CANADA TUNGSTEN MINING CORP LTD.

EXAMINATION OF HAND SPECIMENS - TWIN BUTTES AREA, YUKON; 63° - 30' NORTH LATITUDE; 135° - 25 W. LONGITUDE

D. J. HENDERSON

MAY 6th, 1971

SAMPLE #I

COLOUR: Weathered surface buff to rusty. Fresh surface light very grey with a few pods of rusty material. Some of the feldspars have altered to a cream colour.

MINERALOGY: Colour Index - 5% - all biotite. Feldspar - 85%.

Plagioclase 1/3 - 1/2
Alkalai fp. more than 1/2

Quartz - 10%. Euhedral to anhedral, dark.
Carbonate (secondary), less than 1%.

Weathered sulphides - trace.

Metallic Mineral (?) - trace.

TEXTURE: Medium to coarse grained hypidiomorphic granular. Porphyritic, with alkalai feldspar phenocrysts up to 20 mm. long. Very thin (1/2 mm.) fractures healed with secondary carbonate.

ULTRAVIOLET

TEST: Scheelite - trace.
Yellow fluorescence on fracture fillings (calcite (?).)

ASSAY: WO_3 - 0.26%

NAME: Biotite Granite Porphyry

SAMPLE #II

COLOUR: Weathered surface buff to grey. Fresh surface buff grey.

MINERALOGY: Colour Index, 5% - all biotite.
Feldspar 90%
Plagioclase less than 1/3 alkalai feldspar more than 2/3.

Quartz - 5%. Euhedral to anhedral. Light grey to very dark translucent.

Accessory:
Hornblende or wolframite (?) - trace
Apatite (?), much less than 1%
Secondary carbonate fracture fillings

(cont'd. . .)

SAMPLE #II - (cont'd. . .)

TEXTURE: Medium to coarse grained hypidiomorphic granular.
Porphyritic.
Plagioclase grains up to 5 mm.
Alkalai feldspar phenocrysts up to 20 mm.
Quartz 1 mm. to 10 mm.

ULTRAVIOLET

TEST: Scheelite - Trace.
Yellow fracture fillings.

ASSAY: WO_3 - 0.05%

NAME: Biotite Granite Porphyry.

SAMPLE #III

COLOUR: Weathered surface grey buff. Fresh surface medium grey. Rusty fractures.

MINERALOGY: Colour Index - 5 - 10% - mostly biotite.
Feldspars - 80 - 85%, composition not determined.
Quart - 10%.
Scheelite - trace.

TEXTURE: (a) Granite: Fine grained (less than 2mm), hypidiomorphic granular.

(b) Aplite: Feldspar - quartz dykes cut the fine grained granite. The intrusion of the aplite dykes has caused re-crystallization of biotite adjacent to the aplite.

ULTRAVIOLET

TEST: Trace of scheelite in the granite but about 1% (est.) in the aplite.

ASSAY: WO_3 - 0.06%

NAME: Fine grained biotite granite

SAMPLE #IV

COLOUR: Weathered surface buff grey. Rusty fractures.
Black stain on surface.

(cont'd. . .)

SAMPLE #IV - (cont'd. . .)

MINERALOGY: (a) Granite;
Colour Index less than - 5% - all Biotite.
Feldspar - 80%
Quartz - 15 - 20%

(b) Alteration;
Muscovite
Calcite or dolomite
Secondary carbonate
Quartz
Apatite (?)
Weathered out sulphide box work
Fe - Mn stain

TEXTURE: Fine grained granitic ground mass with altered feldspar phenocrysts. Zoned vein (open space filling) center to outside contact;

(a) Vugs

(b) Altered, dark brown mineral, possibly wolframite (?).

(c) Coarse grained carbonate with well formed muscovite rosettes.

(d) Fine grained quartz (light grey) with sericite.

Secondary carbonate as fracture fillings.

ULTRAVIOLET

TEST: Bluish white on fracture fillings (carbonate). Yellowish fluorescence and phosphorescence on weathered surface (algae).

