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**INDIAN AND NORTHERN AFFAIRS CANADA  
NORTHERN AFFAIRS: YUKON REGION**

**Open File 1996-1(G)**

**GEOLOGICAL COMPILATION MAPS**

of the

**NORTHERN STEWART RIVER MAP AREA  
KLONDIKE AND SIXTYMILE DISTRICTS**

**(115 N/15,16; 115 O/13,14  
AND PARTS OF 115 O/15,16)**

**1:50,000 SCALE**

by

**J.K. MORTENSEN  
DEPARTMENT OF GEOLOGICAL SCIENCES  
UNIVERSITY OF BRITISH COLUMBIA**

**Canada**

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Indian and Northern Affairs Canada  
300 Main Street  
Whitehorse, Yukon, Y1A 2B5.**

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**J.K. Mortensen  
Department of Geological Sciences  
University of British Columbia  
6339 Stores Road  
Vancouver, B.C. V6T 1Z4**

**June 1996**

**Six maps with accompanying notes**

## **INTRODUCTION**

This set of maps represents a geological compilation of the northern part of the Stewart River map area (115 N, O) southwest of the Tintina Fault Zone. The maps are based mainly on geological mapping carried out by the author on behalf of Archer, Cathro and Associates (1981), Ltd. in 1983-84 and the Geological Survey of Canada between 1986 and 1991. Final field checking, map compilation and synthesis was done in 1995-96 with support from the Canada/Yukon Geoscience Office. Published maps by Cockfield (1927), Bostock (1942), Tempelman-Kluit (1974), and Debicki (1983, 1984), as well as original field notes from 1935-36 by H.S. Bostock and a number of unpublished mineral assessment reports, were used to supplement the author's observations. All available isotopic ages from the area are also shown. The lithostratigraphic legend used for these maps was developed for both this series of maps and adjoining portions of southwestern Dawson map area (116B, C) to the north (Mortensen, 1988, in preparation). Note that not all of the units included in the legend are necessarily present in the northern Stewart River map area.

The level of detail on the maps varies from area to area, depending on the amount of information available as well as difficulties in access and generally poor exposure. Areas of outcrop, felsenmeer and/or local float are shown for parts of the maps examined in detail by the author as an aid to future workers in the region.

## **GENERAL GEOLOGY**

Northern Stewart River map area southwest of the Tintina Fault Zone is underlain by two distinct lithotectonic assemblages: 1) medium to high grade, polydeformed metasedimentary and meta-igneous rocks of the Yukon-Tanana Terrane, and 2) weakly deformed and metamorphosed rocks of the Slide Mountain Terrane. These two assemblages are both mainly Paleozoic in age in the study area, and were juxtaposed by regional scale thrust faults in Early Mesozoic time, during a period of terrane accretion that affected much of the northern Cordillera. A variety of younger (post-accretion) volcanic, plutonic and sedimentary rocks are also present in the study area.

## PRE-ACCRETION UNITS

### **Yukon-Tanana Terrane.**

Yukon-Tanana Terrane in the northern Stewart River map area consists of two main assemblages of supracrustal rocks as well as three distinct suites of metaplutonic rocks. Supracrustal rocks comprise the Late Devonian(?) to mid-Mississippian Nasina assemblage and the mid-Permian Klondike Schist assemblage. The Nasina assemblage consists mainly of fine-grained, moderately carbonaceous (unit DMsqc) to non-carbonaceous (unit DMsq) quartz-muscovite-chlorite schist and quartzite derived from fine-grained siliciclastic rocks, with locally abundant interlayered mafic schist and amphibolite (unit DMmasc; mafic metavolcanic rocks) and marble (unit DMc). Also present locally are volumetrically minor bands of carbonaceous, stretched pebble conglomerate (unit DMsqgc) and thin quartz-muscovite schist (unit DMsqm; felsic metavolcanic rock?) layers. One of these felsic schist layers from a locality in southwestern Dawson map area to the north has given an Early Mississippian U-Pb zircon age. Relatively coarse-grained, locally garnetiferous biotite-quartz-muscovite schist (unit DMs) and amphibolite (unit DMasc) in the Sixtymile River area near the western end of the map area and between the mouths of Allgold and Minnie Bell creeks near the eastern end of the map area are interpreted as higher-grade equivalents of the Nasina assemblage. Hornblende-biotite granodiorite gneiss (unit DMgdg) that has yielded Early Mississippian U-Pb zircon ages in southwestern Dawson map area locally occurs as bodies within the Nasina assemblage, and also forms the northeastern portion of the Fiftymile Batholith. Smaller lenses of feldspar and quartz-feldspar augen schist (unit DMsa) occur locally within the Nasina assemblage; these rocks are interpreted as meta-porphyry sills and/or transposed dykes.

Supracrustal rocks of the Klondike Schist assemblage mainly comprise a variety of felsic schists (unit Psqm), most of which are thought to have been derived from felsic tuffs, cherty tuffs and tuffaceous cherts. Interlayered with these felsic units are non-carbonaceous, fine-grained micaceous quartzite and quartz-feldspar-muscovite-biotite( $\pm$ chlorite) schist (unit Psq) that were derived mainly from siliciclastic protoliths. Layers of chlorite schist (unit Psc; mafic metavolcanic

rock) and metagabbro (unit Pg) occur locally within the felsic schist units, together with rare bands of marble (unit Pc) and carbonaceous quartz-muscovite schist (unit Psqc). Lensoidal bodies of quartz- and quartz-feldspar augen schists (unit Psa) interpreted as subvolcanic sills and/or transposed dykes are widespread within the felsic metavolcanic units. In the Klondike District the augen schist unit grades structurally downwards into biotite-bearing quartz monzonitic gneiss of the Sulphur Creek orthogneiss (unit Pqmg). Samples of the felsic metavolcanic rocks, the quartz(±feldspar) augen schist and the Sulphur Creek orthogneiss have given mid-Permian U-Pb zircon ages from several localities within the study area (Table 1) and in southwestern Dawson map area.

Granitic orthogneiss (unit DMgg), typically containing coarse potassium feldspar augen, forms two large bodies in the study area, the Mt. Burnham orthogneiss and the central and southern portion of the Fiftymile Batholith. Both of these bodies give Early Mississippian U-Pb zircon ages (Table 1).

### **Slide Mountain Terrane**

Rocks assigned to the Slide Mountain Terrane (Dawson/Clinton Creek assemblage) include massive greenstone (unit Pv) and a variety of altered ultramafic rocks (unit Pu). The Dawson/Clinton Creek assemblage is represented both by relatively large bodies and by a number of smaller bodies (mainly of serpentinite) that are too small to show at the scale of these maps. Primary textures and structures preserved within the greenstone indicates that it was derived mainly from massive aphyric basalt flows interlayered with less abundant bedded mafic tuffaceous rocks. The ultramafic rocks are partially to wholly serpentinized; in addition strong quartz-carbonate alteration has also affected the rocks locally. Weakly deformed, thinly bedded, immature clastic sediments and argillaceous limestone (unit Trs) that are associated with the mafic and ultramafic igneous rocks at Clinton Creek in the southwestern Dawson map area have given Middle or Late Triassic conodont ages. The greenstone and altered ultramafic rocks are undated.

### **Quartz Monzonite**

Several large bodies of biotite( $\pm$ muscovite) quartz monzonite (unit eJqm) intrude metamorphic rocks of the Yukon-Tanana Terrane in the central and western part of the study area. A K-Ar biotite age for the Jim Creek pluton in the western part of the Klondike District and U-Pb zircon ages for related units in southwestern Dawson map area indicate an Early Jurassic emplacement age. Field relationships in southwestern Dawson map area suggest that these plutons were intruded prior to both Early(?) Jurassic regional thrust imbrication and Early Cretaceous normal faulting.

### **POST-ACCRETION UNITS**

Metamorphic rocks of the Yukon-Tanana and Slide Mountain terranes are unconformably overlain by a sequence of unmetamorphosed sedimentary (unit lKst) and volcanic (unit lKva) rocks of middle(?) and Late Cretaceous age. The lower part of the sequence typically consists of sandstone and pebble to cobble conglomerate, which is overlain by massive andesitic flows and breccias. The volcanic rocks have given Late Cretaceous K-Ar whole-rock ages from several localities on lower Sixtymile River in central Stewart River map area (Lowey et al., 1986) and are correlated with the Carmacks Group. The sedimentary rocks contain abundant plant fossils and locally narrow discontinuous coal beds. Palynological studies of correlative units in the Indian River area by Lowey (1984) indicate depositional ages as old as Albian.

Small plugs and stocks of fine to medium grained, equigranular biotite-hornblende quartz monzonite and granodiorite (unit lKgd) in the study area and in southwestern Dawson map area to the north give Late Cretaceous K-Ar and U-Pb ages (Table 1). These bodies are closely associated with the Late Cretaceous volcanic rocks and are thought to be comagmatic with them.

A bimodal suite of quartz-feldspar( $\pm$ biotite) porphyry (unit eTqfp) and plagioclase-phyric basalt (unit eTdi) dykes occurs in the eastern part of the map area. These rocks have given Eocene

K-Ar and U-Pb ages from both within the study area (Table 1) and in southwestern Dawson map area.

## **STRUCTURAL GEOLOGY**

The study area is structurally complex and scarcity of exposure precludes a detailed structural analysis; however some general observations can be made. Rocks of the Nasina and Klondike Schist assemblages and the three associated orthogneiss units have experienced penetrative ductile deformation and metamorphism at middle greenschist to lower amphibolite facies. Compositional layering in these units has typically been completely transposed into parallelism with the first phase foliation (F1), which also commonly contains a strong mineral stretching lineation (L1). Fold closures related to the D1 event are only rarely observed. The D1 fabric has commonly been deformed by upright to northeast-verging, open to tight folds D2 folds which are characterized by a strong axial planar crenulation foliation (F2) and lineation (L2). Greenstones and ultramafic rocks of the Slide Mountain Terrane generally only display evidence for brittle shearing and open folding. Serpentinite bodies within or adjacent to fault zones commonly show anastomosing brittle shear surfaces.

Rocks of the Yukon-Tanana and Slide Mountain terranes are juxtaposed along mainly shallowly to moderately dipping fault surfaces that are interpreted as regional-scale thrust faults. This interpretation is based largely on evidence from southwestern Dawson map area, where low-grade, brittly sheared greenstones, ultramafic rocks and immature clastic sedimentary rocks of Triassic age are structurally sandwiched between medium-grade, ductily deformed Yukon-Tanana Terrane schist of Paleozoic age. All of the smaller bodies of greenstone and/or ultramafic rocks in the study area are also thought to mark thrust faults. It should be noted, however, that although this interpretation is consistent with structural relations documented elsewhere in the Yukon-Tanana Terrane in western and southeastern Yukon, other structural interpretations may be possible.



Low-angle normal faults are inferred to separate the structurally lower granitic augen orthogneiss assemblage that makes up the Mount Burnham orthogneiss and the central and southern Fiftymile Batholith from overlying rocks. Regional evidence for this includes consistent Early to mid-Cretaceous metamorphic cooling ages in the lower assemblage and mainly Jurassic cooling ages in the structurally higher units, as well as structural studies (e.g., Dusel-Bacon and Hansen, 1992) in adjacent portions of Alaska. In particular, the orientations of mineral stretching lineations are markedly different between the upper and lower assemblages. The cooling age data appears to require faulting to be of Early Cretaceous or younger age. However the stretching lineations within the augen orthogneiss of the Fiftymile Batholith are crosscut by weakly deformed to undeformed intrusions inferred to be of Early Jurassic age; thus the fabrics both above and below the inferred normal faults were formed in Early Jurassic time or earlier. In addition, small bodies of granitic augen orthogneiss that are lithologically and textural identical to that of the central and southern Fiftymile Batholith occur as bands within Nasina assemblage rocks well above the inferred normal fault in the Sixtymile District. The evidence therefore appears to require some displacement across these faults, but argues against the faults representing major terrane boundaries as suggested by Dusel-Bacon and Hansen (1992) and Dusel-Bacon et al. (1995).

Middle and Late Cretaceous sedimentary and volcanic rocks are generally undeformed; however these rocks have at least locally been folded, as evidenced by steep bedding orientations such as are observed along Last Chance Creek and along the Yukon River. The Cretaceous strata are also cut by steeply-dipping normal faults, and the folds may be related to drag along these structures. The valley of the Sixtymile River in the central and western part of the Sixtymile District follows a northeast-trending graben structure that has downdropped Cretaceous volcanic and sedimentary rocks against metamorphic rocks of the Nasina and Klondike Schist assemblages.

The Tintina Fault zone that bounds the study area on the northeast is a major, crustal-scale transcurrent fault of probable Early Tertiary age; however there is surprisingly little evidence for smaller-scale faults related to it within the northern Stewart River map area.

## **GEOCHRONOLOGY**

A total of 23 isotopic age determinations have been made for rock units in the study area. These are shown on the maps and listed in Table 1.

## **MINERAL OCCURRENCES**

A variety of mineral occurrences are present in northern Stewart River map area, including syngenetic (VMS) base metal occurrences in the Klondike Schist assemblage, base metal and gold-bearing skarns in the Nasina assemblage, asbestos in the Dawson/Clinton Creek assemblage, and gold-bearing mesothermal and possible epithermal vein mineralization in the Klondike and Sixtymile districts (e.g., Mortensen et al., 1992; Glasmacher and Friedrich, 1992a, 1992b; Hoymann and Friedrich, 1992; Rushton et al., 1993; Knight et al., 1994). Locations for all Yukon MINFILE occurrences in the study area, as well as several new occurrences located by the author, are shown on the maps, and revised geological summaries for each are given in an included Appendix.

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Table 1. Isotopic age determinations from northern Stewart River map area (errors in ages are given at the 2 $\sigma$  level).

NTS	Latitude; Longitude	Unit	Rock Type	Method	Age (Ma)	Interpretation	Reference
115N/16	67°47.5'N; 140°28'W	Fifty Mile Batholith	granitic augen orthogneiss	U-Pb (zircon)	363.5 ± 4.5/-3.0	crystallization age	Mortensen, 1986; unpub. data
115N/16	67°47.5'N; 140°28'W	Fifty Mile Batholith	granitic augen orthogneiss	K-Ar (biotite)	100.0 ± 3.7	metamorphic cooling age	Wantless et al., 1978
115O/13	63°48.8'N; 139°35.9'W	Jim Creek pluton	biotite quartz monzonite	K-Ar (biotite)	180.8 ± 3.8	crystallization age	Hunt and Roddick, 1992
115O/13	63°50.4'N; 139°31.0'W	Nasina assemblage	biotite granodiorite orthogneiss	K-Ar (biotite)	180.8 ± 3.3	metamorphic cooling age	Hunt and Roddick, 1992
115O/14	63°57.1'N; 139°20.7'W	Klondike Schist assemblage	quartz-muscovite schist	U-Pb (zircon)	263 ± 4	crystallization age	Mortensen, 1989
115O/14	63°57.1'N; 139°20.4'W	Klondike Schist assemblage	quartz-augen schist	U-Pb (zircon)	261 ± 4	crystallization age	Mortensen, 1989
115O/14	63°53.2'N; 139°06.4'W	Klondike Schist assemblage	metagabbro	K-Ar (hornblende)	159 ± 9.6	metamorphic cooling age	R.L. DeBicki, pers. comm., 1985
115O/14	63°46.2'N; 139°07.0'W	Klondike Schist assemblage	quartz-muscovite schist	K-Ar (muscovite)	181.7 ± 3.6	metamorphic cooling age	Hunt and Roddick, 1992
115O/14	63°53.4'N; 139°13.5'W	Klondike Schist assemblage	quartz-muscovite schist	K-Ar (muscovite)	175.7 ± 2.9	metamorphic cooling age	Hunt and Roddick, 1992
115O/14	63°53.2'N; 139°13.8'W	Klondike Schist assemblage	quartz-muscovite schist	K-Ar (muscovite)	165.1 ± 2.9	metamorphic cooling age	Hunt and Roddick, 1992
115O/14	63°59.5'N; 139°03.8'W	Klondike Schist assemblage	quartz-feldspar porphyry	K-Ar (whole rock)	56.1 ± 3.4	crystallization age	R.L. DeBicki, pers. comm., 1985
115O/15	63°54.7'N; 138°52.9'W	Klondike Schist assemblage	quartz-muscovite schist	U-Pb (zircon)	254 ± 3	crystallization age	Mortensen, unpub. data
115O/15	63°54.7'N; 138°52.9'W	Klondike Schist assemblage	quartz-muscovite schist	K-Ar (muscovite)	148.8 ± 2.9	metamorphic cooling age	Hunt and Roddick, 1992
115O/15	63°54.7'N; 138°52.9'W	Klondike Schist assemblage	quartz-muscovite schist	Rb-Sr (muscovite)	143.0 ± 1.4	metamorphic cooling age	Mortensen, unpub. data
115O/15	63°57.7'N; 138°57.3'W	Klondike Schist assemblage	amphibolite	K-Ar (hornblende)	221.5 ± 5.4	anomalous age (excess Ar?)	Hunt and Roddick, 1992
115O/15	63°57.8'N; 138°54.0'W	Klondike Schist assemblage	amphibolite	K-Ar (hornblende)	149.9 ± 9.0	metamorphic cooling age	R.L. DeBicki, pers. comm., 1985
115O/15	63°54.0'N; 138°52.0'W	Klondike Schist assemblage	quartz-muscovite schist	K-Ar (muscovite)	162.8 ± 3.6	metamorphic cooling age	Hunt and Roddick, 1992
115O/15	63°46.8'N; 138°31.0'W	Klondike Schist assemblage	quartz-muscovite-biotite calcite schist	K-Ar (muscovite)	113.8 ± 3.0	metamorphic cooling age	Hunt and Roddick, 1992
115O/15	63°46.8'N; 138°31.0'W	Klondike Schist assemblage	quartz-muscovite-biotite calcite schist	K-Ar (biotite)	117.3 ± 2.3	metamorphic cooling age	Hunt and Roddick, 1992
115O/15	63°48.8'N; 138°39.4'W	Klondike Schist assemblage	quartz-muscovite schist	K-Ar (muscovite)	54.1 ± 4.7	metamorphic cooling age	Hunt and Roddick, 1992
115O/15	63°57.0'N; 138°47.8'W	Whiskey Hill pluton	biotite granodiorite	K-Ar (biotite)	63.6 ± 3.8	crystallization age	R.L. DeBicki, pers. comm., 1985
115O/15	63°52.6'N; 138°56.5'W	Sheba vein	gold-bearing quartz vein	K-Ar (muscovite)	140.1 ± 2.0	mineralization age	Hunt and Roddick, 1992
115O/15	63°52.6'N; 138°56.5'W	Sheba vein	gold-bearing quartz vein	K-Ar (muscovite)	134.5 ± 2.8	mineralization age	Hunt and Roddick, 1992

**APPENDIX**

**CAPSULE GEOLOGICAL SUMMARIES FOR MINFILE OCCURRENCES  
IN THE NORTHERN STEWART RIVER MAP-AREA  
(NTS 1150/13, 1150/14, 1150/15, 1150/16, 115N/15, 115N/16)**

(to accompany Open File Map 1996-1, 1:50 000 scale geological maps)



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<b>MINFILE:</b>	115N 037
<b>NAME(S):</b> Mag	<b>NTS MAP SHEET:</b> 115 N 15
<b>MINFILE #:</b> 115N 037	<b>LATITUDE:</b> 63 45'05"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 140 55'48"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Uncertain

Claims cover an area of Early Mississippian granitic augen gneiss (unit DMgg) cut by several small intrusive stocks of probable Early Jurassic age (unit eJqm). No evidence of mineralization was found by Caltor.

