ASSESSMENT REPORT

on

GEOLOGICAL MAPPING, ROCK GEOCHEMISTRY & VLF-EM GEOPHYSICS

ZAU CLAIMS

Moyie River Area

FORT STEELE MINING DIVISION

TRIM MAPS 82F.050 & 82G.041
NTS 82 F/8E & 82 G/5W

Latitude 49° 27' N
Longitude 116° 00' W

UTM 547700 N, 572400 E

By

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January, 2000

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

1.00 INTRODUCTION

This report describes a program of geological mapping, rock geochemistry and VLF-EM geophysical surveying completed on the Zau property in the Noke and Negro Creek area WSW of Cranbrook, B.C. during 1999.

1.10 Location and Access

The Zau claims are located approximately 17 kilometers west-southwest of Cranbrook, B.C. in the Fort Steele Mining Division (Fig. 1). The claim block covers part of the ridge between Noke and Negro Creeks, southeast flowing tributary drainages of the Moyie River. The claims are centered near 49° 27' N Latitude and 116° 00' W Longitude, along the boundary of Trim maps 85F.050 (NTS 82 F/8E) and 82G.041 (NTS82 G/5 W) (Fig. 2).

Access to the property is via good logging roads up the Moyie River and Noke and Negro Creeks.

1.20 Property

The Zau claims are a contiguous group of 16 two-post claims, staked in the name of Tom Kennedy of Kimberley, B.C. (Fig. 2).

1.30 Physiography

The Zau claims occur west of the Rocky Mountain Trench, within the Moyie Range of the Purcell Mountains. They straddle a glacially rounded ridge between Noke and Negro Creeks, southeast flowing tributaries of the Moyie River. Elevations on the property range from 1475 to 1940 meters.

Forest cover consists of a mixture of mainly pine, fir and larch in various stages of maturity. Parts of the claim block have been clear-cut logged.

1.40 History of Previous Exploration

Southeast flowing tributaries of the Moyie River have historically been worked for placer gold. Negro and Noke Creeks, which drain the Zau claims, both carry placer gold. The search for lode gold sources to the placers has occurred intermittently over many years. In the mid-1980's Cominco Ltd. held this ground as part of their larger 'Noke' claim block in the Moyie River - Perry Creek area. Within the past 10 years junior companies such as Chapleau Resources Ltd. and Abitibi Mining Ltd. have conducted small exploration projects near the Zau claims.

