

PROSPECTING
GEOLOGICAL AND SAMPLING REPORT

STAN, STAN 4, AND STAN 5 CLAIMS

GREENWOOD MINING DIVISION

NTS 82 E 3

119° 08' W , 49° 09' N

by K. Heffernan

October 20, 1982

Owners:

C. Heady and A. Hook
Oliver, British Columbia

Operator:

Cheshire Exploration Ltd.
1010, 505 - 3rd St. S.W.
Calgary, Alberta

Consultant:

Kevin J. Heffernan
7 Templehill Cres. N.E.
Calgary, Alberta

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,734

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1. INTRODUCTION

1.1 LOCATION AND ACCESS

The property is located 12 km northwest of the village of Rock Creek and approximately 3 km northeast of Camp McKinney and 12 km north of the Rock Creek bridge on Highway 3. It is approximately centered at 119° 08' west longitude and 49° 09' north latitude (Figure 1 and 2). Access is gained from Canyon Road which turns north off Highway 3 immediately west of Rock Creek bridge. The roads are in good condition and quite easily travelled by a 4-wheel drive vehicle. A new hydro-electric transmission line crosses the property in an east-west direction near the southern boundry of Stan 4 and Stan 5 Claims. Stanhope Creek, running approximately north-south at the east boundry of the Stan Claim, provides the main drainage in the area.

1.2 STATUS OF CLAIMS

The claims lie within the Greenwood Mining Division and are located as shown on Figure 2, and on Mineral Titles Map 82E3. The claims were recorded by Mr. C. Heady on October 9, 1981. Particulars of the claims are as follows:

STAN (3 units)	Record No. 2897 (9)
STAN 4 (1 unit, two-post)	Record No. 2898 (9)
STAN 5 (1 unit, two post)	Record No. 2899 (9)

The owners of record are:

Mr. C. Heady and Mr. A. Hook
Oliver , British Columbia

The operator is:

Cheshire Exploration Ltd.
1010, 505 - 3rd St. S.W.
Calgary, Alberta

The consultant for Cheshire Exploration is:

K.J. Heffernan
7 Templehill Cres. N.E.
Calgary, Alberta

1.3 OBJECTIVES

The two primary objectives of the work done on the claims in November, 1981, were:

1. To examine, map, and sample the area of veining exposed on the new hydro-electric transmission line right-of-way.
2. To examine rock types on the claims and prepare a reconnaissance geological map.

