

786

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Report  
on  
Geological Survey  
of  
FIR Group  
by  
H. S. Wilson, P. Eng.

General Statement

The FIR group consists of four claims covering one of the southern, lower, summits on the south slope of Skwilkwakwill Mountain, as shown on National Topographic sheet 92-1, Ashcroft. The claims are nearly of full size, except FIR 4 whose area is reduced about 20% by prior locations. The claims, which are in Kamloops Mining Division, are located about five miles ENE of the junction of Skuhun Creek and the Nicola River. They are shown on Mineral Map 92 1/6E(M).

History and Previous Work

What is now the FIR group of four claims was formerly owned by Skeena Silver Mines Ltd., who also owned by staking or under option agreements, adjoining claims to the south and west. During the latter half of 1964 and the first half of 1965, extensive work was done on the claims by this company, including a considerable amount of trenching by bulldozer, chiefly on copper showings located on FIR, 1, which was followed by diamond drilling, consisting of four holes, one on FIR. 3, two on FIR 1, and one on Curmo 1 and 3. In addition, a number of parallel lines, whose bearing is 308° magnetic, were put in by transit and chain. (see map), followed by soil sampling and an

induced polarization survey, and presumably also by geologic and topographic mapping along them. In order to gain access to the claims, a switchback road was constructed up the southwestern slope of the mountain, and across its upper slopes, as shown on the map. The writer has not had access to the maps or to any other data resulting from this work, but presumably results were not encouraging, as evidenced by the fact that the claims were allowed to lapse.

The FIR group of claims, along with the CURMO, HAL, and GEM groups, was acquired by Glen Echo Mines Ltd. early in 1966, and during the period May 30 - June 30, a partial geologic and magnetic survey was made of it as part of a larger project involving systematic prospecting of the entire property in an effort to evaluate its possibilities.

#### New Work

The old northwesterly-bearing lines originally put in by Skeena Silver have been rehabilitated and a set of new lines whose bearing is northeasterly have been laid out by compass at 400-foot intervals, using one of the old lines as a base, as shown on the accompanying map at scale of 1 inch to 400 feet. The new lines have been cut, chained, and tied in to staking lines or to outside property boundaries, both of which have also been surveyed by compass and chain. Two men, under the supervision of the writer, have been employed in this work, chiefly in running and chaining the new lines and in prospecting along them.

Geological mapping has been done and magnetic readings taken by the

writer along all lines indicated on the maps.

A total of 17,700 feet of old lines have been rehabilitated and nearly 9000 feet of new lines laid out, cut and chained on the FIR group. The southwestern half of FIR 3 has not yet been covered, due to the presence on it of a deep gully, which is bounded by cliffs and/or precipitous slopes, thus making it nearly inaccessible.

A statement of time, with dates, is appended.

#### Physical Features

The FIR group lies about 1 1/2 miles SE of the summit of Skwilkwakwill Mountain, elev. 5500' - 6000', and one of its southern local summits, elev. 5000' - 5500', is located near the NE corner of FIR 2. From here, the land slopes gently to the vicinity of the southeasterly-trending road, beyond which the slope gradually, and in places abruptly, increases in grade. As mentioned previously, the southwestern part of FIR 3 is occupied by a deep gully, which is bounded by cliffs and precipitous slopes.

The group as a whole contains a fair amount of rock outcrop, which occupies about 20% of its area. In most places, there would appear to be only a shallow cover of overburden, which consists of glacial drift. Slide rock occupies appreciable areas along the southwestern edge of the area mapped.

Most of the claims are forested with a scattered growth of large Douglas fir and Ponderosa pine, the general aspect of the surface being park-like.

## Geology

The claims lie within the Guichon Creek batholith, which is of Lower Jurassic Age, near its southwestern edge, and mapping shows bedrock to consist chiefly of fairly typical medium-to coarse-grained granodiorite in which the most common mafic mineral is hornblende, but biotite occurs also. It grades locally into quartz diorite, which forms some of the outcrops along the eastern edge of the group. The granodiorite is usually dense and massive, and it contains no conspicuous jointing or other fracturing or shearing.