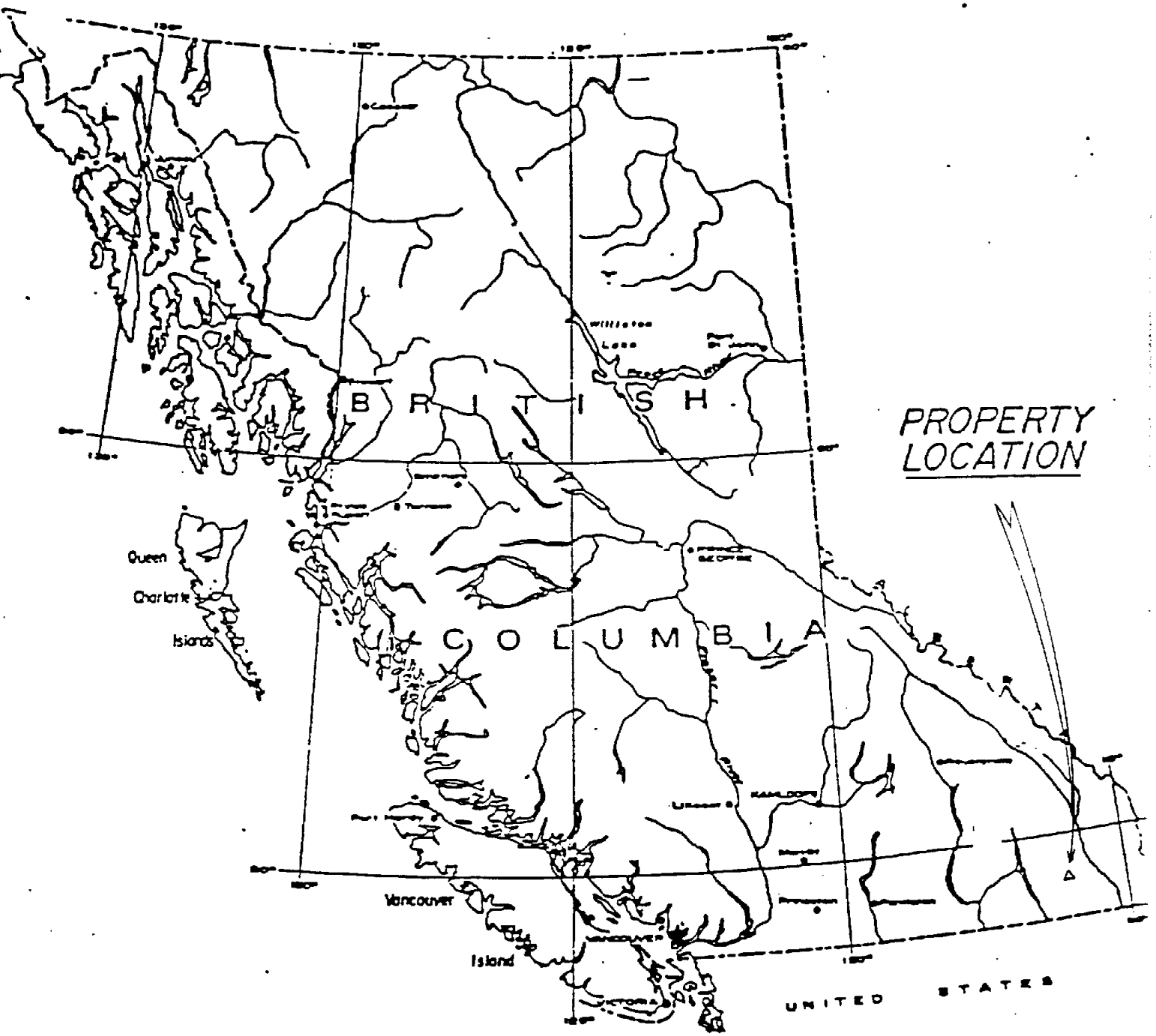

Figure 1
ZAU CLAIMS
PROPERTY LOCATION MAP

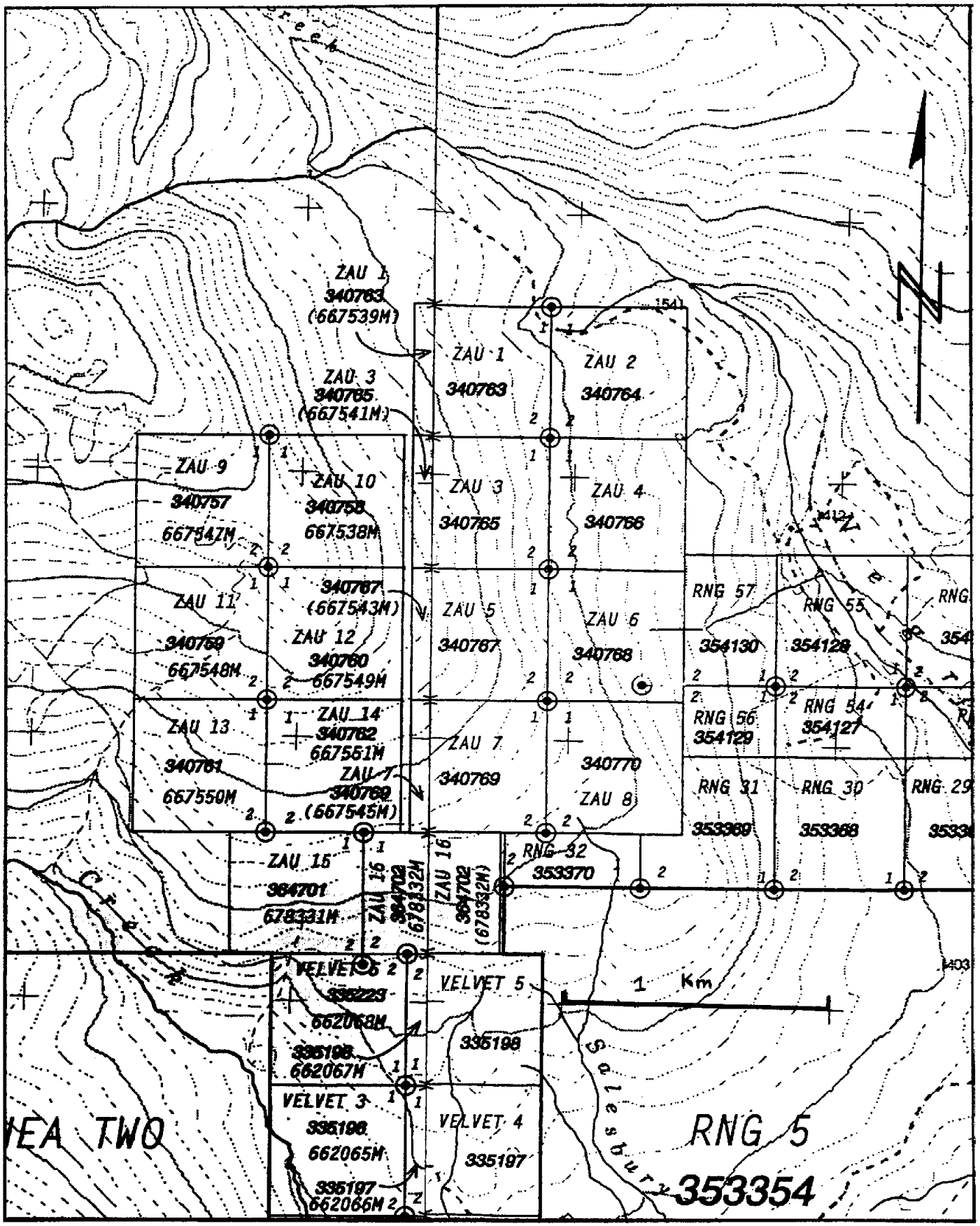

Figure 2
ZAU PROPERTY CLAIM MAP
Scale 1: 25,000 NTS 82 F/8 E & G/5 W
TRIM MAPS 82F.050 & 82G.041

In 1998 a program of VLF-EM geophysical surveying was carried out on the Zau claims to try and identify underlying structures that influenced the deposition of gold. Numerous anomalous VLF-EM responses were detected by the 1998 survey but most were crossed by only a few survey lines and the extent of the anomalies was not delineated.

1.50 Purpose of Survey

During 1999 a program of geological mapping, rock geochemistry and additional detailed VLF-EM geophysical surveying was carried out on the Zau claims in a continuing attempt to locate bedrock sources of gold mineralization. This work was funded in part by a B.C. Department of Energy and Mines Prospector Assistance Program.

2.00 GEOLOGY

2.10 Regional Geology

The area of the Zau claims has been recently mapped by Hoy and Diakow (1982; Figure 3): the property is underlain by the Mesoproterozoic Purcell Supergroup, a thick succession of fine grained clastic and carbonate sedimentary rocks exposed in the core of the Purcell Anticlinorium in southeast British Columbia. These rocks are believed by most workers (eg. Harrison, 1972) to have been deposited in an epicratonic re-entrant of a sea that extended along the western margin of the Precambrian North American Craton.

The oldest known member of the Purcell Supergroup is the Aldridge Formation, a thick sequence of fine-grained siliciclastic rocks deposited largely by turbidity currents. Reesor (1958) has divided the Aldridge Formation in the Purcell Mountains into three informal units: rusty weathering siltstone, quartzitic wacke and argillite of the lower Aldridge Formation; grey weathering quartz wacke and siltstone of the middle Aldridge Formation; and laminated argillite of the upper Aldridge Formation.

The Aldridge Formation is gradationally overlain by shallower-water deltaic clastics of the Creston Formation. The Creston Formation is in turn overlain by predominantly dolomitic siltstones of the Kitchener Formation. The Aldridge Formation has been intruded by a series of gabbroic sills and dikes which are interpreted to be penecontemporaneous with deposition of their host sediments (Hoy, 1989).

The Purcell Anticlinorium is transected by a number of steep transverse and longitudinal faults. The transverse faults appear to have been syndepositional (Lis and Price, 1976) and Hoy (1982) suggests a possible genetic link between mineralization and syndepositional faulting.