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<b>MINFILE:</b>	115N 038
<b>NAME(S):</b> Crag	<b>NTS MAP SHEET:</b> 115 N 15
<b>MINFILE #:</b> 115N 038	<b>LATITUDE:</b> 63 49'58"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 140 58'59"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Anomaly

The 1970 claims were staked on a biotite-muscovite-quartz monzonite intrusion of probable Early Jurassic age (unit eJqm) cutting Early Mississippian granitic augen gneiss (unit DMgg). No evidence of mineralization was found by Caltor. The Eldorado staking covered areas where stream sediment sampling returned anomalous uranium values. Grid surveys identified four radiometric and six soil geochemical anomalies. The highest soil sample values (up to 400 ppm U) were obtained near a uraniferous spring.

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<b>MINFILE:</b>	115N 039
<b>NAME(S):</b> Lerner	<b>NTS MAP SHEET:</b> 115 N 15
<b>MINFILE #:</b> 115N 039	<b>LATITUDE:</b> 63 55'29"N
<b>MAJOR COMMODITIES:</b> Ag,Pb	<b>LONGITUDE:</b> 140 48'52"W
<b>MINOR COMMODITIES:</b> Au,Zn	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Open pit past producer

North-northeast-striking, mesothermal(?) quartz-carbonate-sulphide veins cut Nasina Assemblage schists (unit DMs) and Early Mississippian granitic augen gneiss (unit DMgg) south of Mosquito Creek.

Most of the work has been performed at the northwest locality, called No. 3 Vein. Galena and arsenopyrite, with minor sphalerite, tetrahedrite and boulangerite, form lenses over 12.1 m long and 0.9-1.2 m thick in quartz veins up to 2.1 m thick in a complex en echelon vein system. The 1966 and



1974-76 shipments were made from a single lens and averaged about 2228.5 g/t Ag, 60% Pb and 1.03 g/t Au. The best 1969 intersection was 130.3 g/t Ag and 2.7% Pb across 0.7 m.

The southeast locality, called the No. 2 and No. 7 Veins, has received less work and is more weakly mineralized.

Glasmacher and Friedrich (1992) recognized three stages of vein formation: (1) quartz-pyrite; (2) arsenopyrite-galena (3) quartz-pyrite-sphalerite-chalcopyrite-freibergite. Precious metals were deposited during the second stage. Fluid inclusion and microprobe studies show that the veins formed from high salinity, low pH fluids at temperatures which were initially as high as 330 C.

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<b>MINFILE:</b>	115N 040
<b>NAME(S):</b> Connaught	<b>NTS MAP SHEET:</b> 115 N 15
<b>MINFILE #:</b> 115N 040	<b>LATITUDE:</b> 63 54'50"N
<b>MAJOR COMMODITIES:</b> Ag,Pb	<b>LONGITUDE:</b> 140 47'46"W
<b>MINOR COMMODITIES:</b> Au,Zn	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Open pit past producer

Most of the work was performed at the western locality, called No. 1 Vein, which was the original discovery. The showing consists of lenses of galena and arsenopyrite with minor sphalerite, tetrahedrite and boulangerite in northeast-striking quartz veins cutting Nasina Assemblage schists (unit DMs) which is cut by sills of Early Mississippian granitic augen gneiss (unit DMgg). The No. 1 Vein was exposed with trenching for a length of 1036 m, of which the best portion averaged 781.7 g/t Ag, 19.9% Pb and 1.1 g/t Au over an average width of 1.2 m for a length of 45.7 m.

The 1966 and 1976 shipments, which were mixed with ore from the Lerner occurrence, averaged about 2228.5 g/t Ag, 60% Pb and 1.0 g/t Au. Drilling gave erratic results, with the best intersection 997.7 g/t Ag, 26.5% Pb and 2.74 g/t Au over 0.7 m. Selected specimens of wall rock assayed up to 5.5 g/t Au but most assays were below 1.4 g/t.

The more southerly of the two veins to the east, the No. 4 Vein, averaged 610.3 g/t Ag and 9.1% Pb across a 1.2 m width for a length of 160.6 m in trench samples. Drilling of this vein in 1988 returned assays up to 534.8 g/t Ag, 2.15% Pb and 0.41 g/t Au over 2.3 m and 209.1 g/t Ag, 1.16% Pb and 0.69 g/t Au over 5.3 m. The other showings, called the No. 5 and No. 6 Veins, have received less work and are only weakly mineralized.

The southwestern showing consists of thin veinlets carrying traces of chalcopyrite and molybdenite within a Late Cretaceous hornblende-biotite granodiorite body (unit IKgdr).

Overburden drilling in 1992 tested a copper-gold soil anomaly and intersected altered quartz monzonite.

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<b>MINFILE:</b>	115N 041
<b>NAME(S):</b> Per	<b>NTS MAP SHEET:</b> 115 N 15
<b>MINFILE #:</b> 115N 041	<b>LATITUDE:</b> 63 59'03"N
<b>MAJOR COMMODITIES:</b> Ag,Pb,Zn	<b>LONGITUDE:</b> 140 46'56"W
<b>MINOR COMMODITIES:</b> Au,Hg	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Carmacks volcanics	<b>STATUS:</b> Drilled prospect

Galena, sphalerite and arsenopyrite occur in a northeast-trending vein which cuts a down-faulted block of Late Cretaceous Carmacks Group volcanics (unit IKva) overlying Nasina Assemblage schists (unit DMs). The vein is about 8 to 60 cm wide and was traced for about 61 m. The best chip assay reported was 428.6 g/t Ag, 26.4% Pb, 4.7% Zn, and 1.4 g/t Au over a 76 cm width.

Kreft's 1986 trenching tested a 91 m wide zone of altered andesite containing massive pyrite lenses, quartz stockworks, and disseminated chalcopyrite and galena. Specimens from the trenches assayed up to 26 g/t Au and 3497 g/t Ag. The highest silver values were obtained 460 m north of the main showing area.

All four of Klondike's drillholes intersected mineralized granodiorite dykes of probable Late Cretaceous age (unit IKgdr) containing quartz veins and stockworks with pyrite and arsenopyrite. DDH #2 intersected 12 m grading 7.1 g/t Au, including 1.5 m grading 41.1 g/t Au. The mineralized intersection was also enriched in Zn and Hg (E. Kreft, personal communication).

Homestake's 1989 samples contained up to 402 ppb Au and 7.9 ppm Ag. Brecciated andesite with 1-2% pyrite returned a value of 204 ppb Au and was also anomalous in silver, arsenic, bismuth, copper and tellurium.

Cinnabar was recovered in sluice boxes by placer miners along this portion of the Sixty Mile River gravels but the source was never found. Esso investigated strongly fractured andesite flows and andesite breccia with local clay alteration and obtained disappointing results.

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<b>MINFILE:</b>	115N 042
<b>NAME(S):</b> Butler	<b>NTS MAP SHEET:</b> 115 N 15
<b>MINFILE #:</b> 115N 042	<b>LATITUDE:</b> 63 54'58"N
<b>MAJOR COMMODITIES:</b> Cu,Ag,Pb,Au	<b>LONGITUDE:</b> 140 34'35"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Skarn, vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

The showings occur in hornfelsed Nasina Assemblage schist (unit DMs) and a small Late Cretaceous granodiorite stock (unit IKgdr).

An epidote-magnetite-diopside-pyroxene skarn containing minor chalcopyrite and pyrrhotite is developed at the contact between a marble layer and the intrusion. A skarn specimen taken by Kelan assayed 0.59% Pb, 21 g/t Ag and no Au. Kelan's geochemical survey outlined a 2400 by 300 m area of Pb, Ag, As, Sb and Au response associated with the magnetite skarn. Soil sampling over the stock to the north of the skarn located a large, moderately intense copper anomaly with two smaller but coincident molybdenum anomalies. Trenching failed to locate any mineralization or significant leaching to explain the anomalies.

A linear lead soil anomaly, some 1300 m in length, is located about 2 km east of the skarn. It was explored in 1967 by a trench which exposed a galena-tetrahedrite-carbonate vein (No. 6 vein) that assayed 5698 g/t Ag, 4.11 g/t Au and 52.5% Pb across 1.2 m. In 1972, the No. 6 vein was trenched at regular intervals over a strike length of 400 m with the vein ranging from 15 to 40 cm in width. The best assay was 5500 g/t Ag, 0.69 g/t Au and 24.8% Pb across 30 cm.

About 600 m west of the magnetite skarn, Connaught traced a second vein (No. 8) over a length of 500 m. It contains coarse galena that assayed up to 2218 g/t Ag, 62% Pb and 0.17 g/t Au across 0.6 m. Kelan sampled this vein in another trench and reported that selected samples returned up to 4151.9 g/t Ag, 3.95% Pb and 2.13 g/t Au.

The 1988 drilling tested the No. 6 vein and the magnetite skarn, but only two economically interesting intersections are reported, the best of which assayed 4.0 g/t Au over 1.67 m.

Overburden drilling in 1992 tested a copper-gold anomaly and intersected altered quartz monzonite.

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**MINFILE:** 115N 043  
**NAME(S):** Fifty **NTS MAP SHEET:** 115 N 15  
**MINFILE #:** 115N 043 **LATITUDE:** 63 53'26"N  
**MAJOR COMMODITIES:** Cu **LONGITUDE:** 140 37'40"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Skarn  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Anomaly

Calcareous units within Nasina Assemblage schist (unit DMs) is altered to skarn in the general vicinity of Lake Cretaceous granodiorite intrusions (unit IKgdr). Evidence of old workings, most of which expose traces of malachite in skarn, can be found along a zone some 300 m in length.

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**MINFILE:** 115N 044  
**NAME(S):** Enchantment **NTS MAP SHEET:** 115 N 16  
**MINFILE #:** 115N 044 **LATITUDE:** 63 53'18"N  
**MAJOR COMMODITIES:** Au **LONGITUDE:** 140 25'10"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Paleoplacer  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Showing

Mapping by the GSC in 1972 located outcroppings of Late Cretaceous quartz-pebble conglomerate (unit IKst) and one specimen contained a small rounded flake of gold. The conglomerate has a thickness of 15-30 m and outcrops over approximately 0.8 km. The conglomerate is capped by, and may extend under, andesitic volcanic rocks of the Late Cretaceous Carmacks Group (unit IKva). No mineralization was found in 1973 by Silver Standard.

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**MINFILE:** 115O 045  
**NAME(S):** Monte Christo **NTS MAP SHEET:** 115 O 13  
**MINFILE #:** 115O 045 **LATITUDE:** 63 54'58"N  
**MAJOR COMMODITIES:** **LONGITUDE:** 139 44'28"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Unknown  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Uncertain

The area is underlain by carbonaceous Nasina Assemblage quartz-muscovite schist (unit DMsqc) with narrow interbands of crystalline marble (unit DMc). The gold was probably derived from reworked glacial till in the river valley.

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**MINFILE:** 1150 046  
**NAME(S):** Pickering **NTS MAP SHEET:** 115 O 13  
**MINFILE #:** 1150 046 **LATITUDE:** 63 51'52"N  
**MAJOR COMMODITIES:** Au **LONGITUDE:** 139 42'42"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Vein  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Prospect

An adit was driven on a quartz vein which narrows from 36 cm wide at the portal to about 8 cm at the face. The vein cuts carbonaceous quartz-muscovite schist of the Nasina Assemblage (unit DMsqc) about 1 km north of an intrusive contact with quartz monzonite of the Early Jurassic Jim Creek stock (unit eJqm). MacLean took 5 channel samples, of which four assayed trace and one assayed .68 g/t gold.

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**MINFILE:** 1150 047  
**NAME(S):** Indian **NTS MAP SHEET:** 115 O 13  
**MINFILE #:** 1150 047 **LATITUDE:** 63 45'35"N  
**MAJOR COMMODITIES:** Asbestos **LONGITUDE:** 139 42'00"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Ultramafic-Associated  
**TECTONIC ELEMENT:** Slide Mountain Terrane **STATUS:** Showing

A small, thrust fault-bounded body of serpentinite contains a minor amount of asbestos fibre. Length is mostly less than 1.5 mm but occasionally reaches 3 mm. The aeromagnetic maps show a small 200 gamma anomaly.

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**MINFILE:** 1150 062  
**NAME(S):** Brimstone **NTS MAP SHEET:** 115 O 15  
**MINFILE #:** 1150 062 **LATITUDE:** 63 46'45"N  
**MAJOR COMMODITIES:** **LONGITUDE:** 138 48'18"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Unknown  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Uncertain

The claims are underlain by muscovitic and chloritic quartzite and quartz-muscovite-chlorite schist of the Permian Klondike Schist Assemblage (unit Psq), which has been overthrust by a chlorite schist with quartz-muscovite schist interbands (units Psc and Psqm, respectively).

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**MINFILE:** 1150 063  
**NAME(S):** Gold Run **NTS MAP SHEET:** 115 O 15

MINFILE #: 1150 063  
MAJOR COMMODITIES: Au,Pb  
MINOR COMMODITIES: Ag  
TECTONIC ELEMENT: Yukon Tanana Terrane

LATITUDE: 63 47'32"N  
LONGITUDE: 138 45'54"W  
DEPOSIT TYPE: Vein  
STATUS: Prospect

The area is traversed by a shallow southwest-dipping thrust fault that places medium to dark green chlorite schist and minor rusty yellow muscovite quartz schist (units Psc and Psqm) on top of a sequence of tan to pale green weathering muscovitic and chloritic quartzite and quartz-muscovite-chlorite schist (unit Psq).

MacLean examined the Gold Run occurrence in 1912, at which time the workings included several trenches on the ridge crest between upper Portland Creek and the head of Gold Run Creek and a small open cut on the slope between the ridge crest and Portland Creek. Three samples from the ridge trenches assayed by MacLean in 1914 were barren. He described the occurrence in the open cut on the slope as as follows:

"...outcroppings of white quartz occur for a distance of several hundred feet in a southeasterly-northwesterly direction from the ridge towards Portland Gulch, where the vein is uncovered by an open cut, which is at an elevation about 300 ft above the bed of the gulch and distant 1200 to 1500 ft from its right limit. This open cut is 8 ft long, 4 ft wide and 6 ft in depth at the face. It is made into the side hill and uncovers a vein 18" wide, which dips 50 NE, cutting the schists but striking with them. ....a small showing of free gold was here found in the quartz. Some galena was also noted. The quartz is generally very white, though occasional stains, due to iron oxides, were seen.

Three samples of quartz were taken from this lead. One of them, from an outcrop, and two from the above open cut, all panned colours of gold, and the two latter assayed \$34.90 (1.75 oz/t) and \$3.42 (5.7 oz/t) respectively." (Gold at \$20.00 and silver at \$0.60 per ounce). (MacLean 1914, p. 83-84).

J.K. Mortensen examined the trenches on the ridge during 1983. All of the quartz present is concordant with foliation in the schist. The open cut north of the ridge could not be located.

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MINFILE:  
NAME(S): Portland  
MINFILE #: 1150 064  
MAJOR COMMODITIES: Au  
MINOR COMMODITIES: Ag,Pb,Zn  
TECTONIC ELEMENT: Yukon Tanana Terrane

1150 064  
NTS MAP SHEET: 115 O 15  
LATITUDE: 63 48'43"N  
LONGITUDE: 138 40'06"W  
DEPOSIT TYPE: Vein  
STATUS: Prospect

The property is mainly underlain by medium green chlorite-quartz-muscovite schist and chlorite-actinolite schist of the Permian Klondike Schist Assemblage (unit Psc). Carbonaceous schist occurs in dredge tailings in the bed of Dominion Creek at the eastern end of the property.

The property was examined by MacLean during the summer of 1912 (MacLean, 1914, p. 101-104). Most of the workings present at that time have since caved or been completely overgrown. MacLean described an occurrence of "barrel leads" on the Good Faith mineral claim. The "barrel leads" are very elongate bodies of foliaform quartz occurring in the hinges of mesoscopic second phase folds within chlorite schist. They consist mainly of coarse-grained, clear to milky quartz, with minor coarse-grained, medium brown weathering ferroan carbonate. A sample collected by MacLean from this locality contained no gold values.

Large masses of foliaform quartz of this type appear to be rather common on the property. Two other large areas of foliaform quartz in float and subcrop were located southwest of the "barrel lead"

locality. A discordant quartz vein 51 cm wide, striking 150 and dipping 20 to the NE, was reported by MacLean (p. 102) from a trench on the left limit of Robinson Pup. Two samples taken across the vein about 10.7 m apart gave values of 0.69 g/t Au and trace, respectively. The better sample showed a few fine colours of gold in the pan. A second vein occurs about 610 m farther to the SE. It is about 50 cm wide, strikes 060 and dips at 58 to the southeast (MacLean, p.103). A sample assayed by MacLean contained only trace amounts of gold.

On the Huron claim, MacLean reported a body of rusty quartz containing minor galena and sphalerite that was at least 11 by 2 m in area. Two samples were assayed and contained only traces of gold, although one of them contained 5.5 g/t Ag.

Mortensen et al. (1992) obtained an average homogenization temperature of 330 C and salinity of about 4.8 wt-% NaCl equivalent for foliaform veins of this type, and noted that no evidence of alteration is visible in adjacent wallrocks.

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<b>MINFILE:</b>	115O 065
<b>NAME(S):</b> Dominion (Patterson,Queen Dome)	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 065	<b>LATITUDE:</b> 63 48'37"N
<b>MAJOR COMMODITIES:</b> Au,Ag	<b>LONGITUDE:</b> 138 47'22"W
<b>MINOR COMMODITIES:</b> Pb	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

The area is underlain by chlorite-quartz schist and muscovitic and chloritic quartzite of the Permian Klondike Schist Assemblage (units Psc and Psq). The Dominion (also called the Patterson or Queen Dome) occurrence was examined by MacLean in 1912. His description is as follows:

"Two exposures of quartz occur at a distance of about 350 feet E and W from each other. The eastern exposure, on the summit of the divide, is made by a crosscut trench, 45 feet long, N and S, and 4 feet deep, while the western exposure consists of a massive outcrop of quartz fully 12 feet wide. The supposition is that a vein occurs striking easterly and westerly, and that in case of the first mentioned trench, this vein has trifurcated, the three resultant branches being each about 3 feet wide, and separated by schist, 6 feet and 9 feet in width respectively.

The quartz is milky and opaque with rusty cleavage faces, apparently lacking in minerals, but, when crushed and panned, it exhibited small percentages of galena and pyrite, and in one sample of quartz from the trench colours of gold were seen. Six samples were taken but, when assayed, they gave no values."

Only one of the sixteen claims that were being actively explored at that time was visited by MacLean and it is presumed that other workings are present elsewhere in the immediate area.