ASSAY: WO_3 - 0.06%

NAME: Altered Granite Porphyry intruded by zoned vein

SAMPLE #V

COLOUR: Weathered surface, medium grey.
Fresh surface, cream grey.
Rusty fractures.

(cont'd. . .)

SAMPLE #V - (cont'd. . .)

MINERALOGY: (a) Porphyry;

Colour Index - 5% - all biotite.
Feldspars - 85% - plagioclase less than alkalai feldspar.

Quartz - 10% - dark.

(b) Vein;

Quartz (smoky)
Sericite - less than 1%

TEXTURE: (a) Porphyry:

Ground mass - 1 - 3 mm
Phenocrysts: up to 15 mm.
Feldspar phenocrysts surrounded by very fine grained mofits. Pods of v.f.g. granite near vein contact.

(b) Vein:

Coarse grained quartz which appears to have been slightly sheared.

ULTRAVIOLET

TEST: Scheelite - trace

ASSAY: WO_3 - 0.07%

NAME: Medium grained Granite Porphyry.

SAMPLE #VI

COLOUR Weathered surface buff. Fresh surface creamy grey.

MINERALOGY: Colour Index - 2 - 3% - all biotite.
Feldspars - 85%
Plagioclase less than 1/3.
Cream coloured.

Alkalai feldspar more than 2/3

Quartz - 10 - 15%, cuhedral - suhedral, dark translucent.

Apatite (?) - less than 1%

(cont'd. . .)

SAMPLE #VI - (cont'd. . .)

TEXTURE: Fine grained to coarse grained porphyritic ground mass.

Phenocrysts;

Feldspars - up to 20 mm.

Dark quartz - 2 - 10 mm.

Pegmatite vein with very coarse grained, light grey quartz and feldspar. A little sericite.

ULTRAVIOLET

TEST: Scheelite - trace.
White fluorescence on fracture.
Surface (calcite).

ASSAY: WO_3 - 0.06%.

NAME: Medium grained to coarse grained granite porphyry.

SAMPLE #VII

COLOUR: Weathered surface light grey-cream.
Freak surface light grey to cream.

MINERALOGY: Colour Index - 1 - 2%;
Hornblende more abundant than biotite.
Feldspars - 95%. Alkalai feldspar much more abundant than plagioclase.
Quartz - 5%. Subhedral, dark grey.

Accessory;

Apatite (?)

Zircon - trace

TEXTURE: Medium grained to coarse grained pegmatitic.
Large alkalai feldspar phenocrysts.

ULTRAVIOLET

TEST: Scheelite - trace, yellowish blue.

ASSAY: WO_3 - 0.06%.

NAME: Pegmatitic - Granite

(cont'd. . .)

SAMPLE # VIII

COLOUR: Weathered surface, light grey to pink.
Fresh surface, light grey buff.

MINERALOGY: Colour Index - less than 1%.
Hornblende and biotite.

Feldspars - 85%. Alkalai feldspars much more abundant than plagioclase.

Accessory:

Apatite (?)

TEXTURE: Fine grained to coarse grained.
Euhedral to subhedral quartz and feldspar phenocrysts.

ULTRAVIOLET:

TEST: Yellowish blue fluorescence - trace.

ASSAY: WO_3 - 0.06%.

NAME: Feldspar - Quartz Granite Porhyry

SAMPLE # IX

COLOUR: Weathered surface, buff to rusty.
Fresh surface, medium grey.

MINERALOGY: Colour Index - 10% - biotite.
Quartz - Feldspar.

TEXTURE: Fine grained (less than 1mm.)
Granular texture. Highly indurated with poor fissility. Poorly developed banding.
Narrow (2mm.) rusty quartz stringers.

ULTRAVIOLET

TEST: Scheelite - trace, mostly on fracture surfaces.

ASSAY: WO_3 - 0.05%.

NAME: Impure Quartzite or Metagreywacke.