1.4 SUMMARY OF WORK DONE

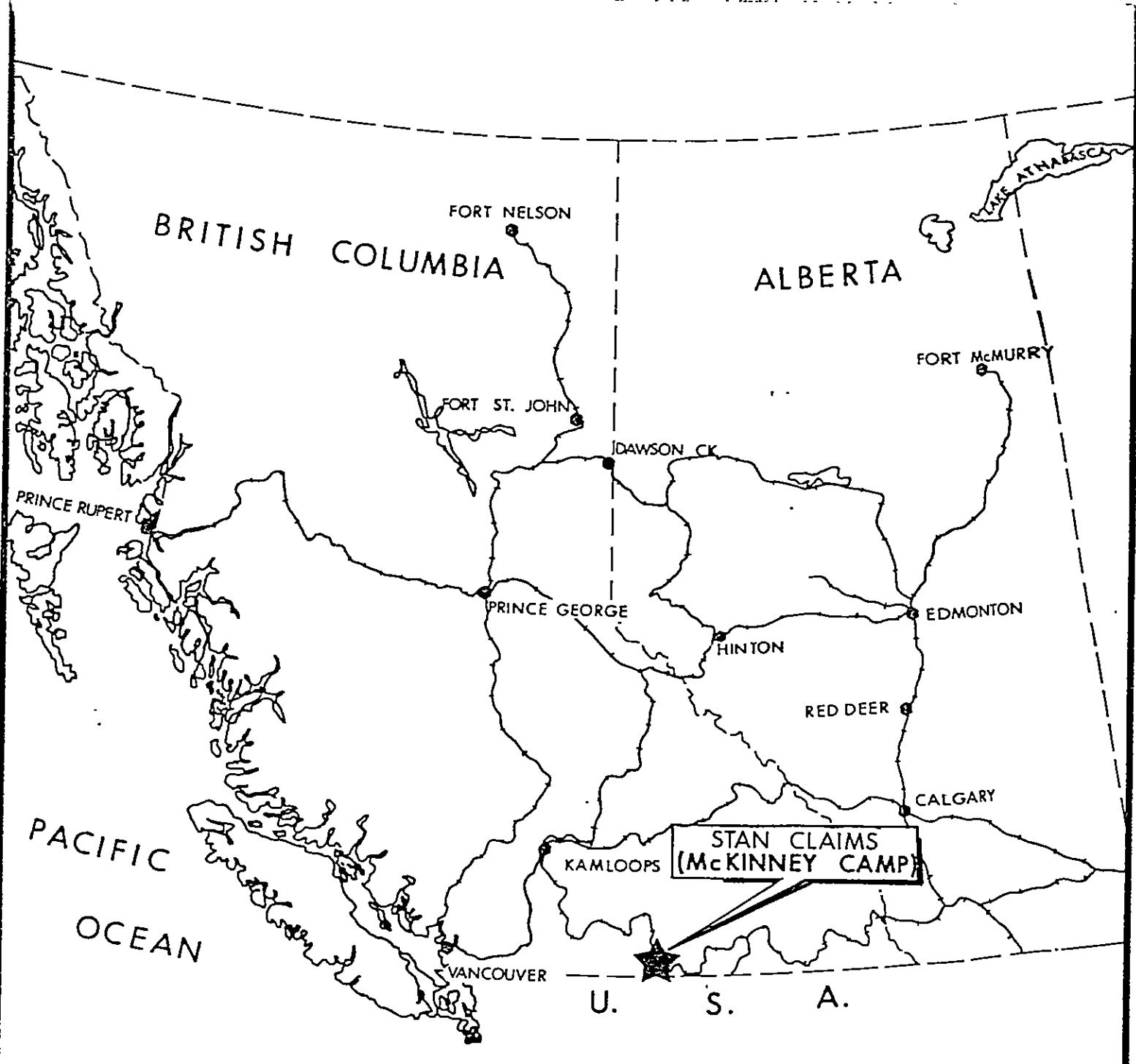
Work was done on the Stan Claims from November 9 to November 11, 1981. Two traverses were conducted and the showing was cleaned and sampled, and mapped in detail. Twelve samples were collected and submitted for assay. Results are included in Appendix C.

2. SUMMARY OF GEOLOGY

2.1 PREVIOUS WORK

No record of previous work in the area covered by the Stan Claims was found; however, a considerable amount of exploration and development is known to have been done to the west in the Camp McKinney area, and to the south in the Jolly Creek area. In both areas the most intense exploration activity occurred prior to World War I. Little exploration was done in the McKinney and Jolly Creek areas from the early 1900's to the mid-1970's, but from the mid-1970's through to the present there has been a continuing low level of exploration centred on old, abandoned prospects.

