

MAP NO.

105-H-16

ASSESSMENT REPORT**CONFIDENTIAL
OPEN FILE**

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TYPE OF**WORK:**

Geological

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| REPORT FILE UNDER | Canada Tungsten Mining Corporation Ltd. | DOCUMENT NO. | 081386 |
| DATE PERFORMED | July 1981 | DATE FILED: | August 24, 1981 |
| LOCATION - LAT. LONG. | 61° 52' to 61° 50' N | AREA: | Tungsten, Nahanni |
| | 128° 05' to 128° 01' W | | |
| CLAIM NO. | Nahanni | | |
| | | | |
| | | | |
| | | | |
| VALUE \$ | 15,278.02 | | |
| WORK DONE BY | (Bema Industries Ltd.) S.C. BARTLETT | | |
| WORK DONE FOR | Canada Tungsten Mining Corporation Ltd. | | |
| REMARKS | Geological mapping indicates that the property is underlain by a tungsten-bearing hydrothermal system. The economic potential of the claim lies in establishing the continuity of mineralization in the structure down plunge toward the stock. A program of sampling to establish the grade of skarn in the main showing is recommended. If a significant amount of tungsten is present, then a drill program is recommended. | | |



GEOLOGY AND MINERAL POTENTIAL

OF THE

NAHANNI CLAIM, TUNGSTEN, N.W.T.

A 98096

N.T.S. 105-H-16

DUPLICATE

DOCUMENT
NUMBER

08 1386

THIS REPORT HAS BEEN EXAMINED AND
APPROVED AS TO TECHNICAL WORTH UNDER
SECTIONS 6 & 7 OF SCHEDULE II OF THE
CANADA MINING REGULATIONS AND
VALUED IN THE AMOUNT OF \$ 15,278.00

DATE:

Jan 27-82

M. Wood

ENGINEER OF MINES FOR
CHIEF, NORTH. NON-RENEW
RESOURCES BRANCH

GEOLOGY AND MINERAL POTENTIAL
OF THE
NAHANNI CLAIM, TUNGSTEN, N.W.T.

Nahanni Mining District

Latitudes $61^{\circ}52'N$ and $61^{\circ}50'N$ and
Longitudes $128^{\circ}05'W$ and $128^{\circ}01'W$

Owned by

CANADA TUNGSTEN MINING CORPORATION LIMITED
Executive Office
Box 12525, Oceanic Plaza
Ste. 1600 - 1066 W. Hastings St.
Vancouver, B.C. V6E 3X1

Work by

BEMA INDUSTRIES LTD.
Ste. 203, 19945 - 56th Ave.
Langley, B.C. V3A 3Y2

S.C. Bartlett, B.Sc.

July, 1981

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SUMMARY

Geological mapping on the Nahanni claim indicates that the property is underlain by a tungsten-bearing hydrothermal system. "Swiss Cheese Limestone" in a tightly folded anticline is skarnified and mineralized two miles up plunge from a mineralized biotite-quartz monzonite stock. The economic potential of the claim lies in establishing the continuity of mineralization in the structure down plunge toward the stock. A program of sampling to establish the grade of skarn in the main showing is recommended. If a significant amount of tungsten is present in the structure then a drill program to test the down plunge continuity of the mineralization is recommended.

GEOLOGY AND MINERAL POTENTIAL

OF THE

NAHANNI CLAIM, TUNGSTEN, N.W.T.

INTRODUCTION

The Nahanni claim was staked on July 31, 1979 for Canada Tungsten Mining Corporation Limited to cover a tungsten-copper occurrence in stratigraphy similar to that at the Canada Tungsten mine. Canada Tungsten Mining Corporation Limited contracted Bema Industries Ltd. of Langley, B.C. to supply a geologist and an assistant to survey the property. This report and the accompanying map is the result of a prospecting and mapping program conducted to assess the mineral potential of the property. To date, 8½ days have been spent on the claim block by the writer and an assistant and 4 days have been spent preparing the geological map. Further work is proposed in the recommendations of this report.

LOCATION

The property is located in the Ragged Ranges of the Selwyn Mountains in the District of Mackenzie, N.W.T. The main showing is located west of the Flat River, ten miles southeast of Tungsten, N.W.T. The 48 unit claim measures 6 units east to west and 8 units north to south and is defined approximately by latitudes 61°52'N and 61°50.5'N and the territorial border, and by longitudes 128°05'W and 128°01'W. A north boundary claim post is located on a razorback ridge between two northeast facing cirques adjacent and west of the Flat River. A south boundary claim post is located on a ridge near the territorial border. The northeast corner claim post is believed to be located in the Flat River Valley adjacent to the river, 2 miles southwest of Pyramid Mountain.

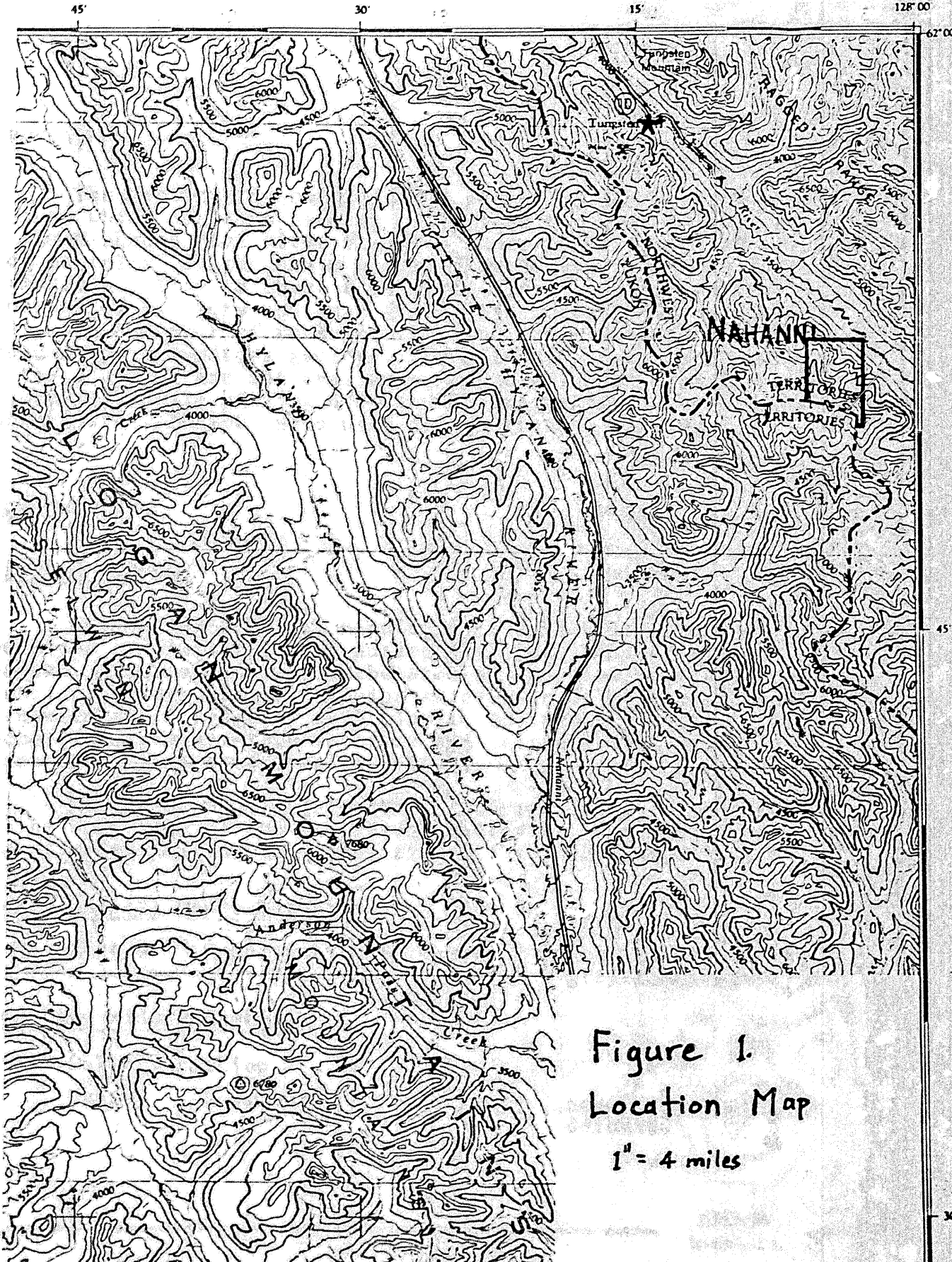


Figure 1.
Location Map
1" = 4 miles

TOPOGRAPHY

The property is covered by a series of northeast facing cirques which occur as hanging valleys on the southwest side of the U-shaped Flat River Valley. There is in excess of 4,500 feet of relief on the claim block, from below 3,500 feet in the Flat River Valley to above 8,000 feet along the western margin. A number of glaciers and snow fields are present on the claim and, with a number of rock glaciers and talus slopes, obscure the underlying bedrock geology. Detailed topographical maps of the property are not available, hence coloured aerial photographs at a scale of 1"=2,640' and enlargements of these at approximately 1"=600' were used for geological mapping.

