to unit 19 on Little's Map or the Phoenix group or possibly partly as the Lower Cup Lake Basalt in the Stratigraphic Table in this report. A few of the dykes do not fit well into either the lighter pink or dark grey classes and display some affinity to Coryell rocks.

Along the eastern edge of the SAN Claims there are few lenses of Nelson and more prominent N20E to N40°E ridges of trachyte porphyry. In one area near 4S/10E north of the SAN 2E, IN claim post there is an area of unusual rocks which could be a sandstone or a

type of intrusive "pebble" dyke. Euhedral and subrounded feldspar and quartz crystals are set together with some fine grained matrix and the occasional larger (10 MM) fragment or pebble of dark finer grained siliceous appearance. Microscopic examination of thin sections should resolve the situation.

There are more pink alteration zones and discontinuous patches of aplitic material formed in the Nelson close to its main eastern boundary.

Considerable attention was paid the N-S trending low swampy area which extends east from the main N-S logging east for less than 500 metres. A weathered and radioactively anomalous weathered regolith lying on the Valhalla erosion surface and covered by both argillaceous sediments and glacial deposits was found about 1 Km to the south of the KAS Claim. This occurrence and the fortuitous lining up of ponds, swamps and low areas prompted a careful search across the swampy areas.

Traverses on the grid lines across the swampy low zone showed a zone about 100 metres wide extending N-S for over half the length of the claims. Unfortunately the character of outcrops seen is such that the chances for a deep swamp are slim and thus the chances for a "perched" or high altitude equivalent to the Blizzard, Fuki, or Tyee Lake style of uranium deposits is also slim.

GEOPHYSICS - SCINTILLOMETER SURVEY

Introduction

Stream silts in the immediate area of the claims are significantly anomalous in uranium, the Valhalla and younger igneous rocks of the district are significantly enriched in uranium in comparison to other intrusives, and an uranium enriched regolith on the Valhalla was found just south of the claims.

Under these circumstances it became apparent that there might be either a primary concentration of uranium in the fresh rocks or a secondary concentration of uranium related to one of the post Valhalla weathering cycles. Accordingly, a scintillometer survey was laid out to cover these two possibilities with particular emphasis to the rock structure and to the geomorphology. All readings with the Scintillometer were related to outcrop, structure, contacts, overburden type such as pine flats, glacial, swamp, lake, gentle slope or bluff etc.

Survey

The instrument used to measure gamma radiation was a Fisher Scintillodyne Scintillation counter modified by Sabre Electronics Instrument Ltd. With a 1" x 1" sodium iodide crystal and integrated circuits this instrument is accurate and sensitive enough to give meaningful readings. The attached specification sheet describes the instrument.

Readings were taken on a grid laid out by compass and topofil thread with stations at 50 metre


intervals. Readings were regularly taken also at contacts, over faults, on zones of alteration and across many of the outcrops on a prospecting basis, but not plotted. The instrument was checked at the end of each line with the calibration button. There was negligible drift. All readings are in counts per second taken with the instrument at waist level

Background count in the Vancouver area is 20 to 30 C.P.S. (counts per second) For comparison a "test button" ranged from 575 to 600 C.P.S. on the Scintillodyne and gave 310 C.P.S. on an Exploranium Scintillometer and a 22,000 to 23,000 C.P.M. (or 375 C.P.S.) on a McPhar T.V. 1.

On the KAS and SAN Claims the counts over Nelson granodiorite ranged from 35 to 50 C.P.S. and from 60 to 80 C.P.S. over the Valhalla granite. The trachyte was generally in the 40 to 60 C.P.S. range. Readings taken with the instrument up against a face of rock were generally about $1\frac{1}{2}$ times higher than readings taken at waist level. Readings on swamps were sometimes lower, but generally the same as outcrop or overburden covered areas. A pair of samples from the pond-swamp at 18 + 50 S/3E ran 4.1 and 0.71 P.P.M. uranium. No areas of higher than normal readings were encountered on the survey and all readings were within the range for the various rock types with the exception of one high reading (110 C.P.S.) on line OS on the north boundary of the SAN Claim.