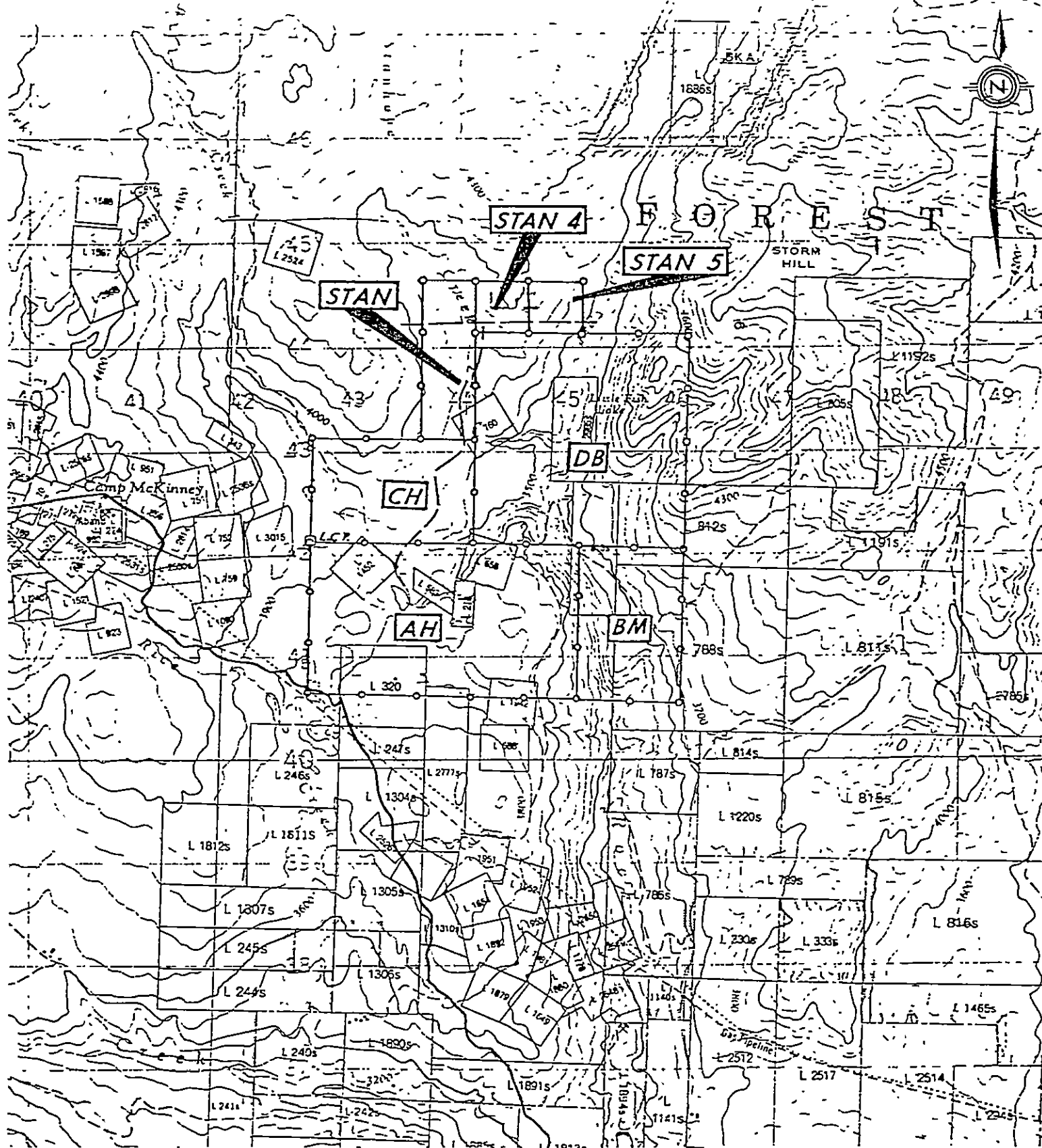
In the Jolly Creek and Camp McKinney areas, gold has been recovered from quartz veins within meta-sediments and meta-volcanics. The veins, which range from a few millimetres to more than 5 metres in width, are predominantly quartz with variable content of calcite, dolomite, pyrite, chalcopyrite (locally bornite), galena, and sphalerite. Gold tellurides have also been reported. Higher gold values are preferentially associated with sphalerite in the Camp McKinney area, with galena in the Old England and Victoria Crown Grants (Lots 658 and 218), and are reported to occur with chalcopyrite on the Lemon Crown Grant (Lot 760). Free gold, and gold with pyrite occur sporadically in quartz veins in both the McKinney and Jolly Creek areas.



