The Geology of the King #1 Claim,

Mile 8.8 Perry Creek Road,

Ft. Steele Mining Division, B.C.

82F/9E

Owner: H.W. Ziemand,

High River, Alberta

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Statement of Qualifications:

H.W. Ziemand, P.Geol.

Education:

B.S.-Geology- Temple University, Philadelphia, Pa., U.S.A. (1955)

Graduate work in geology at Univ. of Wyoming, Univ. of Colorado.

Applicable Working Experience:

1. Globe Mining Co. -- Casper, Wyoming (1955)

   Uranium prospecting, claim surveying

2. U.S. Geological Survey -- Anniston, Alabama & Denver, Colorado (1956-1962)

   Groundwater geology, topographic mapping, research in sedimentology and geomorphology.

3. Chen & Associates - Consulting Engineers -- Denver, Colorado (1971)

   Engineering geology.

4. R.M. Hardy & Associates - Consulting Engineers -- Calgary, Alta. (1971-1973)

   Engineering geology.

5. Self-employed -- Consulting Petroleum & Engineering Geologist
   High River, Alta. (1973-1974)

6. At present employed by Underwood McLellan & Associates -- Calgary

Current work includes supervision of a drilling program on a tar sand lease owned by Tenneco Oil and Minerals Ltd. in north-eastern Alberta.

Memberships:

1. Assoc. of Professional Engineers, Geologists & Geophysicists of Alberta (P. Geol.)
2. Canadian Society of Petroleum Geologists

The Geology of the King #I Claim,
Ft. Steele Mining Division, B.C.

Prepared By -- H.W. Ziemand, P. Geol.
Box 1173
High River, Alberta

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I Introduction

This study was undertaken in order to evaluate the potential of the King #I Claim, to form a basis for further work in the area, and in fulfillment of the requirements for assessment work under the B.C. Mineral Act.

A. Access

Acess to the claim is by motor vehicle along the Perry Creek Road, a good, well-maintained gravel-surfaced forestry road. Post #1 is at Mile 8.8 on this road. The Perry Creek Road turns off Provincial Highway 95A approximately half-way between Cranbrook and Kimberley. (See Index Map, Plate I)

B. Field Work

Field work for the present study was carried out on August 24, 25, 31 and September 1,2, 1974. Mapping was done by Brunton compass and chain, as well as by pace and compass traverse. Air photos were also used. Grab samples of mineralized zones were obtained. In addition, overburden was sampled; these samples were panned, and the heavy mineral residues were taken in for laboratory examination.

C. Laboratory and Office Work

Laboratory and office work were carried out in High River, Alberta at various times during the period between September 3 and December 23, 1974. Samples were examined under the binocular microscope, and were subjected to simple chemical tests for purposes of mineral identification.

Additional air photo study was done. Also, reference was made to available published work on the area.

This report was prepared during December, 1974.

II Rock Descriptions (See Geologic Map, Plate II)

A. Generalized

1. Creston Formation (Precambrian)

Consists of green and grey weathering green, grey and purplish argillaceous quartzite and argillite.

2. Cranbrook - Eager Formations (Cambrian)

Cranbrook Fm. - siliceous quartzite, grit and conglomerate.
Eager Fm. - dark argillite, grey argillite; grey limy argillite, brown weathering sandy limestone.

3. Glacial deposits

Kame terrace deposits made up of sand with gravelly channels. Include some boulders.

4. Intrusive igneous rocks (Moyie Intrusives - Precambrian (?))

Meta-diorite and meta-quartz diorite, in general. Apparently subject to change in lithology due to magmatic differentiation and/or due to interaction with wall rock.

B. Sample Descriptions

X-1 Igneous intrusion

1-a Aplite - quartz-rich, white to light grey, medium grain, crystalline, equigranular. Made up of quartz, mica, feldspar (Albite& K-feldspar). With abundant tourmaline and hornblende. Also contains blobs of metallic minerals: magnetite, hematite,

1-b Basic differentiate. Gabbro with olivine, tabular plagioclase phenocrysts.