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<b>MINFILE:</b>	115O 066
<b>NAME(S):</b> Lloyd	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 066	<b>LATITUDE:</b> 63 49'40"N
<b>MAJOR COMMODITIES:</b> Au,Ag	<b>LONGITUDE:</b> 138 51'51"W
<b>MINOR COMMODITIES:</b> Cu,Pb	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Prospect

Several mineralized quartz veins cut the hanging wall and footwall of a shallow southwest-dipping thrust fault that places chlorite and chlorite-quartz schist of the Permian Klondike Schist Assemblage (unit Psc) on top of a muscovite quartzite and minor muscovite-quartz schist (unit Psq).

Mineralization found on the property consists of a single quartz vein that strikes about 120 and dips steeply to the northeast. The vein can be traced continuously in shafts and bulldozer trenches for at least 250 m. Over this interval, the vein varies in thickness from about 0.8 to 1.5 m. It consists mainly of white quartz, commonly with small vuggy cavities. Pyrite is present throughout the quartz as cubes and grain aggregates to 2 cm in diameter. The pyrite locally makes up as much as 2% of the vein material but is usually much less abundant. MacLean (1914) reported that traces of galena and free gold are also present. Angular fragments of wallrock are abundant within the vein and narrow zones of brecciated and sheared quartz are also locally present. Mortensen et al. obtained an average homogenization temperature of 310 C and salinity of about 4.3 wt-% NaCl equivalent from mesothermal veins of this type in the Klondike area.

Similar mineralization also occurs in material on the waste dump of a shallow shaft about 500 m SSE of the junction of the Caribou Creek road and ridge road. This shaft is well south of the projected trace of the vein described above and must be from a separate vein.

Gold-bearing quartz veins are also present in caved shafts and trenches on the Old Yellow Jacket and Tiger claims northwest of the Kloyd (presently included in the Doc group). This mineralization consists of quartz veins with scattered pyrite and traces of chalcopyrite, galena and free gold. One vein that is exposed on the Tiger claim strikes 136 degrees and dips steeply southwest. MacLean (1914) reported that of six samples from these veins, all but one contained gold, with the highest assay being 20.9 g/t Au and 6.9 g/t Ag from 0.5 m channel sample across a vein on the Yellow Jacket claim.

The mineralization on the Doc group is generally on strike with the main vein on the Kloyd property and is about 2 km from it. This suggests that the potential exists for a semi-continuous vein system at least 2.5 km in length and of unknown width.

On the Auger claims, a silicified andesite dyke and two clay-altered rhyolite dykes cut quartz-biotite-chlorite schist. Soil samples returned up to 80 ppb Au and 80 ppm As.

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<b>MINFILE:</b>	1150 067
<b>NAME(S):</b> Hunker Dome (Dome Lode)	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 1150 067	<b>LATITUDE:</b> 63 51'48"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 138 54'31"W
<b>MINOR COMMODITIES:</b> Ag,Pb,Cu	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Prospect

The area is underlain by medium to dark green chlorite-quartz-actinolite schist (unit Psc) and minor metagabbro (unit Pg) of the Permian Klondike Schist Assemblage, all of which have been thrust on top of a package of micaceous quartzite and quartz-muscovite schist (unit Psq0). Gold occurs in discordant quartz veins on and around the Klook claims. The veins located thus far appear to be confined to chloritic schist in the upper thrust panel.

The Mitchell and Orekon veins, which lie north and northwest of King Solomon Dome and the veins on the ridge between Upper Dominion and Lombard Creeks appear to form a large-scale, en echelon, sheeted vein system. Individual veins strike north-south and dip steeply east. Some veins in the Orekon system have faulted margins but generally the veins appear to be simple infillings of tension fractures. The vein material consists mainly of white, coarsely crystalline quartz with minor ferroan carbonate and pyrite. Concentrations of galena with traces of chalcopyrite and sphalerite are present locally. Traces of tetrahedrite and arsenopyrite have also been reported from the Mitchell vein. Free gold

occurs sporadically in the veins, generally associated with sulphides. Wallrock alteration adjacent to the veins consists of widespread introduction of brown weathering ferroan carbonate and more restricted zones of pyritization. Assay values from veins in the vicinity of King Solomon Dome vary widely. Values of up to 48.0 g/t Au and 10 457 g/t Ag have been obtained from samples of the Mitchell and Orekon veins, although most samples contain only trace amounts.

The veins on the ridge between Upper Dominion and Lombard Creeks have received the most development work of any in the Klondike District. Four veins were uncovered on surface and were explored in the early 1900's by trenches and a shallow shaft. MacLean (1914, p. 112-114) examined the property in 1912 and sampled some of the surface showings. Three samples from trenches and shafts averaged 2.7 g/t Au and 3.4 g/t Ag. The 790 m tunnel was collared approximately 150 m vertically below these showings. Between 250 and 600 m from the portal the tunnel intersected 6 veins ranging from 0.6 to 1.8 m in thickness. Very little information is available on the results of this work, but newspaper accounts report assays of up to 857 g/t Au and 125 g/t Ag.

Quartz veins containing traces of galena and pyrite are also present in old trenches and shafts on the ridge immediately west of Hunker Summit (MacKay and Summit occurrences). MacLean (1914) sampled quartz from both of these showings, but the highest assay was only 1.4 g/t Au. In 1987, United Keno Hill Mines Ltd uncovered a system of en-echelon quartz veins which were traced in bulldozer trenches 3.5 km north from the Hunker Dome grid onto the Mackay grid. The veins are discontinuous, less than 1 m wide and carry traces of disseminated pyrite and galena. Gold values were generally low, but one sample from the Hunker Dome grid assayed 15.3 g/t Au over 3.0 m.

Hoymann and Friedrich (1992) analysed gold with pyrite inclusions from the Hunker Dome vein and found an average silver content of 12.74 wt-% and an average tellurium content of 0.08 wt-%. Gold intergrown with galena from the same location had an average silver content of 22.07 wt-%. Three stages of mineralization were identified: (1) quartz-carbonate-gold-arsenopyrite-pyrite-pyrrhotite-chalcopyrite-galena; (2) quartz-carbonate-chalcopyrite-sphalerite-tetrahedrite-freibergite-polybasite-polyargyrite-argentite-pyrostilbnite-galena; (3) quartz-gold. Fluid inclusions contain CO<sub>2</sub> and have salinities ranging from 0 to 7.2 wt-% NaCl equivalent. Homogenization temperatures range from 390 C down to 120 C, and show a systematic decrease from Stage 1 to Stage 3.

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<b>MINFILE:</b>	1150 068
<b>NAME(S):</b> Mitchell	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 1150 068	<b>LATITUDE:</b> 63 53'19"N
<b>MAJOR COMMODITIES:</b> Au,Ag,Pb	<b>LONGITUDE:</b> 138 56'47"W
<b>MINOR COMMODITIES:</b> Zn,Cu	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

At the Mitchell showing, spectacular samples of free gold were reportedly found on surface in the late 1890s. The main showing consists of two parallel quartz veins striking 060 which cut chlorite and chlorite-quartz-actinolite schist (unit Psc) of the Permian Klondike Schist Assemblage, and have been traced for a length of 1 km. One vein is 1.2 to 2 m wide and barren, while the other is 10 to 45 cm wide and contains trace amounts of visible gold along with rutile and pyrite. The mineralized vein is surrounded by a pyritized and sericitized alteration envelope in which pyrite has replaced euhedral magnetite porphyroblasts in the schist. MacLean collected 34 samples and all those consisting of unmineralized quartz assayed trace in gold and silver. Traces of fine free gold were seen in a few samples. Three samples containing abundant galena and pyrite averaged 21.9 g/t Au and 3.3 g/t Ag.

Yukon Consolidated found considerable bornite in a 10 m section of the shaft, from which assays varied from 5 to 25% Cu with about 685.7 g/t Ag. Orekon Syndicate located several very small but rich sulphide pockets in the main vein and located several parallel veins. Orekon shipped 0.8 tonnes to the



Tacoma smelter in 1966 which assayed 10 457 g/t Ag, 23.5% Pb and 2.9% Cu, and 3.7 tonnes to the Shelby smelter in 1969 which assayed 4680 g/t Ag, 26.3% Pb, 0.7% Zn, 0.4% Cu and 1.4 g/t Au. Seventeen grab samples of sulphide by various geologists gave an arithmetic average of 9943 g/t Ag, 34.2% Pb, 2.3% Zn, 2.9% Cu and 6.9 g/t Au. These pockets contain pyrite, galena, sphalerite, tetrahedrite and arsenopyrite and are separated by up to 100 m of relatively barren vein. Cathro sampled altered pyritized schist near the shaft in 1970 and obtained assays of 4.1 g/t to 48.0 g/t Au. Apparently unpyritized schist and quartz returned assays of 0.69 to 1.4 g/t Au.

The Sheba vein 850 m south of the Mitchell showing contains abundant galena and chalcopyrite and up to 10 285 g/t Ag. 1988 drillholes encountered minor amounts of gold, up to 857 g/t Ag and over 3% Pb. A 2.7 tonne bulk sample of vein material processed at the Cominco smelter at Trail, B.C. contained 34% Pb, 2% Cu, 6728.4 g/t Ag, 1.0 g/t Au and 0.9% Sb. The Sheba vein is 1.5 m thick and strikes NNW and dips 41 east. Chlorite schist in the footwall is sheared up to 1 m away from the contact. J.K. Mortensen obtained a K-Ar age of 140 Ma from sericite in the centre of the vein.

The 1980 geochemical survey in an overburden-covered area south of the Mitchell occurrence gave generally low gold values but showed a continuous arsenic anomaly which appears to be related to stratigraphy. The IP response was flat. However, in 1990 Arbor outlined IP anomalies extending north from the Sheba vein and south from the Mitchell vein, suggesting that the veins may join.

Hoymann and Friedrich (1992) analysed gold inclusions in pyrite from the Mitchell vein and found a mean silver content of 17.58 wt-%. They identified three stages of mineralization in the Mitchell and Sheba veins: (1) quartz-carbonate-gold-arsenopyrite-pyrite-pyrrhotite-chalcopyrite-galena; (2) quartz-carbonate-chalcopyrite-sphalerite-tetrahedrite-freibergite-polybasite-polyargyrite-argentite-pyrostilbnite-galena; (3) quartz-gold. Fluid inclusions contain CO<sub>2</sub> and have salinities ranging from 0 to 7.2 wt-% NaCl equivalent. Homogenization temperatures range from 390 C down to 120 C, and show a systematic decrease from Stage 1 to Stage 3.

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<b>MINFILE:</b>	1150 069
<b>NAME(S):</b> Fawcett	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 1150 069	<b>LATITUDE:</b> 63 54'52"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 138 54'10"W
<b>MINOR COMMODITIES:</b> Ag	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Prospect

Several veins and masses of quartz occur in and adjacent to a thrust fault that places a package of chlorite and chlorite-quartz schist and metagabbro (units Psc and Pb) above chlorite schist, muscovite-quartz schist and quartzite (units Psa, Psqm and Psq). Discontinuous lenses of sheared and strongly altered serpentinite and serpentinitized harzburgite occur along the fault zone. The thickness of the placer paystreak on the Right Fork of Hunker Creek and the rough, coarse nature of the placer gold in that paystreak led to intense prospecting of the nearby ridges and the early discovery of the Mitchell and Orekon vein systems at the head of the right fork. A relatively rich paystreak is also present, however, on 24 Pup, a tributary into the left limit of the Right Fork of Hunker, indicating a lode source separate from the Mitchell-Orekon veins. The placer gold on 24 Pup is characteristically very rough, including wire gold and delicate crystalline forms. Quartz is locally found intergrown with the gold.

Early exploration of the area located several bodies of gold-bearing quartz on ground now covered by the Klaw claims. MacLean (1914) examined three of these showings in 1912, including the Brandon claim at the head of 24 Pup, the Hillsborough claim on the left limit of 24 Pup, and the Alphonse claim on the left limit of 39 Pup. MacLean took 9 samples, 6 of which contained higher than trace levels of gold. A sample of pyritic quartz from an open cut on the Brandon claim assayed 1.4 g/t Au and 19.2 g/t Ag. On the Alphonse claim, a weakly pyritic quartz vein striking east and dipping moderately to the

north had been uncovered by a series of 3 trenches over a strike length of 50 m. The vein ranged from 0.6 to 1.2 m in thickness. The best assay obtained by MacLean was a sample taken across the vein at its widest exposure, which returned 4.1 g/t Au.

Most of the old workings in the area are completely caved and those on the Hillsborough claim have been largely destroyed by bulldozer trenching. Sampling of the old workings returned low values in gold, arsenic and copper. The 1986 geochemical sampling located several moderate gold anomalies but trenching above the head of the placer paystreak gave disappointing results.

Arbor obtained 200 ppb Au from a sample of sericitic quartzite on the Jody claims in 1991.

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<b>MINFILE:</b>	115O 070
<b>NAME(S):</b> Bum	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 070	<b>LATITUDE:</b> 63 55'02"N
<b>MAJOR COMMODITIES:</b> Cu,Ag	<b>LONGITUDE:</b> 138 59'25"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

The area is underlain by green chlorite-quartz schist (unit Psc) and brown-weathering quartz-muscovite-chlorite schist (unit Psq) of the Permian Klondike Schist Assemblage. Chalcopyrite, pyrite and bornite occur in a quartz vein cutting brecciated schist. A selected specimen assayed in 1952 reportedly returned 18% Cu and 617.1 g/t Ag, while another report claimed that a specimen assayed 7.3% Cu and 147.4 g/t Ag.

The 1984 drilling produced no significant gold values. Wealth Resources reported bornite specimens from the showing which assayed 26.9% Cu and 678.8 g/t Ag, and 17.69% Cu, 699.1 g/t Ag in 1991, and the geophysical survey located an EM conductor extending more than 200 m away from the showing.

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<b>MINFILE:</b>	115O 071
<b>NAME(S):</b> Box Car	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 071	<b>LATITUDE:</b> 63 55'00"N
<b>MAJOR COMMODITIES:</b> Ag,Cu,Pb,Au	<b>LONGITUDE:</b> 139 03'20"W
<b>MINOR COMMODITIES:</b> Zn	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Prospect

The area is underlain by pale green to tan weathering quartz-muscovite-chlorite schist (unit Psq) of the Permian Klondike Schist Assemblage. Cu-Pb-Ag-Au mineralization was discovered on the Box Car occurrence in 1901 and was explored by hand pits, shallow shafts and short declines. MacLean (1914) examined and sampled the workings in 1912.

Known mineralization is confined to two showings referred to by MacLean as the Jackpot and Keynote showings. Two shafts (to depths of 15.2 and 9.8 m) are present on the Jackpot and the immediate area around the shafts has been stripped by bulldozer. Mineralization exposed there consists of malachite, azurite, minor chalcopyrite, and rare clots of galena disseminated in quartz-chlorite-muscovite schist within and adjacent to a 1.5 m wide shear zone ("Box Car fault") oriented at 155/85 SW. Both shafts were sunk on this shear zone. There is no well defined vein exposed at surface; the mineralization is more disseminated and stockwork in nature. Small amounts of quartz have been introduced along the

shear zone, and fine-grained, clear, drusy quartz crystals line some of the fractures and cavities within brecciated rock in the shear zone. Epidote is also relatively abundant in and near the shear zone, occurring as both fracture fillings and disseminations.

Old newspaper accounts of the Jackpot workings describe a quartz-galena vein ranging from 0.5 to 1.2 m wide, that was intersected at depth in the two shafts. The presence of this vein cannot be verified as the shafts are both presently inaccessible. Descriptions of the Box Car showings commonly refer to a single vein structure up to 610 m long. However, most of the ridge crest exposures of quartz vein material along this trend are foliaform veins rather than the younger, crosscutting type, so there appears to be no real evidence for individual veins or shear structures with a significant strike length.

MacLean (1914) took 4 samples from the Jackpot showing. All were from the head of the 15.2 m shaft and from an adjoining trench. A specimen from the head of the shaft (within the shear zone) assayed 0.7 g/t Au and 922.3 g/t Ag. Three channel samples across the trench floor (also within the shear zone) ranged from 1.0 to 1.4 g/t Au and 3.2 to 188.6 g/t Ag. Several grab samples have also been assayed. R.W. Brazil reported assays of 10% Cu, 35% Pb, 8.2 g/t Au and 1988.8 g/t Ag from the vein encountered by the 15.2 m shaft. E. Kindle (pers. comm. reported in Gleeson, 1970) reports an assay of 3.25% Cu in one sample. A sample of galena-bearing schist collected by Debicki (1984) contained more than 0.4% Cu, 8.77% Pb, 243.4 g/t Ag and anomalous amounts of Zn, Ba, Sb and Bi.

A separate vein structure is exposed on the old Keynote claim, about 700 m north of the Jackpot shafts. This vein has been explored over about 40 m by several hand trenches and small open cuts. It is oriented at 070/21 SE and ranges in thickness from 3 cm to 1 m. The vein consists mainly of white, coarse-grained quartz, with very rare galena and pyrite. MacLean (1914) took 3 samples of the vein material, none of which contained any gold or silver.

Arbor's soil sampling outlined six geochemical anomalies which parallel the known structures and extend several kilometres in a northwest direction. Values up to 198 ppb Au, 14.2 ppm Ag, 400 ppm As, 535 ppm Pb and 3700 ppm Ba were obtained. The trace of the Box Car fault is outlined by lead anomalies which extend 100 m north and 1100 m south of the Box Car showing. Chip samples across the Box Car fault breccia contained 36.3 g/t Ag, 2.32% Cu, 1.78% Pb and 0.3% Zn over 0.5 m and 271.5 g/t Ag, 3.76% Cu, 14.4% Pb and 0.24% Zn over 1.0 m.

On the central HL claims, a chip sample across a 2.5 m quartz vein cutting sericite-quartz schist returned values up to 5.1 ppm Ag, 4100 ppb Hg and 6500 ppm Ba. A specimen of siliceous schist from the HL 84 claim contained 765 ppb Au.

Trenches 92TR17 and 18 on the Cab claims exposed a 5 m wide, silicified breccia zone with slightly anomalous gold (up to 85 ppb Au). Trenching on the Win claims returned disappointing results.

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<b>MINFILE:</b>	1150 072
<b>NAME(S):</b> Lone Star	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 072	<b>LATITUDE:</b> 63 53'34"N
<b>MAJOR COMMODITIES:</b> Au,Ag	<b>LONGITUDE:</b> 139 13'21"W
<b>MINOR COMMODITIES:</b> Pb,Zn,Cu	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Underground Past Producer

The Lone Star property encompasses the Boulder Lode occurrence which produced 6940 tonnes grading 5 g/t Au from underground workings in the early 1900's, and also a large low-grade, possibly syngenetic deposit, which contains estimated reserves of 907 200 tonnes grading 2.4 g/t Au.

The claims are underlain by quartz and feldspar augen-bearing quartz-muscovite schist (unit Psa) and muscovite-quartz schist (unit Psqm) of the Permian Klondike Schist Assemblage. First-phase foliations in schistose rocks in the area are strongly deformed into northwest-trending, tight to isoclinal second phase folds which are overturned to the northeast. Plagioclase-phyric mafic dykes and quartz-

feldspar porphyry dykes have intruded NNE-trending extensional fractures within the schists. High-angle normal faults with modest amounts of displacement have been mapped on the property as well.

