MAP NO.: 105 B 1

ASSESSMENT REPORT X
PROSPECTUS
CONFIDENTIAL
OPEN FILE X

DOCUMENT NO: 092738
MINING DISTRICT: Watson Lake
TYPE OF WORK: Air Photo Interpretation

REPORT FILED UNDER: McCrory, Preston and Nielsen

DATE PERFORMED: June 12, 1989

DATE FILED: June 16, 1989

LOCATION: LAT.: 60o 09'N

LONG.: 130o 27'W

AREA: Rancheria

VALUE $: 1,600.00

CLAIM NAME & NO.: DK 1-33, 34-49, 51-62, 64-67 YA00594-626, YB00286-301, 303-314, 316-319

WORK DONE BY: Brian P. Fowler

WORK DONE FOR: McCrory, Preston and Nielsen

DATE TO GOOD STANDING:

REMARKS: #4 FIDDLER Airphoto interpretation identified the known showings occurring along a northwest-trending (F2) lineament. Two other similarly oriented lineaments are identified as silver-lead-zinc targets. Four F2-F3 intersecting lineaments are also prime targets (F2 - northwest; F3 - northeast-trending).

AERIAL PHOTO INTERPRETATION REPORT

on the

DK PROPERTY

(DK 1-33, 34-49, 51-62 & 64-67 Claims)

WATSON LAKE MINING DISTRICT

YUKON TERRITORY

Latitude: 60° 09'N

Longitude: 130° 27'W

N.T.S. 105 B/1

for

McCRORY, PRESTON and NIELSEN
522 - 625 Howe Street
VANCOUVER, B.C. V6C 2T6

by

Brian P. Fowler, P.Geol.

12 June, 1989

092738

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 1600.00.

for D A Emond
Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

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SUMMARY

The DK property is situated six kilometres north of the Alaska Highway in the Rancheria area of the Yukon Territory. The property is composed of the DK 1-33, 34-49, 51-62 and 64-67 quartz claims recorded in the Watson Lake Mining District. The claims were staked by T.McCrory of Salmon Arm B.C., B.Preston of Vernon B.C. and M.Nielsen of Pitt Meadows B.C.

The DK property is situated near a group of recently discovered silver-lead-zinc prospects bordering the Cassiar Batholith which comprise the Rancheria Silver belt. All these deposits display similar styles of mineralization with zones of high grade silver.

An air photo interpretation of the DK claims area in 1989 effectively correlated known mineralized occurrences with observeable northwest - southeast air photo lineaments in the region.

Two previously unrecognized northwest - southeast lineaments occur on the DK claims, and warrant prospecting in the field. A possible sulfide "kill zone" has been identified immediately south of and striking into the DK claims, and field examination may confirm the presence of silver-lead-zinc mineralization.

Air photo interpretation has identified four areas of intersecting F2 and F3 lineaments occuring within the DK claim area. Previous experience in the district has shown these areas are most favourable for hosting silver-lead-zinc mineralization.

A follow up prospecting program along airphoto lineaments and intersections as described in this report is recommended. In the event of thick overburden conditions, limited soil geochemistry and EM geophysical surveys may target trenching and diamond drilling efforts.

INTRODUCTION

At the request of Mr. Mike Nielsen of McCrory, Preston and Nielsen, the author was asked to review available literature and perform a preliminary air photo interpretation of the DK property to define additional silver-lead-zinc exploration targets and to fulfill assessment work requirements.

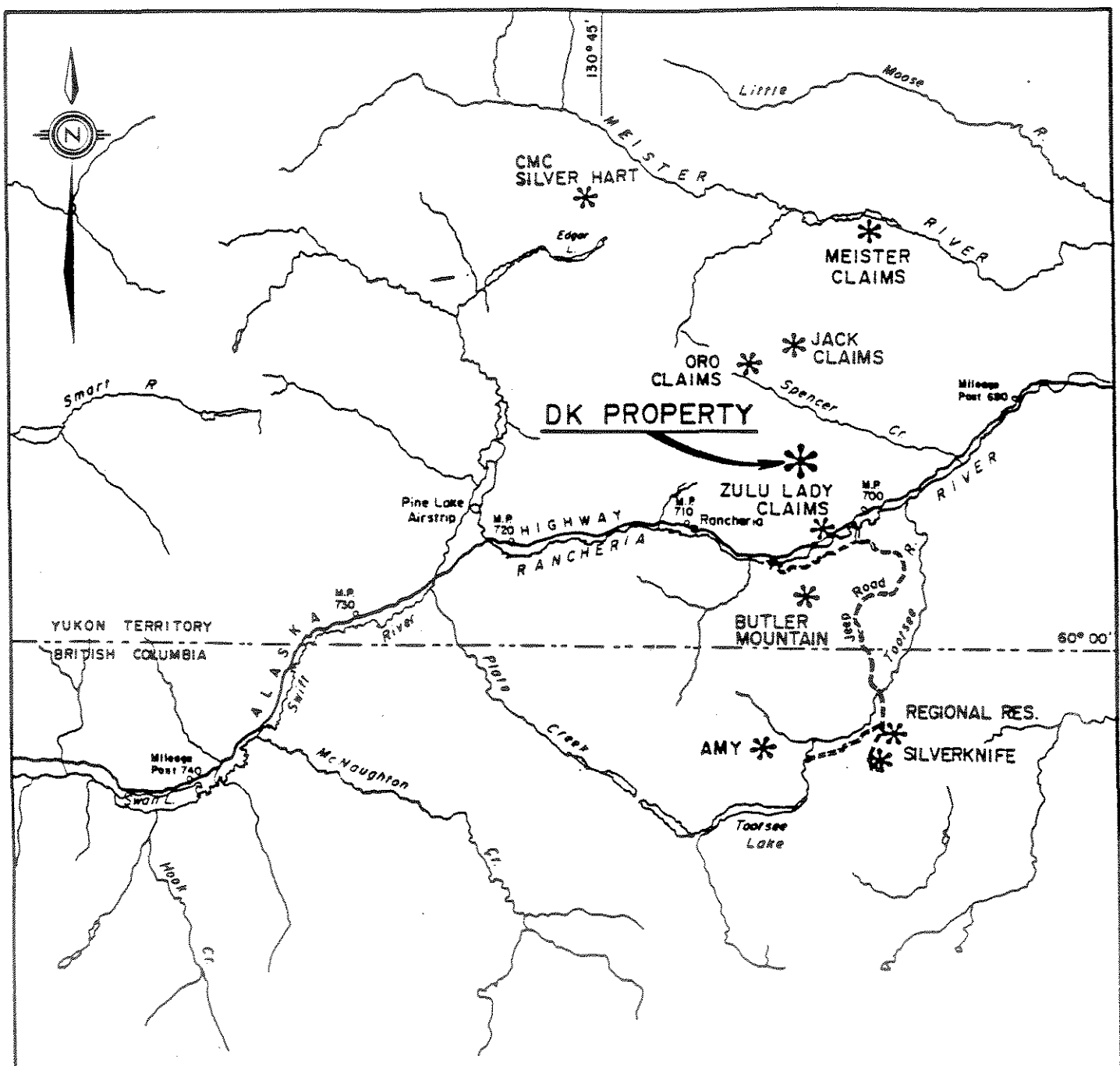
This report is based upon public and private information supplied by McCrory, Preston and Neilsen and upon 4 years personal experience in Ag-Pb-Zn exploration in the Rancheria area.

