DRILLING REPORT
ON
ABJ GROUP # 1

FORT STEELE MINING DIVISION
BRITISH COLUMBIA

CLAIMS CENTER AT 620000E, 5479000N UTM ZONE 11U
WORK CENTER AT 617126E, 5483105N UTM ZONE 11U
NTS 82G/6

For
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INTRODUCTION:

The drilling program on the ASPEN PROJECT was in two parts. Initially two drill holes were started in May 1998 and work completed to June 1998 was applied in September 1998 to the AB Group #1. The Group comprised of five claims of 20 units each as shown in Table 1. From July to September 1998 the drilling continued and work in this phase is dealt with in this report, and applied to ABJ Group #1.

Two collar sites designated A9-1-98 and A9WW-98 are at approximately UTM co-ordinates of 617100E, 5483100N, on the south bank of the Bull River across from the Bul River Mine. The holes were located on the south side of the projection of the Boundary Fault that separates the Rocky Mountain Trench tecteno-stratigraphic terrain from the Rocky Mountain terrain to the north. Rock outcrops in the southern block are mainly mapped as Devonian carbonates, while the block to the north is underlain by argillaceous sediment of the Proterozoic age Aldridge Formation.

A significant magnetic anomaly was identified in an area immediately north of the Bull River centred on the Bul River Mine area, and this anomaly extends south over the river in to the Devonian. Dykes and sills of dioritic composition in the Bul River area, tentatively identified as part of the Moyie Sills and Dykes sequence of Proterozoic age, are believed to be partly the cause of the magnetic anomaly. However, the size of the anomaly exceeds the known area extent of the Moyie intrusive in the area, and the general outline of the anomaly suggests a deeper and larger source, perhaps of batholitic proportions.

A9-1-98 was drilled to determine the depth to the Boundary Fault, and whether the footwall is the same Aldridge sequence found north of the river, and whether dioritic sills and dykes exist in significant amounts to explain the magnetic anomaly extension from north of the river. Hole A9WW-98 was drilled entirely using percussion drilling and cased to provide water for drilling the A9-1-98 diamond drill hole which is recommended to extend to greater depth. Core from the diamond drilling was examined and logged, and the core is stored at the Stanfield camp site just north of Galloway, British Columbia.

Costs for the percussion drill hole A9WW-98 are not applied to the work included in this report. They were used in the previous report dealing with the older claim group "AB Group #1".

Table 1: AB Group #1:

Claim Name	Tenure No.	No. Of Units	Current Expiry Date	$ value to be applied	Years applied	New Expiry Date
Balsam #9	209751	20	99/07/05	28,000	7	06/07/05
Balsam #10	209752	20	99/07/05	28,000	7	06/07/05
Balsam #11	209755	20	99/07/28	32,000	8	07/07/28
Balsam #12	209756	20	99/07/28	32,000	8	07/07/28
Aspen #9	321708	20	03/10/20	0	0	03/10/20

The following Table 2 shows the regrouped claim block ABJ Group #1, and the distribution of assessment work applied from the drilling on claim Aspen 9 of this new group.

Table 2: ABJ Group #1:

Claim Name	Tenure No.	No. Of Units	Current Expiry Date	$ value to be applied	Years applied	New Expiry Date
Joy #9	361195	20	Jan 15, 1999	26,000	8	Jan 15, 2007
Balsam # 5	209747	20	July 5, 1999	32,000	8	July 5, 2007
Balsam # 7	209749	20	July 5, 1999	32,000	8	July 5, 2007
Balsam # 8	209750	20	July 5, 1999	32,000	8	July 5, 2007
Aspen #9	321708	20	Oct 20, 2003	0	0	Oct 20, 2003

LOCATION, ACCESSIBILITY & TOPOGRAPHY:

The Aspen claims are located in south-eastern British Columbia, approximately 30 kilometres by Highway 3 from Cranbrook, and then by Highway 93 just past the settlement of Bull River. Secondary gravel roads provide access to the Aspen Claim 9 of the ABJ Group #1. The remaining Joy and Balsam Claims in the Group are also accessible by the same road system that crosses the Bull River canyon on a log bridge just south of the B.C. Hydro Dam. This road system continues through claims Joy 9, Balsam 8 and 5 to the Galloway mill site, where it intersects Highway 3 again. The northern portion of the Group is on fairly open parkland. Thicker vegetation consists usually of brush, and is located in the Bull River valley and subsidiary drainage and dry creek beds, while the remainder is mixed vegetation of larger mature growth and secondary alders with open meadows.

Topographic relief ranges from 800 meters to 1500 meters, extending from the banks of the Bull River in the Rocky Mountain Trench to the ridge tops running NW from Tie Lake to Bull River, and the east wall of the Rocky Mountain Trench – including "Buffalo Head" on Balsam 7. The claims are in the Fort Steele Mining Division in N.T.S. 82G/6, centred approximately at 620000E, 5479000N (Datum NAD 83, Projection UTM Zone 11).

Figure 1 is a Site Location with respect to south-eastern corner of British Columbia. **Figure 2** is a satellite imagery (using 321 plus 4 bands) on which are superimposed the outline of the claims of this Group. Also, labelled are the location of Cranbrook, the closest urban centre and some of the major physiographic and other cultural features.

Figure 3 is a zoom-in to a larger scale showing the ABJ Group #1 claims on a background of drainage patterns, roads and major cultural features (all from digitised TRIM data). In addition the location of drill hole A9-1-98 program on Aspen # 9 is shown. ERMAPPER software was used to put together and print Figure 3. Costs of work on drill hole A9-1-98 from 803.03 meters to 1298.18 meters has been used for assessment work in this report.

GEOLOGY

The deciphering and understanding of the structure and structural evolution of the Rocky Mountain Trench and the western edge of the Rocky Mountains of southeastern British Columbia are necessary to determine the economic potential of the ABJ Group #1 property. In addition, the mode of occurrence of the different types of mineral deposits in the area, including the ones on the property, provide clues to the location and identification of other exploration targets.

In **Figure 4**, the geology shown is an overlay of T. Hoy's compilation map accompanying Bulletin 84. The most important feature on the claim Group is the Boundary Fault that separates the Rocky Mountain Trench tecteno-stratigraphic terrain from the Rocky Mountain terrain to the north, although this fault in this local area does not exactly coincide with the distinct Steeples Range escarpment. Rock outcrops in the southern block are mainly mapped as Devonian carbonates, while the block to the north is underlain by argillaceous sediment of the Proterozoic age Aldridge Formation.

In addition, the location of the drilling program is based on the discovery of a significant magnetic anomaly in an area immediately north of the Bull River centred on the Bul River Mine area (see **Figure 3)**. This discovery was part of a DIGHEM helicopter borne survey completed in previous years and this anomaly extends south over the river in to the Devonian.

Dykes and sills of dioritic composition in the Bul River area, tentatively identified as part of the Moyie Sill and Dyke sequence of Proterozoic age, are believed to be partly the cause of the magnetic anomaly. However, the size of the anomaly exceeds the known area extent of the Moyie intrusive in the area, and the general outline of the anomaly suggests a deeper and larger source, perhaps of batholitic proportions.

Figure 3 also shows a portion of a magnetic anomaly just west of this claim group that is correlated to a Diorite to Monzonite composition stock or batholith, probably of Cretaceous age. It is therefore possible, that a portion of the large magnetic anomaly tested by this drilling can be a result of a similar intrusive at depth.

Part of the claim group is underlain by the Proterozoic age Aldridge and Creston Formations which are hosts to several vein type mineral deposits of Cu, Pb and Zn associated with shear zones. Although the drill hole A9-1-98 was collared in the Palaeozoic sequence on the hanging-wall side of the Boundary Fault, it intersected this Proterozoic sequence on the foot wall of the Boundary Fault.

LITHOLOGY AND STRATRIGRAPHY

The following Table (from McMechan, 1978) summarizes the lithology and stratigraphy of the area, including this property. In addition, Cretaceous-Tertiary intrusives near the margins of the Trench are worth noting. The Trench itself is filled with Pleistocene and Recent sediments of gravel, sand, silt, till, colluvium and alluvium.