MAJOR RAILWAYS



CHESHIRE EXPLORATION LTD.		
McKINNEY PROSPECT		
LOCATION MAP		
Date: D.R.		Date: DEC '81
Checked:	Checked by:	Scale: 1:80000
Eng: K.J.H.	Drawn by:	Print No: 8118-01-1-0
		FIG. No. 1



CHESHIRE EXPLORATION LTD.		
MCKINNEY PROSPECT		
LOCATION AND ACCESS MAP		
Drawn: M. J.	Checked: []	Date: DEC. '81
Exp. K. J. H.	Revised: []	Scale: 8118-1-02-0
<i>[Signature]</i>		FIG. No. 2

2.2 REGIONAL SETTING

The regional geology has been outlined by H.W. Little on G.S.C. maps 6-1957 and 15-1961, and shows the general claim area to be underlain by a metamorphosed sequence of Paleozoic volcanic and sedimentary rocks. The volcanics consist of basaltic to andesitic lavas, greenstone and tuff, while the sediments vary in composition from coarse clastics through to limestone. Although the time designation is Paleozoic the section includes time-rock units regarded as upper Paleozoic and Triassic. Early workers use the term "Anarchist Series" in reference to the oldest rocks of the area, and refer to varying degrees of metamorphism which produced schists and gneisses. Sheared and serpentized basic rocks were noted along Jolly Creek in old reports, and these were regarded as intrusive in origin.

The main intrusive rocks of the area belong to the Jurassic-Cretaceous Nelson and Valhalla granitic complexes, and these underlay large areas to the north and west. To the east numerous windows poke through patches of Tertiary cover rocks.

East of Rock Creek, Tertiary volcanic flow rocks and sediments represent the youngest stratigraphic sequence.

3. WORK PERFORMED

3.1 MAPPING

Much of the area of the Stan Claims is covered with overburden. The best outcrop exposures occur in the valley of Stanhope Creek, south and east of the STAN Claim, where the creek has eroded a steep walled canyon into bedrock. West of, and uphill from Stanhope Creek an extensive mantle of overburden covers bedrock. The overburden is primarily brown and tan sand and gravel with abundant boulders of quartz-rich metasediments and meta-diorites. Outcrops are also well exposed in places along the power transmission line where bulldozer work has removed much of the overburden. South of the power line outcrops form low, rounded knobs and small covered bluffs. To the north of the power line most of the area is covered with a mantle of overburden. All outcrops examined are considered to represent Anarchist Series rocks.

On the Lemon Crown Grant (Lot 760), rocks exposed in the valley of Stanhope Creek consist of metavolcanics (greenstone). These rocks are poorly foliated, chloritic, typically grey-green in color, fine grained, and rich in calcite. Local, small exposures of poorly foliated, siliceous, grey to dark grey metasediments occur within the predominant metavolcanic unit. The greenstones are reported to host quartz veins with associated

pyrite, chalcopyrite and gold mineralization. This metavolcanic unit is expected to exist under at least a part of the STAN Claim. North of the Lemon Crown Grant the valley of Stanhope Creek broadens and outcrops are scarce.

Along, and south of the power transmission line numerous outcrops of siliceous metasediments and metadiorite are exposed. No contacts between metasediments and metadiorites are observed. The metasediments are fine to medium grained, light grey in color, poorly foliated, and consist primarily of quartz with variable quantities of potassium feldspar and plagioclase. Mafic minerals consist of chlorite and biotite, and are a minor constituent. Some outcrops have a faintly banded character which maybe reflecting the foliation. Quartz and calcite veinlets are common.

The metadiorite is similar in appearance to the metasediments but is locally coarse grained, has a greater plagioclase content, and locally contains minor hornblende.

At the vein showing on STAN 4 Claim a fine grained, grey-brown, badly fractured unit is believed to be a dike or sill, possibly a fine grained gabbro, or a diabase. The unit has a high plagioclase content, with the main mafic mineral being either hornblende or pyroxene. The unit is iron-stained and contains minor disseminated pyrite.

