Geological Report
on the
DV Property

Fort Steele Mining Division,

82 G/11W and 82 G/12E

Latitude: 49° 36' N, Longitude: 115° 28' W

RECEIVED
M121
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EXPLORE B.C. PROGRAM
MEMPR

for

Big B Resources
3977 Woodlands Drive
Trail, B.C.
V1R 2V6

by

Richard T. Walker
Dynamic Exploration Ltd.
1916 - 5th Street South
Cranbrook, B.C.
V1C 1K4

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SUMMARY

The strata comprising the Aldridge Formation in the western Rocky Mountains differ from those exposed to the west in the Purcell Mountains in that they have facies and thickness changes, diverse lithologies and a unusual carbonate facies near the base not identified farther west. Deposition of the Aldridge Formation in the Hughes Range of the Rocky Mountains was interpreted to have been proximal to the northeastern margin of the (Belt-) Purcell Basin, a huge rift basin extending south into the United States. This basin was gradually filled with sediments over time, from the deep water lithologies of the Aldridge Formation to the shallow water facies of the Creston and Kitchener Formations. Renewed rift activity is documented by the Sheppard and Nicol Creek formations.

Two regionally prominent faults have been episodically active since the Proterozoic and have had significant influence on the stratigraphic and structural history of the Canadian portion of the Purcell Basin. The Moyie - Dibble Creek and St. Mary - Boulder Creek faults both have a northern trend immediately north of the U.S. border and undergo a change to an essentially eastward trend near Cranbrook. These faults were interpreted to define a failed rift arm (an aulocogen). The Moyie - Dibble Creek fault has been subsequently interpreted as a flexure or monocline at the northern margin of a topographic high on the eastern margin of the Purcell Basin. This high standing block is known as Montania. Facies and thickness changes described from the Aldridge Formation in the Hughes Range may reflect proximity to Montania as well as movements on the (St. Mary-) Boulder Creek and (Moyie-) Dibble Creek faults. These faults may have localized a sub-basin within the Purcell Basin, similar to the Sullivan sub-basin (the "North Star Corridor"). A stratiform Pb-Zn occurrence (the Kootenay King deposit) was identified and mined in this sub-basin, however the source of mineralization for the deposit was not identified.

The entire stratigraphic package was transported to the northeast during the Laramide Orogeny in the hanging wall of the Hosmer Thrust. Based on detailed mapping in the southern Hughes Range, the rock mass was interpreted to have been initially transported to the southwest up and over the Dibble Creek monocline where it subsequently underwent extension due to gravitational settling. Igneous intrusions having granitoid compositions (composite syenitic to monzonitic dykes, stocks and plutons) were emplaced into the stratigraphic package in the Late Cretaceous (115 Ma), constraining the latest movement on some faults (i.e. the Moyie (-Boulder Creek fault). In addition, at least one of the intrusions appears to have played a role in localizing economic mineralization (i.e. the syenite stock at the Estella mine).

Finally, there is abundant evidence of mineralized fluids which pervaded the strata comprising the southern Hughes Range, resulting in alteration and mineralization of the host rocks. The Bull River Mine is comprised of two open pits located on at least seven zones of steeply dipping sheared and fractured rock, perhaps related to the Bull Canyon Fault. In addition, minor production was documented from the Dibble Crown Grants and the Victor Vein, both interpreted by the author to be related to hydrothermal activity along and/or proximal to fault planes.

Structural mapping of the DV property, as part of the 1995 field program (with compilation of

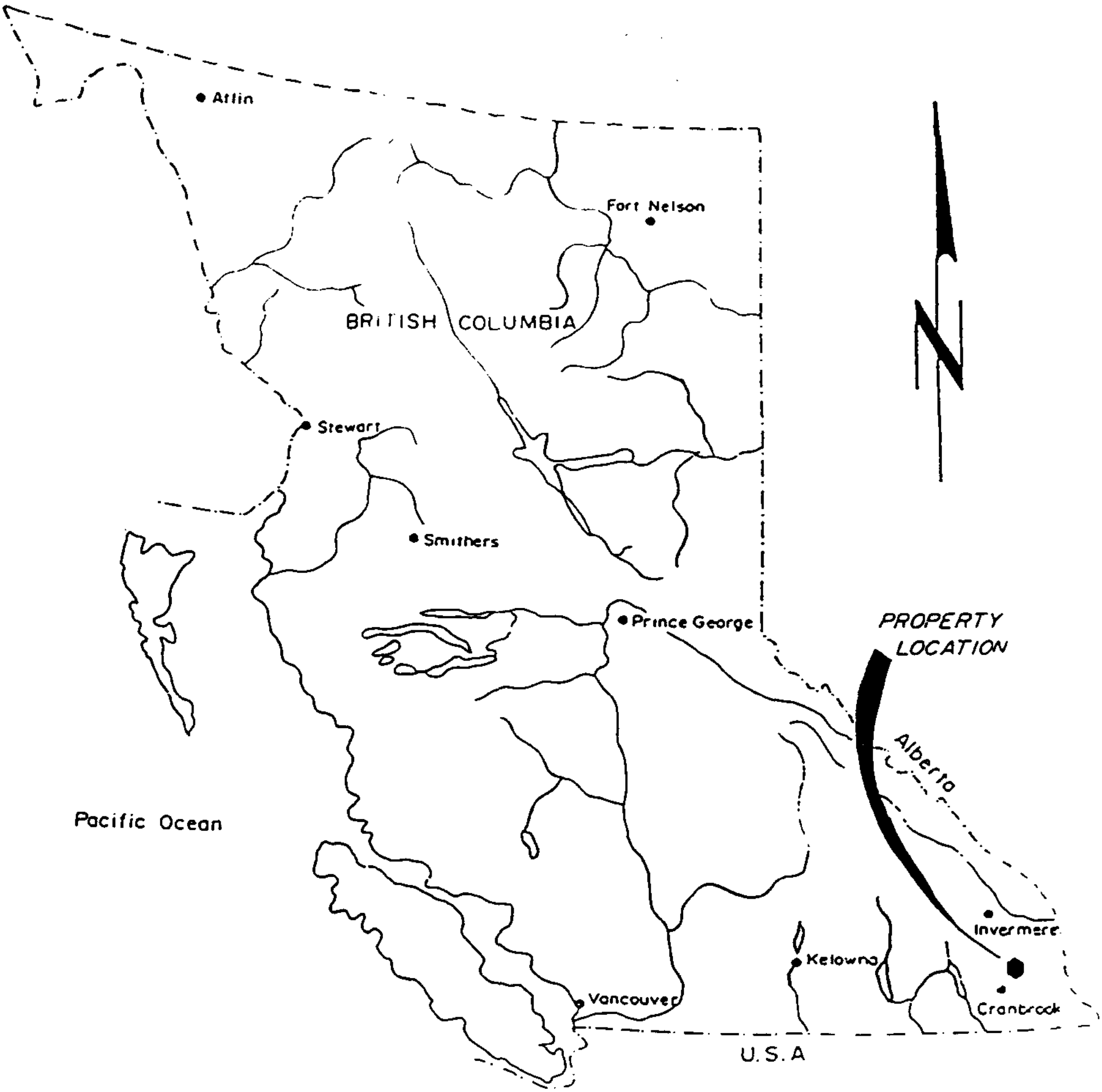
previous mapping, geochemical and geophysical data) supports a very strong association between areas of mineralization and major faults or fault zones. Furthermore, the association of mineralization identified to date with either variable zones of alteration and/or quartz veins along planar discontinuities such as fractures and faults, has been interpreted by the author as a result of hydrothermal activity.

A linear geophysical anomaly was identified on the G.S.C. 8465G (Fernie) mapsheet, which is actually comprised of three magnetic highs. In general, the aeromagnetic data for the region defines a rather uniform gradient from east to west which is deflected by strong magnetic closures (anomalies) coincident with granitoid intrusions (i.e. the Reade Lake, Kiakho and Wild Horse stocks). Therefore, the magnetic anomalies underlying the DV property are inferred to reflect a granitoid intrusion, probably a dyke, at depth. Numerous, smaller granitoid dykes, sills and small plugs have been reported throughout the Hughes Range.

The model proposed for mineralization on the DV property is a simple hydrothermal convection cell, driven by the granitoid intrusions. Hot fluids derived from the granitoids and/or from formation waters proximal to the intrusions leached metals (both base and precious metal) from the host lithologies. The proportion of metals contained in solution was dependent primarily upon the host strata (i.e. lead and zinc from the Aldridge Formation; silver, copper and gold from the Creston Formation). The mineralized fluids rose upward along conduits, primarily fractures and faults, where they cooled and precipitated metals in and along the conduits. Therefore, the quartz veins of the Dibble Crown Grants are interpreted as vein infill (with mineralization) along splay faults within the Dibble Creek fault zone. Similarly, the Victor "vein" is interpreted as a quartz vein (with mineralization and coincident alteration) along a small fault associated with the Horseshoe Fault zone.

In contrast, mineralization on the Box claims may be primary mineralization associated with the DV - Kootenay King sub-basin. The coarse grained facies (quartzites) in the middle Aldridge Formation of the northwest portion of the DV property reflect proximity to a margin, probably the northern margin of Montania. There are some similarities with the Kootenay King mine, primarily coarse grained (quartzitic) intervals in the upper middle Aldridge with anomalous lead-zinc soil geochemistry. The Pic Fault may locally complicate mineralization by providing a secondary source for lead and zinc.

The DV property (Fig. 1) has been held by Big B Resources since 1980, with total exploration expenditures on the property by, and on behalf of Big B Resources, approaching $400,000. At least 1,580 soil, 197 rock and 15 silt samples have been analyzed from the property. In addition, there has been geophysics (both VLF-EM and conductivity) undertaken on small grids on the property with mixed results. Finally, trenching (Victor and Dibble claims) and small diameter (back-pack) drilling (Box claims) was conducted in past programs. As a result of the 1995 program (structural mapping and compilation of previous results), there are now four drill targets identified on the property. The Box claims can be drilled with the information available (target depth approximately 75 metres), while the Victor vein, Dibble Crown Grants and the aeromagnetic targets may require additional work (i.e. airborne and/or ground geophysics) prior to drilling.



BIG B RESOURCES

DV CLAIM GROUP

Location Map

Gemquest Geological		NTS 8
Date Nov., 1995	Scale 1:8,000,000	Fig No 1

INTRODUCTION

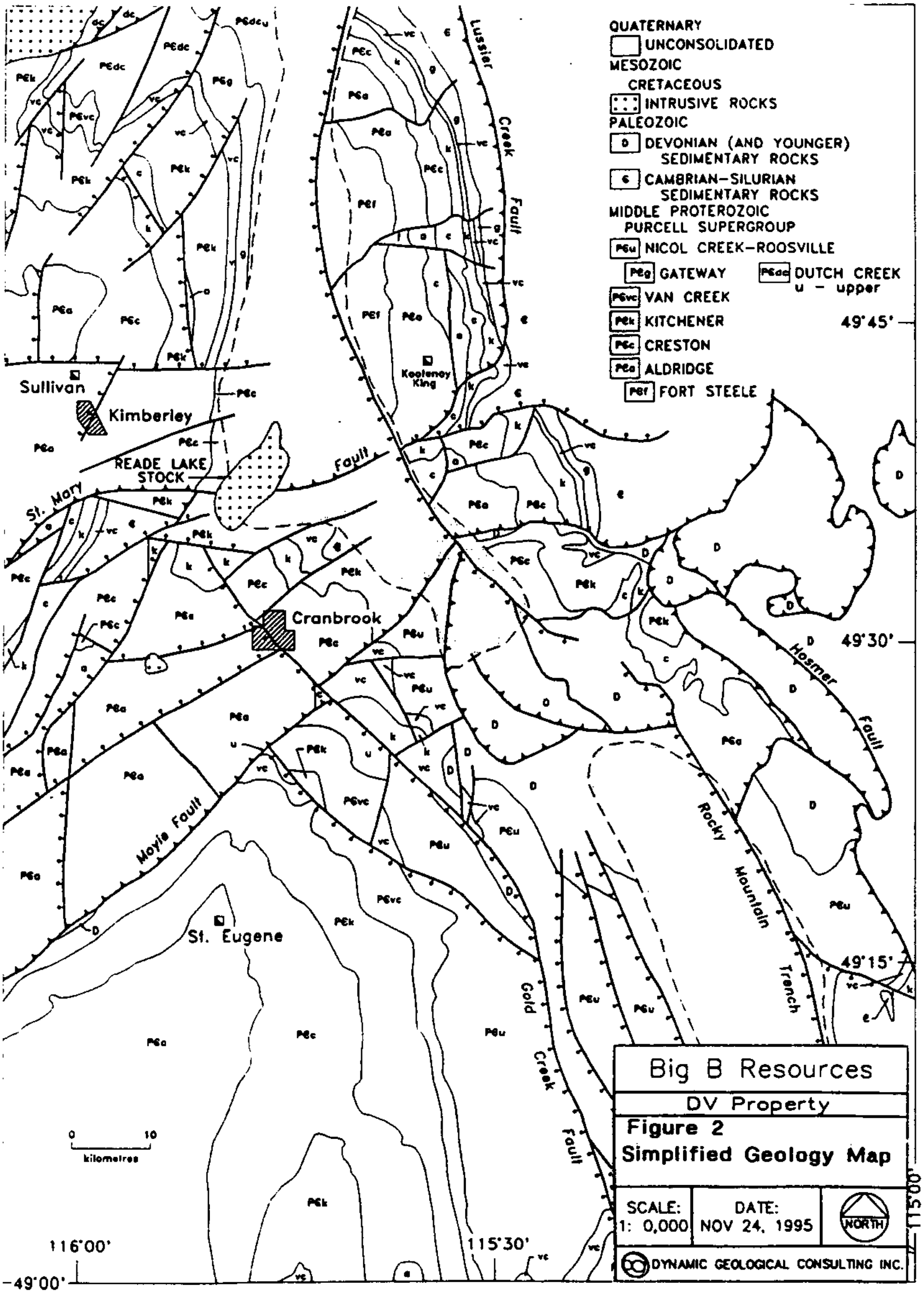
The following synopsis of the geology of the Hughes Range in the western Rocky Mountains has been taken from Höy (1993):

"... Middle Proterozoic strata of the Purcell Supergroup exposed in the Fisher Peak area (Fig. 2) consist of a turbidite sequence gradationally overlain by shallow water, dominantly intertidal deposits that periodically grade into subtidal or subaerial deposits ... Thickness variations in the lower two units (of the Purcell Supergroup) outline a north-trending basin margin that is deflected more than 200 km westward near 49°N latitude. The rectilinear shape can be ascribed to deeply rooted block faulting associated with the development of a Proterozoic continental rift ... Thickness and facies relationships in Purcell strata indicate that the St. Mary - Boulder Creek and Moyie - Dibble Creek fault systems follow a northeast-trending Proterozoic aulocogen-type structure that has been outlined further east by geophysical methods.

Three distinct episodes of regional metamorphism affected Purcell strata exposed in the Mt. Fisher area and the southern Purcell Mountains. The oldest metamorphic episode (1300-1350 Ma) approximately coincides with the termination of Belt - Purcell sedimentation. It was associated with east-west compression that resulted in the formation of north-trending folds, and at lower stratigraphic levels, a north-trending cleavage. A Late Proterozoic (800-900 Ma) metamorphic episode accompanied the regional uplift and block faulting (rifting?) that initiated Windermere sedimentation in the southern Purcell Mountains. Mesozoic metamorphism completely overprinted the earlier metamorphic assemblages along the Kootenay arc, in the region of intense Cretaceous-Paleocene deformation along the Dibble Creek fault, and in the upper Purcell strata north of the St. Mary - Boulder Creek fault.

The overall structural geometry of the Mt. Fisher area is controlled by the position and orientation of ramps connecting bedding-glide zones in the underlying Hosmer thrust. The thrust formed across a pre-Devonian, northwest-facing structure of crustal dimensions, the Dibble Creek monocline, that is now the locus of the Moyie - Dibble Creek fault ...

The evolution of anomalous northeast-trending structures in the region north of the Dibble Creek fault can be attributed to the southeastward displacement of the rock mass up and over the Dibble Creek monocline. Gravitational resistance to displacement up the monocline resulted in compression and the formation of northeast-trending thrust faults, folds and cleavage. After crossing the top of the monocline, the rock mass was then extended by lateral gravitational spreading, and normal displacement was induced along the pre-existing thrust faults" (McMechan 1980).


QUATERNARY
UNCONSOLIDATED
MESOZOIC
CRETACEOUS
INTRUSIVE ROCKS
PALEOZOIC
DEVONIAN (AND YOUNGER) SEDIMENTARY ROCKS
CAMBRIAN-SILURIAN SEDIMENTARY ROCKS
MIDDLE PROTEROZOIC
PURCELL SUPERGROUP
NICOL CREEK-ROOSVILLE
GATEWAY
DUTCH CREEK
u - upper
VAN CREEK
KITCHENER
CRESTON
ALDRIDGE
FORT STEELE
Lussier Creek Fault
Sullivan
Kimberley
Kootenay King
READE LAKE STOCK
St. Mary Fault
Cranbrook
Hosmer Fault
Moyie Fault
St. Eugene
Rocky Mountain Trench
Gold Creek Fault
49°45'
49°30'
49°15'
49°00'
116°00'
115°30'
115°00'
kilometres
Big B Resources
DV Property
Figure 2
Simplified Geology Map
SCALE:
1: 0,000
DATE:
NOV 24, 1995
NORTH
DYNAMIC GEOLOGICAL CONSULTING INC.

The DV property lies in the Hughes Range of the western Rocky Mountains and comprises a portion of the stratigraphic and structural package described above. The area, including the DV property, has been previously mapped at a regional scale by Leech (1958) and McMechan (1980). In addition, detailed mapping on small grids within the DV property have been reported in previous programs (Ditson 1987, Rodgers 1988, Olfert 1986, 1984). The author was retained by Big B Resources to undertake detailed structural mapping (at a scale of 1:10,000) of the DV property during the 1995 field season. The intent was to build upon and, where possible, improve on previous regional mapping by McMechan (1980) and compile the results of previous programs into a single comprehensive package. In addition, drill targets developed in previous programs were to be evaluated and/or new targets developed from structural mapping. The program was financed by Big B Resources (a Babcock family partnership) with assistance from the provincial governments Explore B.C. Grassroots Mineral Incentive program for a maximum of $12,453.

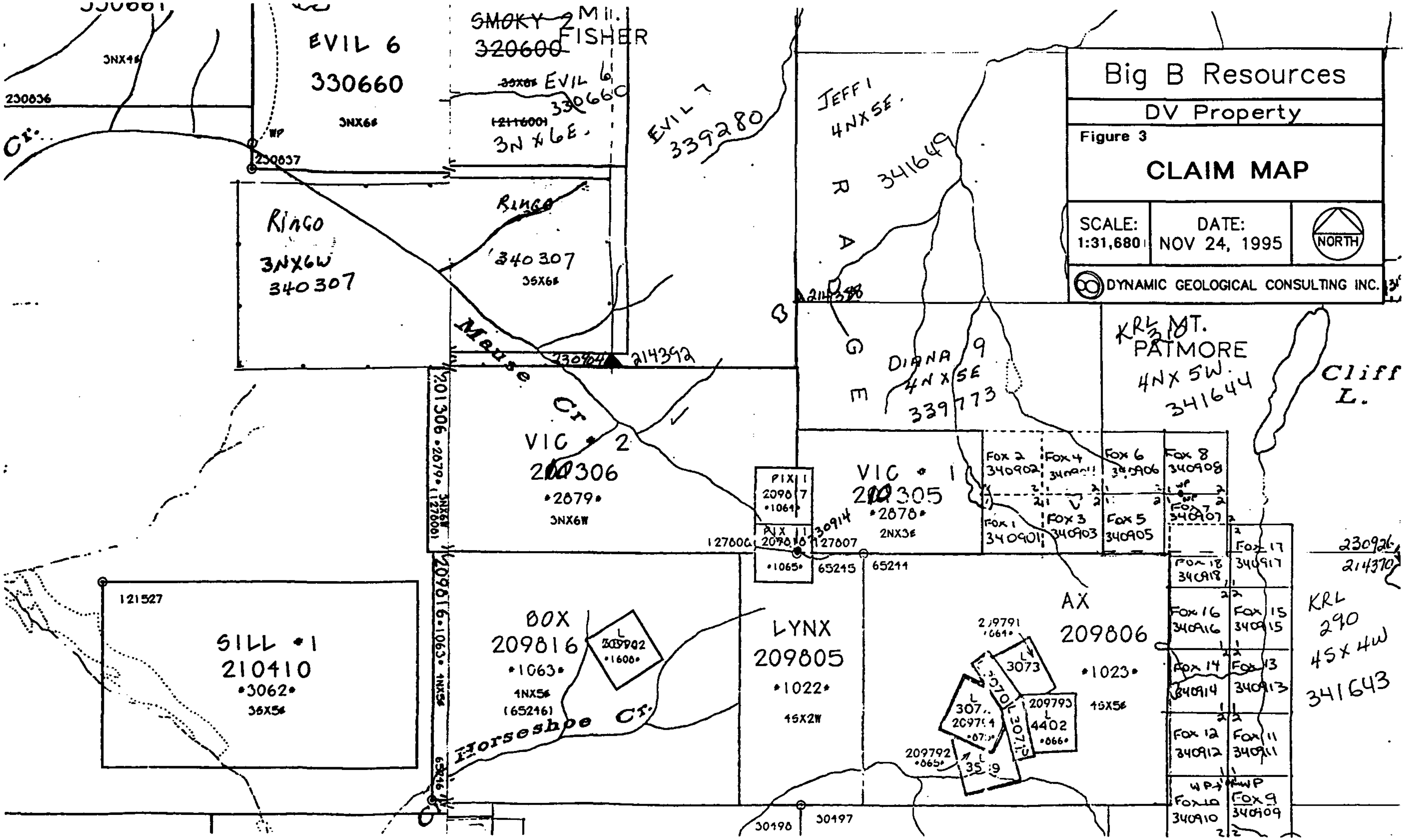
LOCATION AND ACCESS

The property can be accessed by two wheel drive vehicle from Cranbrook (Fig. 2 and 3) by approximately 36 kilometres of paved and rough gravel roads to the northern claim boundary along Maus Creek, or approximately 30 kilometres of paved and dirt roads / trails to Sunken Creek and/or Horseshoe Creek on the western claim boundary. There are reasonably good trails to the headwaters of Maus Creek and over into both Sunken Creek and the unnamed valley to the northeast. In addition, there are good trails along Sunken Creek and Horseshoe Creek. Finally, access is apparently possible from the northern end of Cliff Lake, from the Tanglefoot Creek area, into the northeast portion of the claims. Helicopter access was utilized for the more remote portions of the property from Cranbrook to maximize time spent on the property.

PHYSIOGRAPHY AND CLIMATE

The DV property is located on the eastern margin of the Rocky Mountain Trench (Fig. 2) in the Western Ranges of the Rocky Mountains. The property is characterized by moderate to high relief with elevation ranging between 915 metres (3000 feet) on the western margin of the property to 2523 metres (8280 feet) on an unnamed peak almost due north of Hungary Peak (immediately south of the property's southeast boundary). The area gets higher snowfall than the Rocky Mountain Trench and is available for exploration from early May (at lower elevations) to late October. Snow persists at higher elevations into late June.

Vegetation in the area consists of predominantly coniferous trees (Larch and Balsam) with lesser deciduous and sparse undergrowth consisting of slide alder and bushes. However, slide chutes and creeks have thicker undergrowth. The headwaters of Maus Creek and the unnamed valley to the north are sub-alpine and are comprised of larch and balsam. The south facing slopes at the headwaters of Horseshoe Creek are dry and therefore have relatively sparse tree cover and little undergrowth.