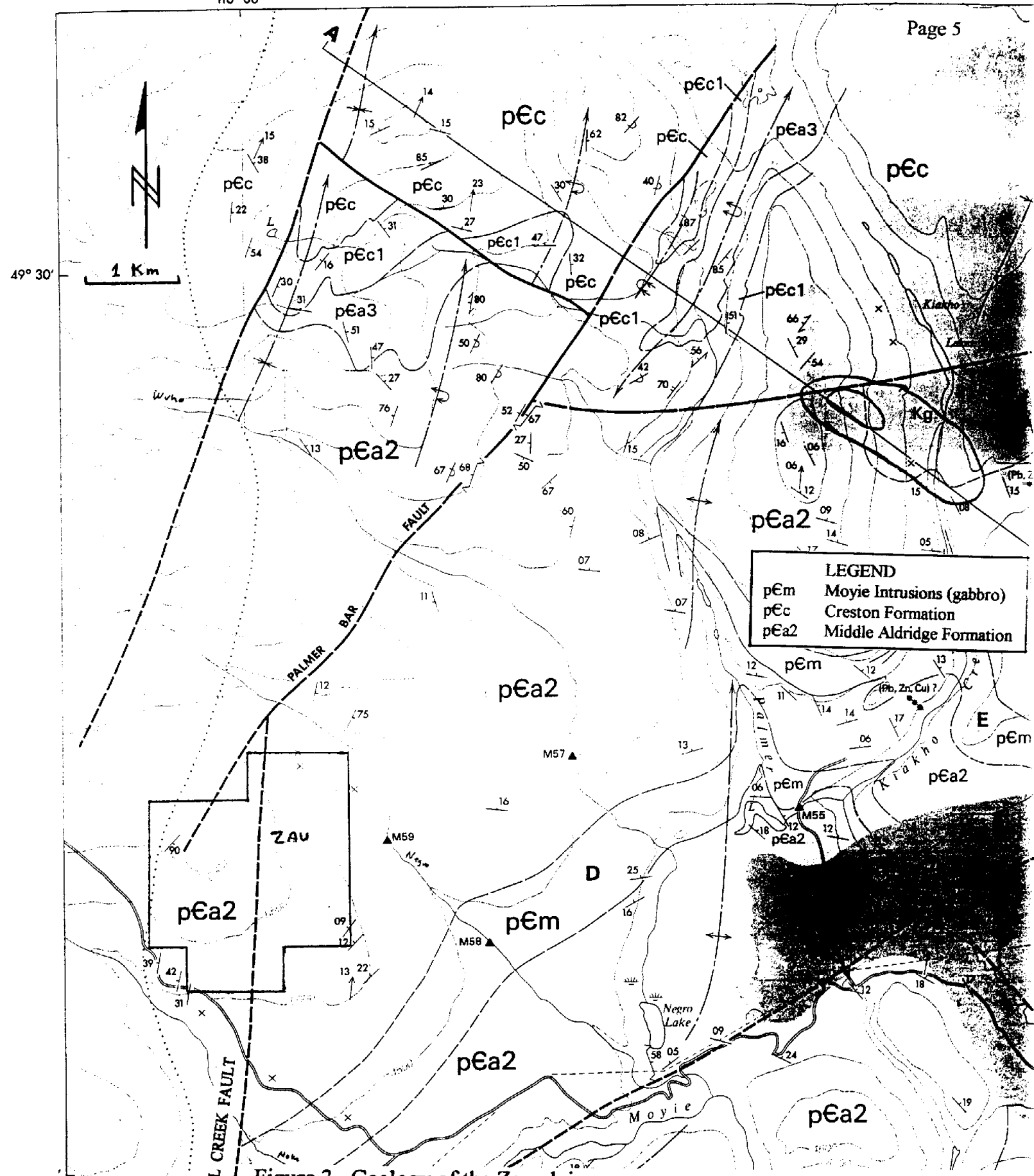

Figure 3. Geology of the Zau claim area

Part of Preliminary Map No. 49, Geology of the Moyie Lake Area, 1982 By T. Hoy and L. Diakow, B.C. Ministry of Energy, Mines and Petroleum Resources. Scale 1:50,000.

Longitudinal faults which more closely parallel the direction of basin growth faults may have played a similar role. Gold mineralization, most of which is believed Cretaceous in age, appears to be related to felsic intrusive activity and controlled by fault or shear structures.

2.20 Property Geology

Geologic mapping of the Zau claims was conducted at a scale of 1:5000 (Fig. 4). Bedrock exposure is less than 5% of the claim area and is mainly in one locality, in the Zau 12 claim area. A few small, isolated bedrock exposures occur elsewhere on the claims, for example along the Negro and Noke Creek roads .

Lithology

The Zau claims are underlain entirely by middle and upper Aldridge Formation rocks. The middle Aldridge Formation consists of medium gray, variably rusty weathering thin and medium bedded, fine-grained siliceous rocks ranging from argillites to quartzites with medium thickness turbidites predominating. The upper Aldridge Formation is thinner bedded and more argillaceous, consisting mainly of parallel-laminated, rusty weathering argillites and silty argillites with occasional thin and medium bedded quartz wackes. Both the upper and middle Aldridge Formation carry minor but variable concentrations of fine, disseminated pyrrhotite.

Rocks interpreted to be part of the upper Aldridge Formation occur in the NW corner of the claim block, northwest of a northeast-striking fault which is probably the regional Palmer Bar Fault (Hoy and Diakow, 1982; see Figures 3 & 4). However, unequivocal middle Aldridge Formation rocks are exposed just inside the north boundary of Zau 10, apparently on the west side of the Palmer Bar Fault, and thus rocks interpreted to be upper Aldridge may actually be part of the middle Aldridge but high in the stratigraphic section.

Structure

Bedding on the property is generally northeast-striking with moderate northwest dips. Minor folding is fairly common and results in variations from this regional attitude. Local shearing and cleavage typically also trends northeast, parallel and sub-parallel to known faults.

A major north-striking structure, the McNeil Creek Fault, cuts across the Zau claim block, sub-parallel to the 116° W longitude. In McNeil Creek, which is south of the Moyie River and south of the Zau claims, this fault offsets middle Aldridge rocks by about 700 m with west side down. In the vicinity of the Zau claims the McNeil Creek Fault changes to a northeasterly strike and

northeast of the claim block is called the Palmer Bar Fault. The northeast-trending fault on the Zau claims which separates upper Aldridge rocks on the west from middle Aldridge rocks on the east has at least 1000 meters of displacement with west side down; this is evidently the Palmer Bar Fault.

Marker beds within the middle Aldridge Formation on the Zau claims, as well as other information obtained during geologic mapping on the property, support the presence of additional northeast fault structures with some stratigraphic displacement.

Gabbros

A few gabbro intrusions were mapped on the Zau claims. A magnetic gabbro sill straddles the boundary of Zau 10 and 12 and occurs within middle Aldridge Formation rocks less than 50 meters east of the Palmer Bar Fault. The sill has a maximum exposed thickness of 60 meters but shrinks down to a negligible thickness just 200 meters to the south. This attenuation is due to structural deformation along a bedding-parallel fault; the gabbro sill is strongly sheared on its east contact with thin shear-parallel quartz veins. The fault is not very obvious in bedrock and its presence suggests there may be other such bedding-parallel faults on the property. Immediately west of the gabbro sill Aldridge beds are boudinaged, sheared and silicified with thin, irregular lensey quartz veins.

Two other small gabbro occurrences were noted; one very thin sliver of gabbro, trending parallel to the gabbro sill, occurs on the Zau 11-12 claim boundary; it may be a southern, offset extension of the gabbro sill noted above.

The other gabbro is in the southeast corner of Zau 10, just south of the northern syenite dike. Again, this exposure is small but appears to be a northwest-striking dike, dipping steeply southwest. No other northwest structure was observed but one of the strongest VLF-EM anomalies detected, in the northeast corner of the claim block, has a very similar strike. (See Section 4.22 & Figure 5).