The bed of Stanhope Creek contains scattered pebbles of white quartz, and larger blocks of unmineralized white quartz occur within overburden upstream, and also west of Stanhope Creek. The source of this vein material is not known.

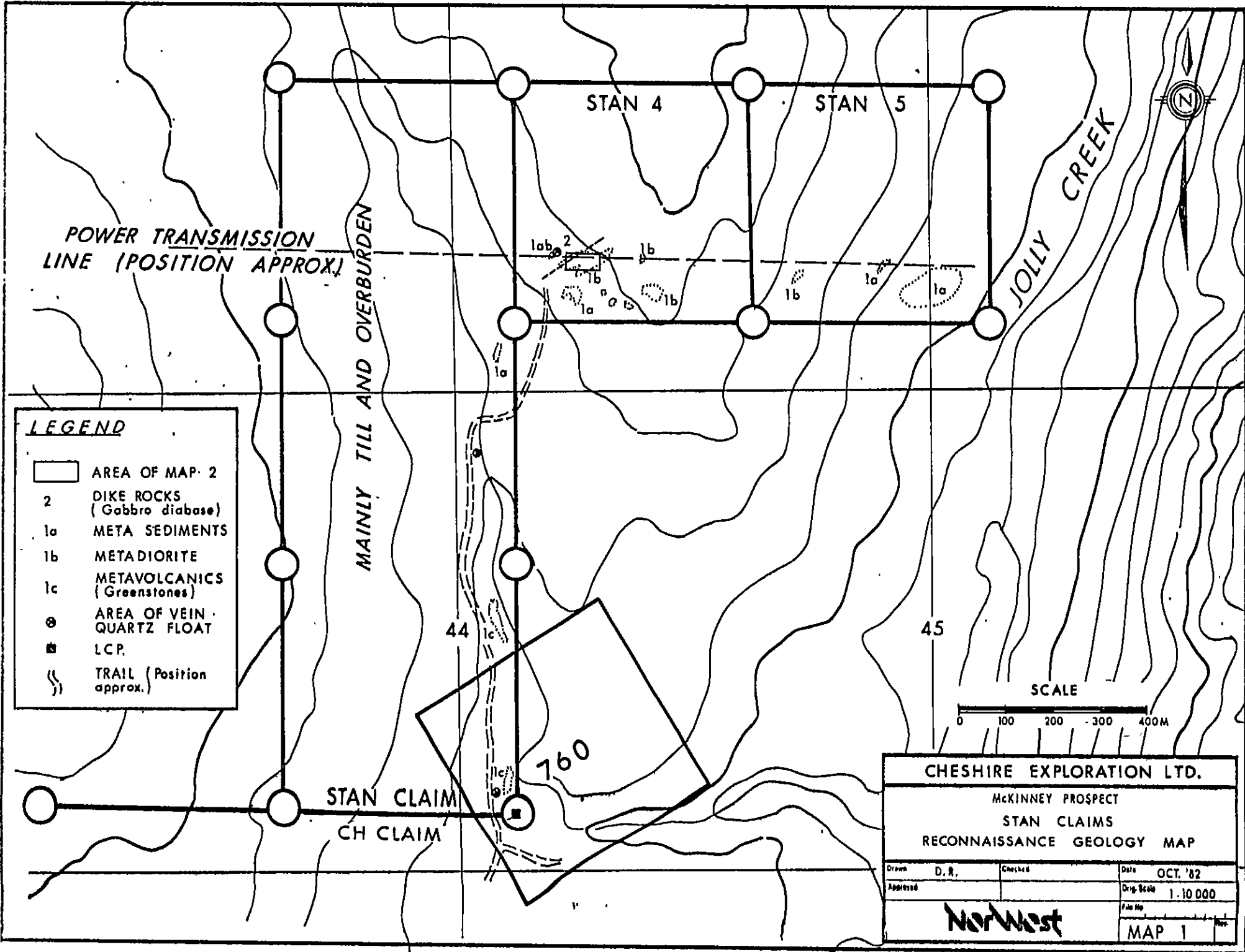
Map 1 shows the distribution of the various outcrops.