On the southern part of the group, the granodiorite is cut by a number of dikes of pale to dark gray, porphyritic rock, the phenocrysts, which range in size from 1/16" to 3/16", being lath-shaped feldspar crystals which are contained in a very fine-grained to aphanitic dark to pale gray matrix. It is tentatively called by the writer, syenite porphyry. These dikes, which range in width from less than a foot to upwards of sixty feet are chilled along their edges to a dense, massive aphanitic rock, dark gray to nearly black in colour, which commonly contains scattered quartz-filled amygdules. The chilled portion, which extends over a width of a foot or so, grades inward within a few feet to porphyritic material. In the FIR group, the dikes strike about WNW magnetic, and their dip is nearly vertical, but elsewhere on the property they appear to follow a somewhat sinuous course. They pinch and swell on strike, and probably also down dip, and sometimes they split and enclose relatively thin lenticular masses of granodiorite.

Although not yet indicated on the map, a series of porphyry dikes appear to occupy a wide zone which extends from the northernmost dike, near the southeast corner of FIR 1, southward to the edge of the Glen Echo property and probably beyond to the overburden-filled valley of Skuhun Creek, a distance of about a mile. They extend on strike in a WNW direction completely across the Glen Echo property, a distance of more than a mile.

I have been unable to find any reference to the occurrence of such dikes in the Guichon Creek batholith in any of the pertinent geological literature available to me.

Although both the granodiorite and the syenite porphyry dikes that occur on the greater part of the FIR group are usually fresh and unaltered, the rocks exposed along the road leading to diamond drill hole no. 1 on the northwestern part of FIR 3, shows considerable alteration, apparently as a result of surface weathering, as does much of the rock exposed in cuts along the road leading up the mountain to the west and southwest. The weathered rocks near diamond drill hole no. 1 are cut by numerous small slips, many of which contain some gouge, and locally there is some brecciation. Most of the slips and joints at this locality, strike about north and south, as do others exposed elsewhere.

#### Economic Geology

A number of copper occurrences are located on the FIR group, all of which occur in the immediate vicinity of the previously-mentioned

syenite porphyry dikes that pass through FIR 1 and 3.

The most important showing occurs just west of station 4W, line 4. Here scattered chalcopyrite occurs with quartz in thin seams along a number of more or less parallel, vertical, north-striking joints in the granodiorite, between two wide dikes of syenite porphyry. Some chalcopyrite also occurs as disseminations, or along hairline fractures, close to some of the joints, which are spaced from about two feet to four or five feet apart. Mineralization of varying intensity extends over an area about forty feet in length, from north to south, and from ten to twenty-five feet in width, from east to west. The zone is cut off at both ends by wide porphyry dikes, which are unfractured and unmineralized, and it is also cut by a narrow, aphanitic (chilled) dike of this rock. Some sparse mineralization in granodiorite is exposed again, about fifty-five feet to the south, the interval between being mostly concealed by overburden. Considerable malachite is visible on joint planes on surface, but the main mineralized area was visually estimated by the writer to average only about 0.5% copper over the dimensions mentioned above.

A much smaller area containing similar mineralization is exposed by trenching some 350 feet to the southwest of the above showing, and some copper stain is visible on joints in a trench just south of station 12W, line 6.

Some copper stain occurs on slide rock at two locations in the gullies along line 12, as noted on the map.

Respectfully submitted,

July 23, 1966.

H.S. Wilson, P. Eng.

Report  
on  
Magnetometric Survey  
of  
FIR Group  
by  
H. S. Wilson, P. Eng.

General Statement

Magnetic readings were taken at 100-foot intervals along the previously mentioned network of lines with a Sharpe Model D-1-M magnetometer, serial no. 292, which is a reconnaissance-type instrument that measures the vertical component of the earth's magnetic field.

A base station was established at the road junction between lines 4 and 6, station 26W, where readings were taken at least twice daily during the course of the survey. All readings have been corrected for diurnal variations in the intensity of the earth's magnetic field.