Workings at the Boulder Lode include a small open pit as well as extensive underground workings. Ore was mined from a series of discordant quartz and pyrite-quartz veins and stringers hosted mainly in muscovite and quartz-muscovite schist. The dominant set of veins dips northeast at a shallow angle, and another set strikes north. Quartz also occurs as concordant foliaform lenses, which are unmineralized. The largest vein in the Boulder Lode strikes 120 and dips 40 NE. Visible gold occurs along the vein margins and in narrow pyrite veinlets. Muscovite schist alongside the vein is silicified. A second parallel vein 4.6 m west of the main vein was chip sampled in 1990 and assayed 51.4 g/t Au across 0.3 m.

The Lone Star adit intersected the main vein at about 30 m, and drifted along it for about 100 m. A large pocket of sulphide ore was found in the opencut, but this could not be treated with the amalgam method used in the mill. Production records show that 7 650 tonnes were milled with a recoverable grade of 5.1 g/t Au and an average gold to silver ratio of about 4:1. Farrell concluded that recovery by the amalgamation method was probably only 75% and that the quartz ore probably averaged about 6.9 g/t Au. The true grade of the showing would have been raised to more than 6.9 g/t Au with inclusion of the sulphide mineralization that was present. A hand-picked sample of sulphides weighing 844 kg was shipped in 1913 to the Selby Smelting Works, San Francisco, and returned \$2009 in gold, a grade of about 368.6 g/t.

Ten sacks of waste from the dump shipped to the Trail smelter in 1930 as a test averaged 2.12 g/t Au, with a recovery of 97%. Two selected sulphide specimens collected in 1925 from a shaft below the floor of the open cut returned assays of 11 725.4 g/t and 11 108.3 g/t Au and 2648.4 g/t and 3017.1 g/t Ag. Old records from the Lone Star property indicate that gold is erratically distributed and that the true grade is very difficult to determine. The various geologists who chip sampled this property over the years all obtained assays that averaged less than mill grade, and each concluded that such sampling did not adequately account for the presence of occasional high-grade veinlets or sulphide patches. For example, chip samples of the 1929 adit averaged less than 0.34 g/t Au but muck sampling of 24 drift rounds (about 32 m of drift) in 1930 gave average assays of 6.5 g/t. The following year, 38 rounds averaged 5.8 g/t Au while 14 raise rounds below the floor of the open cut averaged 4.5 g/t Au.

Arbor's drilling and trenching between 1986 and 1990 outlined a concordant, rusty zone 200 m long and up to 31 m thick beneath the Lone Star workings, which has potential as a bulk tonnage oxide gold deposit. Trench samples taken in 1988 returned up to 150 g/t Au over 1.8 m. In drillholes, grades range from 2.1 g/t to 24.7 g/t Au over widths of 1 to 25 m. In 1990, drilling within a 250 m section of the anomaly indicated 1 million tonnes grading 2.47 g/t Au across widths up to 30 m. Several high grade intersections assayed up to 27.0 g/t Au. Mineralization encountered in the drilling includes both discordant quartz veins and narrow zones of disseminated pyrite, galena, sphalerite and chalcopyrite within the felsic schist. Galena from one of the disseminated sulphide intersections gives a Permian Pb isotopic model age (Mortensen, unpub. data), which is very different from model ages calculated for galenas from the discordant veins in the area. The disseminated mineralization appears to be syngenetic in origin.

Kennecott's 1992 drilling was confined to an area of 150 by 250 m in the area of the old mine. Twelve of the 20 drillholes intersected mineralization grading better than 1.5 g/t Au over widths of more than 1.5 m. Hole 92LS20 intersected 19.8 m averaging 3.2 g/t Au, and hole 92LS5 hit a high grade section grading 10.76 g/t over 4.6 m.

Associated with the Lone Star zone is a broad northwest-trending gold soil anomaly 3 km long and up to 700 m wide, and a coincident 500 x 100 m geophysical anomaly which appears to be located at the intersection of the Lone Star thrust fault and a north-striking vertical fault.

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MINFILE:

1150 073

**NAME(S):** Violet  
**MINFILE #:** 1150 073  
**MAJOR COMMODITIES:** Au  
**MINOR COMMODITIES:** Ag,Pb,Cu,Ba  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**NTS MAP SHEET:** 115 O 14  
**LATITUDE:** 63 51'26"N  
**LONGITUDE:** 139 16'43"W  
**DEPOSIT TYPE:** Vein  
**STATUS:** Underground Past Producer

Several massive white quartz-barite veins cut flaggy, quartz and feldspar augen-bearing, quartz-muscovite schist (unit Psa) of the Permian Klondike Schist Assemblage. The largest vein is 1.2 to 2 m wide and strikes east-west along the contact between augen schist and a mafic dyke. The vein dips 80 to the south and has been traced 80 m into a lineament that extends 1 km farther. Minor amounts of pyrite, galena and chalcopyrite occur in small pockets along the vein, and visible gold can be found occasionally in limonitic boxwork after pyrite. Surface assays of up to 130.2 g/t Au were reported by early workers on the Violet group but no assays are available from the underground workings. MacLean took 25 samples on surface, of which 20 contained no gold or silver. Two of six grab samples from 136 tonnes of quartz on the dump of the main shaft assayed 1.4 and 3.4 g/t Au; and 10.3 and 3.4 g/t Ag. A 0.6 m channel sample containing sulphides from a trench assayed 3.1 g/t Au and 20.5 g/t Ag. A grab sample containing sulphides from a shaft dump assayed 1.4 g/t Au and 20.6 g/t Ag, while a 3.2m channel sample from the face of an adit assayed 0.7 g/t Au and 1.0 g/t Ag. A selected sample of quartz-barite vein material collected 600 m north of the main shaft by Gleeson assayed 0.7 g/t Au, 1.4 g/t Ag, 1.4% Pb and 1.3% Ba. A selected sample collected from the dump of the main shaft by Debicki assayed 3.0 g/t Au and 3.8 g/t Ag.

Arbor's trenching in 1990 uncovered two parallel veins which assayed 3.7 g/t Au over 0.76 m and 4.6 g/t Au over 1.0 m respectively.

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**MINFILE:** 1150 074

**NAME(S):** Leotta  
**MINFILE #:** 1150 074  
**MAJOR COMMODITIES:** Zn  
**MINOR COMMODITIES:**  
**TECTONIC ELEMENT:** Slide Mountain Terrane

**NTS MAP SHEET:** 115 O 15  
**LATITUDE:** 63 56'45"N  
**LONGITUDE:** 138 47'21"W  
**DEPOSIT TYPE:** Unknown  
**STATUS:** Anomaly

Sphalerite was recognized by the GSC in a panning sample collected from Too Much Gold Creek to the south. The area is underlain by carbonaceous quartz-muscovite schist of the Nasina Assemblage (unit DMSqc) that has been tectonically interleaved with thrust slices of serpentized harzburgite (unit Pzu)

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**MINFILE:** 1150 076

**NAME(S):** Hilchey  
**MINFILE #:** 1150 076  
**MAJOR COMMODITIES:** Au  
**MINOR COMMODITIES:** Pb  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**NTS MAP SHEET:** 115 O 14  
**LATITUDE:** 63 53'42"N  
**LONGITUDE:** 139 18'26"W  
**DEPOSIT TYPE:** Vein  
**STATUS:** Drilled prospect

## GEOLOGY

The area is underlain by strongly deformed, blocky weathering, quartz augen-bearing quartz-muscovite-chlorite schist (unit Psa) with isoclinal infolds or interlayers of muscovite-quartz schist and carbonaceous phyllite (unit Psqm). A number of narrow, southwest-dipping shear zones cut the schist. The drill holes encountered hydrothermal alteration, including some vein quartz, pyrite and traces of galena, in the hanging wall of the fault. Low gold values were obtained in some of the quartz-rich sections but core recovery was poor.

The 1987 surveys on the Hawk group outlined an extensive silver and base metal geochemical anomaly but trenching and drilling produced disappointing results. In 1990 Arbor obtained assays of 7.0 and 4.4 g/t Au from narrow quartz veinlets. Drillhole 90R47 intersected 9.1 m grading 1.1 g/t Au.

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<b>MINFILE:</b>	1150 077
<b>NAME(S):</b> Buckland	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 077	<b>LATITUDE:</b> 63 52'35"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 15'42"W
<b>MINOR COMMODITIES:</b> Ag	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

This showing is similar to the Lone Star (Minfile 1150 072) to the northeast and consists of locally gold-bearing quartz veins cutting strongly deformed muscovite and muscovite-quartz schist (unit Psqm) of the Permian Klondike Schist Assemblage. The veins contain scattered grains of pyrite and galena and traces of visible gold. Assays by Klondike Lode Gold ranged up to 96.0 g/t Au over 0.7 m. A grab sample collected by Gleeson (1970) assayed 62.7 g/t Au and 13.7 g/t Ag. The 1987 diamond drill hole at the mouth of Gay Gulch cut quartz augen-bearing quartz-muscovite schist (unit Psa) and a mafic dyke or sill. Several major and minor shear zones were intersected and core recovery was poor. A few thin quartz veins with some pyrite cut the schist, but all assays were low.

Sampling in 1985 returned assays of 5.8 g/t to 10.3 g/t Au from zones up to 1.5 m wide exposed in three trenches along a length of 32 m. The percussion drilling returned inconclusive results. The 1987 work reaffirmed that mineralization is best developed in the previously known area further east on Gay Gulch, with the highest assay (7.2 g/t Au over 3 m) coming from the diamond drill hole.

The 1989 IP survey outlined a 300 m long anomaly at the junction of Gay Gulch and Eldorado Creek. Narrow quartz veins from this area returned assays up to 42.5 g/t Au. Arbor's 1990 drillhole intersected 2.8 g/t Au over 3.0 m.

Four trenches in the area of the 1987 drilling exposed a gold-bearing vein over a strike length of 900 m. Assays ranged from 36 g/t Au to 46.6 g/t Au over an average width of 0.5 m. Subsequent trenching showed that the vein is associated with a vertical northwest-trending shear zone, referred to as the Buckland Shear Zone. The zone is 10 to 20 m wide and has been traced for 1.4 km. A sample from trench 90-20, near the southeast end, assayed 1.9 g/t Au across 4.0 m. Trench 90-4, one km further to the northwest, returned an assay of 1.6 g/t Au across 12.5 m. Two drillholes that intersected the shear zone at depth assayed 6.51 g/t Au across 4.5 m and 3.57 g/t Au across 16.8 m.

Ladder-style quartz veins fill tension gashes in the shear zone and extend 150 m or more into the adjacent wall rocks. Crushed, bleached material within the shear zone is quartz-sericite altered and carbonatization extends 10 m or more into the wall rock. Schist within the carbonatized zone contains micron-sized gold particles and has assayed up to 8.6 g/t Au. The shear zone is associated with a series of magnetic lows which project 7 km northwest into Eldorado Creek.

Placer mining operations in the 27 Pup area are reported to have uncovered narrow pyritic quartz stringers with visible gold, with assays ranging from 1714 to 4457 g/t Au.

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<b>MINFILE:</b>	1150 078
<b>NAME(S):</b> Jen	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 078	<b>LATITUDE:</b> 63 50'01"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 139 10'21"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Anomaly

The area is underlain by quartz and feldspar augen-bearing quartz-muscovite schist (unit Psa) of the Permian Klondike Schist Assemblage, that is overlain by a small patch of hornblende-biotite-phyric andesite (unit IKva) and cut by a narrow ~120 -trending dyke of quartz-feldspar porphyry (unit eTqfp). A newspaper account in 1903 reported that a quartz vein at least 2.5 m wide had been discovered on the Little Alta claim. No assays are available from this occurrence.

The Jen claims were originally staked over an intense, isolated aeromagnetic anomaly. The aeromagnetic anomaly is likely due mainly to the andesite, although float of a strongly magnetic, magnetite-bearing silicified schist was found in one bulldozer trench.

Geochemical sampling detected scattered anomalous values of Cu, Ag, Pb and Mo in soils and a generally higher As background than is found elsewhere in the Klondike.

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<b>MINFILE:</b>	1150 079
<b>NAME(S):</b> Fork	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 079	<b>LATITUDE:</b> 63 57'08"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 139 12'19"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Anomaly

Strongly deformed, rusty weathering muscovite and muscovite-quartz schist (unit Psqm) overlies chlorite-quartz schist (unit Psc) and micaceous quartzite (unit Psq). These units belong to the Permian Klondike Schist Assemblage. Carbonaceous quartz-muscovite schist occurs locally along the contact between the rusty unit and the underlying rocks. Several narrow (<20 cm thick) discordant quartz veins cut the schists. These veins trend ~125 and display near-vertical dips. The veins are mainly barren, but one contains trace amounts of pyrite, arsenopyrite, galena and rutile.

The 1990 geophysical surveys were conducted over areas of anomalous arsenic response.

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<b>MINFILE:</b>	1150 080
<b>NAME(S):</b> Hilker	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 080	<b>LATITUDE:</b> 63 59'18"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 139 22'40"W

**MINOR COMMODITIES:**  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**DEPOSIT TYPE:** Unknown  
**STATUS:** Uncertain

The area is mainly underlain by quartz and feldspar augen-bearing quartz-muscovite schist of the Permian Klondike Schist Assemblage (unit Psa), cut by pyritic porphyry dykes and narrow quartz veins. The augen schist is interpreted to be a felsic metaporphry, and narrow discontinuous bands of carbonaceous and rusty weathering felsic schist within this unit are thought to represent deformed pendants and screens within the intrusive body.

The 1990 geophysical survey tested IP and resistivity responses in an area of known placer potential.

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<b>MINFILE:</b>	115O 083
<b>NAME(S):</b> Greenback	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 083	<b>LATITUDE:</b> 63 51'20"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 138 58'49"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Uncertain

The area is underlain by chlorite schist and rusty weathering quartz-muscovite schist of the Permian Klondike Schist Assemblage (units Psc and Psqm) and is cut by numerous quartz veins. Exploration has been directed toward gold potential but no mineralization has been reported.

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<b>MINFILE:</b>	115O 086
<b>NAME(S):</b> Golden Rod	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 086	<b>LATITUDE:</b> 63 51'07"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 138 54'05"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Uncertain

The area is underlain by chlorite schist of the Permian Klondike Schist Assemblage (unit Psc) and is cut by numerous quartz veins. Exploration has been directed toward gold potential but no mineralization has been reported.

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<b>MINFILE:</b>	115O 087
<b>NAME(S):</b> Carmacks	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 087	<b>LATITUDE:</b> 63 55'18"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 139 07'42"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown



**TECTONIC ELEMENT:** Yukon Tanana Terrane

**STATUS:** Drilled prospect

The claims are underlain by quartz-muscovite-chlorite schist (unit Psq) and minor interlayered chlorite schist (unit Psc), which overlain to the southwest by rusty weathering muscovite-quartz schist (unit Psqm). All of these units are part of the Permian Klondike Schist Assemblage. Drilling on the property returned low gold values to a maximum of 50 ppb over 30.5 m.

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**MINFILE:**

1150 088

**NAME(S):** Trilby

**NTS MAP SHEET:** 115 O 14

**MINFILE #:** 1150 088

**LATITUDE:** 63 58'40"N

**MAJOR COMMODITIES:**

**LONGITUDE:** 139 00'32"W

**MINOR COMMODITIES:** Au,Ag

**DEPOSIT TYPE:** Vein

**TECTONIC ELEMENT:** Yukon Tanana Terrane

**STATUS:** Showing

The area is underlain by strongly sheared and deformed carbonaceous phyllite and fine-grained quartzite (Devono-Mississippian Nasina Series) containing abundant barren quartz stringers and local disseminations of pyrite. Chlorite schist and micaceous quartzite has been thrust over the carbonaceous sequence immediately south of the occurrence.

Early work was directed toward gold-bearing quartz veins. An 1899 newspaper account reported that an assay of 92.6 g/t Au had been obtained from a quartz vein on the Marguerite claim but this was never substantiated.

The 1984 drilling intersected 6.1 m grading 0.37 g/t Au and 8.4 g/t Ag on the Hun 144 cl but other holes returned low values.

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**MINFILE:**

1150 089

**NAME(S):** Torrance

**NTS MAP SHEET:** 115 O 14

**MINFILE #:** 1150 089

**LATITUDE:** 63 46'09"N

**MAJOR COMMODITIES:**

**LONGITUDE:** 139 15'01"W

**MINOR COMMODITIES:**

**DEPOSIT TYPE:** Unknown

**TECTONIC ELEMENT:** Yukon Tanana Terrane

**STATUS:** Uncertain

Claims are underlain by carbonaceous quartz-muscovite schist of the Nasina Assemblage (unit DMSqc) that are overlain to the north along a moderately to steeply northeast-dipping thrust fault by gneissic biotite quartz monzonite of the Sulphur Creek orthogneiss (unit Pqmg).

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**MINFILE:**

1150 090

**NAME(S):** Bald Eagle

**NTS MAP SHEET:** 115 O 14

**MINFILE #:** 1150 090

**LATITUDE:** 63 55'18"N

**MAJOR COMMODITIES:** Au,Pt  
**MINOR COMMODITIES:** Pb,Ba  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**LONGITUDE:** 139 21'21"W  
**DEPOSIT TYPE:** Vein  
**STATUS:** Drilled prospect

The area is underlain by rusty muscovite-quartz schist (unit Psqm) and quartz and feldspar augen-bearing quartz-muscovite schist (unit Psa) of the Permian Klondike Schist Assemblage. Early exploration was concentrated on a southwest-dipping quartz vein reported to be at least 2.4 m thick. No assay data is available for the showing.

The GSC recognized cerussite in pan concentrates from Adams Creek upstream from the shaft and reported that quartz-barite veins were found by placer miners nearby. Samples from two 3 m wide quartz veins on the Nugget cl on Little Skookum Gulch were reported to assay as high as 68.6 g/t platinum.

The 1983 staking was based on anomalous gold values in heavy mineral concentrates associated with a strong 1.2 km long conductor. The 1984 drilling intersected chlorite-quartz-sericite schist with narrow graphitic bands and disseminated pyrite.

The 1990 geophysical survey tested IP and resistivity responses in an area of known placer potential. A 1 m chip sample taken across a contact between graphite schist and quartz augen schist in Trench 91TR11 on the 98 claims assayed 0.69 g/t Au.

Backhoe trenching on the Sury claims exposed fresh, unaltered quartz-augen schist.

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**MINFILE:**

115O 093

**NAME(S):** Flannery  
**MINFILE #:** 115O 093  
**MAJOR COMMODITIES:**  
**MINOR COMMODITIES:**  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**NTS MAP SHEET:** 115 O 14  
**LATITUDE:** 63 55'31"N  
**LONGITUDE:** 139 10'55"W  
**DEPOSIT TYPE:** Unknown  
**STATUS:** Uncertain

The claims are underlain by quartz-muscovite-chlorite schist (unit Psq) and minor interlayered chlorite schist (unit Psc), which overlain to the southeast by rusty weathering muscovite-quartz schist (unit Psqm). All of these units are part of the Permian Klondike Schist Assemblage. Old newspaper accounts report that a gold-bearing quartz vein was discovered on the Centennial No. 1 claim in 1906 but this was never confirmed.