SAMPLE #X

COLOUR: Weathered surface, grey to pink.
Fresh surface, medium grey.

(cont'd. . .)

SAMPLE #X - (cont'd. . .)

MINERALOGY: Colour Index - 5 - 10% - all biotite.
Feldspar 80 - 85%.
Alkalai feldspar more than 2/3.
Quartz - 10%. Small (1 - 2 mm.)
Subhedral.

TEXTURE: Fine grained (less than 2mm to 3mm)
Hypidiomorphic granular gound mass.
Alkalai feldspar phenocrysts up to 10mm.

ULTRAVIOLET

TEST: Scheelite - trace.

ASSAY: WO_3 - 0.05%.

NAME: Biotite Granite Porphyry

SAMPLE #I (x)

COLOUR: Weathered surface, dark grey to black.
Fresh surface, dark grey.

MINERALOGY: Very fine grained (less than 1mm) to fine grained granular. Very thinly laminated (less than 1mm). Fissility moderately well developed. Very small (1mm.) stretched particles).

ULTRAVIOLET

TEST: Trace of Scheelite.

ASSAY: WO_3 - 0.05%

NAME: Greywacke Schist

SAMPLE #II (x)

COLOUR: Weathered surface, light grey to buff.
Fresh surface, light grey to cream grey.

MINERALOGY: Colour Index less than 2% - biotite.
Quartz and Feldspar.

TEXTURE: Fine grained (less than 1mm), hard massive and highly indurated.

(cont'd. . .)

SAMPLE #II (x) - (cont'd. . .)

ULTRAVIOLET

TEST: No Scheelite seen.

ASSAY: WO_3 - 0.07%.

NAME: Rhyolite (chilled margin) or Meta-quartzite.

SAMPLES MARKED WITH RED FLAGGING

SAMPLE #II - N - 160

COLOUR: Weathered surface, dark grey to buff.
Fresh surface, dark grey.

MINERALOGY: Quartz, Feldspar, Biotite.

TEXTURE: Fine grained (less than 2mm).
Fissility well developed.

ULTRAVIOLET

TEST: Trace of Scheelite.

ASSAY: WO_3 - Trace.

NAME: Biotite Greywacke Schist

SAMPLE #II - E - 60

COLOUR: Weathered surface, rusty.
Fresh surface, light grey.

MINERALOGY: Grains are too fine grained for identification using a hand lens.

TEXTURE: Very fine grained, hand and massive Rusty fractures.

ULTRAVIOLET:

TEST: Trace of yellow fluorescence.

ASSAY: WO_3 - Trace.

NAME: Greywacke Hornfels (?)

SAMPLE #II - S - 35

COLOUR: Weathered surface, buff grey.
Fresh surface, light greenish grey.
Rusty fractures.

MINERALOGY: Quartz - fine grained, crystalline.
Feldspar - some altered (saussaurite).

(cont'd. . .)

SAMPLE #II - S - 35

TEXTURE: Very fine grained to fine grained (less than 1mm to 2mm). Massive thin (2mm) quartz vein.

ULTRAVIOLET

TEST: Trace of blue fluorescent algae.

ASSAY: WO_3 - Trace.

NAME: Fine Grained Saussauritized Granite

SAMPLE #II - S - 45

COLOUR: Weathered surface, light grey buff.
Fresh surface, light greenish grey.

MINERALOGY: Colour Index - less than 5%.
Feldspar, some saussaritized Quartz.
A few pods of dark brown material.

TEXTURE: Fine grained hypidiomorphic granular massive.

ULTRAVIOLET

TEST: Trace of Scheelite.

ASSAY: WO_3 - Trace.

NAME: Fine Grained Altered Granite

SAMPLE #II - S - 60

COLOUR: Weathered surface buff to rusty.
Yellowish stain.

MINERALOGY: Quartz.
Feldspar Porphyroblasts.
Others.

TEXTURE: Very fine grained ground mass with porphyroblasts up to 2mm. Fissility not well developed.