BC

Ministry of Energy, Mines and Petroleum Resources

BRITISH COLUMBIA GEOLOGICAL SURVEY

Geological Survey Branch

To Accommpany

BULLETIN 84

GEOLOGY OF THE FERNIE W1/2 MAP SHEET (AND PART OF NELSON E1/2)

NTS 82G/W1/2; 82F/E1/2

By Trygve Höy and Ginette Carter

(SEE BELOW FOR ADDITIONAL SOURCES OF DATA)

SCALE 1 : 100 000

0 2 4 6 8 10

KILOMETRES

LEGEND

QUATERNARY

PLEISTOCENE AND RECENT

Qal Alluvium, colluvium, soil

MESOZOIC

UPPER CRETACEOUS

Km Pink, porphyritic monzonite, quartz monzonite and granodiorite

JURASSIC AND CRETACEOUS

JKk KOOTENAY FORMATION
Dark carbonaceous sandstone, siltstone and mudstone; coal; pebble and cobble conglomerate

Jf FERNIE GROUP
Dark shale, siltstone and sandstone; limestone, glauconitic sandstone and shale

TRIASSIC

Tsr SPRAY RIVER GROUP
Brown-weathering dolomitic and calcareous siltstone, massive orthoquartzite in upper part; grey, buff shale interbeds; finely laminated buff dolomitic siltstone in lower part

PALEOZOIC

PENNSYLVANIAN AND PERMIAN

PPrm ROCKY MOUNTAIN SUPERGROUP
Succession from top of chert breccia; dolomitic siltstone; sandy dolomite; orthoquartzite and limestone

MISSISSIPPIAN

Mr RUNDLE GROUP (ETHERINGTON, MOUNT HEAD AND LIVINGSTONE FORMATIONS)
Mostly dolomite and limestone, cherty toward the top

Meb BANFF AND EXSHAW FORMATIONS

Mb -BANFF FORMATION
thin-bedded, platy, laminated dolomite and limestone; cherty layers

Me -EXSHAW FORMATION
Carbonaceous platy shale, pyritic

DMceb -includes Costigan member and Exshaw and Banff formations

UPPER DEVONIAN

Dp PALLISER FORMATION (COSTIGAN AND MORRO MEMBERS)
Buff, yellow and grey, banded and nodular argillaceous limestone and dolomite with siltstone interbeds

Df SASSENACH FORMATION: FAIRHOLME GROUP (MOUNT HAWK, BORSATO, HOLLEBEKE FORMATIONS)
Limestone, dolomite, platy and argillaceous; siltstone, orthoquartzite and laminated limestone; buff, grey limestone and minor siltstone with possible stromatoporoids (Df may contain Dp undivided)

UPPER (?) MIDDLE AND EARLIER (?) DEVONIAN

Dmu FAIRHOLME GROUP EQUIVALENT
Brown silty shale; grey, black shaly limestone and shale with pyritized fossils

Db "BASAL DEVONIAN UNIT"
Dark shaly limestone, nodular, brecciated; laminated gypsum; sandstone, breccia, conglomerate; pebbly grits and orthoquartzite in lower part

MIDDLE SILURIAN TO MIDDLE DEVONIAN

SDs Shale; limestone; conglomerate; volcanic breccia, lava

UPPER ORDOVICIAN TO MIDDLE SILURIAN

OSb BEAVERFOOT FORMATION
Dolomite with nodular chert, black graphic shale, sandstone and conglomerate in lower part

ORDOVICIAN

Ogw MOUNT WILSON FORMATION
Quartzite and sandstone

GLENOGLE FORMATION
Black graphitic shale, siltstone, limestone

UPPER CAMBRIAN AND LOWER ORDOVICIAN

EOm McKAY GROUP

Om UPPER McKAY
Limestone and shale with intraformational conglomerate

Eum LOWER McKAY
Shale, shaly limestone, intraformational conglomerate

MIDDLE AND/OR UPPER CAMBRIAN

Emuj JUBILEE FORMATION
Dense, cherty limestone, laminated dolomite, intraformational breccia, sandstone and conglomerate

MIDDLE CAMBRIAN

Emt "TANGLEFOOT UNIT"
Shaly limestone, intraformational breccia, sandy shale, conglomerate

MIDDLE AND (?) UPPER CAMBRIAN

Emfge ELKO, GORDON AND FLATHEAD FORMATIONS

Eme ELKO FORMATION
Grey dolomite, massive; grey calcareous mudstone, probably correlative with Jubilee Formation (Leech, 1958)

Emfg FLATHEAD AND GORDON FORMATIONS
Grey calcareous fissile shale; glauconitic limestone; glauconitic sandstone

LOWER AND (?) MIDDLE CAMBRIAN

Elca EAGER AND CRANBROOK FORMATIONS

Ea EAGER FORMATION
Shale, siltstone, limestone, quartzite; minor argillite

Ec CRANBROOK FORMATION
Quartzite, limestone, magnesite; minor grit and quartz pebble conglomerate

Ecl Magnesite

PROTEROZOIC

LATE PROTEROZOIC

WINDERMERE SUPERGROUP

Pwi TOBY FORMATION
Conglomerate, siltstone, argillite

MIDDLE PROTEROZOIC

PURCELL SUPERGROUP

Ps Sills; gabbro, diorite

Pmn MOUNT NELSON FORMATION
Quartzite, dolomitic and gritty sandstone, dolomite, sandy and argillaceous dolomite, siltstone

Pdc DUTCH CREEK FORMATION
Green siltstone, argillite; stromatolitic dolomite, quartz wacke

Pdc2 UPPER DUTCH CREEK FORMATION
Green siltstone, argillite; oolitic dolomite, cryptalgal dolomite, dolomitic siltstone; "carbonate marker" shown as dashed lines on Skookumchuck Creek

Pdc1 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

Pnc1 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

Pm Moyie sills; gabbro, diorite

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

Pa3 UPPER ALDRIDGE
Rusty weathering argillite and siltstone, thinly laminated Pa3l-transition

Pa2 MIDDLE ALDRIDGE
Grey quartzite, quartz wacke, siltstone; argillite; rusty weathering; Pa2s-siltstone, argillite; Pa2q-quartzite

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

NORTHERN HUGHES RANGE

Pa1 Middle (and possibly) Lower Aldridge lime equivalent
Pa1f Argillite
Pa1e Quartzite
Pa1d Siltstone, argillite
Pa1c Siltstone, argillite (dolomitic, in part)
Pa1b Silty dolomite
Pa1a Argillite, siltstone

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

Pr ROOSVILLE FORMATION
Green siltstone and argillite, black laminated argillite; stromatolitic dolomite and dark brown oolitic dolomite, quartz arenite toward the top

Pp PHILLIPS FORMATION
Maroon micaceous siltstone, quartz wacke and argillite

Pg GATEWAY FORMATION (locally includes Sheppard Fm.)
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
Dolomitic quartzite, sandstone, oolitic dolomite, stromatolitic dolomite at top; (Sandstone and conglomerate locally at base)

SYMBOLS

LIMIT OF MAPPING OR EXPOSURE

GEOLOGICAL BOUNDARY (DEFINED, APPROXIMATE, ASSUMED)

UNCONFORMITY

BEDDING (TOPS KNOWN, TOPS UNKNOWN, VERTICAL, OVERTURNED)

CLEAVAGE, SCHISTOSITY

MINERAL LINEATION

FAULT (DEFINED, APPROXIMATE, ASSUMED)

THRUST (TEETH IN DIRECTION OF UPPER PLATE)

NORMAL (CIRCLE INDICATES DOWNTHROW SIDE)

FOLD:

MINOR FOLD

ANTICLINE (DEFINED, APPROXIMATE, ASSUMED)

SYNCLINE (DEFINED, APPROXIMATE, ASSUMED)

OVERTURNED ANTICLINE

OVERTURNED SYNCLINE

SMALL OUTCROP

MINERAL OCCURRENCE, (STRATIFORM Zn-Pb)

UPPER DEVONIAN TO PERMIAN

Undifferentiated Fairholme Group, Palliser Formation, Exshaw Formation, Banff Formation, Rundle Group, Rocky Mountain Group: Limestone, Shale Limestone, Shale, Quartzite, and Dolomitic Quartzite.