No anomalies were obtained from the Top claims.

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**MINFILE:**

115O 095

**NAME(S):** Gleeson  
**MINFILE #:** 115O 095  
**MAJOR COMMODITIES:** W  
**MINOR COMMODITIES:**  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**NTS MAP SHEET:** 115 O 13  
**LATITUDE:** 63 51'14"N  
**LONGITUDE:** 139 34'16"W  
**DEPOSIT TYPE:** Unknown  
**STATUS:** Anomaly

Traces of scheelite found in panning samples are thought to be derived from skarns developed in Nasina Assemblage marbles (unit DMc) along the contact of the Early Cretaceous Jim Creek stock (unit eJqm).

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**MINFILE:** 115O 113  
**NAME(S):** Bronson **NTS MAP SHEET:** 115 O 14  
**MINFILE #:** 115O 113 **LATITUDE:** 63 58'45"N  
**MAJOR COMMODITIES:** Ag,Pb,Cu **LONGITUDE:** 139 28'33"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Vein and stratiform  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Anomaly

Several soil geochemical anomalies were outlined in an area underlain by quartz and feldspar augen-bearing quartz-muscovite schist and rusty weathering muscovite-quartz schist of the Permian Klondike Schist Assemblage (units Psa and Psqm, respectively). Galena-bearing quartz-carbonate vein float was found near the north end of the claims in 1983. Schist boulders containing stringers and disseminations of pyrite, chalcopyrite and galena were found in 1986. This latter style of mineralization gives a Permian Pb isotopic model age (Mortensen, unpub. data), and is interpreted as syngenetic VMS-style mineralization formed in felsic metavolcanic rocks now represented by the muscovite-quartz schist.

The 1987 geophysical surveys outlined several anomalies on the south end of the property.

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**MINFILE:** 115N 115  
**NAME(S):** The **NTS MAP SHEET:** 115 N 15  
**MINFILE #:** 115N 115 **LATITUDE:** 63 57'04"N  
**MAJOR COMMODITIES:** **LONGITUDE:** 140 50'17"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Unknown  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Uncertain

The claims are underlain by Nasina Assemblage schist and amphibolite (units DMs and DMasc) and have been explored for gold and silver vein potential.

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**MINFILE:** 115O 117  
**NAME(S):** Blanche **NTS MAP SHEET:** 115 O 1  
**MINFILE #:** 115O 117 **LATITUDE:** 63 48'56"N  
**MAJOR COMMODITIES:** **LONGITUDE:** 139 03'23"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Unknown  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Uncertain

The claims are underlain by quartz and feldspar augen-bearing quartz-muscovite schist (unit Psqm) of the Permian Klondike Schist Assemblage.

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<b>MINFILE:</b>	115N 119
<b>NAME(S):</b> Mt Hart	<b>NTS MAP SHEET:</b> 115 N 16
<b>MINFILE #:</b> 115N 119	<b>LATITUDE:</b> 63 55'10"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 140 25'32"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Carnacks Gp. volcanics	<b>STATUS:</b> Uncertain

Mapping by the GSC in 1972 located outcrops of Late Cretaceous quartz-pebble conglomerate (unit lKst). The conglomerates have a thickness of 15 to 30 m and outcrop lengths of approximately 0.8 km. They are capped by Late Cretaceous andesitic volcanic rocks (unit lKva). No mineralization was found in 1973 by Silver Standard.

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<b>MINFILE:</b>	115O 120
<b>NAME(S):</b> Envoldsen	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 120	<b>LATITUDE:</b> 63 58'08"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 138 57'35"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Slide Mountain Terrane	<b>STATUS:</b> Uncertain

The 1951 claims are mainly underlain by chlorite schist of the Permian Klondike Schist Assemblage (unit Psc). The claims are thought to have been staked over a strong aeromagnetic anomaly, which appears to be due to the presence of a magnetite-rich metagabbro body within the mafic schists (unit Pg).

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<b>MINFILE:</b>	115O 121
<b>NAME(S):</b> Asbestos Bluff	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 121	<b>LATITUDE:</b> 63 58'58"N
<b>MAJOR COMMODITIES:</b> Asbestos	<b>LONGITUDE:</b> 138 45'56"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Ultramafic-Associated
<b>TECTONIC ELEMENT:</b> Slide Mountain Terrane	<b>STATUS:</b> Showing

Asbestos fibre occurs within a thrust fault-bounded slice of serpentinite that rests structurally above Nasina Assemblage schist (unit DMs). Chrysotile fibres up to 9 mm long occur along with amphibole fibres up to 50 mm long in a 10 m wide zone of brecciated serpentinite in a rock quarry. Chrysotile content is very low and fibre quality is poor.

A second rock quarry located about 1.5 km to the north contains talcose, sheared serpentinite with only trace amounts of short fibre chrysotile.

Surrounding ultramafic rocks are less serpentinized and contain no long fibre chrysotile.

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<b>MINFILE:</b>	115N 123
<b>NAME(S):</b> Bedrock	<b>NTS MAP SHEET:</b> 115 N 15
<b>MINFILE #:</b> 115N 123	<b>LATITUDE:</b> 63 58'31"N
<b>MAJOR COMMODITIES:</b> Ag	<b>LONGITUDE:</b> 140 53'15"W
<b>MINOR COMMODITIES:</b> Cu,Au	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

A south-dipping thrust fault is inferred to cross the claims, separating Nasina Assemblage schist and amphibolite (units DMs and DMasc) in the hangingwall from rusty-weathering quartz-muscovite of the Permian Klondike Schist Assemblage (unit Pks) in the footwall. A thrust-fault-bounded lens of serpentinite occurs along the fault to the east of the occurrence. A vuggy quartz carbonate vein containing no visible sulphides outcrops in the hangingwall of the fault. It is 1 m wide, strikes 140 and dips 38 S. A specimen from the vein assayed 992.5 g/t Ag with 310 ppb Au and 1140 ppm Cu.

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<b>MINFILE:</b>	115O 124
<b>NAME(S):</b> Hobbs	<b>NTS MAP SHEET:</b> 115 O 13
<b>MINFILE #:</b> 115O 124	<b>LATITUDE:</b> 63 45'43"N
<b>MAJOR COMMODITIES:</b> Limestone	<b>LONGITUDE:</b> 139 40'00"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Sedimentary
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Prospect

A limestone bluff 90 m long and 7.6 m high occurs on the bank of the Indian River. An analysis performed by the A.E. Co. returned 51% calcium and 12% silica. The wood-fired kiln was reported to have a capacity of 23 tonnes in 10 days. No information is available to indicate if any limestone actually reached Dawson.

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<b>MINFILE:</b>	115O 126
<b>NAME(S):</b> All Gold	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 115O 126	<b>LATITUDE:</b> 63 54'16"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 138 46'16"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

The claims were staked on a quartz vein that was reportedly gold-bearing and up to 4.3 m wide. The vein was reported to have been followed for a length of 300 m parallel to a greenstone dyke. The area is mainly underlain by carbonaceous quartz-muscovite schist of the Nasina Assemblage (unit DMqsc), which has been overthrust by a slice of serpentinized harzburgite (unit Pzu). The "greenstone dyke" could

be either a narrow imbricate thrust slice of greenstone associated with the serpentinite (unit Pzg) or a conformable band of chlorite schist and amphibolite within the Nasina Assemblage metasedimentary rocks (unit DMasc).

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<b>MINFILE:</b>	115O 127
<b>NAME(S):</b> Lindow	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 127	<b>LATITUDE:</b> 63 59'09"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 13'19"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

The area is underlain by quartz and feldspar augen-bearing quartz-muscovite-chlorite schist (unit Psa) which is overlain by and/or interlayered with rusty weathering muscovite and muscovite-quartz schist (unit Psqm). Carbonaceous quartz-muscovite schist occurs locally along the contact between the two units. The metamorphic rocks are deformed into tight, north-trending, second-phase folds. Quartz veins are abundant in the rocks, occurring predominantly as foliaform metamorphic sweats.

At least 20 claims were staked in the area in 1911 following the discovery of gold-bearing quartz on the Fortune claim. A newspaper account reported assays of 26.4 g/t Au and 6.9 g/t Ag from a rock in which no gold was visible. Cairnes examined the occurrence in 1911 and observed quartz veins with pyrite and visible gold, some of which was quite crystalline. Crystalline gold is relatively common in placer deposits in Bear Creek and may be derived in part from this occurrence.

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<b>MINFILE:</b>	115O 128
<b>NAME(S):</b> Oro Fino	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 128	<b>LATITUDE:</b> 63 57'01"N
<b>MAJOR COMMODITIES:</b> Ag,Pb	<b>LONGITUDE:</b> 139 21'20"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

Oro Fino Hill is composed of quartz and feldspar augen-bearing quartz-muscovite schist (unit Ps) overlain by rusty quartz-muscovite and muscovite-quartz schist (unit Psqm), both of the Permian Klondike Schist Assemblage. Minor amounts of carbonaceous phyllite occur near the contact between the two units. Mineralization was intersected by an adit driven by Yukon Gold Corporation in 1916 to provide a drain for placer tailings from workings on Oro Fino Hill. Several shallow southwest-dipping graphitic shears that parallel the dominant foliation in the rocks are present near the portal. Networks of stringers and narrow veins (to 15 cm) occur within and near these shears. The veins consist of clear to milky quartz and ferroan carbonate and contain traces of pyrite. Occasional narrow stringers of clear quartz contain up to 15% very fine-grained sulphides that occur as small knots. The sulphides consist of fine-grained intergrowths of galena, arsenopyrite and pyrite.

Ray reported grains of a material tentatively identified as a Pb-Sn-Au alloy showing indistinct exsolution textures in placer deposits at the foot of Monte Cristo Hill about 500 m downstream from the Oro Fino occurrence. Although he considered the material to be a natural alloy, it is possible that it was soldered gold flakes.

The 1984 holes tested coincident IP/EM anomalies and intersected micaceous schist with disseminated pyrite. The 1987 trenches and drill holes cut quartz stringers with base metal sulphides, but precious metal contents were low.

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<b>MINFILE:</b>	115O 129
<b>NAME(S):</b> Schramm	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 129	<b>LATITUDE:</b> 63 50'39"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 139 02'06"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

The claims are underlain by chlorite-quartz-muscovite schist (unit Psc) of the Permian Klondike Schist Assemblage. The drilling returned low gold values to a maximum of 110 ppb over 3.0 m.

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<b>MINFILE:</b>	115O 130
<b>NAME(S):</b> Grant	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 130	<b>LATITUDE:</b> 63 45'14"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 08'04"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

The area is mainly underlain by gneissic biotite quartz monzonite of the Sulphur Creek orthogneiss (unit Pqmg) that structurally overlies carbonaceous quartz-muscovite schist (unit DMsqc) and minor chlorite and chlorite-actinolite schist (unit DMasc) of the Nasina Assemblage. Late Cretaceous conglomerates (unit IKst) form the bedrock in some of the meander loops of Indian River immediately southwest of the occurrence.

A quartz vein over 25 m wide was discovered in 1900 in the right bank of Indian River just below the mouth of Quartz Creek. Early newspaper accounts reported that the central 2.1 m of the vein contained free gold and returned assays of 19.9 g/t Au, while the overall vein material assayed 13.4 g/t.

No significant gold values were found in the 1984 drilling.

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<b>MINFILE:</b>	115O 131
<b>NAME(S):</b> Cullen	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 131	<b>LATITUDE:</b> 63 52'01"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 16'23"W
<b>MINOR COMMODITIES:</b> Cu	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

The occurrence is hosted by blocky weathering quartz augen-bearing quartz muscovite schist (unit Psa) of the Permian Klondike Schist Assemblage. Several small dykes of quartz-feldspar porphyry (unit eTqfp) intrude the schist. Vein quartz is abundant although it occurs predominantly as foliaform metamorphic quartz sweats with minor pyrite and/or feldspar. Several crosscutting veins and stringers of quartz on the Peacock adit were sampled by MacLean in 1912. The stringers locally contain traces of pyrite, chalcopyrite, bornite, malachite and azurite. Early newspaper accounts reported that over thirty samples from the property had been assayed and ranged from 3 to 219.4 g/t Au with considerable copper values.

Of the seven samples collected by MacLean, one assayed 0.7 g/t Au; the rest contained no values. A sample from the dump of the 17 m shaft at the Homestake claim also gave no values. The material on the dump of the 5 m shaft on the Homestake claim consists of schist with quartz and feldspar stringers. Some of the schist is reported to contain abundant chalcopyrite. One sample of dump material collected by MacLean contained 2.1 g/t Au.

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<b>MINFILE:</b>	1150 135
<b>NAME(S):</b> Sul	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 1150 135	<b>LATITUDE:</b> 63 45'19"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 138 53'21"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

The claims are underlain by quartz and feldspar augen-bearing quartz-muscovite schist of the Permian Klondike Schist Assemblage. This unit is interpreted to be a felsic metaporphyry, and passes gradationally to the southwest into gneissic biotite quartz monzonite of the Sulphur Creek orthogneiss (unit Pqmg). Chlorite schist (unit Psc) occurs to the northeast.

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<b>MINFILE:</b>	1150 136
<b>NAME(S):</b> Gatenby	<b>NTS MAP SHEET:</b> 115 O 15
<b>MINFILE #:</b> 1150 136	<b>LATITUDE:</b> 63 46'22"N
<b>MAJOR COMMODITIES:</b>	<b>LONGITUDE:</b> 138 34'34"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Unknown
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

The Dom group follows the wide gravel-filled valley of Dominion Creek, which in this area is underlain by muscovitic and chloritic quartzite and quartz-muscovite-chlorite schist of the Permian Klondike Schist Assemblage (unit Pks). Coarsely crystalline bands of marble (unit Pc) occur within the schists. The drilling returned no significant gold values but silver assays up to 20 ppm over 3.0 m were reported.

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<b>MINFILE:</b>	1150 137
<b>NAME(S):</b> Dom	<b>NTS MAP SHEET:</b> 115 O 15



**MINFILE #:** 1150 137  
**MAJOR COMMODITIES:**  
**MINOR COMMODITIES:**  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**LATITUDE:** 63 50'11"N  
**LONGITUDE:** 138 46'55"W  
**DEPOSIT TYPE:** Unknown  
**STATUS:** Drilled prospect

The claims follow the gravel-filled valley of Dominion Creek, which in this area is underlain by muscovitic and chloritic quartzite, quartz-muscovite-chlorite schist and rusty weathering quartz-muscovite schist of the Permian Klondike Schist Assemblage (units Pks and Psqm). The drilling returned no significant gold or silver assays.

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**MINFILE:** 1150 138

**NAME(S):** Cowan  
**MINFILE #:** 1150 138  
**MAJOR COMMODITIES:**  
**MINOR COMMODITIES:**  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**NTS MAP SHEET:** 115 O 15  
**LATITUDE:** 63 46'22"N  
**LONGITUDE:** 138 44'34"W  
**DEPOSIT TYPE:** Unknown  
**STATUS:** Drilled prospect

The claims follow the gravel-filled valley of Gold Run Creek, which in this area is underlain by muscovitic and chloritic quartzite and quartz-muscovite-chlorite schist of the Permian Klondike Schist (unit Pks).

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**MINFILE:** 1150 139

**NAME(S):** Hun  
**MINFILE #:** 1150 139  
**MAJOR COMMODITIES:**  
**MINOR COMMODITIES:**  
**TECTONIC ELEMENT:** Yukon Tanana Terrane

**NTS MAP SHEET:** 115 O 15  
**LATITUDE:** 63 56'14"N  
**LONGITUDE:** 138 53'40"W  
**DEPOSIT TYPE:** Unknown  
**STATUS:** Drilled prospect

The claims follow the gravel-filled valley of Hunker Creek, which in this area is mainly underlain by chlorite-actinolite-quartz schist (unit Psc) thrust on top of muscovitic and chloritic quartzite (unit Psq). Both units are part of the Permian Klondike Schist Assemblage. Small lenses of sheared serpentinite occur locally along the thrust surface. The 1988 drilling and VLF results indicate that beneath 9 to 18 m of overburden, bedrock consists of graphite schist and rhyolite porphyry cut by a series of north-striking faults. The strongest VLF conductors coincide with magnetic lows and with extensive zones of clay gouge in drill core.

A major vein similar to the Ben Levy vein 550 m to the north was intersected by drillhole HUN 88-32. Visible gold was identified in pan concentrates from 2 successive samples between 27.4 and 33.5 m, but the gold was not detected by assays and may be due to contamination from placer gravels uphole.

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**MINFILE:** 1150 140

**NAME(S):** Brady **NTS MAP SHEET:** 115 O 15  
**MINFILE #:** 1150 140 **LATITUDE:** 63 49'50"N  
**MAJOR COMMODITIES:** Au **LONGITUDE:** 138 56'10"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Vein  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Drilled prospect

The claims follow the gravel-filled valley of Sulphur Creek which in this area is underlain by medium green chlorite schist of the Permian Klondike Schist Assemblage (unit Psc). The best drill results were obtained from holes on the Sul 112 claim and included up to 0.31 g/t Au over 21.3 m.

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**MINFILE:** 1150 141

**NAME(S):** Gonzales (Plinc) **NTS MAP SHEET:** 115 O 14  
**MINFILE #:** 1150 141 **LATITUDE:** 63 56'13"N  
**MAJOR COMMODITIES:** Zn,Pb,Cu **LONGITUDE:** 139 25'07"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Unknown  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Showing

The northeastern part of the area is underlain by rusty-weathering muscovite-quartz schist (felsic metavolcanic) with some bands of carbonaceous quartz-muscovite schist of the Permian Klondike Schist Assemblage (unit Psqm). These units pass to the southwest into quartz and feldspar augen-bearing quartz-muscovite schist (felsic metaporphry; unit Psa) and then into gneissic biotite quartz monzonite (Sulphur Creek orthogneiss; unit Pqmg). The geology is interpreted to reflect a sequence of felsic volcanic rocks with interlayered carbonaceous sediments that has been intruded by a quartz monzonite intrusion and its finer-grained, porphyritic equivalents.

The 1984 drillhole tested a geochemical anomaly and intersected quartz-muscovite-chlorite schist and carbonaceous schist with disseminated pyrite and trace amounts of sphalerite, galena and chalcopryrite. The galena gives a Permian Pb isotopic model age, and the sulphides are interpreted to be syngenetic, VMS-style mineralization. Discordant quartz veins 1.5 - 2 m in width also occur on the property. These veins trend ~130 and consist mainly of quartz with trace amounts of pyrite, ferroan carbonate, albite, and rutile. A single flake of visible gold was found within limonitic boxwork after pyrite within a sample of vein quartz.

The 1990 geophysical survey tested IP and resistivity responses in an area of known placer potential.