Big B Resources
DV Property
Figure 3
CLAIM MAP
SCALE: 1:31,680
DATE: NOV 24, 1995
NORTH
DYNAMIC GEOLOGICAL CONSULTING INC.
EVIL 6
330660
3NX6E
SMOKY 2
320600
Mt. FISHER
EVIL 6
330660
3N x 6E.
EVIL 7
339280
JEFF 1
4NX5E.
341649
RINGO
3NX6W
340307
Ringo
340307
3SX6E
Mause Cr.
214392
VIC # 2
209306
•2879•
3NX6W
VIC # 1
209305
•2878•
2NX3E
PIX 1
PIX 1
DIANA 9
4NX5E
339773
MT. PATMORE
4NX 5W.
341644
Cliff L.
Fox 2
340902
Fox 4
Fox 6
340906
Fox 8
340908
Fox 1
340901
Fox 3
340903
Fox 5
340905
Fox 7
340907
Fox 17
340917
Fox 18
340918
Fox 16
340916
Fox 15
340915
Fox 14
340914
Fox 13
340913
Fox 12
340912
Fox 11
340911
Fox 10
340910
Fox 9
340909
KRL 290
4SX4W
341643
SILL #1
210410
•3062•
3SX5E
121527
BOX
209816
•1063•
4NX5E
(65246)
Horseshoe Cr.
LYNX
209805
•1022•
4SX2W
AX
209806
•1023•
4SX5E
209793
4402
209792
65245
65244
30498
30497
230836
230837

CLAIM STATUS

The DV property is located approximately 24 kilometres northeast of Cranbrook (see Fig. 2). The property consists of 89 claim units and 7 full or partial Reverted Crown Grants (Fig. 3). All claim information has been checked at the Gold Commissioners office in Cranbrook, B.C. and was current as of Sept. 1, 1995. Pertinent claim data is tabulated below:

MODIFIED GRID CLAIMS

CLAIM	TENURE NO.	UNITS	RECORD DATE	EXPIRY DATE
AX	209806	20	July 30, 1980	July 30, 1996
LYNX	209805	8	July 30, 1980	July 30, 1996
BOX	209816	20	Sept. 15, 1980	Sept. 15, 1996
VIC 1	210305	6	Apr. 29, 1987	Apr. 29, 1996
VIC 2	210306	18	Apr. 29, 1987	Apr. 29, 1996
SILL # 1	210410	15	Feb. 10, 1988	Feb. 10, 1996
	Total:	87		

TWO-POST CLAIMS

CLAIM	TENURE NO.	UNITS	RECORD DATE	EXPIRY DATE
PIX I	209817	1	Sept. 15, 1980	Sept. 15, 1999
PIX II	209818	1	Sept. 15, 1980	Sept. 15, 1999
	Total:	2		

REVERTED CROWN GRANTS

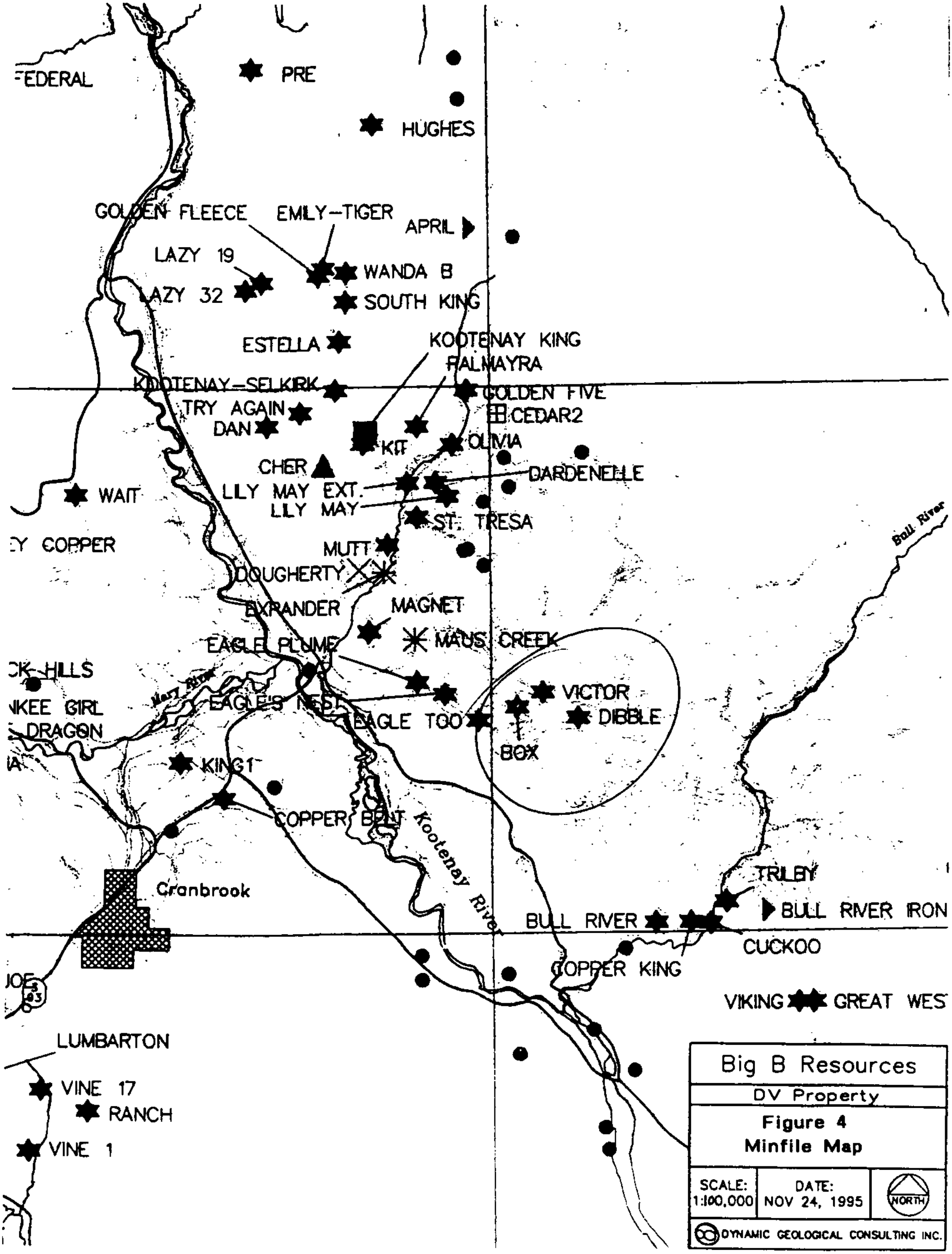
CLAIM	RECORD NO.	LOT	RECORD DATE	EXPIRY DATE
LAST CHANCE FR.	864	3070	Jan. 15, 1980	Jan. 15, 1999
BEAVER FR.	864	3073	Jan. 15, 1980	Jan. 15, 1999
FIRST EXTENSION OF LAST CHANCE	865	3071	Jan. 15, 1980	Jan. 15, 1999
FOSTER	865	3539	Jan. 15, 1980	Jan. 15, 1999
RICHMOND HILL	875	3072	Feb. 4, 1980	Feb. 4, 1999
EMERALD	866	3070	Jan. 15, 1980	Jan. 15, 1999
BIG THREE	1608	5814	Feb. 15, 1980	Feb. 15, 1999
Total:	7 Full or partial claims			

In addition, as part of the 1995 program, the Ringo claims (18 units) and the Fox claims were staked to cover magnetic anomalies identified on the northwest and northeast - eastern margins of the existing property.

HISTORY

The following summary of the history of the DV Property has been taken from Babcock and Babcock (1983). The occurrences are indicated on the accompanying Minfile occurrence map (Fig. 4 - modified from Geoscience Map 1995 - 2).

> The first public record of the Dibble Property on Lost Creek (now Sunken Creek), "a new mineral district", was in 1890. A highgrade sample yielded approximately 4.8 oz Au/T, 500 oz Ag/T, and 12% Cu. In 1895, four tons of handpicked ore were shipped to the smelter at Everett, Washington, returning 0.09 oz Au/T, 132 oz Ag/T, and 3% Cu. Work apparently was conducted annually until 1902, and it was in this period that more than 400 m of tunneling in six portals, plus numerous open cuts were completed. In 1969, Imperial Oil staked 40 claims and conducted geological mapping and geochemical sampling on the property. In 1972, TVI Mining and Athabasca Columbia Resources of Calgary carried out additional rock and dump sampling (65 samples of which 23 were analyzed for Cu and Ag), plus 5.4 km of flagged line, and 4.8 km of VLF-EM surveying. During 1980 and 1981 consulting geologist, C.M. Armstrong, conducted a modest field program on the property involving prospecting, stream sediment sampling, and rock geochemical sampling for F&B Silver.
>
> The first mention of the Victor Property, located at the headwaters of Maus Creek, was in 1904. The existence of Ag, Pb & Zn was recorded. A major portion of the existing tunneling was completed in the following years. In the period 1919 to 1921, a 50 TPD mill was erected, and a 7 Ton "mixed carload of ore and concentrates was shipped in the fall" of 1921. No additional tunneling has been driven since that time. Three adit drifts at about 32 m vertical intervals, aggregating more than 400m, follow a very steep dipping quartz vein normal to a precipitous mountain slope. In 1951, R. Sostad of Vancouver staked the 12 claim Victor group, and F.J. Hemsworth cut several samples of mineralized vein material in the upper and middle tunnels. The values ranged from 0.3 m with 0.02 oz Au/T, 2.0 oz Ag/T, 1.7% Pb, and 14.3% Zn, to 0.15m with 0.48 oz Au/T, 10.8 oz Ag/T, 3.9% Pb, and 23.6% Zn. In 1969, 1970, and 1971, the Victor Mining Corporation (R. Sostad, President) excavated five trenches totalling 64 m, and carried out a limited program of surveying, mapping, sampling and diamond drilling (two shallow holes totalling 64m) in the immediate mine area. G. Blaney cut 19 samples, and F.J. Hemsworth cut 40 samples in the middle and upper tunnels. No history of the Box Claim or Crown Grant L5814 prior to 1980 has been found. During 1980 and 1981 consulting geologist, C.M. Armstrong, P.Eng., conducted a modest field program at the Victor adits and a fairly detailed geochemical soil, silt and rock sampling program on the Box Claim. In 1980, nine representative chip-channel samples taken by C.M. Armstrong in the three tunnels on the Victor vein verified that some ore grade/width combinations were present. A flat-lying quartz lens, the F vein, with spotty, highgrade galena mineralization was located on the



Big B Resources		
DV Property		
Figure 4 **Minfile Map**		
SCALE: 1:100,000	DATE: NOV 24, 1995	NORTH
DYNAMIC GEOLOGICAL CONSULTING INC.		

> Box Claim near the south strike extension of the Victor vein. During the 1981 investigation of anomalous silt values from the 1980 exploration program on the Box Claim, C.M. Armstrong discovered an "occurrence of a substantial body of brecciated and healed quartzite". Local patches of massive pyrite and chalcopyrite occur in the breccia. The breccia location coincides with a major east-west fault ... During 1981 94 B zone soil samples were collected on the "Breccia Zone" and analyzed for Cu, Pb, Zn, Ag and some Cd. Analysis indicated anomalous results for all elements (sic)."

The property has been subject to considerable exploration on behalf of the present owners (Big B Resources) which includes prospecting, mapping, sampling (at least 1580 soil, 183 rock and 15 silt samples), trenching, geophysics (VLF-EM and one conductivity survey) and limited small diameter drilling.

Geochemical sampling has identified numerous geochemical anomalies, probably associated with veins, with highly anomalous gold, silver, lead, zinc and copper values (Sample E35 - 4.10% Cu, 111.5 oz/ton Ag and 3.758 oz/ton Au; 2,710 ppm lead and 1,710 ppm zinc). In addition, several geophysical anomalies (both VLF-EM and conductivity) have been identified, some broadly coincident with geochemical anomalies, pervasive alteration and concordant with local bedding. Others have no identifiable surface expression and are interpreted to be a result of lenses of mineralization at depth (which the small diameter drill program attempted to test but was aborted significantly short of target depth).

The DV property consists of at least three separate areas of interest, the Dibble, Victor and Box showings. The Dibble claims are underlain by upper Aldridge sediments, structurally overlain by siltstones and quartzites of the Creston Formation. The area of the showings lies between two splays of the east-trending Dibble Creek Fault. The strata consist of grey, green and red siltstones with interbedded quartzite horizons. The lithology hosting mineralization are quartz veins, of which two distinct types have been interpreted. Limited historical production took place from narrow, high grade veins (Type I), which appear to have limited lateral continuity. Recent exploration and trenching has concentrated on the wider quartz-pyrite veins (Type II) which may have greater lateral continuity, both on surface and at depth, and therefore have greater economic potential. Geophysics (VLF-EM) has failed to identify any sulfide conductors and the resulting anomalies were interpreted to represent fault zones or water-saturated shears.

The Victor area is hosted entirely by the Creston Formation on the overturned limb of a northeasterly trending anticline. The Victor vein was also the site of limited historical mining activity. Recent exploration of the Victor area has identified several geochemical anomalies (Upper Pond and Flat Veins), which have been tentatively correlated as continuations of the Victor vein, offset by faults. In his report, Armstrong (1980) stated " It is probable that the Victor structure persists to substantial depth ... In addition to sampling and mapping, both diamond drilling and tunnelling are justified to further explore the Victor vein ..."

The Box area is underlain by middle and upper Aldridge strata in fault contact with Creston

Formation to the north. Considerable prospecting and geochemical soil sampling has outlined an anomalous area extending south west from the Pic adits in a belt 1,200 m in length and 300 m wide. Two main areas have been identified having anomalous Pb and Zn values (up to 1000 ppm and 900 ppm respectively). Recent mapping and prospecting outlined an alteration zone 1,000 m by 200 m, coincident with the geochemical anomaly and concordant to the regional strike of predominantly quartzitic Aldridge strata. Alteration includes albitization, pyritization and quartz stringers with sericitic haloes and minor galena. A geophysical survey conducted in 1988 identified a south-southwest trending sub-surface conductivity anomaly at an interpreted depth of 75 m, possibly "... generated from a concentration of small, conductive lenses focussed about a larger lineation and is considered the best electromagnetic target mapped" (Pezzot 1988). Attempts to test this anomaly by drilling (three holes) were hindered by broken ground and the small size of the drill utilized. Core recovery was less than 25% and the maximum depth achieved was 28.65 m, less than half the depth required to test the anomaly. This anomaly remains untested.

A more detailed summary of recent work undertaken on the DV Property can be found in the report by Price (1989).

REGIONAL GEOLOGY

The Mount Fisher area of the Hughes Range in the Western Ranges of the Rocky Mountains was mapped by McMechan and published at a scale of 1:50,000 (McMechan, 1979 - Fig. 5). Recently, a map of the Fernie west-half map sheet was published by Höy and Carter (1988) and subsequently a geological compilation of Ministry of Energy, Mines and Petroleum Resources field work (Höy 1993). The following synopsis for the area has been derived from the above sources.

The stratigraphy of the DV property is comprised predominantly of the middle(?) and upper Aldridge Formation and the Creston Formation of the Purcell Supergroup (Fig. 6). Subordinate exposures of the Kitchener Formation of the Purcell Supergroup are present along the eastern margin of the property across the Mt. Patmore Fault and to the southeast in the footwall of the Dibble Fault, stratigraphically underlying the basal Devonian unit. This stratigraphic succession has been transported northeast in the hanging wall of the Hosmer Thrust, the structurally highest and westmost thrust fault in the southern Rocky Mountains. The stratigraphic succession has been structurally complicated by faulting

Stratigraphy

Proterozoic

Fort Steele Formation

The lowest strata of the Purcell Supergroup exposed is the Fort Steele Formation, exposed along the western slopes of the northern Hughes Range in the Rocky Mountains (Fig. 2). The Fort Steele Formation is comprised predominantly of massive quartz arenite, quartz and feldspathic wacke and siltstone. There are no known exposures of the Fort Steele Formation in or adjacent to the DV property.

Aldridge Formation

The Aldridge Formation has been sub-divided into three informal units, the lower, middle and upper Aldridge Formations (Fig. 5). Regionally, the lower Aldridge Formation is comprised of grey weathering quartz wacke and siltstone interbedded with silty argillite. In the northern Hughes Range, lower Aldridge strata (Unit A1) is distinctive with respect to lower Aldridge strata of the Purcell Mountains in that "... it is characterized by diverse lithologies, pronounced facies and thickness variations and a conspicuous carbonate unit near its base" (Höy 1993). Furthermore, the lower-middle Aldridge transition at "Sullivan time" is not recognized and regional correlations in the lower portion of the section remain uncertain. However, regional markers indicate that the upper portion of the lowest division of the Aldridge Formation exposed in the Northern Hughes Range (Unit A1) correlates with the middle part of the middle Aldridge Formation of the Purcell Mountains. Unit A1 has been subdivided into six subdivisions (A1a through A1f), none of which have been identified in the area of the DV property.

Skookumchuck Creek

Pdk1 LOWER DUTCH CREEK
Coarse quartz wacke; stromatolitic, oolitic dolomite; green siltstone-argillite couplets

Pks KITCHENER, NICOL CREEK AND VAN CREEK FORMATIONS

Pnc NICOL CREEK FORMATION
Massive to amygdaloidal basaltic to andesitic lava flows, volcanic and feldspathic sandstone, siltite

Pnc2 Green, locally purple volcaniclastic siltite, fine wacke and tuffaceous siltstone

Pvc VAN CREEK FORMATION
Green, mauve laminated siltstone and quartz wacke; minor tuffaceous siltstone at top

Pk KITCHENER FORMATION
Grey, black dolomite, limestone; green argillite, dolomitic siltstone

Pk2 UPPER KITCHENER
Grey, black dolomite, limestone, molar tooth texture; siltstone, thin quartz arenite beds

Pk1 LOWER KITCHENER
Green, beige siltstone, argillite; dolomitic siltstone

Pc CRESTON FORMATION
Green, grey and mauve siltstone, argillite; white, green quartz arenite

Pc3 UPPER CRESTON
Siltstone, quartz arenite, argillite

Pc2 MIDDLE CRESTON
White, green and mauve quartz arenite and siltstone

Pc1 LOWER CRESTON
Grey, black argillite-siltstone couplets, siltstone and siliceous argillite, green siltstone

Pa ALDRIDGE FORMATION
Quartzite, quartz wacke, siltstone, argillite, silty dolomite

Pa3 UPPER ALDRIDGE
Rusty weathering argillite and siltstone, thinly laminated

Pa2 MIDDLE ALDRIDGE
Grey quartzite, quartz wacke, siltstone; argillite, rusty weathering

Pa1 LOWER ALDRIDGE
Rusty weathering siltstone and quartzite with interbeds of silty argillite; quartz wacke

(EAST OF TRENCH)

Pa2a Quartzite
Pa2s Siltstone, argillite
Pa1a Quartzite
Pa1s Siltstone, argillite
Pa1d Silty dolomite

Pf FORT STEELE FORMATION
White quartzite, grey argillaceous quartzite, argillite, grey, black dolomitic and calcareous argillite

Pg GATEWAY FORMATION
Dolomite, quartz wacke, siltstone, argillite

Pg2 UPPER GATEWAY
Green siltstone, argillite, dolomite

Pg1 LOWER GATEWAY
Quartz wacke, dolomitic sandstone, stromatolitic dolomite, oolitic dolomite, green siltstone

Psh SHEPPARD FORMATION
Sandstone and conglomerate locally at base; dolomitic quartzite, sandstone, oolitic dolomite, stromatolitic dolomite at top

Dibble Property

Legend Figure 5

SYMBOLS

Limit of Mapping or Exposure

Geological boundary (defined, approximate, assumed)

Unconformity

Bedding (tops known, top unknown, vertical, overturned)

Cleavage, schistosity

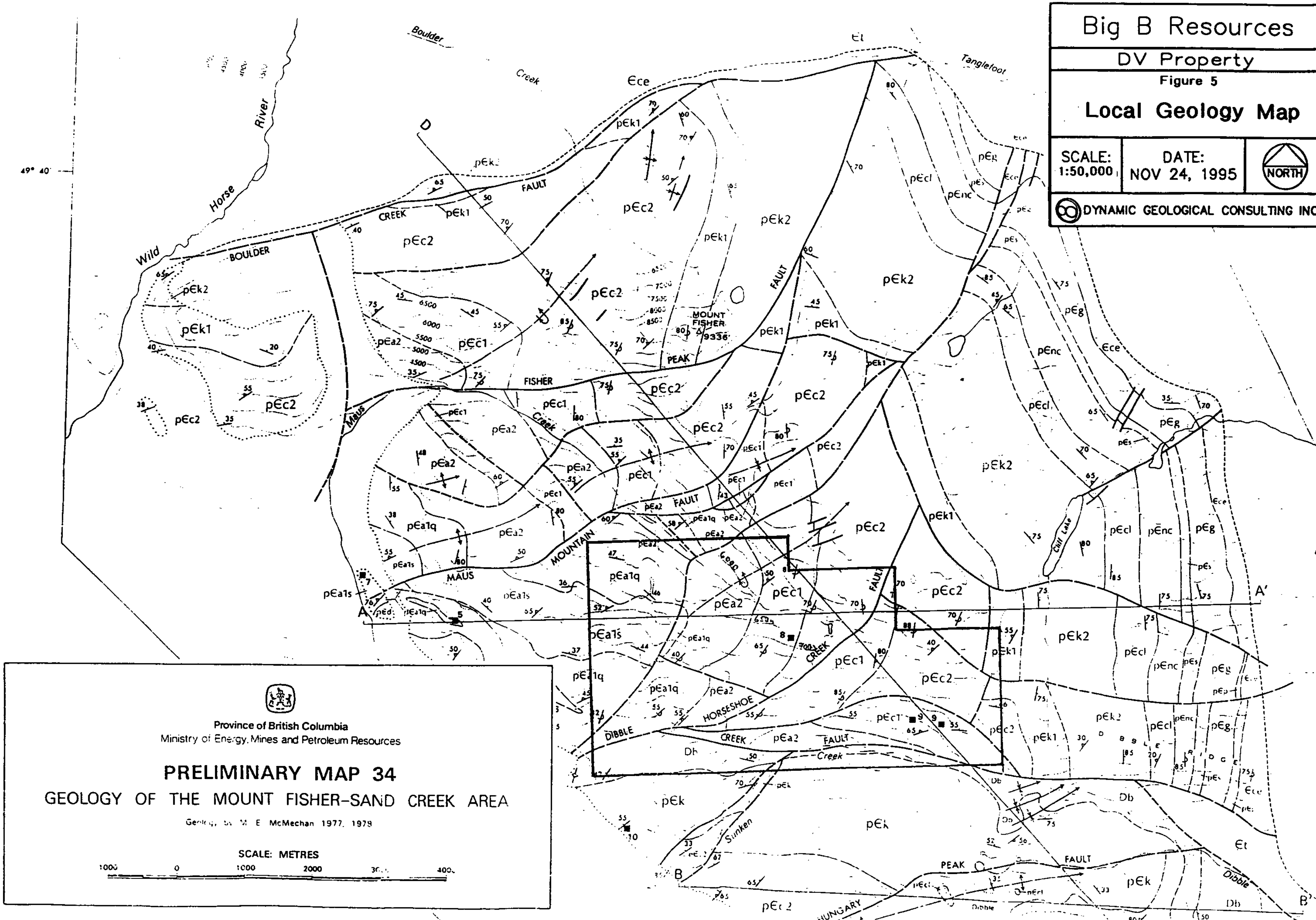
Mineral lineation

Fault (defined, approximate, assumed)

Thrust (teeth in direction of dip)

Normal (circle indicates downthrow side)

Fold:


Big B Resources
DV Property
Figure 5
Local Geology Map
SCALE: 1:50,000
DATE: NOV 24, 1995
NORTH
DYNAMIC GEOLOGICAL CONSULTING INC.
Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
PRELIMINARY MAP 34
GEOLOGY OF THE MOUNT FISHER-SAND CREEK AREA
SCALE: METRES
1000
0
1000
2000
Wild Horse River
Boulder Creek
Tanglefoot
BOULDER CREEK FAULT
FISHER PEAK
MOUNT FISHER 9336
FISHER Creek
MAUS CREEK
MAUS
MOUNTAIN FAULT
HORSESHOE CREEK FAULT
DIBBLE CREEK
Lewis
Chill Lake
Sunken Creek
PEAK FAULT
HUNGARY
Dibble
49° 40'
A
A'
B
B'
D

Middle and upper Aldridge strata exposed in the Hughes Range differ from strata exposed in the Purcell Mountains in that the succession is thinner, although lithologically similar, than equivalent strata in the Purcell Mountains. Regionally, the middle Aldridge Formation is comprised of "... thick-bedded, massive to graded quartz arenite and wacke beds, thin-bedded siltstone and, minor argillite. ... The middle Aldridge in the Mount Fisher area ... comprises interbedded "quartzite", siltite and argillite. Although its base is not exposed, it is estimated to be of comparable thickness to the succession in the Moyie Lake area ", in excess of 2800 metres thick (Höy 1993). The upper part of the middle Aldridge "... comprises a number of distinct cycles of massive, grey quartz arenite beds that grade upward into an interlayered sequence of quartz wacke, siltstone and argillite, and are capped by siltstone and argillite" (Höy 1993).

There are two sub-divisions of the middle Aldridge Formation exposed on or immediately adjacent to the DV property, namely units Pa_2 (rusty weathering grey quartzite, quartz wacke and siltstone with subordinate argillite) and Pa_2q (quartzite) (Höy 1993). This differs slightly from the interpretation of McMechan (1980, 1979) in that Höy (1993) utilizes three informal subdivisions for the Aldridge Formation as opposed to two. "The contact with the upper Aldridge is placed above the last bed of massive grey quartz arenite" (Höy 1993).

The upper part of the Aldridge Formation consists mainly of rusty weathering, thin-bedded, dark to medium grey argillite, and thinly parallel-laminated light and dark grey siltite laminae (unit Pa_3 of Höy 1993). Strata of the Aldridge Formation "... grade into those of the overlying Creston Formation over a few hundred metres ... characterized by the increasing abundance of a very thin-bedded, medium-grained siltite ... The top of the Aldridge Formation was defined at the top of the last thick (greater than 10 metres) interval of grey argillite and thinly parallel-laminated siltite" (McMechan 1979). Alternatively, Höy (1993) described the contact between the upper Aldridge and Creston Formations as usually gradational and placed the contact where either green-tinted lenticular bedding or syneresis cracks become noticeable.

Creston Formation

The Creston Formation comprises dominantly green, mauve and grey siltstone, argillite and quartzite which conformably overlies upper Aldridge argillite and siltstone. McMechan (1980) sub-divided the Creston into five lithostratigraphic units (C1 - C5), described from bottom to top:

C1 - the basal unit is comprised predominantly of siltite-argillite couplets composed of light grey or green-grey siltite laminae which are gradationally or sharply overlain by dark grey argillite laminae. Syneresis (desiccation) cracks, load casts, scour-and-fill structures, ripple cross-laminations are locally abundant. This unit is approximately 150 metres in thickness.

