GEOLOGY REPORT
FOR
SEFEL J. & ASSOCIATES
ON THE
FALCON PROPERTY
BY
JOHN G. PAYNE, Ph.D.,
GEOLOGIST

October, 1979

GEOLOGY REPORT

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ON THE

FALCON PROPERTY

WILLISTON LAKE AREA,
OMINECA MINING DIVISION.

Map 93 0/11W
55°42'N, 123°20'W

By

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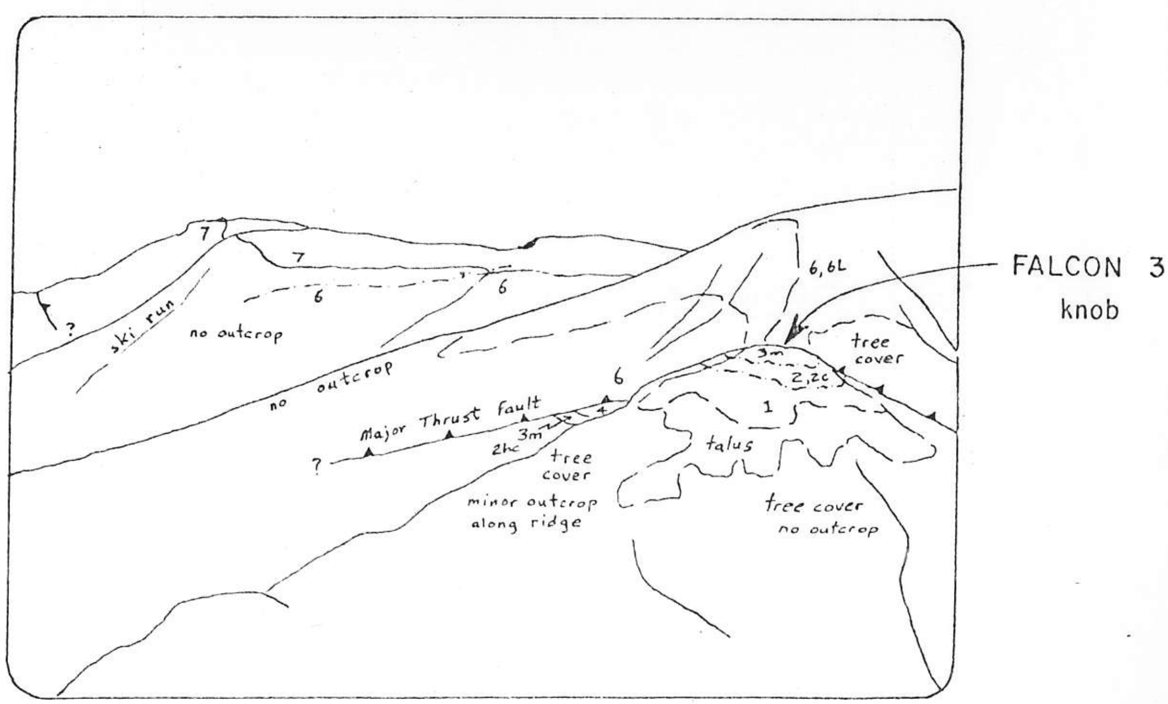
STOKES EXPLORATION MANAGEMENT CO.LTD.,
No.713 - 744 W. Hastings Street,
Vancouver,B.C.
V6C 1A5.

Frontispiece. View Southeast to Falcon 3 from Helicopter above Patsuk Valley

Sketch of Geology of photo in frontispiece



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SUMMARY.

1. The Falcon Iron property was mapped on a scale of 1:5000 and in part on a scale of 1:1000. The Falcon iron formation deposit occurs in a thin unit of tuffaceous sediments and tuffs, which are enclosed in a thick sequence of immature fine clastic sediments. All rocks are of Upper Proterozoic (Hadrynian) age. The source of the iron formation probably was exhalative solutions, which mixed with sea water, and from which mixture, the iron formation was precipitated in a shallow basin of low to moderate relief.

2. Iron formation consists of several facies which occupy stratigraphic subunits. An early silicate-facies subunit composed of quartz-chlorite-magnetite is overlain by and locally interlayered with oxide-facies (magnetite with lesser hematite) and chert facies iron formation. The upper subunit commonly is thinly layered. Thin carbonate layers occur throughout the unit.

3. The rocks are tightly folded into inhomogeneous, northwesterly trending folds with sub-horizontal to gently plunging axes. Although minor folds are tight, the faltenspiegel (form surface) of the iron formation is relatively shallowly dipping. Axial-plane foliation is strongly developed in most units, and bedding is mainly obliterated except in banded oxide and chert facies iron formation. On a regional scale, rocks were stacked along several generally low-angle northeastward-directed thrust faults. Later, right-lateral offset occurred on several northeast-trending, steeply dipping faults, and large blocks were jostled slightly, producing in some blocks gentle northwest or southeast plunges on axes of earlier northwest-trending folds.

4. A ground magnetometer survey was done on grids over the outcrop area of iron formation and the aeromagnetic anomalies mapped in the survey of 1978. The anomalies from the ground survey are grossly similar to those of the airborne survey, but their resolution is greater. Interpretation of geology and magnetic anomalies generally are compatible, but locally are conflicting.

5. Outcrops and shallow trenches were sampled, and several representative samples were assayed for total Fe, magnetic Fe, P and S. Assays for iron average as follows:

   45% Fe_T (40% Fe_M) in magnetite-rich subunits.

   35% Fe_T (20% Fe_M) in magnetite-hematite-rich subunits.

   25% Fe_T (14% Fe_M) in silicate facies iron formation.

6. The tonnage (in millions of metric tons) of near surface iron formation which could be mined by open pit methods is as follows -

Falcon 1.	3.9 oxide-facies, 4.2 silicate-facies.
Falcon 3.	3.0 oxide-facies.

These estimates are conservative and are based only on iron

SUMMARY - continued

formation within about 20 meters of the surface. The estimates are lower than previous ones mainly because of a different structural interpretation; earlier studies assumed the iron formation contacts were parallel to the steeply southwest-dipping metamorphic foliation.

7. A recommended diamond drill program is outlined to test the model on which present tonnage estimates are based, and to allow a better interpretation of the structure and thickness of the deposit. It consists of ten (10) holes averaging 50-100 meters in length.

John Payne

John Payne, PhD.

FALCON PROPERTY
OMINECA MINING DIVISION,
B. C.
AN IRON PROSPECT.

INTRODUCTION.

At the request of Mr. J. Sefel, and following a preliminary report for Stokes Mining Corp. by R. Kemeny (1979), a major program of surface mapping, sampling and magnetometer surveying of the Falcon iron prospect was undertaken from July 16 to August 28, 1979. The purpose was to outline the size, shape, and grade of the bodies of iron formation which had been detected by an airborne magnetometer survey during the fall of 1978. Surface geology was mapped at scales of 1:5000 and 1:1000. Ground magnetometer surveys were done over the anomalous zones; grids with 100-meter line spacing were cut or flagged and readings were taken at a maximum station-spacing of 25 m along grid lines. Many outcrops and shallow trenches were sampled, and several representative samples were assayed.

The following new data are presented:

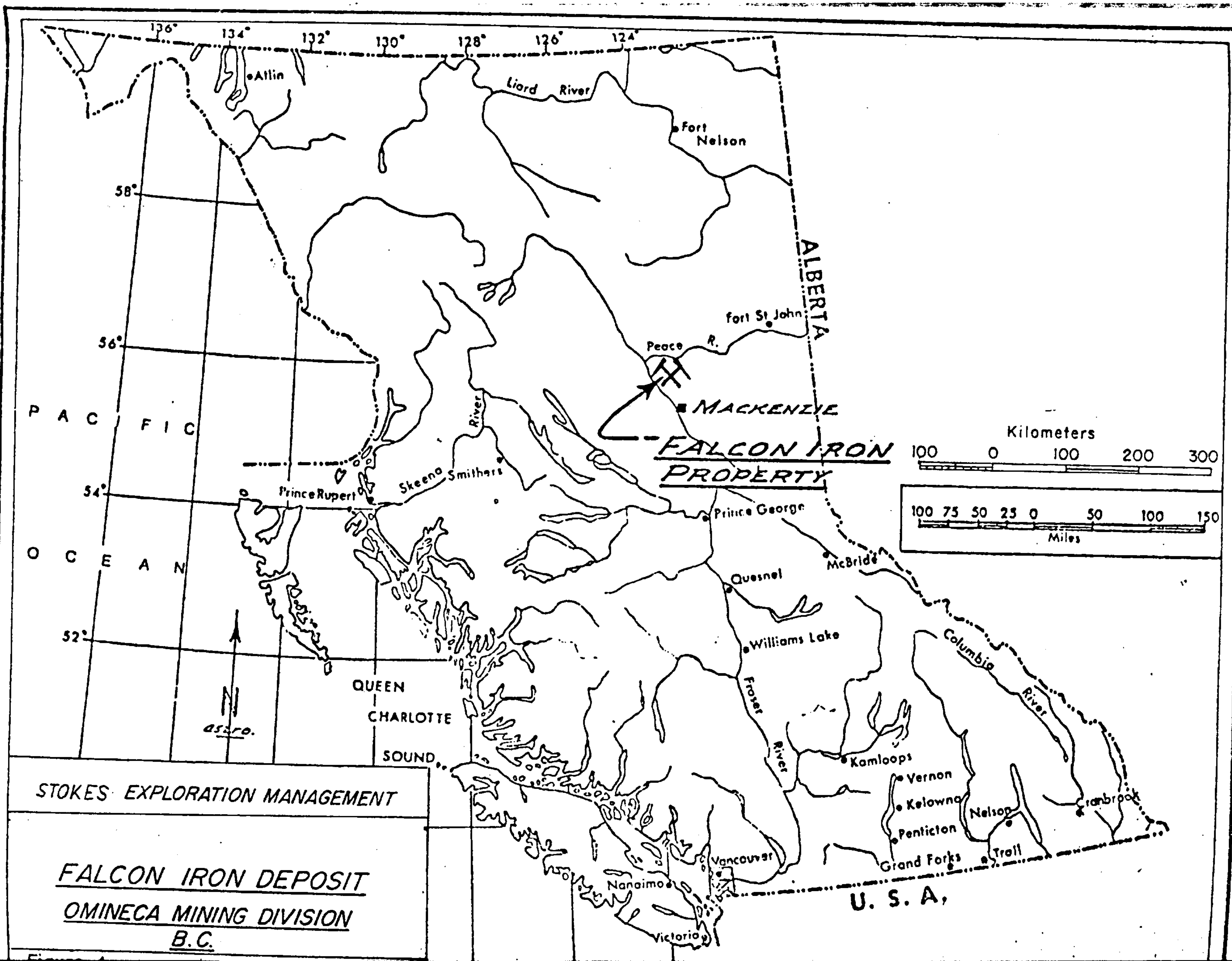
1) geological maps of the Falcon 3 property (scale-1:5000 and scale-1:1000).
   (The geology map of Falcon 1 on the scale of 1:1000 is incomplete and is not included in this report)
2) geology sections of Falcon 1 and Falcon 3 (scale-1:1000)
3) ground magnetometer contour maps of Falcon 1 and Falcon 3 (scale 1:5000)
4) assays of samples from trenches and outcrops.
5) From interpretation of geology and magnetometer data, an estimation was made of the potential tonnage of iron formation which could be mined by open pit methods.

At the beginning of the study, John Payne assisted by Pierre Vaillancourt spent two weeks mapping the property at a scale of 1:5000, and Falcon 3 at a scale of 1:1000. The more detailed mapping was started when it became obvious that the geology of the iron formation was too complex to be portrayed at a scale of 1:5000. On July 27 Mike Milner replaced John Payne as senior geologist, and was in charge of mapping parts of Falcon 1 on the scale of 1:1000, conducting a magneton survey on grids on both claim blocks and sampling the iron formation.

Location and Access (See Figure 1.)