GEOLOGY

Regional Geology

Regional geological mapping of the Flat River area was conducted by Blusson (1967) during the 1962 and 1963 field seasons. Blusson described the area as underlain by late Precambrian to Devonian-Mississippian succession of miogeosynclinal carbonate and coarse and fine clastic sedimentary rocks. This succession is moderately deformed and intruded by a series of discordant Cretaceous granitic stocks.

At the Canada Tungsten Mining Corporation Limited mine on the west side of the Flat River Valley at Tungsten, N.W.T. the stratigraphic section consists of the following units:

Middle and (?) Upper Cambrian

| | | |
|--------|------------------------|------------------------------------|
| Unit 9 | Rabbitkettle Formation | thin bedded, silty, grey limestone |
|--------|------------------------|------------------------------------|

Lower and Middle Cambrian

Sekwi Formation

| | | |
|--------|----------|---------------------------|
| Unit 6 | Dolomite | sandy and sparry dolomite |
|--------|----------|---------------------------|

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| | | |
|--------|--------------------------|---|
| Unit 5 | "Upper Argillite" | slate, siltstone and limy rocks |
| Unit 3 | "Ore Limestone" | grey crystalline limestone and marble |
| Unit 2 | "Swiss Cheese Limestone" | interbedded cherty argillite, siltstone and limestone |

Lower Cambrian and (?) Earlier

Backbone Ranges Formation

| | | |
|--------|-------------------|--|
| Unit 1 | "Lower Argillite" | slate, siltstone, fine grained quartzite |
|--------|-------------------|--|

This package has been deformed into a recumbent syncline and intruded by a Cretaceous granitic stock. Scheelite-bearing massive sulphide pods and garnet-diopside skarn have developed in favourable environments in the "Ore Limestone" adjacent to the "Swiss Cheese Limestone" and "Upper Argillite" units.

Geology of the Nahanni Claim

Stratigraphy

Unit 1 - "Lower Argillite"

The stratigraphy underlying the Nahanni claim shows marked similarities to that at the Canada Tungsten minesite. The oldest strata in the claim area is Unit 1, the "Lower Argillite" of the Backbone Ranges Formation. In the southeast the unit consists of black, pyrrhotite-rich, silty slate. To the northwest the rock grades into black to grey, silty and calcareous, phyllitic slate and argillite. Unit 1 displays a well developed slaty cleavage which generally strikes about 130° and dips vertically or steeply to the southwest. Silty slate occurs in the hinge area of the main anticline on the property and becomes more widespread to the northwest as the limbs of the fold spread to form a broad, open structure, apparently overturned to the

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northeast. In the cirque wall opposite the main showing a number of irregular northwest trending quartz-pyrrhotite veins cut Unit 1 immediately below the overlying "Swiss Cheese Limestone" unit. The veins range from a few inches in width and swell locally to at least 4 feet. These are usually discontinuous and are restricted to the hinge areas of folds.

Unit 2 - "Swiss Cheese Limestone"

"Swiss Cheese Limestone" (Unit 2) occurs above "Lower Argillite" on the claim. The unit is comprised almost uniformly of argillite and chert interbedded with thin limestone layers which have been sheared and stretched into aligned carbonate nodule-like forms and boudins. In the northeast portion of the map area "Swiss Cheese Limestone" is replaced in the stratigraphic section by a series of andesitic flows and thin intercalated limestone beds (Unit 2a). The andesite is an amygdaloidal, feldspar porphyry with calcite amygdules elongated in the direction of foliation.

In the central portion of the claim block the southeasternmost exposure of Unit 2 occurs on the south wall of a cirque valley. Here the unit is folded into an isoclinal anticline which appears to plunge 15° to 20° to the southeast. The east limb dips very steeply and shows thinning immediately below the hinge area. The limb passes downward into the cirque floor and is obscured by talus. The west limb of the structure is crumpled into a series of plunging synclines and anticlines which correlate with larger, more open structures exposed in the north wall of the cirque. Unit 2 crops out along the back wall of the cirque and in the north wall shows well developed synclinal and anticlinal structures.

In the cirque to the northwest the east limb of the anticline trends down the south cirque wall, disappears beneath talus and then is well exposed in the north cirque wall. The west limb of the fold trends along the top of the cirque and is exposed along the flanks of a southwesterly plunging syncline. The unit trends into an ice field and appears to close in the hinge area of this syncline.

In the cirque north and west of the claim block the "Swiss Cheese Limestone" trends down the south wall of the cirque and curves to the northeast. At this point the unit trends into the talus and below the cirque before passing through the hinge zone of a prominent syncline. On the north face of the cirque Unit 2a is exposed. Sheared andesitic flows intercalated with thin limestone units comprise the section and appear to be transitional from the "Swiss Cheese Limestone". Abrupt apparent thickening of the unit in bottom of the cirque may be in part structural as the section appears to be in the hinge or on the northeast limb of a synclinal structure. On the west limb of the main anticline Unit 2 and Unit 2a are eroded.

In the vicinity of the main showing the "Swiss Cheese Limestone" is altered to a light green, siliceous, banded skarn. Skarnification of the cherty rock, particularly the limy portions, and replacement along fractures has occurred. Scheelite, chalcopyrite and pyrrhotite occur in the skarn as disseminations and fracture fillings. A number of small, scheelite-bearing quartz-pyrrhotite-chalcopyrite veinlets cut the unit parallel to the axial plane cleavage. Subsequent weathering of copper sulphides has produced a number of malachite stains in the vicinity of the showing.

Unit 3 - "Ore Limestone"

Above the "Swiss Cheese Limestone", along the northeast limb of the anticline, a thin unit of buff weathering, grey crystalline limestone is exposed. The unit varies in thickness from 25 feet and is believed to correlate to the "Ore Limestone" (Unit 3) horizon. On the north side of the cirque opposite the main showing is the most southeasterly exposure of the unit. From here the limestone trends northwesterly up the cirque wall and into the adjacent cirque to the north. On the north wall of this cirque the unit shows marked thickening due to minor isoclinal folds. In the cirque north and west of the claim block the "Ore Limestone" trends down the wall almost to the base and is not distinguished from the "Swiss Cheese Limestone".

Unit 5 - "Upper Argillite"

Above the "Ore Limestone" on the northeast limb of the anticline and above the "Swiss Cheese Limestone" elsewhere lies the "Upper Argillite" (Unit 5). On the claim block in the southeast Unit 5 consists of black, slaty siltstone interbedded with quartzite, thin bedded limestone and minor skarn. Also included in this section on the ridge south of the main showing is a thin unit of sheared, black, volcanic rock, probably basalt. In the area west of the claim block, west of the large ice-fields, Unit 5 comprises a thick section of rusty, pyrrhotite-rich slate which encloses a few pods of massive crystalline limestone and chert. In this area a number of quartz-carbonate-pyrrhotite veins are present. Scheelite, chalcopyrite and sphalerite were identified in the veins.

On the north limb of the main anticline the "Upper Argillite" consists of rusty weathering slate and quartzite with minor limestone. Toward the northwest limestone becomes more abundant and the black slaty rocks grade into grey to black calcareous phyllite and argillite. Along this north limb Unit 5 is folded into an upright syncline which trends roughly parallel to the axis of the main anticline.

Unit 9 - Rabbitkettle Formation

The youngest stratigraphic unit in the map area is the Rabbitkettle Formation (Unit 9). An angular unconformity separates the formation from the underlying "Upper Argillite" unit. The rock consists of silty, grey crystalline limestone and light grey siltstone. The irregular layering of limestone and siltstone result in a "wavy banded" appearance on weathered surfaces.

In the vicinity of the Nahanni claim the Rabbitkettle Formation occurs on the northeast limb of the main anticline and its subsidiary syncline which parallel the Flat River Valley. To the south "wavy banded" limestone is more widespread and closes around the hinge of the main anticline just south of the limit of mapping.

Unit 11 - Quartz Monzonite-Granodiorite

A small granitic stock and a number of synchronous granitic dykes occur on the Nahanni claim. The intrusions are of Cretaceous age (Blusson) and are of a series of similar intrusions in the district. The stock is centered at the intersection of the southern claim boundary and the territorial boundary on the southwest limit of the claim. The body is elongate in shape and measures approximately a mile by half a mile. It cuts the stratigraphy near the hinge zone of the major anticline on the property. An apophysis of the intrusion strikes northwesterly along the limb of the westernmost anticline for more than a mile.