C2 - is characterized by dark to light green siltite-argillite couplets and the general absence of quartzite lenses. The unit is also characterized by common scour-and-fill structures and rip-up debris beds with local mudcracks and ripple marks. This unit is 226 metres thick in the Maus Creek area.

C3 - is characterized by purple-purple, green-green or green-purple siltite-argillite couplets. As with unit C2, mudcracks, ripple marks, scour-and-fill structures and rip-up debris beds are locally abundant, however interbedded quartzite lenses (locally having herringbone-crossbeds) are abundant. This unit is also 226 metres thick in Maus Creek.

C4 - is comprised predominantly of coarse-grained, purple-grey, grey or green siltite, with interbedded purple and green siltite-argillite couplets with locally abundant purple colour-mottling and rippled tops. Interbedded quartzite lenses comprise approximately half of the section and are an important constituent of unit C4. Unit C4 is approximately 610 metres thick in Maus Creek.

C5 - consists of green or purple siltite-argillite couplets and green dolomitic siltite-argillite couplets with locally abundant interbedded quartzite lenses. Minor coarse-grained siltite occurs near the near of the unit. Mudcracks and ripple marks are locally abundant in the lower part of the unit but are less common in the upper part whereas ripple cross-laminated lenses of dolomite-cemented, very fine-grained quartzite are locally abundant in green siltite-argillite couplets in the upper part of the unit. This unit is also approximately 600 metres thick at Maus Creek.

Unit C5 grades upward into dolomitic siltstones and argillites of the overlying Kitchener Formation across a transition zone a few hundred metres thick. The contact between the Creston and Kitchener Formations was defined as the top of the last 10 metre thick non-dolomitic siltite and argillite interval within the transition zone. The total thickness of the Creston Formation in the DV property area is approximately 1800 metres.

In subsequent work, Höy (1993) described three main subdivisions: "... a basal silty succession of thin-bedded grey to green siltstone and argillite, a middle quartzite succession of coarser grained mauve siltstone and quartz arenite, and an upper succession of intermixed green argillaceous siltstone and minor quartz arenite. ... The basal two (C1 and C2) comprise dominantly grey and green siltite-argillite couplets, C3 and C4 include the middle, generally mauve-tinged units, and C5, the upper, dominantly green siltite unit".

The following has been paraphrased from Höy (1993):

> "The basal Creston Formation comprises several hundred metres of interlayered argillites, argillaceous siltstone and minor quartz wacke. It is generally grey to dark grey and rusty weathering near the base, but becomes green tinged upsection with increasing siltite component. Thinly laminated argillite or siltite, graded siltite-argillite couplets and lenticular-bedded siltstone are the most abundant bedforms; more massive medium-bedded quartz wacke is less common and brown-weathering silty dolomite layers are occasionally recognized. Syneresis cracks are common in the thin-bedded argillite and argillaceous siltite units.
>
> The thick, middle part of the Creston Formation comprises mauve or green argillite and siltstone with variable amounts of more massive quartz wacke or arenite. Siltstone-argillite couplets, up to several centimetres thick, dominate the basal

section of the middle Creston and differ from units in the basal section as they are commonly purple in colour, thicker bedded and contain abundant mud cracks. Lenses of massive to graded, green, purple, or white quartzite that may contain large tangential crossbeds or wavy, irregular laminations are inter-bedded with the purple siltstone. The quartzites commonly scour the underlying siltstone and may contain numerous rip-up clasts. Coarsening-upward cycles, with massive to laminated purple and green siltstone at the base and interlayered purple siltstone and white quartzite with crossbeds, rip-up clasts, scour-and-fill structures and graded beds at the top have been described at Premier Lake.

A prominent, thick, white orthoquartzite unit occurs near the middle of the middle Creston. It is medium to thick bedded and contains broad trough and tangential crossbeds and numerous rip-up clasts. The upper part of the quartzite unit comprises a number of coarsening-upward cycles, 3 to 10 metres thick, with purple and green siltstones at the base grading up through ripple cross-laminated siltstones and quartzites to massive thick-bedded quartzite at the top. Smaller fining-upward sequences are also common in the middle quartzite interval and overlying siltstone units.

Interbedded mauve siltstone and argillaceous siltstone, white quartz arenite and minor green siltstone overlie the white quartzite unit. Small fining-upward cycles are common, with massive to cross-bedded quartzites at the base and thin-bedded, mud-cracked and rippled argillite or siltstone at the top. Rip-up clasts, mud-chip breccias and some load casts occur throughout these units.

Higher in the succession, laminated green siltstone and graded siltstone-argillite couplets become prominent. Surfaces may be mud-cracked or rippled, but these structures are less prominent than in underlying units. Small fining-upward cycles are common, with thick-bedded, white or green quartzite or more massive siltstone at the base grading up into thin-bedded siltite.

The top generally comprises pale green laminated to massive argillaceous siltstone, commonly with a dolomitic cement. Contact with the overlying Kitchener Formation is gradational and consists of a transitional zone of thin, regularly bedded siltstone-argillite that contains beds of dolomitic, buff weathering argillite. The Kitchener contact is placed at the base of the first appearance of relatively pure, thick dolomite".

Kitchener Formation

The following description has been paraphrased from Höy (1993), with minor additions from McMechan (1980):

"The Kitchener Formation is readily divisible into lower and upper members, with the upper member further subdivisible into a lower, grey dolomitic unit and an upper interlayered dolomite, silty dolomite and siltstone unit.

The lower member comprises dominantly pale green or locally grey siltstone and dolomitic siltstone interbedded with rusty to buff-weathering silty or argillaceous dolomitic layers typically 1 to 2 metres thick. The siltstone is commonly thinly laminated to thinly-bedded or consists of graded siltstone-argillite couplets. Mudcracks, lenticular beds, crossbeds, ripple marks and basal scours are common structures. Lenses of ripple cross-laminated, dolomite-cemented, very fine-grained quartzite that resemble lenticular bedded, scour-and-fill structures are locally abundant. Grey micritic limestone pods occur locally in some siltstone beds. "Dolomite" layers vary from a dark grey, argillaceous or silty dolomite to tan dolomitic siltstone. They are commonly lenticular bedded or contain discontinuous silt lenses. The thickness of the lower member is between 350 and 500 metres thick

The upper member comprises dominantly dark grey, very thin- to thin-bedded argillaceous or silty limestone and dolomite overlain by a succession of calcareous or dolomitic siltstones. Graded beds, with thin dolomite layers capped by either siltstone or dark grey argillite, are common throughout the upper member. Carbonate layers are commonly finely or irregularly laminated, massive, and locally crossbedded. Molar-tooth structures are locally abundant in silty dolomite layers. Calcareous, dolomitic or non-dolomitic siltstone layers occur throughout the basal part of the upper member but predominate in the upper part. Non-dolomitic siltite and argillite layers become common in the upper 300 metres, are commonly graded with argillite cappings, locally crossbedded, and may have rippled surfaces. Syneresis cracks occur locally, particularly in the upper, more silty section, and mud cracks are uncommon. Thin oolitic layers occur near the base and top of the middle member and occasional layers of stromatolites are present throughout.

In the Steeples block, dolomite occurs as massive beds with or without locally cross-laminated silty dolomitic laminae and is the dominant lithology throughout except in the upper 180 metres where dolomitic and non-dolomitic siltite and argillite predominate. Thick beds of sandy and oolitic dolomite are common between 300 and 400 metres below the top of the member. The upper member is 1175 metres thick in the Steeples block and approximately 1420 metres thick near Cliff Lake in the Fisher block".

Devonian

Basal Devonian

The basal Devonian is characterized by dolomites, sandy dolomites and dolomitic shales that weather buff, yellow, brown, or less commonly red or purple (Leech 1958). The lower portions of the basal Devonian consists of interbedded feldspathic, dolomitic sandstone, dolomite and red mudstone which rests unconformably upon Purcell Supergroup strata (Kitchener Formation) south of the Dibble Creek Fault. The unconformity cuts gently down section as it is traced west. In detail the surface is irregular and the lithology of the lowermost beds varies greatly from place to place. Conglomerate and breccia of local provenance are commonly developed at the base of this unit.

Intrusives

Moyie Intrusives

The following has been paraphrased from Höy (1993):

> "Moyie sills are restricted to the lower Aldridge, the lower part of the middle Aldridge, and to correlative rocks in the northern Hughes Range. Moyie Intrusions generally form laterally extensive sills ... (and) commonly comprise up to 30 per cent of lower and middle Aldridge successions. Their abundance decreases up-section in the middle Aldridge, as the abundance of thick-bedded A-E turbidites decreases.
>
> Moyie sills comprise dominantly gabbro and diorite ... (consisting of) dominantly hornblende and plagioclase phenocrysts, typically up to 5 millimetres in diameter, in a finer grained groundmass of plagioclase, quartz, hornblende, chlorite and epidote. Hornblende phenocrysts, commonly partially altered to chlorite and epidote, are generally subhedral to anhedral with irregular ragged terminations. Plagioclase ... is generally clouded by a fine mixture of epidote and albite (?), particularly in the more calcic cores of zoned crystals. Accessory minerals include leucoxene, commonly intergrown with magnetite, as well as tourmaline, apatite, calcite and zircon.
>
> Zircons from a fresh, massive sample ... were analyzed to determine the intrusive age of the ... Lumberton sill in the middle Aldridge. ... The upper intercept age of 1445 ± 11 Ma is interpreted to be a minimum age for emplacement of the sill. It is close to the 1433 Ma uranium-lead age of the Crossport C sill (Idaho) and a 1436 Ma potassium-argon date from a biotite in the alteration associated with the Sullivan deposit. As the Moyie sills are interpreted to have intruded during Aldridge sedimentation, the date indicates that the Sullivan deposit formed at approximately 1445 Ma and that lower and basal middle Aldridge rocks were deposited prior to 1445 Ma".

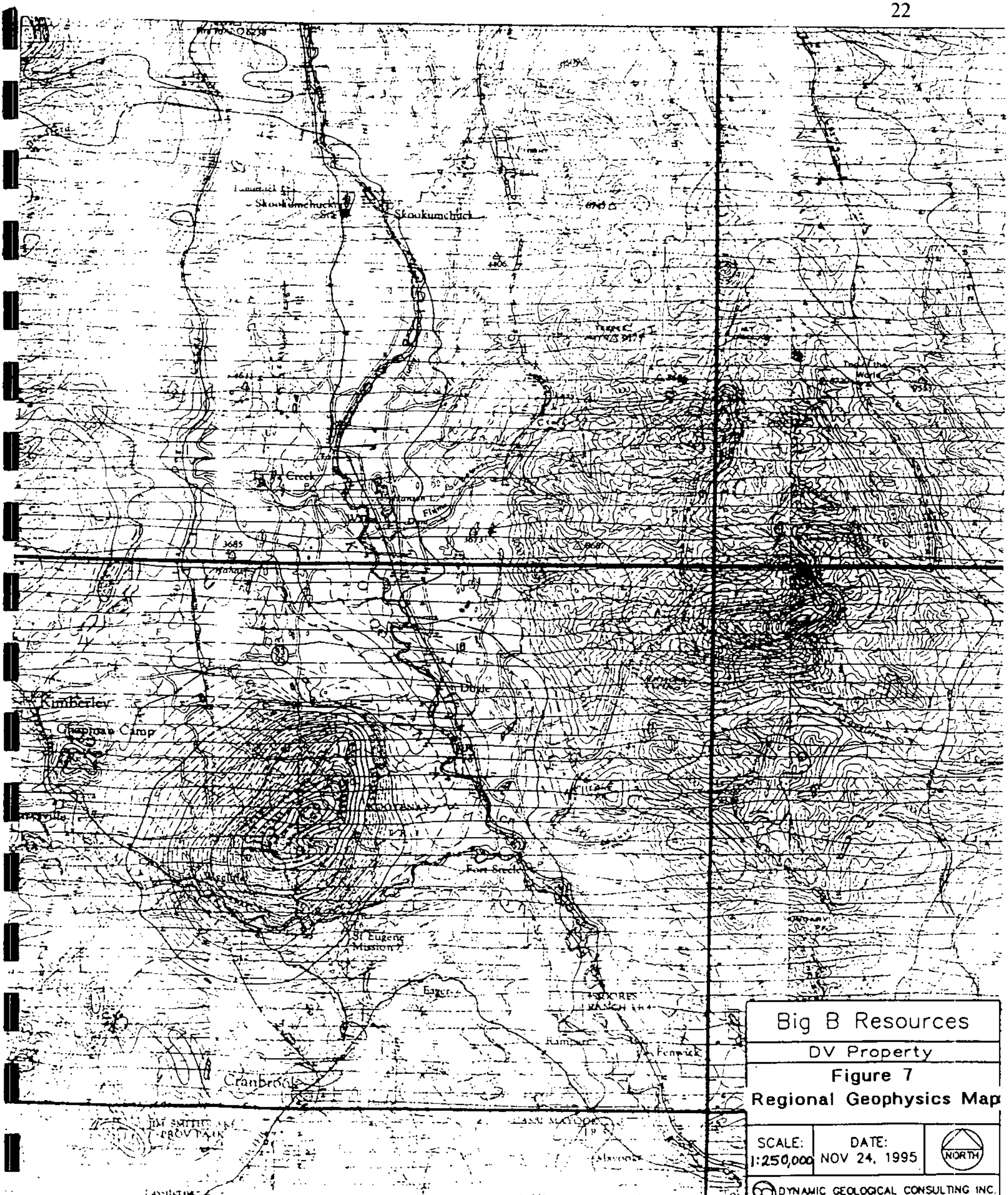
Meta -Gabbros to Meta-Diorites

Fine- to coarse-grained, hornblende-plagioclase metagabbro to metadiorite 'sills' have intruded strata of the Aldridge, Creston and Kitchener formations in the Mount Fisher area. These 'sills' are texturally similar to the Moyie sills in textural appearance, however they are chemically and mineralogically distinct from the Moyie sills and appear to represent a later magmatic event, perhaps related to the Nicol Creek lavas (Höy 1993). Magnetostratigraphic studies suggest that the Nicol Creek lavas were extruded between 1350 and 1400 Ma (Höy 1993).

Granitic Intrusions

No granitic intrusions have been identified on or adjacent to the DV property. However, due to the strong magnetic character of these alkali granitoid bodies (Fig. 7), they are included here for their possible correlation to a distinct magnetic linear identified on regional aeromagnetic data. The following has been paraphrased from Höy (1993):

> "A small, irregular crosscutting stock is exposed in the cirque near the headwaters of Tracy Creek 10 kilometres east of Wasa Lake ... informally referred to as the Estella stock because the worked-out Estella silver-lead-zinc vein occurs near its margin. The stock is in sharp intrusive contact with middle Aldridge Formation siltstone, argillite and minor quartz wacke. The country rock is hornfelsed and locally contains abundant disseminated pyrite; it may be brecciated and cut by quartz-carbonate-sulphide veins.
>
> ... Its composition is highly variable and includes quartz monzonite, quartz monzodiorite and syenogranite. Its dominant phase is a porphyry with euhedral potassic feldspar phenocrysts (to 1-2 cm in length) and albite (generally 1 cm) in a fine-grained to aphanitic groundmass of quartz, feldspar and amphibole (?). Disseminated pyrite and quartz veinlets with bleached margins are common. A fine-grained equigranular phase is mineralogically similar to the groundmass of the porphyry phase.
>
> The Estella stock is interpreted to be an epizonal, volatile-rich composite intrusion that was forcibly intruded into middle Aldridge metasedimentary rocks. ... A biotite concentrate from a coarse-grained porphyritic syenite phase of the Estella stock has yielded a 115 Ma date, ... similar to the Reade Lake and Kiakho stocks; however, it should be considered the maximum age of intrusion ... Vein mineralization at the Estella mine may be related to the stock. However, lead-lead dating of galena from these veins yielded a Middle Proterozoic age. It is possible, therefore, that the Estella deposits records Proterozoic mineralization, remobilized by the Middle Cretaceous Estella stock.
>
> A large L-shaped stock intrudes limestone and shale of the McKay Group ... near the divide between Tanglefoot Creek and the east fork of Horsethief Creek (sic. - probably meant Wild Horse Creek). ... The southern part of the stock is a pink porphyritic monzonite and quartz monzonite with medium to coarse subhedral grains of perthitic orthoclase and minor hornblende in a fine-grained groundmass of plagioclase, orthoclase and quartz. The northern part is more varied, with


Skookumchuck
Kimberley
Chapman Camp
Fort Steele
St Eugene Mission
Cranbrook
Fenwick
Dutch Creek
Big B Resources
DV Property
Figure 7
Regional Geophysics Map
SCALE:
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compositions ... ranging from almost equigranular to markedly porphyritic. Two zones of granitic rocks intrude the Gateway and Jubilee formations and the McKay Group just east of the headwaters of Wildhorse Creek. They range in composition from quartz monzonite to monzonite and minor syenite and vary from medium-grained equigranular phases to porphyritic phases. The porphyritic phases are most common, with phenocrysts of potassic feldspar, plagioclase, and less commonly hornblende in a fine to very fine grained groundmass ...

A number of small outcrops of layered monzonite or granodiorite are exposed on the east side of the trench near the mouth of the Bull River. ... Many dikes and small irregular granitic intrusions are also exposed on the east side of the trench between Lewis Creek and Wild Horse River. ... Here, weathered, rounded outcrops of pink to grey intrusive rock occur within hornfelsed siltstone and quartzite of the Fort Steele Formation. ... (The) intrusion is a quartz monzonite to monzogranite. It is porphyritic with subhedral phenocrysts of perthite, commonly overgrown by plagioclase, in a groundmass of anhedral perthite, microcline, plagioclase and quartz. Accessory minerals include apatite, biotite, sphene and opaques; minor secondary minerals include chlorite, epidote and carbonate, and probably replacements of hornblende. Porphyritic dikes of similar compositions, 1 to 2 metres thick, cut orthoquartzites of the Fort Steele Formation up to 1 kilometre south of the main intrusive zone."

Structure

Rocks of the Purcell Supergroup have been affected by several separate phases of deformation, ranging from Middle Proterozoic through to Paleocene. The North American craton underwent two phases of extension, a compressional orogeny and subsequently continental rifting followed by development of a miogeocline. Thrusting and folding associated with development of the Foreland Fold and Thrust belt took place from Cretaceous to Paleocene time and was followed by Eocene extension.

The earliest deformation was associated with extension in the Middle Proterozoic which resulted in block faulting along the margin of the Purcell Basin, coincident with deposition of the Fort Steele and Aldridge formations. Distinct changes in the character of lower Purcell strata of the Hughes Range indicate that the Boulder Creek Fault and the segment of the Rocky Mountain Trench fault north of Boulder Creek represent the eastern and northern edges of the local Purcell Basin, respectively. Dramatic southward increases in coarse-grained sediments in the Northern Hughes Range suggest proximity to growth faults near the margin of the basin. Movement along growth faults is interpreted to have ceased by upper middle to upper Aldridge time.

Voluminous extrusion of basaltic lava (Nicol Creek Formation) in the upper Purcell Supergroup has been interpreted to indicate renewed extension in the Purcell Basin. In addition, dramatic changes in the thickness of the Sheppard and Gateway formations were interpreted to reflect growth faults active during deposition of these strata. A tectonic high has been proposed in the

Larchwood Lake area north of Skookumchuck. Variations in the thickness and character of the strata document facies changes which resulted "... from block faulting ..., with erosion and deposition of coarse conglomerates on and at margins of tectonic highs and shallow-water, turbulent carbonate facies deposited in adjacent small basins (Höy 1993).

A late Middle to early Upper Proterozoic (1300 to 1350 Ma) compressional event, the East Kootenay orogeny, has been interpreted based upon evidence for deformation and metamorphism prior to deposition of lower Paleozoic miogeoclinal strata. This event was associated with folding, development of a regional cleavage and granitic intrusions (i.e. 1305±52 Ma Hellroaring Creek stock). Localized high grade metamorphic areas (i.e. Mathew Creek) are related to this tectonic event which is interpreted to have terminated Belt Purcell sedimentation.

The extensional Goat River orogeny occurred during deposition of the Windermere Supergroup (800 to 900 Ma) and is characterized by large-scale block faulting during and perhaps immediately prior to deposition of strata. The Windermere Supergroup is comprised of a basal conglomerate (Toby Formation) overlain by immature clastic and carbonate sediments of the Horsethief Creek Group. The Toby Formation consists of "... predominantly conglomerates and breccias, interpreted to have been deposited in fan sequences adjacent to active fault scarps in large structural basins. Locally, up to 2000 metres of underlying Belt-Purcell rocks have been eroded from uplifted blocks, providing a sediment source ... in adjacent basins" (Höy 1993).

The earlier tectonic events may record incipient rifting, with development of block-faulted, intracratonic structural basins, whereas by early Paleozoic time continental separation had occurred as platformal and miogeoclinal sediments were deposited on a western continental margin. The Laramide orogeny (Late Jurassic to Paleocene) resulted in the horizontal, northeast directed compression of Proterozoic strata and the overlying Paleozoic miogeoclinal prism onto the North American craton. Easterly verging thrust faults and folds developed with normal faults and westerly verging back thrusts and normal faults, resulting in a complex structural pattern. Two major faults, the Boulder Creek - St. Mary and Dibble Creek - Moyie faults (Fig. 2 and 5), have had a significant role in the structural history and fabric of the region, controlling facies and thickness changes in Proterozoic and Paleozoic strata.

"The Boulder Creek fault, one of the more prominent structural features that crosses the generally north-trending structural grain, coincides approximately with a pronounced change in Purcell rocks. The St. Mary fault, the southwestern extension of the Boulder Creek fault, follows the southern edge of a late Proterozoic (Windermere) structural basin. To the south, the northeast-trending Moyie - Dibble Creek fault system coincides with the northwestern flank of Montania, a lower Paleozoic tectonic high. These prominent northeast-trending faults segment the Hosmer thrust sheet into a number of fault-bounded blocks, ... (which include the) Boulder block and Hosmer nappe on the east side. Differential movements occurred on these blocks as the Hosmer nappe first moved northeastward approximately 8 kilometres and then southeastward 12 kilometres " (Höy 1993).

A final episode of north-trending, west-dipping normal faulting took place in the Late Tertiary.

The Rocky Mountain Trench is the most prominent and is a listric normal fault having dip-slip separation of at least 5 to 10 kilometres. However, strike slip separation is interpreted to be minimal based on stratigraphic correlations across the trench.

Mineralization

There are two main deposit types hosted by Purcell Supergroup strata in southern British Columbia, namely:

1) stratabound clastic-hosted deposits such as the Sullivan and Kootenay King (Fig. 2), which are syngenetic or formed immediately following deposition of the host sediments, or

2) vein deposits, which have been sub-divided by Höy (1993) into three separate types:
   a) copper veins (i.e. Bull River and Dibble)
   b) lead - zinc veins (i.e. Estella and St. Eugene), and
   c) gold veins (Perry Creek and Midway).

Stratabound Clastic-Hosted Deposits

Stratabound clastic-hosted deposits are "... concordant bodies of massive or laminated lead, zinc and iron sulphides in fine to, less commonly, medium-grained sedimentary rocks" (Höy 1993). Some deposits may have cross-cutting footwall stockworks, disseminated or vein mineralization interpreted as conduits for mineralized solutions which were subsequently deposited as the overlying stratiform deposit.

Many stratiform lead-zinc deposits have associated zoning, either vertically (commonly copper-lead-zinc-(barium)) or laterally (commonly copper-lead-zinc). Stratiform lead-zinc deposits in the Purcell Supergroup are restricted to deep water facies of the lower and middle Aldridge Formation.

Details of stratiform clastic-hosted deposits are discussed in Höy (1993) and summarized in a past property report by Price (1989).

Kootenay King (from Höy 1993)

The Kootenay King mine (Fig. 2 and 4) is a stratiform clastic-hosted deposit which produced approximately 13 260 tonnes of ore with documented recovery of 715 grams of gold, 882 kilograms of silver, 710 866 kilograms of lead and 881 383 kilograms of zinc. The deposit was a small orebody comprised of a massive lead-zinc sulphide layer hosted by strata correlated to the lower middle Aldridge Formation. The deposit was contained within the "Kootenay King" quartzite, a prominent thick-bedded quartzite interval within dominantly buff-coloured dolomitic siltstone, dolomitic argillite and dark grey argillite. The quartzite interval is up to 250 metres thick and consists of a sequence of interbedded wacke, arenite and minor argillite which becomes thicker and coarser grained to the south. An impure, fine-grained dolomitic facies near the top of the Kootenay King quartzite hosted the orebody. Mineralization included fine-grained, laminated pyrite, galena and an unusual pale grey to green sphalerite.

"The lack of either a footwall stringer zone or hangingwall alteration, and the finely laminated nature of the mineralization suggests either that the deposit is distal, well-removed from its vent source or that much of it is eroded, including evidence of a conduit in the footwall" (Höy 1993).