ULTRAVIOLET

TEST: No Scheelite seen.

(cont'd. . .)

SAMPLE #II - S - 60 - (cont'd. . .)

ASSAY: WO_3 - Trace.

NAME: Greywacke Hornfels (?)

SAMPLE #II - W - 120

COLOUR: Weathered surface, light grey to buff.
Fresh surface, light grey.

MINERALOGY: Quartz
Feldspar
A little Sericite
Black Stain.

TEXTURE: Very fine grained, hard and massive.
Faint laminations.

ULTRAVIOLET

TEST: No Scheelite seen.

ASSAY: WO_3 - Trace.

NAME: Quartzite

SAMPLE N - 20

MINERALOGY: Colour Index - 1 - 2% - all Biotite.
Feldspar - 90 - 95%
Alkalai fp. more than 2/3
Plagioclase less than 1/3
Altered to cream colour

Accessory:

Sericite

Secondary Carbonate

Mn. Stain

TEXTURE: Medium to coarse grained (1 - 5mm)
Hypidiomorphic granular.
Quartz vein 1 inch wide.

ULTRAVIOLET

TEST: Abundant blue fluorescence on surface (algae). Trace of yellow fluorescence in quartz pod.

(cont'd. . .)

SAMPLE N - 20 - (cont'd. . .)

ASSAY: WO_3 - 0.06%.

NAME: Altered Granite

SAMPLE 75E

(A) GRANITE

COLOUR: Weathered surface, buff to grey.
Fresh surface, light grey.

MINERALOGY: Colour Index - less than 1% - all Biotite.
Quartz and Feldspar 99%.

TEXTURE: Very fine grained, massive.
Cut by pods, stringers and veins of quartz and Aplite.
Phenocryst of Quarts and Feldspar up to 15mm across.

NAME: Granite Porphyry

(B) SCHIST Thinly laminated, very fine grained, well indurated, dark grey to black. Contact with granite very sharp.

NAME: Greywacke Schist

ULTRAVIOLET

TEST: Trace of Scheelite.

ASSAY: WO_3 - 0.06%.