LOCATION AND ACCESS

The DK property consists of 65 contiguous mineral claims centered at 60° 09' north latitude and 130° 27'west longitude in the Watson Lake Mining District of the Yukon Territory. The N.T.S. map sheet for the area is 105 B/1.

The property straddles the divide between Boulder and Spencer Creeks roughly six kilometers north of the Alaska Highway. Access is gained via an eight kilometer four wheel drive road from Milepost 702 (kilometer 1130) of the Alaska Highway.

Rancheria Lodge, located at Milepost 710 (kilometer 1143) of the Alaska Highway, provides hotel, restaurant and service station facilities. Watson Lake, approximately 160 kilometers to the east, is the closest town and provides full services as well as a commercially serviced airport.



McCRORY, PRESTON & NIELSEN

DK PROPERTY

WATSON LAKE MINING DISTRICT, YUKON TERRITORY

LOCATION MAP

Brian Fowler, P. Geol.

DATE:	SCALE:	FIGURE No.
JUNE, 1989	1: 500,000	1

PHYSIOGRAPHY AND VEGETATION

The DK property centres over a high alpine to sub-alpine ridge. Elevations range from 1,097 metres to 1,615 metres A.S.L. Topography is moderate to steep and scant outcrop exposures are limited to ridge tops.

Vegetation consists of varying thicknesses of balsam spruce, scrub conifers, alder, and dwarf birch. Alpine vegetation is typically mosses and lichens.

CLAIMS INFORMATION

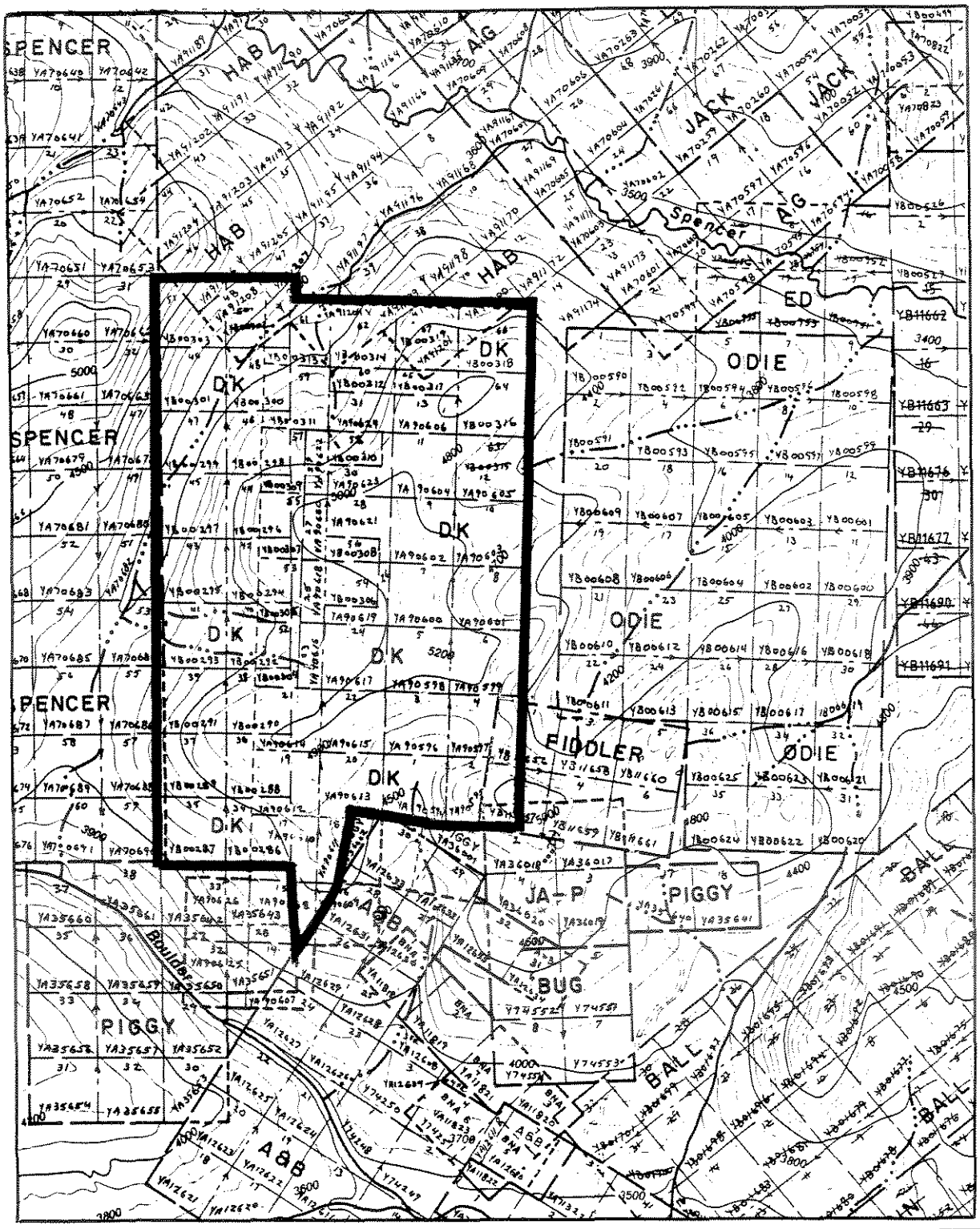
The DK property consists of the following 65 Yukon Quartz claims:

CLAIMS	GRANT NUMBERS	EXPIRY DATE
DK 1-33	YA90594 - YA90626	March 27, 1992
DK 34-49	YB00286 - YB00301	December 12, 1989 *
DK 51-62	YB00303 - YB00314	December 12, 1989 *
DK 64-67	YB00316 - YB00319	December 12, 1989 *

The claims are located in the Watson Lake Mining District and appear on Map Sheet 105 B/1. The DK claims are owned by T.McCrory (40%), B.Preston (40%) and M.Nielsen (20%).

The author has not had the opportunity to inspect any claim posts, but based on previous reports by accredited engineers is satisfied the claims are staked in compliance with the Yukon Quartz Mining Act.

* Denotes dates for which assessment work applied. Confirmation of receipt and acceptance of this application should be made with the District Mining Recorder in Watson Lake, Y.T.



0 1 2

KILOMETRES

McCRORY, PRESTON & NIELSEN

DK PROPERTY

WATSON LAKE MINING DISTRICT, YUKON TERRITORY

CLAIM MAP

Brian Fowler, P. Geol.

DATE: JUNE, 1989	SCALE: 1:30,000	FIGURE No. 2

EXPLORATION HISTORY

The first concerted prospecting efforts in area were during the 1950's and 1960's, which led to the discovery of several silver-lead-zinc and tungsten occurrences.

The Fiddler property, being the most significant tungsten prospect, is situated immediately south of the DK property. It consists of a series of wolframite (tungsten) and cassiterite (tin) bearing quartz veins in Lower Cambrian sediments. Extensive underground development was undertaken in the 1950's and a small mill was built, only to be destroyed by a large forest fire which swept the area in the late 1950's.

The Rancheria area has recently been undergoing extensive exploration for vein and replacement silver-lead-zinc mineralization. Several significant prospects are at various stages of exploration, the most notable of which are the Hart Silver and Meister properties 30 kilometres to the north and northwest of the DK property. Regional Resources' Midway property and the Butler Mountain property are 25 kilometres and 10 kilometres towards the south respectively. The Oro and Jack claims are situated 10 kilometres towards the north and Keno Hill's Freer property is 15 kilometres towards the southwest. All these properties exhibit a vast array of related styles of silver-lead-zinc mineralization with zones of high grade silver mineralization and form what is known as the Rancheria Silver Belt.

The DK property was originally owned by Goldex Resources Inc. of Vancouver, B.C. until 1986. The claims were allowed to lapse and the ground was subsequently restaked for McCrory Holdings (Yukon) Ltd. In July of 1986, the property was optioned to Sunrise Metals Corporation who carried out a limited trenching program on the Pie, Hammer, and MB zones. The property was then optioned to Greenwood Ventures Inc. of Calgary, AB who in 1987 commissioned Searchlite Resources Ltd. of Vancouver to conduct a more detailed trenching and prospecting progamme. Greenwood Ventures relinquished their option in April, 1988, and after a brief prospecting programme in 1988, it was decided to initiate an air photo interpretation of the area. The results of this work are described in this report.

REGIONAL GEOLOGY

The DK property is located on the Wolf Lake Map Sheet (Map 10-1960), which was mapped by W.H. Poole, D.A. Roddick, and L.H. Green for the Geological Survey of Canada between 1951-59. More recently G. Lowey and J. Lowey completed geology maps of Spencer Creek (105/B1) and Daughney Lake (105/B2) at 1:50,000 scale and provided accompanying text (Open File 1986-1). This work was funded under the Minerals Sub-Agreement of the Canada-Yukon Economic Development Agreement.

The following descriptions of lithology and structural geology of the region are condensed from Open File 1986-1 (Lowey & Lowey):

Lithologies:

The geology in the vicinity of the DK property can be divided generally into three belts of diverse rock types: Paleozoic sedimentary rocks of the Cassiar Platform underlie the property and the area towards the east; metamorphosed Carboniferous volcanic and sedimentary rocks of the Yukon Cataclastic Terrane underlie the area several kilometres to the west; and Cretaceous plutonic rocks of the Cassiar Batholith underlie the area between these two belts.

Paleozoic strata includes: Cambrian quartzite, phyllite, interbedded limestone and phyllite, limestone and dolostone (Atan Group; Cambro-Ordovician phyllite and hornfels (Kechika Group); Siluro-Devonian dolostone, siltstone, quartzite and limestone (Sandpile Group); Devonian limestone (McDame Group); and Devono-Mississippian quartzite, metaconglomerate and phyllite (Earn Group). These sediments were deposited in a shallow, marginal marine basin on the western edge of North America.