Vein Deposits and Occurrences

The Aldridge and Creston formations are important for vein type deposits in southern British Columbia. The Aldridge Formation is host to copper veins (adjacent to Moyie sills), lead-zinc veins (in late structures or adjacent to late felsic intrusions) and gold veins. Copper veins are most commonly hosted by the Creston Formation. Gold veins are also documented in sheared Creston Formation in Perry Creek. Metals recovered from vein deposits (primarily the Bull River, Estella, St. Eugene and Stemwinder mines) total approximately 219 400 grams gold, 198 418 kilograms silver, 7270 tonnes copper, 119 962 tonnes lead and 28 850 tonnes zinc. "Most veins carry pyrite, pyrrhotite, chalcopyrite, galena or sphalerite in a quartz-carbonate gangue. Veins hosted by Purcell Supergroup rocks are subdivided into three main types, those with copper, those with silver, lead and zinc, and those with gold as their primary commodities" (Höy 1993).

Copper Veins

Copper veins are those which carry copper as the principal commodity with variable amounts of lead, zinc, silver and gold as chalcopyrite, pyrite and pyrrhotite. Galena and sphalerite commonly occurs and tetrahedrite has been reported in a few instances. Quartz, commonly with calcite or siderite, is the principal gangue mineral and barite occurs in some veins hosted by upper Purcell Supergroup strata.

"Two groups of copper veins are recognized: those hosted by middle Aldridge or, less commonly, lower Aldridge or Fort Steele rocks and those hosted by clastic rocks of the upper Purcell Supergroup. Many of the veins in the Aldridge Formation occur in shear or fault zones that cut across lower Purcell stratigraphy. Others are associated with Moyie sills, either in metasediments immediately adjacent to a sill or in vertical fractures in sills. ...

Veins in overlying upper Purcell rocks may be largely derived from remobilization of metals originally deposited in shallow-water clastic or carbonate facies. A few of these veins are in wacke that contains finely disseminated chalcopyrite or pyrite. This disseminated mineralization may be similar to, but far less concentrated than stratabound copper occurrences ... A number of other copper vein occurrences are closely associated with small mafic or alkalic stocks or dikes" (Höy 1993).

Bull River (from Höy 1993)

The Bull River mine (Fig. 4) produced approximately 7 256 tonnes of copper, 126 000 grams of gold and 6.3 million grams of silver from approximately 450 000 tonnes of ore. The ore was produced from two open pits at an average grade of 1.46% copper, 0.232 gram per tonne gold and 11.7 grams per tonne silver. Mineralization was reported to occur in at least seven zones of steeply south dipping, sheared and fractured rock. These zones crosscut lower Aldridge siltstone and wacke at or near a contact with a Moyie Intrusive (dyke). The zones consist of one or more quartz-siderite veins with disseminated or massive pods of chalcopyrite, pyrite and pyrrhotite.

Dibble (from Minfile Number 082GNW003)

The Dibble occurrence (Fig. 4) is hosted by argillite, quartzite and argillaceous quartzite of the Lower Creston Formation in a horse within the Dibble Creek Fault. Two types of mineralized veins are present: 1) narrow quartz stringers, 1 to 8 centimetres thick with tetrahedrite, arsenopyrite, malachite, azurite and very minor chalcopyrite; and 2) wider quartz-pyrite veins from 30 to 200 centimetres thick, breccias and replacements, often in quartzite units. Alteration of wallrock from veins of the first type is slight, ranging from 10 to 30 centimetres thick whereas alteration associated with the second type is more intense, ranging from 30 to 150 centimetres thick. Production in the past occurred from veins of the first type, which strike approximately east-west and dip steeply north. Highest assays returned from samples from these veins were 4.1 per cent copper, 3822.2 grams per tonne silver, 0.01 per cent lead, 0.15 per cent zinc and 126.8 grams per tonne gold. Note: see Price (1989) for a more detailed summary of the Dibble Group showing.

Eagle Plume (from Minfile Number 082GNW025)

The Eagle Plume showing (Fig. 4) is located on the western slopes of the Hughes Range, immediately east of the Rocky Mountain Trench and is interpreted as quartz-filled hydrothermal veins. Mineralization occurs in parallel "fissure" veins hosting disseminated chalcopyrite which strike roughly east within altered limestone and schist of the Aldridge Formation.

Eagle's Nest (from Minfile Number 082GNW026)

The Eagle's Nest showing (Fig. 4) occurs south-southeast of the Eagle Plume occurrence on the western slopes of the Hughes Range, immediately east of the Rocky Mountain Trench. A 1 metre wide quartz vein within a Moyie sill carries small amounts of chalcopyrite and pyrite near the contact with host Aldridge Formation argillaceous quartzites.

Eagle Too (from Minfile Number 082GNW032)

The Eagle Too showing (Fig. 4) occurs south-southeast of the Eagle Plume and Eagle's Nest showings and north of Horseshoe Creek. Chalcopyrite and pyrite in a quartz vein are reported in argillites and quartzites of the Aldridge Formation near the contact with a Moyie sill. Copper and gold are reported to occur.

Lead-Zinc Veins

Lead-zinc veins carry lead and zinc with variable amounts of copper, silver and gold with galena, sphalerite, pyrite and pyrrhotite as the main sulphide minerals. Minor chalcopyrite, arsenopyrite and tetrahedrite may also be present. The gangue mineral is predominantly quartz, but may include quartz-calcite or less commonly quartz siderite.

"Nearly all lead-zinc vein occurrences are within the Aldridge Formation, most commonly in the middle Aldridge or in rocks correlative with the middle Aldridge rocks (Unit A1d) ... Middle Aldridge rocks are deep-water clastic facies with relatively high background metal values that provide a source for metals in the veins. They are commonly thick-bedded and competent, and hence fracture readily. In contrast with copper veins, only a few lead-zinc veins appear to be associated with the Moyie sills. ...

Despite the variety of lead-zinc deposits in Aldridge rocks, most have very similar lead isotopic ratios. These ratios are similar to those of stratiform deposits such as Sullivan and Kootenay King, indicating a common lead source, presumably the host Aldridge succession. Metals were initially deposited together with Aldridge sediments, remobilized during intrusive or later tectonic events and deposited as lead-zinc veins" (Höy 1993).

Estella (from Höy 1993)

The Estella mine (Fig. 4) is an example of a lead-zinc vein and produced a total of approximately 6393 kilograms of silver, 5181 tonnes of lead, 9834 tonnes of zinc and very minor gold from a total of 109 518 tonnes of ore. The mine is located in a lead-zinc-silver vein hosted by siltstone, argillite and wacke of the Aldridge Formation and is adjacent to a small porphyritic to equigranular composite stock. Two diorite bodies occur locally, a large, irregular body just west of the mine and another underground, interpreted to be Moyie Intrusives.

The orebody was located in a moderately to steeply southwest dipping (40° to 70°) zone of fracturing and light shearing which follows the general trend of the underground diorite contact. The ore zone ranges from 5 to 7 metres in thickness and was comprised of secondary (replacement) sphalerite, galena and pyrite accompanied by variable amounts of silica.

Victor (from Minfile Number 082GNW004)

The Victor vein (Fig. 4) is an occurrence from which limited production is documented. Lead, silver, zinc, gold and copper values have been reported from sporadic galena, sphalerite and pyrite mineralization, present as small lenticular shoots and thin streaks along the footwall. Occasional disseminations are also reported in the quartz gangue. The Victor vein is hosted by quartzites and argillites of the Lower Creston Formation which strike north-northwest and dip 70° to 75° west. Two distinct rock types have been reported, a green-grey argillaceous quartzite with minor interbedded apple green quartzite, and a silver grey-black argillite/phyllite with local silty units.

The Victor vein strikes 020° with an eastern dip ranging from 70° to vertical and can be traced on surface for over 600 metres. Polyphase quartz is present along the exposed length of the vein with occasional siliceous zones up to 4 metres thick and an alteration envelope between 10 and 30 metres thick. Three adits are present along the Victor vein system. Assays of recent samples taken along the adits returned a high of 12.9 per cent lead, 7.69 per cent zinc, 198.9 grams per tonne silver, 7.0 grams per tone gold and 0.39 per cent copper. Note: see Price (1989) for a more detailed summary of the Victor vein showing.

Box (from Minfile Number 082GNW051)

The Box showing (Fig. 4) is underlain by sediments of the Aldridge Formation in fault contact with Lower Creston Formation sediments to the north and Devonian sediments to the south. Lead, copper, zinc, gold and silver values have been reported from galena, chalcopyrite and pyrite mineralization. Spotty patches of galena are associated with quartz veins ranging from 0.5 to 2.0 metres thick within Aldridge Formation quartzites (Unit Pa_2q). The veins may be a strike extension of the Victor vein or may be similar in character and stratigraphic location. In addition, a large occurrence of brecciated and healed quartzite with patchy pyrite and chalcopyrite coincides with an east trending fault associated with the Horseshoe Creek Fault. Grab samples from bedding parallel quartz veins have returned assay values of 0.27 per cent lead, 0.17 per cent zinc, 1.52 grams per tonne gold and 3.4 grams per tonne silver. Note: see Price (1989) for a more detailed summary of the Box showing.

Gold Veins

"Although many of the copper veins and some of the lead-zinc veins contain minor gold, a number ... contain gold as their primary commodity. They are gold-quartz veins controlled by northeast-trending faults that cut Creston Formation quartzite and siltstone. Shearing and fracturing are extensive, commonly occurring in a zone several hundred metres wide on either side of the faults. Many of the veins are also associated with mafic dikes. They vary in thickness from a few centimetres to greater than 10 metres. They comprise massive, white to occasionally pink quartz, minor calcite, disseminated pyrite, and occasionally trace chalcopyrite and galena. They are commonly severely fractured or sheared and locally cut and offset by crossfaults. Others cut the prominent schistosity ... (indicating) that they formed during and immediately following deformation" (Höy 1993).

Sedimentary Copper Deposits

Although no sedimentary copper deposits have been reported in the Hughes Range, potential exists in both the Creston Formation and the carbonate facies of the Van Creek Formation (equivalent to the Siyeh Formation). However, only the Creston Formation is present in the DV Property. Copper mineralization occurs either in quartzites or in many of the red and green beds that overlie the deeper water Aldridge Formation.

"Stratabound copper deposits and occurrences in Belt-Purcell rocks have a number of features in common with other stratabound, clastic-hosted copper deposits ... They commonly formed in a tectonically active, intracratonic setting; there appears to be only an indirect association, if any, with volcanic rocks; and the hostrocks are usually fine-grained clastic sediments, commonly green, reduced beds that immediately overlie more oxidized red beds. At Spar Lake, however, the hostrocks are white to pinkish quartzites within grey siltites. Mineralization in these deposits is stratabound, localized in specific favourable units; it is usually not strataform as it cuts across both sedimentary units and structures. Metals include copper and silver, less commonly uranium, and occasionally lead and zinc. Mineral and metal zoning is common.

The Spar lake deposit ... is in white, crossbedded quartzite of the Revett Formation. Sulphides occur as disseminations, clots and fracture fillings, commonly closely related to bedding planes, crossbeds and scour-and-fill structures. The sulphides are zoned with essentially a lower chalcopyrite zone, overlain by chalcopyrite-bornite-chalcocite, bornite-chalcocite, chalcopyrite-bornite-galena, galena-pyrite, and pyrite zones. Silver values correlate with copper values, with better grades in the thicker parts of the deposit. Evidence for structural control of mineralization includes: the spatial association with an early growth fault, the East fault; zonation of minerals and elements away from the fault; and vertical stacking of mineralized lenses in the Revett Formation" (Höy 1993).

LOCAL GEOLOGY

A profound change in facies and thickness occurs at approximately 49° 30', interpreted to have resulted from rotation and displacement along northeast-trending faults during Proterozoic and early Paleozoic time. This profound change was interpreted as a reentrant along the generally northwest trending Proterozoic Purcell Basin (McMechan 1980). Anomalously thickened turbidite sequences in the Aldridge Formation with local occurrence of coarse-grained sand and northeast to southwest transport of some of these turbidites "... strongly suggest this reentrant developed before or during deposition of the Aldridge Formation" (McMechan 1980).

Evidence for this northeast-trending reentrant, located where the right-hand, reverse St. Mary - Boulder Creek and Moyie - Dibble Creek fault systems segment the eastern limb of the Purcell Anticlinorium (Fig. 2), is apparent in isopach maps of all Purcell Supergroup subunits. Thickness variations in the overlying Windermere Supergroup, suggest that movement on the block faults defining the reentrant had ceased by Late Proterozoic time. These pre-existing zones of crustal weakness were subsequently reactivated as right-hand reverse faults during Mesozoic compression.

The Moyie - Dibble Creek Fault (discussed in a later section) is a right-lateral reverse fault with an estimated displacement of 12 kilometres. West of the Rocky Mountain Trench, the Moyie Fault is represented as a steeply northwest dipping zone of intense shearing several hundred metre wide. The footwall of the Dibble Creek Fault, east of the Rocky Mountain Trench, follows a gypsum horizon in the basal Devonian succession (Fig. 6). The St. Mary Fault, west of the Rocky Mountain Trench, is also a right lateral reverse fault with an estimated displacement of 11 kilometres. The fault is intruded by the Reade Lake stock south of Kimberley. The quartz monzonite intrusion constrains the age of displacement on the fault to earlier than 94 Ma. East of the Rocky Mountain Trench, the Boulder Creek Fault accommodates right lateral displacement of the St. Mary Fault, juxtaposing strata of the Aldridge Formation in the hangingwall against Kitchener Formation strata in the footwall. North of these faults, a thick succession of Cambrian through Silurian strata are exposed. In contrast, Devonian rocks rest unconformably on upper Purcell strata to the south.

McMechan (1980) interpreted a northwest-dipping flexure, the Dibble Creek monocline, to coincide with the northern flank of Montania, which occurred south of the Dibble Creek - Moyie fault system in pre-Devonian time. This interpretation was based on reconstruction of sub-Devonian units across the northwestern flank of Montania. Contrasting stratigraphic relationships beneath the sub-Devonian unconformity on either side of the Moyie - Dibble Creek fault system show that this fault follows the locus of a pre - Middle Devonian transverse northeast-trending structure with more than 7 km of stratigraphic separation, across which the north side moved down as the lower Paleozoic strata were being deposited. North of the flexure, presently represented by the Dibble Creek - Moyie Fault (Fig. 5 and 6), was a basin filled with lower Paleozoic rocks. These two major, right lateral reverse faults, the St. Mary - Boulder and Moyie - Dibble Creek fault systems, have been interpreted to define a structural basin north of the Dibble Creek monocline. The DV property is located in the southern half of this structural basin, overlying and north of the Dibble Creek Fault.

McMechan (1980) structurally subdivided the southern Hughes Range into 5 separate domains, separated by faults, on the basis of bedding orientation and/or folds outlined by bedding.

"Domain 1, in the western part of the (Mt. Fisher) block, is characterized by a series of faulted northeast-plunging asymmetric anticlines in Aldridge to Kitchener strata. Domain 2, in the eastern part of the block, comprises an east-facing panel of north- to northwest-striking Kitchener to Cranbrook strata. Domain 3, at the southern end of the block, is a horse of Aldridge and Creston strata that occurs along the Dibble Creek fault ... Domain 4 lies between the Bull Canyon and Dibble Creek faults and is characterized by a series of low amplitude, open, northeast-plunging folds. Domain 5 lies south of the Bull Canyon fault and is dominated by the northwest-striking Lizard segment of the Hosmer nappe structure" (McMechan 1980). The DV property lies predominantly in Domains 1 and 3, with minor overlap into Domain 2 to the east and Domain 4 south of the Dibble Creek fault.

The structural geometry of Domain 1 is dominated by a series of asymmetric anticlines. The right-way-up limbs strike west to northwest and dip moderately north to northeast. Steeply dipping to overturned beds strike northeast or southwest and dip southeast (right-way-up) or northwest (overturned). The folds generally have northwest plunging (approximately 60°) axial planes and fold axes that plunge moderately (37°) to the north-northeast. Northwest-dipping faults having left-lateral normal separation replace synclines, juxtaposing the steep forelimb of one anticline against the backlimb of the adjacent anticline. On the outcrop scale, a moderate to well developed penetrative cleavage is developed in argillaceous strata and a spaced cleavage in argillaceous quartzite and siltites.

Domain 2 is comprised of an east-facing stratigraphic succession, from Kitchener Formation on the west upward to the Cranbrook Formation to the east. Strata is moderately to steeply northeast dipping with a predominant northwest strike. The Fisher Peak and Patmore faults separate Domain 1 on the west from Domain 2 on the east. "The Patmore fault is a steep north to northwest-trending fault that represents a zone of décollement near the base of the Kitchener Formation separating the homoclinal panel of Domain 2 from the complex faulted folds of Domain 1" (McMechan 1980).

Domain 3 is a horse of upright Aldridge and Creston strata lying between the Dibble Creek Fault to the south and a splay to the north. Both bedding and cleavage strike west and dip moderately (60°) to the north, sub-parallel to the orientation of the Dibble Creek Fault.

"Domain 4 is basically a northeast-plunging monocline. The northeast-dipping upper limb is broadly folded about open, shallow (23°), northeast (046°)-plunging folds that involve both Proterozoic and Devonian strata. The northwest-dipping middle limb dips under the Dibble Creek fault and occupies the northern part of Domain 4" (McMechan 1980).

Dibble Creek Fault

The hangingwall of the Dibble Creek Fault comprises a ramp which truncates structures and stratigraphic units of the Purcell Supergroup, ranging from the Aldridge Formation to the Kitchener Formation in an eastward direction. Proterozoic strata in the hangingwall show evidence of deformation, with bedding and cleavage partially rotated into the plane of the plane. The footwall lies in a flat, following a gypsum horizon in the basal Devonian unit, therefore, strata comprising the basal Devonian unit show little or no evidence of proximity to a major, regional scale fault. The fault also separates strata showing evidence of northwest-southeast directed compression and folding around northeast-trending fold axes during southeastward displacement of the hangingwall relative to the footwall. Benvenuto and Price (1979) estimated that there has been in the order of 12 kilometres of right-lateral reverse movement along the Dibble Creek Fault. The orientation of the fault, as determined near the headwaters of Sunken Creek, suggests the fault strikes west and dips north at approximately 55°. The surface trace of the fault swings from northeast (Moyie Fault) to almost due east (Dibble Creek Fault) in the region of the Rocky Mountain Trench.

The "... Moyie - Dibble Creek Fault probably initiated as the locus of vertical adjustment between thicker and thinner parts of the (Hosmer) thrust sheet. The ... fault propagated northeastward and southwestward along the flank of the Dibble Creek monocline as a right-hand reverse fault when the direction of displacement on the Hosmer thrust changes from northeast to southwest" (McMechan 1980). At this location the fault splayed into, and its locus was controlled by, a gypsum horizon in the basal Devonian unit. Subsequent southeastward displacement of the Hosmer thrust sheet was restricted to strata lying structurally above the Dibble Creek Fault.

The Fisher Peak, Maus Creek, Tanglefoot and Horseshoe Creek faults are northwest-dipping transverse faults that have had a complex history of reverse, strike-slip, and normal displacement. Asymmetric minor folds associated with these faults generally indicate reverse dip-slip displacement while stratigraphic offset and early faults (i.e. Patmore Fault) indicate left-lateral normal slip on the Fisher Peak, Maus Mountain and Horseshoe Creek faults.

Bedding in the southern portion of Domain 1 is overturned an additional 20° due to proximity to the right-lateral Dibble Creek reverse fault. The regional cleavage is also deformed in strata proximal to the Boulder Creek, Dibble Creek and Fisher Peak faults, as evidenced by partial rotation into the plane of the faults and local development of a west-northwest plunging, folded cleavage. In contrast, folds documented in bedding proximal to the Horseshoe Creek Fault have an undeformed northwest-dipping axial planar cleavage consistent with northwest-southeast directed compression. Reverse (north to northwest side up) displacement is recorded by the minor folds adjacent to all these faults.

The major zones of crustal weakness developed during aulocogen formation were reactivated as northwest-side down structures that controlled the pattern of erosion and deposition in the Late Proterozoic and early Paleozoic and as right-hand reverse faults in the Mesozoic.

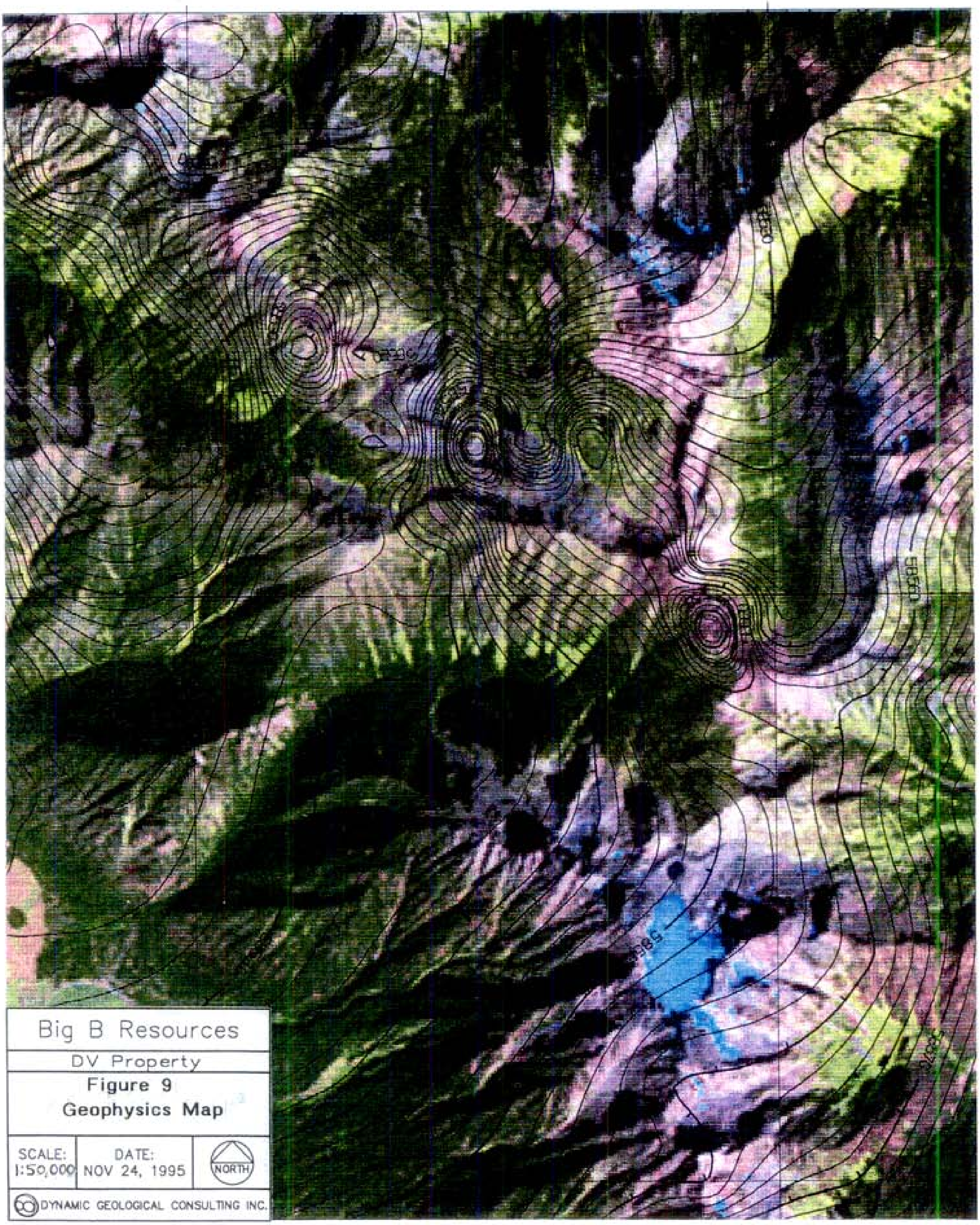
Geophysics

An airborne geophysical digital dataset was obtained for the area (western portion of Fernie mapsheet (8465G) and eastern portion of Cranbrook mapsheet (8469G)) and reviewed in the course of this study (Fig. 8 and 9). The geophysical data was acquired from Sept. 1969 to June 1970 along flight lines spaced between 500 metres and 2 kilometres apart. The flight lines were flown at an average elevation of 300 metres above ground level.

The contoured data (mapsheets 8465G and 8469G) data generally documents a fairly uniform regional gradient which decreases to the west. The regional gradient is greatly disturbed by at least two prominent localized highs, which correspond to the Reade Lake stock (underlying Cranbrook airport) and a monzonite - syenite intrusive body in the east fork of the Wild Horse River (Fig. 7). In addition, a northwest trending aeromagnetic high is also evident, which extends from the headwaters of the Dibble Creek valley northwestward to the northeast portion of the Maus Creek valley, where it passes into the core of a regional scale magnetic low (Fig. 7). However, in detail, the trend is segmented into three separate north to northwest trending bulls-eyes or linears (Fig. 8 and 9).

The eastern linear is spatially associated with a thick sequence of gabbros exposed in the ridge crest northeast of the Dibble Group Reverted Crown Grants (Fig. 6 and 8). However, the trend of the linear is oriented at an oblique angle to the strike of the gabbros. In addition, the geophysical trend extends both to the southeast along a ridge and to the northwest into an alpine cirque (Fig. 9) where little or no surface exposures of gabbro were noted. Furthermore, the gabbros are exposed at surface whereas the source of the geophysical anomalies are most likely located at depth. Finally, the gabbroic exposures are interpreted to be correlative to the Nicol Creek volcanics, a basaltic accumulation occurring at higher stratigraphic levels in the Purcell Supergroup. Mapped exposures of the Nicol Creek volcanics do not appear to disturb the geophysical gradient evident on the contoured geophysical map. It is unlikely that gabbroic dykes and/or sills in the sub-surface, having similar compositions to the Nicol Creek volcanics, would produce a stronger magnetic signature than the correlative basaltic lavas. Therefore, the anomalies are not believed to be sourced from gabbroic exposures at surface.

