

87-306-16094

GEOLOGY OF SHEAR 1-7 CLAIMS

49°59'~~40~~⁵⁰ N; 119°34'~~10~~¹⁰ W E/88
NTS: 82E/13E ~~100/100~~
BEAR CREEK, 13 Km NNW of Kelowna
Vernon Mining Div., British Columbia

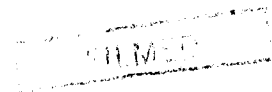
by

N.C. Lenard, P. Geol., P. Eng.
Consulting Geologist, Westbank

Field Work Done: May 21, 22, 1987

Operator/ Owner: N.C. Lenard

Report Date: May 24, 1987.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,094

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-FRONTISPIECE-

Fig.1: Location Map

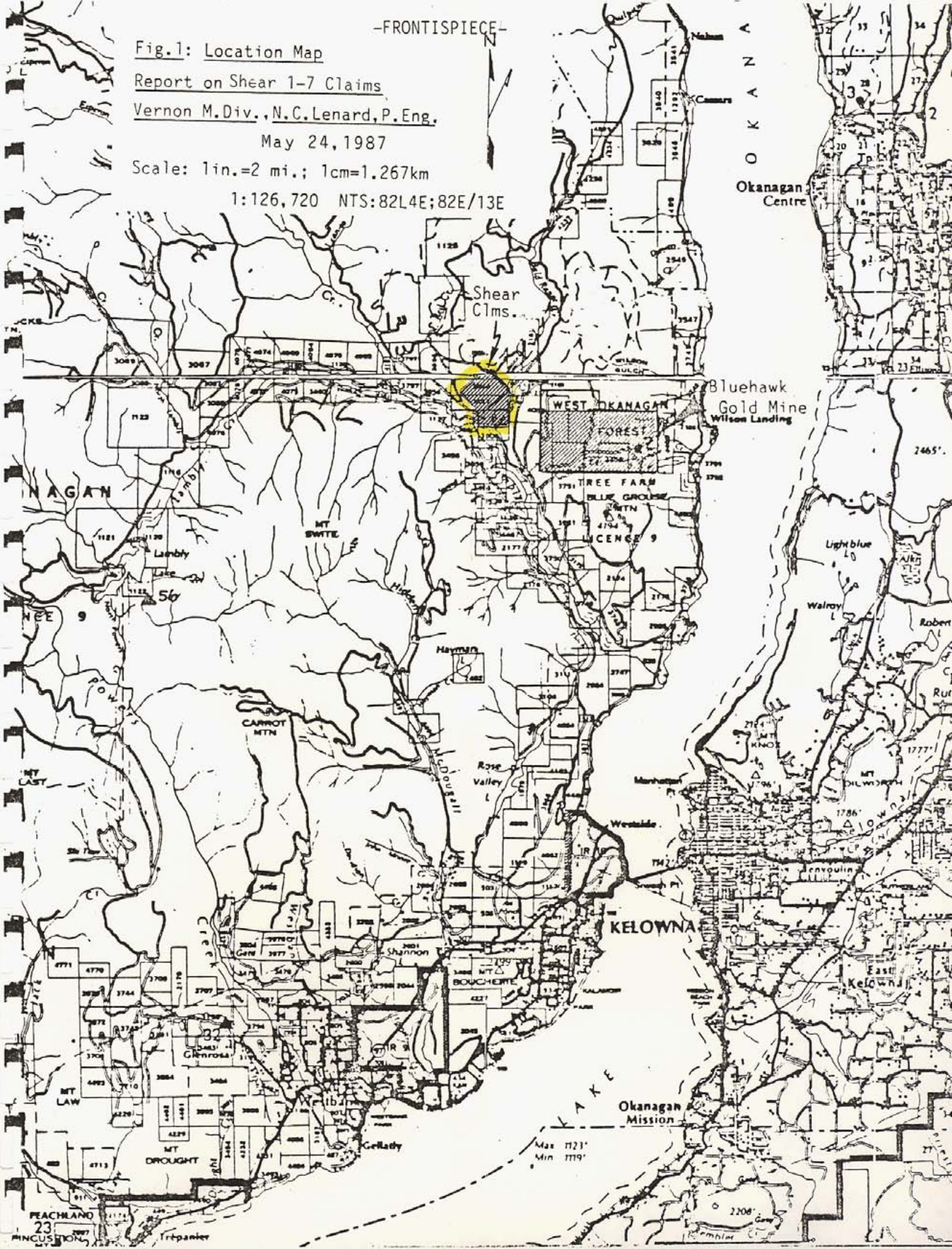
Report on Shear 1-7 Claims

Vernon M.Div., N.C.Lenard, P.Eng.