A total of 257 readings have been taken by the writer along the above-mentioned lines on the FIR group in a period estimated at three days.

Results, in scale divisions, are plotted on the accompanying map at scale of 1 inch to 400 feet.

A statement of time, with dates, is appended.

Discussion of Results

The map, which has been contoured at 1000 gamma intervals, reveals a number of broad anomalies of moderate intensity, which must reflect the somewhat erratic distribution of magnetite within the granodiorite.

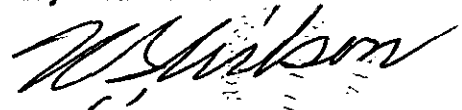


There would appear to be little or no magnetic difference between the granodiorite and the syenite porphyry dikes.

In a general way, there is also a strong suggestion that the magnetic readings reflect the topography, although no firm conclusions can be drawn at this time.

It is realized that the instrument readings being obtained at this location do not fall within the range ( $114^{\circ}$  to  $171^{\circ}$ ) in which the instrument yields its maximum sensitivity, namely about 68 gammas per scale division. However, since it is being used only as a possible aid to ground prospecting, it is considered useful for this purpose. A magnet is being added to increase its sensitivity.

Respectfully submitted



H. S. Wilson, P. Eng.

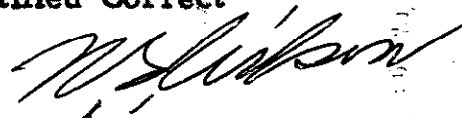
July 23, 1966.

## Appendix

Statement of Time  
(applicable to FIR group only)

Name of Employee	Dates	Salary	Total Amount
G.H.E. Erickson - helper	parts of May 21 & 23 parts of June 18, 20, 21 parts of June 23, 24, 25 estimated total - 4 days	\$500/mo. & board \$90.00	\$ 78.66
D.H. Bernard - helper	parts of May 21, & 23 parts of June 18, 20, 21 parts of June 23, 24, 25 estimated total - 4 days	\$350/mo. & board \$90.00	\$ 46.66
H.S. Wilson	parts of May 30 & 31 parts of June 2, 5, 6, 8, 9, 10 all of June 11, July 21, 22 maps & report total - 9 days	\$1000/mo. & board \$90.00	\$327.00
			<hr/> \$452.32 <hr/>

Certified Correct


H. S. Wilson  
July 23, 1966

**Statement of Qualifications  
of H. S. Wilson, P. Eng. (Ont.)**

**Education**

B. Sc. (Mining Eng.), McGill University, 1924  
 M. Sc. (Geology), McGill University, 1925  
 Two years further post-graduate work in geology at University of Wisconsin,  
 1925-26-27.

**Experience**

1923 - 27      Student Assistant on field parties of Geological Survey of Canada  
 and prospecting and field work for Nipissing Mining Co. Ltd.,  
 Cobalt, Ontario.

1928 - 31      Chief Geologist, in charge of exploration, Nipissing Mining Co.,  
 Ltd.

1932 -          Consulting practice at Cobalt, Ontario

1933 - 45      Chief Geologist, and for time Chief Engineer, Lamague Mine,  
 Bourlaimague, Quebec.

1946-mid 50    Consulting practice at Bourlaimague, Que. (which conducted  
 since 1935).

mid 1950-mid 55 Field Geologist, Newmont Mining Corp. of Canada, based  
 at Toronto, Ontario.

mid 1955-to date Consulting practice at 179 Reynolds St., Oakville, Ontario

Member, Can. Inst. of Mining & Metallurgy. (since 1925).