The texture and apparent intrusive relationships suggest that the pluton is in a structurally high level. It is typically discordant with steep, sharp contacts. Only a few inclusions were observed. Compositionally the pluton ranges from a sugary textured aplite to biotite-quartz monzonite. On the ridge across the width of the stock it is comprised of an aplitic quartz-feldspar rock and contains a high percentage of quartz. In a structurally lower position on the north side of the stock coarse grained biotite-quartz monzonite with sections of feldspar megacrysts and darker medium grained material are present.

Hydrothermal alteration in the stock and in an aureole around the stock is locally well developed. Portions of the stock are altered to limonitic, quartz-sericite-pyrite rock and in some sections quartz veins and a quartz vein stockwork are well developed. Traces of scheelite, molybdenite and chalcocopyrite are present in this stockwork. An aureole of intense hydrothermal alteration extends for up to 500 feet adjacent to the east margin of the pluton. Hydrothermal alteration along structures emanating from the pluton is developed to at least 1000 feet off the northwest contact of the stock. Scheelite and chalcocopyrite-bearing, dark green diopside + garnet skarn and pyrrhotite-chalcocopyrite + pyrite bodies occur in the alteration aureole north and east of the pluton. Minor amounts of fracture-controlled sulphides are widespread near the contact. Subsequent weathering of copper sulphides has given rise to locally widespread malachite stains. A mineralized quartz vein structure up to 20 feet wide is developed in country rocks northwest of the intrusion. Late quartz-arsenopyrite-pyrite-scorodite veins cut the intrusion and the alteration aureole adjacent to it. These late veins are probably auriferous.

With the exception of the granitic apophyses of the main stock, granitic dykes on the property strike northeasterly and dip to the northwest. They range in width up to 10 feet and in strike length to at least 1600 feet. The amount of intrusive float present suggests that the number of dykes present is much larger than the number of those mapped. The intrusions are fine to medium grained biotite-feldspar porphyries of granodiorite composition. Skarn mineralization is often associated with these intrusions, usually as fracture controlled envelopes in country rock up to 30 feet from the contacts.

Structure

Structure on the Nahanni claim is predominated by a southeasterly trending anticline and by a number of subsidiary anticlines and synclines which parallel this structure. In the northwest the main anticline appears as a broad open structure which is overturned to the northeast. Axial plane cleavage however does not support this hypothesis and generally dips steeply to the northeast. To the southeast the structure persists and has affected Unit 5 and Unit 9. South of the claim boundary Unit 5 occurs in the hinge area and is surrounded by Unit 9 which closes around the nose of the fold. Here the fold plunges to the southeast at approximately 10° to 15° .

In the vicinity of the main showing Unit 2 is folded into an isoclinal anticline that appears to be overturned to the northeast. The west limb of the fold trends up the cirque wall and is crumpled into several tight, smaller folds. The east limb of the fold dips steeply to the northeast into the floor of the cirque. Axial plane cleavage in the hinge area of this fold dips vertically.

Northeastward from this east limb a minor but persistent syncline occurs in Unit 5 and has probably affected the "Swiss Cheese Limestone" below the floor of the cirque. Though the "Swiss Cheese Limestone" does not crop out in the next cirque south both structures are present and the unit probably exists below the talus cover.

Toward the stock on the southern limit of the claim two anticlines are apparent. The most easterly structure is interpreted to be the main anticline and trends through the east

side of the stock. The second anticline is strongly developed and lies to the west of the main anticline. This westernmost structure trends into the pluton.

Mineralization

Mineralization observed on the Nahanni claim has been described briefly in the geology section above. Six types of mineralization occur on the claim, some of which warrant further exploration. The six types of mineral occurrence are:

1. Tungsten and copper-bearing skarn and massive sulphide lodes in Unit 5, adjacent to the biotite-quartz monzonite stock near the south limit of the claim.
2. Tungsten and copper-bearing skarn developed in Unit 2 in the isoclinal anticline at the center of the claim.
3. Tungsten and copper-bearing skarn developed in Unit 5 on the ridge southeast of the main showing.
4. Tungsten and copper-bearing skarn developed in all units associated with dykes throughout the property.
5. Tungsten, copper and molybdenum-bearing quartz stockworks developed in some portions of the biotite-quartz monzonite stock.
6. Auriferous(?) quartz-arsenopyrite-pyrite-scorodite veins which crosscut the stock and altered country rocks.

Of the six types of mineralization only the first two warrant further investigation at this time.

Tungsten and copper-bearing skarn and massive sulphide occurs in Unit 5 along the northwest and eastern contact of the biotite-quartz monzonite. At the northwestern occurrence a quartz vein structure strikes 100° and dips 70° to the northeast. The vein ranges in width to 18 feet and is continuous along strike for at least 1,000 feet. Mineralization consists of coarse grained, subhedral quartz and at least three fine grained, massive sulphide lodes. On surface the vein is strongly weathered and forms a

manganiferous gossan. The largest massive sulphide lode measures 12 feet wide and is 30 feet long. It occurs on the hanging wall side of a 6 foot wide zone of gossanous quartz. The lode consists of massive pyrrhotite with minor chalcopyrite, scheelite and pyrite. Gangue consists mostly of quartz, but dark green diopside and red garnet is present in minor amounts. Three samples were collected from this portion of the zone. Sample 6234 represents the gossanous footwall material, sample 6232 the south side of the sulphide lode and sample 6233, the north side. The average grade of tungsten is 0.49% over 18 feet. At approximately 100 feet to the northwest along the structure another massive sulphide body occurs. At this point the vein is 6 feet wide. The footwall consists of quartz-sericite-limonite altered slate. Against the footwall is a 2.5 foot wide zone of gossanous quartz, above which occurs 3.5 feet of massive pyrrhotite with minor chalcopyrite and scheelite. The hanging wall consists of coarse grained calcite marble. Chip sample 6235 across the sulphide zone assayed 0.38% WO_3 . Approximately 100 feet to the northwest 4.5 feet of massive sulphide occurs in the 5 foot wide structure. Sample 6236 across the 4.5 foot width assayed <0.01% WO_3 . At the apparent northwestern end of the structure, approximately 100 feet northwest of sample 6236, wispy bands of massive pyrrhotite to several inches thick occur in an altered argillite. Sample 6237 across 5 feet of this zone assayed 0.55% WO_3 .

East of the pluton tungsten and copper-bearing diopside + garnet skarns and massive sulphides crop out on the crest of a steep northeast trending ridge. The units strike northwesterly and dip moderately to steeply to the east and disappear beneath talus below the crest of the ridge. The first occurrence is located approximately 130 feet east of the intrusive contact and consists of scheelite-bearing skarn with pyrrhotite and pyrite in argillite. Sample 6221 represents 3 feet of a 10 foot wide altered zone and assayed 0.40% WO_3 . Sample 6222 was collected 20 feet to the east from the same unit and contained 0.43% WO_3 across 10 feet. Approximately 140 feet east of sample 6222 fracture controlled skarn mineralization and sulphides occur in argillite and chert. This material was sampled in 6224 across 6 feet and assayed <0.01% WO_3 . Twenty feet east of sample 6224 an 8 foot zone of skarn containing quartz, pyrrhotite, pyrite and scheelite was sampled. Sample 6226 across this 8 foot zone assayed 0.40% WO_3 . In a saddle 50 feet further along the ridge skarn and sulphides occur. Chip sample 6225 from an 8 foot exposure here assayed 0.50% WO_3 . A 4 foot skarn unit located

30 feet south of sample 6225, sample 6227, assayed 0.49% WO_3 . One hundred feet east of the saddle at the top of the ridge a section of cherty skarn is covered with malachite. The unit consists of skarnified argillite with pyrrhotite and chalcopyrite. Sample 6218 was collected across 4 feet of section and contained 0.45% WO_3 . Fifty feet down from the crest of the ridge below sample 6218, malachite-stained cherty skarn is present. The exposed mineralized area measures 13 feet by 25 feet and a chip sample 6230 across 13 feet assayed 0.50% WO_3 and 2.00% Cu. At the edge of the altered zone, approximately 100 feet east of sample 6218, 2 feet of massive sulphide occurs in a 10 foot wide zone. The zone lies immediately below relatively unaltered silty limestone of the Rabbitkettle Formation. Sample 6217, taken across 2 feet of the zone, assayed 0.40% WO_3 .

The second significant showing is located on the south wall of a cirque near the center of the claim. On the geology map this occurrence is labelled as the main showing. Scheelite and chalcopyrite occur in skarnified rocks of Unit 2. The skarn is light green in colour, banded and contains disseminated scheelite and chalcopyrite and fracture fillings of quartz and chalcopyrite.