Overburden samples:

X-O-1 Collected in depression (kettle (?)). Silty sand with few pebbles. Light textured with mod. high organic content. Light brown. Mineral grains weathered.
Heavy minerals: Pyrite, hematite, magnetite, garnet, amphiboles-pyroxenes, topaz.

X-O-2 Slope. Gravelly till. Heavy, clayey. Little heavy residue,
Heavy residue: Tourmaline (abund.), Amphiboles-pyroxenes (abund.), chlorite, hematite, magnetite.

X-O-3 Base of slope, in gully. Light brown sandy loam, with moderately high organic content.
Panned residue: Magnetite (abund), hematite, tourmaline, pyrite, olivine, garnet.

X-O-4 Boulder channel (In road cut). Sandy gravel.
Panned residue: Tourmaline, garnet, hematite, magnetite, topaz, amphiboles-pyroxenes, olivine.

X-O-5 In ravine. Sand and gravel.
Panned residue: Hematite(abund.), amphiboles-pyroxenes, olivine.

X-O-6 Boulder channel. From slope - in road cut.
Panned residue: Tourmaline, amphiboles-pyroxenes, hematite, little magnetite.

III Structure

The chief structural feature of the area is the high-angle fault at the northern margin of the claim. The southern block has moved up relative to the northern one, placing Precambrian Creston Formation in contact with Cambrian Cranbrook-Eager. The topographic expression of the fault is fairly clear, with the downthrown side now topographically higher, but a veneer of residual soil, colluvium and glacial debris masks detail. Apparently associated with the fault is an intrusive igneous body just south of Post #2. This shows zoning and contains some metallic minerals.

Just north of the northern boundary of the claim, and apparently associated with the fault, a mineral-bearing quartz vein is exposed. The vein trends N75^{o}W.

IV Interpretation

No commercial mineral deposits were found on the claim. On the other hand, there are abundant signs of mineralization. Best potential appears to exist in the northern part of the claim. Further evaluation of the claim will require trenching by bulldozer, or excavation by other means.

Sampling and panning of surface material revealed no gold or other placer mineral deposits, and it is unlikely that any deposits of this nature exist in the relatively slightly reworked glacial material. However, abundant euhedral crystals and sharp-edged cleavage fragments of iron minerals tend to corroborate the existence of mineralization nearby.

The most productive course of action will be to search for further mineralization associated with faulting and intrusive rocks in the area. It is thought that enough mineralization has been found to continue evaluation of the King #I Claim, and to prospect the area north of the claim.

H.W. Ziemand

H.W. Ziemand, P.Geol.