Syenite Dikes

Narrow felsic 'syenite' dikes were recognized at 3 localities on the property. Two are near the boundary of Zau 11 & 12. Both occurrences appear to strike northeast and they may be part of one dike although syenite material was not recognized in the middle ground. Immediately east of the western felsic dike are a series of northwest-striking, north-dipping (142/32N) quartz veins; possibly an orthogonal set of tension gash veins related to emplacement of the syenite.

The third syenite occurrence is northwest of the southeast corner of Zau 10. This exposure is very small but shearing in the syenite strikes northeast, similar to the other syenite dikes and this is the presumed attitude of this dike as well. Small 2-3 mm feldspar phenocrysts are visible in

this syenite dike. Rock samples were collected from each of the three syenite occurrences and analyzed for gold; the northern and eastern syenites (samples Zau 3 and Zau 9; Table 1 and Appendix 1) each have 5 ppb Au while the western syenite has 5 and 70 ppb Au (samples Zau 4 and Zau 26). The 70 ppb Au sample was limonitic (pyrite?) and contained thin light gray quartz veins; higher gold values may be due to the pyrite (?) and / or late stage silicification.

Fragmentals

A small dike-like fragmental is exposed in a small cliff on the western edge of the Zau 12 claim (Fig. 4). The fragmental cross-cuts Aldridge stratigraphy at about 45° to bedding. Abundant rounded and angular fragments or clasts are present, about 3 - 10 cm across, with some fragments aligned parallel to the dike walls.

Another fragmental occurrence is near the northeast corner of the claims on Zau 2, in a rubbly, altered roadcut exposure of chloritic-altered middle Aldridge sediments. Minor disseminated sphalerite occurs with this fragmental.

Alteration

Although bedrock exposure is quite limited on the Zau claims, it appears that alteration is more strongly developed on the east side of the Palmer Bar Fault.

Sericite alteration is present in a patchy manner within the main outcrop area on the claims, generally in the vicinity of the cross-cutting fragmental dike and near the southern edge of this area of bedrock exposure. Sericite is developed around the Sullivan orebody at Kimberley and is considered a 'distal' indicator of possible Zn-Pb-Ag Sedex style hydrothermal venting. On the Zau claims, sericite is also developed on the margins of the northwest-striking gabbro dike, and is more extensively developed on the southwest side of the dike.

A strong argillic and limonitic alteration zone with abundant pyritic quartz veining is exposed just east of the Zau 2 claim along the Negro Creek road. Only very little bedrock is actually exposed, along the inside ditch line of the road, where phyllitic and argillaceous Aldridge sediments are altered to a yellow-brown limonitic color. White felsic material, presumably from a syenite dike, occurs within the alteration zone as float. This material is limonite-spotted, possibly from oxidation of fine-grained pyrite. Breccia float with a chloritic, argillaceous matrix is also present as float.

Quartz vein float is widespread within the area of alteration, and is also common within the clear cut to the immediate west (Fig.5), where logging activity has disturbed the soil and turned up a large number of rocks. Disseminated, dark reddish-brown oxidized pyrite is abundant with some of the quartz vein float.

The alteration zone extends from about 2650 N to 2800 N, just south of an E-W to NE oriented VLF-EM anomaly (see Fig. 5). The northern edge of the alteration zone coincides closely with this VLF anomaly and the two features are probably related.

The one rock sample collected from this alteration zone, a piece of strongly sheared, argillaceous siltstone with numerous thin limonitic, vuggy quartz veins returned only 10 ppb Au (sample Zau 1; Fig. 4, Table 1 and Appendix 1).

Another limonitic alteration zone was noted just east of the center of Zau 4, within a large clear cut. No bedrock is exposed in the vicinity but an area of limonitic soil strongly suggests an underlying alteration zone. This alteration zone is a prime candidate for future VLF-EM surveying.

Extensive quartz vein float is present on the Zau claims. This quartz ranges considerably in character from massive, white, 'barren' looking quartz to sheared and strongly pyritic material. Some of the quartz carries specular or botryoidal hematite.

The magnetic gabbro sill which crosses the Zau 10-12 boundary has patchy epidote-quartz-amphibole-magnetite alteration along fractures; epidote and magnetite alteration of gabbros is a fairly common feature where gold mineralization is present in the Moyie River - Perry Creek 'gold district'. Some quartz pods in the gabbro carry specular hematite.

3.00 ROCK GEOCHEMISTRY

Rock geochemistry was undertaken to help identify areas within the claim block where anomalous gold may exist in bedrock. Bedrock is exposed on less than 5% of the Zau claim area and rock samples were taken mostly from bedrock, thus only very little of the claim block has been evaluated using rock geochemistry. A number of specimens of favourable-looking float material were also sampled and analyzed.

Twenty-six rock specimens were collected of a variety of lithologies, alteration and quartz veins. These rocks are generally similar in character to rocks on nearby properties which do carry significant anomalous gold. Samples were analyzed for geochemical gold by Rossbacher Laboratories Ltd. of 2225 Springer Avenue, Burnaby, B.C., V5B 3N1. Sample locations are shown in Figure 4, geochemical results are provided in Table 1 and sample descriptions are provided in Appendix 1.

ROSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 Springer Ave., Burnaby, British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

To : Peter Klewchuk
246 Moyie Street
Kimberley, B.C. V1A 2N8

Project: ZAU
Type of Analysis: Geochemical

Certificate: 99524
Invoice: 50252
Date Entered: 99-11-26
File Name: KLE99524.G
Page No.: 1

PRE FIX	SAMPLE NAME	PPB Au
A1	ZAU 99 - 01	10
A1	ZAU 99 - 02	5
A1	ZAU 99 - 03	5
A1	ZAU 99 - 04	5
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A1	ZAU 99 - 26	70
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A1	ZAU 99 - 28	5
A1	ZAU 99 - 29	10
A1	ZAU 99 - 30	10
A1	ZAU 99 - 31	30
A1	ZAU 99 - 32	10

Table 1. Geochemical analyses of rock samples, Zau claims.

CERTIFIED BY : Rossbach

Results

Only low anomalous gold values are present in the 26 rock samples collected from the Zau claims in 1999. The maximum gold value is only 70 ppb; 2 samples have 30 ppb Au, 2 samples have 20 ppb Au, 7 samples have 10 ppb Au and 14 samples have '5ppb Au' (Table 1).

Although the number of rock samples taken is small, and the gold values too low to provide any definite conclusions about where the better bedrock gold on the property may be hosted, some general comments can be made. The highest gold value of 70 ppb is within a syenite dike that has been cut by a series of thin light gray quartz veins. This supports a relationship between the syenite dikes and gold deposition and the presence of the thin light gray quartz veins indicates gold was emplaced during a late stage silicification process. Other 'better' gold values tend to be in fault zones or in brecciated or sheared sediments which have been cut by a series of thin quartz veins. These results support the structural control for gold-bearing fluids. It appears that the more obvious pyritic quartz veins generally do not carry significant gold values, however, gold is often erratically distributed within its host structures, thus better gold values may exist close by.