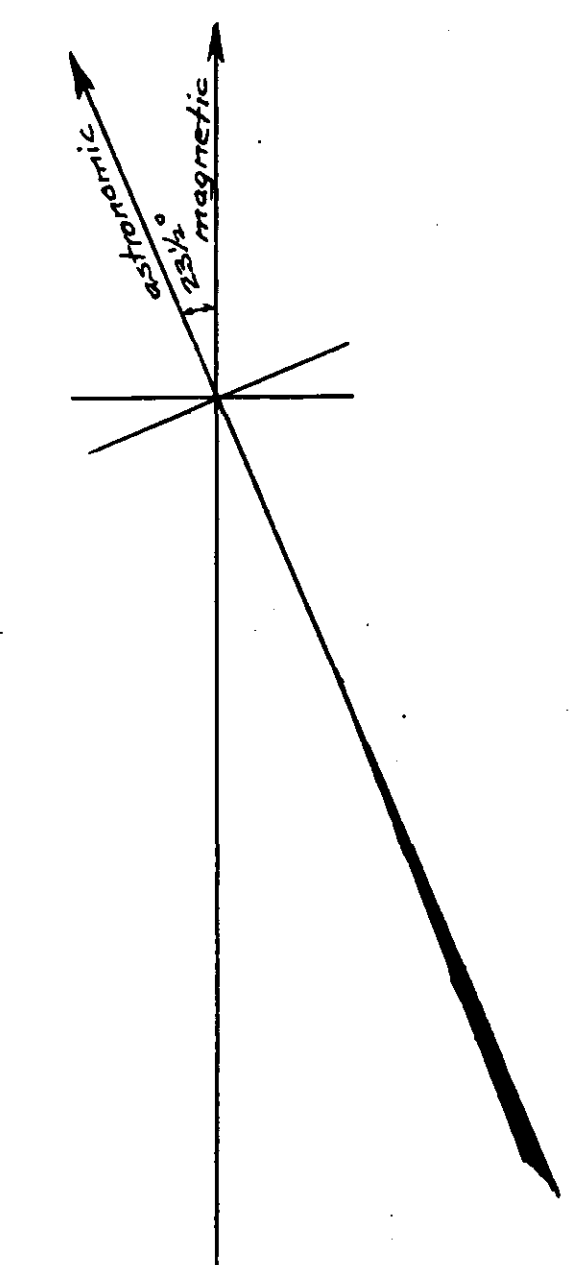