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**MINFILE:** 1150 145

**NAME(S):** Blue Sky **NTS MAP SHEET:** 115 O 15  
**MINFILE #:** 1150 145 **LATITUDE:** 63 48'23"N  
**MAJOR COMMODITIES:** **LONGITUDE:** 138 59'04"W  
**MINOR COMMODITIES:** **DEPOSIT TYPE:** Unknown  
**TECTONIC ELEMENT:** Yukon Tanana Terrane **STATUS:** Uncertain

The claims are underlain by chlorite schists of the Permian Klondike Schist Assemblage (unit Psc), which are in contact to the southwest with strongly foliated quartz and feldspar augen-bearing quartz muscovite schist (unit Psa, felsic metaporphry).

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<b>MINFILE:</b>	115O 146
<b>NAME(S):</b> Victoria (Lone Star)	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 146	<b>LATITUDE:</b> 63 54'07"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 12'38"W
<b>MINOR COMMODITIES:</b> Pb	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

A shallow southwest-dipping contact between chlorite-quartz-muscovite schist (unit Psc) and underlying quartz-muscovite-chlorite schist (unit Psq) passes through the head of No. 7 Pup on Victoria Gulch. A small body of talc-carbonate-altered ultramafic rocks occurs along the contact, suggesting that it may be a thrust fault. A north-trending, plagioclase-phyric mafic dyke cuts the schists near the head of No. 7 Pup.

The coarse ragged character of the placer gold in No. 7 Pup triggered the lode gold prospecting that led to the discovery of the Lone Star Mine in 1900. Much of the placer gold contained so much quartz that it had to be mortared before sluicing. There are several unconfirmed reports of gold-bearing dyke rock on the Victoria claim. A placer miner interviewed by Aho in 1960 reported that a 15 m shaft was sunk on the claim and intersected a "red-weathering porphyry dyke containing finely disseminated free gold and a little quartz". Most old workings in the immediate vicinity of No. 7 Pup have been destroyed by subsequent placer mining.

Careful examination of float in the bed of the pup by J.K. Mortensen and R.J. Cathro failed to disclose any porphyry, although float blocks of discordant, pyrite and galena-bearing quartz veins to at least 20 cm thick are present. Bulk soil samples collected by Hilchey from both limits of upper No. 7 Pup contained gold colours and one of the four churn drill holes is reported to have intersected gold in bedrock.

Soil sampling by Dawson Eldorado outlined scattered small areas of anomalous Au and As values. A whole-rock geochemical sample of altered serpentinite collected by Morin contained 2500 ppm As. Arbor's work shows that the Lone Star geophysical and geochemical anomalies extend northwest through this area. A specimen taken in 1990 from the pyritic zone assayed 68.9 g/t Au, and mineralized float from the same area contained 65.5 g/t Au, 497.1 g/t Ag and 8.22% Pb.

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<b>MINFILE:</b>	115O 147
<b>NAME(S):</b> Parnell	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 115O 147	<b>LATITUDE:</b> 63 53'10"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 13'50"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

The area is underlain by the same muscovite and quartz-muscovite schists (unit Psqm) that hosts mineralization at the Lone Star Mine, 2 km to the northwest (Minfile 115O 072). Quartz is abundant in

the rocks, occurring mainly as foliaform metamorphic swaths but also as rusty, weakly pyritic, crosscutting veins up to 40 cm wide. Early exploration in the area was directed toward the crosscutting veins. Exposure in the area is very limited, however, and less than half the old workings actually reached bedrock. No assay data from this occurrence is presently available.

Although the placer deposits in Victoria Gulch are richest below the mouth of No. 7 Pup, the paystreak continues up the gulch almost to its head, suggesting that the Parnell occurrence may have made a significant contribution.

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<b>MINFILE:</b>	1150 148
<b>NAME(S):</b> Robin Egg	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 148	<b>LATITUDE:</b> 63 52'58"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 63 52'58"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

Quartz veins which are locally gold-bearing cut muscovite and quartz-muscovite schist of the Permian Klondike Schist Assemblage. A considerable amount of barren foliaform quartz is also present.

Newspaper accounts of the early workings on the Jennie claim reported that three distinct veins had been located and had yielded assays ranging from 0.05 to 5.13 g/t Au. MacLean examined one open cut on the Robin claim in 1912. He described a flat-lying quartz vein 40 cm thick, with limonite pseudomorphs after pyrite. Of four samples he collected from this vein, two contained 1.4 g/t Au while the other two gave no values. He also noted two narrow (5 to 8 cm) quartz stringers which "exhibited a number of good specimens with free gold, of crystalline character, in the quartz, while very fine gold was seen disseminated through the associated schists".

A 5 m shaft was sunk in the bottom of this open cut later in the year by Eldorado Dome Co., and is reported to have intersected a quartz vein 2.4 m wide, dipping east and locally containing abundant visible gold. No assays are available from this material.

Bulk soil sampling by Klondike Lode Gold detected abundant gold particles in soil and colluvium on the immediate left limit of Oro Grade Gulch, but further work failed to locate the source. Mortensen (1992) reported coarse scheelite and barite grains from colluvial deposits near the Robin occurrence on Oro Grande Gulch, which are likely derived from the discordant quartz veins in the area.

Arbor's 1987 drillhole intersected 1.5 m grading 5.83 g/t Au. In 1989, placer mining exposed a stockwork of narrow quartz veins and pyrite lenses east of Eldorado Creek at the mouth of 27 Pup. A 3 m x 5 cm pyrite lens assayed 1714.4 g/t Au. One of Arbor's 1990 drillholes intersected 3.3 g/t Au over 3 m.

\*\*\*\*\*

<b>MINFILE:</b>	1150 149
<b>NAME(S):</b> Roach	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 149	<b>LATITUDE:</b> 63 51'51"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 13'16"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

Pale green, locally rusty weathering, muscovite and muscovite-quartz schist overlies quartz augen-bearing quartz muscovite schist. The schist is deformed into northwest-trending, open to tight folds that are overturned to the northeast. A north-trending, nearly vertical, unfoliated, quartz-feldspar porphyry dyke from 30 to 40 m wide cuts the schist.

A gold-bearing quartz vein about 0.6 m wide was discovered in 1899 on the Basaltic claim. The vein was reported to trend northwest, dip at 45 (NE?) and to cut across the foliation in the schist. Early newspaper accounts report that a 27 kg sample of vein material from a 21 m shaft sunk on the vein in the bed of Upper Eldorado Creek returned an assay of 168.6 g/t Au. The strike of the vein is parallel to that of the quartz porphyry dyke, but the two are apparently unrelated. The vein was reported to have been traced southeast as far as Chief Gulch.

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<b>MINFILE:</b>	1150 150
<b>NAME(S):</b> Pioneer	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 150	<b>LATITUDE:</b> 63 52'59"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 13'06"W
<b>MINOR COMMODITIES:</b> Ag,Pb	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Drilled prospect

The Pioneer occurrence is underlain by the same muscovite and quartz-muscovite schists that host mineralization at the Lone Star Mine 1 km to the northwest (Minfile 1150 072). The schist at the Pioneer is cut by several north-trending, vertical dykes of quartz-feldspar porphyry and plagioclase-phyric mafic dykes. Abundant, barren foliaform lenses of metamorphic quartz occur in the schist. Both types of dykes are locally strongly pyritized but contain only background levels of gold. A gold-bearing quartz vein approximately 1 m wide has been followed in hand pits, shallow shafts and bulldozer trenches for about 25 m. It strikes 135 degrees and appears to be nearly vertical. Visible gold is present in the vein in one bulldozer trench.

The 1910 adit on the Pioneer claim intersected the vein at a depth of about 40 m and two samples of pyrite and minor galena-bearing vein material on the adit dump collected by R.J. Cathro and J.K. Mortensen in 1982 and 1983 assayed 9.3 g/t Au and 4.8 g/t Au. Quartz vein material with visible gold was also reported to have been intersected by the adit at least 80 m north of the vein intersection. The 1987 rotary hole intersected 1.5 m grading 3.43 g/t Au.

\*\*\*\*\*

<b>MINFILE:</b>	1150 151
<b>NAME(S):</b> Amanda	<b>NTS MAP SHEET:</b> 115 O 14
<b>MINFILE #:</b> 1150 151	<b>LATITUDE:</b> 63 54'06"N
<b>MAJOR COMMODITIES:</b> Au	<b>LONGITUDE:</b> 139 17'01"W
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE:</b> Vein
<b>TECTONIC ELEMENT:</b> Yukon Tanana Terrane	<b>STATUS:</b> Showing

A large quartz mass containing traces of disseminated pyrite is reported to occur in blocky-weathering, fine-grained, quartz and feldspar augen-bearing quartz-muscovite schist (unit Psa) of the Permian Klondike Schist Assemblage. Present workings have not determined the total extent of the

quartz mass or its exact orientation, but the exposed body is at least 20 m in diameter. No assay data is available to date.

Arbor's IP survey outlined a 610 x 90 m anomaly which coincides with a surface alteration zone.

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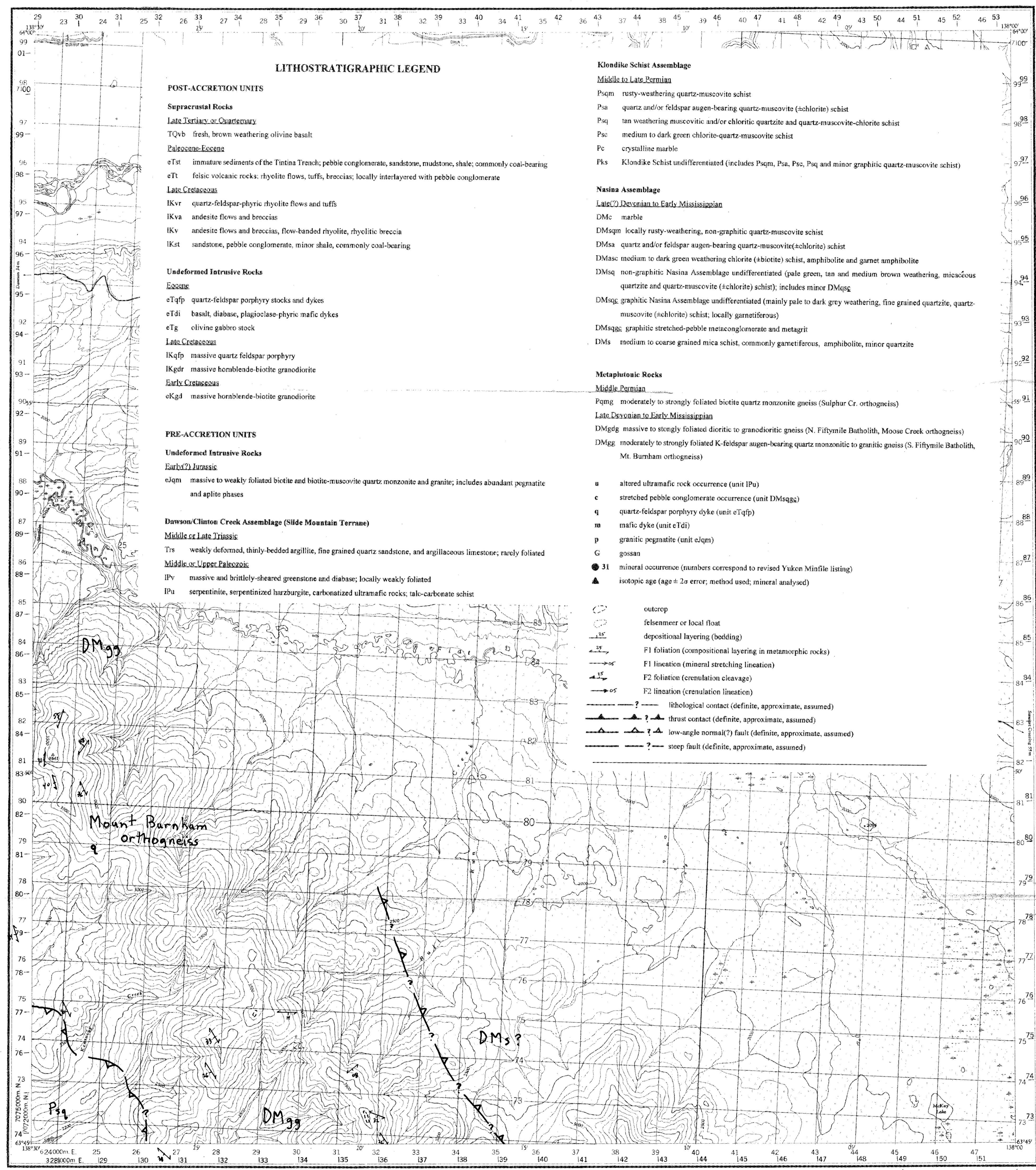
<b>MINFILE:</b>	1150 157
<b>NAME(S): NEW</b>	<b>NTS MAP SHEET: 115 O 14</b>
<b>MINFILE #: 1150 157</b>	<b>LATITUDE: 63 46'15"N</b>
<b>MAJOR COMMODITIES: Ba</b>	<b>LONGITUDE: 139 07'12"W</b>
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE: Stratiform</b>
<b>TECTONIC ELEMENT: Yukon Tanana Terrane</b>	<b>STATUS: Showing</b>

Bands of semi-massive pyrite up to 10 cm thick occur within rusty weathering quartz-muscovite schist and muscovitic quartzite (unit Psqm) of the Permian Klondike Schist Assemblage in dredge tailings in the bed of Quartz Creek. These rocks are interpreted as deformed felsic tuffs and tuffaceous cherts, and appear to form a screen or pendant within the gneissic biotite quartz monzonite of the Sulphur Creek orthogneiss (unit Pqmg). The sulphides are thought to be syngenetic in origin. Although no base metal sulphides were noted, trace amounts of barite occur in some of the pyrite bands.

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<b>MINFILE:</b>	1150 158
<b>NAME(S): NEW</b>	<b>NTS MAP SHEET: 115 N 15</b>
<b>MINFILE #: 115N 158</b>	<b>LATITUDE: 63 56'58"N</b>
<b>MAJOR COMMODITIES: Pb</b>	<b>LONGITUDE: 140 42'48"W</b>
<b>MINOR COMMODITIES:</b>	<b>DEPOSIT TYPE: Syngenetic</b>
<b>TECTONIC ELEMENT: Yukon Tanana Terrane</b>	<b>STATUS: Showing</b>

Traces of disseminated galena occur within a very rusty-weathering band of pyritic muscovite-quartz schist (unit Psqm) of the Permian Klondike Schist Assemblage. The galena gives a Permian Pb isotopic model age, and the sulphides are interpreted to be syngenetic in origin.



**LITHOSTRATIGRAPHIC LEGEND**

**POST-ACCRETION UNITS**

**Supracrustal Rocks**

**Late Tertiary or Quaternary**

TQvb fresh, brown weathering olivine basalt

**Paleocene-Eocene**

eTst immature sediments of the Tintina Trench; pebble conglomerate, sandstone, mudstone, shale; commonly coal-bearing

eTt felsic volcanic rocks; rhyolite flows, tuffs, breccias; locally interlayered with pebble conglomerate

**Late Cretaceous**

IKvr quartz-feldspar-phyric rhyolite flows and tuffs

IKva andesite flows and breccias

IKv andesite flows and breccias, flow-banded rhyolite, rhyolitic breccia

IKst sandstone, pebble conglomerate, minor shale, commonly coal-bearing

**Undeformed Intrusive Rocks**

**Eocene**

eTqp quartz-feldspar porphyry stocks and dykes

eTdi basalt, diabase, plagioclase-phyric mafic dykes

eTg olivine gabbro stock

**Late Cretaceous**

IKqfp massive quartz feldspar porphyry

IKgdr massive hornblende-biotite granodiorite

**Early Cretaceous**

eKgd massive hornblende-biotite granodiorite

**PRE-ACCRETION UNITS**

**Undeformed Intrusive Rocks**

**Earliest(?) Jurassic**

eJqm massive to weakly foliated biotite and biotite-muscovite quartz monzonite and granite; includes abundant pegmatite and aplite phases

**Dawson/Clinton Creek Assemblage (Slide Mountain Terrane)**

**Middle or Late Triassic**

Trs weakly deformed, thinly bedded argillite, fine grained quartz sandstone, and argillaceous limestone; rarely foliated

**Middle or Upper Paleozoic**

IPv massive and brittlely-sheared greenstone and diabase; locally weakly foliated

IPu serpentinite, serpentinitized harzburgite, carbonized ultramafic rocks; talc-carbonate schist

**Klondike Schist Assemblage**

**Middle to Late Permian**

Psqm rusty-weathering quartz-muscovite schist

Psa quartz and/or feldspar augen-bearing quartz-muscovite (schlorite) schist

Psq tan weathering muscovite and/or chloritic quartzite and quartz-muscovite-chlorite schist

Psc medium to dark green chlorite-quartz-muscovite schist

Pc crystalline marble

Pks Klondike Schist undifferentiated (includes Psqm, Psa, Psc, Psq and minor graphitic quartz-muscovite schist)

**Nasina Assemblage**

**Late(?) Devonian to Early Mississippian**

DMc marble

DMsqm locally rusty-weathering, non-graphitic quartz-muscovite schist

DMsa quartz and/or feldspar augen-bearing quartz-muscovite (schlorite) schist

DMsc medium to dark green weathering chlorite (schlorite) schist, amphibolite and garnet amphibolite

DMsq non-graphitic Nasina Assemblage undifferentiated (pale green, tan and medium brown weathering, micaceous quartzite and quartz-muscovite (schlorite) schist); includes minor DMsqg

DMsqg graphitic Nasina Assemblage undifferentiated (mainly pale to dark grey weathering, fine grained quartzite, quartz-muscovite (schlorite) schist; locally garnetiferous)

DMsqgq graphitic stretched-pebble metaconglomerate and metagrit

DMs medium to coarse grained mica schist, commonly garnetiferous, amphibolite, minor quartzite

**Metaplutonic Rocks**

**Middle Permian**

Pmqm moderately to strongly foliated biotite quartz monzonite gneiss (Sulphur Cr. orthogneiss)

**Late Devonian to Early Mississippian**

DMgdg massive to strongly foliated dioritic to granodioritic gneiss (N. Fiftymile Batholith, Moose Creek orthogneiss)

DMgg moderately to strongly foliated K-feldspar augen-bearing quartz monzonitic to granitic gneiss (S. Fiftymile Batholith, Mt. Burnham orthogneiss)

u altered ultramafic rock occurrence (unit IPu)

c stretched pebble conglomerate occurrence (unit DMsqg)

q quartz-feldspar porphyry dyke (unit eTqfp)

m mafic dyke (unit eTdi)

p granitic pegmatite (unit eJqm)

G gossan

31 mineral occurrence (numbers correspond to revised Yukon Minfile listing)

▲ isotopic age (age ± 2σ error; method used; mineral analysed)

○ outcrop

○ felsenmeer or local float

— depositional layering (bedding)

→ F1 foliation (compositional layering in metamorphic rocks)

→ F1 lineation (mineral stretching lineation)

→ F2 foliation (crenulation cleavage)

→ F2 lineation (crenulation lineation)

— lithological contact (definite, approximate, assumed)

— thrust contact (definite, approximate, assumed)

— low-angle normal(?) fault (definite, approximate, assumed)

— steep fault (definite, approximate, assumed)

Indian and Northern Affairs Canada  
Exploration and Geological Services Division  
Yukon Region

Open-File 1996-1 (G)  
sheet 6 of 6

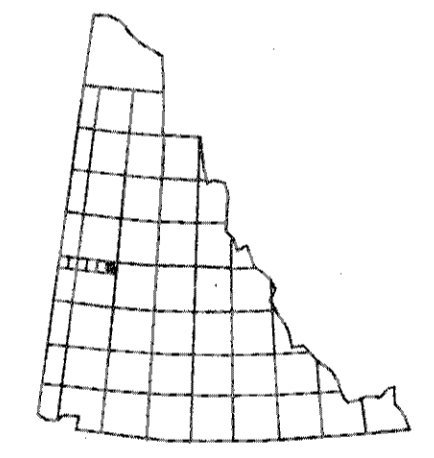
### Geological Compilation Map of the Northern Stewart River Map Area, Klondike and Sixtymile districts, Yukon NTS 115 O/16

1:50 000 scale

by  
James K. Mortensen  
Department of Geological Sciences  
University of British Columbia  
Vancouver, B.C.