CONCLUSIONS

All the rocks in this area are anomalously high in their content of radioactive minerals. Nowhere on the property was there seen any unusual concentration of radioactive minerals, either in the primary rock structures or in the swampy low lying areas. There still exists a slim chance for a secondary enriched uranium zone at the base of the swamp line.

Alfred T. ...
A circular professional seal for an engineer, partially overlapping the signature. The seal contains the text "PROFESSIONAL ENGINEER" and "STATE OF CALIFORNIA".

**SABRE ELECTRONIC
INSTRUMENTS LTD.**

4245 EAST HASTINGS STREET

BURNABY, B.C. V5C 2J5

TELEPHONE: 291-1617

Modified Fisher "Scintillodyne" Scintillation Counter.

SPECIFICATIONS:

Detector.

1" X 1" sodium iodide crystal coupled to RCA 6199 photomultiplier tube.

Sensitivity.

3 ranges: 0-100, 0-1000, 0-10,000 counts per second. (These ranges are set in factory, the sensitivity can be increased by calibration control to 30,300 and 3,000 counts per minute if background count permits)

Power Supply.

2 Eveready #276 9 volt batteries. Battery life is approx. 100 hours of continuous operation. Internal voltage regulation is provided.

Temperature Range.

Limited by batteries to -20°C to +70°C.

Controls.

On-Off switch, range switch, calibration, meter zero, time constant switch.

Circuitry.

Old tube circuitry replaced by 4 integrated circuits.
1. Detector Amplifier - LM218 high freq. OP. AMP.
2. Ratemeter - LM222 freq. to voltage converter.
3. Meter Amplifier - LM 207 operational amplifier.
4. High Voltage Power Supply - LM322 precision timer, connected as regulated pulse generator, driving high voltage transformer and rectifier assembly.