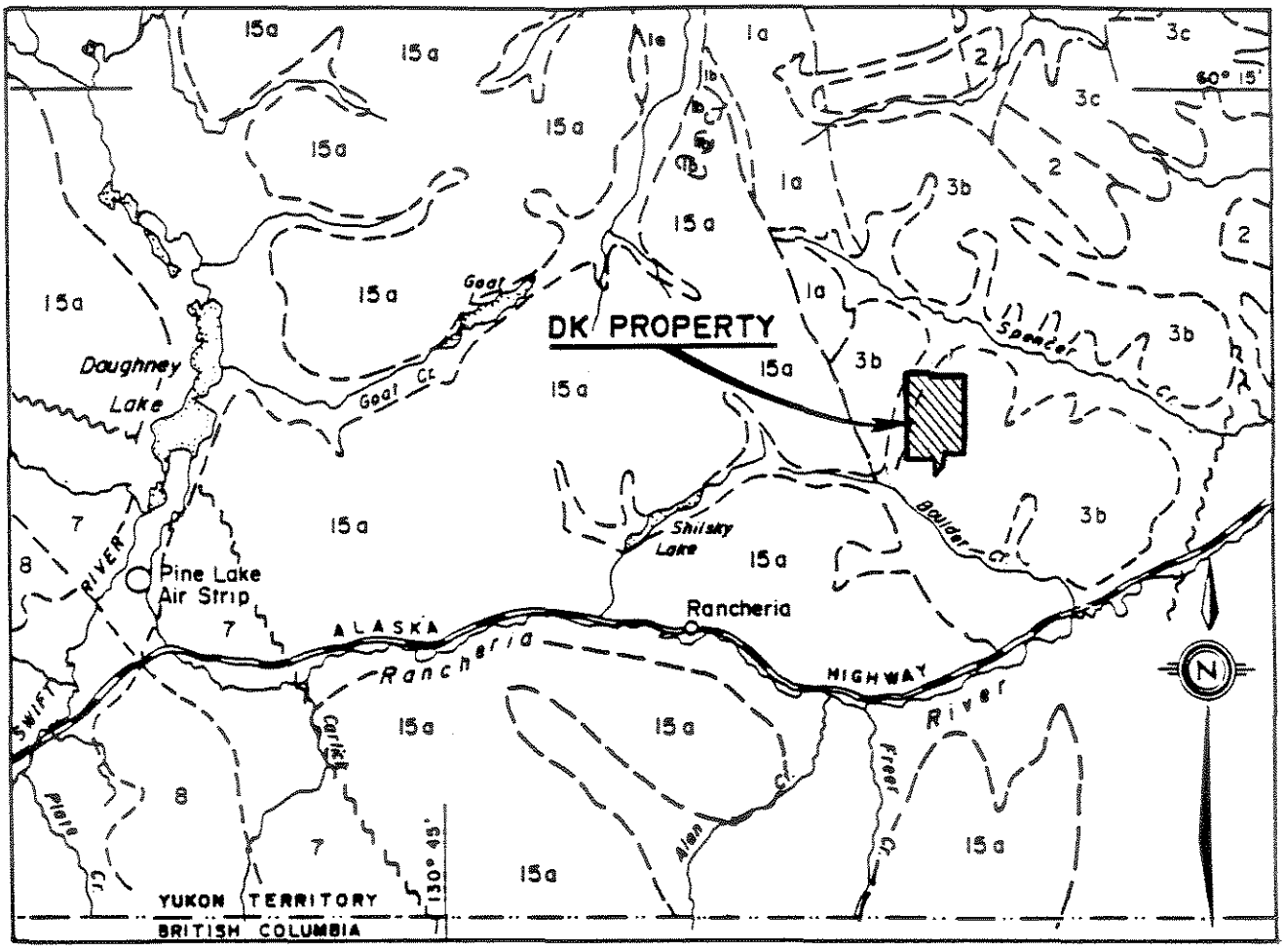
Metamorphosed Carboniferous strata includes Mississippian andesite and intercalated chert (Sylvester Group) and Mississippian-Pennsylvanian mylonite, quartzite and dolostone (unnamed unit). These rocks were thrust over the Paleozoic strata in Late Jurassic - Early Cretaceous time.

The Cassiar Batholith, consisting predominately of granite and granodiorite, intruded both the Paleozoic and Carboniferous strata in Early Cretaceous time.

Large scale movement on several right-lateral transcurrent faults (i.e., Tintina, Kechika and Cassiar) occurred during Late Cretaceous - Early Tertiary time and was followed by widespread emplacement of Tertiary dykes and veins.

Structure:

The regional structural trend in the area of the DK property is northwest, similar to that throughout most of the Cordillera. Pool



LEGEND

CRETACEOUS

15a — CASSIAR BATHOLITH — quartz monzonite

DEVONIAN AND MISSISSIPPIAN

8 — Chert, hornfels, argillite, quartzite & limestone

7 — Greenstone, schist, quartzite, phyllite, slate & chert.

LOWER CAMBRIAN

3b — Limestone, dolomite, slate & phyllite

3c — Limestone, argillite & slate

PRECAMBRIAN(?) AND PALAEOZOIC

CAMBRIAN AND (?) EARLIER

2 — Quartzite, minor slate and phyllite, quartz grit and fine pebble conglomerate
2a, phyllite, minor slate; 2b, hornfels.

1 — Probably metamorphic equivalents of 2; 1a, biotite schist and quartzite; 1b, marble and skarn; 1c, biotite schist and quartzite with sills, dykes, and irregular bodies of pegmatite; 1d, biotite schist and gneiss.

Overburden

KILOMETRES
0 5 10

McCRORY, PRESTON & NIELSEN

DK PROPERTY

WATSON LAKE MINING DISTRICT, YUKON TERRITORY

REGIONAL GEOLOGY

Brian Fowler, P.Geol.

DATE: JUNE, 1989	SCALE: 1: 250,000	FIGURE No. 3

et. al., (1960) recognized that the dominant structure is an anticlinal area occupied by the Cassiar Batholith which is flanked to the east and west by major northwest trending synclines. Poole *et.al.* (1960) suggested that Lower Paleozoic strata to the southeast of the property is isoclinally folded, but the repetitive nature of the strata (*i.e.* phyllite, interbedded limestone, and phyllite and dolostone), indicates that northeasterly directed imbricate thrust faulting may have occurred.

Three distinct phases of structures are recognized in the Rancheria area. The first phase (F1) includes bedding and slaty cleavage. The second phase (F2) trends northwest and includes crenulation cleavage and associated lineations and folds. The third phase (F3) is approximately 90° to the second phase and trends easterly to northeasterly. The latter phase includes jointing and associated lineations and folds.

It has been suggested by Lowey (1986) that the second phase predates emplacement of the Cassiar Batholith and is related to northeast-southwest compression of allochthonous terraine in Late Jurassic-Early Cretaceous time. It is hypothesized that the stress field generated by subsequent lateral transcurrent movement along the Kechika and Cassiar Fault zones generated small scale, north trending extension faults and jointing (F3).