MIDDLE DEVONIAN AND (?) EARLIER

Upper unit (Burnais and Harrogate Formations): Shaly Limestone, Shaly Dolomite, Limestone Breccia, and Gyp0sum; Basal Unit: Dolomitic Sandstone, Sandy Dolomite, Breccia, Conglomerate, and Shale

CAMBRIAN

"Tanglefoot Unit": Shaly Limestone, Limestone, Sandy Shale, and Dolomite
Eager Formation: Shale, Limestone, Siltstone, and Quartzite; Cranbrook Formation: Quartzite and Granule Conglomerate

MIDDLE PROTEROZOIC

Moyie Sill: Hornblende Metadiorite to Metagabbro

PURCELL SUPERGROUP

Phillips Formation: Red Micaceous Quartzite and Siltite
Gateway Formation: Green, Purple Siltite, Minor Quartzite, and Dolomitic Siltite near top.
Sheppard Formation: Stromatolitic Dolomite, Green, Purple Siltite, Quartzite, and Silty Dolomite
"Lava and Sediment" Unit: Massive to Amygdaloidal "Andesitic" Lava, Volcanic and Feldspathic Sandstone, Siltite, and Minor Dolomitic Siltite
"Non-Dolomitic Siltite" Unit: Green, Locally purple Siltite

KITCHENER FORMATION

Upper Unit (North of Dibble Creek Fault): Silty Dolomite, Grey Dolomitic Siltite, Grey Siltite, Sandy Dolomite, and Stromatolitic Dolomite
Lower Unit (North of Dibble Creek Fault): Green or Grey Dolomitic Siltite, Green Siltite, and minor Dolomitic Quartzite

CRESTON FORMATION

Upper Subunit: Green, Lesser purple Siltite, Dolomitic Siltite near top, white quartzite

Lower Subunit: Purple, Grey or green, very course-grained Siltite to fine-grained quartzite, white quartzite, and green, purple Siltite

Upper Subunit: Purple Siltite with white quartzite

Middle Subunit: Green Siltite

Lower Subunit: Grey Siltite (north of Bull Canyon Fault), green, fine-grained quartzite, with Grey Siltite (south of Bull Canyon Fault-Unit)

ALDRIDGE FORMATION

Grey Siltite and Argillite, with two Dolomitic Siltite Horizons near top, South of Bull Canyon Fault

Quartzite, Grey Siltite and Argillite: Quartzite predominant, Siltite and Argillite predominant

TYPES OF MINERALISATION:

The following is a brief description of the types of mineralisation known on the property and in the surrounding area with similar to identical geology.

Quartz-Carbonate-Sulphide VEIN SYSTEMS in SHEAR ZONE envelopes:

Vein systems can be massive, tens of feet wide to a few inches width in stockworks and horsetails. Sulphides are chalcopyrite, pyrite, pyrrhotite mainly, with minor galena and arsenopyrite. Quartz is the major gangue mineral followed by carbonates (dolomite and siderite). Gold is associated with the sulphides and/or occurs as free gold in the quartz gangue and within silcified zones in the shear envelopes.

Host rocks are partly silicified and chloritised argillites, argillaceous quartzites, and quartzites mainly of the Aldridge formation. Other host rocks include the argillites of the Creston and Gateway formations. The meta diorite dykes and sills of the Moyie Sill group have some degree of spatial relationship to the vein systems, but their role in the mode of origin of mineralisation is not clear.

The Bull River Mine just north of the property is an excellent example of this type of mineralisation. Other related examples of this type include the Strathcona-Empire, the Rex-Zone, the Dean Zone, the Treasure Zone, the Don and Rimrock Zones.

Conformable (Syngenetic?) Massive Sulphide Deposit

These are characterised by mainly conformable (to bedding) massive sulphides within the Aldridge formation. Sulphides are galena, sphalerite, pyrrhotite, with zones of massive pyrite. Zoning of sulphides is common, so is alteration, such as chloritisation and tourmaline. The host rock lithology is very similar to the Bull River Mine. The Sullivan Mine is a prime example of this type, and is located west-northwest of the property, on the other side of the Trench. Location of a Sullivan Type of ore body east of the Trench, has been a long-term exploration goal in this part of British Columbia.

Quartz Lode Type with Sulphides and/or Free Gold:

The Cretaceous-Tertiary quartz-monzonite, monzonite, granodiorite and diorite intrusive in the area have potential for this type of mineralisation, and may be source areas for some of the placer told deposits.

Vein Type Galena-Sphalerite Mineralisation associated with Major Structures:

This type of mineralisation has been found to date in the Aldridge, Creston, and the Lower Cambrian formations. Mineralisation occurs as fillings and replacement with faults and associated fissure systems. Examples of this type in the area are the Burt, OK Zones, and

possibly the Great Western Zone. The Estella Mine and the Kootenay King Mine further north of the property are also of this type, and so is the St. Eugene Mine across the Trench to the west.

STRUCTURE AND STRUCTURAL EVOLUTION

The property and the immediate area is divided into a number of tecteno-statrigraphic domains. The primary divisions include the ROCKY MOUNTAIN TRENCH on the west of the property and the WESTERN ROCKY MOUNTAINS on the east half of the property.

The Western Rocky Mountains:

The Western Rocky Mountains form the eastern edge of the Purcell anticlinorium, against the Rocky Mountain thrust belt. The geology is fairly complex, with structural evolution mainly tied to the Hosmer Thrust.

The Western Rocky Mountains in this area are further subdivided into three major tecteno-stratigraphic terrains by EAST trending REVERSE FAULT SYSTEM **(see Figure 5)**. The northern segment is the STEEPLES RANGE DOMAIN, whose northern boundary is marked by the DIBBLE FAULT SYSTEM and the southern boundary by the BULL CANYON FAULT SYSTEM. The middle segment is the relatively complex SAND CREEK – LIZARD RANGE DOMAIN, that includes the Lizard Range. It is bounded in the north partly by the BULL CANYON FAULT and to the south by the SAND CREEK FAULT. Most of the AB Group #1 is within this segment. Both of the Steeples and the Sand Creek – Lizard Range Domains are part of the LIZARD SEGMENT of the HOSMER THRUST, and is part of the structurally highest portion of the southern Rocky Mountains.

The southern most domain is the BROADWOOD ANTICLINE bounded in the north by the Sand Creek Fault (different than the Upper Sand Creek Fault), and has a southern boundary near Mt. Broadwood.

The Sand Creek – Lizard Range Domain:

This domain is divided into two longitudinal sections by the NW trending UPPER SAND CREEK thrust fault. The western segment is designated by us as the SAND CREEK SECTION, and the eastern segment is the LIZARD RANGE SECTION.

The BULL CANYON FAULT marks the northern boundary of the Sand Creek Section. It is a left-lateral reverse fault with about 2-3 km of stratigraphic separation, and dips southward. The locus of the fault suggests that its origin is tied into the stress associated with the Dibble monocline. Also, the contrasts in the Purcell succession across the fault suggest that it may follow the locus of an older structure that controlled Purcell deposition. Although the Lower Purcell group of rocks are found on both sides of the fault, the NE trending structures in the Steeples Domain, north of the fault do not extend on the hangingwall side of this fault. In

addition, the large anticline north of the fault (in the Steeples Domain) is not one of the NE trending structures caused by compression during movement on the Dibble fault, but is formed during the Bull Canyon Fault displacement, and does not have a counterpart on the hangingwall (south) side of the fault.

In the Sand Creek-Lizard Range domain, the mechanics and structural history of the UPPER SAND CREEK FAULT are critical in understanding the stratigraphy of this domain. This fault is considered to be a splay from the Hosmer Thrust. The Domain is part of the HOSMER NAPPE which has a shallow NW plunge. Strata in the overturned forelimb are west dipping while strata in the backlimb a generally northeast dipping.

The Upper Sand Creek Fault cuts through this nappe, causing the backlimb and bow of the nappe to be thrust over the overturned forelimb. This has thrust the Precambrian Purcell Series of rocks from the backlimb of the nappe against the overturned Devonian and Mississipian strata of the forelimb. The Purcell Series forms a range with generally rounded slopes, and structurally also is part of the crest and east limb of an anticline (superimposed on the backlimb of the nappe) that plunges gently northwest. This range is the SAND CREEK SEGMENT of the domain.