The Falcon property is in the Misinchinka Range of the Rocky Mountains, 40 km north of Mackenzie, B.C. at 55°42'N, 123°20'W in NTS map area 93-0/11W. The main iron formation units outcrop at elevations between 1520 and 1680 meters in Falcon 1 and I 1480 and 1560 meters in Falcon 3. Mackenzie is 25 km from the railway joining Prin George and Dawson Creek, about 790 km from Vancouver and 490 km from Edmonton by ra

Access to the property is by helicopter from Mackenzie airport or from a gravel roa along the east side of Williston Lake; this road passes about 7 km southwest of th property. An access road to the property could be built from the Williston Lake ro up the Patsuk valley; its length would be about 12 km with a vertical rise of 800 r



STOKES EXPLORATION MANAGEMENT

FALCON IRON DEPOSIT

OMINECA MINING DIVISION

B.C.

Topography, Vegetation, and Climate.

The topography near the showings is slightly rugged with gently rolling ridge tops and local steep-sloped flanks; most slopes are less than 40°. The treeline is near the level of the showings on Falcon 3 and generally below those in Falcon 1. Iron formation is well exposed in parts of the region; in particular, banded iron formation and massive magnetite iron formation are resistant units.

The summer is mild to warm and relatively dry. In the cold winter, snow accumulates to a maximum of 3 to 4 meters at the elevation of the showings. Melting of this snow normally would provide water for drilling until mid-August.

History of Property.

1975 - (August) Iron formation discovered by A. Potter, prospector.

1976 - (April) Falcon #1 claim block (20 units) and Falcon #2 claim block (16 units) were staked by A. Potter, and recorded in Vancouver.

(July) Welcome North Mines Ltd. and Ventures West Capital Ltd., both of Vancouver, B.C. obtained exclusive rights on the property via option from Mr. Potter.

1978 - (October) J. Sefel and Associates optioned the property from Welcome North and Ventures West Capital. SEMCO was retained to manage an exploration program. An airborne magnetometer survey was flown; five anomalous zones were detected, two on the property and three on the ridge to the south of Patsuk Creek.

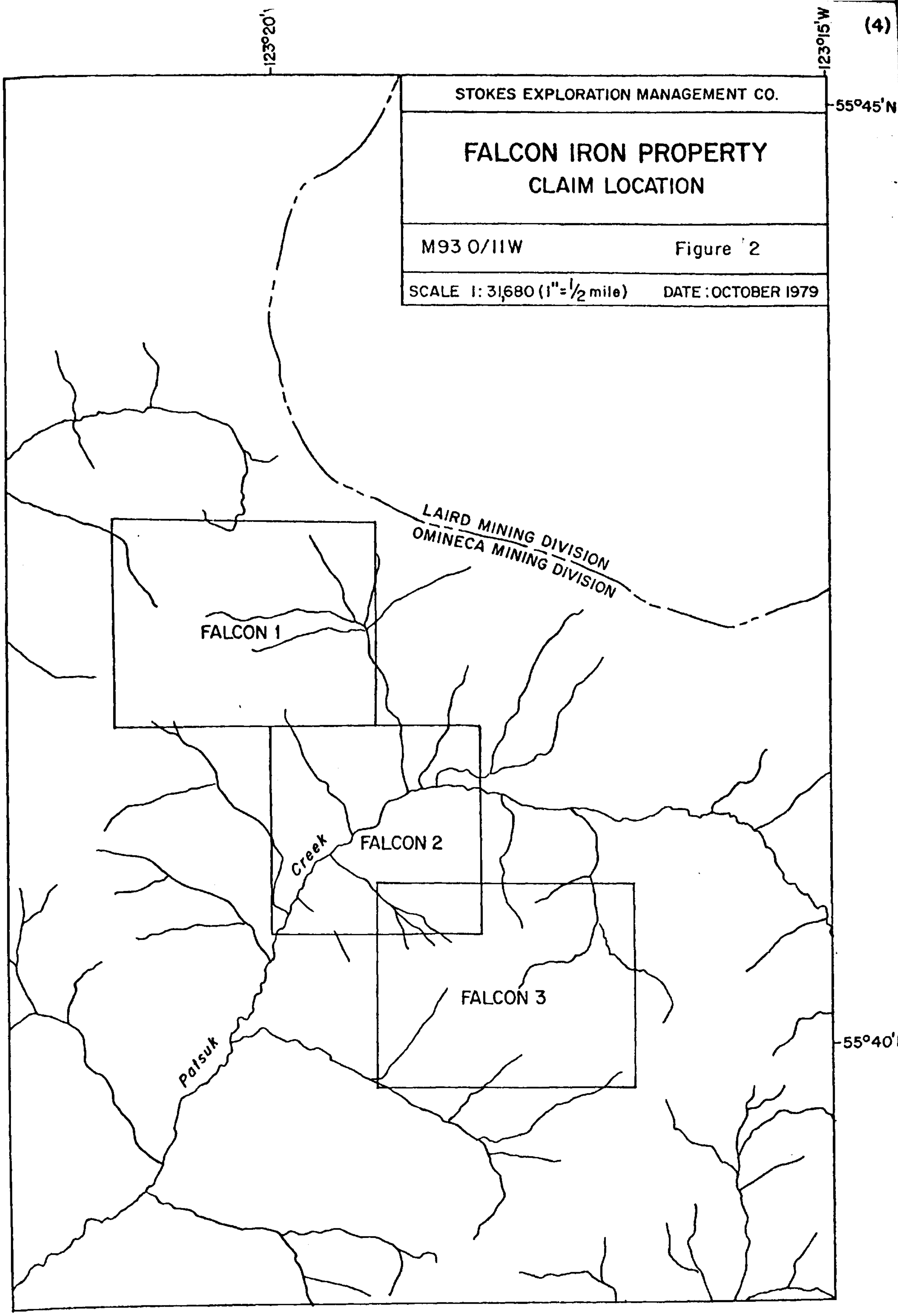
1979 - Falcon # 3 (20 units) was staked for J. Sefel and Associates to cover the magnetic anomalies south of Patsuk Creek. Preliminary metallurgical and marketing studies were done (report by R. Kemeny, May, 1979).

Claim Status (see figure 2).

The property consists of the following claim blocks:

Claim Block	No.of Units	Record No.	Date Recorded	Valid Until.
Falcon 1	20	261(4)	April 12, 1976.	Survey pending L/1 -581/79
Falcon 2	16	262(4)	April 12, 1976.	
Falcon 3	20	1779(5)	May 28, 1979.	Work to be filed before 1980

Falcon 1 and Falcon 2 owned by WELCOME NORTH.
Falcon 3 staked by DAVID O'SULLIVAN, FMC 175612 and held by blank Bill of Sale for WELCOME NORTH.


123°20'
123°15'W
55°45'N
55°40'N
STOKES EXPLORATION MANAGEMENT CO.
FALCON IRON PROPERTY
CLAIM LOCATION
M93 O/11W
Figure 2
SCALE 1: 31,680 (1"=½ mile)
DATE: OCTOBER 1979
LAIRD MINING DIVISION
OMINECA MINING DIVISION
FALCON 1
FALCON 2
FALCON 3
Creek
Patsuk

GEOLOGY.

A) Regional Geology. (See Figure 3)

The Falcon Iron property is near the western margin of the Eastern Marginal Tectonic Belt of the Canadian Cordillera. Rocks in the Misinchinka Mountains are mainly fine to coarse clastic metasediments of Upper Proterozoic (Hadryian) age. These are overlain by clastic sediments and thick carbonate units of Lower to Middle Paleozoic age. Major units are persistent along a northwest trend for a length of over 50 km. The gross section of rocks has been displaced and stacked by several subparallel, generally low-angle, eastward-directed thrust faults. The rocks have been deformed into inhomegeneous, open to tight folds trending northwest and plunging gently northeast or southeast. In less-competent units a prominent regional axial-plane foliation was developed; it strikes parallel to the regional fold trend and dips moderately to steeply southwest. Bedding in these units was transposed parallel to the foliation or was obliterated.

B. The Snake River Deposit.

Sharp (1976) noted similarities between the Falcon deposit and the Snake River deposits in the Yukon. The latter occurs on the north edge of the Mackenzie Mountains in Proterozoic clastic sedimentary rocks of the Rapitan formation. This unit consists of shale and shaley conglomerate, with many remarkably persistent members including thin volcanic ash layers. The shale grades laterally into hematitic shale. The iron formation consists of interlayers of red chert and fine grained bluish specular hematite; it is thought to have formed by precipitation as a gelatinous ooze from solutions of exhalative origin. Soft-rock deformation and diagenetic replacement are common compaction features. The iron formation is interlayered with shale containing widely dispersed cobbles and pebbles (cf. Unit 6, this study); some cobbles are of iron formation. The cobbly unit is interpreted as a channel-fill deposit. The deposit is up to 500 feet thick and is estimated to contain 2 billion tons of ore grading 43% Fe.

C. Property Geology. (See Figures 4, 5, 6).

Detailed mapping has allowed a partial unravelling of the complexly folded structure, and with a few notable exceptions, a relatively simple stratigraphic section has been constructed. The stratigraphic section was determined first on Falcon 3, and a relatively similar section was mapped later on Falcon 1.

1. STRATIGRAPHY.

The stratigraphic section is described from oldest to youngest units.

Unit 1. Lithic-Fragment Mudstone.

The oldest unit is well exposed only at the base of outcrops at the ends of prominent ridges overlooking the Patsuk valley. It consists of medium grey to black phyllite derived from a siltstone to mudstone; the unit contains abundant fine, angular to flattened fragments (averaging 0.5-1 cm in length) of fine grained clastic sedimentary rocks. Pyrite cubes up to a few mm across are common in some parts of the unit, and may mark original sedimentary layers. Quartz-calcite blebs a few mm across are locally abundant. The weathering surface is characteristically waxy in lustre and light greyish brown to brown in colour.

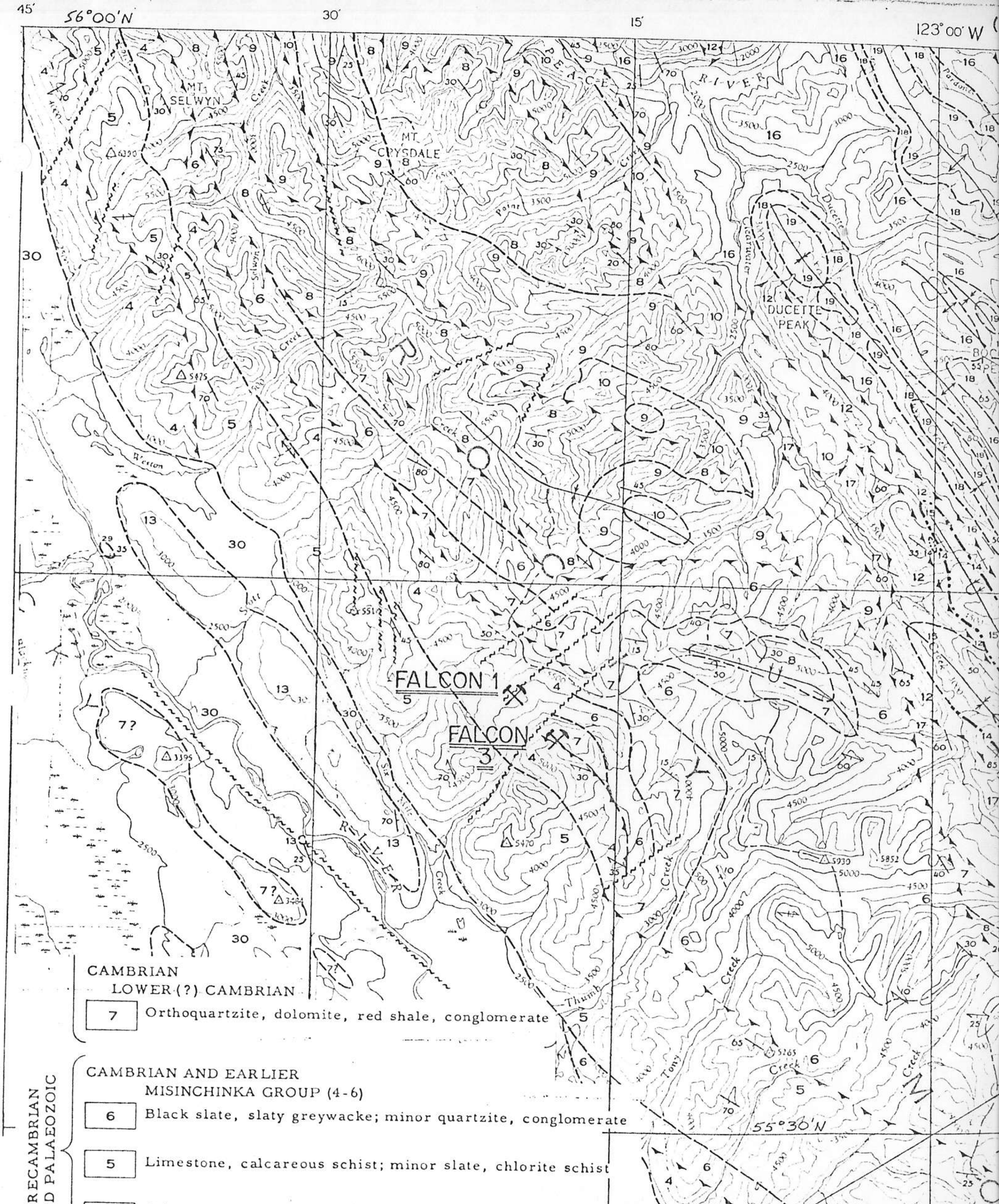


Figure 3. Regional Geology (GSC Map 11-1961)

A well developed axial plane cleavage and abundant fractures help make this a recessive unit.