3.2 SAMPLING

A number of narrow quartz veins occur at, and near the contact between the dark grey-brown gabbro-diabase and the adjacent metadiorite. Twelve rock samples were collected, representing the vein material, and immediate hangingwall and footwall units. The samples were analyzed for Cu, Pb, Zn, Ag, and Au at TerraMin Research Labs in Calgary. Gold and silver values were determined by a combined fire assay/atomic absorption method. Results are presented in Appendix C and D.

The detailed geology in the area of veining is shown on Map 2.

The veins are badly iron-stained, and consist primarily of white quartz with abundant pyrite and minor visible chalcopyrite. A thin (2 cm to 10 cm) "cap" of limonite cemented gravel overlies the veins and adjacent hangingwall and footwall rocks. Veining is discontinuous and lency, and in places a narrow zone of brecciation occurs in the metadiorite adjacent to the veins. Gold values are low (less than 0.16 gm per tonne) and spotty, but locally occur in hangingwall and footwall rocks as well as in the



POWER TRANSMISSION
LINE (POSITION APPROX.)

MAINLY TILL AND OVERBURDEN

STAN 4

STAN 5

JOLLY CREEK

LEGEND

- AREA OF MAP 2
- 2 DIKE ROCKS (Gabbro diabase)
- 1a META SEDIMENTS
- 1b METADIORITE
- 1c METAVOLCANICS (Greenstones)
- ⊙ AREA OF VEIN QUARTZ FLOAT
- LCP
- (- - -) TRAIL (Position approx.)

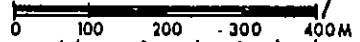
44

45

760

STAN CLAIM
CH CLAIM

SCALE



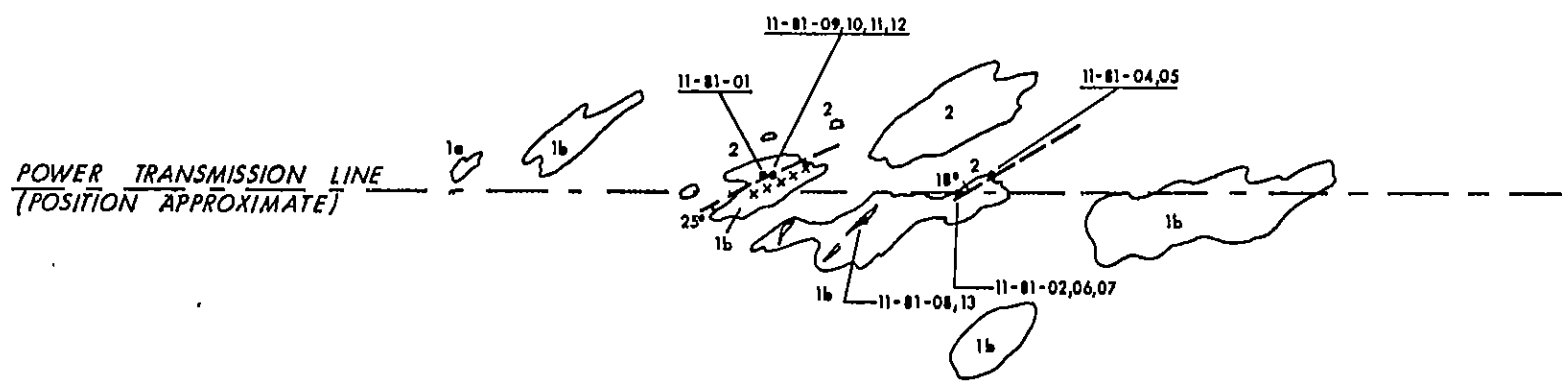
CHESHIRE EXPLORATION LTD.