East of the Upper Sand Creek Fault the second division of the domain forms the LIZARD RANGE. It essentially consists of the overturned forelimb of the Hosmer Nappe forming a prism of sediments. The backbone of the range is made up by resistant portions of Devonian and Mississipian formations, while its eastern slopes are underlain by softer Mesozoic strata.

While the north boundary of the Sand Creek segment is mainly marked by the Bull Canyon Fault, the Lizard Range segment's north end is crumpled by complex faults and nappe-like folds that are overturned to the southeast and south, causing the strata to bend sharply from a NW trend to NE near the drainage area of Iron Creek. This trend continues NE off the property to Sulphur Creek where the NW trend and folds overturned east-northeast resumes to form the mountains north of Fernie and between the upper Elk and upper Bul Rivers.

DRILLING PROGRAM:

The first phase of the drilling program consisted of two drill holes located within a few meters of each other. Two collar sites designated A9-1-98 and A9WW-98 are at approximately UTM co-ordinates of 617100E, 5483100N, on the south bank of the Bull River across from the Bul River Mine. The holes were located on the south side of the projection of the Boundary Fault that separates the Rocky Mountain Trench tecteno-stratigraphic terrain from the Rocky Mountain terrain to the north. The costs of the first phase were applied for assessment of the AB Group #1 in 1998.

Hole A9WW-98 was drilled entirely using percussion drilling and cased to provide water for drilling the A9-1-98 diamond drill hole. In the second phase of the drilling program, the diamond drill hole (A9-1-98) was extended to 1298 meters, and this report covers this second

phase. Core from the diamond drilling was examined and logged, and the core is stored at the Stanfield camp- site just north of Galloway, British Columbia.

In Figures 2 and 3 the location of the drilling program is marked and labelled as A9-1-98. The claim boundaries and these identification are on both these figures also.

Objectives and Summary Results

Over the past twenty years the R. H. Stanfield Group of companies has initiated a series of programs of airborne geophysics, satellite imagery, and ground examination to fulfil the following objectives. The programs are ongoing, and this report covers a portion of the effort covering this claim group:

a. Determine the strike and dip extensions of the individual deposits.
b. Increase the tonnage potential of the deposits by either connecting these adjacent deposits along strike (or connections at depth), or discovering other deposits in the strike directions or down-dip or enechelon to the known showings.
c. A9-1-98 was drilled to determine the depth to the Boundary Fault, and whether the footwall is the same Aldridge sequence found north of the river, and whether dioritic sills and dykes exist in significant amounts to explain the magnetic anomaly extension from north of the river.

The ABJ Group #1 claim group includes the BUL RIVER MINE (see Figure 3). It straddles the Sand Creek- Lizard Range Domain of the Rocky Mountain tecteno-stratigraphic province, and the Rocky Mountain Trench province. In the former province within the claim group the bedrock is mostly of argillaceous sediments of Proterozoic age Aldridge-Creston Formations, and Moyie diorite dykes and sills. The Proterozoic sequence is the host-rock on most of the known mineral deposits on the property and adjacent to it. On the claim group, the area immediately on the hanging wall of the Boundary Fault, that separates the two provinces across from the Bul River Mine area, is of interest because of the large magnetic anomaly associated with the area.

The drill sites were located in the closest flat area that was accessible using existing infrastructure. The core from the diamond drilling program are stored at the R. H. Stanfield campsite near Galloway.

Appendix 1 contains the geologic logs of the A9-1-98 diamond drill hole. Of particular interest was the confirmation of the Boundary Fault, the presence of dyke (dioritic?) immediately in the footwall of the fault, and the intersection of Proterozoic argillaceous sediments on the foot wall side of the Boundary Fault.

The aeromagnetic anomaly over the Bul River Mine area is possibly related to the en-echelon system of diorite dykes and sills that have been mapped to date as part of the Proterozoic Moyie system. To the immediate west of the claim group another distinct aeromagnetic anomaly has

been correlated to a large intrusive of diorite-monzonite composition. This has been mapped in Bulletin 84 as a Cretaceous age intrusive.

It is, therefore, possible that the dyke intersected in the A9-1-98 drill hole may be either related to the Moyie dykes and sills, or to the Cretaceous intrusive in the area, or is part of a different intrusive sequence. Samples of the Moyie type intrusive from the Bul River Mine area, and samples from the Cretaceous intrusive were analysed for major elements together with a sample of the dyke from A9-1-98. This was covered in the previous report on AB Group #1, where the conclusions were that the intrusive in A9-1-98 is probably different than the other two intrusive types in the Bul River mine area, or is a different phase of probably the Moyie. The iron content in the A9-1-98 sample is probably high enough to explain the magnetic anomaly, but the drilling to date has not intersected enough intrusive material to support the size of the anomaly south of the Bull River.

In this phase the extension of the drill hole allowed intersection of the footwall side of the Boundary Fault where argillaceous sediments similar to the Aldridge sequence at Bul River Mine were intersected.

RECOMMENDATIONS:

No further drilling is recommended at this time.

STATEMENT OF COSTS:
(Based on information by the R. H. Stanfield Group to MMRS)

Diamond Drill Hole A9-1-98

Section A: (Background)

Drilling Days	50
Period Days July 23-Sept 22/98	62
Number of Driller R&B Days	109
Total Diamond Drilling - 4284'-2650' (used previously)	1634

Section B: Direct Costs

I.) Contractor Rates, Drill Rig Charges

	Hours	Rate/Hr	Total
Schmidt Drilling Rate	667.5	$185.00	$123,487.50
Schmidt Travel Time	67	$72.00	$4,824.00

II.) Drill Bits

	Qty	Cost/per	Total
Series 9F NQ Longyear	3	$805.00	$2,415.00
Series 6 BQ Longyear	1	$430.00	$430.00
Series 9F BQ Longyear	2	$590.00	$1,180.00
BQ Reaming Shell	1	$410.00	$410.00
NQ Reaming Shell	1	$540.00	$540.00
BQ Right Hand Tap	1	$131.96	$131.96
NQ Right Hand Tap	1	$148.44	$148.44

III.) Drill Muds

	Qty	Cost/per	Total
20L UltraVis Mud	48	$100.00	$4,800.00
20L Torqueless	40	$80.00	$3,200.00

20L Drill Rod	8	$110.00	$880.00
Grease			
20L Linseed Soap	1	$45.00	$45.00
WD-40	2	$10.00	$20.00

IV.) Drill Pipe

	Footage	Cost/per	Total
BQ Drill Pipe	1634	$2.56	$4,183.04
NQ Pipe lost in Hole	960	$10.20	$9,792.00

V.) Miscellaneous

	Qty	Cost/per	Total
BQ Corelifters	4	$10.25	$41.00
BQ Corelifter Cases	4	$19.00	$76.00
Splices for Wireline	50	$1.16	$58.00

Total Direct Costs **$156,661.94**

Section C: Indirect Costs

	# of days	$/day	Total
R&B Contractor	109	$65.00	$7,085.00
Wage Foreman	51	$200.00	$10,200.00
Wage Co-ordinator	40	$140.00	$5,600.00
R&B Foreman	51	$65.00	$3,315.00
R&B Co-ordinator	40	$65.00	$2,600.00
4x4 Foreman	51	$50.00	$2,550.00
4x4 Co-ordinator	40	$50.00	$2,000.00

Total Indirect Costs $33,350.00

$33,350.00

Section D:
Ancillaries

	Hours	Rate/Hr	Total
Case 580D Backhoe	8	$42.00	$336.00

Section E: Professional Fees

Geological Consultant @ $400.00/day x 2 days	$800.00
Geologists R&B @$65.00/day	$130.00
Geologist 4x4 $50/day x 2 days	$100.00

Grand Total of A9-1-98 ***$191,377.94***

General Information on A9-1-98

A:) Diamond Drilling

Dates Drilled	A9-1-98 (Continuance) July 23, 1998 to September 22/98	
Contractor	Schmidt Drilling Ltd. PO Box 98 Tees, Alberta T0C 2N0	
Crew	Drillers- Darcy Schmidt, Kevin Schmidt Helpers- Rod Kellner, Michael Schmidt, Geoff Kellner, Evertte Waddy, Ken Miller	
Site Crew	Manager- Ross Stanfield	Box 94, Galloway BC
	Co-ordinator- Tim Hewison	Box 94, Galloway BC
Equipment	Ingersol Rand TH-60 Truck Mounted Rotary Percussion Drill Rig, 600 CFM Air Compressor, Western Star Flatbed, 1000 Ga. Tanker and Pipe Truck, Tool Shed Trailer (8 x 15) and ¾ ton 4x4 Diesel Crew Cab and Slip Tank. Schramm Coring head with side inlet swivel Model T660, Model 2500 Foot Clamp to hold drill rods, Wheatley Tri-plex Hi-Pressure pump, 16' Gooseneck Stock Trailer	