Mineralization:

The following has been derived from F.M. Smith's 1987 report on the DK property for Greenwood Ventures Corporation:

Several different types of mineral occurrences lie within the Rancheria district. These include quartz and carbonate veins containing galena, sphalerite, freibergite, tetrahedrite, pyrite and minor chalcopyrite in granite of the Cassiar Batholith and in Lower Cambrian sediments; replacement-type galena-sphalerite deposits with minor silver in the Lower Cambrian sediments; galena-sphalerite bearing quartz veins in Carboniferous mylonite and quartzite; chimney/manto type replacement galena-sphalerite-pyrite of Devonian carbonates, and tungsten bearing skarns in roof pendants within the Cassiar Batholith.

Most of the silver-rich mineral occurrences in the district exhibit similar characteristics which suggest a common genesis. The presence of silver-lead-zinc mineralization in quartz and carbonate veins appears to be controlled by three parameters:

1. the presence of a group of rocks with relatively high backbground values in silver, lead and zinc. (*i.e.* the Lower Cambrian sediments),

2. close proximity to the margin of the Cassiar Batholith,

3. northeast to east trending (F3) jointing and faulting accompanied by injection of hydrothermal solutins of approximately 50 Ma age.

A proposed genetic model for silver mineralization is as follows (after Boyle, 1965 and Lowey and Lowey, 1986):

a) Early Cretaceous intrusion of the Cassiar Batholith into the Lower Cambrian sediments which concentrates silver, lead and zinc along its margins (replacement type deposits),

b) Late Cretaceous-Early Tertiary dextral movement on large transcurrent faults such as Tintina, Kechika and Cassiar Faults which led to the development of a northeast to east trending fracture system,

c) Early Tertiary (50Ma) volcanism and dyke emplacement related to transcurrent fault movement resulting in a rise of the geothermal gradient and convective heat flow,

d) Hydrothermal solutions migrate along the northeast to east trending fracture system in the now enriched granites and Lower Cambrian sediments and minerals precipitate in dilatant zones. Several phases of injection take place temporally related to the fracturing event and dyke emplacement.

PROPERTY GEOLOGY

The DK claims are underlain by northwest striking Lower Paleozoic sediments of the Atan Group consisting mainly of interbedded limestone and phyllite with occasional massive limestone and dolostone.

F.M. Smith (1987) states that " the limestone is light grey, weathers light grey-brown, and is finely crystalline. The phyllite is medium grey and weathers light grey to light silvery grey. Both limestones and phyllite beds are generally less than 10 cm in thickness and are highly folded and cut by numerous faults and minor shears."

No grid scale mapping has been carried out on the DK property. Detail trench mapping of the more significant showings has been performed by past operators.

Mineralization:

The following has been derived from F.M. Smith's 1987 private report for Greenwood Ventures Inc.:

"Several silver bearing quartz and carbonate veins occur on the property. These veins are all recent discoveries and were primarily found by looking for manganese oxide coatings and were probably overlooked by the early prospectors due to their recessive weathering nature".

"To date, the mineralization of this type found on the property is composed of galena and freibergite with lesser amounts of sphalerite, pyrite and arsenopyrite in quartz and carbonate veins. The veins pinch and swell considerably, reflecting the dilatant areas or "rolls" in the fault zones they are filling".

"Initial prospecting early in 1986 uncovered the presence of abundant manganese oxide stained fragments on the higher parts of the property. Detailed prospecting accompanied by hand trenching revealed a series of east to northeast trending mineralized fractures at approximately 32 metre intervals. Prospecting also discovered several northwesterly trending structures which appeared to better mineralized".

"The prospecting in 1986 gave sufficiently encouraging results to warrant continuing exploration through bulldozer and blast trenching. The trenching initially concentrated on exposing the east to northeast trending fractures such as the N and L zones. Emphasis then shifted to the wider northwesterly trending structures. Three strongly mineralized shears were uncovered on the property; the Pie, the Hammer and the M.B. zones. Detailed prospecting in July, 1987, led to the discovery of a number of new zones in addition to those discovered in 1986. These new zones were usually revealed by the presence of manganese alteration. The Parallel Zone was found as a result of the discovery of float samples of galena with high silver values of 66.5 and 61.8 oz/ton. The PHD, (the southerly extension of the M.B. Zone) Gully and DS Zones were also discovered at this time."

"The Pie, Hammer and M.B. Zones on the DK property, unlike other silver-rich veins in the Rancheria area, strike northwesterly". These veins appear to have formed along the earlier F2 structures related to the northeast southwest compression of the region in Late Jurassic - Early Cretaceous time. The N, L and Gulley zones are more typical of the region and probably formed along younger northeasterly F3 structures. "The style of mineralization in both types of vein is the same as other silver deposits in the area."

"The sampling carried out in 1986 indicates the presence of silver in grab samples up to 260 ounces/ton with lead values up to 70 per cent. The preliminary sampling on the DK property in 1987 gave values up to 66.5 ounces/ton silver from grab samples."

AIR PHOTO INTERPRETATION

The most recent air photographs available to the author for the DK property were black and white, 1:40,000 scale photos which were taken in 1948. The quality and overlap proved exceptional, and the photos were obtained from the Maps and Air Photos Department of the University of Calgary Library. While the area has changed considerably in the past 40 years, interpretation could not be confused by post 1948 man made features such as trenches, roads, etc.

The author has first hand knowlege of the effectiveness of air photo interpretation in the Rancheria district. In 1987, the author managed an agressive surface exploration program on Silver Hart Mines Ltd. extensive claim block towards the north. An air photo interpretation of this region (CAR, SH, BEA, SAB, CMC claims) was commissioned in early 1987 and proved invaluable in directing regional prospecting efforts.

The most obvious lineaments observed in the DK area trend northeast-southwest, and probably represent large scale F3 structures (Red lines - Fig.4). The Fiddler deposits immediately south of the DK property occur along one of the strongest lineaments in the area along this trend. Two less pronounced lineaments of similar orientation occur approximately 800 metres and 1200 metres northwest of the Fiddler deposits well within the DK claim boundary. These structures, labelled "A" and "B" (see Fig.4), can be traced over a distance of approximately 2 kilometres.

Immediately south and towards the western limits of Structure "A", an unusual series of linear swaths devoid of trees occurs in a moderately forested area. Labeled "KZ", this could represent sulfide kill zones along smaller, sympathetic shear zones and definitly warrants field investigation. Although this area plots outside the DK claim boundary on government claim maps, experience in the area has shown that plotted claim boundaries are usually +/- 0.5 kilometres from their true position, and that the area could be well within the DK claim boundary.