Unit 2. Tuff, Tuffaceous Siltstone-Mudstone (Intermediate composition).

Unit 1 is overlain by fine grained, light to medium green tuff and tuffaceous siltstone-mudstone. Most of the contact is sharp, but locally it is gradational, and a few green tuffaceous units occur within Unit 1 at the north end of Falcon 3. In Unit 2 lithic fragments up to 1 cm long are widespread; these are mainly of fine grained sedimentary and volcanic rocks. Northeast of Falcon 3, pyrite cubes are common in rocks overlying pyritic rocks of Unit 1. Along its upper contact, Unit 2 generally is altered against overlying iron formation to dark green, chlorite-rich rock or reddish brown-green, chlorite-hematite-rich rock. Generally hematite is more abundant near the contact, while chlorite alteration extends further into the tuff. Quartz veins and patches and smaller irregular replacement patches of massive, fine grained pyrite are common with hematite alteration. Within a meter of the iron formation contact, altered rock locally contains minor to major magnetite associated with hematite.

Unit 3. Iron Formation.

This unit consists of several subunits which vary widely in relative abundances in different parts of the property. Subunits have sharp to gradational contacts, with contacts between individual layers within subunits generally sharp.

3m - magnetite-rich iron formation.
commonly medium to coarse grained, rare primary layering, blocky weathering, composed of magnetite, quartz, and minor hematite. Hematite probably is a primary sedimentary mineral in part, but in many outcrops it is associated with late cross-cutting quartz veins, and may have formed by hydrothermally related oxidation along the veins.
In Falcon 1 the subunit is lensy in character suggesting that it may have been boudinaged during folding or that it was precipitated in local shoals in the original basin.
This is the most prominent and most economically desirable type of iron formation in the property.

3q - cherty iron formation
in part dark grey averaging 10% magnetite, in part reddish with disseminated dusty hematite, and in part light grey with very minor iron oxides. Generally the subunit is thinly banded with various types of oxide-facies iron formation.

3h - hematite-rich iron formation
steel grey in color, finely banded to massive, locally bright red jasper lenses occur in a few layers associated with layers of 3q.

3x - banded iron formation
where the above subunits are thinly banded (in the order of 1-10 mm) the unit is described as banded iron formation, and given the subscript x. Subscripts describe the types of layers present, in order of decreasing abundance.

3a - carbonate-rich iron formation
common in thin layers in banded iron formation and as remobilized crosscutting veinlets. Layers of this unit are too small to show on the maps.
Some contain segregations of magnetite both parallel to bedding and parallel to metamorphic foliation.

3av - tuffaceous carbonate-rich iron formation
associated with banded iron formation west of the major saddle in Falcon 1 is an irregular layer composed of very abundant angular whitish-weathering fragments of dacitic tuff? up to 2 cm long set in a brown-weathering matrix of carbonate. This unit probably was formed by settling of ash fragments into the basin during a period of deposition of carbonate.

3s - silicate-facies iron formation (Plate 1).
this subunit is restricted to Falcon 1, and occurs in the lower part of the unit. It consists of quartz, chlorite, and magnetite, possibly with other, green iron silicates. The unit is deformed and recrystallized with minerals segregated into irregular lenses parallel to the metamorphic foliation. This has produced a color banding parallel to foliation, with lenses of lighter green, quartz-rich rock enclosed in irregular bands and lenses of darker green, chlorite-rich rock and/or black or dark green, magnetite-rich rock. Magnetite-rich lenses are up to 2 mm thick and several tens of cm long. At the lower margin of the iron formation, this subunit grades into chlorite-altered tuff (Unit 2c) with similar texture to unit 3s but without magnetite.

Unit 4. Tuffaceous Siltstone-Mudstone. (Intermediate composition).

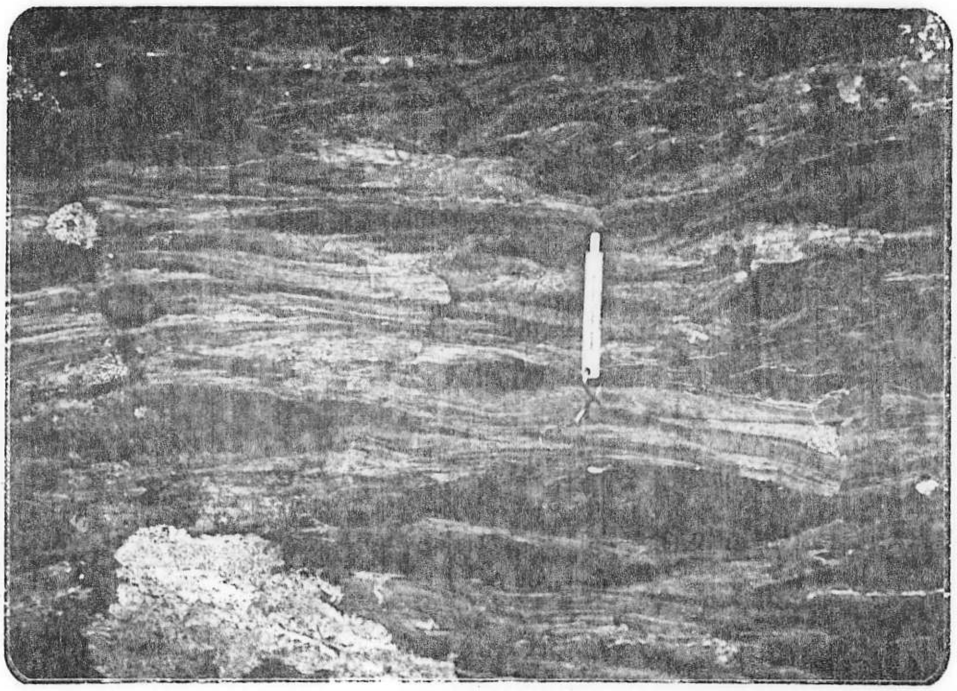
Above the iron formation is a second light green tuffaceous siltstone-mudstone unit similar to Unit 2. However, lithic fragments are much rarer, and the texture is slightly more uniform in Unit 4 than in Unit 2. However, in scattered outcrops, it commonly is difficult to distinguish the two units, and as a result, structural interpretation in these regions is ambiguous. Contacts with iron formation generally are much less altered than those of Unit 2; alteration mineralogy is similar to that along Unit 2-Unit 3 contacts, with hematite, chlorite, and lesser magnetite in the tuff adjacent to the contact. However, pyrite is rare in this unit. The patterns of alteration suggest that the section is right-way-up, because alteration would be expected to be greater along the footwall of the iron formation because of interaction with ascending exhalite solutions.

Unit 5. Mudstone-Siltstone.

Above Unit 4 in Falcon 1 is a medium to dark grey, fissile mudstone-siltstone unit, which generally is poorly exposed. On the round knob to the southwest of the Falcon 1 saddle are thin interbeds of iron formation containing hematite, pyrite, and minor magnetite.

In Falcon 3, Units 1-4 are separated from Units 6 and 7 by a major thrust fault? as shown on Figure 5. The relative ages of the rocks are unknown, but most probably Units 6 and 7 are younger.

Plate 1. Silicate facies iron formation.Subarea 3 Falcon 1, showing elongate magnetite-rich and silicate-rich lenses parallel to S_1. (Magnet is hanging from a magnetite-rich lens).



Unit 6. Sandy Siltstone.

This unit consists mainly of sandy to pebbly siltstone with up to 10% quartz grains from 0.5 to 1 mm in size. It also contains a few thin layers of silty sandstone and scattered lenses and pods of limestone and dolomitic limestone. Throughout the unit are scattered to locally abundant cobbles and boulders of quartzite, vein quartz, and rarely carbonate rock up to 50 cm across. Layers in which these coarse lithic fragments are relatively abundant are denoted with a suffix, L, on Figure 4. Rocks show a well developed axial-planar foliation and generally are fissile. Exposure is poor except on cliffs and crests of ridges. The unit has light brown color and weathering color.

In Falcon 1 rocks of Unit 6 occur on the knob to the northeast of the saddle; however, their structural relations to the other rocks is unknown.

Unit 7. Mudstone-Siltstone.

In Falcon 3 this unit overlies Unit 6 gradationally, with interlayers of brown siltstone of Unit 6 and dark grey mudstone-siltstone of Unit 7. Beds range up to 50 cm thick in Unit 7, and consist of mudstone and siltstone, locally with abundant pyrite cubes. At the southeast end of Falcon 3 are several very thin bedded units up to 3 m thick of pyritic siltstone-mudstone containing up to 20% very fine grained pyrite. Interbedded in some of these units are beds up to 5 cm thick of cherty exhalite; these are particularly useful as markers in the otherwise uniform Unit 7.

2. STRUCTURE.

Early Deformation.

Bedding (S_o) was deformed strongly during a major deformation (D_1) into a series of broad major folds (F_1) with numerous close to isoclinal parasitic folds on major fold limbs. Major folds have periods up to 200 m and amplitudes up to 100 m; parasitic folds average 0.3-2 m period and 0.2-0.5 mm amplitude. Folds are not obvious in the field; they were outlined by carefully mapping contacts between units and by detailed mapping of banded oxide-facies iron formation, in which unit, S_o is preserved. Fold axes plunge variably from 20°SE to 20°NW, with plunges being relatively uniform within large blocks; changes and reversals of plunge in F_1 axes were produced by later warping or block faulting along NE-SW trending planes. These are described in detail in a later section dealing with tonnage estimates of different bodies of iron formation.
A prominent axial plane foliation was developed in all units except oxide and chert facies iron formation; it trends 110-130° and dips 60-80°SW. Towards and beyond the southeast end of the property a structural transition exists in rocks of Unit 7. S_1 gradually becomes less prominent toward the southeast, and S_o becomes more obvious and less deformed. In the cliffs beyond the southeast end of the property S_o is only slightly shuffled along a close to widely spaced axial-planar fracture cleavage (S_1). Based on the southeast plunge of the folds in Falcon 3, these rocks would be structionally well above the iron formation of Unit 3.

This change in fold style is probably a function of depth, with fracturing and weak folding dominant at shallower depth, and recrystallization and more intense folding dominant at greater depth.

The obliteration of S_0 and prominence of S_1 in many of the rocks led previous workers to assume that the contacts of iron formation units would follow the steeply dipping S_1, and earlier tonnage estimates were based on steeply dipping iron formation bodies which were thought to extend to depths of at least 100 meters.

Late Faulting.

Mapping by the Geological Survey of Canada shows a major NE trending strike-slip fault along Patsuk Creek, with a right lateral offset of 1-2 km on the trace of major thrust faults east of the Falcon property. This fault would offset Falcon 1 from Falcon 3 with the same magnitude of right-lateral movement.