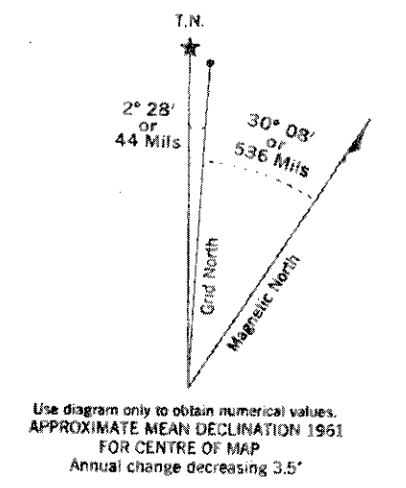
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116 C/2	116 C/1	116 B/4	116 B/3	116 B/2	116 B/1
115 N/15	115 N/16	115 O/13	115 O/14	115 O/15	THIS MAP
115 N/10	115 N/9	115 O/12	115 O/11	115 O/10	115 O/9



GRID TONE EXPLANATION 7V	HOW A SQUARE IDENTIFICATION E 7 N 71
TO GIVE A REFERENCE TO NAMES IN METERS	
EXAMPLE: STREAM JUNCTION	
EASTING: Real number on grid line immediately to left of point	34
ESTIMATED: Estimated number of a square from the line nearest to point	2
NORTHING: Real number on grid line immediately below point	66
ESTIMATED: Estimated number of a square from the line nearest to point	1
METRIC UNIT REFERENCE	26 9380
Means number grid reference 26 9380 meters above 18 miles	

ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 7



### MEDRICK CREEK YUKON TERRITORY

1954

SCALE 1:50,000 ECHELLE

CONTOUR INTERVAL 100 FEET  
Elevations in Feet above Mean Sea Level  
North American Datum 1927  
Transverse Mercator Projection

MAGNETIC DECLINATION 32° 29' EAST  
AT CENTRE OF MAP 1961  
Annual change (decreasing) 3.5

ÉQUIDISTANCE DES COURBES: 100 PIEDS  
Élevations en pieds au-dessus du niveau moyen de la mer  
Réseau géodésique nord-américain d'origine (1927)  
Projection Transverse de Méricator

DÉCLINAISON MAGNÉTIQUE AU CENTRE  
DE LA FEUILLE EN 1961: 32° 29' EST  
Variation annuelle (diminuant) 3,5

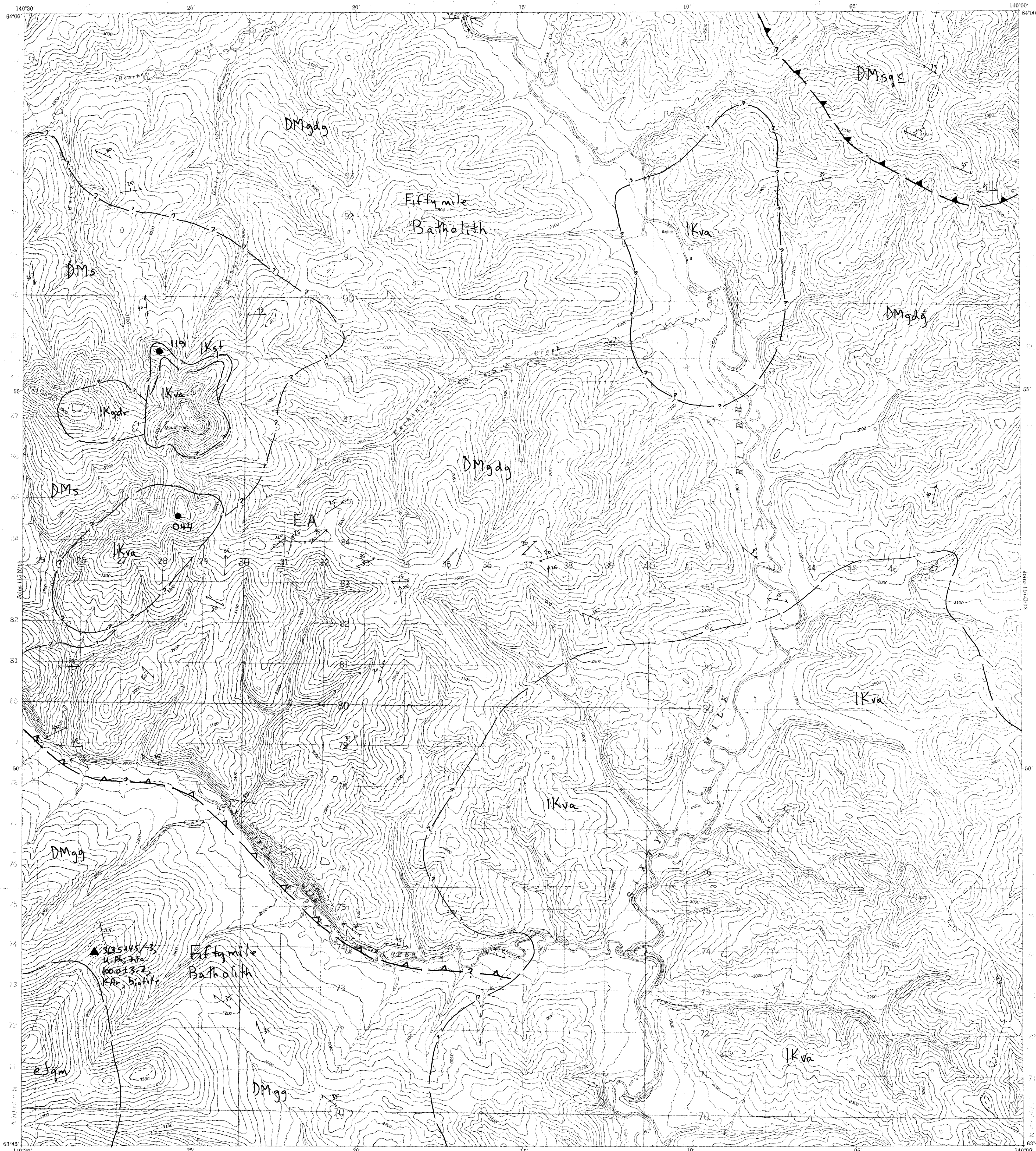
Building	Édifice	Earth	Terre
Church	Église	Gravel	Gravier
Lightning	Éclaircie	Gravel	Gravier
Shore with edge	Rive avec bordure	Gravel	Gravier
Stream, intermittent or dry	Cours d'eau intermittent ou à sec	Gravel	Gravier
Line representing drainage	Ligne représentant une dérivation	Gravel	Gravier
Maple or Sycamore	Maple ou Sycamore	Gravel	Gravier
Depression contour	Contour de dépression	Gravel	Gravier

Produced and printed by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF MINES AND TECHNICAL SURVEYS, 1961, from photographs taken in 1940, 1953 and 1954.

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Yukon Region

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sheet 2 of 6

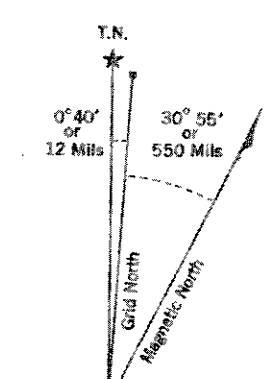
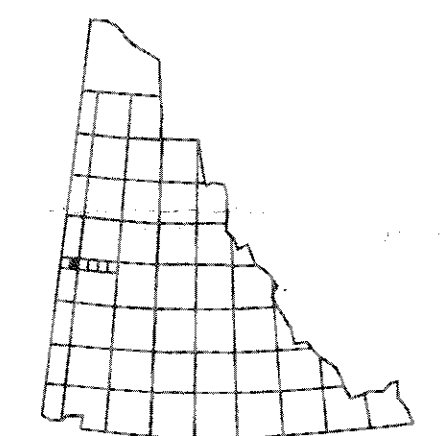
**Geological Compilation Map of the Northern  
Stewart River Map Area,  
Klondike and Sixtymile districts, Yukon  
NTS 115 N/16**

1:50 000 scale

by  
James K. Mortensen  
Department of Geological Sciences  
University of British Columbia  
Vancouver, B.C.

Copies of this map and the accompanying report may be purchased  
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116 C/2	116 C/1	116 B/4	116 B/3	116 B/2	116 B/1
115 N/15	<b>115 N/16</b> THIS MAP	115 O/13	115 O/14	115 O/15	115 O/16
116 N/10	116 N/9	116 O/12	116 O/11	115 O/10	115 O/9

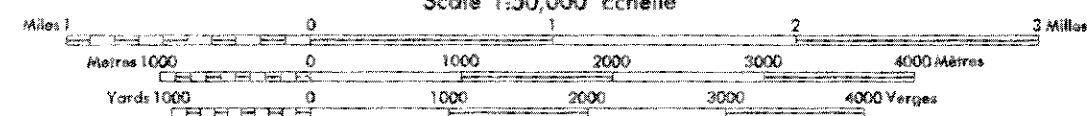


Use diagram only to obtain numerical values.  
APPROXIMATE MEAN DECLINATION 1969  
FOR CENTRE OF MAP  
Annual change decreasing 2.4'

ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 7

**ENCHANTMENT CREEK  
YUKON TERRITORY**

Scale 1:50 000 Echelle



Produced by the SURVEYS AND MAPPING BRANCH,  
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Whitehorse, Yukon Territory, in 1981 and 1985. First survey  
1963. Printed 1986.

Copies may be obtained from the Map Distribution Office,  
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This Provisional Map is prepared to a standard  
map in accordance with:

Some errors in this map are not yet official  
Corrections or additions are invited by the  
Survey and Mapping Branch.

CENTRE MERIDIAN: 120° 00' W  
EQUATORIAL DISTANCE: 2000 Kilometres  
EQUATORIAL DISTANCE: 2000 Kilometres  
EQUATORIAL DISTANCE: 2000 Kilometres

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sur point de vue géométrique et de leur PROJECTION  
en 1980. Imprimé en 1986.

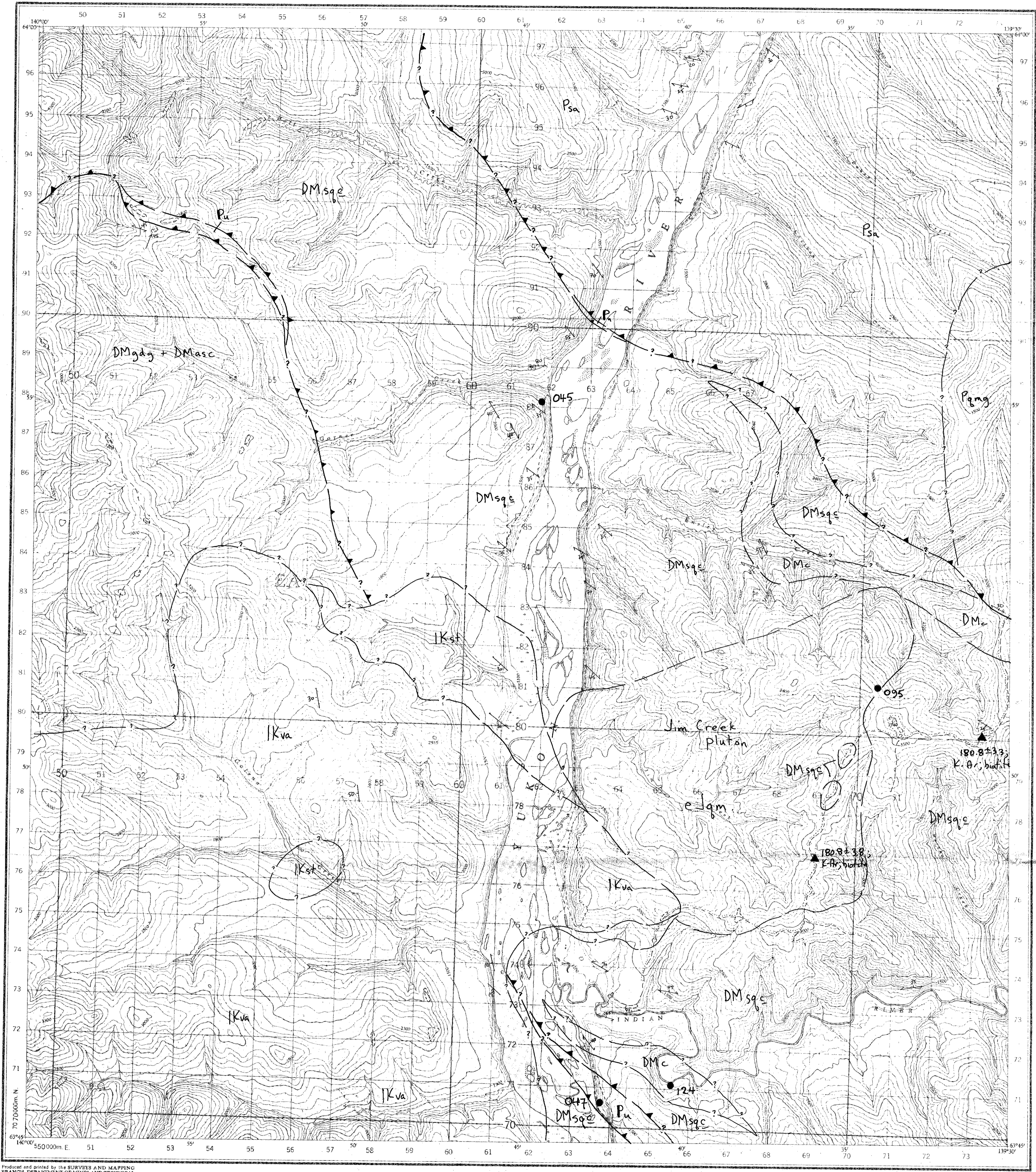
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Échelle: 1:50 000  
Système de coordonnées géographiques: UTM  
Projection: Transverse de Mercator

Échelle au: la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE  
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Yukon Region

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sheet 3 of 6.

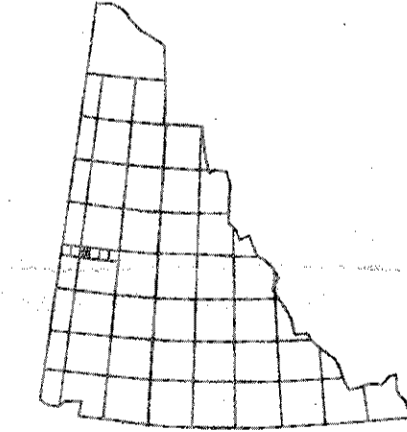
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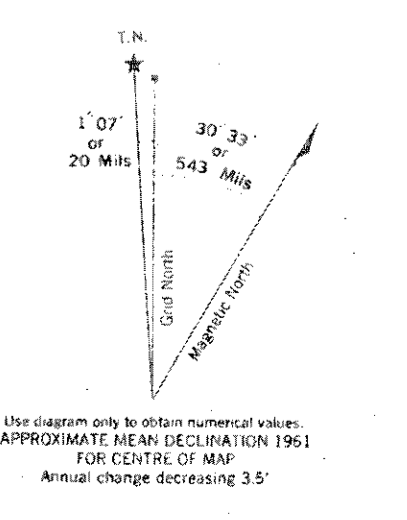
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116 N/15	116 N/14	116 O/13	116 O/14	116 O/15	116 O/16
116 N/10	116 N/9	116 O/12	116 O/11	116 O/10	116 O/9



GRID TILING DESCRIPTION	UNIVERSAL SQUARE IDENTIFICATION
7U	EA

TO ONE A REFERENCE TO NEAREST 100 METRES  
EXAMPLE: POINT  
EASTING: Read number on grid line immediately to right of point  
Easting (metres) of a square from the 100-metre interval  
574  
NORTHING: Read number on grid line immediately below point  
Northing (metres) of a square from the 100-metre interval  
829  
Easting and Northing: 574829  
Refer to table grid reference (page 10) for 1:50,000

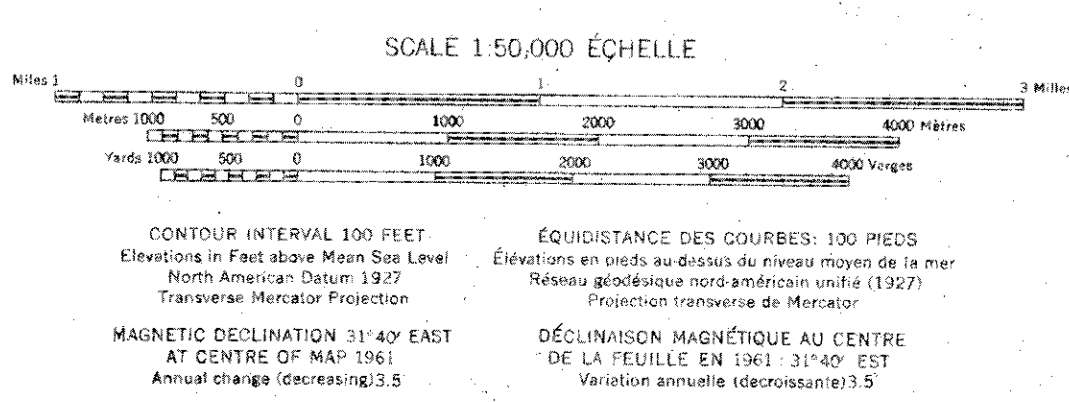
ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 7



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SURVEYS, 1991, from air photographs taken in 1965 and 1962.

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RELEVÉS TECHNIQUES en 1991, d'après les photographies  
aériennes prises en 1965 et 1962.