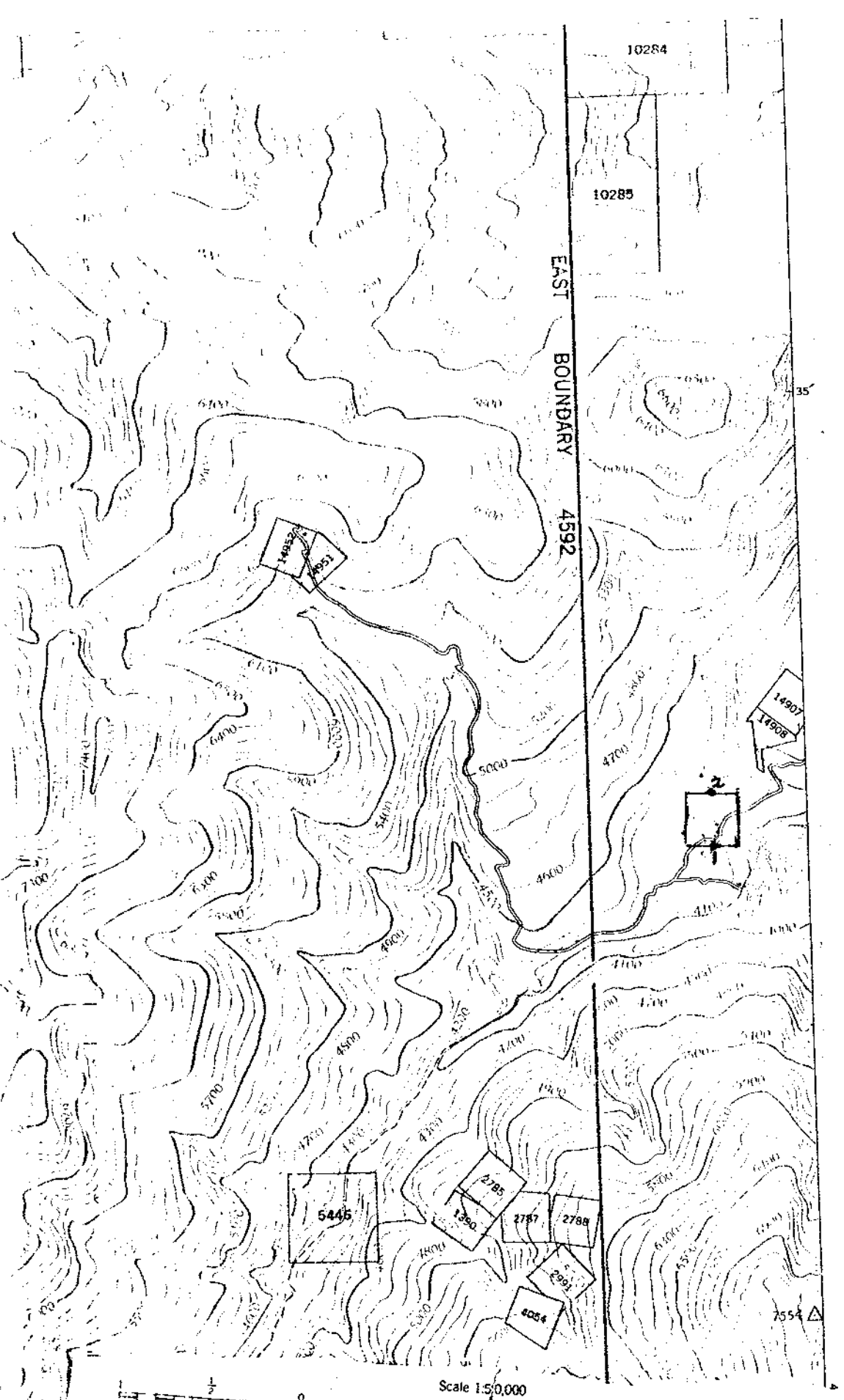
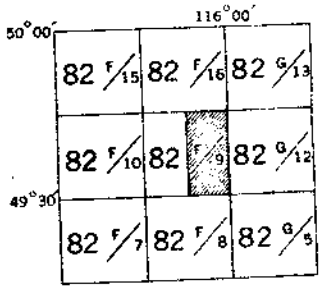


PLATE I: Index Map

INDEX TO ADJOINING SHEETS



See "Index to Maps Available" for sheets published.

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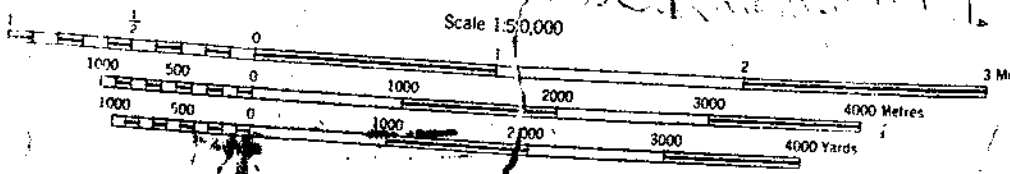
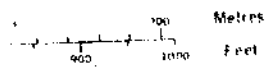
MAP 1