Mineralization occurs in the hinge zone of a tight anticline. The structure crops out on the steep south wall of the cirque and appears to plunge gently to the southeast. The anticline is present in the next cirque south but the "Swiss Cheese Limestone" does not crop out. Skarn mineralization is however, developed in Unit 5 at the top of the ridge and samples 6215 and 6216 assayed 0.41% WO_3 and 0.43% WO_3 respectively across 1 foot. Unit 2 must lie below the cirque or is obscured by talus.

At the base of the east limb of the fold near the main showing two chip samples were collected across 11 feet of mineralized skarn. Sample 6201 assayed 0.42% WO_3 across 6 feet and sample 6202 assayed 0.34% over 5 feet. In the hinge of the fold, approximately 200 feet to the west, another pair of 5 foot chip samples were collected from light green siliceous skarn. Sample 6203 assayed 0.47% WO_3 and sample 6204 contained 0.35% WO_3 . A third sample from this area, of light green siliceous skarn with pyrrhotite and chalcopyrite was covered by a bright yellow stain. Sample 6205, a grab sample of this material, assayed 0.82% WO_3 and 0.92% Cu.

Mineral Potential of the Nahanni Claim

The following conclusions drawn from the Nahanni claim describes a geological model with which the mineral potential of the prospect can be more clearly realized.

1. Tungsten and copper-bearing skarn mineralization occurs over two miles along a northeast trending anticline on the claim.
2. Mineralization is associated with a high level quartz monzonite stock which intrudes the core of the anticline and with apophyses and dykes possibly related to a larger underlying pluton.
3. Tungsten skarn mineralization occurs in the "Swiss Cheese Limestone" two miles away, up plunge from the pluton.
4. Tungsten skarn mineralization occurs in the "Upper Argillite" near the hinge of the anticline one and a half miles up plunge from the stock. These showings are stratigraphically several hundred feet above the main showing.
5. Late quartz-arsenopyrite-scorodite veins occur in the stock and adjacent alteration aureole and strike parallel to the fold axis of the anticline.

The associations described above are characteristic of tungsten-bearing hydrothermal systems and suggests the presence of a significant mineral system on the Nahanni claim. The mineral potential is further enhanced by the possible presence of a parallel subsidiary syncline structure in the "Swiss Cheese Limestone" east of the main showing. It is apparent that the economic potential of the claim lies in establishing and exploring the continuity of the skarnified "Swiss Cheese Limestone" structures down plunge toward the biotite-quartz monzonite pluton.

The tonnage potential of the anticlinal structure can be easily calculated. The mineralized zone crops out over 1,200 feet along the base of the cirque and rises for at least 200 feet up the wall of the cirque. For every 100 feet the structure extends into the cirque wall the tonnage potential is:

$$\begin{aligned} \text{Tonnage Potential} &= \frac{\frac{1}{2}(1,200 \text{ feet} \times 200 \text{ feet}) \times 100 \text{ feet}}{10 \text{ feet}^3/\text{ton}} \\ &= 1.2 \times 10^6 \text{ tons} \end{aligned}$$

If the structure projects 2,400 feet to the base of the north wall of the cirque south of the main showing, then the tonnage potential is:

$$\begin{aligned} \text{Tonnage Potential} &= 2,400 \text{ feet} \times 1.2 \times 10^6 \text{ tons}/100 \text{ feet} \\ &= 28.8 \times 10^6 \text{ tons} \end{aligned}$$

If this unit is consistently mineralized and has an average grade similar to that of the main showing, then the potential number of short ton units of tungsten (for every 100 feet of projection) is:

$$\begin{aligned} \text{STU of } \text{WO}_3 &= 1.2 \times 10^6 \text{ tons} \times 0.40\% \\ &= 4.8 \times 10^5 \text{ STU} \end{aligned}$$

If the unit projects 2,400 feet to the next cirque to the south, then the structure potentially hosts:

$$\begin{aligned} \text{STU of } \text{WO}_3 &= 2,400 \text{ feet} \times 4.8 \times 10^5 \text{ STU}/100 \text{ feet} \\ &= 11.52 \times 10^6 \text{ STU} \end{aligned}$$

RECOMMENDATIONS

1. Due to a lack of claim posts the area covered by the Nahanni claim is not well defined. It is possible that areas of significant mineral potential may not be covered by the claim. A survey program is required to establish the claim boundaries and to acquire land of significant mineral potential within this tungsten system.

2. In order to maintain an accurate record of future work performed on the claim a topographical base map is required. A topographical map of the claim should be prepared at a scale of 1:4,800.
3. For accurate data control the claim should be geologically mapped at the scale of the contour map. A geologist and mountaineering specialist could complete the job in approximately 1 week.
4. To establish the grade of the zone of mineralization thorough sampling of the main showing is required. Chip sampling across 10 foot widths over the total width of the zone is recommended. Horizontal lines of samples should be established at various heights above the cirque floor. A spacing of 100 vertical feet between horizontal lines would be effective. A sampler and a mountaineering specialist would be required to complete the program in two weeks. Approximately 200 samples would be collected. Samples should be assayed for tungsten and copper.
5. If a significant amount of tungsten occurs in the structure then exploration of the fold down plunge is warranted. A vertical diamond drill hole at the base of the north-west wall of the cirque south of the main showing would test the structure approximately 2,400 feet down plunge. Detailed mapping recommended in 3. above would be required to determine the target depth of the hole.
6. To test the hypothesis that the "Swiss Cheese Limestone" is folded into a syncline to the east of the main showing a drill hole is required. A vertical hole collared approximately 1,500 feet northeast of the main showing would cut the "Swiss Cheese Limestone" if it is folded into a syncline. Detailed mapping is required to determine more precisely the target depth of the hole. A depth of less than 1,000 feet is anticipated.

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REFERENCES

Blusson, S.L.,
1967;

Geology and Tungsten Deposits Near the Headwaters
of Flat River, Yukon Territory and Southwestern
District of Mackenzie, Canada. G.S.C. Paper
67-22.

Signed by: *[Signature]*

Stanley C. Sabulish, M.Sc.
Project Geologist

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Report by: Stanley Bartlett
Stanley C. Bartlett, B.Sc.
Project Geologist

SCB/pcd

APPENDIX I

Rock Chip Sample Data

BEMA INDUSTRIES LTD.