Two low-angle thrust faults were mapped in the eastern exposure of iron formation in Falcon 1 (Zone 5). The direction and magnitude of displacement is unclear, but the latter probably is of the order of a few decameters. The movement on the faults superimposed on a tightly folded stratigraphic section has produced a complex outcrop pattern in the iron formation and enclosing tuffaceous rocks.

A major thrust fault may be present in Falcon 3 between units 1-4 and 6-7 (see Figure 5). The southwestern limb of the major synform in Unit 3 is truncated by the fault, and further southeast the northeastern limb of the fold is unconformably overlain by rocks of Unit 6. These features can best be explained by an overthrust of rocks of Units 6 and 7 toward the northeast. In the same region, the aeromagnetic survey shows a right-lateral offset of several decameters at the southern end of the anomaly. The low intensity of the anomaly in this region is because it is covered by rocks of the upper thrust plate.

3. PALEONVIRONMENT.

The oldest exposed rocks, lithic argillite of Unit 1, were formed by rapid erosion of intermediate to mafic volcanic rocks and deposition into an active basin. The presence of primary pyrite, now represented by pyrite cubes, in certain parts of the section suggests a reducing environment during at least part of the time of formation of the unit.

An andesitic to dacitic volcanic episode followed, during which fine lithic tuffs and tuffaceous sediments were deposited in the basin. Mapping was not done away from the basin to determine the source of the volcanic debris.

During a hiatus in the volcanic activity, Fe and Si were brought into the basin by exhalite solutions, and were precipitated as various types of iron formation (Unit 3). Interaction between the exhalite solutions and footwall tuffs produced alteration assemblages containing chlorite and hematite, with lesser magnetite, quartz, and pyrite.

The depth of the sedimentary basin varied, with the deepest part being near the middle of the exposed iron formation, near the south end of Falcon 1.

At first silicate-facies iron formation was precipitated in the deeper part of the basin. This was followed by more widespread precipitation of various types of oxide-facies iron formation associated with chert and carbonate-facies iron formation in a shallower, more oxidizing basin than that into which the silicate facies iron formation had been precipitated. Thin layering in the upper unit probably reflects local variations in both oxidation potential and composition of exhalite solutions. Magnatite is more abundant in Falcon 3, while chert and hematite are more abundant in Falcon 1.

Volcanic activity resumed, and again the basin received fine volcanic debris (Unit 4). As volcanic activity waned, sedimentation of volcanic-derived argillite (Unit 5) occurred in Falcon 1. Thin interbeds of hematite-pyrite iron formation in the section indicate brief periods of exhalative? activity similar to that which produced the main iron formation unit.

The record of later events in Falcon 3 has been destroyed by erosion or obscured by the cover of rocks of the upper thrust-plate.

In the upper thrust-plate, the sandy siltstone of Unit 6 probably was formed by erosion of quartz-bearing, medium to coarse grained rocks (plutonic or sedimentary). Sorting is poor, suggesting rapid deposition and little reworking. Scattered lenses of carbonate suggest a shallow basin. The presence of scattered cobbles and boulders of quartzite and vein quartz suggests an origin by rafting on ice across the surface of the basin and settling into the sediment when the ice melted.

4. GEOPHYSICS (GROUND MAGNETOMETER SURVEY).

Ground magnetometer surveys were done over the outcrop regions of iron formation; these are mainly concident with the anomalous areas in the airborne magnetometer survey of 1978. On Falcon 1 the base line was oriented parallel to the major fold axes, and cross lines were spaced at 100 m intervals. In Falcon 3 the base line was laid before geology was done, and hence is at an angle to the fold axes; it has one major offset, made to obtain better topographic control of the location of the line. Cross lines are mainly at 100 m intervals. Base lines trend 130° in Falcon 1 and 122° in Falcon 3; these directions are taken as Grid E-W, and references below are in terms of grid orientation.

Interpretation of the data generally follows the dike model, which for a moderately to steeply dipping dike (and depending on the orientation of the dike with respect to the earth's magnetic field) consists of a high on the hangingwall of the magnetic dike, and a negative value of lower magnitude on the footwall side. Topographic effects may be significant; readings topographically below outcrop or subcrop of gently to moderately dipping iron formation have a strong negative topographic component.

Readings were taken at 25-meter intervals along grid lines, and at shorter intervals in anomalous regions, in places being at 3-meter spacings. The closely spaced data commonly identified narrow but structurally continuous magnetic bands, and aided interpretation of the geology. It also helped distinguish scattered erratic boulders of probably glacial origin; these produced isolated peaks the size of the boulder.

The magnetic datum was set in a nonmagnetic area at about 500 gammas to provide sensitivity on the low scales of the instrument. Data was plotted on maps at the scale of 1:5000 for regional trends and distribution, and on profiles at the scale of 1:1000 for interpretation of geological sections. Some of the profiles are reproduced in Figure 6. Contoured plots of the data on the scale of 1:5000 are shown in Figures 7 and 8 for Falcon 1 and Falcon 3 respectively.

Data from the aeromagnetic survey of 1979 has been recontoured in part on the basis of geological work done in this study (Figure 9). The patterns are very similar to those obtained from the ground magnetometer surveys, but lack some of the detail of resolution of anomalies.

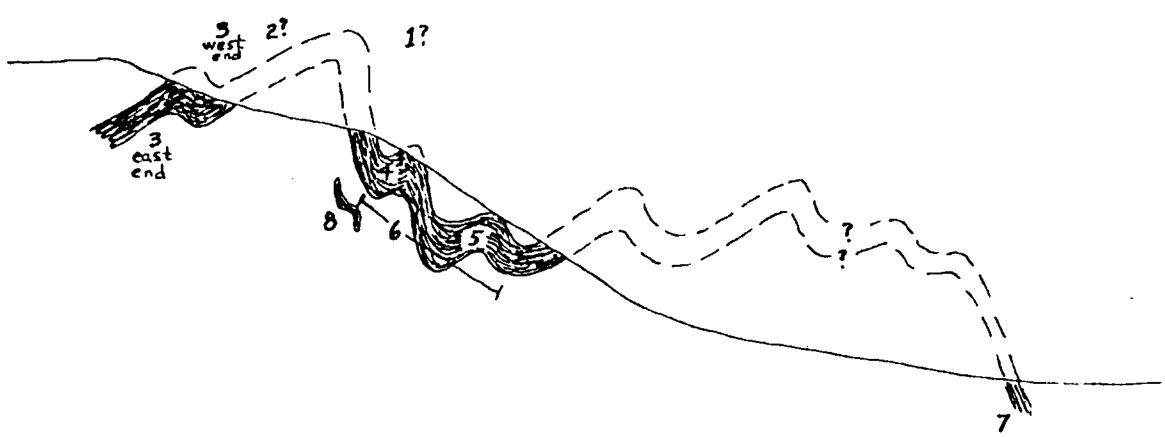
The magnetic anomalies are useful in determining the distribution of iron formation in regions of overburden, and in general correspond well to the outcrop and projected near-surface distribution of the iron formation based on geology. Because of the wide variety of magnetite content in the iron formation, it is considered impossible to interpret the detailed variation in magnitude of the magnetic anomalies.

5. DETAILED DISTRIBUTION OF IRON FORMATION.

a) Falcon 1.

The iron formation in this region has been subdivided into eight subareas on the basis of continuity of iron formation on surface or in magnetic anomaly. The rocks are folded into a few major inhomogeneous folds, which locally can be described as cylindrical to conical. Within subareas, especially smaller ones, the plunge of major folds is relatively uniform; however, plunges vary widely between subareas. Thus it is impossible to make a composite projection of the data without major distortions. A schematic section is shown below which attempts to remove the effects of later deformation, and to show the relative positions of the different subareas on a generalized cross section of Falcon 1. (Figure 10).

Figure 10. Schematic Composite Cross Section of Falcon 1 showing locations of subareas.



In some sections, particularly those for which little geological data is available, interpretation of magnetic data conflicts with interpretation of geology as projected onto the section from the nearest outcrops. Some of the conflicts may be because of complexities in structure, others in the simplicity of the geophysical model, and others due to the variable magnetic properties of the iron formation. None of these factors can properly be assessed without more geological data, such as would be obtained from sections of drill holes.

Subarea 1.

A small body of 3s outcrops in a cliff face near line 675W at elevation 1520-1550m. The iron formation is exposed over a width of 35 m, and is gently folded into two synforms and a central antiform whose axes plunge gently to the east. The magnetic expression of subarea 1A has a strike length of nearly 200 m, and fades to the east. On line 400W a moderate magnetic anomaly (subarea 1B) occurs in a region of no outcrop; this is on strike with subarea 1A and thus is grouped with it as a probably continuation of the zone.

Subarea 2.

Near line 300W at elevation 1641 m; layered iron formation.

In the main outcrop, 3m, 3mq, 3a, and 3s form a layered sequence up to 2 m thick overlying 2hc. Individual layers (beds) are 5-30 cm thick. Rocks are gently folded into synforms and antiforms within a larger synform; fold axes plunge 3-9^{o}E. Carbonate-rich layers commonly have abundant segregations of magnetite as lenses parallel to S_o and to S_1 (Plate 1). The magnetic anomaly suggests that the south limb of the fold is steeply dipping to the north.

Subarea 3.

At the west end of subarea 3 (Lines 200W to 100E) the geology is complex. Thinly layered 3mqh and massive thickly layered 3m form interlayers with foliated 2 and 2ch. 3m layers are most resistant to weathering and form broad flat outcrops. The overall structure consists of close to open folds with horizontal or gently eastward plunging axes, with the iron formation in a broad synformal trough. Interlayered with 3hqm is an irregularly folded, 10-50 cm-thick layer of 3av, with cherty dacitic to rhyolitic fragments averaging 1-5 cm in size enclosed in a brown weathering carbonate groundmass.

The structural relationship of subareas 1, 2 and 3 are unclear. Because of gentle eastward plunge of the folds and the relative elevations of the subareas, rocks in subarea 2 plunge beneath those of subarea 3. The projection of rocks of subarea 1 to the position of subarea 3 (section 100W) would be at even a deeper level. Because the rocks of subareas 1, 2 and 3 appear to occupy the same stratigraphic position, a different explanation might be that the region has been faulted, with blocks to the west downdropped relative to those further to the east.

East of the outcrop at the origin of the grid, the iron formation causing the main anomaly of Zone 3 is unexposed until line 600E. From here to the end of the ridge just beyond line 800E subarea 3 is well exposed on the top and steep north side of the ridge. S_o is tightly folded, and S_1 is prominent in all units except 3m, 3q, and 3x. The stratigraphic section in the iron formation consists of a lower layer of 3s and an upper layer dominated by 3xqmh, and some thick layers of 3m. To the south the unit is folded into

Plate 2. Magnetite segregations parallel to S_0 and parallel to S_1 in carbonate-rich layer in 3xm; subarea 2, Falcon 1.