COST STATEMENT FOR ASSESSMENT WORK ON THE KAS (5 units)
and SAN (4 units) MINERAL CLAIMS, GREENWOOD MINING DIVISION

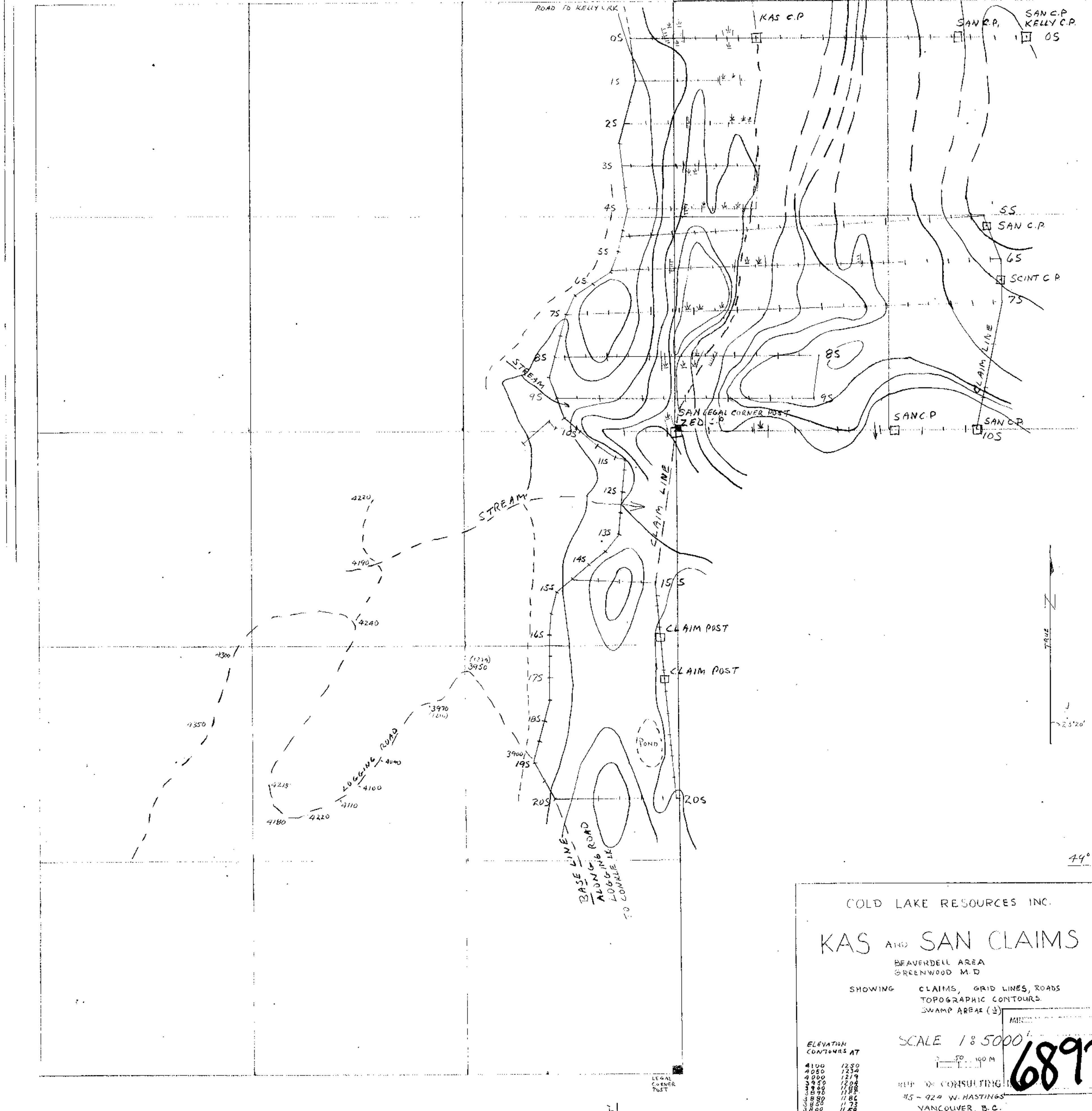
August 16-21	H. Richardson, 3537 Dieppe St., Vancouver, 435-9303 6 days @ \$50/day wages	\$ 300.00
" 16-22	A. Burton, 5900 No. 1 Road, Richmond, 270-2827 7 days @ \$250/day fees	1,750.00
	Vehicle 6 days @ \$20/day	120.00
	Vehicle mileage 671.1 @ 15¢/mile	100.66
	Scintillometer rental 6 days @ \$10/day	60.00
	Accommodation, meals, fuel	158.84
	Office disbursements, printing, typing	100.00
	Topofill thread	29.77
	Vangeochem Lab Ltd.	10.50
		<hr/>
		\$ 2,629.77
		<hr/> <hr/>

To apply on:

Geological & Geophysical Assessment Report

KAS and SAN Mineral Claims, Greenwood Mining Division





COLD LAKE RESOURCES INC.

KAS AND SAN CLAIMS

BEAVERDELL AREA
GREENWOOD M.D.

SHOWING CLAIMS, GRID LINES, ROADS
TOPOGRAPHIC CONTOURS
SWAMP AREA (S)