DATE July 8, 1981
COLLECTOR S.C.B. & C.L.S.PROJECT 81-07G
N-T-S 105 H/16ANALYST
METHOD

ROCK CHIP SAMPLE DATA

| Number | Location | Grid Reference | Notes | Date | Type | Depth | Length | Width | Remarks | Rossbacher | | CAN TUNG | | Rossbacher |
|--------|---------------------|----------------|-------|---------|------|-------|--------|-------|--|-------------------|------|-------------------|------|------------|
| | | | | | | | | | | Values (ppm) | | | | |
| | | | | | | | | | | WO ₃ % | Cu % | WO ₃ % | Cu % | Au oz/T |
| 6201 | CLAIM Nahanni | 1 | T-1 | 8/7/81 | chip | | | 6' | lt grn sil SKRN w/PO & CP | 0.04 | 0.19 | 0.47 | 0.29 | |
| 6202 | CLAIM Nahanni | 1 | T-2 | 8/7/81 | chip | | | 5' | lt grn SKRN & dk brn sil "ARGL" | 0.04 | 0.12 | 0.34 | 0.25 | |
| 6203 | CLAIM Nahanni | 2 | T-3E | 8/7/81 | chip | | | 5' | lt grn sil SKRN w/PO & CP fair WO ₃ | 0.10 | 0.40 | 0.47 | 0.50 | |
| 6204 | CLAIM Nahanni | 2 | T-3W | 8/7/81 | chip | | | 5' | lt grn sil SKRN-QZ and "ARGL" as above | 0.04 | 0.14 | 0.35 | 0.25 | |
| 6205 | CLAIM Nahanni | 2 | T-3S | 8/7/81 | grab | | | | lt grn sil SKRN w/QZ-PO-CP-SP? fair to mod WO ₃ | 0.54 | 1.20 | 0.82 | 0.92 | |
| 6206 | CLAIM Nahanni | 5 | T-4 | 9/7/81 | grab | | | | lt grn SKRN CHRT \approx 25' above lower contact. Unit 8' thick | 0.12 | 0.01 | 0.09 | 0.20 | |
| 6207 | CLAIM Nahanni | 5 | T-5 | 9/7/81 | grab | | | | lt grn sil SKRN 2' thick above blk SLAT | 0.08 | 0.01 | <0.01 | 0.14 | 0.001 |
| 6208 | CLAIM Nahanni | 6 | T-6 | 9/7/81 | chip | | | 1.5' | QZ-LM sweat in hinge zone | 0.04 | 0.01 | 0.12 | 0.18 | 0.001 |
| 6209 | CLAIM Nahanni | 6 | T-7 | 9/7/81 | chip | 4.5' | 1-2' | | QZ-LM w/ minor CL? | 0.16 | 0.01 | 0.12 | 0.19 | 0.001 |
| 6210 | CLAIM Nahanni | 6 | T-8 | 9/7/81 | chip | 6' | 1' | | QZ-LM w/ minor CL? | 0.20 | 0.01 | 0.12 | 0.18 | 0.001 |
| 6211 | CLAIM Nahanni | 7 | T-9 | 9/7/81 | chip | 5' | 2' | | sil lt grn SKRN-CHRT w/ sil CO ₂ nodules | 0.08 | 0.01 | 0.01 | 0.16 | 0.001 |
| 6212 | CLAIM Nahanni | 8 | T-10 | 9/7/81 | chip | | | 5' | sil lt col banded SKRN in CHRT CO ₂ nodules | 0.10 | 0.01 | 0.01 | 0.14 | 0.01 |
| 6213 | CLAIM SW of Nahanni | 15 | T-11 | 11/7/81 | chip | | | 1' | mass PO in QZ, mod WO ₃ | 0.20 | 0.05 | 0.29 | 0.11 | 0.003 |
| 6214 | CLAIM SW of Nahanni | 15 | T-12 | 11/7/81 | grab | | | | QZ w/ PO-SP-CP & LM fair med gr WO ₃ | | | 0.56 | 0.16 | 0.001 |
| 6215 | CLAIM Nahanni | 18 | T-13 | 11/7/81 | chip | | | 1' | lt grn AC-TR SKRN, TR WO ₃ | 0.16 | 0.02 | 0.41 | 0.16 | 0.001 |
| 6216 | CLAIM Nahanni | 18 | T-14 | 11/7/81 | chip | | | 1' | lt AC-TR LM SKRN, TR WO ₃ | 0.16 | 0.03 | 0.43 | 0.16 | 0.001 |
| 6217 | CLAIM S of Nahanni | 41 | T-15 | 11/7/81 | chip | | | 2' | mass PO-PY-CP in ARGL BRXX TR WO ₃ | | | 0.40 | 0.18 | |
| 6218 | CLAIM S of Nahanni | 40 | T-16 | 11/7/81 | chip | | | 4' | QZ-PO-CP in ARGL-mass PO TR WO ₃ | | | 0.45 | 0.20 | |

BEMA INDUSTRIES LTD.

DATE July 8, 1981

PROJECT 81-07G

ANALYST

COLLECTOR S.C.B. & C.L.S.

N-T-S 105 H/16

METHOD

ROCK CHIP SAMPLE DATA

Ross

CAN TUNG

Ross

| Number | Location | Grid Reference | Notes | Date | Type | Depth | Length | Width | Remarks | Values (ppm) | | | |
|--------|--------------------|----------------|-------|---------|------|-------|--------|-------|---|-----------------|-------|-------|-----------|
| | | | | | | | | | | WO ₃ | Cu % | Au/Ag | |
| 6219 | CLAIM S of Nahanni | 36 | T-17 | 17/7/81 | chip | | | 4-5" | QZ-AS-SC vein in QZMZ 100' E to contact | | 40.01 | 0.11 | 0.02/2.58 |
| 6220 | CLAIM S of Nahanni | 37 | T-18 | 17/7/81 | chip | | | 1.5' | mass QZ-AS-PY-SC in ARGL | | 0.61 | 0.19 | |
| 6221 | CLAIM S of Nahanni | 37 | T-19 | 17/7/81 | chip | | | 3' | SKRN w/PO-PY in alt zone of 10' wide-ARGL host Fair WO ₃ | | 0.40 | 0.20 | |
| 6222 | CLAIM S of Nahanni | 37 | T-20 | 17/7/81 | chip | | | 10' | dk grn DI-QZ SKRN w/PO-PY mod WO ₃ | | 0.43 | 0.18 | |
| 6223 | CLAIM S of Nahanni | 37 | T-21 | 17/7/81 | chip | | | 1.5' | QZ-AS-PY-LM-SC vein in ARGL SKRN | | | | |
| 6224 | CLAIM S of Nahanni | 37 | T-22 | 17/7/81 | chip | | | 6' | SKRN in ARGL w/FRX QZ-PY-PO-CP mod WO ₃ | | 0.01 | 0.20 | |
| 6225 | CLAIM S of Nahanni | 38 | T-23 | 17/7/81 | chip | | | 8' | SKRN w/PO mod WO ₃ | | 0.50 | 0.24 | |
| 6226 | CLAIM S of Nahanni | 37 | T-24 | 17/7/81 | chip | | | 8' | SKRN-sulph blds fair WO ₃ | | 0.40 | 0.17 | |
| 6227 | CLAIM S of Nahanni | 38 | T-25 | 17/7/81 | chip | | | 4' | str weathered SKRN-LM fair WO ₃ | | 0.49 | 0.23 | |
| 6228 | CLAIM S of Nahanni | 39 | T-26 | 17/7/81 | chip | | | 4' | str alt QZ-SE-LM-PY-AS zone PO-compass doesn't work | | | | |
| 6229 | CLAIM S of Nahanni | 39 | T-27 | 17/7/81 | chip | | | 6' | SKRN w/PO & PY in ARGL TR WO ₃ | | | | |
| 6230 | CLAIM S of Nahanni | 42 | T-28 | 17/7/81 | chip | | | 13' | lt grn cherty SKRN w/QZ-CO ₃ and MA | | 0.50 | 2.00 | |
| 6231 | CLAIM Nahanni | 44 | T-29 | 18/7/81 | chip | | | 1' | Qz-SC-AS | | | | 0.03/0.74 |
| 6232 | CLAIM Nahanni | 49 | T-30 | 18/7/81 | chip | | | 5.5' | S side of massive sulphide pod PO w/CP heavy WO ₃ | | 0.71 | 0.18 | |
| 6233 | CLAIM Nahanni | 49 | T-31 | 18/7/81 | chip | | | 6.5' | N side of massive sulph pod PQ-CP-DI-GN mod WO ₃ | | 0.37 | 0.16 | |
| 6234 | CLAIM Nahanni | 49 | T-32 | 18/7/81 | chip | | | 6' | GOSSAN GO-LM | | 0.43 | 0.14 | |
| 6235 | CLAIM Nahanni | 48 | T-33 | 18/7/81 | chip | | | 3.5' | mass PO w/CP | | 0.38 | 0.15 | |
| 6236 | CLAIM Nahanni | 47 | T-34 | 18/7/81 | chip | | | 4.5' | mass sulph h.w. cr gr xtl CA-marb TR WO ₃ | | 0.01 | 0.18 | |

APPENDIX II

Field Notes - S.C.B.

July, 1981 TUNGSTEN N.W.T. 81-07
NAHANNI CLAIMS SE of TOWNS

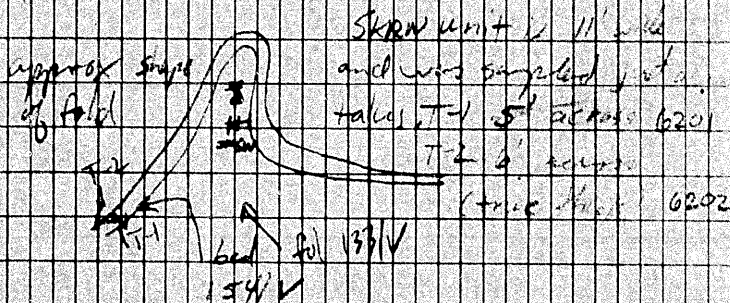
① In cirque First south of the end of the glacier

Cu stain (Malachite) on south wall

Just above snow and scree

CP-PY? ST? occur in weakly SKW
ROCK between SKW shaly LMST and
CH NOD LMST (SWISS CHEESE). THE AREA
has been sampled (red flags) and some
climbing equipment is present. The SKW
LMST sequence forms the hinge of
a tight antiform which trends
SE (very roughly 140°). THE core of the
fold hosts light colored sil/sch
Al grey w/ Fe and cp - Fe veins are
present and up to 8" wide or/60s
Fe veins are also mineralized

SKW unit is 11' wide
and was sampled just
below T-1 5' across 6201
T-2 6' across
(true dip) 6202



② in hinge zone of Anticline and sil skew
 in ch nod LMST? bands of sil "ARGL"
 SKRN unit is at least 50' wide. To east
 ARGL = 30' wide w/ well devel slaty clay
 E is more ch nod "LMST" w/ Malachite
 staining this unit appears to be in
 the head wall of the cirque

Two chip samples T-SE⁶²⁰³ and T-SW⁶²⁰⁴
 are both 5' wide. Eight m uphill
 a third sample T-35⁶²⁰⁵ east SKRN ph.
 CP - and a third sulph. The area is
 covered by a bright yellow stain.