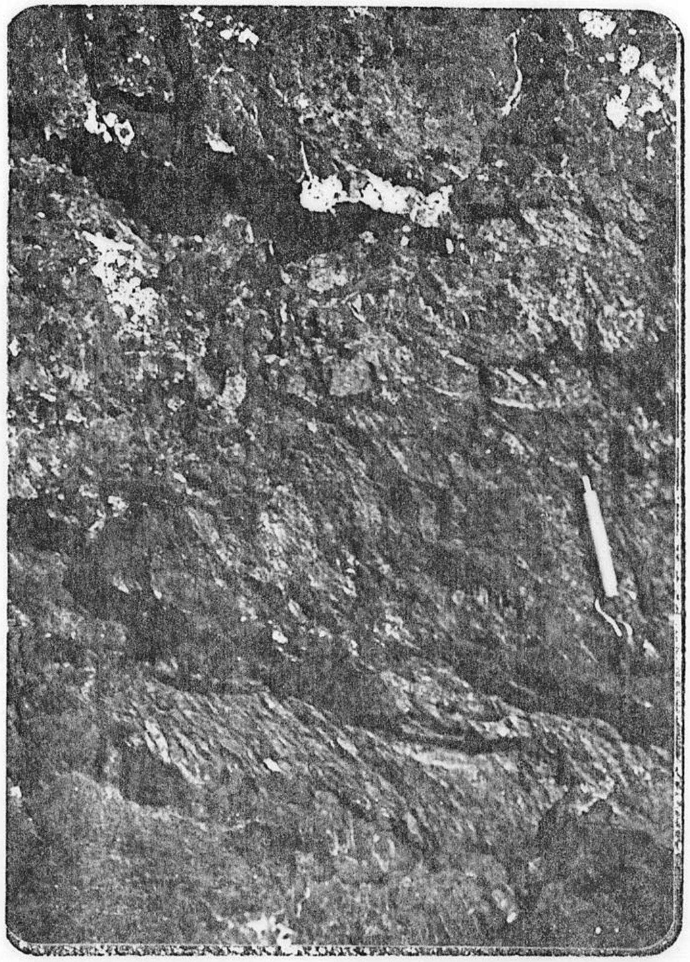
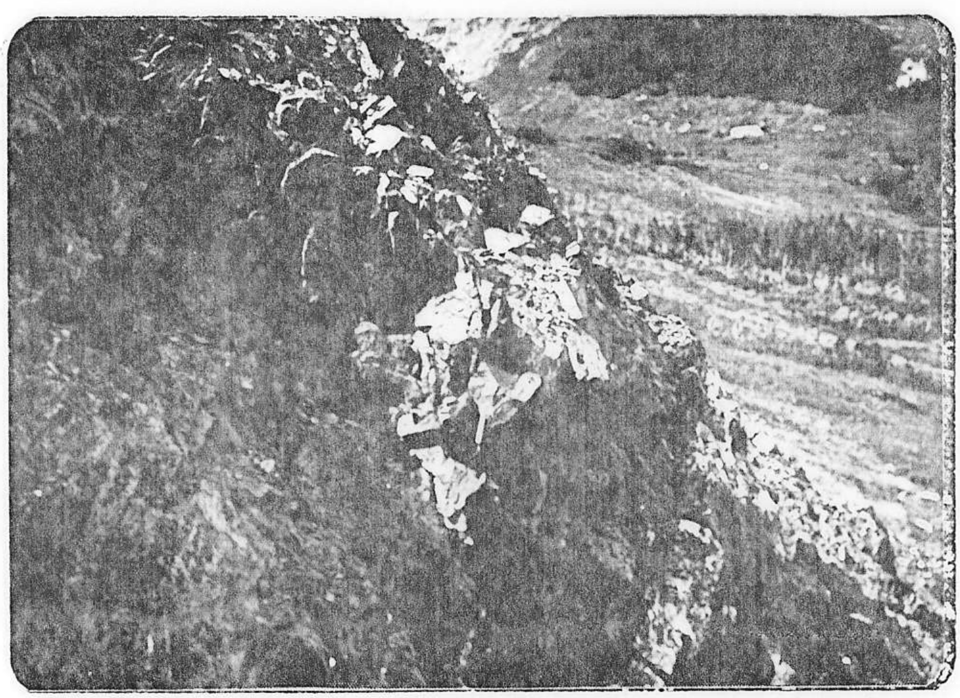


Plate 3. Small-scale F_1-folds in S_0 in oxide facies Iron Formation; subarea 4, Falcon 1.



small open folds with magnitudes of 1-3 meters. (Plate 2). The unit appears to pinch out or is truncated by a fault, or less probably a tight fold about 150 meters south of the base line.

From line 100E to 400E a narrow outcrop zone of thin banded 3xqhm is exposed on a cliff face about 60 m north of the baseline. This unit is tightly folded into small, close drag folds which suggest a major anticlinal closure to the south. However, interpretation of the overall geology and magnetic patterns suggest that the major antiform is to the north.

Fold axes and lineations parallel to fold axes are broadly warped and plunge up to either 5° west or 5° east.

Subarea 4.

This subarea is well exposed between lines 400E and 600E. Near 400E it outcrops in a series of close folds which plunge $20\text{-}23^{\circ}$ west. The iron formation is probably thin here, because 100 meters to the east along the axis of a major antiform the contact with tuffs of unit 2 is exposed. The outcrop along the north-facing cliff is cut by two small? thrust faults with unknown offset; these superimpose older rocks from the core of the antiform (3s,2) onto younger rocks (3x) to the north.

An estimate of the ratio of 3xqhm to 3s is difficult to make because of limited exposure and complex structure; a value of 2/1 is used in calculations of tonnage in a later section.

Subarea 5.

North of subarea 4, and probably connected to it at depth below the detection limit of the magnetometer is a poorly exposed zone of iron formation containing 3h, 3s, and 3m. Interpretation of the magnetic anomalies indicates a syncline between subareas 4 and 5; this could be tested as part of a drill program outlined later. The magnetic expression of subarea 5 is not closed off by background readings at the west end, suggesting that it may continue further in that direction. No indication of plunge of fold axes was found in this subarea.

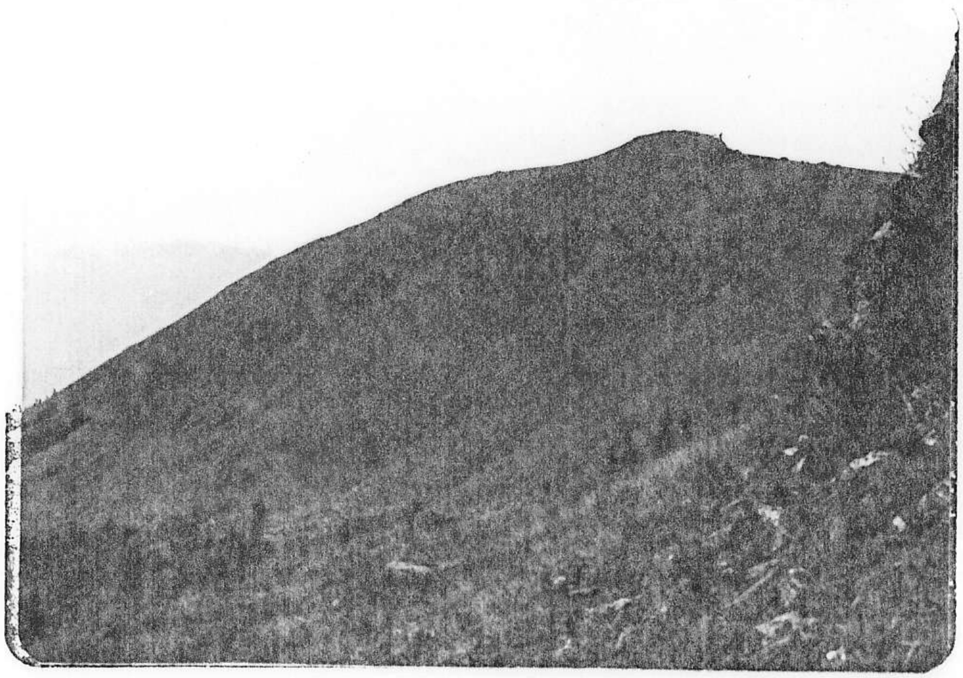
Subarea 6.

Across a broad valley east of and on strike with subareas 4 and 5 between 960E and 1320 subarea 6 is perched on the top and north flank of a flat-topped ridge which parallels the fold axes (Plate 3.) The broadly folded structure can be seen in Plate 3 and most outcrops of 3x contain tighter small-scale folds. Fold axes plunge variably from 5°E to 10°W, averaging slightly to the west. The stratigraphic section is as in subarea 3, with a thick zone of 3s underlying a thinner zone of 3xqhm containing a few 3m and 3h layers up to 50 cm thick. The ridge is underlain by rocks of Units 2 and 1 which are well exposed at its east end.

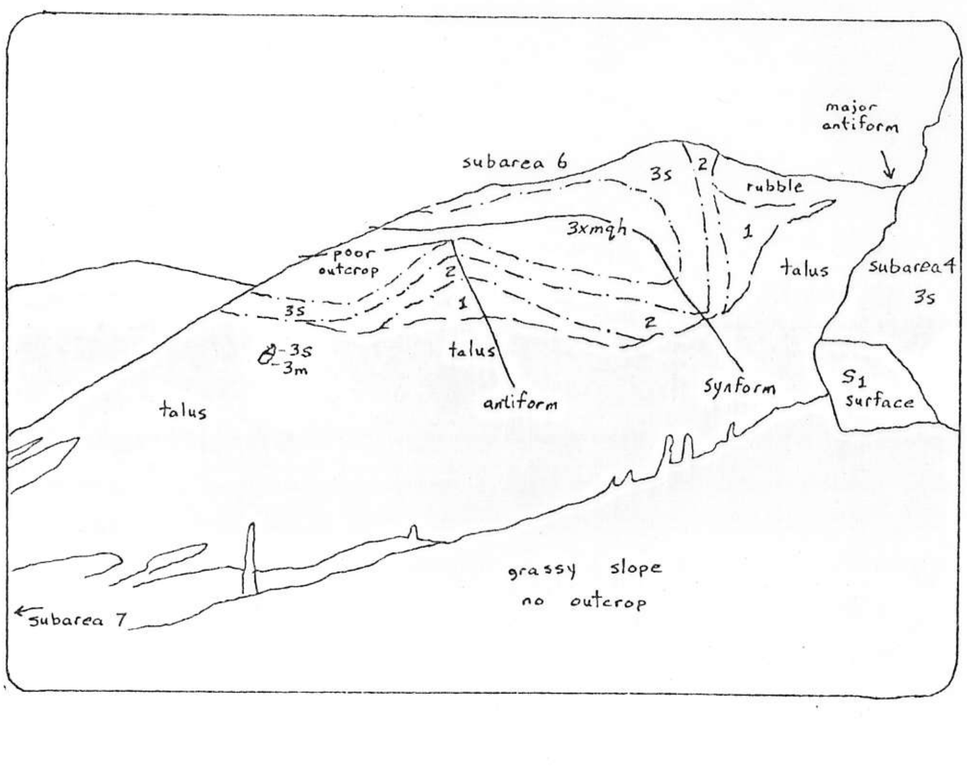
Subarea 7.

North of subarea 6 the iron formation probably thins; local magnetic highs on line 900E at 680N and on line 1000E at 625N are interpreted as being the extension of the main iron formation unit on the north limb of a broad antiform which separates this region from subarea 6. (See Fig.10).

Plate 4. Large-scale F_1-folds in Iron Formation, subarea 6, Falcon 1; view towards southeast from subarea 4.



Sketch of geology on Plate 4.



Subarea 8.

Stratigraphically below subarea 6 within Unit 2 is a zone up to 5 m thick of iron formation composed of a lower member of 3s (2-3 m thick) and an upper member of 3xqhma (2-3 m thick). The rocks in this subarea are gently to tightly folded, with subhorizontal fold axes; the style of folding is partly unconformable with that in the overlying iron formation (see Fig.6, Section 1300E). After several unsuccessful attempts to relate this unit stratigraphically to the main iron formation, it was concluded that it must be an earlier unit.

b) Falcon 3.

The Falcon 3 deposit consists of a continuous zone of predominantly 3m and 3mq, with lesser 3xmqh. It outcrops in a major synform plunging 18-20°E, (see Figure 5). The detail folding is complex, with discontinuous, in part conical folds common, e.g., folds 2A, 2B, 3A (Figure 5). The shape of the synform is variable; it is well defined along the northwest side of the knob at 350W by the lower contact of the iron formation against altered tuffs of Unit 2.

On the northeast limb of the synform, the main iron formation unit is split in two by a band of 2ch, and abundant 2chpy alteration occurs in rocks further northeast. It is possible that this region might be near a vent which supplied exhalite solutions to the basin.

Two small outcrops of 3mq are exposed in the creek along line OE, 140 m and 200 m north of the main iron formation. These are stratigraphically older than the main iron formation (assuming no major folds occur in this region of poor outcrop). The magnetic expression of the northern outcrop continues eastward to line 400E.