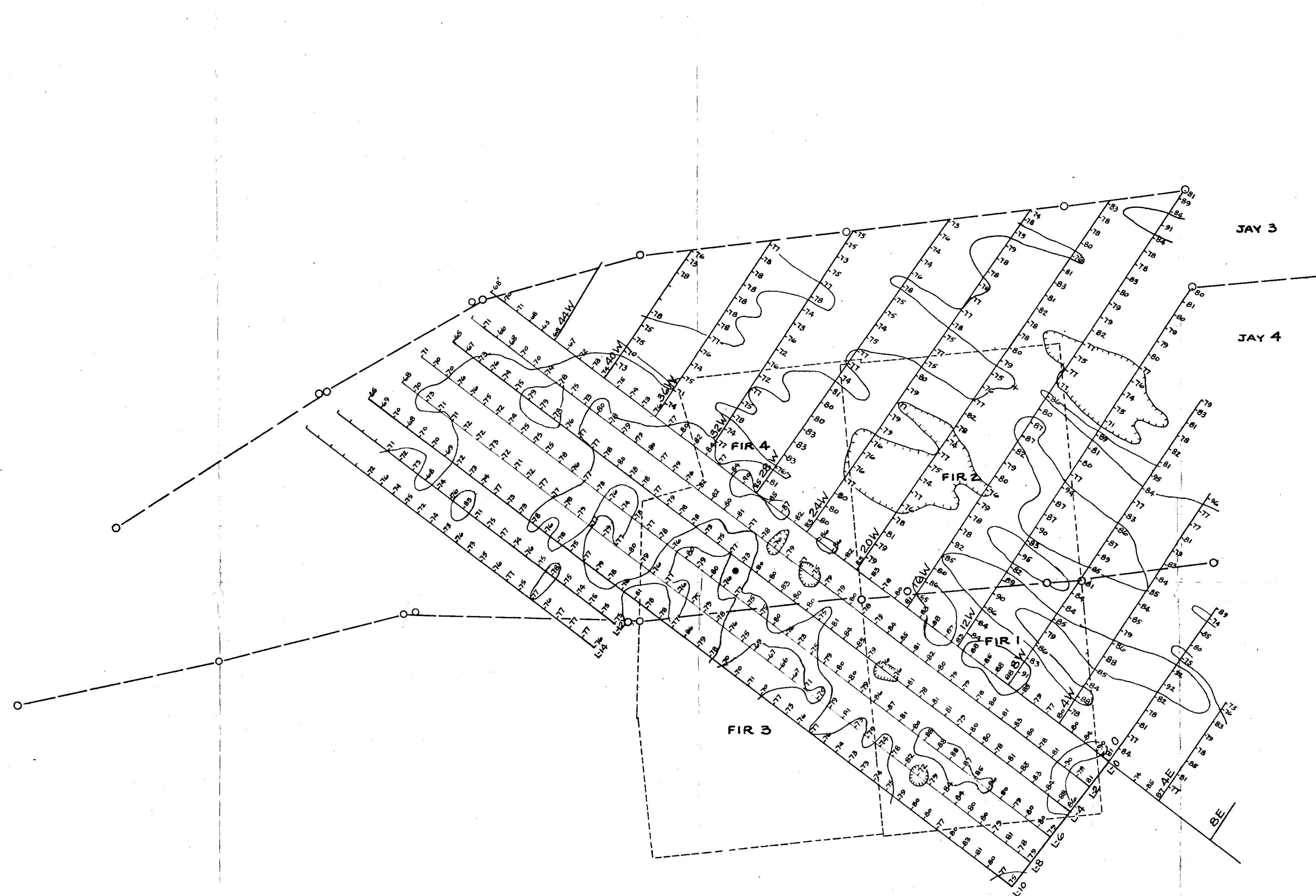
Member, Geological Assoc. of Canada.