4.00 GEOPHYSICS

4.10 Introduction

Two areas of anomalous VLF-EM responses detected by a survey in 1998 (Klewchuk, 1998, A.R. 25,771) were detailed in 1999. These areas are in the northeast and southwest corners of the claim block. Survey lines were run by compass and are oriented north-south and east-west. Survey lines were measured with a hip-chain with VLF-EM readings taken at 25 meter spacings.

A total of 10.425 kilometers of line was surveyed; Figure 4 shows the location of the two survey grids and the detailed VLF-EM data is shown in Figures 5 and 6.

4.20 VLF-EM Survey

4.21 Instrumentation and Survey Procedure

The VLF-EM (**V**ery **L**ow **F**requency **E**lectro**m**agnetics) method uses powerful radio transmitters set up in different parts of the world for military communication and navigation. In radio communication terminology, VLF means very low frequency, about 15 to 25 kHz. Relative to frequencies generally used in geophysical exploration, the VLF technique actually uses very high frequencies.

A Crone Radem VLF-EM receiver, manufactured by Crone Geophysics Ltd. of Mississauga, Ontario was used for the VLF-EM survey. Seattle, Washington, transmitting at 24.8 kHz and at an approximate azimuth of 247° from the survey area, was used as the transmitting station.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic (primary) field by a strong alternating current usually through a coil of wire. If a conductive mass such as a sulfide body is within this magnetic field, a secondary alternating current is induced within it, which in turn induces a secondary magnetic field that distorts the primary magnetic field. The VLF-EM receiver measures the resultant field of the primary and secondary fields, and measures this as the tilt or 'dip angle'. The Crone Radem VLF-EM receiver measures both the total field strength and the dip angle.

The VLF-EM uses a frequency range from about 15 to 28 kHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can detect zones of relatively lower conductivity. This results in it being a useful tool for geologic mapping in areas of overburden but it also often results in detection of weak anomalies that are difficult to explain. However the VLF-EM can also detect sulfide bodies that have too low a conductivity for other EM methods to pick up.

Results were reduced by applying the Fraser Filter; dip angle readings and the Fraser Filter values are shown in plan in Figures 5 and 6. Fraser Filter values are plotted between the dip angle readings which are at survey points. The higher Fraser Filter values (5+) are also contoured on these figures.

The Fraser Filter is essentially a 4-point difference operator which transforms zero crossings into peaks, and a low pass operator which induces the inherent high frequency noise in the data. Thus the noisy, often non-contourable data are transformed into less noisy, contourable data. Another advantage of this filter is that a conductor which does not show up as a zero crossover in the unfiltered data quite often shows up in the filtered data.

4.22 Discussion of Results

Reconnaissance VLF-EM surveying on the Zau claims in 1998 identified a number of moderately strong anomalies; two of these areas were selected for detailed surveying in 1999; they are in the northeast and southwest corners of the claim block (Fig. 4).

Northeast Grid

The VLF anomalies on this grid (Fig. 5) have a somewhat complex and disrupted pattern. On the eastern edge of the claims, an east-west anomaly which crosses the claim boundary is proximal to and partly coincident with a strong limonitic-weathering quartz-pyrite alteration zone that is