May 24, 1987

Scale: 1in.=2 mi.; 1cm=1.267km

1:126,720 NTS:82L4E;82E/13E



Okanagan Centre

Bluehawk Gold Mine
Wilson Landing

OKANAGAN

KELOWNA

Okanagan Mission

Max 1121'
Min 1119'

PEACHLAND
23
MINCUSION

GEOLOGY OF SHEAR 1-7 CLAIMS

Vernon Mining Div., British Columbia

INTRODUCTION:

This report covers the general geology of the Shear 1-7 2-post claims, which straddle Bald Range Creek, a north tributary of Bear (Lambly) Creek on the west side of Okanagan Lake. The property is about 13 Km northwest of Kelowna, and about 3 Km west of the old Bluehawk gold mine on Bluegrouse Mountain.

Evaluation is based on data gathered in the field on May 21, and 22, 1987. Mapping was done by belt chain and compass tied to roads and topography.

PURPOSE:

This work attempted to outline the general geology of the claims for locating petrologic and structural controls for gold-quartz lodes and stockwork deposits. One such potential quartz stockwork in andesite occurs in a road cut close to Bald Range Creek, described in a previous report (Lenard, 1986).

LOCATION & ACCESS:

The property is easily accessed by auto, and is about 5 Km west of Okanagan Lake via Crown Forest's Bear Lake Main logging road. Elevations range from about 750m (2,460 ft.) at Bald Range Creek to 1,000m (3,280 ft.). It is snow-free for about 7-8 months a year. The Bear Lake road is reached from the Westside road turnoff, about one mile west of the Kelowna Bridge. Fair logging roads span the property.

PROPERTY:

The property consists of seven 2-post claims, located as follows:

- (a) Shear 1-3 were staked to cover the quartz showing, which appeared to be on open ground east of the Blue 2-5 claims from the claim sheet. But, field evidence later revealed that the showing was covered by the east side of Blue claims.
- (b) When the Blue claims lapsed in late August, 1985, Shear 4-7 claims were staked to cover the lapsed ground.

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Record Date</u>	<u>Owner</u>
Shear 1	1	1959	528734M	June 4, 1985	N.C. Lenard
2	1	1960	528735M	June 4, 1985	N.C. Lenard
3	1	1961	528736M	June 4, 1985	N.C. Lenard
4	1	1998	528738M	Sept. 13, 1985	N.C. Lenard
5	1	1999	528739M	Sept. 13, 1985	N.C. Lenard
6	1	2000	528740M	Sept. 13, 1985	N.C. Lenard
7	1	2001	528741M	Sept. 13, 1985	N.C. Lenard

WORK HISTORY:

Prior to the Lenard, 1986 assessment report, the only known work was exploration for uranium on the old ACTIVE CLAIMS, which yielded nothing of economic interest.

GENERAL GEOLOGY:

The property is on the west border of the Shuswap metamorphic terrane, a broad region of old sedimentary belts and granitic plutons.

The property is underlain by andesites, cherts, marbles and other metasediments of the Permain Cache Creek

assemblage. The Vernon granitic pluton lies north and east of the claims, but small intrusives from it could underlie the eastern margins under blanketing glacial drift.

Gold and silver values are locally associated with satellite plugs and the intrusive front of the Jura-Cretaceous pluton. The nearby Bluehawk mine has free gold in shoots of dislocated quartz veins in a basic diorite plug, with spotty values to one ounce or more of gold and 5-10 ounces silver per ton in grab samples: an old 5-ton shipment to Trail graded about 0.95 ounces gold/ton. Mineralization there consists of pyrite, sparse galena and chalcopyrite, and spotty, common bismuth tellurides. Wallrock alteration is generally albitic, and strong sericitation accompanies the high grade gold occurrence in the brecciated quartz shoot described above.