The south limb of the iron formation and its magnetic expression terminate abruptly against rocks of Unit 6. This contact is not exposed, but is best explained as a thrust fault with moderate to steep southerly dip, with Unit 6 over-riding the iron formation.

At about 150 E the northern limb of the iron formation plunges under rocks of Unit 6, here also suggesting that Unit 6 is thrust over the iron formation. The dip of the fault would be moderately shallow here to explain the broad aero-magnetic anomaly from about 1500 E to 3000 E. The latter is interpreted as the buried continuation of the north limb of the synform, offset slightly to the right by a late cross fault. On surface this magnetic anomaly was not detected, the only evidence of magnetite in this region were scattered to locally abundant float boulders which had been carried there by the Pleistocene glaciers from the main exposure of iron formation on Falcon 3.

TYPES AND TONNAGES OF NEAR-SURFACE IRON FORMATION

Detailed cross sections were constructed at about 100-meter intervals along strike of the major fold axes (some are shown in figures 5 and 6). From these were estimated cross sectional areas of iron formation. Volumes of iron formation were calculated by averaging the areas of adjacent sections within the same subareas and multiplying by the distance between the sections. (A measure of the degree of approximation inherent in this method can be made by examination of the sections in Figures 5 and 6; in much of the property the interpretation is hampered severely by lack of surface geological data.) Volumes were converted into tonnages by multiplying by an arbitrary factor for specific gravity, taken as 3.5 for subunit 3s and as 4.0 for the various oxide-facies subunits. Data are summarized in Table 1. Estimates are made only for iron formation which was detected by the magnetometer (probably that within 20 meters of the surface), and for that which could be extrapolated on the basis of abundant and consistent geological data.

Table 1. Tonnages of Near-Surface Iron Formation

Zone	subarea	Tonnage in millions of metric tons subunit 3s	subunits 3xmqh, 3mqh, 3mh
Falcon 1	1A	0.20	minor
	1B	0.07?	minor
	2	0.02	0.045
	3	1.67	2.11
	4	0.46	0.98
	5	0.22	0.45
	6	1.66	0.32
	7	unknown, probably minor of both types	
	8	minor	minor
	subtotal	4.23	3.91
Falcon 3		0	3.0
	Total	4.23	6.91

Previous Estimates

In 1976 W.M.Sharp estimated 14 x 10^6 long tons per 100 vertical feet in Aeromag. Anomaly 1A (equivalent to subareas 3,4, and 6). This equates to 8.7 x 10^6 long tons per 20 vertical meters, which is somewhat higher than the estimate in this study of 6.9 x 10^6 metric tons per 20 vertical meters (top 20-meter section only). In 1979, R.Kemeny estimated 134 x 10^6 metric tons per 100 vertical meters, which equates to 26.8 x 10^6 metric tons per 20 vertical meters. Both earlier estimates are high because they were based on a model in which the iron formation was steeply dipping parallel to the regional foliation. Kemeny's estimate is particularly high because it was based on an assumption that a mineable zone would have continuity over the entire strike length of the anomalous zone from Falcon 1 to Falcon 3. This assumption was a reasonable conclusion from the model of a steeply dipping iron formation.

ASSAYS

Samples were taken from outcrops and trenches along the strike of the iron formation; in Falcon 1 twelve composite trenches were sampled, and in Falcon 3 four trenches were sampled. Because of the high cost of assays, only selected samples were submitted at this time; others are being held for possible future assaying. Analyses were made for Fe-total, Fe-magnetic, P and S. Results for these and a calculated value for non-magnetic Fe in each sample are given in Table 2.

Table 2. Assay Data (all values in per cent)

Area	Sample no.	rock type	coordinates	Fe_T	Fe_M	Fe_{NM}	S	P
Falcon 1	1-a	3xmqh	213E, 51.5N	40.4	35.5	4.9	0.18	0.4
	1-b	3xmqh	213E, 54N	48.5	34.3	14.2	0.06	0.74
	1-c	3xmqh	213E, 56.5N	38.1	31.5	6.6	0.04	0.39
	1-d	3xmqh	218E, 55.5N	36.8	30.8	6.0	0.02	0.47
	2-c	3m	188W, 36S	51.7	44.3	8.4	0.04	0.47
	2-h	3mh?	185W, 31S	39.9	19.5	20.4	0.01	0.37
	4-e	3mh	147W, 30S	39.8	21.5	18.3	0.04	0.35
	5-g	3mh	130W, 14S	37.0	19.8	17.2	0.01	0.29
	6-j	3hqm	132W, 14N	26.7	12.8	13.9	0.01	0.29
	6-o	3m	130W, 33N	36.3	30.3	6.0	0.02	0.38
	6-u	3s	137W, 51N	34.5	17.7	16.8	0.02	0.34
	9-k	3s	503E, 183N	22.5	12.0	10.5	0.01	0.40
	10-u	3x	749E, 6N	33.4	24.5	8.9	0.01	0.60
	12-g	3s	998E, 180N	30.9	17.2	13.7	0.01	0.29
Falcon 3	4-1	3m	3W, 14N	49.6	45.1	4.5	0.09	0.33
	4-o	2hc	1W, 20N	25.5	0.6	24.9	0.22	0.32

Because of the wide variability in assay values, no accurate overall conclusions can be made regarding average grade, except to put the following estimates on grades in some of the iron formation subunits (Table 3):

Table 3. Estimates of Average Grades in some Iron Formation Subunits

subunit	Fe_T	Fe_M	Fe_{NM}	Fe-bearing minerals
3m, 3xmqh	40-50%	35-45%	5-10%	magnetite, minor hematite
3mh-3hm	35-40	15-20	15-20	magnetite-hematite
3s	22-30	12-18	10-17	magnetite, iron silicates (chlorite is main silicate)

RADIOMETRIC SURVEY

A reconnaissance radiometric survey was performed by Mike Milner. Carbonate facies iron formation and dark grey, possibly graphitic argillite were suspected to have higher than normal radioactivities. In the survey, only background readings (less than 200 c.p.s.) were recorded. The highest values were in conglomeratic mudstones, probably of Unit 6, in two localities: just southwest of the southwest corner of the Falcon 1 claim, and north of the Falcon 1 grid near line 100E. The latter locality contains outcrops of graphitic gritty mudstone-conglomerate.

CONCLUSIONS

1. A model was developed of a thin (15-20 meters thick) stratabound iron formation unit of probable exhalite origin, enclosed in tuffaceous sediments and tuffs, within a thick sequence of very poorly sorted clastic sediments.

2. The rocks were folded by a series of open to tight, gently plunging, northwest-trending inhomogeoeous folds, and a strong axial-plane foliation was developed in all units except oxide and chert facies iron formation.

3. Because of limited outcrop, the detailed distribution of iron formation in much of the region must be inferred from magnetic data and extrapolation of geological data up to a few hundred meters away from outcrop. Interpretation of surface geology and magnetic anomalies generally are in good agreement, but some major discrepancies occur.

4. Tonnages are calculated from cross sections constructed on the basis of geological and magnetic data. Only iron formation which was detected by the magnetometer and which could be extrapolated on the basis of well defined structural and stratigraphic data is included in the estimates. Thus, the estimates are conservative, but because of the complexity of folding, extrapolation to greater depths would be speculative without supporting drill data.

5. Because of the nature of the folding and the overall shallow dips and plunges of the units, it is expected that tonnages at greater depths are probably not as great as those in the upper levels. If larger tonnages of iron formation are present, they may exist laterally from known showings, and some exploration should be directed towards this possibility.

6. Although calculated tonnages are significantly less than those of earlier studies, grades are comparable to the 36% Fe_T estimate made by R.Kemeny (1979).

RECOMMENDATIONS.

1. GEOLOGY.

1) complete 1:1000 scale geology map of Falcon 1.
2) map surrounding rocks at 1:5000 to better understand structure and stratigraphy near Falcon 1.

2. GEOPHYSICS.

1) Falcon 1, subarea 5, close off north end of anomaly.
2) Falcon 1, subarea 7, extend grid to north and test this region.
3) Falcon 3, extend grid to east and north to check extension of the narrow magnetic anomaly north of the main anomaly. Try to determine if this is a separate zone or is connected by folding to the main body at Falcon 3.

3. DIAMOND DRILLING.

A: Stage 1.

Test by drilling the model used in estimation of tonnages of iron formation. In particular test regions where a different interpretation of the data and new data will give a clearer understanding of the structure and might indicate greater tonnage estimates. All holes to be drilled vertically.

1) Falcon 1: subareas 2-3, lines 0 to 300W. Drill two (2) holes from 50 to 100 meters deep at 100W, 0N, and 50W, 50N to determine if the iron formation units are stacked structurally in this region. Subareas 1 and 2 are topographically below and plunge beneath subarea 3.

2) Falcon 1: subareas 3, 4, 5, line 500E. A section of four (4) holes averaging 50-100 meters in length at 15S, 60N, 180N, 250N would test the zone in the region of the broadest magnetic anomalies and probable maximum tonnage potential. The section would give a clearer interpretation of the structure and thickness of the iron formation.

3) Falcon 3:
   a) Southeast extension of magnetic anomaly in zone of no outcrop. Two (2) holes on baseline at 200E and 300E, respectively.

   b) One (1) hole at 200W, 10S in the core of synform 3 to test for thickness of iron formation and continuity of structure.

   c) One (1) hole on baseline at 245W to test for thickness of iron formation in magnetite-rich zone. Because of deformation, the iron formation may be much thicker than normal here.

B: Stage 2.

Contingent on results of Stage 1.

REFERENCES.

KEMENY, F. L., 1979. Falcon Iron Ore Deposit. Preliminary Evaluation Report for SEMCO. (Unpublished).

MULLER, J. E., 1961. Pine Pass. Preliminary Geological Map. Geology Survey of Canada. Map 11-1961.

SHARP, W. M., 1976. Preliminary Examination of the Falcon Iron Property, Pine Pass Project. (Unpublished).

ENGINEER'S CERTIFICATION.

I, John G. Payne, PhD, of North Vancouver, B.C. do hereby state:

1. I am a consulting Geological Engineer. I graduated from Queens University, Kingston, Ontario in 1961 with a BSc degree in Geological Engineering. I received a PhD degree in Geochemistry from McMaster University in 1966.

2. My address is 877 Lillooet Road, North Vancouver, B.C. V7J 2H6.

   I am under contract for this report to Stokes Exploration Management Co.Ltd., #713 - 744 West Hastings Street, Vancouver, B.C. V6C 1A5.

3. I have practiced Geology since graduation for 13 years, mainly in the North American Cordillera.

4. My report is based on a 2-week personal examination of the FALCON property and on a further 6-week examination of the FALCON property by Mike Milner and Pierre Vaillancourt, between July 16, 1979 and August 28, 1979.

5. I have no direct or indirect interest in the FALCON property or in J. Sefel and Associates.

6. This report may be used by J. Sefel and Associates in a Statement of Material Facts or Prospectus for public financing.