The SKRN is grn: sil w/ grey sections
 sulph are finely dis and flaking. Nearby
 a 32' grad filling has abundant CP smeared
 on the face.

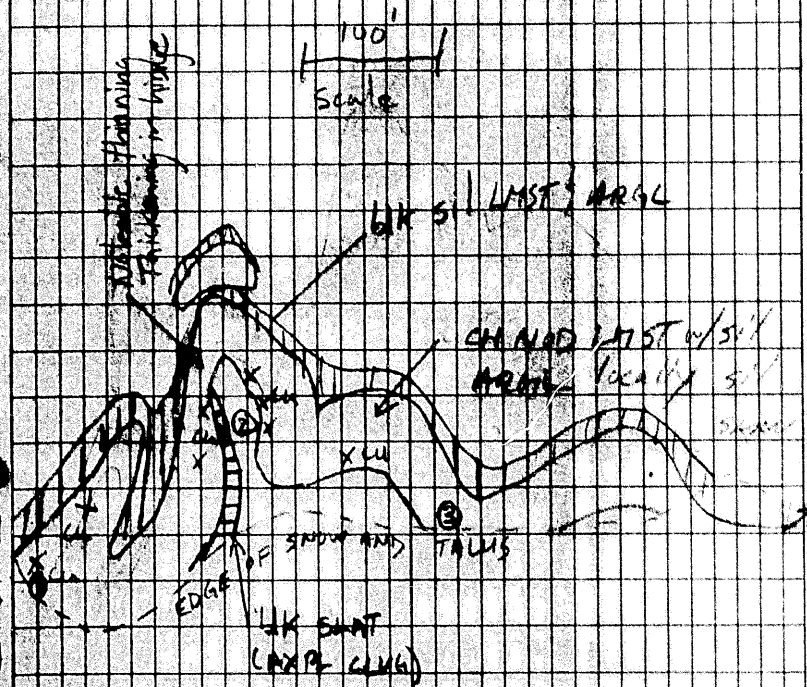
across the valley a tight recumbent
 synform is generally entered w/ the
 west limb of the fold.

bed 094/54W

log 138/V

③ 300ft. W of E side of Hinge
 bed 144/85W

Thursday 9 July 1961
 TUNGSTEN, ALBERTA 81-00
 Nahanni claim to cirque west
 of one w/ glacier



④ Bk SLAT below CN LMST
dvg 12E/V rusty w/ PR finely diss.

⑤ Back of cirque on S side of large
near cirque sil CH sand LMST
bed H7/84W 2"-4" LMST beds w/ 1/4"
- 1 CH layers. some slightly
SKRN

ALSO QZ-CO₂ vein trend = 120°/85W
inclined LM Cirque QZ, parallel to bed,
T-4 SKRN unit about 25' above base
contact. Unit is about 8' thick 6206
- 30' along wall at contact 6207
2' SKRN unit above Bk SLAT
contact ~ 78/50E

⑥ N side of cirque at N edge of snow
in back cirque.
Bk SLAT dvg 128/P4E
a number of QZ-LM veins (sweats) in area
irreg trend 092/V (steep) w/ CL (SKRN)
T-6 6208 from 1/2" wide vein
T-7 6209 4' wide QZ w/ m CL pods
T-8 6210 12" wide QZ-LM-CL
100' above a SLAT - SWISS CHEESE LMST contact

blk CHRT w/ CO₂ NAD irreg dvg 116/85W
622 is widespread and generally appears
on the contact between SLAT & CHRT
made up to 10' long & 5' wide are present
slope appears to be a dip slope

⑦ W limb of syncline
T-9 6211 2' unit of sil Hgrn SKRN
trending downhill 121/72E
CO₂ NAD CHRT & SKRN ~ 40' above SLAT

⑧ hinge area of syncline N side of
cirque T-10 6212 5' section
of sil Hgrn sand SKRN in CHRT
CO₂ NAD CHRT is against Bk SLAT
w/ well devel dvg 128/85W

T-11 on W limb of Anticline 5' SKRN CO₂
NAD CHRT 6213

81-076

Friday 10 July, 1981 Tungsten NWT 81-076

(1) Dyke near base of Swisscheese unit on N side of cirque. In gr grey-green mottled FP-CL w/ PO or MG. 2 1/2 ft wide str 2170°/51epN crosscut bed abruptly. Some larger FP SB-1

(2) S side of Cirque East hinge of anticline. Arcal thin bed w/ thin sections 106/102E

(11) S side of Cirque 500' E of (10) thin bed SLST Arcal QTZ 139/59E LYST BUNDING

(12) S side of Cirque 300' E of (11) Arcal thin bed w/ thin sections 140/27E

(13) S side of Cirque 200' E of (12) thin bed Arcal 090/54S

(14) S side of Cirque 100' E of (13) thin bed SLST 128/61E

SATURDAY 11 July 1981 TUNGSTEN, NWT

NATHANIAN CLAIM

(5) Broad south facing cirque below glacier south west of block in Yukon? BLK to grey SLST w/ pods of LYST grey-black mottled LYST some pods enclosed in grey calc. Finer QZ Arcal VERY rusty w/ 16-nd pd some QZ-CO₂ veins green but roughly parallel to clay to 2' wide T-11 4215 is many pd from 15' wide vein

T-12 6214 is flat from near T-13 and is QZ-pd w/ SP, CP. Also noted strongly altered QZ-CLAY INTER flat bed. green-purple clay INTER or SLST flat both from NW

(6) SW of small lake west of claim block Arcal w/ an QTZ on NW side of NW TREADING PLACER however new from the Δ glacier unit is cut by the road gr 31-0102 or 0401 dikes - cross on trail is 020/160NW some QZ veins and stringers near contact vein trend 035/ST NW

SB-2

FIELD

(7) Ridge between cirque south of showing
and small cirque which opens
in Flat R. to N. Blk PX rock strongly
bed of pre def ages SB-3 looks alt
to TR-Ac? w/ granular alt Eps gneiss

(8) Same cirque as above N side 3 groups of 3

Post #2 113441 #3 113444

#3 113446 #4 113444

#4 113446 #1 113445

#4 113445

#2 113445

#2 113444

cut in QTZT 165/33E

sect consists of QTZT, LMY QTZT & ARSN
w/ 1 unit of metavolc?

75' E of posts 1' SARN Ac-TR w/ CA

near limy QTZT T-14 6215

15' above T-13

T-14 6216 1' bed of AL-TR SARN w/

PO my/sp

(9) 2 posts

(1) #1 T36716

#2 T36713

#3 T36714

#4 T36717 (9) standing grease pencil

(2) #1 T36717

#2 T36714

(20) ~100' below posts on S side of large cirque
CHST 'RABBIT KETTLE' 122/25W

SUNDAY

12 July 1981 TUNGSTEN, N.W.T. PI-076

Nohanni Claim

Cirque w/ GLACIER N side

(1) contact between Upper Archaic and
"SWISS CHEESE" LMST on NE limb of
overturned anticline

above SCLMST is ~25' unit of LMST
equivalent to 'Ore' LMST? SW of LMST
consists of CHRTY ARCHAIC w/ LMST NOD
and a few LMST beds 117/07E

CLUG 115/02W. fold on S wall of
cirque looks like axial plane dips
about 45° to west.

(2) N side of cirque bottom of LMST unit
LMST >100' exposed above thin bed
LMST - ARCHAIC Red soil ARCHAIC in LMST
to S side bed 107/00W Isoclinal folds common
thinning

(3) N side of cirque lower contact of
SCLMST bed in LMST 113/76E
CLUG 110/05E in SLAT
along LMST NOD (BAND) in ARCHAIC
below LMST is SLAT but SLAT
is next to LMST above? the more

SCLMST then >100' above LMST (2)

(4) Back of cirque LMST POD above
main LMST units. Appears to be a case
of tight syncline reflected on N side
crosscut by QZ-POD veins parallel to
A-C jointing. CLUG in SLAT 120/05E
lots of INTX (KRTD or Dior) float from above

(5) Back of cirque toward S side
SCLMST bed 130/06E. CLUG 120/05E

(6) Back of cirque toward S side
DIP - GAD Dike at least 10' wide trends
N010/20NE - 30' to either side
is weakly cleaved along front and in LMST
of QZT. AC - QZ - PD w/ m CP
INTX cut w/ pd a few cr QZ or
SB - 4

(7) E side of cirque above LMST
SLAT bed 117/52E CLUG 117/11

② SE corner of Cirque o/c just above
 the first bulk bench. Purty SLAT
 unit is folded into a syncline. Ax appears
 to be trending $\approx 100^\circ$. Crushed $^{Fe}O_2$ -LW
 clasts near core.