Member, Assoc. of Prof. Engineers of Ontario (since 1955).

Inactive member, Corp. of Engineers of Quebec (member 1945 to Dec. 31, 1965).

On May 26, 1966, applied to British Columbia Assoc. of Prof. Engineers  
 for temporary registration, but application not yet processed.

Temporary address: P.O. Box 1257  
 Merritt, B.C.



**LEGEND**

-75 magnetic readings in scale divisions  
 -82  
 -79

● base station

contour interval 1000 gammas  
 gamma equivalents

Scale divisions 71 = 0  
 " " 77 = 1000 gammas approx.  
 " " 85 = 2000 " "  
 " " 97 = 3000 " "  
 " " 109 = 4000 " "

Survey by H.S. Wilson, P. Eng. using Sharpe D-I-M magnetometer, Serial No. 292, June 1966.

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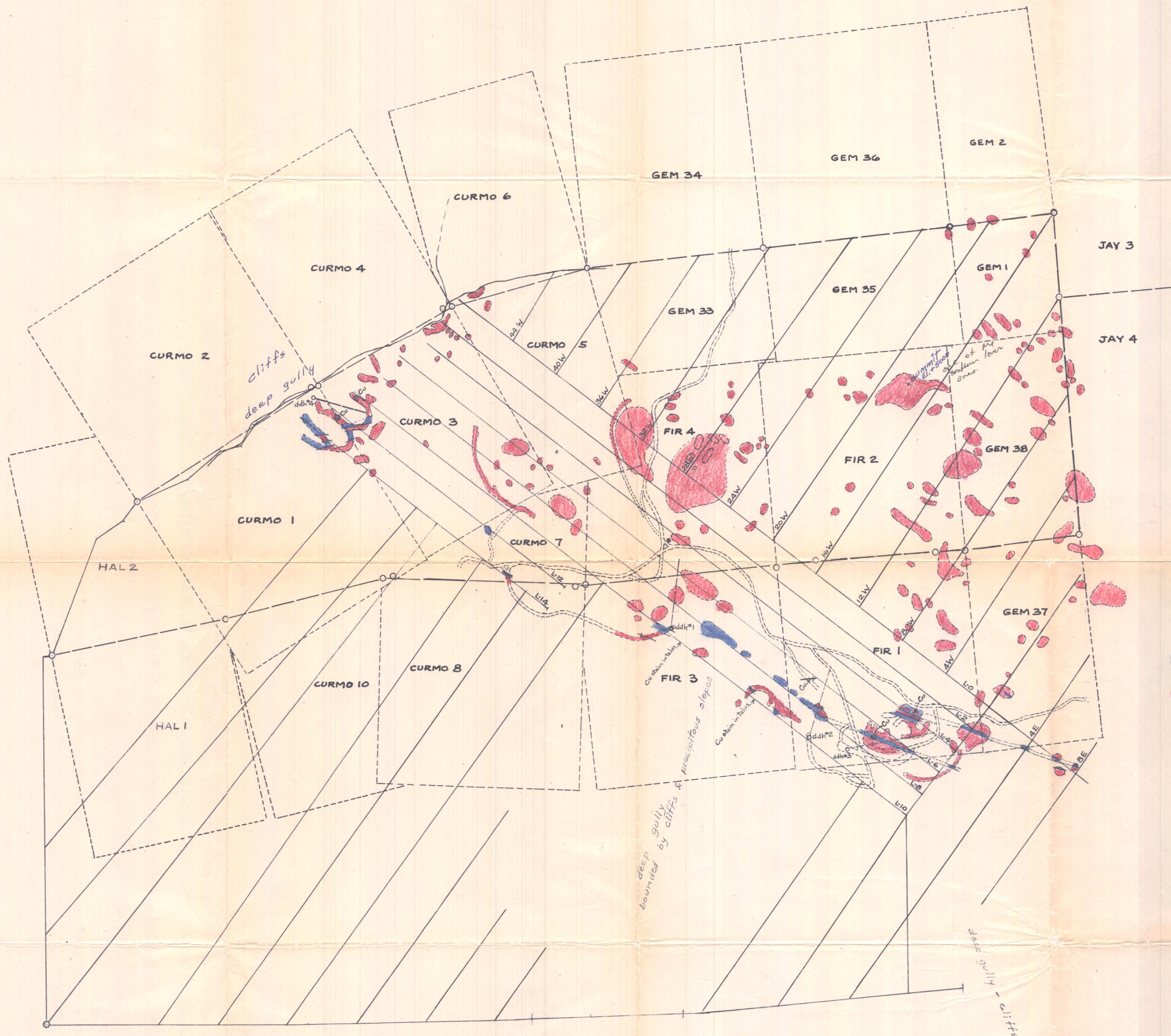
Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 786 MAP # 1

To accompany geophysical report by H.S. Wilson, P. Eng. on the FIR group, 5 miles ENE of the junction of Skuhun Creek and the Nicola River, Kamloops M.D., dated July 23, 1966.

786

*H.S. Wilson*  
 July 26, 1966

GLEN ECHO MINES LTD.  
 MAGNETOMETRIC SURVEY OF SKUHUN CREEK PROPERTY  
 KAMLOOPS MINING DIVISION  
 BRITISH COLUMBIA  
 MINERAL MAP 921/6E (M)  
 SCALE: 1" = 400'  
 SOUTH SHEET



LEGEND  
INTRUSIVE ROCKS  
■ syenite porphyry  
 LOWER JURASSIC  
■ granodiorite and quartz diorite; part of Guichon Creek batholith

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
 NO. 786 MAP #2

To accompany geological report by H.S. Wilson, P. Eng.  
on the FIR group, 5 miles ENE of the junction of  
Skuhun Creek and the Nicola River, Kamloops  
M.D., dated July 23, 1966.  
South Slope Skuhun Creek Mtn #786

786

GLEN ECHO MINES LTD.  
GEOLOGICAL SURVEY OF SKUHUN CREEK PROPERTY  
KAMLOOPS MINING DIVISION  
BRITISH COLUMBIA  
MINERAL MAP 921/6E(M)  
SCALE: 1" = 400'  
SOUTH SHEET

*H.S. Wilson*  
July 26, 1966