Four smaller lineaments (C,D,E and F) of similar orientation occur in the main showings area (Pie, Hammer, M.B., Parallel, Gully, and PHD Zones). The Gully and Parallel zones occur along Structure "C", and the Pie Zone occurs just south of Structures "D and E" (See Fig.4) These structures are traceable for less than 1.0 kilometre or so, but nevertheless should be prospected thoroughly due to their observed association with mineralization in the area.

Other large linears trending northeast-southwest occur towards the northern limits of the DK property. Structure "H" is approximately 2.4 kilometres north of Structure "B" and is traceable for 2.0 kilometres. Occurring within the northern portion of the DK claim

block, this structure is large and presently unexplored. Structure "I" occurs off the DK claims towards the east, and appears to terminate at the claim boundary. Structure "J" was first observed by Lowey and Lowey (1986), and is traceable for 7.0 kilometres. This structure cuts through the northwest corner of the claims area, and being the most pronounced structure in the area, should be investigated in the field.

The second strongest set of lineaments within the area trend northwest-southeast, and probably represent earlier F2 structures, related to northeast-southwest compression of allochthonous terraine in Late Jurassic - Early Cretaceous time (Lowey and Lowey, 1986). Traced in blue on Fig.4, these structures are much less pronounced than the F3 lineaments, but are observed to be directly associated with known mineralization on the DK property.

The southernmost structure (K) occurs in the southeastern corner of the DK claim block and can be observed over a distance of approximately 600 metres. While no showings are known to be associated with this structure, mapping by Lowey and Lowey (1986) has outlined sinkholes and breccia occurrences along this lineament. To the author, this only substantiates the presence of a significant tectonic structure in the vicinity. Structure K appears to intersect northeast trending structure B on the eastern claim boundary. More will be said about intersecting structures later in this section.

As stated earlier, the better mineral occurrences on the DK property (Pie, Hammer, M.B. Zones) occur along northwest - southeast trending structures. This trend is readily visible, and the above named showings all occur along a 700 metre lineament labelled structure "L". A better exploration tool for the area would be hard to come by.

The northernmost F2 structure, labelled structure "M", occurs 700 metres north of the Pie Zone. Traceable for 800 metres, this lineament bisects a northeast trending ridge and should be considered a prime exploration target.

It bears mentioning that reconnaissance mapping of the area by Lowey and Lowey (1986) shows that F1 structures (bedding) are of similar orientation to F2 strucutes in the DK claims area. This lends to the possibility that mineralization in the area may be controlled more by stratigraphy and less by fault structures. This being the case, exploration in the area would have to be geared more towards stratiform mineralization. Additional exploration in the form of trenching, detail mapping and prospecting of the area may lead to the definition of typically larger, lower grade stratiform silver-lead-zinc deposits.

As stated earlier, Rancheria vein silver-lead-zinc deposits tend to occur in northeast-southwest and lesser northwest-southeast

trending structural breaks. Personal experience in the district also shows that the best vein mineralization is usually confined to vein fault splits and the intersection of two or more structures. This is probably due to the higher density of fractures typical of this environment, which aids to the movement and accumulation of ore solutions.

Four areas where 2 or more structures are observed to intersect occur within the DK claims. These have been labelled 1 to 4 (Fig.4), and all should be prospected thoroughly. Should overburden conditions prohibit effective prospecting, geochemical, geophysical and/or trenching should be considered in these areas.

CONCLUSIONS

1. Known mineral deposits on the DK claims are directly related to northwest-southeast (F2) and lesser northeast - southwest (F3) structural lineaments.

2. Air photo interpretation of the DK property can readily identify the larger F2 and F3 structures.

3. The major DK showings (Pie, Hammer and M.B.) are observed in the field and on air photos to occur along a northwest-southeast trending lineament.

4. Two other lineaments of similar orientation were observed by air photo interpretation of the claims area, and constitute prime silver-lead-zinc exploration targets.

5. Air photo lineaments (F2 and F3) are observed to intersect in no less than four areas, and past experience in the district identifies these areas as prime exploration targets.

RECOMMENDATIONS

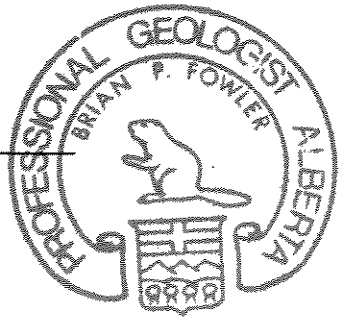
It is recommended that lineaments and exploration targets defined by air photo interpretation of the DK claims area be investigated in the field with details as follows:

1. Investigate the possible sulfide kill zone (KZ) associated with structure "A", and determine whether it is located within the DK claim boundary.

2. Concentrate future prospecting along northwest-southeast (F2) lineaments as described in this report.

3. Prospect in detail areas 1 - 4; areas of intersecting F2 and F3 structures.

4. In the event overburden conditions prohibit effective prospecting, small scale soil geochemistry and EM geophysical surveys would be an effective means for directing followup trenching and diamond drilling.



Brian P. Fowler, P.Geol.
June 12, 1989

STATEMENT OF COSTS

DK 34-49, 51-62 & 64-67 claims

Wages:	Office: Geologist 5 days x $300/d	1500.00
Contract drafting:	Tiessen Mapping Inc.	200.00
Printing, office supplies:	Alphagraphics	50.00
	TOTAL:	$1,750.00

CERTIFICATE

I, Brian P. Fowler, do hereby certify that:

1. I am a practicing Mining Geologist and my address is 105 - Shannon Crescent S.W., Calgary, Alberta T2Y 2T7.

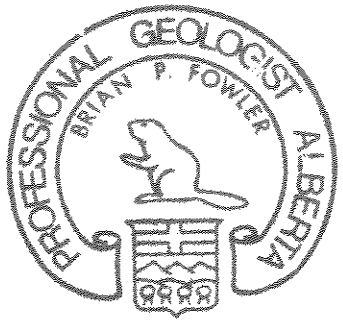
2. I am a 1981 graduate in Geology from the University of Alberta, and have engaged in practicing my profession on a full time basis for 9 years.