The trend of the individual segments of the geophysical anomalies is sub-parallel to slightly oblique to the average orientation of bedding and highly oblique to the average foliation. However, the magnetic lows which separate the three magnetic high segments appear to correspond reasonably well with the possible depth extension of the Horseshoe Creek Fault and a small (?) north-trending, unnamed fault mapped north of the Dibble Group (Fig. 6). Therefore, the linear orientation of the magnetic highs may represent a single magnetic body which was subsequently segmented by brittle faulting. Subsequent fluid movement along the fault planes may have destroyed the magnetic minerals (i.e. altering magnetite to hematite). The only strong magnetic features which readily stand out on the map sheet are the very pronounced magnetic highs associated with the Wild Horse monzonite intrusion to the north. Therefore, by analogy, it is proposed that the segmented magnetic linear may reflect an alkalic intrusive dyke at depth, underlying the DV property.


Big B Resources
DV Property
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DYNAMIC GEOLOGICAL CONSULTING INC.

Subsequent development of fault planes may have acted as conduits for fluid movement, resulting in alteration of primary magnetic minerals to non- or weakly magnetic secondary minerals.

Note: The aeromagnetic anomalies discussed above were located at the northwestern and northeastern to southeastern margins of the DV property. Therefore, two additional blocks of claims were staked to cover these anomalies. The Ringo claims are comprised of 18 units which adjoin onto the northern boundary of the Vic # 2 claims and cover stratigraphy of the Aldridge Formation underlain by a geophysical low. The Fox 1 - 18 claims are a series of two post claims which adjoin the northern and eastern boundaries of the Ax claim and cover strata of the Creston to Kitchener Formations. In addition, these claims cover portions of three magnetic highs identified on the digital geophysical data. As a result of the above staking, the closures evident on the aeromagnetic geophysical data are now largely covered by claims comprising the DV property.

PROPERTY GEOLOGY

Structure

The purpose of the 1995 field season was to structurally map the DV property, to improve and build upon McMechan's (1979) mapping (Fig. 5) and to evaluate previously proposed drill targets with respect to the structural data. The domains defined by McMechan (1980) were used to analyze the resulting structural data. The DV property lies primarily within Domains 1 and 3, with minor overlap into Domain 2 to the east and Domain 4, south of the Dibble Creek Fault.

Note: All planar structural measurements use "dip to the right" convention (i.e. strike is measured such that the plane measured is always on the observer's right side).

Domain 1

A total of 276 bedding (S_0) measurements were taken in Domain 1, 99 from the Aldridge Formation (Fig. 10) and 177 from the Creston Formation (Fig. 11). Although the average orientation for both the Creston Formation and the Aldridge Formation is similar, the distribution is markedly different. The Creston Formation has uniform distribution with an average orientation of 188°/89°. Deviation from the mean orientation is apparent as a diffuse zone centred around the mean. A small proportion of the data (poles to bedding) plots in the western quadrant while the bulk of the data plots in the eastern quadrant. Therefore, the bulk of the data is from south striking, west dipping strata with a minor proportion from north striking, east dipping strata. These data reflect warps and undulations in steeply west dipping Creston strata.

Poles to bedding for the Aldridge Formation define a diffuse band. The majority of the data plots around 119°/18°, which corresponds to an average orientation of 209°/72°, however several subordinate point maxima are present within the diffuse band. A best fit great circle drawn through the resulting poles to bedding defines a conical fold axis plunging 43° toward 025°.

As with bedding, there is a significant difference between foliation orientations in the Aldridge and Creston formations. Poles to foliation in the Aldridge Formation (86 measurements - Fig. 12) define a point maximum at 155°/46° corresponding to an average orientation of 245°/54°. The data defines a relatively well defined point maximum with relatively minor variation in the data. More variation is evident in foliation data collected from the Creston Formation (99 measurements - Fig. 13). The data defines one relatively strong point maximum at 128°/26° (corresponding to an average orientation of 218°/64°). A second slightly subordinate point maximum occurs at 128°/38° (average foliation orientation of 218°/52°).

The first contour interval (0-2% of the data) shows considerable variation with several widely scattered groupings, documenting variation in the Cretaceous foliation. Some variation is to be expected in measurements from lithologies having different competence (i.e. quartzites versus siltites and argillites) however, the more widely varying data probably reflect structural controls on the orientation of the foliation (i.e. proximity to faults).

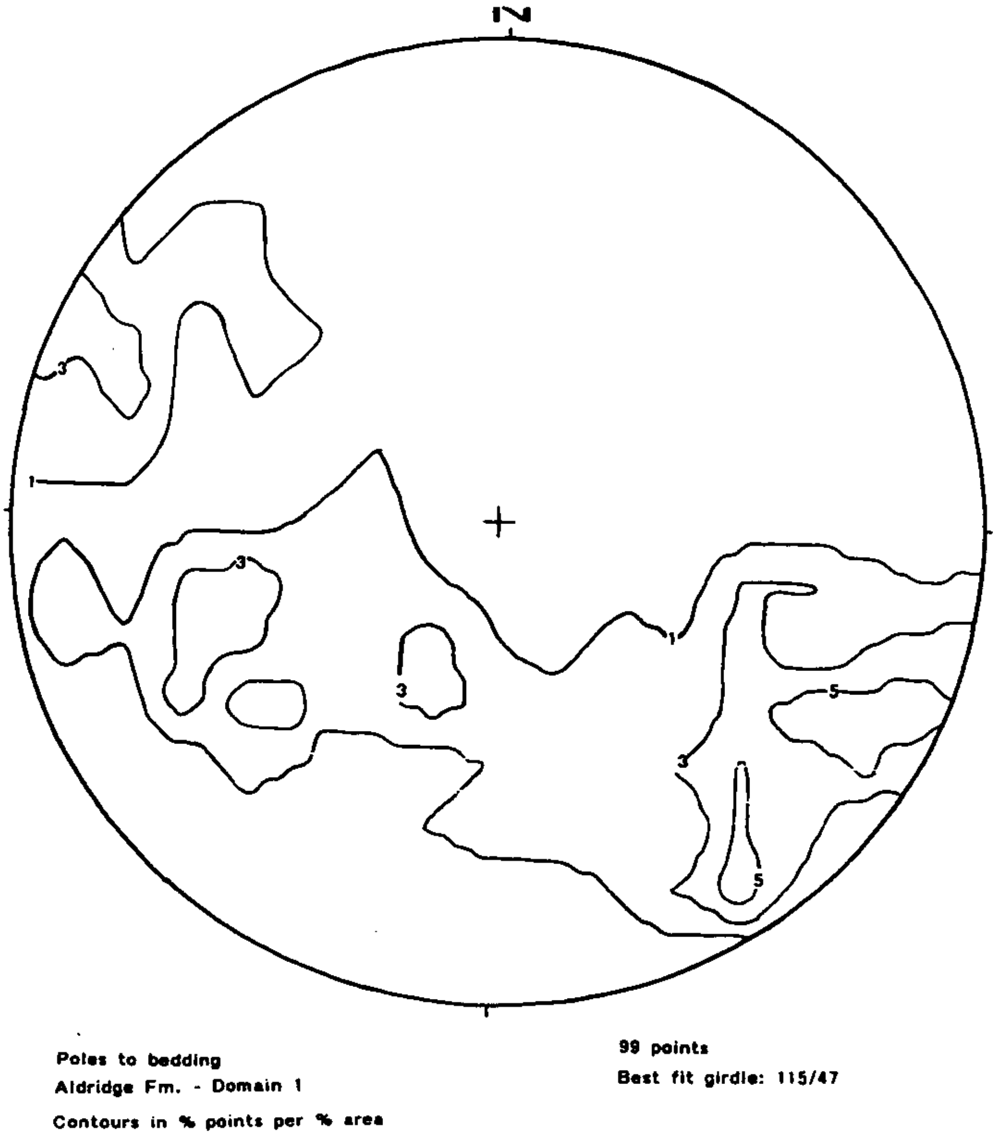

Figure 10 - Plot of poles to bedding (S_0) for data obtained in the Aldridge Formation of Domain 1. The plot is based on a total of 99 bedding measurements, with contours plotted on % points per % area. The resulting best fit girdle for the data lies at 115°/47°. Data plotted on a Schmidt stereonet.

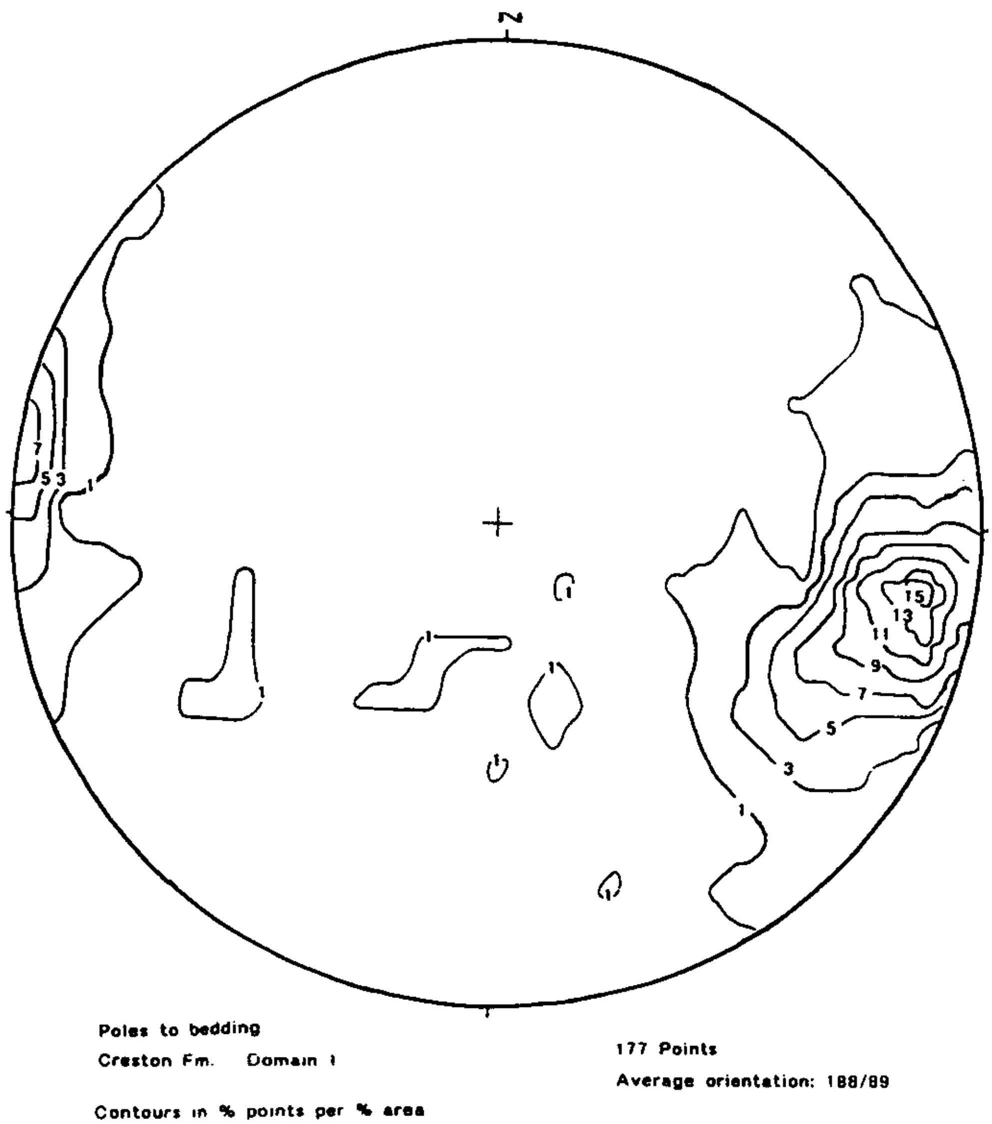

Figure 11 - Plot of poles to bedding (S_0) for data obtained in the Creston Formation of Domain 1. The plot is based on a total of 177 bedding measurements, with contours plotted on % points per % area. The resulting best fit girdle for the data lies at 188°/89°. Data plotted on a Schmidt stereonet.

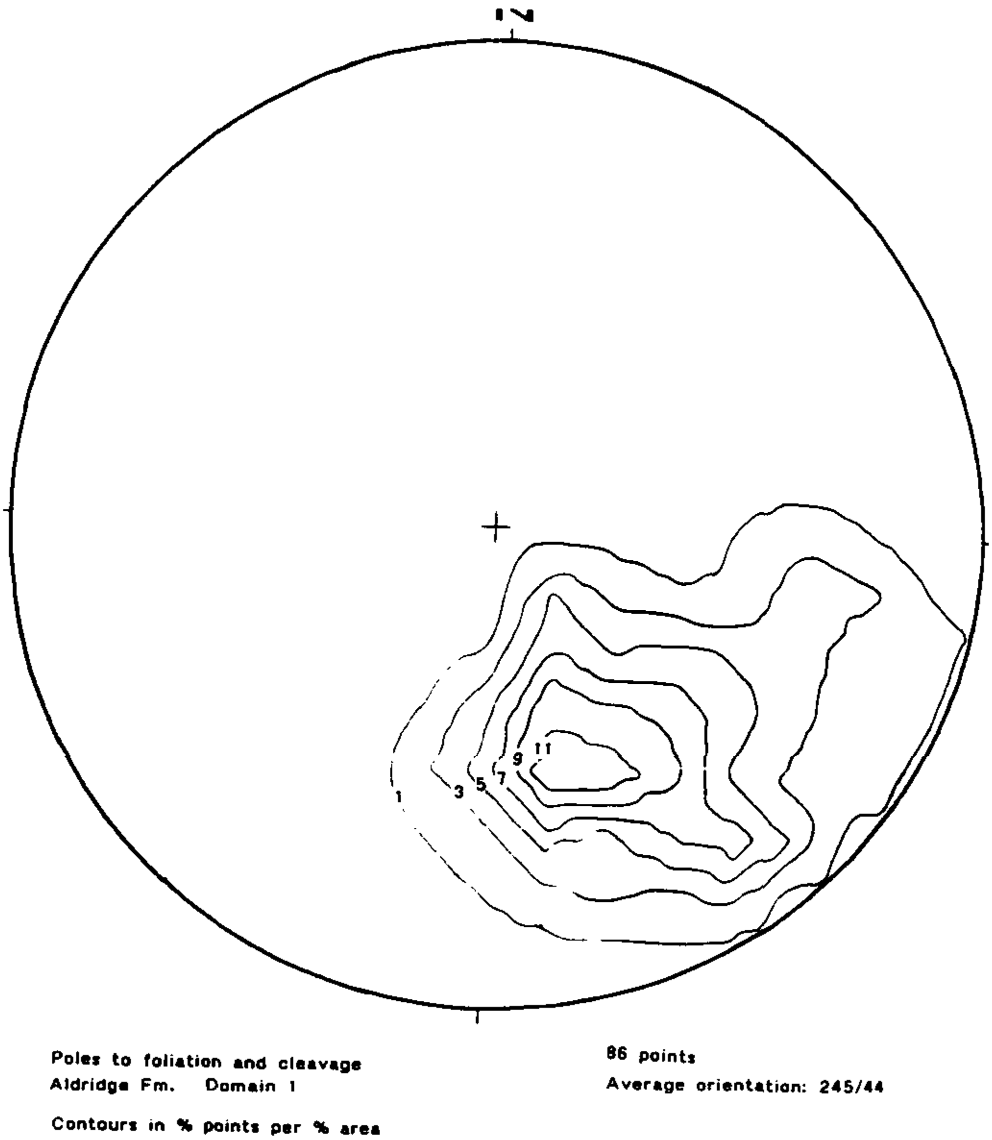

Figure 12 - Plot of poles to foliation / cleavage (S_1) for data obtained in the Aldridge Formation of Domain 1. The plot is based on a total of 86 foliation measurements, with contours plotted on % points per % area. The resulting best fit girdle for the data lies at 245°/44°. Data plotted on a Schmidt stereonet.

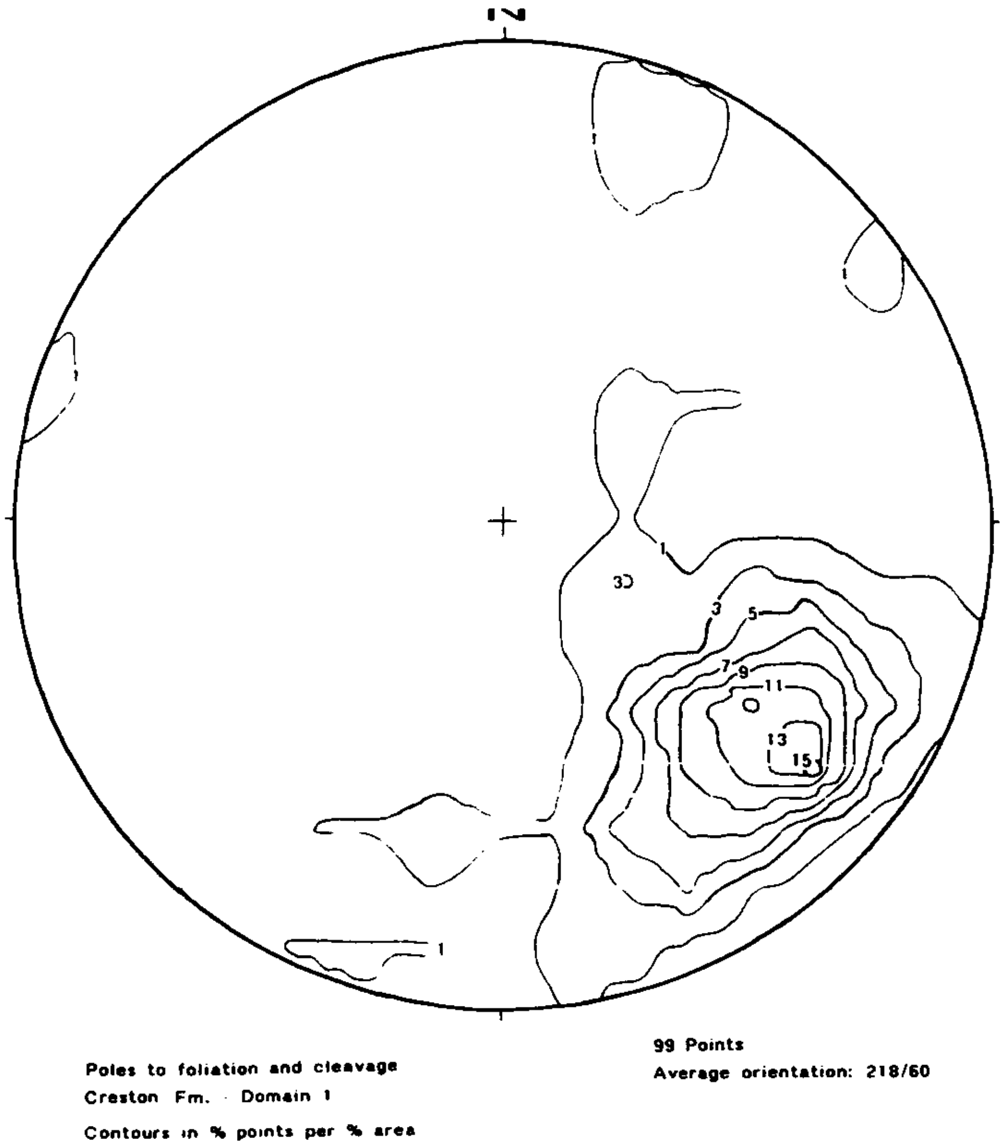

Figure 13 - Plot of poles to foliation / cleavage (S_1) for data obtained in the Creston Formation of Domain 1. The plot is based on a total of 99 foliation measurements, with contours plotted on % points per % area. The resulting best fit girdle for the data lies at 218°/60°. Data plotted on a Schmidt stereonet.

Fold data (fold axis orientations and S_0/S_1 intersection lineations) also differ between the Aldridge and Creston formations. A small population of twenty S_0/S_1 intersections were measured in the Aldridge Formation of Domain 1. The intersection of S_0 (bedding) with S_1 (foliation) results in a lineation parallel to local fold axes. Most S_0/S_1 measurements fall in the north-northeast quadrant, defining a loose cluster having an approximate orientation of 36°/021°. There are 5 measurements which plot in the west - southwest quadrant and define no single average orientation. An examination of bedding (S_0) data suggests that a conical fold solution fits the data better than a cylindrical fold solution. Observations of small parasitic folds in outcrop is consistent with an interpretation of conical folds from the data.

The plot of bedding (S_0) of measurements taken in the Creston Formation also suggests that a conical fold solution best fits the weakly defined bedding girdle. Fold axes measured in the Creston Formation document northwest to northeast-trending, moderately plunging folds. Two smaller populations are apparent, northwest to southeast-trending, almost vertically plunging folds and south - southwest-trending, moderately plunging folds. Bedding (S_0) / foliation (S_1) intersection data supports northwest to northeast-trending, moderately plunging folds. Data from the Aldridge and Creston formations document northwest to northeast-trending, moderately plunging folds, however, data from the Aldridge Formation has an average orientation more easterly than similar data from the Creston Formation. Fold axis and S_0/S_1 intersection data result in an average orientation of 40°/355° for folds developed in the Creston Formation.

Finally, fold axial plane data for folds in the Creston Formation of Domain 1 appear to document two populations, one in the southeast quadrant and the other in the northeast quadrant. Fold axial plane data are coincident with the foliation data measured in Domain 1. Therefore, folds having axial planes in the southeast quadrant (south - southwest striking, north - northwest dipping) are interpreted to be coeval with development of the foliation. Data in the northeast quadrant are coincident with a subordinate, widely variable population of foliation data measured in the Creston Formation of Domain 1.

Joint and fracture data from Domain 1, from both the Aldridge and Creston formations, documents similar features, with the exception of a small population of approximately 8 data points which are interpreted to represent joints and/or fractures associated with north - northwest trending brittle faults and veins (i.e. Victor vein). These planar breaks and discontinuities are apparently expressed only in the more competent Creston Formation.

There are two remaining populations apparent in the data from both Aldridge and Creston formations, one in the northeast quadrant (which most likely represent fractures perpendicular to fold axes) and one in the southeast (which are probably the expression of the foliation in more competent units (i.e. quartzites in both the Aldridge and Creston formations)

Domain 2

There are two prominent and one broad, highly subordinate point maxima evident in bedding measurements (68 total), taken from the Creston and Kitchener formations east of the Patmore

Fault (Fig. 14).

Most of the measurements plot sub-parallel to bedding orientations in Domain 1, however bedding, in general, has a slightly more eastward orientation. Two separate and distinct point maxima are evident in the data, one at 12°/098° (representing an average S_0 of 188°/78°) and 33°/112° (for an average S_0 of 202°/57°). These point maxima represent south - southwest striking, moderately to steeply west dipping overturned strata collected along the east side of the Patmore Fault and the divide between the headwaters of Cliff Lake and Sunken Creek. A subordinate portion of the data defines an almost east-west girdle associated with west - northwest striking, shallowly north plunging beds immediately east of a saddle at the intersection of the Patmore Fault and an unnamed west - northwest - east - southeast trending fault. Finally, a minor subset of the data plots in the southwest quadrant representing west - northwest striking, moderately steeply dipping beds. These measurements probably represent beds partially rotated into the plane of the Dibble Creek Fault.

Foliation measurements (41 total) for Domain 2 (Fig. 15) plot in a fairly tight cluster having an unusual termination on the northern margin of the cluster. Data north of this abrupt termination are scattered with no apparent cluster (preferred orientation). Examination of the raw data reveals there is a "hole" in the data which ranges between a trend of approximately 170° and 219° and a plunge of 20° and 40°. The Patmore Fault strikes north - northeast, therefore, the northern termination of the tight data cluster may be an expression of the Patmore Fault. The tight cluster of foliation measurements have a point maximum at 53°/124°, representing an average orientation of 214°/37°. Although the trend of the foliation is similar to that of Domain 1, the dip is markedly less than that of the Creston Formation and slightly less than that of the Aldridge Formation. Therefore, the moderately steep dip probably reflects less competent carbonate lithologies of the predominantly Kitchener Formation strata.

There are approximately 10 measurements which plot in the northwest quadrant and/or have anomalously shallow dips (<20°). These data were obtained along the divide separating Cliff Lake from the headwaters of Sunken Creek. Several faults were noted having orientations similar and sub-parallel to that of the Dibble Creek Fault. Therefore, it is proposed that the northern margin of the Dibble Creek Fault zone is present along the ridge and that small horses having anomalous structural orientations exist along the ridge.

Only five fold axes were measured in Domain 2 and the resulting data is very scattered. However, when combined with S_0/S_1 intersection lineations (6 total), the data appears to document north to northwest-trending fold axes, similar to fold axes in Domain 1. The folds in Domain 2 are north - northwest trending, shallowly to moderately plunging and appear to have a more westerly trend than folds in Domain 1.

Joint and fracture data collected for Domain 2 (Fig. 16) was obtained primarily from the saddle southwest of Cliff Lake that was mapped by McMechan (1979) as being the locus of an unnamed west-northwest-east-southeast trending fault, immediately east of the Patmore Fault. A total of 45 measurements were taken and are predominantly associated with these two faults.