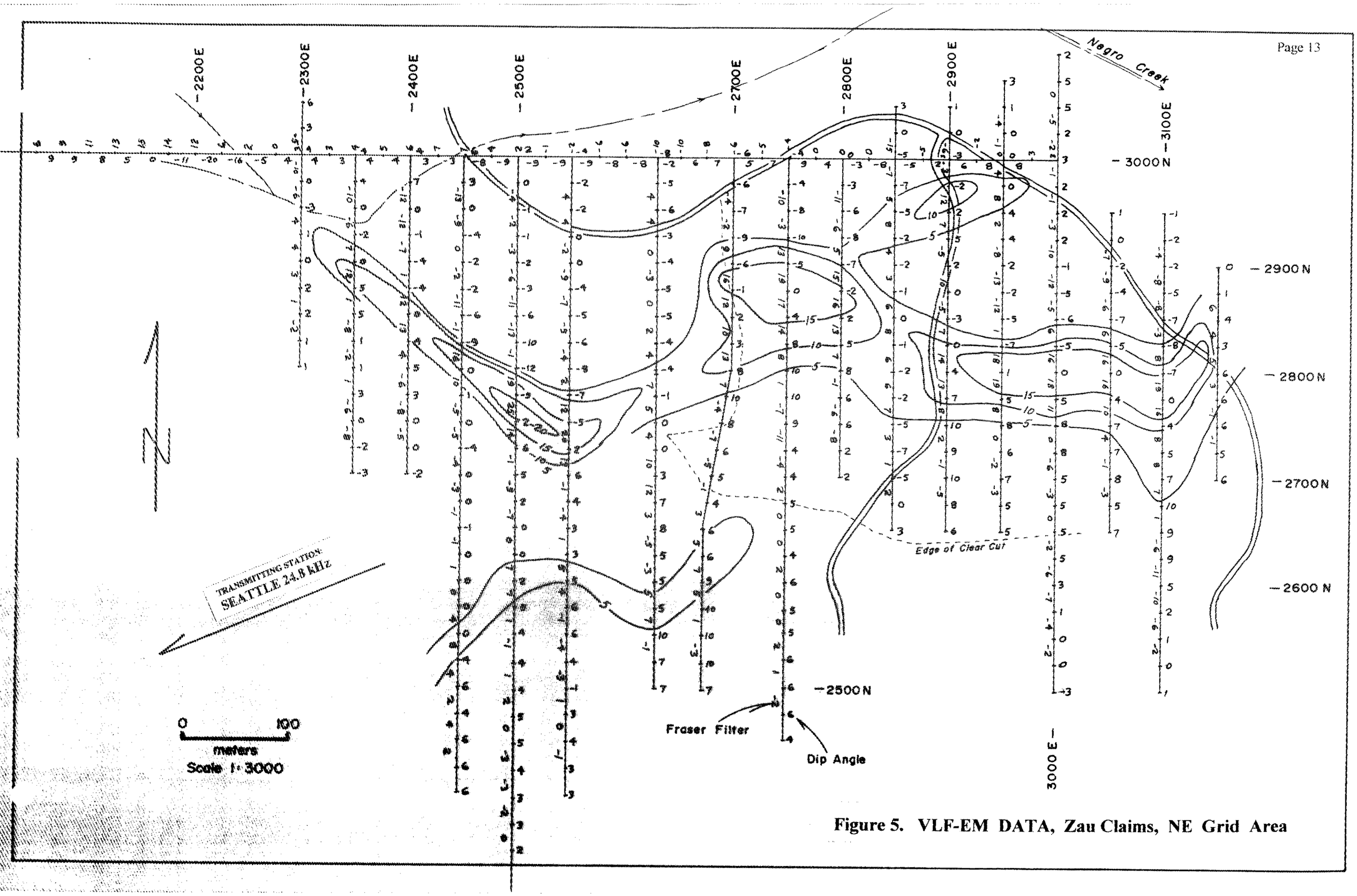

Figure 5. VLF-EM DATA, Zau Claims, NE Grid Area

cut by the Negro Creek road between 2650 N and 2800 N. The VLF anomaly does not coincide with the exposed part of the alteration zone, but swings to the north of the exposed alteration at the east edge of the survey area. The data on line 3150 E suggest the anomaly has diminished but this may be an area of low response within a more continuous anomaly, somewhat similar to the response of this same anomaly on line 2850 E. The proximal relationship of this VLF anomaly and the limonite-quartz-pyrite altered zone supports a genetic relationship for the two features.

In the central part of the northeast grid the east-west anomaly described above coalesces with an apparent northeast-oriented anomaly. To the northeast, this anomaly appears to terminate between lines 2950 E and 3000 E; to the southwest the anomaly joins a northwest trending anomaly which extends west of line 2550 E.

The northwest-oriented anomaly on the west edge of this grid is a distinct narrow linear anomaly but it apparently terminates going west, between lines 2350 E and 2300 E. This western anomaly is at a high angle to the regional northeast structure and may represent a cross-cutting structural feature. Geological mapping has identified one narrow gabbro dike on the property which appears to be northwest striking and of similar attitude to this VLF anomaly.

Much of the Northeast Grid overlies a logged clear cut within which there is widespread altered float and abundant pyritic quartz float. Thus the VLF anomalies defined here may be related to underlying structurally-controlled alteration zones.

Southwest Grid

Detailed VLF-EM surveying in the southwest grid area has partly delineated three separate northeast-trending anomalies. This trend is sub-parallel to regional structure and the anomalies probably reflect underlying structural zones.

4.30 Magnetics

In 1969-70 a Federal and B.C. Government-funded helicopter airborne magnetic survey was flown over most of the East Kootenay region of British Columbia. East-west flight lines were spaced an average of about 1000 meters and the magnetometer was flown about 300 meters above ground level.

In the Zau claim area this airborne magnetic survey defined a distinct north-trending linear anomaly (Figure 7). The anomaly closely parallels the lower part of McNeil Creek on the south side of the Moyie River and is thus roughly coincident with the McNeil Creek Fault (Hoy and Diakow, 1982). The survey data indicates this north-trending magnetic anomaly terminates on the Zau claims.