PROPERTY GEOLOGY:

Outcrops are sparse, even along roadcuts on the claims. Bedrock is chiefly andesites and locally marbleized limestone of the Permian Cache Creek beds.

Locally, the andesites are brecciated, rusty-weathering and rarely silicified, notably in draws. However, no significant hydrothermal alteration was noted in the Cache Creek beds except at location B, where a highly altered granitic dyke cuts limestone and andesite in a draw about 400m northeast (033°) of the quartz stockwork examined last year (Lenard, '86). This current discovery has a 5 foot (1.5m)-wide pyritized quartz vein near-surface close by in brecciated andesite (Fig.5).

Another poorly exposed siliceous dyke was mapped in a draw about 110m north of the 'A' site quartz stockwork roadcut exposure (Lenard, 1986). It is a pyritic, dark

grey, quartzose microdiorite that could be related to the 'A' site quartz occurrence, and is slightly pyritic. It has a prominent jointing aligned at about 026° , similar to the inferred trend, 023° , of the 'A' site quartz stockwork vein.

ECONOMIC GEOLOGY:

The 'B' site quartz vein discovery was on a traverse down a draw marking a sharp end to limestone outcrop, which was inferred to mark a possible fault. Rusty pyrite limestone float and rusty quartz float occur in a small area near the quartz vein subcrop.

Wallrock alteration is not obvious on the south side of the quartz vein, which assimilated andesite breccia there. The vein, which strikes about 084° appears to dip northerly at 59° , but more stripping is needed to establish dip.

Pyrite in minor brecciation is the only noted sulphide, and is too weathered to give meaningful assays for precious metal values. Alteration is strong in the north, andesite wallrocks, being soft, creamy and argillic for about 16 cm. from the vein.

The 5m-wide, very altered quartz diorite or granodiorite dyke, 12m to the north, is devoid of quartz, soft, and variably matrixed with muscovite mica (beresitized), limonite, and much black manganese. Gossanous soil overlies the dyke. At least 2m of south-adjointing andesite is faulted and strongly altered to clays. No silicification occurs in either the dyke, the adjoining andesite, or pyritic limestone wallrocks.

SUMMARY & CONCLUSIONS:

Considering the discovery of the 'B' site quartz vein and associated highly altered granitic dyke

in the Paleozoic section in a gully, as inferred from the 'A' site quartz setting, other similar strong structures may well occur on this property with potential for hosting precious metals in brecciated shoots. Geophysical reconnaissance with VLF-EM instruments could be effective in locating and extending such pyritic quartz lodes.

General conclusions are:

- (1) Wallrock effects noted to date are pyritization, argillite, and albitization in brecciated andesite and pyritization in marble-cut limestone.
- (2) Mining-width quartz structures occur on the property, related to granitic dykes, strong hydrothermal alteration, fair pyrite and rare galena mineralization.
- (3) Economic gold values in quartz veins may occur only in breccia shoots of high permeability, produced by late-shock effects before or simultaneous with gold deposition.
- (4) Potassic alteration of the 'B' zone dyke and its strong manganese content may auger well for deposits of sulphides and precious metal values in the 'B' quartz vein and elsewhere on the claims, from comparison with other gold-bearing deposits (Boyle, 1979).

RECOMMENDATIONS:

Geophysical (VLF-EM and magnetometer) and 'B-C' zone soil geochemical surveys are warranted for these claims, and, ground prospecting of all gullies and outcrops for pyritic zones and quartz float to locate fault-controlled quartz lodes.

Proposed exploration is:

1. Do VLF-EM traverses across the 'A and B' quartz

occurrences with 100m overlap to delineate trend and extent of the structures, and conductors. If response is weak, do a magnetometer survey as well. Extend this work across Bald Range Creek to seek conductors along the creek course and up the east slope.