B:) Claim Information

Claim Group	ABJ Group #1
Claims	Aspen #9, Joy #9, Balsam #5, Balsam #7, Balsam #8

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CERTIFICATE

I, Pilsum Master of 32 Midpark Gardens S.E. Calgary, Alberta certify that:

I am a graduate of the University of Bombay, India and a graduate of the University of New Mexico, U.S.A., and hold the following degrees:

B.Sc., 1963, Geology/Chemistry
M.Sc., 1965, Geology
M.Sc., 1968, Geology/Mineralogy

I am a Registered Professional Geologist (Association of Professional Engineers, Geologists and Geophysicists of Alberta) and a member of the American Institute of Mining, Metallurgical and Processing Engineers.

I am the President of Master Mineral Resource Services Ltd. of Calgary, Alberta with Permit to Practice Number P5336 from the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

I have practised my profession since 1967.

This Report on the ABJ Group #1is based upon my involvement in the compilation of geological literature, examination of drill sites, logging of drill core, and the evaluation and compilation of data.

My company and I do not hold any interest in the properties or securities of R. H. Stanfield, or affiliates thereof, nor do my company and I expect to receive any directly or indirectly.

Pilsum Master, M.Sc.,M.Sc., P.Geol.
President
Master Mineral Resource Services Ltd.

PERMIT TO PRACTICE
MASTER MINERAL RESOURCE SERVICES LTD.
Signature _____
Date March 29, 1999
PERMIT NUMBER: P 5336
The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

APPENDIX 1

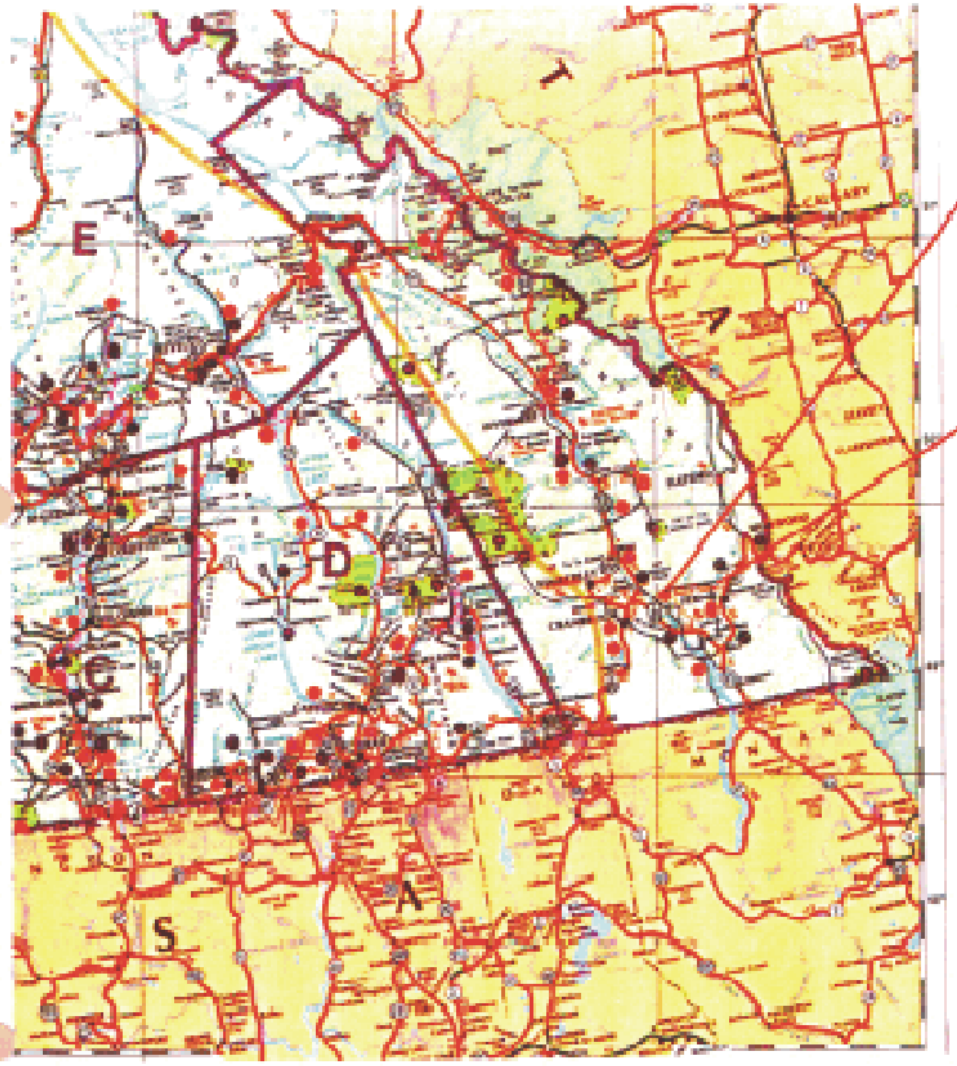
DRILL LOGS

DIAMOND DRILL LOG — **R. H. STANFIELD GROUP** — **PAGE:** 1 OF 2

HOLE NO	**A9-1-98**	**PROJECT:**	ASPEN	**PROPERTY:**	**ABJ GROUP #1**	**OBJECTIVE:**					
COLLAR	**LATITUD**	5483105 N	**LONGITUDE:**	617126 E	**ELEVATION:**	890 meter	**DIP:**	-90			
COMMENCED:		21-May-98	**COMPLETED:**	halted 18 June 1998	**DRILLED BY:**	Schmidt Drilling Ltd					
		resume 23 July 1998		completed 23 Sept 1998							
LOGGED BY:		Pilsum Master, P.Geol	**DATE LOGGED:**	July 27,30 1998	**SURVEY: DEPTH:**	275m	**DIP:**	-85	**Azimuth:**	19	
				17-Sep-98		481.8m		-86		31.5	
						678.8m		-83		35	
						918.2m		-80		323	

FROM ft	FROM m	TO ft	TO m	DESCRIPTION	SAMPLE	FROM	TO
0.00	0.00	202.00	61.21	Overburden			
202.00	61.21	276.00	83.64	Gray Limestone: fractured broken and some ground core	No samples submitted for chemical analysis		
276.00	83.64	355.00	107.58	Gray Limestone: quite fractured, not as broken and little or no ground core			
355.00	107.58	380.00	115.15	Gray Limestone: more ground core than in previous sections			
380.00	115.15	511.00	154.85	Gray Limestone: less ground core, but still broken and fractured			
511.00	154.85	620.00	187.88	Gray Limestone: fractured broken and some ground core			
620.00	187.88	860.00	260.61	Gray Limestone: with irregular white carbonate stringers fracturing @ 75 degress to CA and approximately 1 inch apart			
860.00	260.61	890.00	269.70	Gray Limestone: with irregular white carbonate stringers spaced further apart			
890.00	269.70	1430.00	433.33	Gray Limestone: more competent less fractured			
				269- 378: more broken and fractured, some ground core			
				378- 400: calcite stringers about the same as previous section			
1430.00	433.33	1635.00	495.45	Gray Limestone: with irregular white carbonate stringers quite fractured at high angle to CA			
1635.00	495.45	1700.00	515.15	Gray Limestone: slightly graphitic			
1700.00	515.15	1725.00	522.73	Most core lost: unconsolidated Grit(?)			
1725.00	522.73	1925.00	583.33	Gray Limestone: slightly graphitic, quite broken and ground core			
1925.00	583.33	2047.00	620.30	Gray Limestone: slightly graphitic, less broken and ground core			
2047.00	620.30	2093.00	634.24	Dark Limestone: quite graphitic			
2093.00	634.24	2280.00	690.91	Dark Graphitic Limestone: quite competent, with irregular discontinuous stringers of calcite. Afew zones of breccia with white CO3 matrix over a few inches at irregular intervals.			
2280.00	690.91	2500.00	757.58	Gray Limestone: quite crackled, but core is still competent and not broken. Evidence of cemented brecciation and fault gouge. Uneven fractures usually at 75 degrees to CA, some secondary CO3 stringers, irreg., discontinuous and at variable orientation to CA.			
				691 - 703: increased percentage of white carbonate stringers			
				726: fault gouge			
2500.00	757.58	2555.00	774.24	Fault Gouge Zone (?): gray colour, carbonate matrix, some argillaceous material recognisable (UNCONFORMITY?)			
2555.00	774.24	2566.00	777.58	Medium grained intrusive Diorite (?): light coloured			
2566.00	777.58	2669.00	808.79	Fault Gouge Zone (?): gray colour, carbonate matrix, some argillaceous material recognisable (UNCONFORMITY?)			
2669.00	808.79	2859.00	866.36	Medium grained intrusive Diorite (?): greenish coloured portions are quite fractured and ground core (fault zone?). Few CO3-chlorite-Bx clay zones @ 45-70 degrees to CA ,especially between 845.2- 845.8 and 861.8 - 863.5 meters			
2859.00	866.36	2914.00	883.03	Argillaceous - Quartzite (Aldridge or Creston): quite "cemented" and altered (silicified), some bx, irregular CO3 gouge veinlets over a few cm. THIS IS PROBABLY AN UNCONFORMITY			