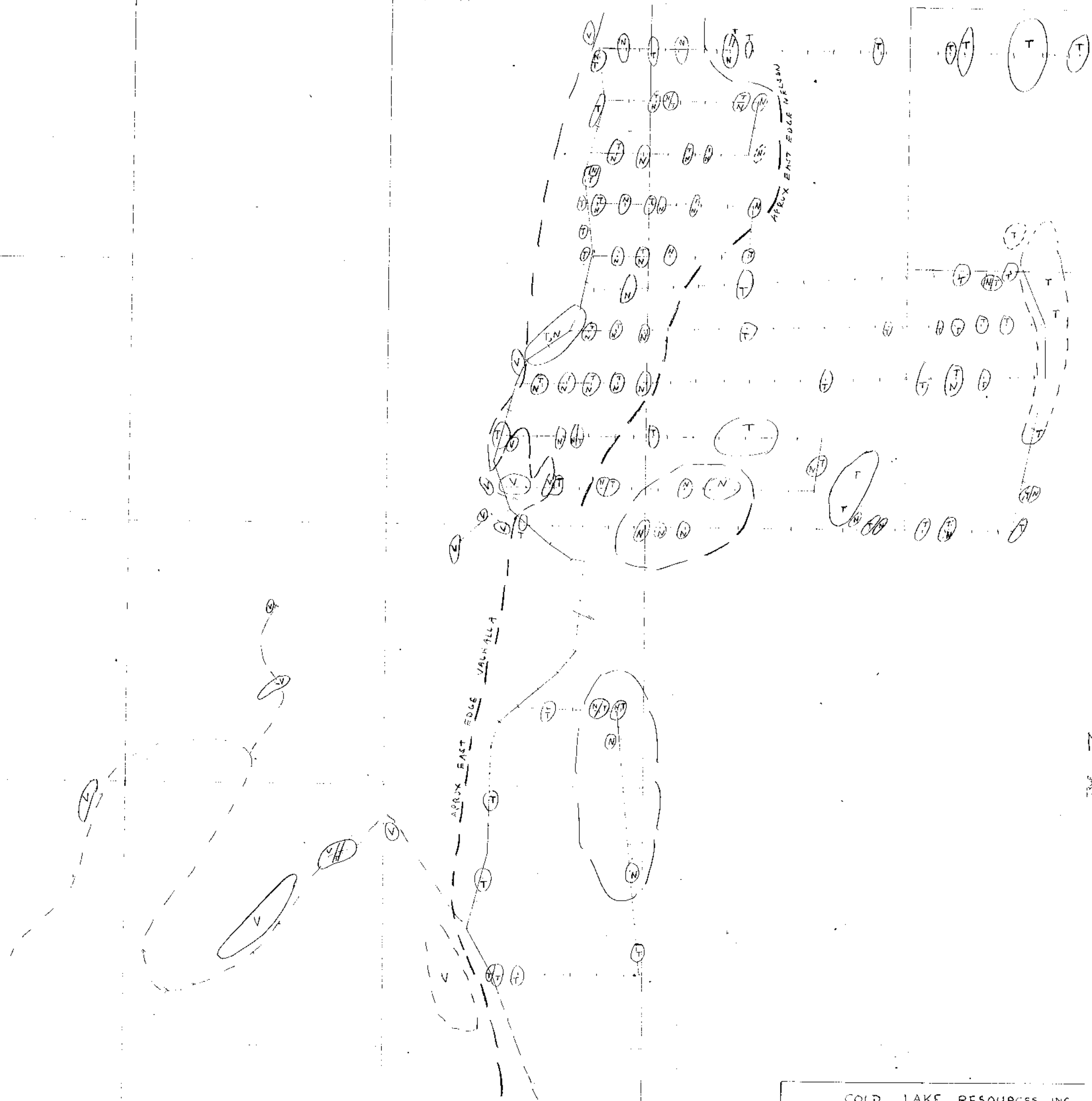
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ELEVATION CONTOURS AT	
FEET	METRES
4100	1250
4050	1234
4000	1219
3950	1204
3900	1188
3850	1173
3800	1158
3770	1143
3740	1128

REF. BY CONSULTING
715-924 W. HASTINGS
VANCOUVER, B.C.
V6C 1E4
ALEX BURTON, P. ENG.

AUGUST
1978

6892



COLD LAKE RESOURCES INC.

KAS AND SAN CLAIMS

BEAVERDELL AREA
GREENWOOD M.D.

GEOLOGY

V VALHALLA INTRUSIVES
N NELSON INTRUSIVES
T TRACHYTES

MINERAL RESOURCE TARIFF
ACCOUNT NO. **6892**
NO.