ST MARY LAKE

82 F/9 EAST HALF

FIRST EDITION





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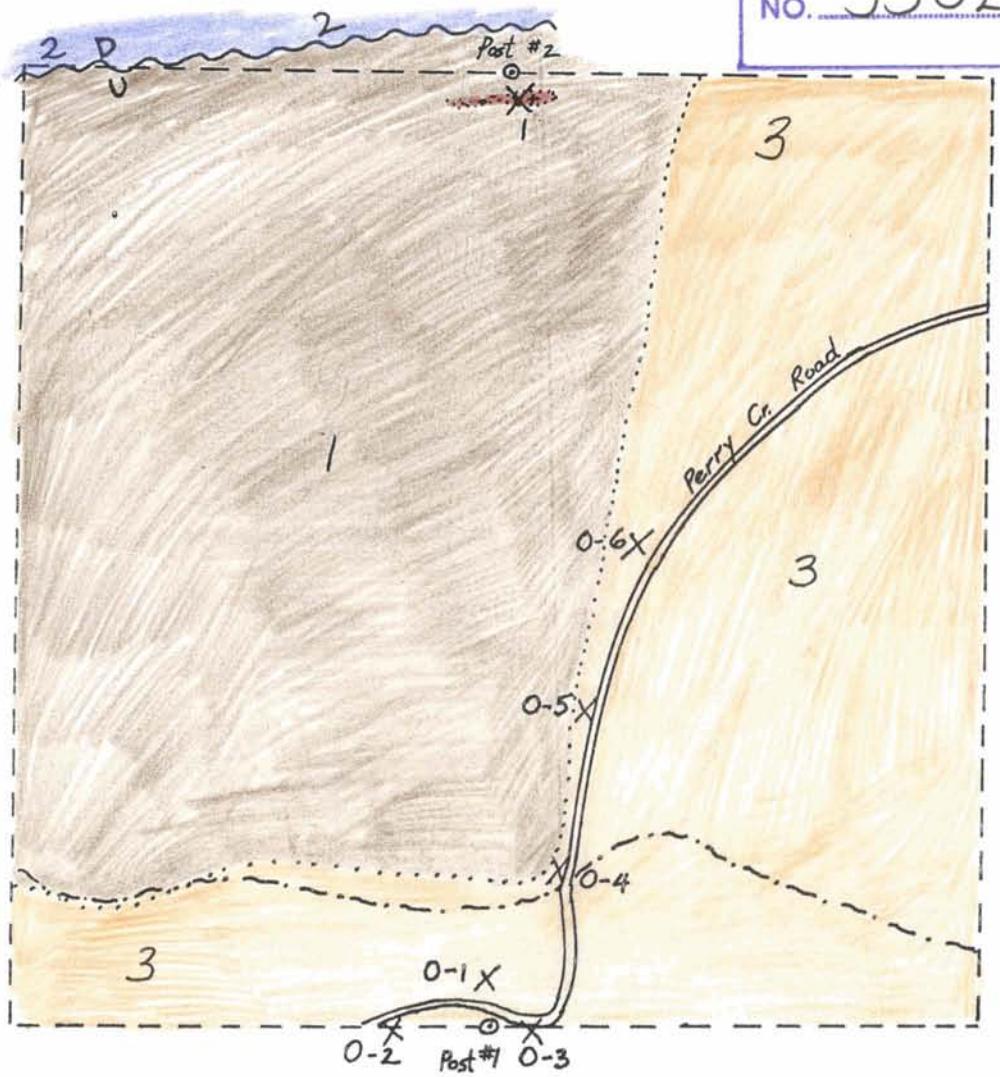
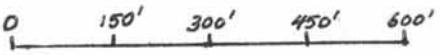


PLATE II : GEOLOGIC MAP OF THE KING #I CLAIM, FT.STEELE MINING DIVISION, BRITISH COLUMBIA

Scale: 1 inch = 300 feet



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MAP 2

LEGEND

1	Creston Formation	– – – –	Claim Boundary
2	Cranbrook & Eager Formations, undiff.	═══	Road
+++	Intrusive Igneous Rocks	·····	Approx. Contact
X Sample Pt.	~·~·~· Drainage	D U ~~	Fault
3	Glacial Deposits		