**GARNER CREEK  
YUKON TERRITORY**

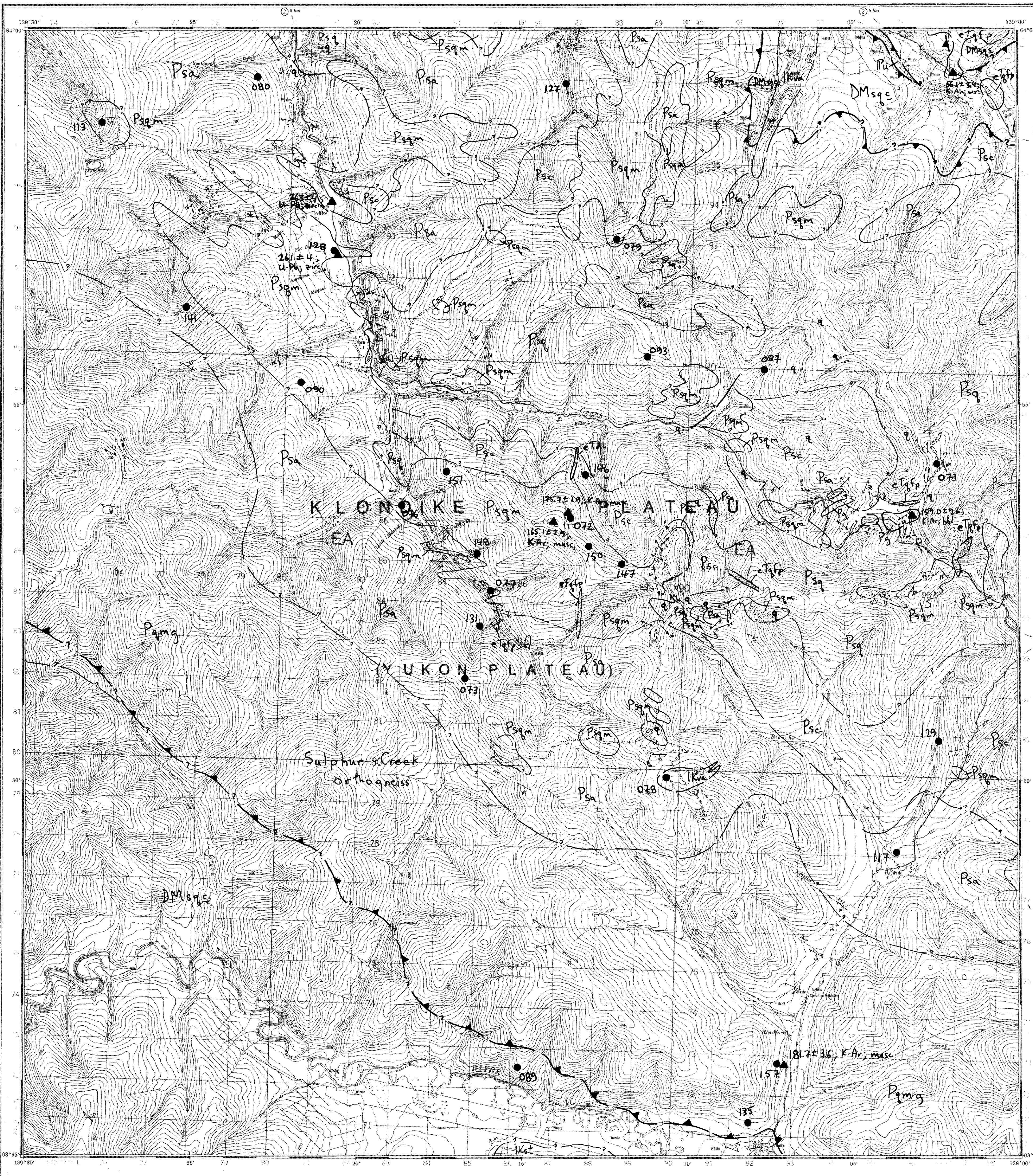


Route	Point
air route	trails
air service	airfield
air track	airfield or portage
road or portage	road or portage
power transmission line	power transmission line
mine or prospect	mine or prospect
horizontal control point with elevation	horizontal control point with elevation
bench mark, with elevation	bench mark, with elevation

Building	Barren	Bank	Gravel
Salt	Ecological	Trail	Gravelly soil
Clay	Ecological	Clay	Gravelly soil
Log	Ecological	Clay	Gravelly soil
Water with stream	Water with stream	Water with stream	Water with stream
Stream, intermittent or dry	Stream, intermittent or dry	Stream, intermittent or dry	Stream, intermittent or dry
Low meadows, wetlands	Low meadows, wetlands	Low meadows, wetlands	Low meadows, wetlands
Hard or stony	Hard or stony	Hard or stony	Hard or stony
Depression contour	Depression contour	Depression contour	Depression contour

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sheet 4 of 6

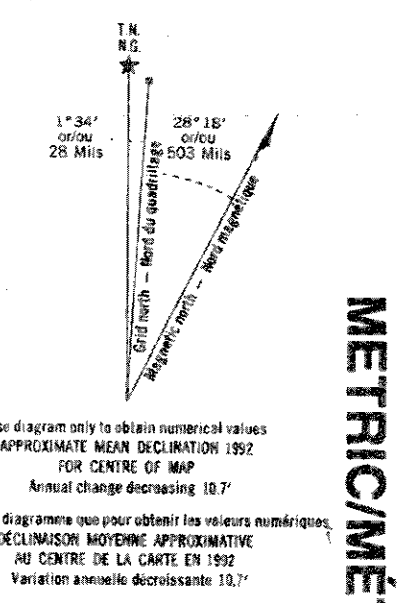
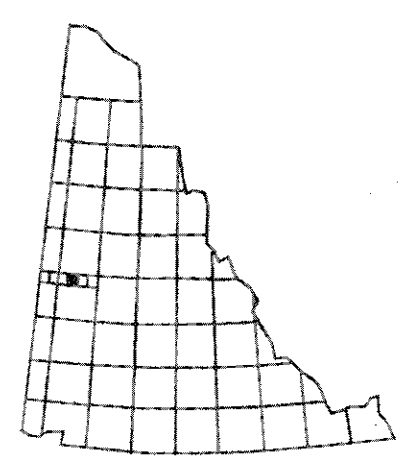
**Geological Compilation Map of the Northern  
Stewart River Map Area,  
Klondike and Sixtymile districts, Yukon  
NTS 115 O/14**

1:50 000 scale

by  
James K. Mortensen  
Department of Geological Sciences  
University of British Columbia  
Vancouver, B.C.

Copies of this map and the accompanying report may be purchased  
from Geoscience Information and Sales, Exploration and Geological Services Division,  
Indian and Northern Affairs Canada, Room 102-300 Main St., Whitehorse, Yukon Y1A2B5  
Ph. 403-667-3204 Fax 403-667-3198

116 C/2	116 C/1	116 B/4	116 B/3	116 B/2	116 B/1
116 N/15	116 N/16	116 O/13	THIS MAP	116 O/15	116 O/16
116 N/10	116 N/9	116 C/12	116 O/11	116 O/10	116 O/9



ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 7  
QUADRANGLE UNIVERSAL TRANSVERSE DE MÉRIDIEN  
DE MILLE MÈTRES

METRIC/MÉTRIQUE

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- Roads:  Road
- Gravel:  Gravel
- Asphalt:  Asphalt
- ... (rest of the legend follows similar format)

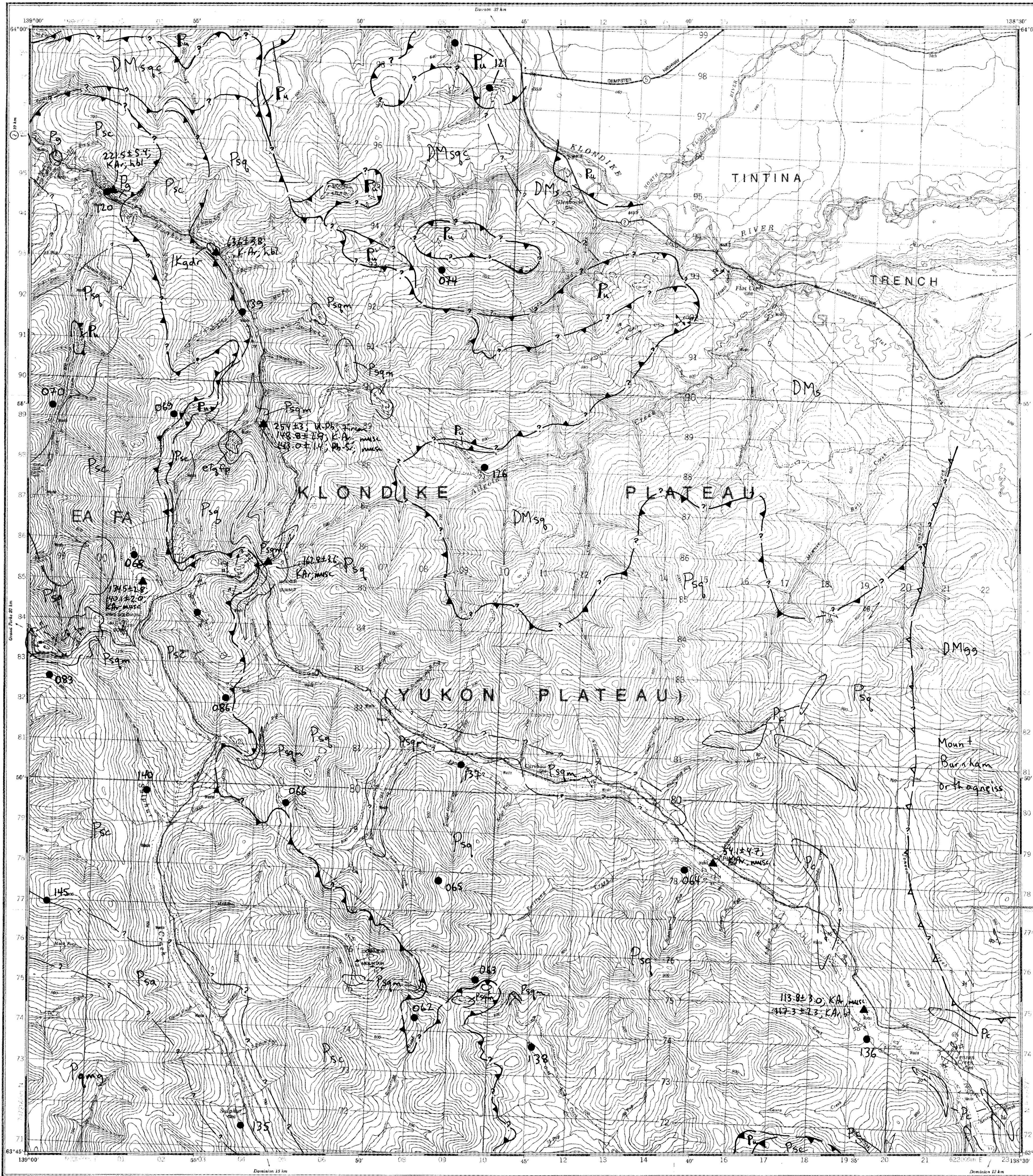
**GRAND FORKS  
YUKON TERRITORY TERRITOIRE DU YUKON**

Scale 1:50 000 Échelle

CONVERSION SCALE FOR ELEVATIONS  
MÈTRES 20 30 40 50 60 70 80 90 100  
FOOT 100 200 300 400 500 600 700 800 900 1000

CONVERSION TABLE FOR ALTITUDES  
MÈTRES 20 30 40 50 60 70 80 90 100  
FOOT 100 200 300 400 500 600 700 800 900 1000

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sheet 5 of 6

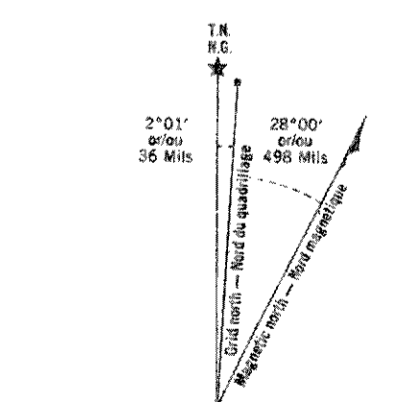
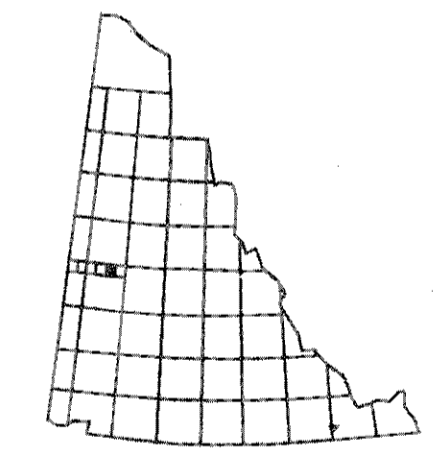
**Geological Compilation Map of the Northern  
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Klondike and Sixtymile districts, Yukon  
NTS 115 O/15**

1:50 000 scale

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James K. Mortensen  
Department of Geological Sciences  
University of British Columbia  
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115 C/2	115 C/1	115 B/4	115 B/0	115 B/2	115 B/1
115 N/15	115 N/16	115 O/13	115 O/14	THIS MAP	115 O/16
115 N/10	115 N/9	115 O/12	115 O/11	115 O/10	115 O/9



Use diagram to obtain numerical values  
approximate to NEAREST MILLIMETER  
FOR CENTRE OF MAP  
Annual change decreasing 11.8

Échelle de conversion des valeurs numériques  
à l'UNITÉ DE LA CARTE EN MÈTRES  
Variation annuelle décroissante 11.8

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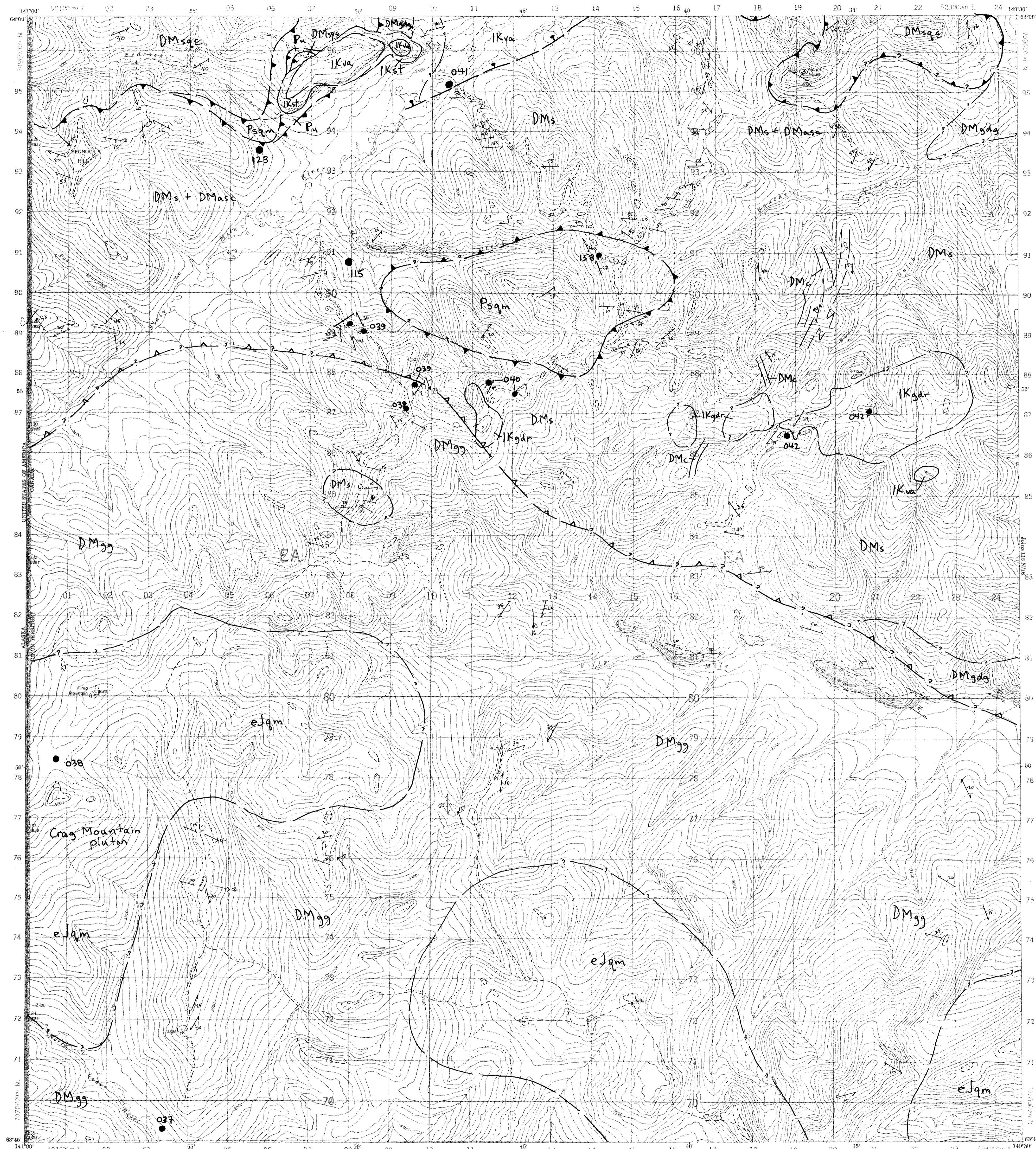
**FLAT CREEK  
YUKON TERRITORY TERRITOIRE DU YUKON**

Scale 1:50 000 Echelle  
Miles 1 0 1000 2000 3000 4000 Miles  
Mètres 1000 0 1000 2000 3000 4000 Mètres

Information concerning bench marks and historical survey monuments can  
be obtained from the Survey of Canada, Ottawa.  
CONVERSION SCALE FOR ELEVATIONS  
Meters 0 50 100 150 200 300 400 500 600 700 800 900 1000 Feet  
Scale 1:50 000

Pour les renseignements concernant les repères de nivellement et les bornes géodésiques, s'il  
y a lieu, s'adresser à la Division des levés géodésiques, Centre canadien des levés, Ottawa.  
ÉCHELLE DE CONVERSION DES ALTITUDES  
Mètres 0 50 100 150 200 300 400 500 600 700 800 900 1000 Pieds  
Échelle 1:50 000

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sheet 1 of 6

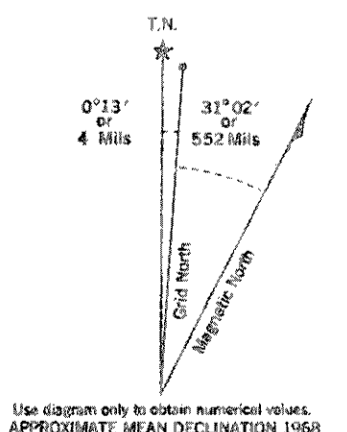
### Geological Compilation Map of the Northern Stewart River Map Area, Klondike and Sixtymile districts, Yukon NTS 115 N/15

1:50 000 scale

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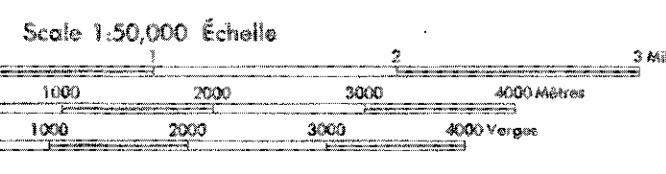
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116 O/2	116 O/1	116 B/6	116 B/5	116 B/2	116 B/1
	115 N/16	115 O/13	115 O/14	115 O/15	115 O/16
	115 N/10	115 N/9	115 O/12	115 O/11	115 O/7



ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 7

### CRAG MOUNTAIN YUKON TERRITORY



Produced by the SURVEYS AND MAPPING BRANCH,  
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Roads: Routes  
Trail or passage: sentier ou passage

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