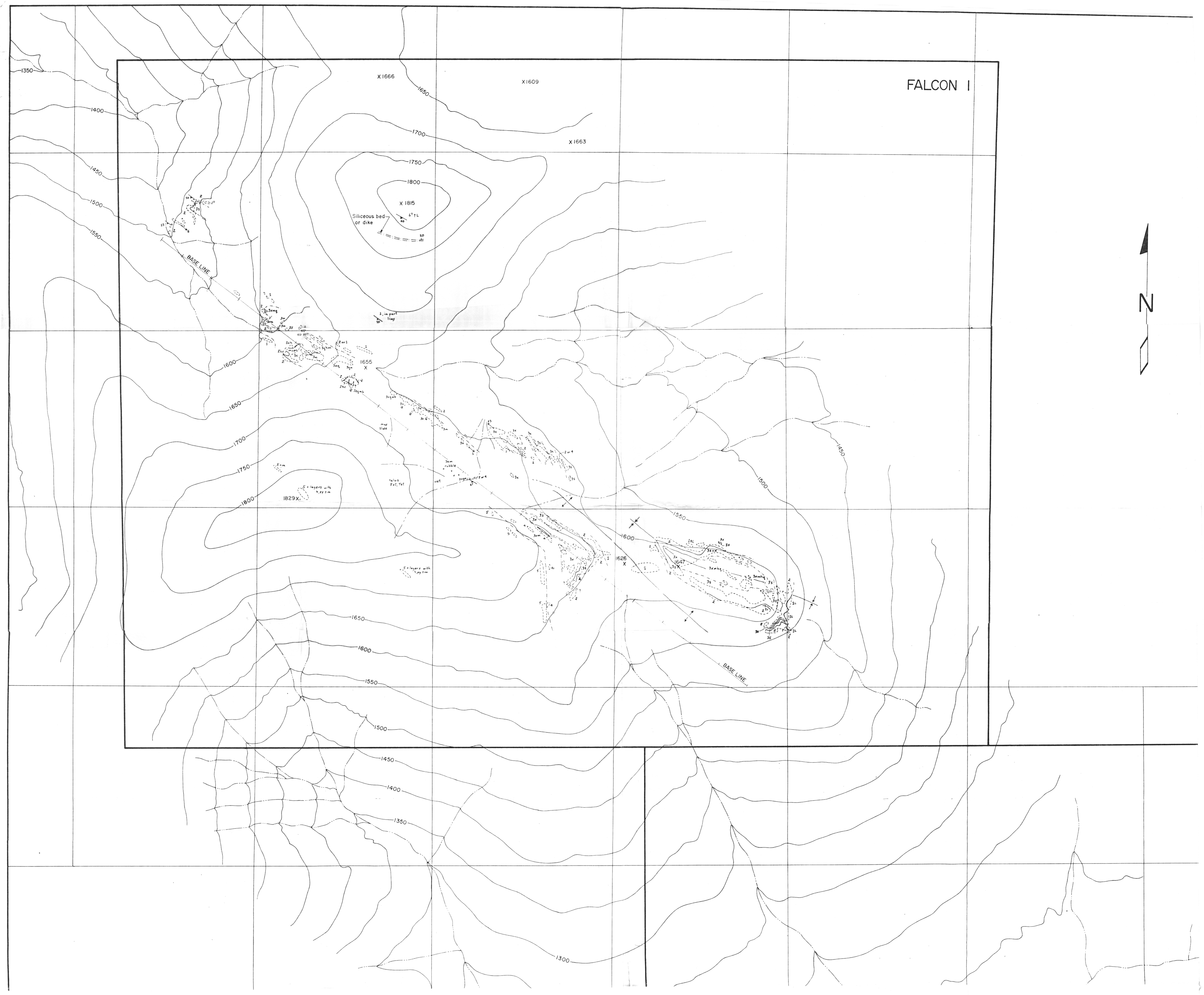
Dated at Vancouver, British Columbia, the 5th day of November, 1979.

STOKES EXPLORATION MANAGEMENT CO.LTD.

John Payne

John G. Payne, PhD.,
Consulting Geological Engineer.

JGP/cmp



GEOLOGICAL SYMBOLS

- Outcrop border
- Contact: defined, assumed
- Bed (So)
- Foliation (S1)
- Major fold axis (F1): plunge, synform, antiform
- Lineation along fold axis (F1)
- Fault, normal, strike slip
- Fault, thrust, barbs on overthrust plate

NON-GEOLOGICAL SYMBOLS

- Drainage
- Contour line (metres)
- Grid lines

LEGEND

STRATIGRAPHIC UNITS

7	Mudstone, siltstone
6	Sandy siltstone, minor conglomerate, carbonate
5	Mudstone, siltstone
4	Tuffaceous siltstone - mudstone
3	Iron formation
	x - banded
	m - magnetite facies
	h - hematite facies
	g - chert facies
	a - carbonate facies
	av - carbonate with volcanic fragments
	s - silicate facies
2	Tuff, tuffaceous siltstone - mudstone
1	Lithic - fragment mudstone

ABBREVIATIONS

Rock types

ss	sandstone	CG	conglomerate
st	siltstone	LS	limestone
md	mudstone	DQX	dolomite-quartz breccia
T	tuff		
Tst	tuffaceous siltstone		

subscript L - lithic fragments abundant

Mineral

py	pyrite
Q	quartz veins
c	chlorite

inches 0 1 2
0 1 2 3 4 5 centimetres

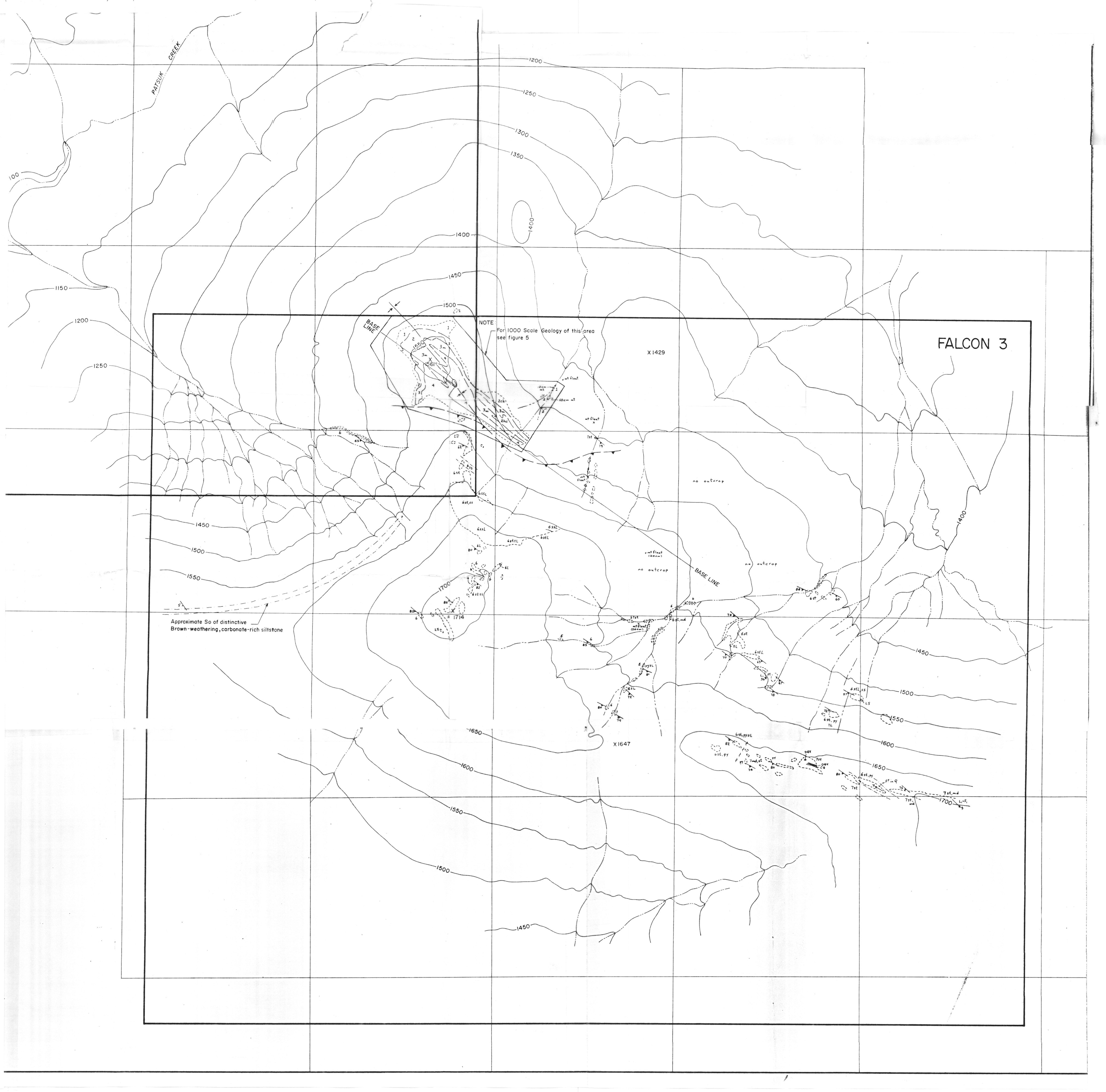
BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

Scale 1:5000

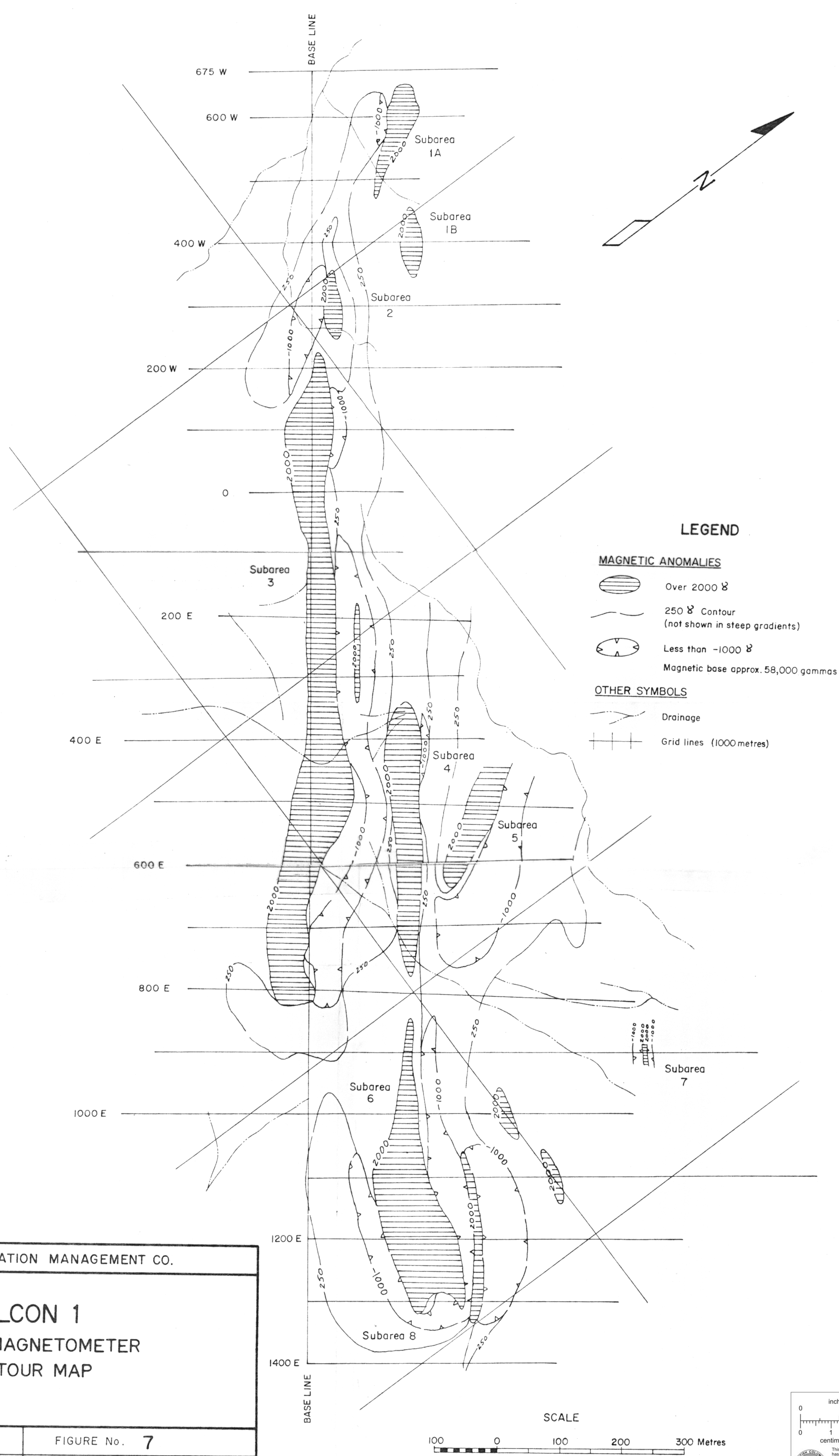
100 0 100 200 300 400 500 Metres

STOKES EXPLORATION MANAGEMENT CO.	
FALCON IRON PROPERTY OMINECA MINING DIVISION GEOLOGY	
CALE: 1:5000	FIGURE No. 4
EOLOGY BY: JOHN PAYNE, Ph.D.	DATE: OCTOBER 1979