McKINNEY PROSPECT

STAN CLAIMS

RECONNAISSANCE GEOLOGY MAP

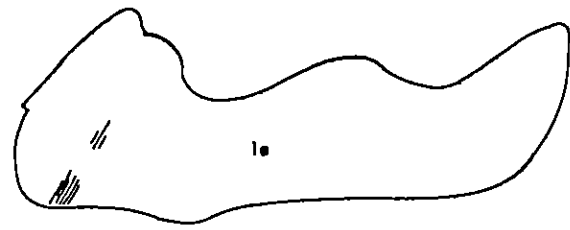
Drawn D. R.	Checked	Date OCT. '82
Approved		Orig. Scale 1:10 000
Northwest		File No.
		MAP 1



LEGEND

2	DIKE ROCKS (Gabbro-diabase)
1a	METASEDIMENTS
1b	METADIORITE
---	QUARTS VEINS
○	QUARTS LENS
x x x x	BRECCIATION
11-81-01	SAMPLE LOCATION

NOTE: SAMPLE 11-81-01 IS LOCATED 125 METRES EAST AND 130 METRES NORTH OF S.W. CORNER OF STAN 4



AREA OF QUARTZ AND CALCITE VEINLETS



CHESHIRE EXPLORATION LTD.		
McKINNEY PROSPECT VEIN SHOWING STAN 4 CLAIM		
Drawn	M. J.	Checked
Approved	K. J. H.	Date
		OCT. '82
		Orig Scale
		1:500.
Northwest Resource Consultants Ltd.		File No. 8118 2.0 2:2
		MAP 2

quartz veins. Silver values are consistently less than 16 gms per tonne. One sample of vein material contained 0.19% Cu, but all other values are very low. No significant lead and zinc values were reported.

4. CONCLUSIONS AND RECOMMENDATIONS

The veins, where examined, are narrow, discontinuous, and lensey. It is possible that intrusion of the gabbro-diorite generated fractures that were later filled with quartz and sulphides. The mineralizing solutions did, however, carry gold, and it is possible that more favorable vein systems are developed elsewhere on the property. The white vein quartz locally observed in the overburden may not have originated at the exposed veins.

Siliceous metasediments and metadiorites have not been reported as particularly favorable hosts for vein-type gold mineralization in the McKinney area. The best showings and producers in the area have been consistently reported to occur in metavolcanics or mixed metasediments and metavolcanics. These types of rocks occur on the Lemon Crown Grant (Lot 760) but their westward and northern extent is not known. On the Lemon Crown Grant the metavolcanics are known to host gold-bearing quartz veins, and similar potential should be expected on at least a part of the STAN Claim. Because of proximity to the Cretaceous Valhalla intrusives and evidence of mineralized veins on the Lemon Grant, and to the north, additional exploration is warranted.

It is recommended that the following activities be pursued:

1. Heavy mineral stream sediment sampling in Stanhope Creek.
2. Prospecting, with a view to identifying the distribution of the various lithologies (particularly in the south half of the STAN Claim), and identifying any concentrations of vein quartz float in the overburden.
3. Comprehensive soil sampling and geophysical surveys are not considered warranted at the present time.

5. STATEMENT OF ASSESSMENT

This report requests that two (2) years assessment be applied to each of the STAN, STAN 4, and STAN 5 Claims. An itemized statement of expenditures is included in Appendix A. Total applied expenditures are \$1000.00.