2. Map all limestone outcrops where rusty or pyritic and do rock geochemistry for ppb gold to locate intrusives and possible quartz structures.
3. Drill one or more steep, oblique holes for diamond core in the 'A' and 'B' quartz structures to obtain fresh samples for gold assay.
4. Strip the 'B' site quartz area for detailed mapping, and prospect the north, limestone side of the dyke for silicified areas there.

Plan further staged exploration and prospecting from results of the proposed program.

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-CERTIFICATION-

I, Neall Curtis Lenard, of the settlement of Westbank in the Province of British Columbia do hereby certify:

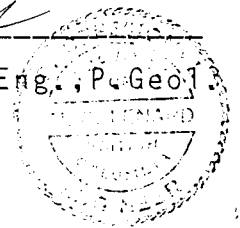
1. that I am a consulting geologist with an office mailing address of Box 863, Westbank, British Columbia, V0H 2A0,
2. that I graduated from the University of British Columbia with a Bachelor of Arts Degree in 1949 (Honours Geology),
3. that I have practised my profession continuously for thirty-eight years,
4. that I am the sole owner of the subject Shear 1-7 Claims,
5. that the statements made in this report are based on personal examination of the claim from May 21, and 22, 1987, and, on a study of published and unpublished reports on the property area,
6. that I am a member of the Associations of Professional Engineers of British Columbia and Alberta,
7. that no legal survey has been conducted over the subject mining properties and, therefore, in accordance with the mining laws of the appropriate jurisdiction in which such properties are situate, the existence of and the area of such properties could be in doubt.

DATED AT: The Settlement of Westbank, in the Province of British Columbia this twenty-fourth day of May, 1987.



Neall Curtis Lenard

Neall Curtis Lenard, P. Eng., P. Geol.



-EXPENDITURES-

PERSONNEL:

N.C.Lenard, P.Geol, May 21, 22, 1987	
2 days @ \$400	\$800.00

TRANSPORTATION:

4 WD: 2 days @ \$35.00	70.00
Gas:	15.00
Supplies: Topoline	10.00

REPORT PREPARATION:

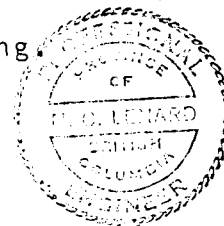
Drafting: 2 hr. @ \$15.00	30.00
N.C.Lenard,P.Geol.: 1 day @ \$400	400.00
Office, reproduction costs:	<u>60.00</u>

TOTAL DISBURSEMENTS:	<u>\$1,385.00</u>
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I certify that the above statement is an accurate representation of expenditures made for the geological survey of the Shear 1-7 Claims conducted on May 21 and 22, 1987.

N.C. Lenard

N.C.Lenard, P.Geol, P. Eng.



Ex. Date Dec. 31, 1987

-REFERENCES-

BOYLE, R.W.: The Geochemistry of Gold and Its Deposits
Geol. Surv. Canada, Bull. 280, 1979.