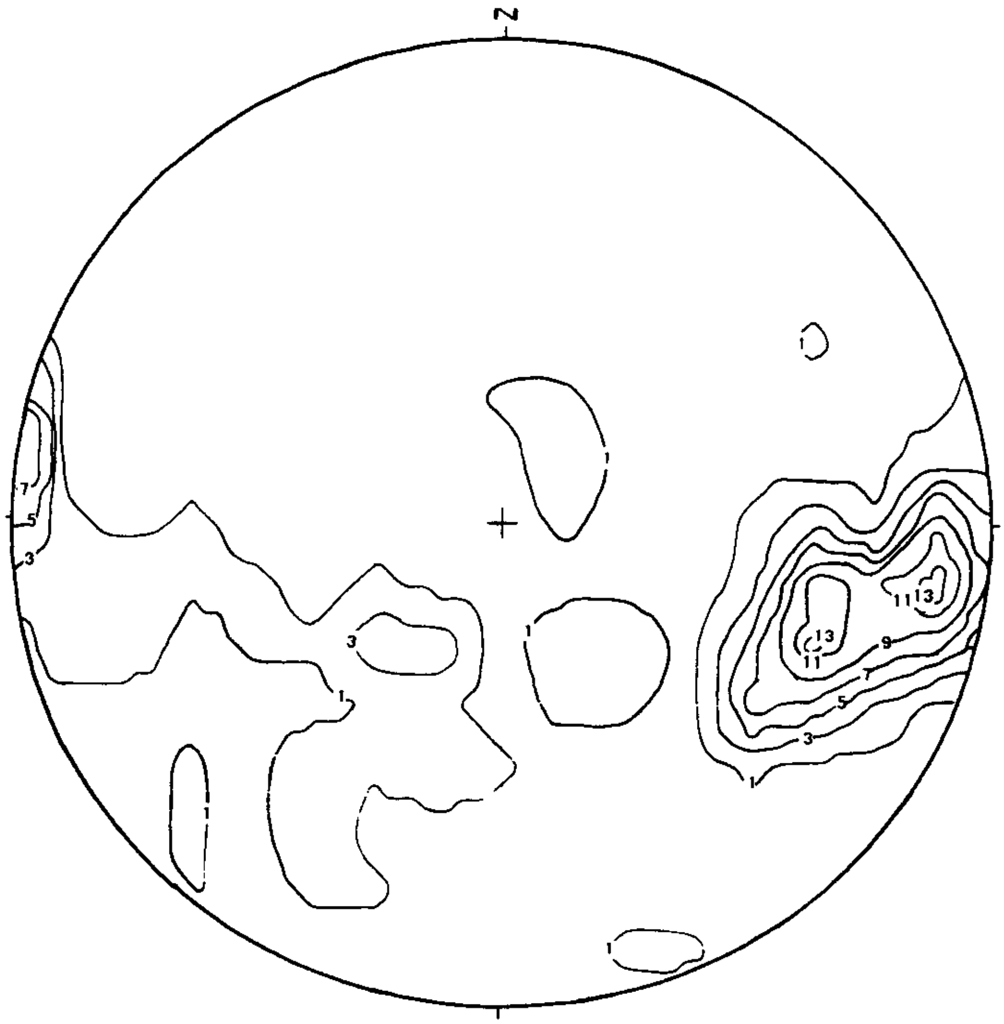

Figure 14 - Plot of poles to bedding (S_0) for data obtained in the Creston and Kitchener formations of Domain 2. The plot is based on a total of 68 bedding measurements, with contours plotted on % points per % area. See text for discussion of the resulting plot. Data plotted on a Schmidt stereonet.

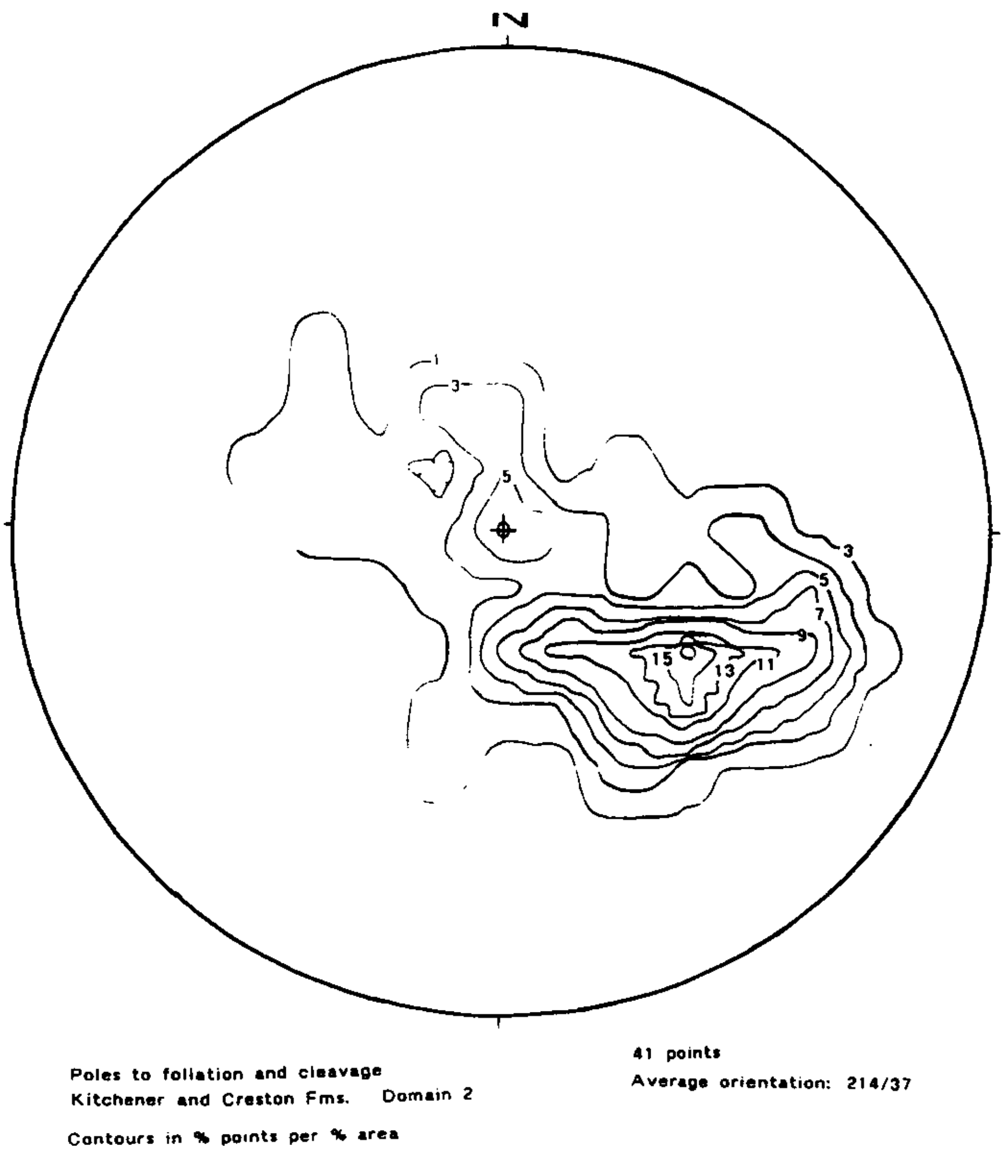

Figure 15 - Plot of poles to foliation / cleavage (S_1) for data obtained in the Creston and Kitchener formations of Domain 2. The plot is based on a total of 41 foliation measurements, with contours plotted on % points per % area. The resulting best fit girdle for the data lies at 214°/37°. Data plotted on a Schmidt stereonet.

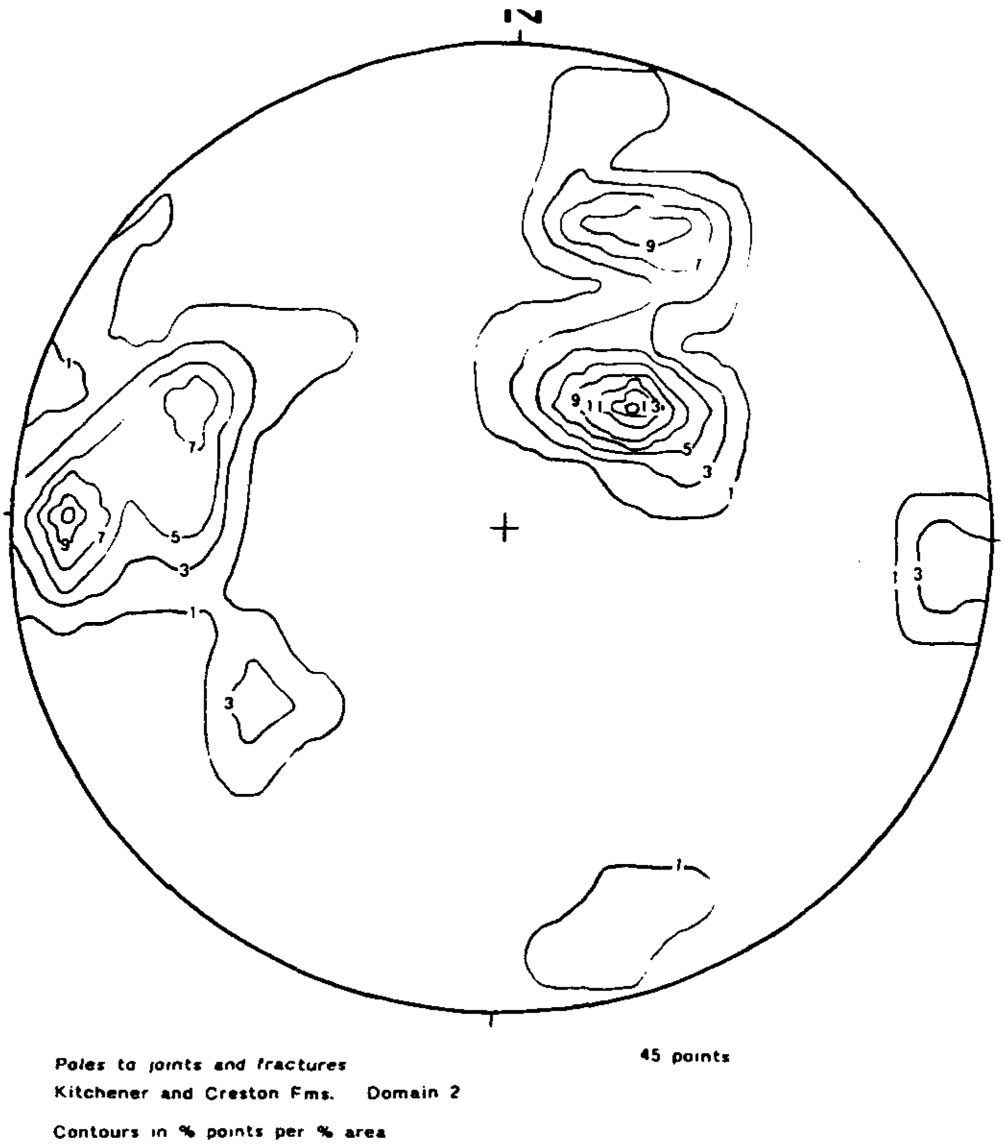

Figure 16 - Plot of poles to joints and fractures for data obtained in the Creston and Kitchener formations of Domain 2. The plot is based on a total of 45 measurements, with contours plotted on % points per % area. The resulting plot is discussed in the text. Data plotted on a Schmidt stereonet.

The Patmore Fault is defined by fractures and small faults having an average orientation of 360°/78° (defined by a point maximum at 12°/270°. A second point maximum at 32°/290° represent fracture planes associated with, but slightly oblique to the Patmore Fault. These data compare well to a small fault having an orientation of 357°/78°.

Two separate point maxima appear to be associated with the unnamed fault, namely at 61°/046° and 33°/023°. A slickenline measurement of 12°/299° lies very close to the trace of a fracture plane having an orientation of 140°/32°. Therefore, the first point maximum (61°/046°) is considered to be most representative of the orientation of the unnamed fault (136°/49°).

Domain 3

Both bedding and foliation data measured in Domain 3 document rotation of these planar features into parallelism with the Dibble Creek Fault. A total of 15 bedding measurements were taken, 10 of which have western strike with a dip which varies from shallow to steep. Four of the remaining measurements represent moderately to steeply dipping, south-southwest striking beds, either from Domain 1 or at the transitional boundary between Domain 1 and Domain 4.

Foliation data (10 measurements) from the Creston Formation ranges from orientations comparable to those in Domain 1 (approximately 218°/64°) to that of the Dibble Creek Fault (approximately 270°/55°). Therefore, despite the small size of the dataset, rotation of the regional foliation into parallelism with the Dibble Creek Fault appears to be documented.

Domain 4

In contrast to data from Domains 1 and 2, bedding measurements from Domain 4, in the immediate footwall of the Dibble Creek Fault, document bedding which appears to have been folded around (an) essentially east-west trending, cylindrical fold axis (axes). The girdle is not well defined due to the limited size of the dataset (18 measurements) however, an approximate trend of 22°/084° was estimated. Approximate trends of fold axes in the field and from S_0/S_1 intersection lineations suggest a trend of 055° is more representative.

Geochemistry

A total of 14 rock samples were taken and analyzed (30 element ICP + gold) from the DV property. Descriptions of the samples are contained in Appendix B, together with copies of the analyses.

Anomalous values were returned for Au (2 samples), Ag (1 sample), Ba, Co (1 sample), Cr, Cu, Ni (1 sample), P, Pb, and Zn. Of particular significance are two samples containing strongly anomalous values in gold. One of the samples was taken from the newly identified Bowl vein and returned a gold value of 195 ppb, together with anomalous silver, barium, copper (0.91%), and phosphorous. The other anomalous gold value was returned from a blast pit associated with malachite staining in the (upper?) Creston Formation, northwest of the Dibble Crown Grants.

This sample also contained anomalous barium, copper (6743 ppm) and phosphorous. Four samples returned anomalous gold values (10 ppb) with or without associated anomalous values in barium, copper (one at 9869 ppm) and phosphorous. Not surprisingly, samples taken from gabbros are most anomalous in phosphorous (1390 to 2320 ppm), cobalt, chromium and nickel.

Samples having anomalous gold, silver, barium, copper, lead and zinc are strongly recommended for follow-up geochemistry. Many of the rock samples taken (and analyzed) as part of the 1995 field program returned anomalous to strongly anomalous values from localities not previously known. These findings suggest that mineralization may be more widespread than previously believed. A soil grid was proposed for the cirque north of Maus Creek but no samples were obtained due to thick snow cover in early October. The author strongly recommends the soil program be undertaken as part of the 1996 field season. In addition, anomalous barium values arising from past (and future) geochemical programs should be plotted in an attempt to evaluate the possibility of hydrothermal alteration and the location of possibly mineralized veins associated with an epithermal system.

DISCUSSION AND INTERPRETATION

With the exception of the Aldridge Formation, the strata of the Purcell Supergroup in the Hughes Range "...record deposition in a shallow-water tidal flat or flood-plain environment" (Höy 1982). Extensional block faulting was interpreted to have controlled the initial deposits of the Purcell Supergroup.

> "A marine transgression is apparent in lower Aldridge rocks... Overlying laminated siltstone and argillite, correlative with the middle Aldridge of the Purcell Mountains represent continuing transgression. In the Kootenay King area, the lower division of the Aldridge Formation, Al, thins (northward)... In addition the character of the lower division rocks also charges northward. Thick sections of quartz-rich siltstone in the south give way to finer-grained and more dolomitic siltstone to the north and finally grade into black argillite. As well, thick, coarse-grained quartzites that contain fine to coarse, angular clasts near their base become thinner and finer-grained northward. The thinning and fining of sediments to the north, ...(and) a northerly current direction, suggested that the Kootenay King area formed in a fault-bounded basin with south-side-up in middle Aldridge time. The Boulder Creek fault... (was) postulated to be the locus of an earlier fault that defined the southern limit or hinge line of the basin. However, there (is) a thick succession of correlative turbidites south of the Kootenay King area and Boulder Creek fault zone in middle Aldridge time, indicating that there may have been a major structural basin here. The Kootenay King area, therefore, appears to be a local fault-bounded, sub-basin on the northern rim of a large structural basin... The Kootenay King, a stratiform lead-zinc deposit, is in the upper part of the thickest and coarsest of these quartzite sequences. Quartzite interlayered with conglomerate just north of the transverse Lewis Creek-Nicol Creek zone also thins, becomes finer-grained and dies out to the north suggesting that this zone also was tectonically active in Aldridge time and locally controlled sedimentation.
>
> The middle division of the Aldridge Formation consists of proximal turbidite deposits, transported in a northerly direction. The first evidence of a marine regression appears near the top of the Aldridge Formation and green siltstone and shale near the base of the overlying Creston Formation were deposited in a peritidal environment. Overlying purple siltstones that contain numerous mudcracks, rip-up clasts and ripple marks and tidal flat or flood-plain deposits ... "The carbonate rocks of the Kitchener-Siyeh, and the mudcracked siltstone and shale of the Gateway, Phillips and Roosville Formations, were also formed an extensive tidal flats or flood plains" (Höy 1982).

Renewed extensional activity with development of small sub-basins is documented by thickness variations in the Nicol Creek volcanics and, in particular, the overlying Sheppard and Gateway formations. The Nicol Creek Formation consists of lava flows, volcanic breccias and pyroclastic rocks having its thickest accumulations in the Hughes Range and oriented in a north-northwest -

south-southeast trend.

This region of southeast British Columbia is characterized by a re-entrant defined to the north and south by the St. Mary - Boulder Creek and Moyie - Dibble Creek fault systems, respectively. These faults were active episodically from the Middle Proterozoic to the Cretaceous - Paleocene, when they were reactivated as reverse faults, carried in the hangingwall of the Hosmer Thrust. Gravitational compensation and extensional faulting resulted in a number of brittle faults which have segmented the stratigraphic succession exposed in the DV property.

In general, the structural mapping undertaken on the DV property is in agreement with previous mapping by McMechan (1979). However, there are some interpretations arising as a result of structural mapping which differ. In addition, more detailed structural data (and therefore control) has resulted in significant changes in the interpretation of local features (relative to McMechan's (1979) regional scale map.

The DV property lies in the southern portion of a block of lower Purcell Supergroup strata which has been juxtaposed against the Kitchener Formation of the Purcell Supergroup and the basal Devonian unit by the Dibble Creek Fault (Fig. 6). The basal Devonian unit unconformably rests on the Kitchener Formation north of Hungary Peak.

The stratigraphic succession in the hanging wall of the Dibble Creek Fault is comprised of the upper middle Aldridge Formation to the lower Kitchener Formation, structurally complicated by one or more phases of faulting. This structural complication is, perhaps, most evident along Horseshoe Creek. In the lower portion of Horseshoe Creek, argillite and quartzite of the upper middle Aldridge is juxtaposed against the basal Devonian unit across the Dibble Creek Fault zone. In the mid-to upper north slopes, the stratigraphic succession of upper middle Aldridge to lower Creston Formations has been complicated by north-northeast and northwest trending brittle faults such that upper middle Aldridge strata is locally in contact with strata of the lower Creston Formation. Furthermore, the nature of the faulting ranges from brittle (with minor brecciation) to proto-mylonitic, probably documenting at least two phases of faulting.

Mapping of the DV property in 1995 together with data compiled from previous programs (Rodgers 1988, Ditson 1987, Olfert 1986), strongly suggests that the stratigraphy of the area has been extensively segmented by predominantly brittle (normal?) faults. There are at least two major faults which occur, the Dibble Creek Fault on Sunken Creek, and the Horseshoe Fault, structurally above the Dibble Creek Fault and passing northeast through the property.

A third structurally significant fault, the Maus Creek Fault, is present northwest of, and sub-parallel to, the Horseshoe Fault. This fault juxtaposes right-way-up upper Aldridge strata against an over-turned, northwest dipping, southeast facing lower to middle Creston succession. The fault was interpreted by McMechan (1979, 1980) as a southeast verging, overturned anticline. There is, in fact, an anticlinal closure north of the fault but fold axis and S0/S1 intersection lineation data indicate a discontinuity in the region of the saddle east-northeast of Maus Creek. Therefore, the anticlinal closure has been truncated against the Maus Creek Fault.

The surfaces traces of both the Horseshoe Creek and Dibble Creek faults have been represented by single lines, however fault zones are more appropriate. Detailed mapping by Ditson (1987) on a grid at the headwaters of Maus Creek, together with mapping associated with the 1995 field season (Fig. 6), document a number of faults of varying orientations, some of which are sub-parallel to the trace of the Horseshoe Creek Fault. The presence and orientation of these faults suggest the Horseshoe Creek Fault is actually a northeast trending zone of brittle faulting. In addition, there are a number of bedding parallel fault zones in the Creston Formation (ie. the Victor Vein) which have taken some of the displacement of the Horseshoe Creek Fault. There is an increased strain gradient associated with the fault however, which is most prominent where McMechan (1979) mapped the trace of the fault. Therefore, the Horseshoe Creek Fault is present at the headwaters of Maus Creek as interpreted by McMechan (1979) however there is a relatively wide, northeast-trending zone of brittle faulting associated with it.

Similarly, the Dibble Creek Fault was interpreted to underlie McMechan's (1980) Domain 3 with a splay as the upper bounding fault of the resulting horse. There is a very well defined fault contact between the basal Devonian unit in the footwall and the (middle(?)) Creston in the hanging wall of the Dibble Creek. However, strata in the hangingwall is highly disrupted, with several small faults identified having orientations sub-parallel to the Dibble Creek Fault. These faults are present in the ridge separating the headwaters of Sunken Creek from Cliff Lake to the north. In addition, it is postulated that many of the quartz veins described from the Dibble Group (Reverted Crown Grants) by Price (1987) are, in actual fact, fractures and/or faults sub-parallel to the Dibble Fault that have localized hydrothermal activity. Mineralization and alteration (silica flooding and precipitation of quartz veins) resulted from fluid movement along these planar conduits.

The Patmore Fault, on the eastern boundary of the property, separates McMechan's (1980) Domain 1 from Domain 2. McMechan (1979) interpreted two blocks of upper Creston and Kitchener through Cambrian Cranbrook/Eager strata separated by an unnamed northwest-southeast trending fault. The north-south-trending Patmore Fault separates these blocks from strata of the upper Creston Formation of Domain 1.

There are three southeast striking, shallowly to moderately southwest dipping faults present on the western boundary of Domain 2, the Saddle Fault, the Middle Fault and the Klippe Fault (Fig. 6). In contrast, McMechan (1979) proposed two faults and interpreted them to be moderately to steeply north dipping faults which strike essentially west. The data used to establish the surface trace of these faults (by structure contouring) was obtained in the saddle east of the headwaters of Cliff Lake. There is a generally east-west trending fault in that saddle (the Saddle Fault), however, the data collected is consistent with a local orientation of 140°/32°. This same orientation was used to structure contour the surface trace of the two faults located in the saddles to the north, the Middle Fault and the Klippe Fault. Although there is little direct evidence to support the interpreted placement of these faults from structural mapping, there is supporting evidence from the following observations:

a) Structure contouring the faults to the southeast places them in corresponding saddles to the east (ie. recessively weathering areas),

b) The locus of the Middle Fault follows a gully from the valley floor upward into a saddle (a gully can be expected to form in weaker or more recessive ((ie faulted) rock), and

c) The surface traces of the faults (established from structure contouring) are spatially associated with gullies highly oblique to the strike of the Creston Formation (therefore the gullies are not stratigraphically controlled).

Therefore, the north striking, steeply east dipping (357°/78°) Patmore Fault has been segmented by three southeast striking, southwest dipping (136°/49°) faults which likely initiated to accommodate displacement between the Horseshoe Creek Fault and the Dibble Creek Fault.

Similarly, using observations made in the field and trends evident on the topographic base map, it is proposed that the Horseshoe Creek Fault passes northeasterly through the valley northeast of Maus Creek. As proposed, the Horseshoe Creek Fault truncates the three southeast striking faults (as evidenced by a change in the trend of the gullies. An average orientation of 225°/60° was used to structure contour the Horseshoe Fault. This orientation was chosen as it approximates the orientation of several smaller faults measured within the Horseshoe Creek Fault zone and is consistent with the overall trend of the fault zone. Using this orientation places the fault well within the proposed fault zone, southward to where it merges into the Dibble Creek Fault. To the north, the interpreted trace of the fault differs from that of McMechan (1979) in that it is not truncated by a northwest striking fault, but rather continues north through a saddle on the northern flank of Mt. Patmore and truncates the Saddle, Middle and Klippe faults (Fig. 6).

The stratigraphic relationships of the DV property have been extensively modified by faulting, the most significant of which were discussed above. The DV property is comprised predominantly of Creston Formation and subordinate Aldridge Formation and Kitchener Formation strata.

The strata of Sunken Creek consists of a stratigraphic sequence ranging from argillites and quartzites of the upper middle Aldridge, through argillites of the upper Aldridge and into siltites and minor quartzites of the lower Creston Formation. This sequence, carried in the hanging wall of the Horseshoe Creek Fault has been subsequently modified by faulting, such that strata of the upper Aldridge Formation has been juxtaposed against that of the lower Creston Formation by the northwest trending Pic Fault.