3. I am a member of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta and a Fellow of the Geological Association of Canada.

4. I have never visited the DK claims, and that this report is based on 4 seasons of personal experience in the area, available public and private maps and reports and an air photo interpretation carried out by the author.

5. I have no interest direct or indirect in the properties of McCrory, Preston and Nielsen or in any companies with contiguous property to the DK claims.

Brian P. Fowler, P.Geol, FGAC



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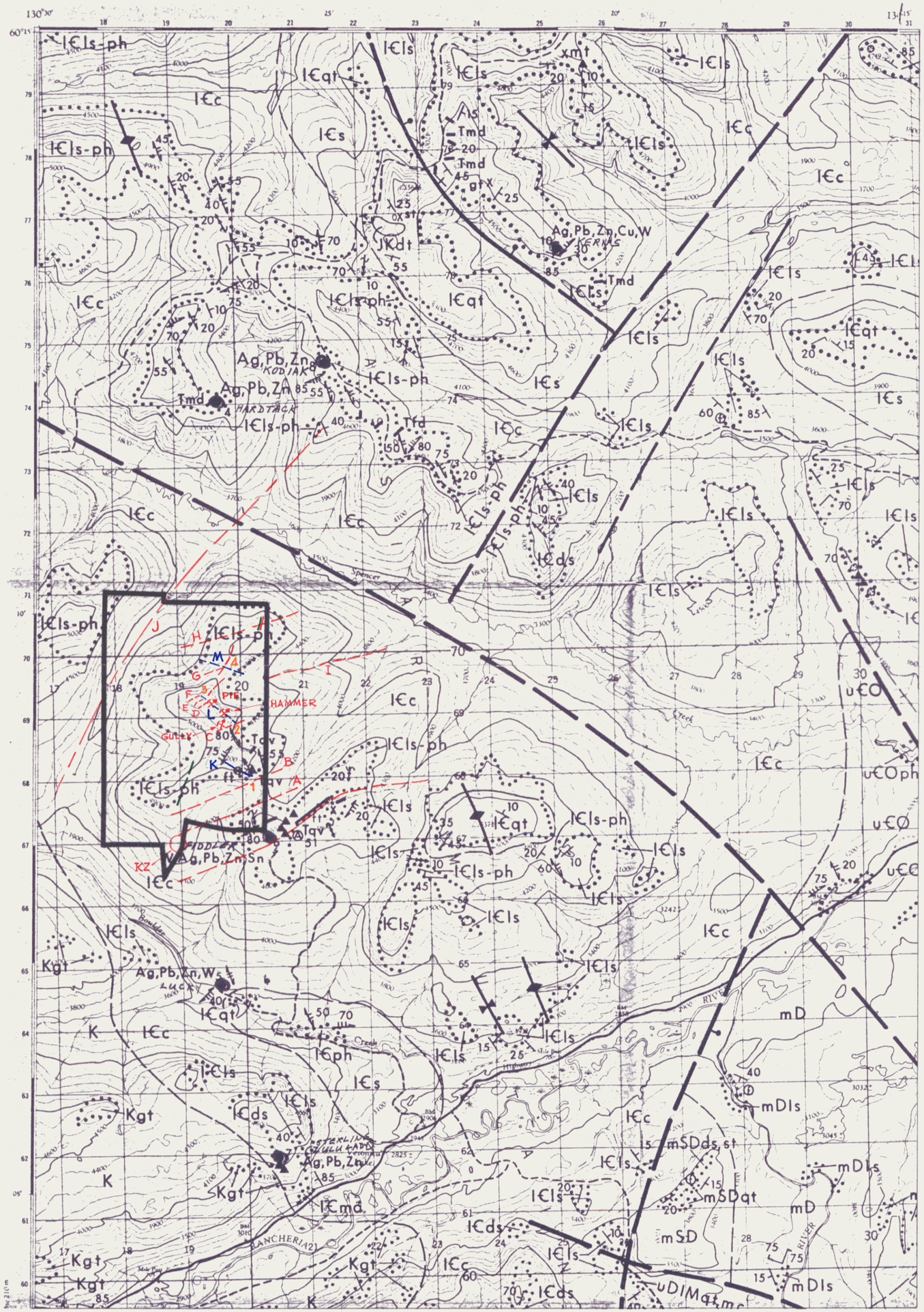

Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

LEGEND

QUATERNARY
Pleistocene and Recent
Q unconsolidated glacial, glaciofluvial, glaciolacustrine, alluvial and soil deposits

Qbt basalt: porphyro-aphanitic with light green, 0.5 to 1 mm olivine phenocrysts in a light to dark brown groundmass; subaerial flows 2 to 5 m thick, flow tops marked by vesicular ropy basalt; columnar jointing locally present

TERTIARY
Eocene (?)
Tmd mafic dykes: porphyro-aphanitic with biotite and rarely augite phenocrysts in a dark green groundmass; up to 1 m thick.

Tfd felsic dykes: porphyro-aphanitic with quartz and albite phenocrysts in a light grey groundmass; up to 1 m thick

Tqv quartz veins: light grey, generally coarsely crystalline; associated minerals may include feldspar, pyrite, galena, sphalerite, siderite and lepidolite; generally less than 0.5 m thick

CRETACEOUS
K — unsubdivided granite, granodiorite, orthogneiss and sheared and fectonized granite
Kgt granite: speckled light grey or light red and dark black; phaneritic, medium to coarsely crystalline and equigranular to porphyritic with up to 5 cm long orthoclase phenocrysts; of 40% alkali feldspar, 30% quartz, 20% plagioclase and 10% biotite and/or muscovite. Minor amounts of granodiorite locally present

Kog orthogneiss: medium to dark grey and speckled light grey or light red and dark black; consists of augen of albite in a cataclastic matrix of quartz, feldspar and mica. Minor amounts of sheared and fectonized granite are present

JURASSIC (?) and CRETACEOUS
JKdt dacite: light grey-green to dark black; phaneritic, medium crystalline and equigranular; consists of 60% plagioclase, 20% biotite and 20% hornblende (?).