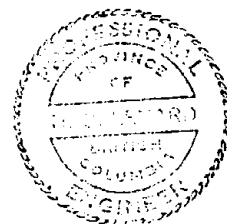
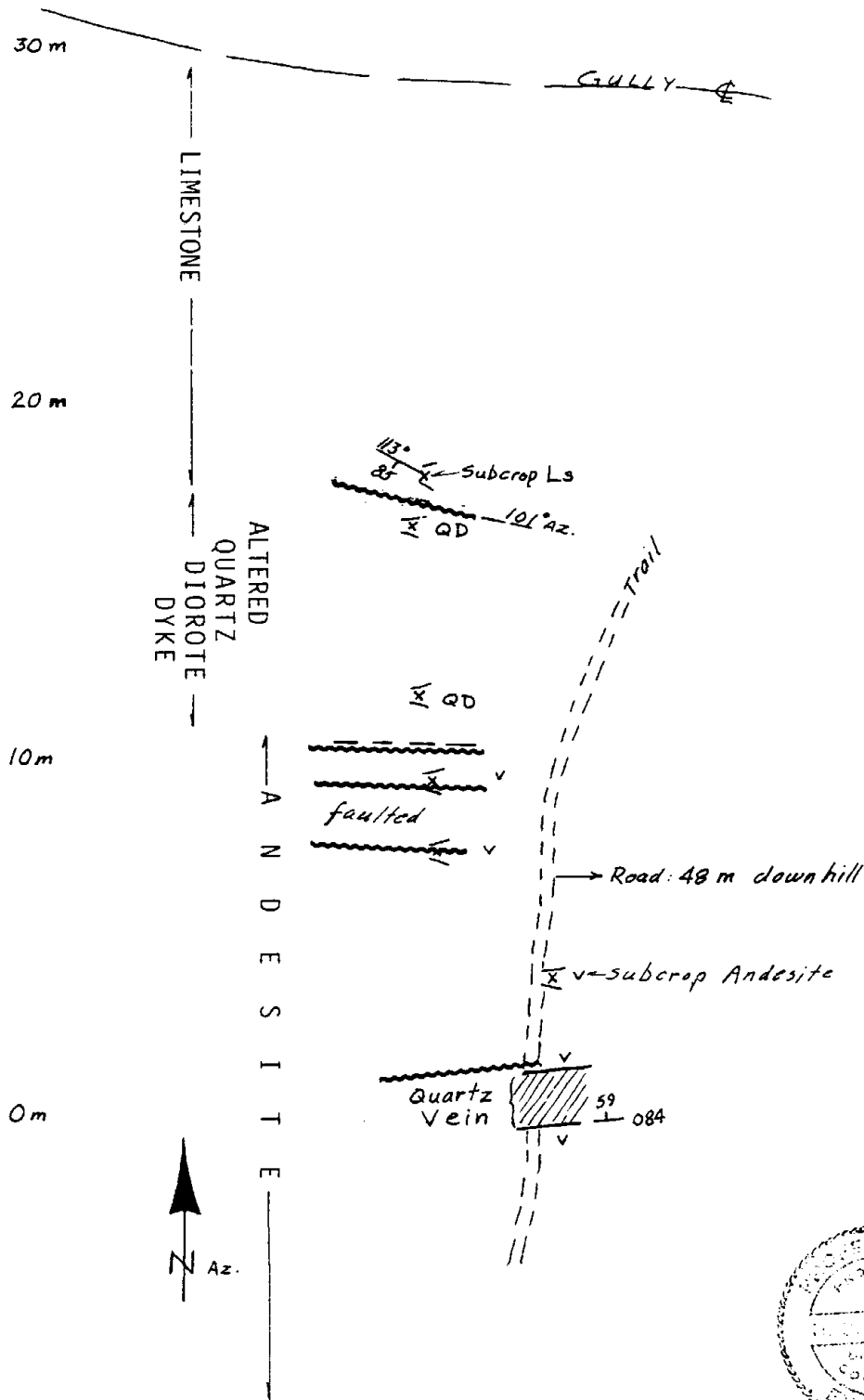
CHURCH, B.N., 1980:
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Geology of the Kelowna Tertiary Outlier
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LITTLE, H.W., 1958, 1959:
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Kettle River (West Half), B.C.

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Fig.3: To Accompany Report on Shear 1-7 Claims
by N.C.Lenard,P.Eng. May 24,1987