In the northwest corner of the property is a succession of right-way-up, northwest striking, northeast dipping upper middle Aldridge argillites (Pa_2), structurally overlain by argillites and quartzites (Pa_2q). These strata have been juxtaposed by the Maus Creek Fault against upper middle Aldridge argillites and quartzites (Pa_2q) south of the Pic Fault. North of the Pic Fault and east of the Maus Creek Fault is an overturned, southwest striking steeply northwest dipping, east facing panel, comprised of a stratigraphic succession from the upper Aldridge Formation through to the middle Creston Formation on the ridge northwest of Maus Creek and Upper Creston Formation on the ridge southwest of Maus Creek. Dolomitic quartzites of the Upper Creston Formation are exposed on the eastern flank of the ridge peak hosting the Victor vein. This stratigraphic package has been faulted against Lower Creston strata to the east. Eastward, the remainder of the ridge consists of quartzites and siltites of the middle Creston Formation.

On the eastern margin of the property, middle (to upper) Creston strata are in fault contact with Kitchener strata across the Patmore and Saddle faults. Strata of the upper Aldridge Formation and lower Creston Formation comprise horses between the Bounding Fault, the Mid-slope Fault and the Dibble Creek Fault. Although mapped by McMechan (1979) as an intact west striking, north dipping stratigraphic succession between the Dibble Creek Fault and a splay (resulting in a horse), it is probably more complicated than represented in the map arising from this study. As stated previously, there are a number of small faults having orientations sub-parallel to the Dibble Creek Fault. In addition, there are many west-trending quartz veins (described by Price 1987) which probably represent quartz veins precipitated along small faults and fractures associated with the Dibble Creek Fault.

Finally, there is an anomalous succession of meta-gabbro which comprises up to 30% of the stratigraphic succession in the ridge peak west of the headwaters of Cliff Lake and northeast of the Dibble Crown Grants. These gabbros intrude the (middle) Creston Formation and are interpreted to be post Moyie Intrusive sills. They are probably intrusive equivalents of the Nicol Creek Formation, having alkaline to subalkaline basaltic compositions and locally in excess of 400 metres thick (Höy 1993).

This entire stratigraphic package is carried in the hanging wall of the Dibble Creek Fault. The surface trace of the Dibble Creek Fault is essentially eastward, following Horseshoe Creek east through a well defined saddle into Sunken Creek. The fault is well exposed in the saddle at the headwaters of Sunken Creek, where it passes eastward into the Dibble Creek drainage. The Dibble Creek Fault follows a flat localized within the basal Devonian unit, resting unconformably on the Kitchener Formation and exposed in the southern portions of the property.

Mineralization

Mineralization in the Dibble Group has been related to two types of veins (Rodgers 1988, Price 1989), namely:

1) Narrow quartz stringers from 1 to 8 cm thick with "...grey sulphides and sulphosalt associated with copper carbonate; malachite and azurite, and containing high gold and silver values, ... (and)

2) Wider quartz-pyrite veins (30-200 cm), breccias and replacements, often in quartzite units, and associated with low to moderate gold and silver grades. This type of vein is characterized by brecciation and silicification following quartzite beds" (Price 1989).

Rodgers (1988) proposed that many of the veins are strike equivalents and may comprise a single system extending approximately 600 metres in length, passing through No. 1 and No. 2 adits.

Strike continuity of these veins should not be expected as they likely represent faults oriented sub-parallel to bedding and pass from one bedding plane to another in an en echelon style. Furthermore, as previously discussed, it is possible that there are a number of fault bounded horses present between the upper Bounding Fault and the main Dibble Creek Fault. Variation in the mineralogy of the veins and the degree to which associated alteration zones are developed probably reflects the amount of fluid movement associated with the veins. Narrower quartz veins (Type I) with tetrahedrite-acanthite mineralization associated with high gold-silver grades have narrow alteration - zones from 10 to 30 cm thick. The wider quartz-pyrite brecciated quartzites (Type II) having better continuity and low precious metal content are associated with more intense alteration over 30 to 150 cm thick. Therefore, thicker (Type II) veins may represent either:

a) brecciated quartzite beds subsequently annealed by secondary quartz or

b) earlier dilatant veins which have localized significant fluid movement, flushing out early sulphide mineralization and resulting in thicker quartz veins with wider alteration zones.

The Type I veins may be either:

a) dilatant fractures that opened and were the locus of subsequent precipitation of silica (quartz) and associated mineralization; or

b) fractures that opened during the late stages of deformation under conditions more favourable for mineralization (ie pressure, temperature, oxidation-reduction potential, etc.) and/or were subject to less fluid movement / alteration.

In his report, Price (1989) states (with reference to the vein sampled at E40/T40, E56/T56, E33/T33):

> "If one were to assume that the vein is continuous over the 600 meters, the average width is 1.25 metres, and the depth is 300 metres, with the average grade 0.060 oz/ton, then approximately 650,000 tons would contain approximately 40,000 ounces of gold.
>
> Clearly, this is still an uneconomic target, but the geology and trenching results demonstrate a mineralized system over 2000 feet in strike length, 400 feet or more in width, and containing a variety of moderate to high grade copper, silver, and gold occurrences. There is sufficient room for an economic deposit; there is a strong possibility of stratigraphically controlled mineralization in the silicified quartzite units, and exploration in the future should work towards defining areas of good width and grade as "shoots" along the structure....".

As stated previously, the interpretation presented in this report is that the veins (both Type I and Type II) have orientations sub-parallel to the Dibble Creek Fault. Therefore, mineralization extends over 2000 feet along strike in a zone extending over 400 feet structurally (which has probably been stratigraphically dismembered). However, if the veins are oriented sub-parallel to the Dibble Creek Fault, then the mineralized system is currently open at depth.

The Victor vein has been previously interpreted as a quartz vein precipitated along a fault (Rodgers 1988, Price 1989). The vein is oriented at approximately 195°/85°, hosted by siltites of the overturned lower Creston Formation, and is exposed over 300 metres, both vertically and along strike. The vein varies in width from several centimetres to over 1 metre and contains sphalerite, galena, chalcopyrite and pyrite with gold and silver values. Although having a markedly different orientation to veins in the Dibble Group, the Victor vein is similar in that it is a mineralized vein precipitated along a fault sub-parallel to bedding.

The Box showing is located in a structural block comprised of strata correlated to the Aldridge and Creston Formations, lying between the Maus Creek Fault and the Horseshoe Creek Fault. The block has been further complicated by brittle faulting. Minor disseminated, fine-grained galena associated with quartz veins and altered quartzites, mineralization associated with the Pic vein and gossanous clay alteration (fault gouge) suggests proximity to faults and hydrothermal activity.

The three main showings (Dibble, Victor and Box) also differ in the mineralization and grade identified to date. The following table demonstrates the variability in mineralization and grade from the showings (Minfile):

		Ag(g/t)	Au(g/t)	Cu(%)	Pb(%)	Zn(%)
Dibble	-	3822.2	126.8	4.1	0.01	0.15
Victor	-	198.8	7.0	0.39	12.9	7.69
Box	-	3.4	1.52	----	0.27	0.17

As a first approximation, it is evident that Dibble Group has significant silver, gold and copper values with minor zinc and trace lead. In contrast, the Box showing has significantly lower silver and gold values, no copper and slightly higher lead and zinc. (Note: 0.24% copper was returned from a sample of the Pic Vein (Olfert 1984). As a preliminary working model, it is proposed that the mineralization is secondary, having been remobilized from adjacent host strata. Deposits sourced from or within the Creston Formation have elevated or anomalous silver, gold and copper values with negligible to minor lead and/or zinc. Deposits remobilized from the Aldridge Formation have lower silver, gold and copper values with higher lead and/or zinc.

The Box claims host elevated silver, gold and minor copper values in addition to larger anomalous zones of lead due to the proximity of Creston Formation strata across faults (ie. Pic Fault). The Victor vein is interpreted as a hybrid deposit, hosting anomalous values of silver, gold, copper, lead and zinc in a vein hosted by the Lower Creston Formation. However, the Horseshoe Creek Fault was interpreted as a reverse fault by McMechan (1980), therefore the lower Creston Formation at surface may overlie Aldridge Formation lithologies at depth, below the Horseshoe Creek Fault.

Model for Mineralization

Faults and fractures are interpreted to have acted as planar conduits for fluid movement associated with hydrothermal activity. The timing of this hydrothermal activity is open to interpretation. Petrographic studies of samples from the Box area suggest a metamorphic origin for quartz veins identified there whereas field relationships are interpreted to indicate an epithermal origin (possibly associated with a "granitic" intrusion at depth). However, age dating on the granitic stocks in the area suggest an age of emplacement between 122 and 90 Ma (Kiakho and Reade Lake stocks, respectively). The Reade Lake stock has been interpreted as a postkinematic intrusion (Hõy 1993), therefore **local** deformation associated with the Laramide orogeny (Cretaceous to Paleocene in age) may have ceased by the Late Cretaceous. Quartz veins precipitated at this time during and subsequent to the metamorphic peak (locally modified by the "granitic" intrusions) were subsequently deformed during Tertiary extension. Therefore, interpretation of a metamorphic origin versus an epithermal origin may simply be a semantic issue (ie. Regional metamorphism versus thermal metamorphism associated with intrusive stocks).

Mineralization is interpreted to have resulted from hydrothermal mobilization and subsequent precipitation, most likely due to a large scale convection cell. Furthermore, hydrothermal activity associated with the proposed convection cell is interpreted to have occurred during, or immediately following, the latest stage of deformation in the Cretaceous to Paleocene Laramide orogeny. Although there may have been fluid movement associated with Tertiary extension and associated faulting, it is not interpreted to have had any significant effect on mineral precipitation. As described in Regional Geology, there are a number of syenitic and quartz monzonitic (generally referred to as granitic) intrusive bodies documented in the area (ie. Reade Lake Stock, Wild Horse stock, Estella stock). Therefore, intrusion of these post-kinematic granitic intrusions almost certainly drove local convection cells, perhaps resulting in enriched mineral occurrences proximal to the stocks (ie. Estella stock). As discussed in "Local Geology", there is a northwest-trending, segmented linear magnetic anomaly which is oblique to both stratigraphy and structural features identified at surface. It is proposed that this magnetic high may be a "granitic" dyke, coeval with the Wild Horse and Reade Lake stocks, which initiated a post-kinematic convection cell. Hot fluids rising from the dyke leached base and/or precious metals (depending on the host lithology) and precipitated them at higher levels upon cooling.

It should be noted that two petrographic studies on the Box showings (Harris 1990, KRTA Limited 1986) found no evidence to support an epithermal source for mineralization, interpreting instead a metamorphic origin for the quartz veins. However, the Box area is atypical of the DV property, as quartz veins (and associated mineralization) are not developed to the same degree as elsewhere on the property. This is interpreted to reflect the incompetence of the predominantly argillitic lithology of the Aldridge Formation relative to the Creston Formation. Therefore, deformation in the Aldridge Formation was accommodated by intrafolial slip and folding whereas in the competent Creston Formation, deformation produced bedding parallel faults and fractures which were subsequently infilled by quartz veins. As a result, mineralization in the Box area is in the form of disseminations expressed as wide geochemical anomalies in the Aldridge Formation and mineralized veins and pods or lenses in the Creston Formation (with the development of subsequent dispersion haloes due to weathering).

The association of anomalous Barium values with mineralization and/or quartz veining is considered significant by the author. Anomalous Barium values arising in past (or future) geochemical sampling should be followed up by prospecting to identify additional possible mineral occurrences. In addition, if drilling is undertaken in future programs, anomalous Barium values (with or without associated base and/or precious metal values) may indicate proximity to a hydrothermal system. In the author's opinion, virtually all quartz (± carbonate) veins (including mineralized occurrences) are associated with faults. As all faults in areas characterized by thin-skinned tectonics (such as the Rocky Mountains) merge at depth into (a) basal décollements(s), there is a distinct possibility of (an) economic deposits(s) at depth where the fault controlled hydrothermal systems must also merge.

CONCLUSIONS

There is evidence that the DV property may be located in a sub-basin on the margin of the Proterozoic Purcell Basin. The sub-basin coincides with a reentrant that was controlled by two major tranverse faults episodically active from the Proterozoic (during deposition of the Aldridge Formation) to the Mesozoic (deformation associated with the Laramide orogeny). The St. Mary - Boulder Creek Fault is present to the north and the Moyie - Dibble Creek Fault comprises the southern margin of the DV property. The Dibble Creek Fault is coincident with a Proterozoic monocline, the Dibble Creek monocline, on the northern flank of a basement high-standing area referred to as Montania. Sediments that thicken and coarsen to the south, coupled with northward directed paleo-currents suggests that the DV property may have been located in a sub-basin controlled by growth faults.

There are three past producers in the immediate vicinity of the DV property, the Estella, Kootenay King and Bull River mines. The Kootenay King mine was a stratabound orebody located in a quartzite, the Kootenay King Quartzite, in a separate sub-basin. Of particular significance is the fact that the source vent for the deposit was not located and was interpreted as either eroded or distal from the resulting orebody. The Estella mine was a lead-zinc vein, located proximal to both a composite monzonite - syenite stock and two Moyie sills, one exposed in outcrop immediately west and the other in the sub-surface mine workings. The Bull River mine consists of a series of seven separate sheared and fractured zones within the host lower Aldridge argillites. With the exception of the host strata, mineralization identified to date on the Dibble Group appears to be broadly similar to that described in the Bull River mine. Quartz veins (with siderite) in sheared and fractured rock proximal to a major fault (Bull Canyon Fault) host disseminated or massive pods of chalcopyrite, pyrite and pyrrhotite. In the Dibble Creek area, sheared and fractured Creston strata proximal to a major fault (the Dibble Creek Fault) host disseminated or massive pods of chalcopyrite and pyrite.

The Victor vein is a vein infill of a rather minor fault which is sub-parallel to bedding. It hosts predominantly lead-zinc mineralization with significant values in gold and silver and minor copper. It has been, and is interpreted, as vein style mineralization. The source for the mineralization is presently unknown, but is interpreted to have a composite source, locally from the Creston Formation (silver and copper, probably gold) and the Aldridge Formation (lead and zinc). The Box showing has previously been interpreted as a lead-zinc vein showing (Hōy 1993, Minfile) but the author believes it may have stratiform potential. There are a number of quartzite beds which comprise a significant proportion of the local stratigraphy (upper middle Aldridge), there is a relatively wide lead anomaly, the area is interpreted to be in a sub-basin of the Purcell Basin characterized by deep water clastics and is south of the Kootenay King stratiform deposit. The Kootenay King Quartzite hosted the mine and is the highest of a number of quartzites in the lower middle Aldridge Formation. Harris (1990) proposed that the suite of samples obtained from the Box showing may represent a tuffaceous or exhalative environment.

> "They (the petrographic suite examined) are comprised of unusually albite-rich meta-sediments (feldspathic argillitic siltstones and arkosic quartzites); albitites (of

unknown, but possibly keratophyric meta-igneous or meta-tuffaceous origin); chlorite-quartz rocks, possibly representing ferro-magnesian cherts; and a cryptofragmental amphibole-chlorite rock which could be a mafic meta-tuff. Several of the albitic samples contain traces of barite, associated with metamorphically remobilized (?) hairline veinlets of quartz and albite. One (Sample 9 from DDH-3) contains siderite and sphalerite, and most contain disseminated pyrite or derived limonite.

This mineralogy suggests a distinctive depositional environment which may have included a tuffaceous or exhalative component. The albitites are texturally distinct from the feldspathic quartzites, and no evidence was found to indicate that they have developed from "alteration" of the latter ..." (Harris 1990).

Finally, there is an enigmatic magnetic linear evident on regional airborne geophysics for the area. The linear trends northwest-southeast and is oblique to both the stratigraphy and structure present and mapped at the surface. In detail, the linear appears to be segmented into three north-northeast trending segments. However, the resulting segments are still oblique to surface stratigraphy. It is proposed that they may represent a single dyke of alkalic composition (monzonite to syenite), coeval with, and related to, the Wild Horse and/or Reade Lake stocks. The dyke may have been segmented by the Horseshoe Creek and the Patmore faults at depth, resulting in its current geophysical expression. A more detailed geophysical program should be undertaken to evaluate this anomaly.

RECOMMENDATIONS

1) Plot Barium values on a property map as a possible pathfinder for hydrothermal alteration associated with fractures, faults and/or as yet unknown quartz veins hosting mineralization,

2) Re-contour VLF data for the Victor geophysical grid (and possibly the Box grid),

3) Undertake a geographical positioning survey of the property to survey in adit, trench, shaft and mineral occurrences together with geographical features for future reference (i.e. trails, helipads, etc.),

4) Order complete black and white and/or colour airphoto coverage for the property to facilitate mapping and assist in future program decisions,

5) Undertake some form of property scale geophysics (i.e. either an airborne geophysical program or a ground survey) to assess the entire property with respect to anomalies arising from possible orebodies and with regard to adjacent ground,

6) Collect soil samples over the entire property to thoroughly evaluate the economic potential of the Creston (Cu, Ag, Au) and Aldridge (Pb, Zn) formations and Barium as a pathfinder for hydrothermal activity / mineralization,

7) Evaluate the economic potential of the gypsum horizon in the basal Devonian unit,

8) Undertake soil and rock sampling of Domain 3 to completely assess mineralization of the Aldridge and Creston block bounded by the Dibble Creek Fault and its splay,

9) Undertake geophysical evaluation of the Dibble Group Reverted Crown Grants, particularly the area in Domain 3 and the slopes to the north where there may be down-dip mineralization associated with hydrothermal activity along the fault plane(s), and

10) Undertake a ground magnetometer study of the magnetic high to better define its location, obtain better resolution of the anomaly and attempt to identify its possible origin,

11) Compile all geological, geochemical and geophysical data to develop and test drill targets.

    Targets developed to date and considered worthy of drilling are:

    a) the Victor vein system, test mineralization with depth;
    b) the VLF anomaly underlying the Box claim (90 metres depth);
    c) the Horseshoe Creek and/or Dibble Creek fault systems to evaluate their down-dip extension(s) for mineralization;
    d) the segmented geophysical anomalies identified on the airborne geophysical dataset (after ground magnetic survey to better define the anomaly).

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Appendix A

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Richard T. Walker, of 1916 - 5th Street South, Cranbrook, B.C., hereby certify that:

1) I am a graduate of the University of Calgary of Calgary, Alberta, having obtained a Bachelors of Science in 1986;

2) I obtained a Masters of Geology at the University of Calgary of Calgary, Alberta in 1989;

3) I am a member in good standing with the Association of Professional Engineers and Geoscientists of the Province of British Columbia;

4) I am a member in good standing with the Association of Professional Engineers, Geologists and Geophysicists of Alberta;

5) I am a Fellow of the Geological Association of Canada;

6) I am a consulting geologist and Principle of Dynamic Exploration Ltd. with offices at 1916 - 5th Street South, Cranbrook, British Columbia;

7) I am the author of this report which is based on field work conducted on the property from July 27 to August 21, 1995;

8) I have no interest, direct or indirect, in Big B Resources; in any of their projects or properties nor do I expect to receive any such interest.

9) I hereby grant my permission to Big B Resources to use this report, or any portion of it, for any legal purposes normal to the business of the firm, provided the excerpts used do not materially deviate from the intent of this report as set out in the whole.

Dated at Cranbrook, British Columbia this 30th day of November, 1995.

PROFESSIONAL PROVINCE OF R. T. WALKER BRITISH COLUMBIA GEOSCIENTIST

Richard T. Walker, P.Geo, P.Geol., F.G.A.C.

Appendix B

Geochemical Analyses

Sample Number	Description
RW95 - 1a	Quartz pod immediately adjacent to chloritized gabbro at 2410 metres (7920 feet) just below (south) of ridge crest, northeast of Dibble Crown Grants. Pod approximately 1.5 to 2 metres in areal extent. Relationship to gabbro and structure uncertain as the exposure comprised largely of rubble. Chalcopyrite and malachite associated with lower contact of gabbro. Grab sample taken of vein material.
RW95 - 1b	As above, sample of host gabbro.
RW95 - 2	Massive white weathering quartzite from outcrop at 2300 metres (7560 feet), north of Dibble Creek Fault. Attempt to duplicate high silver values reported from this locality.
RW95 - 3	Massive white weathering quartzite from outcrop at 2300 metres (7550 feet), north of Dibble Creek Fault. Attempt to duplicate high silver values reported from this locality.
RW95 - 4	Massive green weathering quartzite from outcrop at 2300 metres (7540 feet), north of Dibble Creek Fault. Attempt to duplicate high silver values reported from this locality.
RW95 - 5	White weathering quartzite with weathered sulphides (probably originally pyrite - now hematite / limonite) at 2080 metres (6820 feet). Sample from east edge of eastern slide chute, east of cabin and Dibble Crown Grants.
RW95 - 6	Sample of quartz vein float with malachite and chalcopyrite at 2080 metres (6820 feet). Sample from east edge of eastern slide chute, east of cabin and Dibble Crown Grants.
RW95 - 7	Sample of rusty weathering fault breccia, minor quartz stockwork on west margin of fault zone. Located on ridge west (above) of Victor vein at 2250 metres (7480 feet). Sample consists of quartz vein ($\leq$ 20 cm thick) comprised of iron-stained quartz with weathered sulphides.
RW95 - 8	Gabbroic outcrop adjacent to southeast trending fault zone above and slightly southwest of Victor vein. Occurrence on east face of unnamed peak at 2310 metres (7580 feet). Sheared, iron-stained gabbro from fault zone.
RW95 - 9	Blast pit (?) on ridge south of unnamed peak hosting Victor vein. Malachite staining on light green, sericitic siltites of (upper) Creston Formation at 2350 metres (7690 feet). Malachite bearing sericitic siltite.

RW95 - 10 Sample taken from BOX Crown Grant at 1783 metres (5850 feet) near helipad and east of the trench. Grab sample taken from altered upper middle Aldridge strata.

RW95 - 11 Upper Pond Vein - vein at outlet of pond, averages 15 to 20 cm thick, bull quartz with rusty spots, carbonate (siderite) subordinate. Some rusty sections and rusty (oxidized) recessive weathering alteration envelope extends for 60 to 100 cm on either side of vein. Grab sample from 15-20 cm thick portion of vein.

RW95 - 12 Bowl vein at 2377 metres (7800 feet)at headwaters of Maus Creek. Approximately 1.5 metres wide zone of bleached argillite to fine quartzite with central quartz and lesser rusty carbonate with malachite stain and some rusty sections. Thinner, discontinuous veins on margin of bleached zone as well. Main vein 10 - 35 cm thick has slivers of wall rock, seems to pinch out uphill. Chip sample across 20 cm of vein and adjacent footwall.

RW95 - 13 Sample of the Creston Formation exposed in area of high aeromagnetic closure in alpine cirque northeast of Maus Creek. Purple weathering siltites along eastern margin of north-northwest trending gully. Minor argillite laminae. (G.P.S. location: Easting 613760, Northing 5496405).

RW95 - 14 Sample from western margin of gully (Sample RW95 - 13). Dolomite cemented arenite. Buff to medium grey weathering, approx. 1 metre thick.

RW95 - 15 Sample from west side of gully immediately above sample RW95 - 14. Thin bedded, chlorite green quartzite layer within purple weathering argillite.

RW95 - 16 Sample of gabbro taken from same location as RW95 14 and 15.