SCALE 1:5000

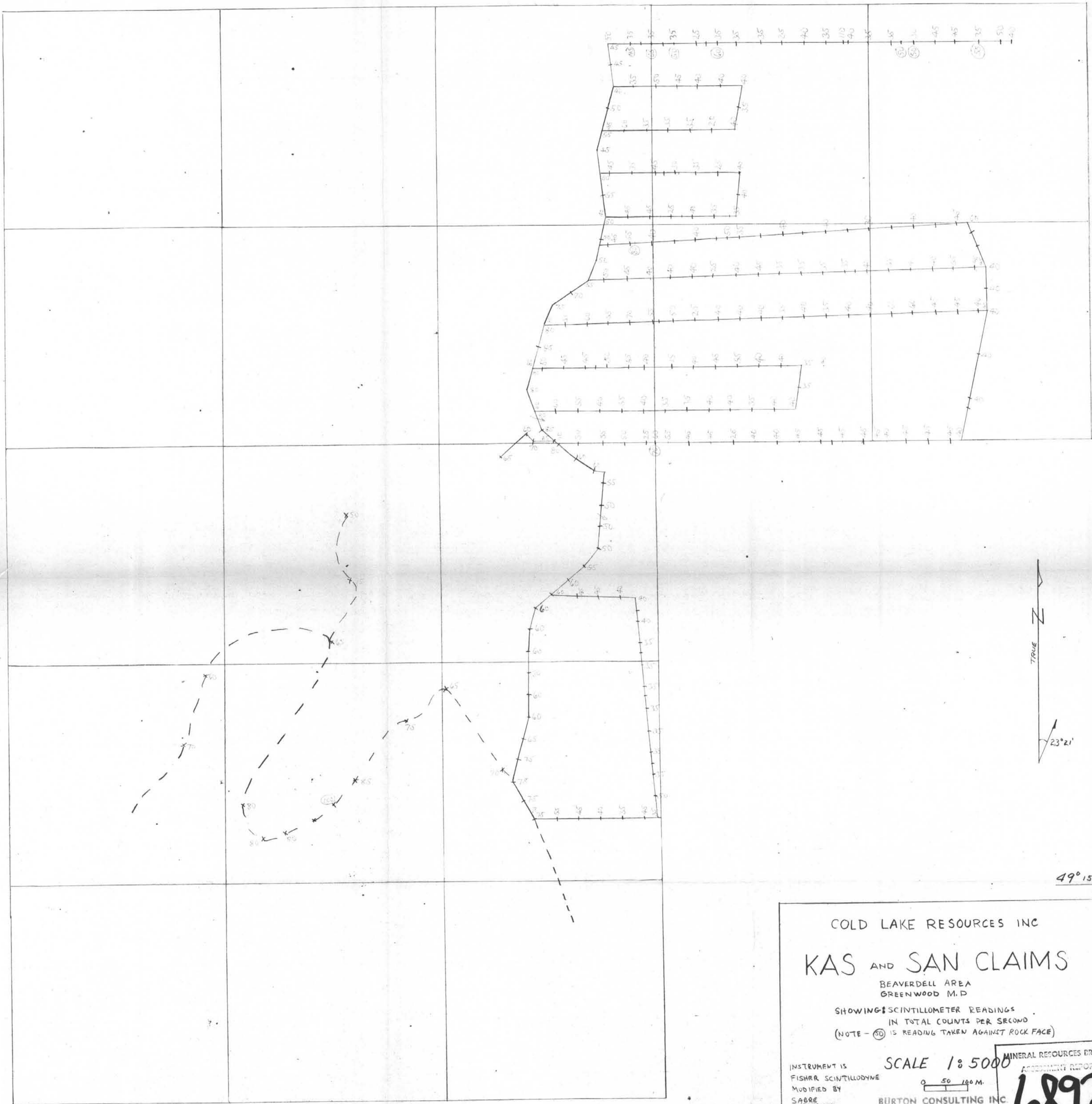
0 50 100M

#5-924 W. HASTINGS
VANCOUVER, B.C.
V6C 1E4

ALEX BURTON, P. ENG.

AUGUST
1978

119° 05'



COLD LAKE RESOURCES INC
 KAS AND SAN CLAIMS
 BEAVERDELL AREA
 GREENWOOD M.D.

SHOWING SCINTILLOMETER READINGS
 IN TOTAL COUNTS PER SECOND
 (NOTE - 50 IS READING TAKEN AGAINST ROCK FACE)

INSTRUMENT IS
 FISHER SCINTILLODYME
 MODIFIED BY
 SABBRE
 ELECTRONIC
 INSTRUMENTS
 LTD
 1" X 1" NAI CRYSTAL

SCALE 1:5000
 0 50 100 M.

BURTON CONSULTING INC.
 75-924 W. HASTINGS
 VANCOUVER, B.C.
 V6C 1E4
 ALEX BURTON, P. ENG.

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
6892
 NO. AUGUST 1978

119° 05'

49° 15'