Sketch Map of B site Quartz Vein Geology



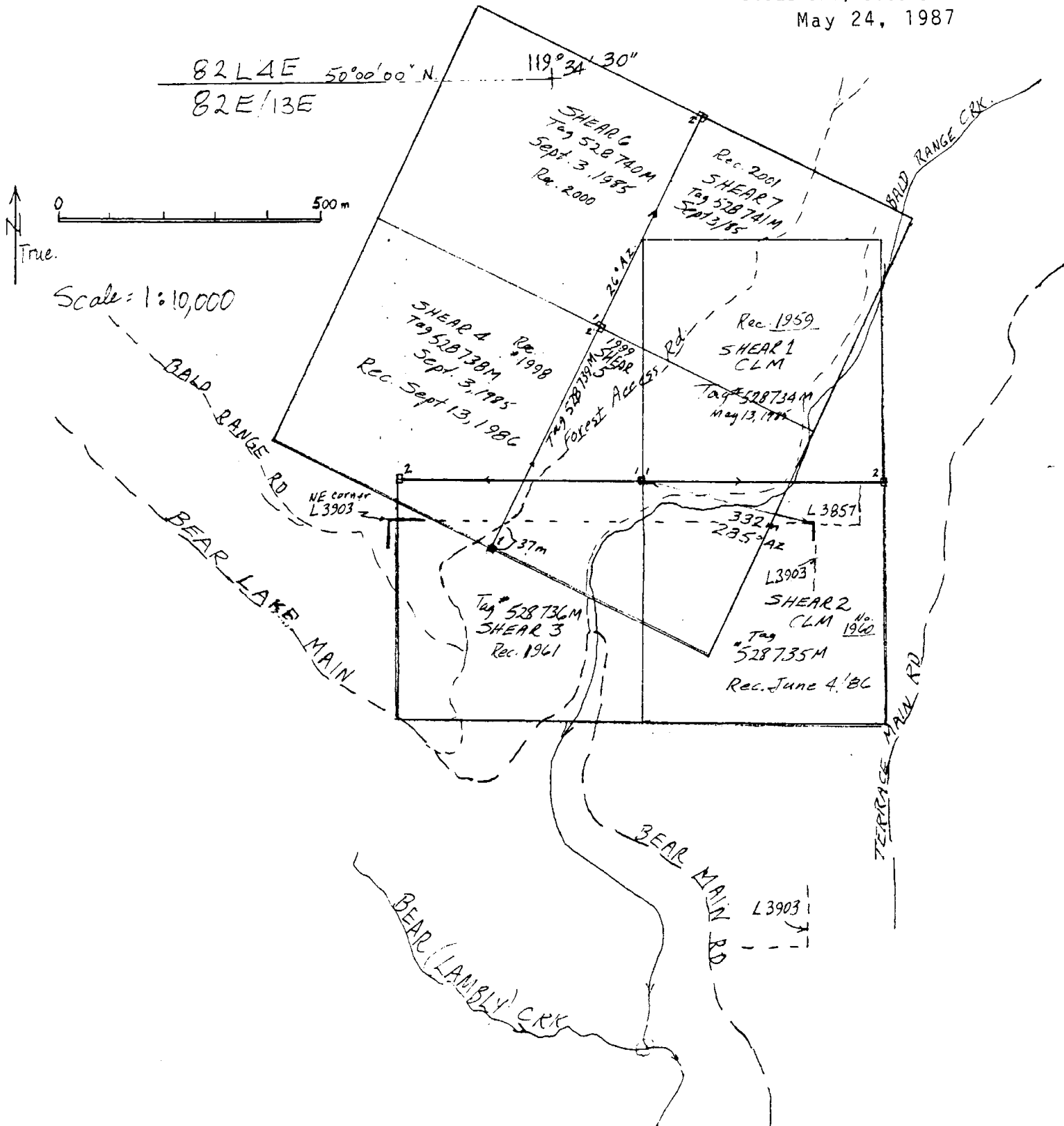
Ex. Date Dec. 31, 1987

Fig. 4

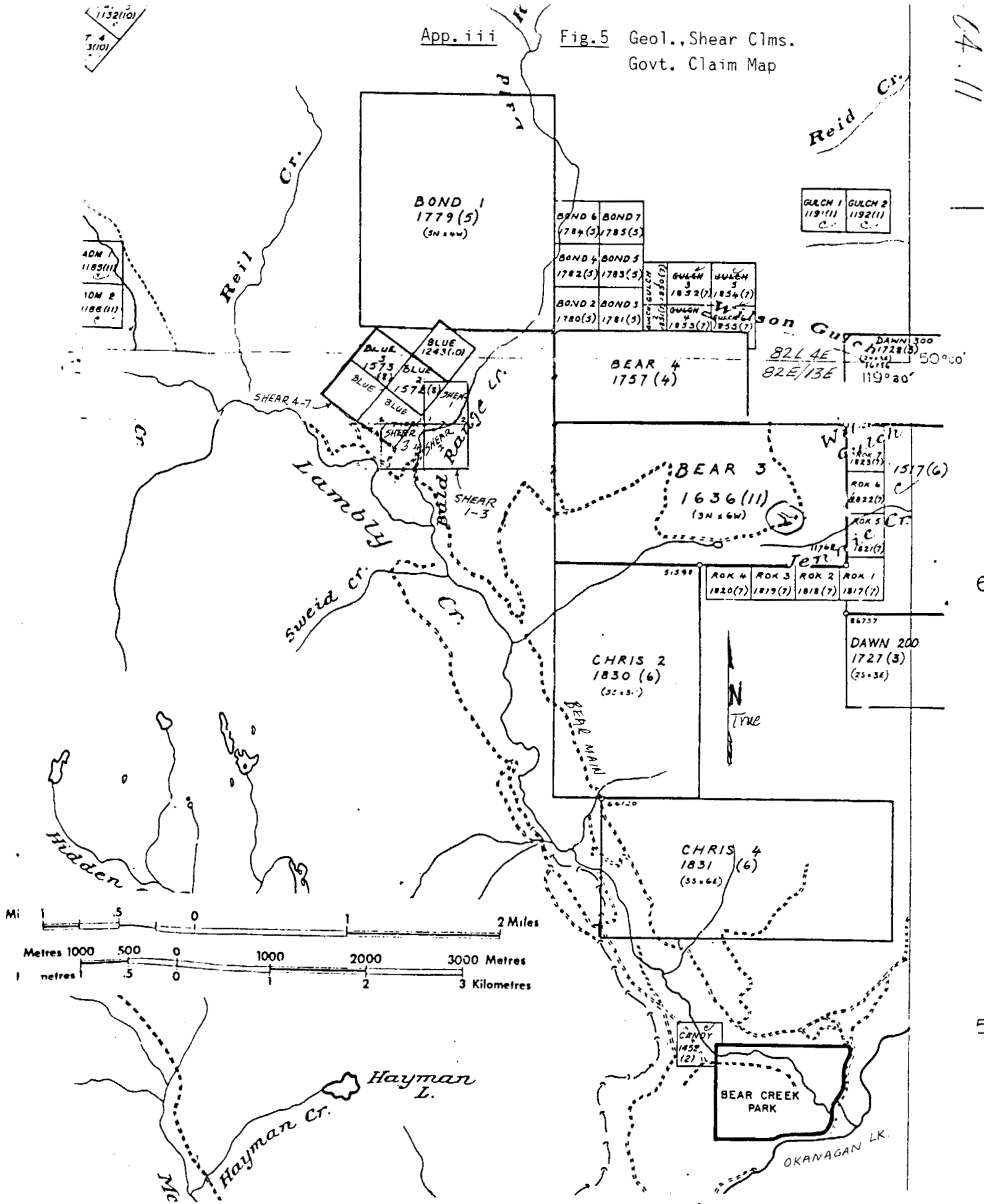
STAKING SKETCH MAP

Geol., Shear Clms.
N.C. Lenard, P. Geol.

May 24, 1987



CA. 11



6

5

50° 00' 00"

82 L/4E
82 E/13E

L3858

L2172

L3857

Shear 4

Shear 1

L3860

L3903

L4059

Shear 3

Shear 2 Cim.

L3903

0 100 m
1:3333.3

N Az.

49° 59' 15"

GEOLOGICAL BRANCH
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Fig. 2: PROPERTY, GEOLOGY, TOPOGRAPHY SHEAR 1-7 CLMS.
Geological Report by N.C. Lenard, P. Geol.,
May 24, 1987
Vernon Min. Div.

- LEGEND -
- V Permian andesite volcanic outcrop
 - L Permian limestone outcrop
 - Quartz vein QD: Quartz Diorite
 - Fault observed D: Diorite
 - Fault inferred
 - rock outcrop, subcrop
 - rock float
 - Trench, strip
 - Claim post

Ex. Date Dec. 31, 1987
M.L.