MONDAY 13 July, 1981 TUNGSTEN
 NATHANNI 81-076 NWT

② Ridge of INTR SE of claim
 Very rusty at INTR SB-5
 acid QZ rich GRAN of a few % Bl
 appears to intrude Rabbit Kettle LWT
 although contact rocks are cherty.
 Near SBP no number

③ In cirque w/ Rock Glacier, 1st N of
 cirque w/ hanging glacier
 SLAT dvg 106/80E. Nearby found
 float of INTR ξ QZ veins w/ γ & δ
 TR of CP:GA S. STANNY FLOAT
 INTR SB-6 UK, Bl-RICH WAE? w/ Lg QZ
 INTR from o/c QAZ/70NW

③ E of lower? contact in SLAT
 fol in SLAT 116/85E. Fol LWT-1026
 014/50E fol in LWT

③ N side of cirque, up cirque from SLAT
 SLAT PHYC w/ 132/80W

③ N side of cirque? up from SE LWT
 sheared alt ANDS w/ CA AMYG SB-7
 unit ends in seasonal creek against ST
 thinbed LWT w/ m. AXOL 137/75W
 thin beds of CA (LWT)? in ANDS.

③ N side of cirque silty SLAT clgy 30/80W

③ S side of cirque up and out
 CLAT RUST 2" x 2" K A
 Post #3 A87477
 #2 A87478

③ Top of N ridge
 sheared ANDS clgy 130/85W
 SB-8

Friday 17 July 1981 TUNGSTEN, N.W.Z.

Nahanni PI-076

(36) Near top of Ridge in 12112

OZ-AS-SC vein 4-5"

Sample T-17 6219 145/50 W

1.5' E to contact

looks ARHL w/ fract. parallel to contact
000/50 W

157' on RIDGE 100' E of contact

Mica OZ-AS-SC vein 6220 T-18

1.5' wide 154/50 W

50' E of (37) on Ridge SKRN w/
PY-PX in area over 2' at zone is
1.5' wide appears to dip E T-19 6221

20' E of T-19 same SKRN unit 10'

sample across 10' py-sulph

at scd-OZ SKRN T-20 6222

100' E of T-20 OZ-AS-SC-LM^{PI} vein

174/50 W 1.5' T-21 6223

29

40' E of T-21 SKRN area w/ FOX MIN OZ-
PY-PX-CP T-22 6224 enclosed by
CHRT 2.6" thick

50' E of T-22 SKRN w/ OZ-PY-PX
CP T-23 6225 1.5' over 1'

(38) In Saddle 50' E of T-24
T-23 6225 SKRN/SULPH area
PI

T-25 6227 W SKRN 1/4' wide
30' SE of T-23

(39) TOP RIDGE Between two saddles
OZ - alter zone trending 130/15 W
4' across zone OZ-SE-LM-PY-AS
str alt compass doesn't work
T-26 6228

30' SE T-27 6229 SKRN w/ sulph
over 1/2'

(40) On RIDGE TOP 100' E of saddle
past SE of CHRT SKRN w/ MIN

SATURDAY 18 July, 1981

QZ SULPH W, 20 - CP in ARGL
knows pp T-16 6216 4' wide

(41) Edge of the A1+ zone at Top of Ridge
E of alt zone is Rabbitkettle LMST plug
010/4-w

In alt zone Unit 5?? mass pp in
ARGL ~~3000~~-15 6217 2' wide exposure
in a 10' wide zone in ARGL
06/50W ARGL is 3000 w/pt

(42) 50' below ridge (41)
zone of alt CHRT w/ QZ-CO₂ w/ MA
zone is approx 25' wide? 008/72W?
-28 6230
x13'

(43) 300' E of (42) = 5 claim posts (old)
on crest of ridge

TUNLISTEN, NW T

Nahanni

(44) Back of Cirque N of Q212 014/10W
75' N of contact 1' wide QZ-SC-AS
in T-19 6231 1/25' from contact zone of frt
10' wide with numerous QZ-SC-
AS-MA veinlets to 4' wide

(45) Inside of ridge along Cirque back
Lg QZ-LM vein from 100' open
space QZ fillings to SC-AS 7-8' wide
but mostly frt sugary QZ
096/70N - another zone to south 4' wide

(46) NW along RIDGE LM alt Q212? w/
mass sulph + waxy bands of mass pp
just above of the main strct. 5' wide
T-35 6237

(47) SE from (46) 100' mass sulph 4 1/2' wide
in 5' wide zone FW QZ-SC rock
NW str ge xt/CA-MAB - mass pack-like
w/ a few lara pass bed - very lara - sandy x10
T-34 6236

(48) T-33 6235 Mass sulph
3 1/2' FW EM-QZ-SE HU is sandy
cr gr CA-MARR = 100' E of (47) zone is
about 6' wide with gossan in FW of
structure

(49) 100' W of (48) large mass sulph
pod w/ Gossan FW Mass sulph
pod is 12' wide and about 30' long
consists of p/w/CP and coarse
grn diopⁿ - red garnet and QZ
FW Gossan is about 6' wide and
consists of Mn-LM - some QZ and SE
is present. This to the struct is
QZ-SE all CHRY rocks - same as FW
This zone is part of a QZ vein - vein
struct that trend 100° and appears
to dip steeply north. Along strike
to the west mass QZ Gossan
predominate until (48) where a
3 1/2' wide pod of massive sulph and
a 5' wide gossan are located.
At (49) T-30 6232 S side of
mass sulph pod p/w/CP 5 1/2'
T-31 6233 N side mass sulph pod

consist p/w-CP-DI-GN @ 1/2'
T-32 6234 Gossan 6'

THE zone is outlined by Mn-LM
and QZ-SE all of well rocks

(50) AT base of slope on Talus - Maradeic
Flattop road on E side of MZ - Unitarian
text except for in place FP - Premier
SB-9

Also in same talus irreg of magne
p/w/FP pieces to 1 1/2' x 3/4"
rock containing xenoliths that have
assimilated

SUNDAY 19 JULY, 1981 TUNGSTON, N.W.T

(51) S of plateau bed in Rabbit Kettle 140/50E
thin bed SLTY LMST ~~with~~ ^{with} 100' E
ARGL unit cherty 1/2' grn-gry rock

(52) Area extends for ~300' from
Q2M2 in gr sugary Q2-FP w/ an 8'
cut by Q2 veins SB-10

(53) Huge transported gossan on slope S of
claim line consists of CHRT-ARGL
frags cemented by LM = 30-40' thick
lying on ~~top~~ w/ m LMST 024/05SE

(54) E part of S slope 2 post 1 tag post
#5 113427
-150' west a pile of red plugging
in rocks

(55) N side of Q2M2 in cirque - small
banded Q2-LM-PY vein ~~cut~~ ^{cut} slaty ARGL
130/65 SW - complex band w/ mass 47
Q2-JA 1.5' alt SE-LM(GA) frx ARGL
over 2.5' then Q2-ARGL BRN ~~cut~~
over 2.5' in HW - sample