SAMPLE 150 W

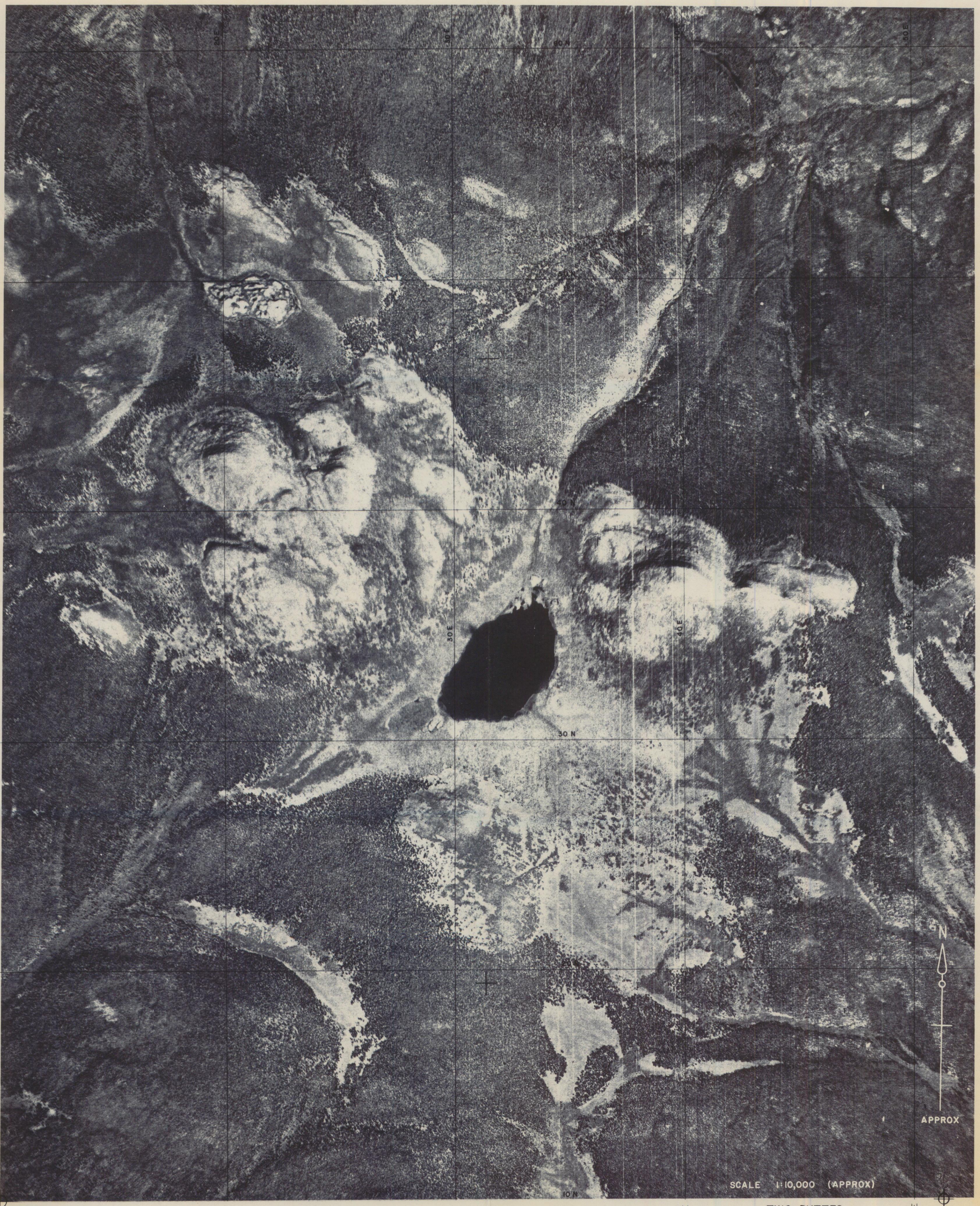
MINERALOGY: Medium grained to coarse grained Quartz - Feldspar Granite Porphyry.
Colour Index about 5% mostly as Biotite. Phenocrysts of Feldspar and Euhedral to Subhedral, dark Quartz. Small zenolith of Quartz - Feldspar - Biotite Schist.

ULTRAVIOLET

TEST: Trace of Scheelite.

ASSAY: WO_3 - 0.06%.

NAME: Quartz - Feldspar Granite Porphyry



TWO BUTTES

MAP I

NOTICE

THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.

SHEET 105M-6

SCALE: 1/2 MILE to 1 INCH.

FT. 1500 0 1500 3000 4500 6000 7500 9000 10500 FT.

MAGNETIC NORTH N 33° - 10° E

105M-12	105M-11	105M-10
105M-5	105M-6	105M-7
105M-4	105M-3	105M-2

WHITEHORSE, Y.T. JUNE 13, 1972. DECEMBER 3, 1970. 3/MAY 79

63° 30' 135° 30' 135° 00' 63° 30'

T W O B U T T E S

P L A T E A U

THREE MILE RAPID

FIVE MILE RAPID

HORSESHOE SLOUGH

+ 1680

2500

Francis Cr.

No Gold Creek

2500

Old Pass Creek

Avalanche Cr.