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CERTIFICATE OF ASSAY AK 95-725

DYNAMIC EXPLORATION LTD.
1916-5th STREET SOUTH
CRANBROOK, B.C.
V1C 1K4

6-Sep-95

ATTENTION: RICK WALKER

13 rock samples received Aug 28, 1995
PROJECT #:None given
SHIPMENT #:None given
Samples submitted by: Rick Walker

ET #.	Tag #	Cu (%)
13	RW 95-12	0.91

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31-Oct-95

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Fax : 604-573-4557

DYNAMIC EXPLORATION LTD. AK 95-1010
1916-5th STREET SOUTH
CRANBROOK, B.C.
V1C 1K4

ATTENTION: RICK WALKER

4 Rock samples received October 24, 1995
PROJECT #: DIBBLE
Samples submitted by: Rick Walker

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	RW95-13	5	<.2	0.43	5	365	<5	0.18	<1	3	94	14	1.31	20	0.31	252	3	<.01	11	430	4	<5	<20	5	<.01	<10	4	<20	<1	29
2	RW95-14	5	<.2	0.04	<5	1335	<5	6.48	<1	<1	187	2	0.81	<10	3.28	3035	5	<.01	3	50	2	30	<20	78	<.01	<10	48	<20	2	17
3	RW95-15	5	<.2	0.91	<5	140	<5	1.22	<1	8	78	<1	2.00	20	1.42	683	3	<.01	16	540	4	15	<20	10	<.01	<10	5	<20	<1	48
4	RW95-16	5	<.2	4.10	<5	210	25	3.55	<1	49	36	16	10.20	20	3.32	1410	6	0.02	25	2320	<2	<5	<20	57	0.10	<10	145	<20	6	124

QC/DATA:

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
Resplit:																														
R/S 1	RW95-13	5	<.2	0.45	<5	355	<5	0.17	<1	4	84	14	1.36	20	0.32	273	2	<.01	11	440	4	<5	<20	7	<.01	<10	4	<20	<1	30
Repeat:																														
1	RW95-13	-	<.2	0.43	5	370	<5	0.18	<1	3	94	14	1.30	20	0.31	253	3	<.01	11	420	4	<5	<20	6	<.01	<10	4	<20	<1	29
Standard:																														
GEO'95		145	1.4	1.77	70	175	<5	1.82	<1	19	62	83	3.92	<10	1.02	726	<1	0.02	27	680	20	5	<20	60	0.11	<10	78	<20	5	77

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DYNAMIC EXPLORATION LTD. AK 95-725
1916-5th STREET SOUTH
CRANBROOK, B.C.
V1C 1K4

ATTENTION: RICK WALKER

13 Rock samples received August 28, 1995
PROJECT #: None given
SHIPMENT #: None given
Samples submitted by: Rick Walker

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	RW 95-1A	5	2.0	0.19	5	110	<5	8.70	<1	2	247	8489	1.47	<10	0.22	653	7	<.01	6	<10	202	<5	<20	73	<.01	<10	5	<10	24	66
2	RW 95-1B	10	2.6	4.16	5	355	<5	1.47	1	29	46	9869	9.48	<10	4.04	974	7	0.02	59	1440	178	<5	<20	37	0.04	<10	98	<10	<1	159
3	RW 95-2	5	<.2	0.16	<5	15	<5	0.05	<1	3	152	99	0.61	<10	0.15	49	5	<.01	6	220	6	<5	<20	2	<.01	<10	2	<10	<1	5
4	RW 95-3	5	<.2	0.13	<5	10	<5	0.10	<1	7	162	45	0.52	<10	0.15	151	4	<.01	4	130	2	<5	<20	<1	<.01	<10	1	<10	<1	5
5	RW 95-4	5	<.2	0.46	<5	35	<5	2.57	<1	2	137	10	1.24	<10	1.75	1498	4	<.01	6	150	2	20	<20	14	<.01	<10	5	<10	<1	7
6	RW 95-5	10	<.2	0.03	<5	130	<5	0.50	<1	2	158	10	0.71	<10	0.17	751	4	<.01	4	360	<2	<5	<20	<1	<.01	<10	1	<10	<1	4
7	RW 95-6	10	<.2	0.29	<5	10	<5	11.90	<1	6	99	560	0.92	<10	0.33	646	3	<.01	5	40	2	5	<20	155	<.01	<10	8	<10	2	12
8	RW 95-7	5	<.2	0.08	<5	30	<5	0.07	<1	5	170	15	1.76	<10	<.01	258	5	<.01	10	180	216	<5	<20	<1	<.01	<10	1	<10	<1	170
9	RW 95-8	5	<.2	3.10	<5	1015	<5	8.51	1	59	493	87	9.62	<10	4.18	1162	5	<.01	456	1390	<2	<5	<20	34	<.01	<10	223	<10	4	78
10	RW 95-9	40	7.6	0.24	<5	385	<5	0.32	<1	1	96	6743	0.51	<10	0.12	712	2	<.01	8	620	4	<5	<20	5	<.01	<10	3	<10	4	8
11	RW 95-10	5	0.4	0.16	20	110	<5	0.05	<1	10	64	60	2.23	<10	0.02	62	4	0.02	16	210	132	<5	<20	14	<.01	<10	4	<10	<1	224
12	RW 95-11	10	<.2	0.09	<5	85	<5	0.04	<1	2	148	28	0.90	<10	0.02	126	4	<.01	4	240	<2	<5	<20	<1	<.01	<10	<1	<10	<1	12
13	RW 95-12	195	21.6	0.32	<5	300	<5	0.84	<1	4	140	>10000	0.82	<10	0.49	873	4	<.01	10	760	<2	10	<20	25	<.01	<10	3	<10	1	23
QC/DATA:																														
Resplit:																														
R/S 1	RW 95-1A	10	2.2	0.15	<5	115	<5	8.70	<1	2	225	8390	1.55	<10	0.20	659	8	<.01	5	<10	192	<5	<20	74	<.01	<10	4	<10	23	58
Repeat:																														
1	RW 95-1A	10	2.2	0.21	<5	120	<5	8.95	<1	3	254	8409	1.54	<10	0.24	682	7	<.01	7	<10	196	<5	<20	74	<.01	<10	6	<10	25	56
10	RW 95-9	-	7.8	0.24	<5	390	<5	0.32	<1	<1	97	6730	0.51	<10	0.12	714	2	<.01	8	830	4	<5	<20	5	<.01	<10	3	<10	4	8
Standard:																														
GEO'95		140	1.2	1.62	65	160	<5	1.65	<1	17	54	86	3.79	<10	0.91	665	<1	0.01	27	690	18	10	<20	49	0.07	<10	69	<10	4	74

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Appendix C

Program Related Documents

MINFILE NUMBER: 082GNW003 NATIONAL MINERAL INVENTORY:

NAME(S): DIBBLE, LEO

STATUS: Past Producer Underground MINING DIVISION: Fort Steele
NTS MAP: 082G11W UTM ZONE: 11
LATITUDE: 49 35 50 NORTHING: 5494803
LONGITUDE: 115 26 15 EASTING: 612913
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 500M

COMMODITIES: Silver Copper Gold

MINERALS
SIGNIFICANT: Tetrahedrite Chalcopyrite
ASSOCIATED: Quartz Pyrite Arsenopyrite
ALTERATION: Azurite Malachite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOST ROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Creston	

LITHOLOGY: Argillite
Quartzite
Argillaceous Quartzite

GEOLOGICAL SETTING
TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North American
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

RESERVES

ORE ZONE: DIBBLE

CATEGORY: Assay YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE
Silver	3822.2000 Grams per tonne
Gold	126.8000 Grams per tonne
Copper	4.1000 Per cent

COMMENTS: Highest assays.
REFERENCE: Assessment Report 18309

CAPSULE GEOLOGY

The Dibble occurrence area is underlain by Helikian Lower Creston Formation (Purcell Supergroup) argillite, quartzite and argillaceous quartzite. The area of mineralization lies between two splays of the east trending Dibble Creek fault.

Two types of mineralized veins are present: 1) narrow quartz stringers (1-8 centimetres) with tetrahedrite, arsenopyrite, malachite, azurite and very minor chalcopyrite; and 2) wider quartz-pyrite veins (30-200 centimetres), breccias and replacements often in quartzite units. Alteration of wallrock from veins of the first type is slight (10-30 centimetres) whereas alteration of wallrock from the second type is more intense (30-150 centimetres). It is from veins of the first type that past production occurred. These veins strike approximately east and dip steeply north. Highest assays from these narrow veins were 4.1 per cent copper, 3822.2 grams per tonne silver, 0.01 per cent lead, 0.15 per cent zinc and 126.8 grams per tonne gold (Assessment Report 18309).

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1899-593; 1900-798; 1902-130; 1933-202; 1934-A25; 1935-E33
EMPR ASS RPT 8864, 15052, 15868, 15733, *18309
EMPR MAP 34
EMPR OF 1988-14
GSC MAP 11-1960
GSC P 58-10

DATE CODED: 850724 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 860611 REVISED BY: BG FIELD CHECK: N

MINFILE NUMBER: 082GNW004 NATIONAL MINERAL INVENTORY:

NAME(S): VICTOR

STATUS: Past Producer Underground MINING DIVISION: Fort Steele
NTS MAP: 082G11W UTM ZONE: 11
LATITUDE: 49 36 32 NORTHING: 5496063
LONGITUDE: 115 27 43 EASTING: 611121
ELEVATION: 1980 Metres
LOCATION ACCURACY: Within 500M

COMMODITIES: Lead Silver Zinc Gold Copper

MINERALS
SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: Metres STRIKE/DIP: 020/70E TREND/PLUNGE:
COMMENTS: Vein dips vary from 70 degrees east to vertical.

HOST ROCK
DOMINANT HOST ROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Creston	

LITHOLOGY: Argillite
Quartzite
Argillaceous Quartzite

GEOLOGICAL SETTING
TECTONIC BELT: Foreland PHYSIOGRAPHIC AREA: Continental Ranges
TERRANE: Ancestral North American
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

RESERVES

ORE ZONE: VICTOR

CATEGORY: Assay YEAR: 1988
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	198.8000	Grams per tonne
Gold	7.0000	Grams per tonne
Copper	0.3900	Per cent
Lead	12.9000	Per cent
Zinc	7.6900	Per cent

COMMENTS: Highest assays from underground samples.
REFERENCE: Assessment Report 18309

CAPSULE GEOLOGY

The Victor occurrence area is underlain by quartzites and argillaceous quartzites of the Helikian Lower Creston Formation (Purcell Supergroup) which strike north-northwest and dip 70-75 degrees west. Two distinct rock types are present; a green-grey argillaceous quartzite with minor interbedded apple green quartzite, and a silver grey-black graphitic argillite/phyllite with local silty units.

The Victor vein strikes 020 degrees and dips from 70 degrees east to vertical. It can be traced on surface for over 600 metres. The vein has a hydrothermal alteration envelope of 10-30 metres, polyphase quartz along its strike length with occasional siliceous

CAPSULE GEOLOGY

zones swelling up to 4 metres, and sporadic mineralization. Mineralization consists of galena, sphalerite and pyrite with values in silver and gold. The sulphides are in small, lenticular shoots and thin streaks along the footwall with occasional disseminations in the quartz gangue.

Three tunnels have explored the Victor vein system. Recent underground chip samples assayed a high of 12.9 per cent lead, 7.69 per cent zinc, 198.8 grams per tonne silver, 7.0 grams per tonne gold and 0.39 per cent copper (Assessment Report 18309).

BIBLIOGRAPHY

EMPR AR 1904-108; 1907-84; 1916-190; *1917-148; 1918-150; 1919-115; 1920-116; 1921-128,166; 1922-188; 1951-185
EMPR GEM 1969-347; 1970-476; 1971-418
EMPR ASS RPT 8864, *16396, *18309
EMPR MAP 34
EMPR OF 1988-14
GSC MAP 11-1960
GSC MEM 76
GSC P 58-10

DATE CODED: 850724 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 860611 REVISED BY: BG FIELD CHECK: N

MINFILE NUMBER: 082GNW051

NATIONAL MINERAL INVENTORY:

NAME(S): BOX

STATUS: Showing
NTS MAP: 082G11W
LATITUDE: 49 36 08
LONGITUDE: 115 28 48
ELEVATION: 1740 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Fort Steele
UTM ZONE: 11
NORTHING: 5495296
EASTING: 609831

COMMODITIES: Lead Copper Zinc Gold Silver

MINERALS
SIGNIFICANT: Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOST ROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Quartzite

GEOLOGICAL SETTING
TECTONIC BELT: Foreland
TERRANE: Ancestral North American
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Continental Ranges
RELATIONSHIP:
GRADE:

RESERVES

ORE ZONE: SHOWING

CATEGORY: Assay
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	3.4000	Grams per tonne
Gold	1.5200	Grams per tonne
Lead	0.2700	Per cent
Zinc	0.1700	Per cent

COMMENTS: Highest assay.
REFERENCE: Assessment Report 18309

CAPSULE GEOLOGY

The Box occurrence area is underlain by Helikian Aldridge Formation (Purcell Supergroup) sediments which are in fault contact with Lower Creston Formation (Purcell Supergroup) sediments to the north and with Devonian sediments to the south.

Spotty patches of galena are associated with quartz veins (0.5-2.0 metres wide) within Aldridge Formation quartzites. The veins may be a strike extension of the Victor vein (082GNW004) or just similar to it in character. In addition, a large occurrence of brecciated and healed quartzite hosting patches of pyrite and chalcopyrite coincides with an east trending fault associated with the Dibble-Horseshoe Creek fault.

Grab rock samples from bedding plane parallel quartz veining assayed 0.27 per cent lead, 0.17 per cent zinc, 1.52 grams per tonne gold and 3.4 grams per tonne silver (Assessment Report 18309).

BIBLIOGRAPHY

EMPR MAP 34
EMPR ASS RPT 11223, 4122, 10415, 8864, 13015, 15733, 15868, *18309

BIBLIOGRAPHY

EMPR OF 1988-14
GSC MEM 76
GSC MAP 11-1960
GSC P 58-10

DATE CODED: 850724 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 860624 REVISED BY: BG FIELD CHECK: N

MINFILE NUMBER: 082GNW025

NATIONAL MINERAL INVENTORY:

NAME(S): EAGLE PLUME

STATUS: Showing
NTS MAP: 082G12E
LATITUDE: 49 36 50
LONGITUDE: 115 33 00
ELEVATION: 0915 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Fort Steele
UTM ZONE: 11
NORTHING: 5496493
EASTING: 604748

COMMODITIES: Copper Silver Gold

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: Metres STRIKE/DIP: 090/90S TREND/PLUNGE:

HOST ROCK
DOMINANT HOST ROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	

LITHOLOGY: Schist
Limestone
Argillite

GEOLOGICAL SETTING
TECTONIC BELT: Foreland
TERRANE: Ancestral North American

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Eagle Plume showing, disseminated chalcopyrite occurs in quartz-filled parallel fissure veins striking roughly east within altered limestone and schists of the Helikian Aldridge Formation (Purcell Supergroup).

BIBLIOGRAPHY

EMPR MAP 34
EMPR AR 1924-87
GSC MEM 76; 207, p. 55
GSC MAP 396A; 11-1960
EMPR OF *1988-14

DATE CODED: 850724 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 860616 REVISED BY: BG FIELD CHECK: N

MINFILE NUMBER: 082GNW026

NATIONAL MINERAL INVENTORY:

NAME(S): EAGLE'S NEST

STATUS: Showing
NTS MAP: 082G12E
LATITUDE: 49 36 30
LONGITUDE: 115 31 50
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Fort Steele
UTM ZONE: 11
NORTHING: 5495902
EASTING: 606165

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Tourmaline
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOST ROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Dioritic Sill
Argillaceous Quartzite

GEOLOGICAL SETTING
TECTONIC BELT: Foreland
TERRANE: Ancestral North American

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Eagle's Nest showing, a 1 metre wide quartz vein occurs within a Proterozoic Moyie Intrusions diorite sill near its contact with host Helikian Aldridge Formation (Purcell Supergroup) argillaceous quartzites. The vein carries small amounts of chalcopyrite and pyrite.

BIBLIOGRAPHY

EMPR MAP 34
GSC MEM 76; 207, p. 53
GSC MAP 396A; 11-1960
EMPR OF *1988-14

DATE CODED: 850724
DATE REVISED: 860616

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: 082GNW032

NATIONAL MINERAL INVENTORY:

NAME(S): EAGLE TOO

STATUS: Showing
NTS MAP: 082G12E
LATITUDE: 49 35 47
LONGITUDE: 115 30 25
ELEVATION: 1449 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Fort Steele
UTM ZONE: 11
NORTHING: 5494608
EASTING: 607897

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOST ROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Helikian	Purcell	Aldridge	
Proterozoic			Moyie Intrusions

LITHOLOGY: Quartzite
Argillite
Dioritic Sill

GEOLOGICAL SETTING
TECTONIC BELT: Foreland
TERRANE: Ancestral North American

PHYSIOGRAPHIC AREA: Continental Ranges

CAPSULE GEOLOGY

At the Eagle Too showing, a quartz vein carries disseminated pyrite and chalcopyrite. The vein is near the contact of a diorite sill of the Proterozoic Moyie Intrusions with argillites and quartzites of the Helikian Aldridge Formation (Purcell Supergroup). An old adit is evident at the showing.

BIBLIOGRAPHY

EMPR MAP *34
EMPR OF *1988-14
GSC MAP 11-1960
GSC MEM 76

DATE CODED: 850724
DATE REVISED: 860616

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

Province of
British Columbia

Ministry of
Energy, Mines and
Petroleum Resources
MINERAL TITLES BRANCH

302, 865 Hornby Street
Vancouver
British Columbia
V6Z 2G3

November 21, 1995

File No. 13825-02-1034

Certified Mail # LC 006 924 980

Mr. Richard T. Walker
1916-5th Street S.
Cranbrook, B.C.
V1C 1K4

Dear Mr. Walker:

Re: Section 35 of the Mineral Tenure Act
Diana 9 Mineral Claim
Tenure Number 339773
Fort Steele Mining Division

This will acknowledge receipt of your complaint which you have lodged against the above mentioned title.

A Mineral Title Inspector will notify you of the date and time of the investigation. If you are not able to attend the investigation, you may send your representative. You will receive a copy of the investigation report regardless of whether you attend the inspection.

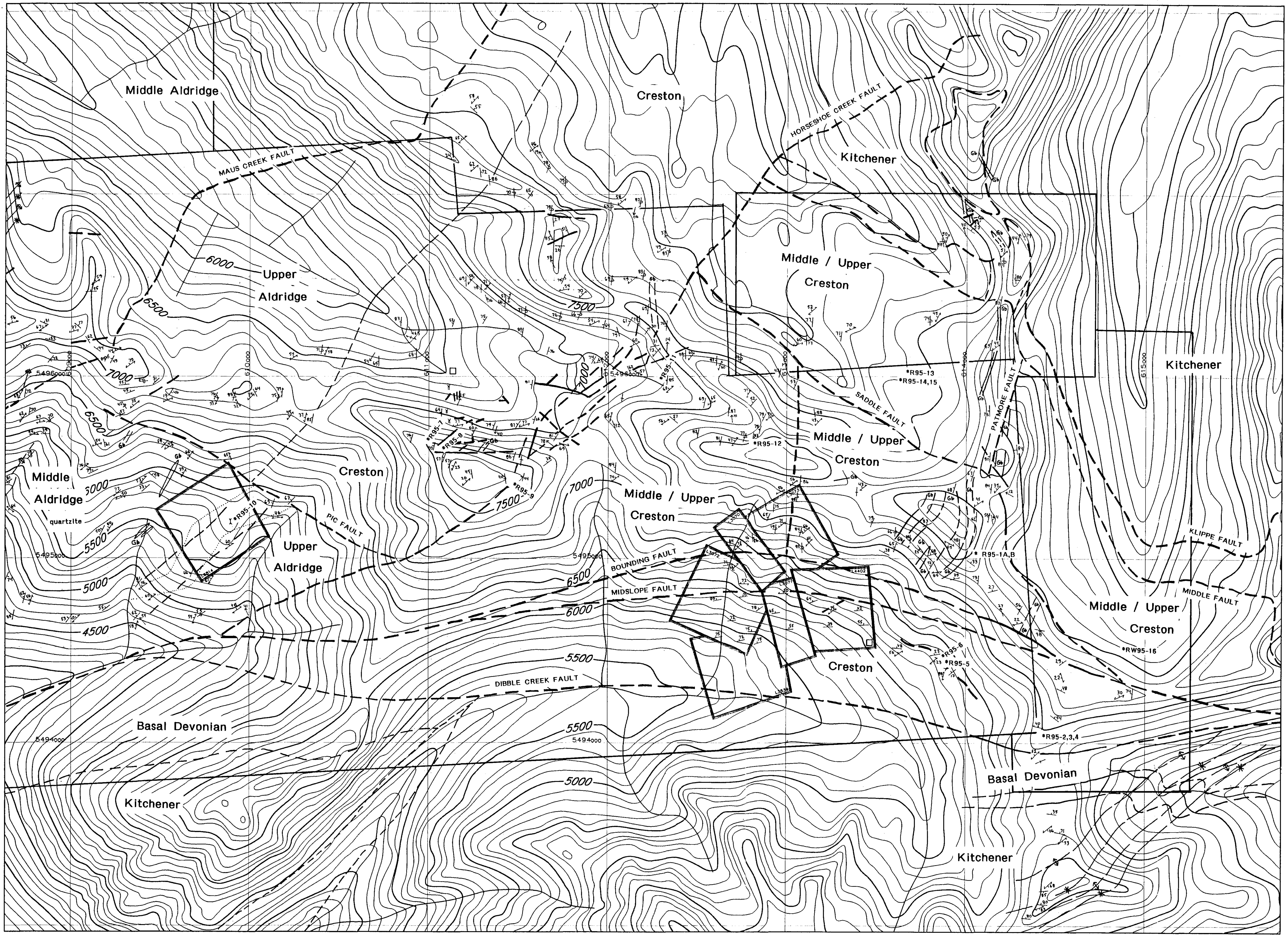
I would like to point out that if you have any information which you feel may have a bearing on this investigation, such information must be made available to the inspector prior to or during the investigation.

Please be advised that a section 35 complaint does not waive work requirements on your title. Work or cash in lieu must be recorded on or before the anniversary date.

Yours truly,

Rick Conte
Assistant Director, Operations

RJC:amv



GEOLOGICAL BRANCH
ASSESSMENT REPORT

24,375

LEGEND

- VEIN
- BEDDING
  - RIGHT WAY UP OR TOPS UNKNOWN
  - OVERTURNED
- FOLIATION
- MINOR FOLD AXES
- FOLD AXES (DASHED WHERE APPROXIMATE)
- GEOLOGICAL CONTACT (DASHED WHERE APPROXIMATE OR ASSUMED)
- FAULT (DASHED WHERE APPROXIMATE OR ASSUMED)
- SILICA + PYRITE ALTERATION
- GABBRO SILL OR DYKE — Gb
- SAMPLE LOCATION AND NUMBER — *R95-12
- ADIT
- TRENCH
- CABIN

RECEIVED
DEC 12 1995
EXPLORE B.C. PROGRAM
MEMPR

CONTOUR INTERVAL 100 FEET

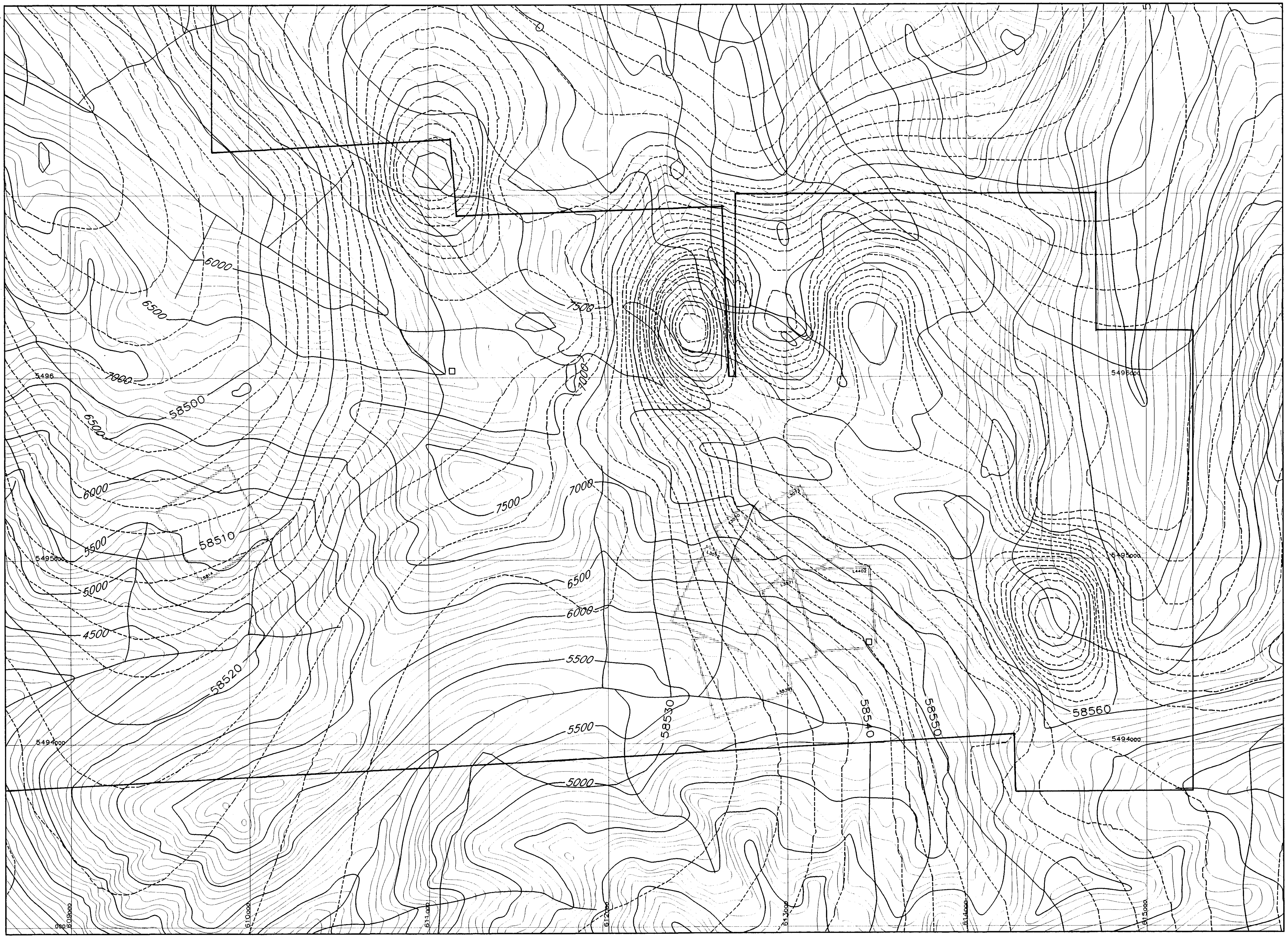
Big B Resources

Box/Dibble Geology

GEOLOGY MAP

SCALE:	DATE:	
1:10,000	AUG 24, 1995	NORTH

DYNAMIC GEOLOGICAL CONSULTING INC.



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SSESSMENT REPORT

24,375

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M121
DEC 12 1995
EXPLORE B.C. PROGRAM
MEMPR

Big B Resources

DV Property

MAGNETIC MAP

SCALE:	DATE:	
1:10,000	NOV 24, 1995	NORTH 2

DYNAMIC GEOLOGICAL CONSULTING INC.