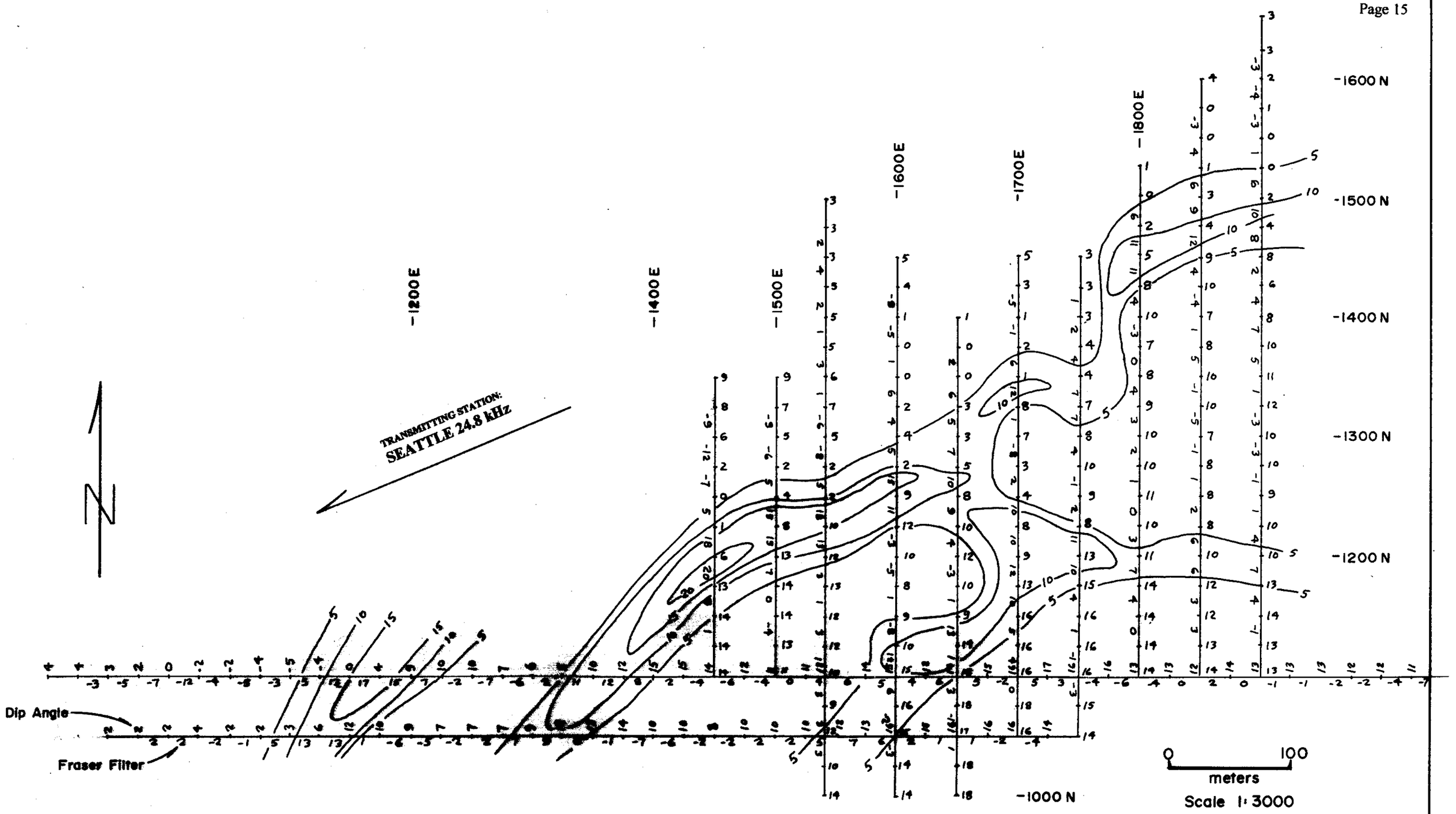

Figure 6. VLF-EM DATA, Zau Claims, SW Grid Area

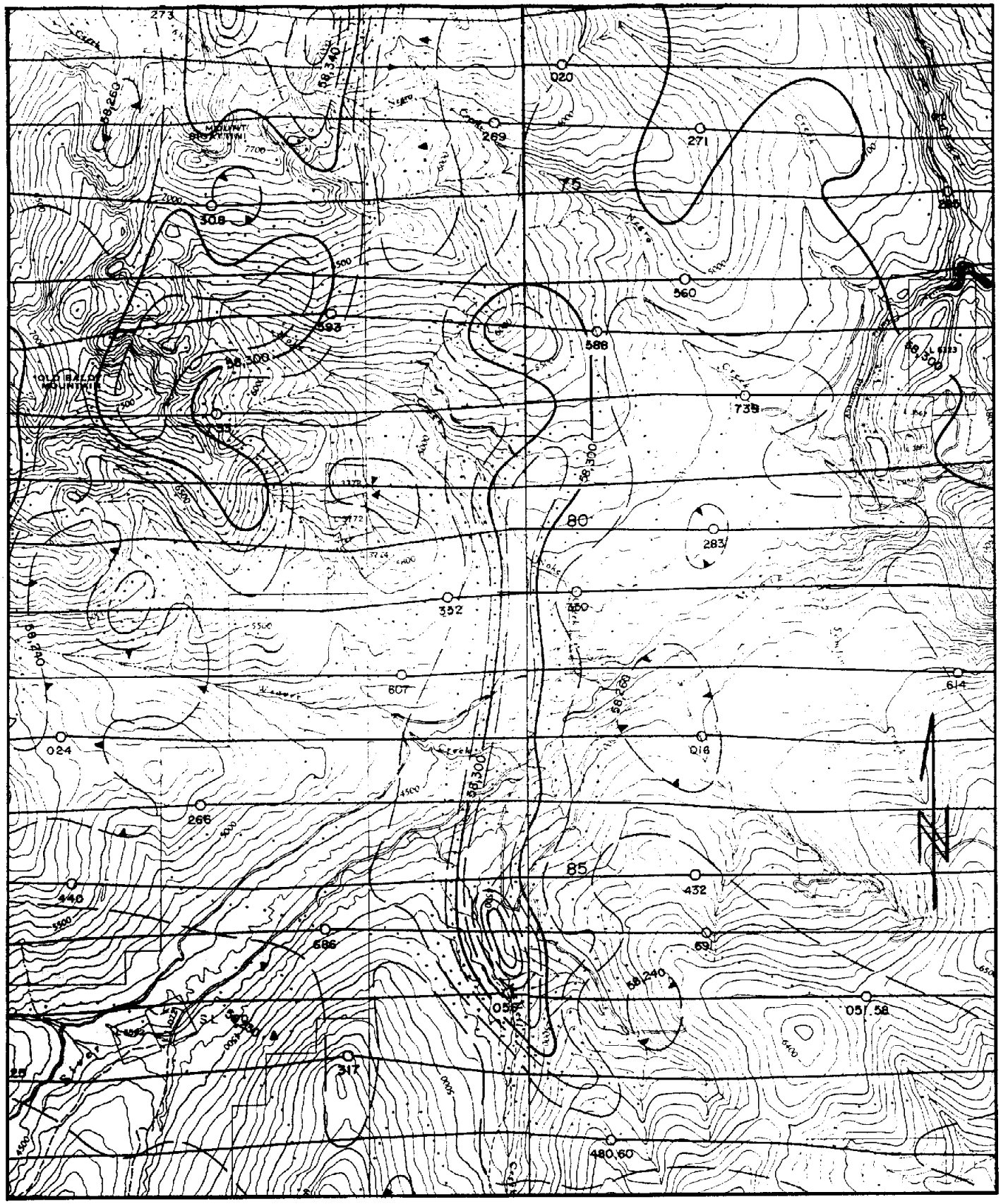

Figure 7. Airborne Magnetics, Zau Claim Area
Part of Maps 8472 G & 8468 G, 1969-70 Survey
Scale 1 : 63,360

It was intended to detail the northern terminus of this magnetic anomaly during the 1999 field season. On 2 separate occasions, attempts were made to collect magnetic data in this area using a single Geometrics model G816 portable proton precession magnetometer capable of detecting magnetic variations of one gamma. Unfortunately, during each attempted magnetic survey, too much magnetic noise was present to obtain meaningful results; at individual stations, where a series of 5 or 6 separate magnetic readings were taken, results varied by several hundred to more than 1000 gammas. This strong variation in magnetic readings at individual stations may be due to enhanced sunspot activity which is predicted to reach the peak of its 11 year cycle in the year 2000. No meaningful magnetic data was collected on the Zau claims in 1999.

4.00 CONCLUSIONS

1. Geological mapping on the Zau claims has established some control of the stratigraphy and structure. The Palmer Bar Fault separates upper Aldridge rocks on the west from middle Aldridge rocks on the east with a displacement in the order of 1000 meters. Additional northeast-oriented faulting is present on the claims, as indicated by a fault-attenuated gabbro sill within middle Aldridge stratigraphy.

2. Extensive alteration and pyritic quartz veining, of a style considered favourable for gold mineralization, occurs over much of the Zau claims as float and locally in bedrock. Geochemical analysis of some of these rocks has detected only low values of gold, in samples of an intrusive syenite dike and in fault-related brecciation and quartz veining. Gold mineralization appears related to late stage brecciation and silicification.

3. Minor fragmentals, local disseminated sphalerite and fairly widespread sericitic alteration indicate there is good exploration potential for sedex style Pb-Zn-Ag mineralization on the Zau claims.

4. Detailed VLF-EM surveying in the northeast corner of the Zau claims has defined a series of anomalies that may be a reflection of structures which control the extensive alteration seen in the area.

5. Detailed VLF-EM surveying in the southwest corner of the claim block has partly defined three separate northeast-trending anomalies that possibly reflect underlying fault zones in bedrock.

5.00 REFERENCES

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6.00 STATEMENT OF EXPENDITURES

Work done prior to September 23, 1999

9 ½ man-days, field work, drafting and report @ $300/day	$2850.00
4X4 truck 7 days @ $75/day	525.00
VLF-EM rental 5 days @ $30/day	150.00
Map preparation	75.00
Field, drafting and report supplies	62.00
Subtotal	$3662.00

Work done following October 3, 1999

6 man-days, field work	$1800.00
4x4 truck 6 days @ $75/day	450.00
Rock geochem analyses, 26 samples	278.20
Freight	18.98
Field Supplies	23.00
Subtotal	$2570.18
TOTAL EXPENDITURE	**$6232.18**

7.00 AUTHOR'S QUALIFICATIONS

As author of this report I, Peter Klewchuk, certify that:

1. I am an independent consulting geologist with offices at 246 Moyie Street, Kimberley, B.C.
2. I am a graduate geologist with a B.Sc. degree (1969) from the University of British Columbia and an M.Sc. degree (1972) from the University of Calgary.
3. I am a Fellow of the Geological Association of Canada and a member of the Association of Professional Engineers and Geoscientists of British Columbia.
4. I have been actively involved in mining and exploration geology, primarily in the province of British Columbia, for the past 23 years.
5. I have been employed by major mining companies and provincial government geological departments.