MISSISSIPPIAN and PENNSYLVANIAN (?)
unsubdivided mylonite, breccia, quartzite and dolostone
MPds dolostone: light grey, very finely crystalline dolomite, massive

MPmy mylonite: interlayered light and dark laminae of very finely crystalline quartz

MPqt quartzite: light grey-green, modal grain size is fine grained sand; mineralogically a quartzarenite with minor chlorite and muscovite.

MISSISSIPPIAN
Mat,ch intercalated andesite agglomerate and chert: andesite agglomerate is porphyro-aphanitic with 1 to 2 mm long hornblende phenocrysts in a light to medium green groundmass; andesite blocks range from 1 to 30 cm in length. Chert is medium green, horizontally laminated and bedded. Minor amounts of medium red argillite are locally present

DEVONIAN and MISSISSIPPIAN
unsubdivided quartzite, metaconglomerate, phyllite, argillite and schist
uDIMqt,mc interbedded quartzite and metaconglomerate: quartzite is dark grey, modal grain size is medium grained sand, mineralogically a lithanite. Metaconglomerate is dark grey, modal grain size is fine to coarse pebble gravel, mineralogically a chert pebble lithrudite. Minor amounts of black argillite and plant fragments are locally present

uDIMph phyllite: medium black, thin interbedded quartzite beds are present. Minor amounts of schist and argillite are locally present

DEVONIAN
mD — unsubdivided limestone and minor amounts of dolostone
mDls limestone: light to dark grey, finely crystalline, massive or horizontally bedded, poorly preserved fossils (spaghettistone) are present. Minor amounts of interbedded black fetid dolostone and limestone are locally present.

SILURIAN and DEVONIAN
mSD — unsubdivided dolostone, siltstone, quartzite and limestone
mSDls limestone: medium grey; finely crystalline; horizontally laminated and bedded

mSDqt quartzite: medium to dark grey, modal grain size is medium sand, mineralogically a quartzarenite with zircon and tourmaline common, horizontally laminated and bedded. Minor amounts of phyllite are locally present

mSDds,st dolostone and siltstone: light to medium grey, weathers medium grey to light brown, finely crystalline massive or thin bedded, trace fossils are present.

CAMBRIAN and ORDOVICIAN
uCO — unsubdivided phyllite, hornfels and minor limestone
uCOph phyllite: light to medium grey, weathers light silver-grey, highly folded, minor amounts of black argillite and rare amounts of limestone are locally present

uCOhs hornfels: light grey brown, weathers light red-brown, finely laminated, magnetite and pyrite present along fractures. Minor amounts of marble and skarn are locally present

CAMBRIAN
lЄc — unsubdivided carbonates, includes interbedded limestone and phyllite, limestone, dolostone, marble and minor schist
lЄma marble: light grey, coarsely to very coarsely crystalline, laminated and bedded. Minor amounts of schist are present

lЄds dolostone: light grey, weathers light red, ranges from fine to coarsely crystalline; generally massive, bisolites are locally present

lЄls limestone: medium grey, finely crystalline to bioclastic. archaeocyathids are locally abundant and trilobite fragments, oolites and pisolites may be present.

lЄls-ph interbedded limestone and phyllite: limestone is light grey and weathers light grey-brown, finely crystalline, massive or horizontally laminated. Phyllite is medium grey. Both limestone and phyllite beds are generally less than 10 cm thick and highly folded. Minor amounts of marble and schist are locally present

lЄs — unsubdivided siliciclastics, including quartzite and phyllite and minor amounts of limestone

lЄph phyllite: medium brown, thin interbedded quartzite beds and rare limestone beds are locally present

lЄqt quartzite: light grey to medium brown, modal grain size is medium sand, mineralogically a quartzarenite with zircon rare, massive. Minor amounts of dark brown argillite are locally present.

* unconsolidated deposits on the map are represented by the unsubdivided part of the lithostratigraphic units and lie outside of the outcrop symbol

SYMBOLS

- area of bedrock outcrop
- float
- geological boundary, observed
- geological boundary, interpreted
- fault, observed
- fault, assumed (dot indicates down thrown side, arrows indicate horizontal movement)
- thrust fault, assumed
- F_1 structures: bedding (S_0), inclined
- slaty cleavage (S_1), inclined
- F_2 structures: crenulation cleavage (S_2) inclined, vertical
- multiple folds, arrows indicate fold axis (f_2)
- F_3 structures: jointing (S_3) inclined
- small-scale folds, arrow indicates plunge of fold axis (f_3)
- anticline
- syncline
- jointing (in plutonic rocks), inclined
- fossil locality
- locality where age has been determined in million of years
- sinkhole, cave
- breccia
- dyke or vein
- mineral deposit or prospect
- mineral locality
- magnetite (mt)
- pyrite (py)
- specularite (st)
- fluorite (ft)
- goethite (gt)
- silver (Ag)
- lead (Pb)
- zinc (Zn)
- tin (Sn)
- copper (Cu)
- tungsten (W)
- molybdenum (Mo)
- gold (Au)
- primary road
- secondary road
- DK Ag-Pb-Zn Showing
- Airphoto Lineaments

Geology by G.W. Lowey and J.F. Lowey, 1985

Open File no. 1986-1

Drawn by the N.A.P. Drafting section

Approximate magnetic declination in 1985 was 30°27' east and decreasing 4.5' west annually

Elevations in feet above mean sea level; contour interval 100 feet

This map accompanies the following report:
Lowey, G.W. and Lowey, J.F. 1986. Geology of Spencer Creek (105B/1) and Daughney Lake (105B2) map areas, Rancheria district, southeast Yukon. Exploration and Geological Division, Yukon, Indian and Northern Affairs Canada. Open File Report 1986-1, with two 1:50,000 scale maps with marginal notes.

Funded by Canada-Yukon Economic Development Agreement (Contract YEDA-85-01)

McCRORY, PRESTON & NIELSEN

DK PROPERTY

WATSON LAKE MINING DISTRICT, YUKON TERRITORY

AIRPHOTO LINEAMENTS & GEOLOGY

Brian Fowler, P. Geol.

DATE: JUNE, 1989 SCALE: 1 : 50 000 FIGURE NO. 4

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