That unit almost is still reached
T-36 6238

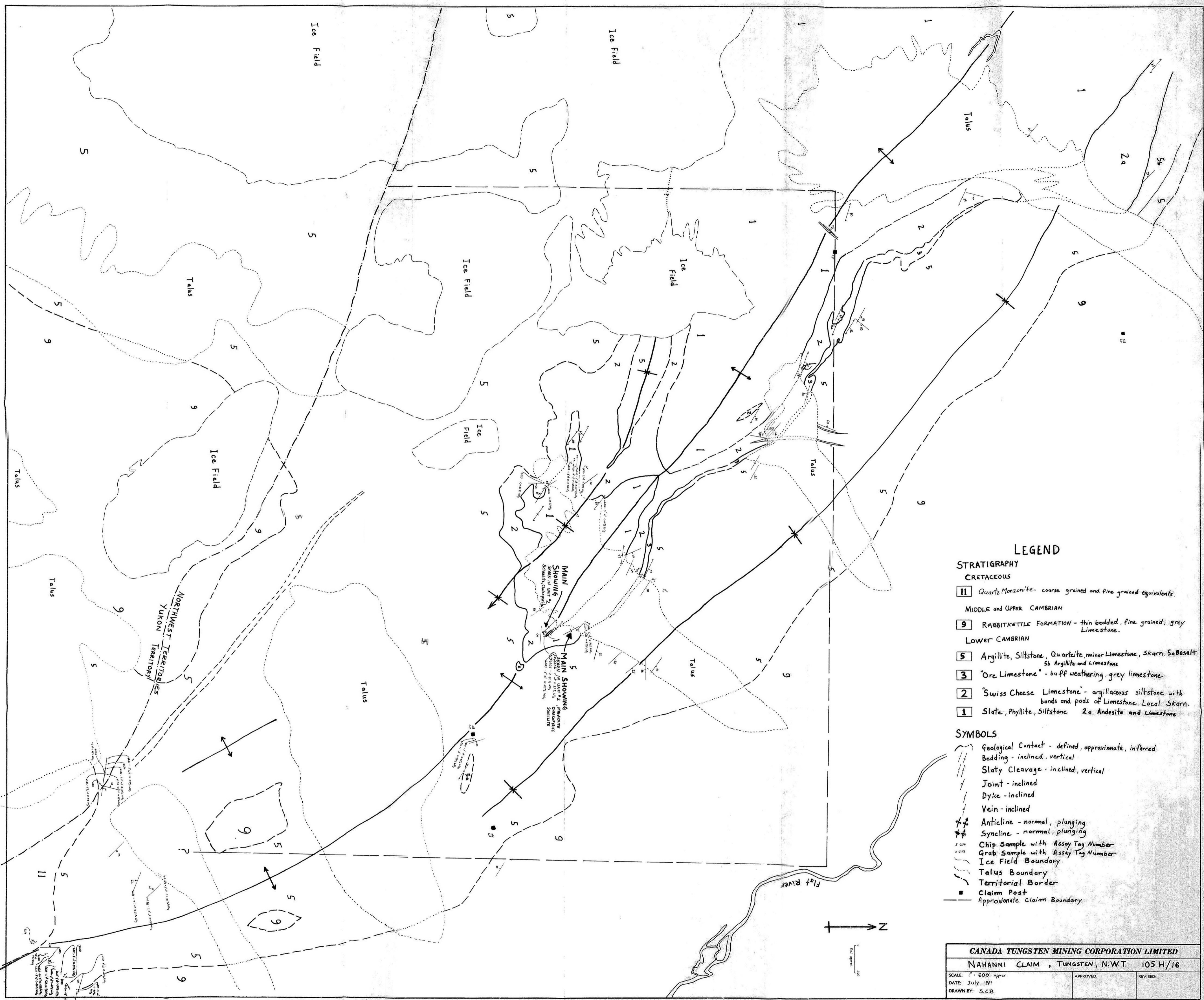
(56) S face of Cirque 400' W of (55)
T-37 6239 mass sulph in Q2
vein 6"-2" wide 112/625W

Band runs parallel to a zone of
Hydrothermal alt in ARGL. Q2-S
alt ~~is~~ w/ LM - ~~is~~ are now reached
and no sulph are present.
zone of alt - alt, 135/70NE
is about 10'-15' wide with gossan
cap some BRN is present in some
pools. South wall is ARGL w/ BTK
LMST to E - Rabbit Kettle LMST is
further to E and is difficult to distinguish.
Q2M2 flt found on slope but
no ofc. It appears to be related
in alt to the top of the plugging. F14
is alt Q2-SE w/ numerous ~~cut~~ ^{cut} Q2
stringers. Some SKRNY looking chert
and ARGL alt has Q2-PA-LP #PY

(57) Half way down talus slope on S wall
a number of QZ-Mb steam hlds and/or
o/c of ANGL w/ QZ-Mass Sulph MIN
T-38 6240 across 3' bld/o/c
PQ-CP zone is pass at least 3' wide
or long. if o/c

On the talus slope above mass sulph
hlds were located

(58) South west ridge
Post old
#3 AFS314 at 6550'

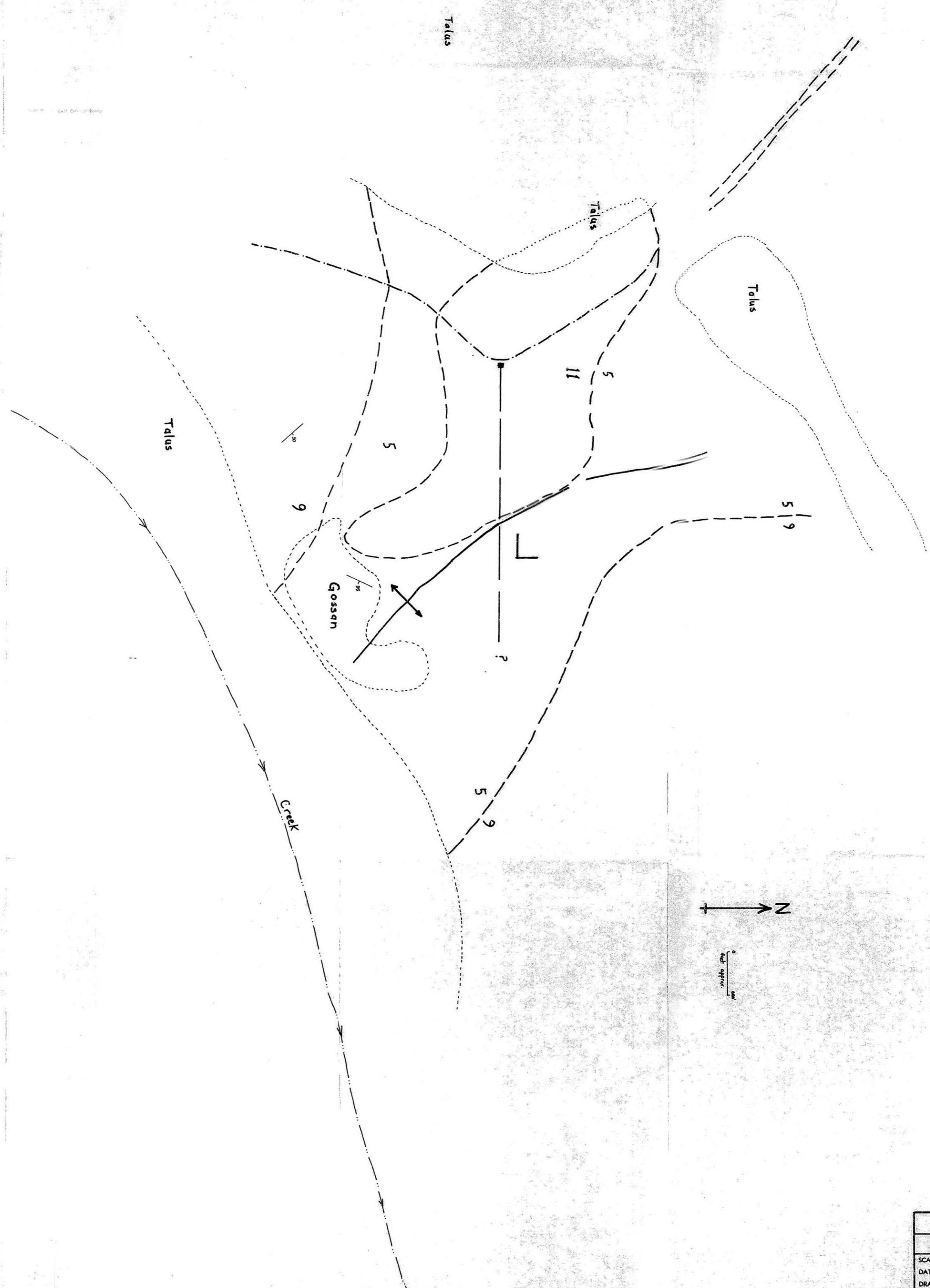


LEGEND

- STRATIGRAPHY**
- CRETACEOUS**
- 11** Quartz Monzonite - coarse grained and fine grained equivalents.
- MIDDLE and UPPER CAMBRIAN**
- 9** RABBITKETTLE FORMATION - thin bedded, fine grained, grey Limestone.
- LOWER CAMBRIAN**
- 5** Argillite, Siltstone, Quartzite, minor Limestone, Skarn, Sa Basalt, Sb Argillite and Limestone
 - 3** "Ore Limestone" - buff weathering, grey limestone.
 - 2** "Swiss Cheese Limestone" - argillaceous siltstone with bands and pods of Limestone. Local Skarn.
 - 1** Slate, Phyllite, Siltstone 2a Andesite and Limestone

- SYMBOLS**
- Geological Contact - defined, approximate, inferred
 - Bedding - inclined, vertical
 - Slaty Cleavage - inclined, vertical
 - Joint - inclined
 - Dyke - inclined
 - Vein - inclined
 - Anticline - normal, plunging
 - Syncline - normal, plunging
 - Chip Sample with Assay Tag Number
 - Grab Sample with Assay Tag Number
 - Ice Field Boundary
 - Talus Boundary
 - Territorial Border
 - Claim Post
 - Approximate Claim Boundary

| | | |
|---|-----------|----------|
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| NAHANNI CLAIM, TUNGSTEN, N.W.T. 105 H/16 | | |
| SCALE: 1" = 600' approx. | APPROVED: | REVISED: |
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