GEOLOGICAL SECTIONS
A
A'
B
B'
C
C'
LEGEND
STRATIGRAPHIC
6 Sandy siltstone
4 Tuffaceous siltstone-mudstone
3 Iron formation
x - banded
m - magnetite facies
h - hematite facies
q - chert facies
2 Tuff, tuffaceous siltstone-mudstone
1 Lithic-fragment mudstone
ABREVIATIONS
gn green
m magnetite
h hematite
q chert
c chlorite
py pyrite
py* pyrite cubes
L lithic fragments
Q quartz veins
± minor
GEOLOGICAL SYMBOLS
Outcrop border
Outcrop on sections
Contact: defined, assumed
Bed (So)
Foliation (S1)
Fold axis
Synforms
Antiforms
Lineation along fold axis (F1)
Fault, thrust, barbs on overthrust plate
NON-GEOLOGICAL SYMBOLS
Drainage
Contour line
Border of clearing
Grid lines (metres)
N
Base Line
open talus
trees
open grassy
no outcrop
approximate location of possible major thrust
SCALE
10 0 10 50 Metres
STOKES EXPLORATION MANAGEMENT CO.
FALCON 3
GEOLOGY MAP & SECTIONS
SCALE: 1:1000
FIGURE NO. 5
GEOLOGY BY: JOHN PAYNE, Ph.D.
DATE: OCTOBER 1979


GRID NORTH
600 W
1550 m
Subarea 1a
300 W
1650 m
Subarea 1B
Subarea 2
100 W
1650 m
Subarea 3
100 E
1650 m
Subarea 3
300 E
Subarea 3
Subarea 4
500 E
Subarea 3
Subarea 4
700 E
1650 m
Subarea 3
Subarea 5
Subarea 4
900 E
1600 m
Subarea 6-4
1100 E
1550 m
Subarea 6
1300 E
1550 m
Subarea 6
Subarea 8
5000 Gammas
GEOLOGICAL SYMBOLS
Outcrop on sections
Interpreted contact: in ground, eroded
Fold axes
Magnetic profile in gammas
LEGEND
STRATIGRAPHIC UNITS
5 Mudstone, siltstone
4 Tuffaceous siltstone - mudstone
3 Iron formation
x - banded
m - magnetite facies
h - hematite facies
g - chert facies
s - silicate facies
2 Tuff, tuffaceous siltstone - mudstone
1 Lithic - fragment mudstone
ABREVIATIONS
m magnetite
h hematite
q chert
c chlorite
py pyrite
py* pyrite cubes
L lithic fragments
Q quartz veins
± minor
SCALE
20 0 20 40 60 Metres
STOKES EXPLORATION MANAGEMENT CO.
FALCON 1
SECTIONS SHOWING
GEOLOGIC & MAGNETIC DATA
SCALE: 1 : 1000
FIGURE No. 6
SURVEY BY: Mike Milner Ph.D., John Payne Ph.D. Pierre Vaillancourt
DATE: OCTOBER 1979



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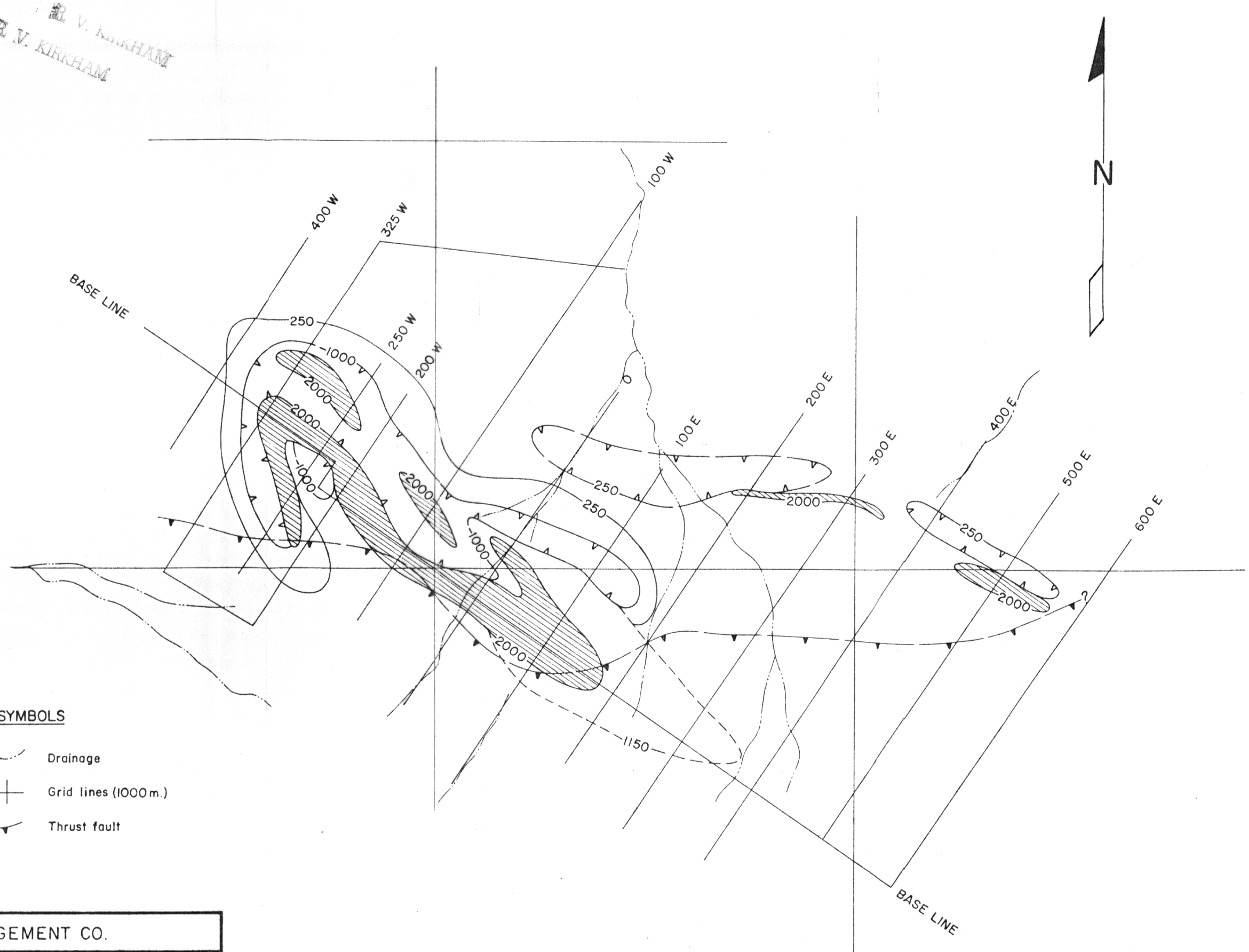
FALCON 1

GROUND MAGNETOMETER CONTOUR MAP

ALE: 1 : 5,000	FIGURE No. 7
RVEY BY: Mike Milner, Ph.D. ERPRETED BY: JOHN PAYNE, Ph.D.	DATE: OCTOBER 1979



LEGEND

GEOPHYSICAL SYMBOLS

250 — Magnetic contours in gammas

Magnetic base approx. 58,000 gammas

OTHER SYMBOLS

Drainage

Grid lines (1000 m.)

Thrust fault

STOKES EXPLORATION MANAGEMENT CO.

FALCON 3
GROUND MAGNETOMETER CONTOUR MAP

SCALE: 1:5,000	FIGURE No. 8
SURVEY BY: Mike Milner, Ph.D. INTERPRETED BY: JOHN PAYNE, Ph.D.	DATE: OCTOBER 1979

SCALE

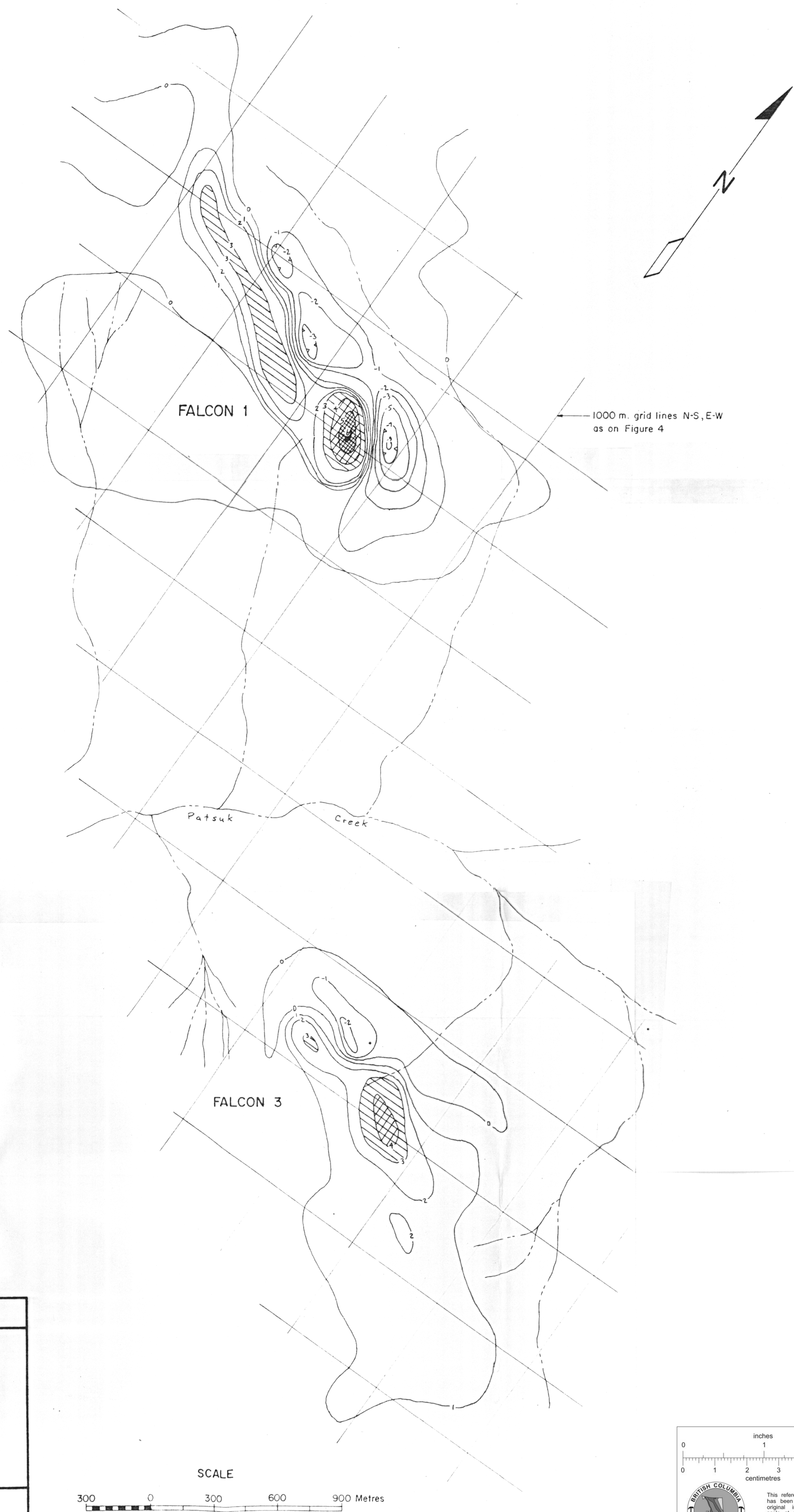
100 0 100 200 300 Metres

inches 0 1 2

0 1 2 3 4 5 centimetres

BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.



LEGEND

GEOPHYSICAL SYMBOLS

Magnetic contours in thousands of gammas above 58,000 gammas

OTHER SYMBOLS

Drainage

Grid lines (metres)

STOKES EXPLORATION MANAGEMENT CO.

FALCON

AEROMAG CONTOUR MAP
1978 SURVEY

SCALE: 1 : 15,000	FIGURE No. 9
RECONTOURED BY: JOHN PAYNE Ph. D.	DATE: OCTOBER 1979