APPENDIX A

ITEMIZED STATEMENT OF EXPENDITURES

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ITEMIZED STATEMENT OF EXPENDITURES

1. Geological Costs:

Personel : K.Heffernan; November 9, 10, 11 @ \$350./day	\$ 1050.00
Accommodations and meals: 3 days @ \$45.00/day	135.00
Vehicle costs: rental 3 days @ \$30.00/day	90.00
mileage 290 Km @ \$ 0.19/day	55.10
	55.10
Total	\$ 1330.10

2. Analyses:

12 samples @ \$12.25	147.00
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3. Report Preparation:

K. Heffernan 2 days @ \$350.00/day	700.00
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	<hr style="border-top: 3px double black;"/>
Total Expenditures	\$ 2,177.10

APPENDIX B

STATEMENT OF QUALIFICATIONS

APPENDIX B

STATEMENT OF QUALIFICATIONS

The undersigned certifies that:

1. He is a consulting geologist residing at 7 Templehill Cres. N.E., Calgary, Alberta
2. He is a graduate of the University of Saskatchewan (Saskatoon), with a B.Sc. (Honors), 1973.
3. He has been involved in mineral exploration since graduation.
4. He has based this report on the result of work done on the property in November, 1981.
5. He is a member in good standing of the Association of Professional Engineers, Geologist, and Geophysicists of Alberta.

Respectfully submitted,

A circular seal for a Professional Geologist in Alberta. The outer ring contains the text "PROFESSIONAL GEOLOGIST ALBERTA". Inside the ring, the name "KEVIN J. HEFFERNAN" is written. The center of the seal features a stylized figure holding a staff and a hammer, with a shield below it containing the letters "P.G.E.". A handwritten signature, "Kevin J. Heffernan", is written across the seal.

Kevin J. Heffernan, P.Geol. (Alta)

APPENDIX C

ANALYSES

ANALYTICAL REPORT

Job # 81-331

Norwest Resource Consultants Ltd. Date 30 November 1981

Client Project

Page 1 of 1

Sample No.	Cu ppm	Pb ppm	Zn ppm	Au ppb	Ag ppm
11-81-01	1920	21	61	14	6.60
02	430	11	13	2	1.35
04	61	5	8	< 2	4.40
05	74	2	38	< 2	0.27
06	580	4	10	< 2	1.51
07	72	2	35	8	11.2
08	28	1	4	140	15.9
09	52	0	23	158	15.2
10	181	25	29	8	0.89
11	77	13	52	4	0.28
12	220	8	10	4	2.50
13	530	23	118	< 2	0.49

APPENDIX D

SAMPLE DESCRIPTIONS

Sample No.	Width (m)	Description	Cu %	Pb %	Zn %	Ag gm/t	Au gm/t
11-81-01	Grab	Quartz vein, brecciated, quartz, pyrite, minor chalcopyrite	0.19	tr.	tr.	6.6	0.014
11-81-02	Grab	Quartz vein, pyrite masses, cubes, and veinlets	0.04	tr.	tr.	1.4	0.002
11-81-04	0.08	Quartz vein, no visible sulphides	tr.	tr.	tr.	4.4	0.002
11-81-05	0.14	Footwall, brecciated and iron-stained metadiorite, adjacent to 11-81-04. Hangingwall eroded	tr.	tr.	tr.	0.3	0.002
11-81-06	0.13	Quartz vein, scatteres pyrite cubes and masses	0.06	tr.	tr.	1.5	0.002
11-81-07	0.19	Footwall, brecciated and iron-stained metadiorite, adjacent to 11-81-06	tr.	tr.	tr.	11.2	0.008
11-81-08	Grab	Quartz lens, minor pyrite	tr.	tr.	tr.	15.9	0.140
11-81-09	0.11	Hangingwall, grey-brown, fine grained, siliceous metadiorite, adjacent to 11-81-10	tr.	tr.	tr.	15.2	0.158
11-81-10	0.35	Quartz vein, white, iron-stained, pyrite masses	tr.	tr.	tr.	0.9	0.008
11-81-11	0.11	Footwall, grey-brown, very fine grained, iron-stained, gabbro-diabase, adjacent to 11-81-10	tr.	tr.	tr.	0.3	0.004
11-81-12	Grab	Quartz vein, heavily mineralized with pyrite, same location as 11-81-10	tr.	tr.	tr.	2.5	0.004
11-81-13	Grab	Gossan, limonite cemented gravels	0.05	tr.	tr.	0.5	0.002