DIAMOND DRILL LOG				R. H. STANFIELD GROUP			PAGE:	2 OF 2
HOLE NO A9-1-98		PROJECT:		ASPEN	PROPERTY:	ABJ GROUP #1	OBJECTIVE:	
FROM ft	FROM m	TO ft	TO m	DESCRIPTION			SAMPLE FROM	TO
2914.00	883.03	3030.00	918.18	Argillaceous - Quartzite (Aldridge or Creston): light coloured, banding				
				at high angle to CA. Old unconformity at 912.12 - 912.27 meter				
				901.52- 902.42: broken and fractured core				
				906.67- 918.18: broken and fractured core				
3030.00	918.18	3145.00	953.03	Qtzitic-Argillite: quite massive, little or no banding				
				918.8 - 940.91:broken and fractured core, some gouge zones				
				931.82 - 953.03: some carbonate in matrix of gouge and fault.				
3145.00	953.03	3855.00	1168.18	Qtzitic-Argillite: quite massive, little or no banding				
				some sections more qtzitic.				
				Broken and fractured core @: 955.45 - 956.06, 958.79 - 961.52,				
				965.46 - 966.06, 970.30 - 972.12, 975.61 - 975.76,				
				977.87 - 978.18, 1000.91 - 1003.33, 1019.39 - 1019.70,				
				972.88 - 973.33: Qtz-CO3-bx, some chlorite filled crackle zone and				
				and sulphides similar to Bul River Mine				
				1010.61 - 1010.79: Quartz with some CO3, slightly bx, no crackle,				
				no sulphides				
				1050 - 1080.61: <5% diss. and stringer pyrrhotite parallel to banding				
				1080.61 - 1081.21: fault bx, some CO3 cement, broken and fract.core				
				1086.06 - 1087.27: slightly bleached look				
				1089.09 - 1096.97: some fractured core				
				1144.55 - 1145.15: some fractured core, few gouge zones				
3855.00	1168.18	3858.00	1169.09	Bleached looking, fine grained, equigranular intrusive, dyke (?), seems				
				to have cemented a fault zone				
3858.00	1169.09	4088.00	1238.79	Qtzitic-Argillite: quite massive, little or no banding				
				pyrrhotite-py stringers and diss. Generally parallel to banding,				
				which is @ 45-60 to CA				
4088.00	1238.79	4092.00	1240.00	Bleached looking, fine grained, equigranular intrusive, dyke (?)				
4092.00	1240.00	4179.50	1266.52	Qtzitic-Argillite: quite massive, little or no banding				
4179.50	1266.52	4190.50	1269.85	Qtz-Co3-bx (fault zone?), not as bx as in previous sections, and higher				
				quartz content				
4190.50	1269.85	4284.00	1298.18	Qtzitic-Argillite: quite massive, little or no banding				
				1293.03 - 1295.3: Qtz-CO3-bx, not much quartz, mostly CO3 cement,				
				quite competent. Pyrrhotite diss and clots <5%				
		4284.00	1298.18	END OF HOLE				



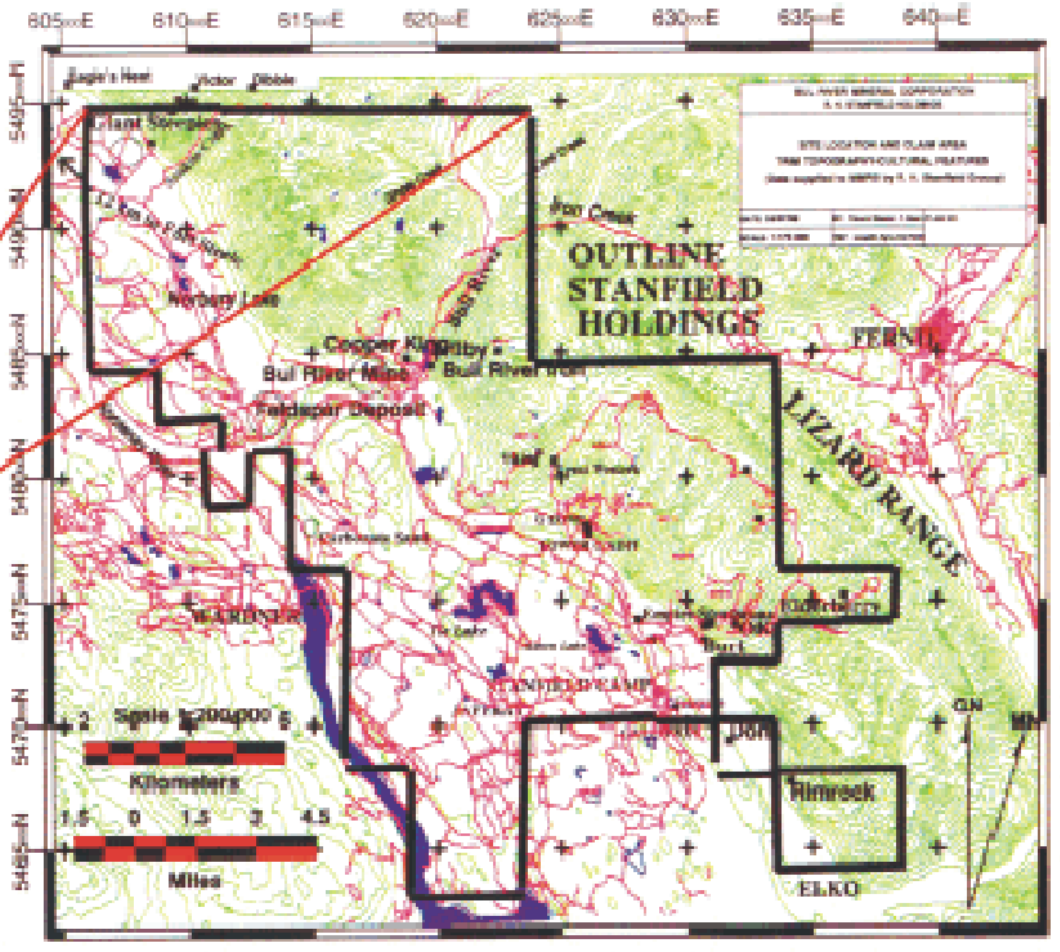
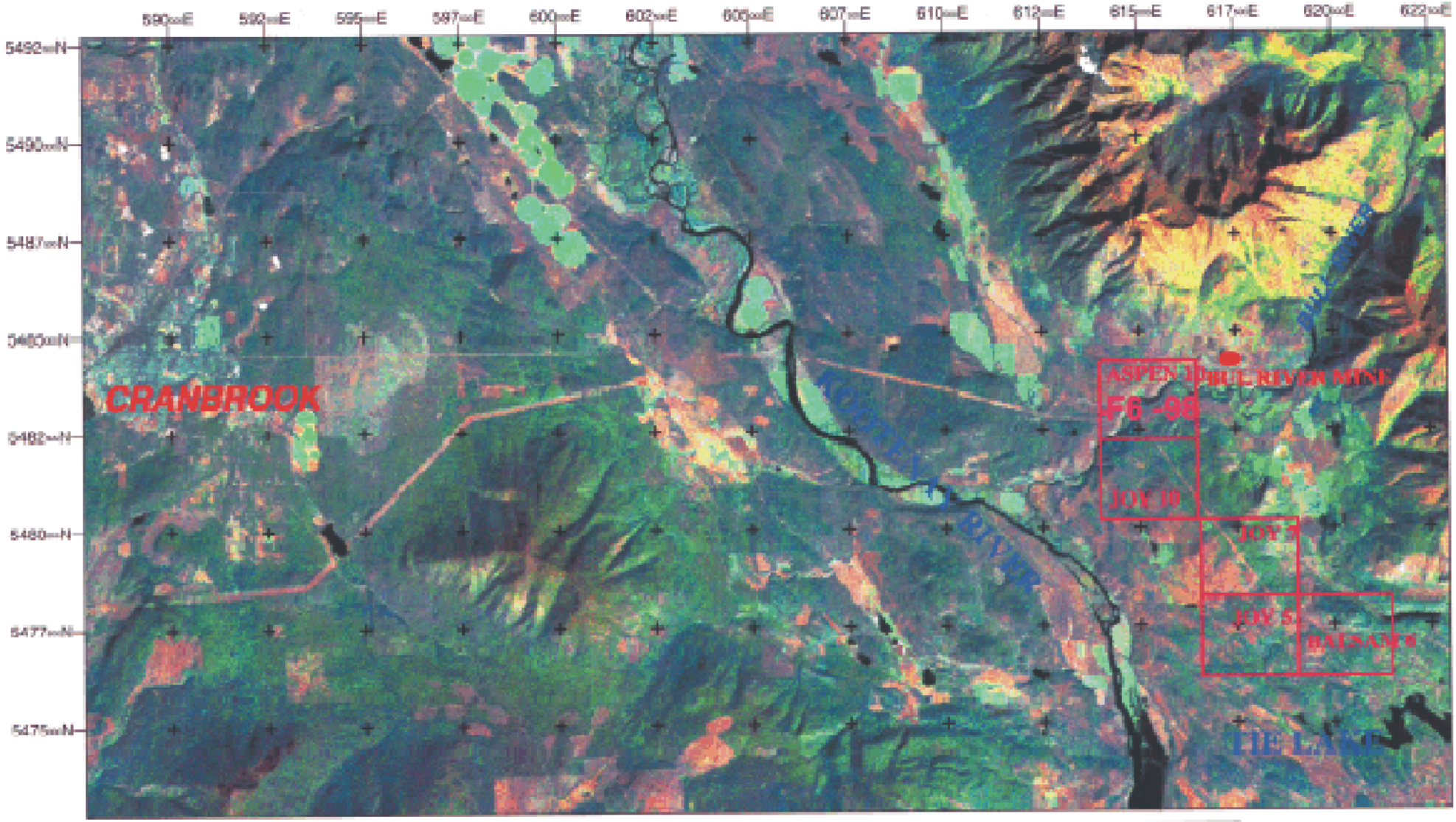