Dated at Kimberley, British Columbia, this 20th day of January, 2000.

Peter Klewchuk
P. Geo.

Appendix 1. Description of rock geochem samples

Zau 1	Float. Strongly sheared / foliated argillaceous rock with numerous thin, limonitic, vuggy QV. Disseminated, dark reddish-brown oxidized pyrite is abundant with larger QV. 10 ppb Au.
Zau 2	Float. White to light gray granular mottled quartz. Disseminated fine and medium-grained pyrite is irregularly distributed. Purple-pink limonite streaked. 5 ppb Au.
Zau 3	Felsic dike, syenite. 5 ppb Au.
Zau 4	Felsic dike, syenite at 1550 E 1645 N. 5 ppb Au.
Zau 5	Quartz vein in footwall contact of thin, strongly sheared gabbro at 1650 N 1570 E 5 ppb Au.
Zau 6	Float on landing. Bleached, limonitic argillaceous material; possible felsic intrusive. 5 ppb Au.
Zau 7	Float on landing. Limonitic altered quartzite, cut by thin light gray quartz veins with medium grained disseminated pyrite. 5 ppb Au.
Zau 8	Float on landing. Ribboned quartz float with abundant coarse to medium-grained pyrite and botryoidal hematite. Minor included sheared argillaceous sediments. 5 ppb Au
Zau 9	Felsic dike, possibly syenite. More limonitic than felsic dikes seen further south. Small 2-3 mm feldspar crystals evident. 5 ppb Au.
Zau 10	Quartz vein zone in silicified sediments; coarse milky white vuggy quartz with brownish-red limonitic alteration. 5 ppb Au.
Zau 11	Altered, silicified sediments with limonitic vugs and thin light gray quartz veins. Texture is cataclastically deformed with augen. 20 ppb Au.
Zau 12	Rusty quartz veining within fault zone. Small dark reddish-brown limonitic vugs common; may be oxidized pyrite. 10 ppb Au.
Zau 13	Float. Limonitic, vuggy sheared argillite and siltstone with a few thin light gray quartz veins. 30 ppb Au.

Zau 20 Old trench, mottled white to light gray quartz with disseminated pyrite and scattered small clots of light green chlorite. Vuggy with orange limonitic rust pockets. 10 ppb Au.

Zau 21 Same area, different trench, similar material. Streaky limonite, chloritic sedimentary fragments. More sheared with abundant medium grained disseminated pyrite. Local 'rusty' muscovite with pyrite. 10 ppb Au.

Zau 22 1650 E 1850 N Quartz breccia; vugs & limonite; NE striking fault zone. White to light gray mottled quartz. Fine-grained muscovite near some vugs. 20 ppb Au.

Zau 23 Near sample Zau 22; south along strike, ~10 m wide zone. Quartz vein and pale gray to green siliceous quartzite with thin mm wide quartz veins in fault zone. Disseminated oxidized pyrite in both quartzite and larger quartz vein. 5 ppb Au.

Zau 24 10 m west on contour. Quartz breccia with limonite and chlorite. Brecciated, sheared siltstone with thin quartz vein matrix. Disseminated small elongate vugs, some disseminated pyrite. 5 ppb Au.

Zau 25 Same zone, more massive white to light gray mottled quartz, some quartz crystals. Quite vuggy with some vugs encrusted with botryoidal hematite; some fractures coated with rusty, fine-grained mica. 5 ppb Au.

Zau 26 Altered narrow syenite, limonite-stained with thin light gray fine-grained quartz veins. Pervasively limonitic with abundant disseminated dark brown-black streaky mineral - biotite(?). Micaceous (fine to very fine muscovite), disseminated fine-grained euhedral pyrite. Quartz veins have dark orange-brown limonitic patches, probably oxidized pyrite. 70 ppb Au.

Zau 27 Narrow NW-trending veins, some iron staining & limonite in chloritic sericitic quartzite (structure?). Local trains of fine-grained pyrite. Some quartz is quite vuggy. 5 ppb Au.

Zau 28 Brecciated quartzite-siltstone with ~15% narrow (~1 cm) quartz veins, some iron staining, limonite. Sericitic and weakly chloritic with rare disseminated pyrite (pyritohedrons recognized). 5 ppb Au.

Zau 29 50 m east of Zau 28, similar material, micaceous quartzite-siltstone (argillite?). Rusty vugs, disseminated pyrite. Sheared with shear-parallel trains of fine-grained pyrite. Similar to sample Zau 28 but more argillaceous, more pyritic, more sheared. 10 ppb Au.

Zau 30 Between Zau 28 & 29, similar material. Brecciated, sericitic quartzite. Few thin, irregular, lensey, pyritic quartz veins 1-4 mm wide. Minor disseminated pyrite in quartzite. 10 ppb Au.

Zau 31 Quartz blow-out, 10 m east of Zau 29, on contour. Quartz with included lensey shards of chlorite, sericitic siltstone. Boxwork limonitic vugs on quartz vein margin. Patchy dark red-brown-black limonitic oxidized vugs. Minor disseminated oxidized pyrite. NE-trending. 30 ppb Au.

Zau 32 75 m along contour from Zau 31. Mottled light gray limonitic quartz. Lensey inclusions of rusty mica/chlorite. No obvious pyrite noted. 10 ppb Au.

Zau Claim Boundary

Zau 1 Zau 2 Zau 3 Zau 4 Zau 5 Zau 6 Zau 7 Zau 8 Zau 9 Zau 10 Zau 11 Zau 12 Zau 13 Zau 14 Zau 15 Zau 16

Negro Creek

Noke Creek

Middle Aldridge Formation

Upper Aldridge Formation

Middle Aldridge Formation

Palmer Bay Fault

Fragmental Minor Zn-S

Limonite Altered Zone Small Q.V.

Alteration Zone - Float

Angular Gabbro Float

Thin QV Float

GABBRO DIKE

SYENITE

CHLORITE BRECCIA

Folding

1800 1700 1500 1900 2000 1600

5479000 5478000 5477000 5476000

571000 E 572000 E 573000 E

LEGEND

- GABBRO
- FRAGMENTAL
- Q.V. QUARTZ VEIN
- 0/12 ROCK SAMPLE
- BEDDING
- CLEAVAGE
- JOINTING
- QUARTZ VEIN
- VLF-EM ANOMALY

N

200 m

ZAU CLAIMS

SURFACE GEOLOGY

Showing VLF-EM Anomalies

Scale 1:5000 | January 2000 | Figure 4