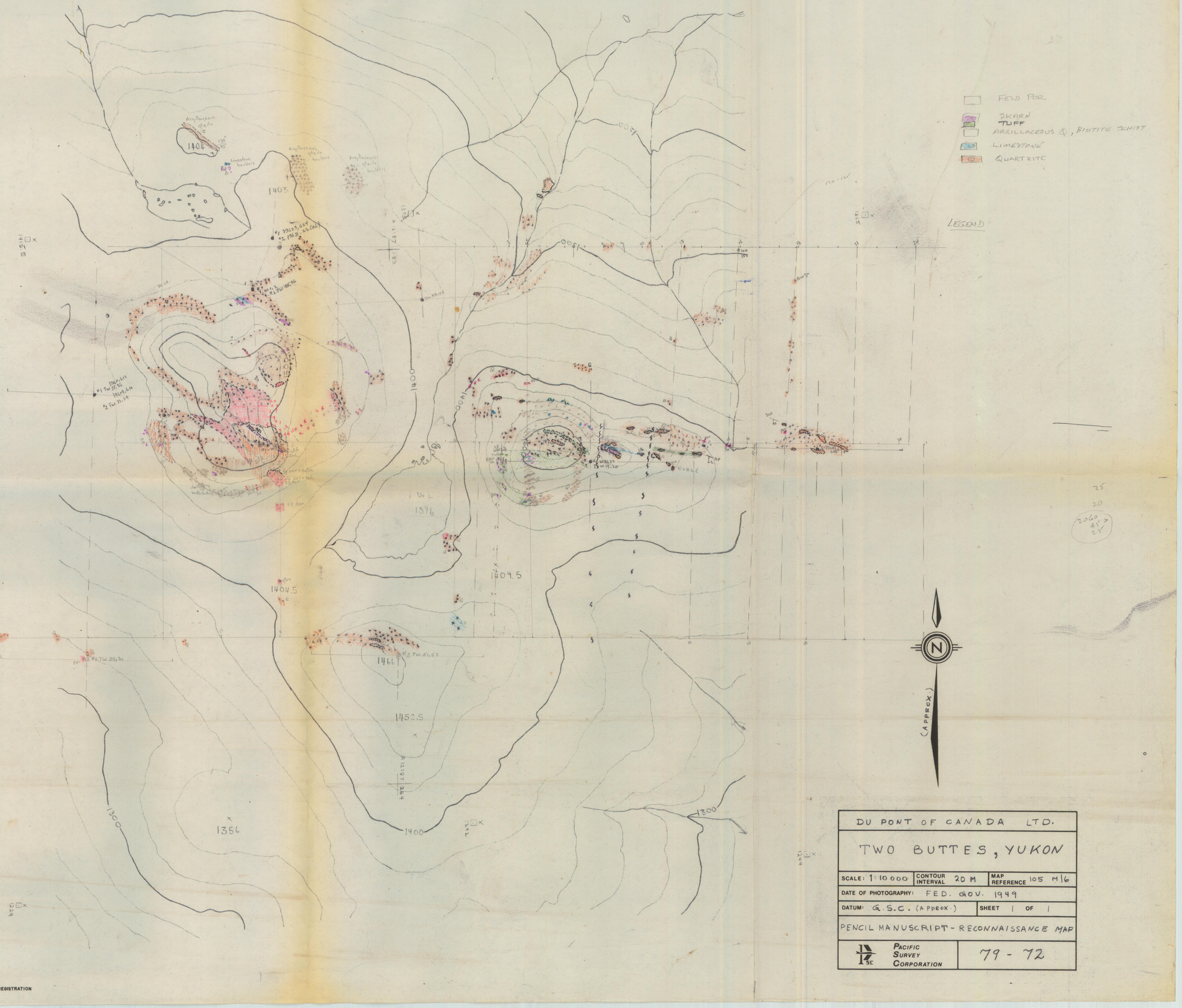
5000

63° 15' 135° 30' 135° 00' 63° 15'

105M-6

N.T.S. 105 M 6
DRWG No. TB. 79-3

TWO BUTTES PROJECT
CONTOUR MAP



DU PONT OF CANADA LTD.		
TWO BUTTES, YUKON		
SCALE: 1:10 000	CONTOUR INTERVAL 20 M	MAP REFERENCE 105 M/6
DATE OF PHOTOGRAPHY: FED. GOV. 1949		
DATUM: G.S.C. (APPROX.)	SHEET 1 OF 1	
PENCIL MANUSCRIPT - RECONNAISSANCE MAP		
PACIFIC SURVEY CORPORATION	79 - 72	

REGISTRATION