Figure 1

THE
R. H. STANFIELD
GROUP



GRID N

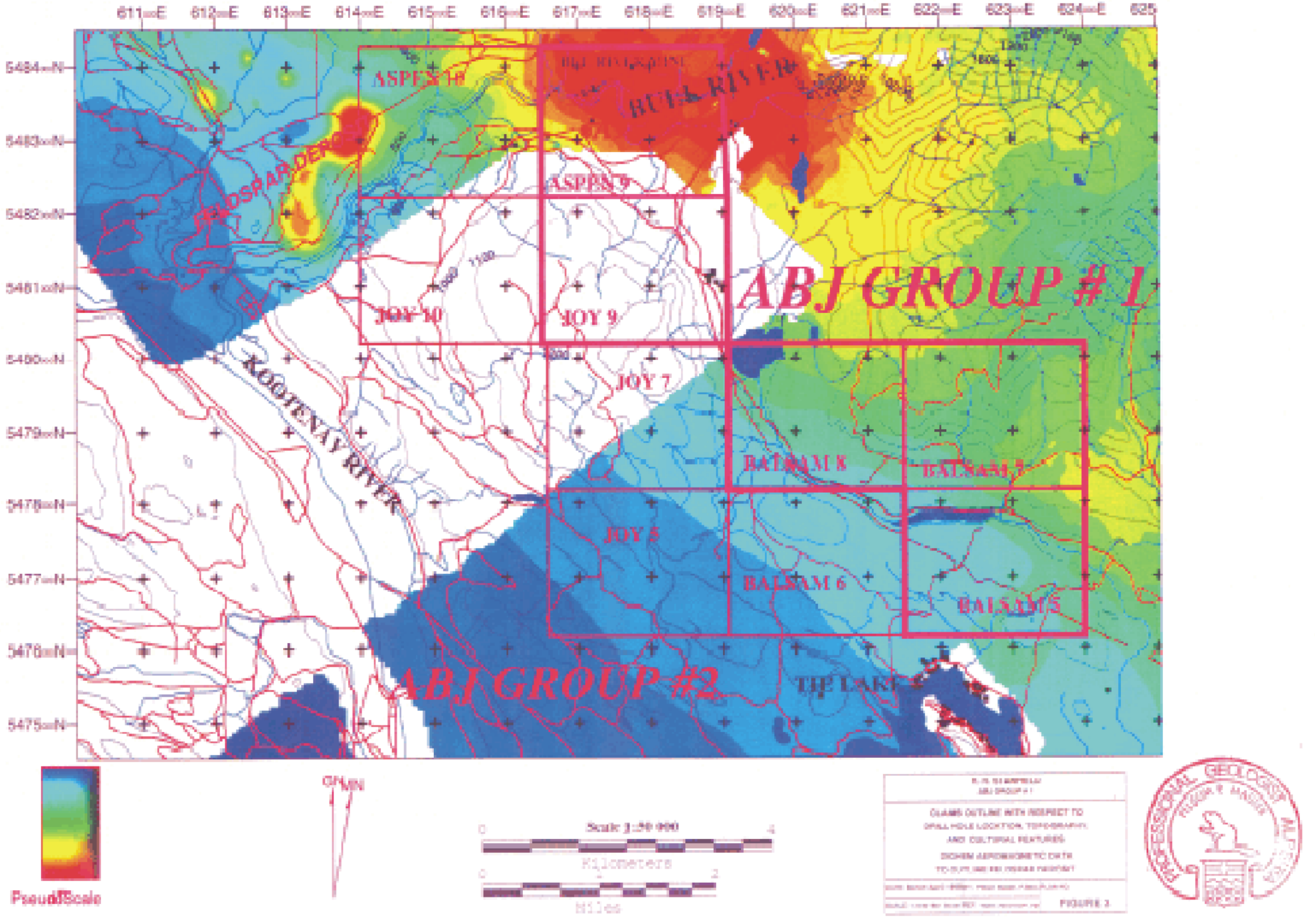
0 2.5 5 7.5 10
Kilometers

0 1.5 3 4.5 6
Miles

G. D. STANFIELD
ABJ GROUP 11

CLAIMS OUTLINE WITH RESPECT TO
DRILL HOLE LOCATION, AND
REGIONAL FEATURES
SATELLITE IMAGERY
(SAMOS 121 plate)

FIGURE 2


611mE
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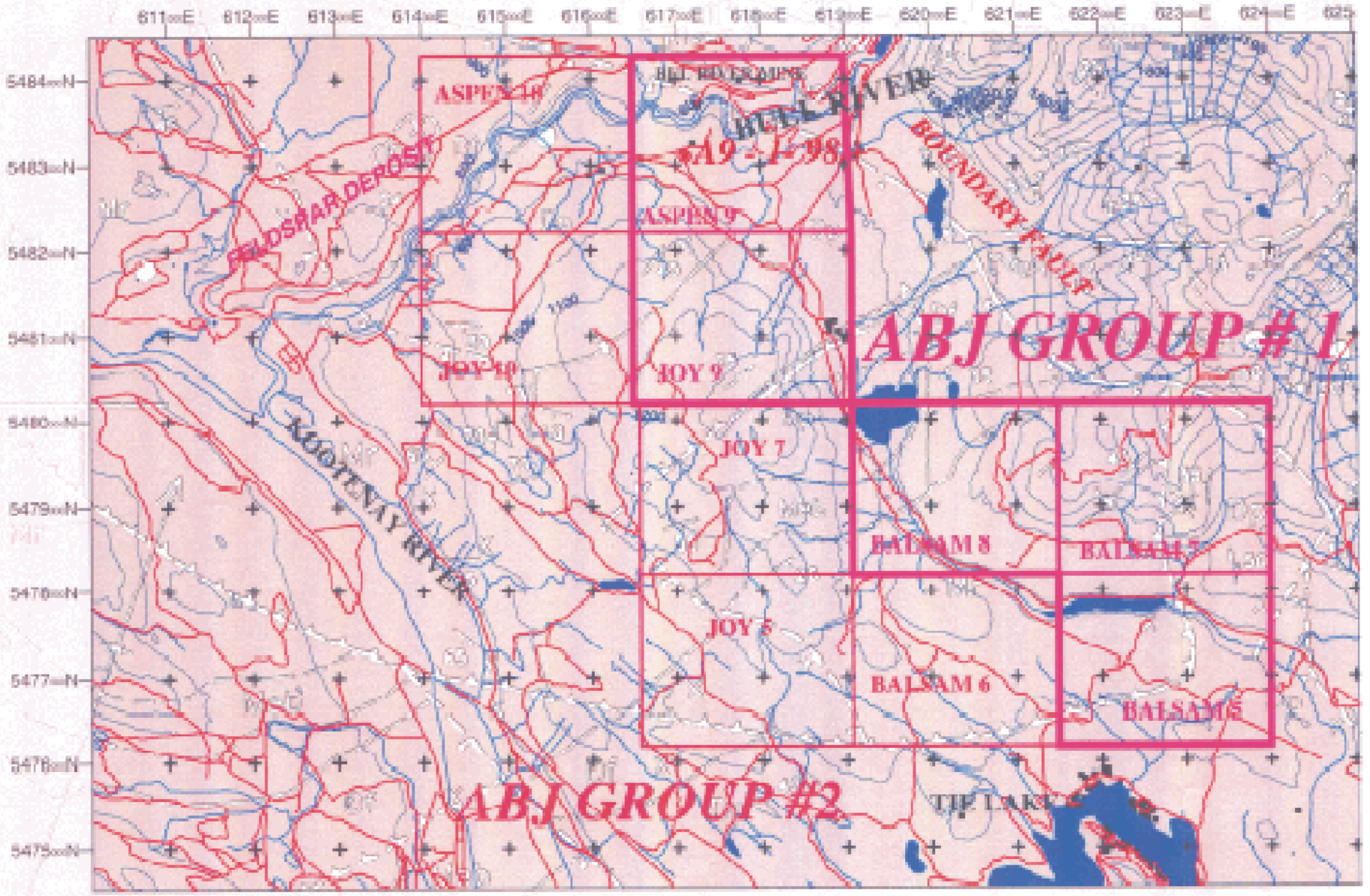
5479mN
5478mN
5477mN
5476mN
5475mN
ASPEN 10
ASPEN 9
JOY 10
JOY 9
JOY 7
JOY 8
BALSAM 8
BALSAM 6
BALSAM 5
ABJ GROUP # 1
ABJ GROUP #2
FELDSPAR DEP.
KOOTENAY RIVER
TIE LAKE
Pseudo Scale
GRID N
Scale 1:50 000
Kilometers
Miles
CLAIMS OUTLINE WITH RESPECT TO
DRILL HOLE LOCATION, TOPOGRAPHY,
AND CULTURAL FEATURES
OVER AEROMAGNETIC DATA
FIGURE 3



N. H. STANFIELD
ABJ GROUP # 1

COMPILATION MAP

REGIONAL LOCATION, CLAIM OUTLINE

WITH GEOLOGY FROM MOY (BULLETIN 84)

FIGURE 4

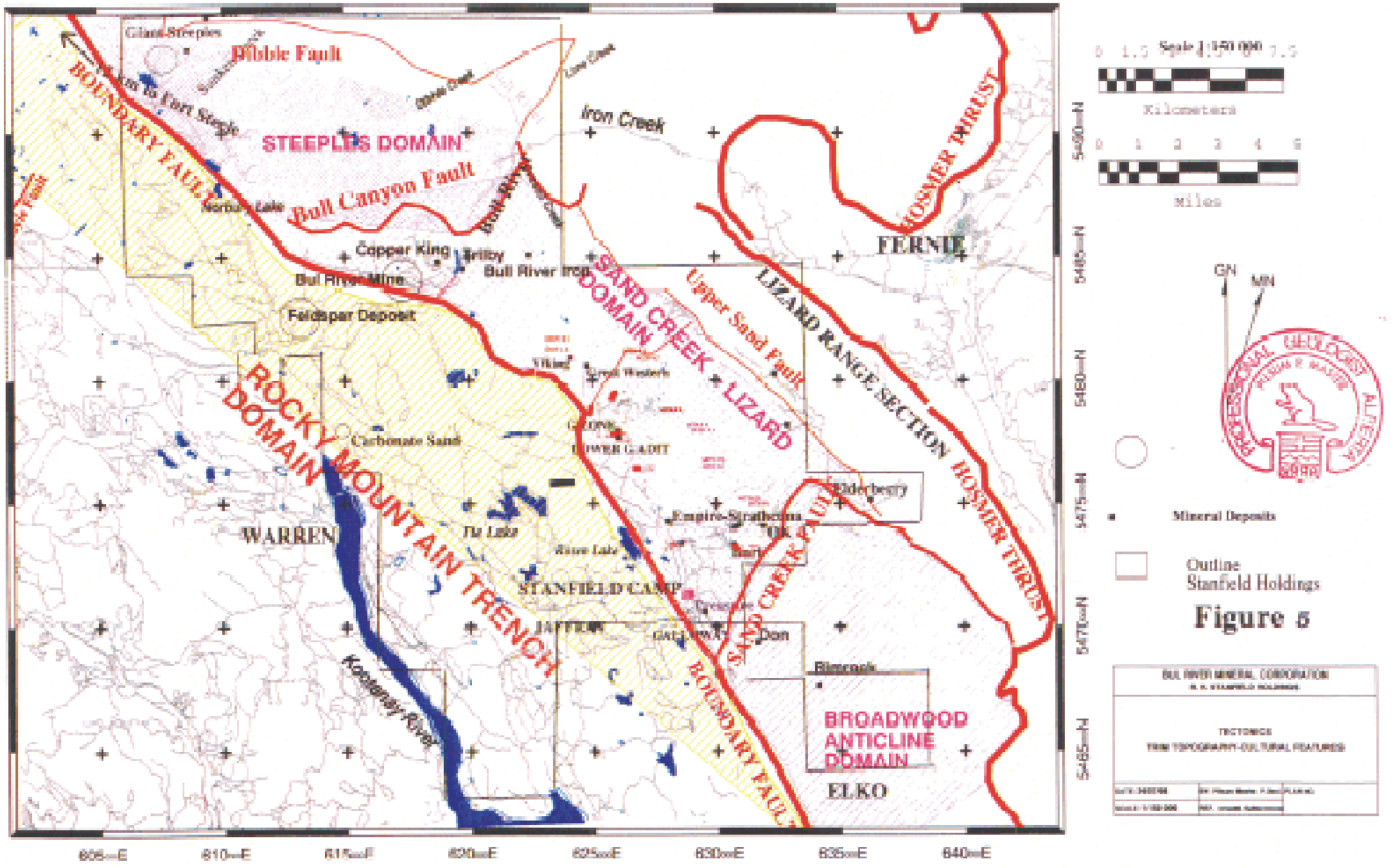


Figure 5

BULL RIVER MINERAL CORPORATION
B. C. STANFIELD HOLDINGS

TECTONICS
TRIM TOPOGRAPHY-CULTURAL FEATURES