

DRILLING REPORT ON ABJ GROUP #2

**FORT STEELE MINING DIVISION
BRITISH COLUMBIA**

**GROUP CENTRE: 616500E, 548000N, Datum NAD 83, Projection UTM Zone 11
WORK CENTRE: 613964E, 5482938N, Datum NAD 83, Projection UTM Zone 11**

**FOR
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**GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT**

April 1999

25,879

MASTER MINERAL RESOURCE SERVICES LTD.

CONTENTS

	Page:
INTRODUCTION	2
LOCATION, ACCESSIBILITY AND TOPOGRAPHY	2
PROPERTY	3
OBJECTIVES, SCOPE AND DESCRIPTION OF WORK DONE	3
FELDSPAR – INDUSTRIAL MINERAL PRODUCT SPECIFICATIONS, CHEMICAL COMPOSITION (GRADE DETERMINATION)	4
DESCRIPTION OF PART OF 1998 DRILLING PROGRAM (F6-98 DRILL HOLE)	5
CONCLUSIONS AND RECOMMENDATIONS	5
COST STATEMENT	6
REFERENCES	8
STATEMENT OF QUALIFICATION	9

APPENDIX 1: DRILL LOGS, CLASSIFICATION OF
MONZONITE-DIORITE

APPENDIX 2: Statement of Work, Notice to Group

	Following Page:
Figure 1: Site Location and Claim Area, TRIM Topography And Cultural Features	2
Figure 2: Claims Outline With Respect To Drill Hole Location And Regional Features, Satellite Imagery	2
Figure 3: Claims Outline With Respect To Drill Hole Location Topography And Cultural Features, DIGHEM Aeromagnetic Data To Outline Feldspar Deposit	3

INTRODUCTION:

Drilling programs in 1987 and 1994 located a deposit of feldspar porphyry on the Aspen 11 claim. Subsequent surface mapping and airborne geophysical surveys outlined the extension of the deposit. The deposit extended into the adjacent Aspen and Steeples claims. Currently the deposit is recognized as a large intrusive stock of monzonite -diorite composition with feldspar as the main mineral component, and quartz and mica as the other rock forming minerals in relatively small proportion.

The monzonite diorite stock has intruded Devonian sediments, mostly limestone, and in some places assimilation of large blocks and xenoliths of the host rock alters its composition.

Feldspar is used in the manufacture of container glass and glass fiber insulation, in ceramic whiteware products and glazes, in wall and floor tile compositions, and as a filler-extender in paints, plastics and foam rubber.

Previous work on the deposit indicate that it is relatively uniform in all components, except carbonates, which are mainly calcite and siderite. Iron content is directly correlated to the magnetite and siderite content. Material characterization to date indicates that physical and chemical properties will meet the specifications for the glass and ceramic industry after completion of the current program of process research. In certain portions of the deposit, iron content exceeds the specifications for the ceramic industry, and subsequently the total iron content is used as the primary characteristic for grade determination in drilling and sampling programs.

LOCATION, ACCESSIBILITY & TOPOGRAPHY:

The Aspen claims are located in southeastern British Columbia, approximately 30 kilometers 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 10 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. 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 1300 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. The claims are in the Fort Steele Mining Division in N.T.S. 82G/6, centered approximately at 616500E, 5480000N (Datum NAD 83, Projection UTM Zone 11).

Figure 1 is a Site Location with respect to southeastern 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, labeled are the location of Cranbrook, the closest urban center and some of the major physiographic and other cultural features.

Figure 3 is a zoom-in to a larger scale showing the ABJ Group #2 claims on a background of drainage patterns, roads and major cultural features (all from digitized TRIM data). In addition the location of a drilling program on Aspen #11 and #10 is shown. ERMAPPER software was used to put together and print Figure 3. Costs of work on drill hole F6-98 has been used for assessment work in this report, and the location of F6-98 is shown in magenta colour.

PROPERTY:

Table 1: Work applied to Claims in ABJ Group #2:

Claim Name	Tenure No.	No. Of Units	Current Expiry Date	\$ value to be applied	Years applied	New Expiry Date
Aspen 10	322366	20	Nov 10, 2003	0	0	Nov 10, 2003
Joy 10	361196	20	Jan 15, 1999	10,000	4	Jan 15, 2003
Joy 5	361302	20	Jan 31, 1999	10,000	4	Jan 31, 2003
Joy 7	361301	20	Jan 31, 1999	10,000	4	Jan 31, 2003
Balsam 6	209748	20	July 5, 1999	16,000	4	July 5, 2003

OBJECTIVES, SCOPE AND DESCRIPTION OF WORK DONE:

The Aspen claims are adjacent to the block of claims on which the Bul River Mine is located. The mine-mill was operated in the 1970s by Placid Oil and was primarily a producer of copper concentrates. During the course of step-out drilling in 1987, one diamond drill hole intersected a significant section of feldspar porphyry intrusion. The author of this report (see November 1994 assessment report) examined the core and the value of the deposit as a source of feldspar industrial commodity was recognized. In 1994 two percussion drill holes were completed and sampled to extend the reserves on the deposit.

In the early 1990's a portion of the Aspen Claim group was covered by a DIGHEM airborne geophysical survey and a large magnetic anomaly was discovered to cover the area over the reserves recognized from the 1987 and 1994 drilling program. This same magnetic anomaly extends for a considerable distance south and southwest of the initially drilled (discovery) area.

In 1996 eleven percussion drill holes were completed to investigate the area to the south of the discover area. One percussion hole (F1-96) was completed to the west of the original discovery area to determine if the feldspar intrusive extended west of the boundary indicated by the aeromagnetic anomaly. A total of twelve drill holes were completed. An assessment report

covering the first four of the twelve holes was filed in October 1996. Another drilling report filed for assessment in October 1997 covers the remaining eight holes (F5-96 to F12-96).

In 1991 and 1993 two assessment reports were filed to cover assessment costs on DIGHEM airborne surveys that includes the area covered by this claim group and adjacent claims. A distinct higher magnetic susceptibility located by this survey correlates with the extent of the monzonite-diorite intrusive based on surface outcrops and drill intersections to date, however the true extension of the intrusive has not yet been fully delineated by drilling.

Previous drilling programs on the Feldspar deposit used percussion drilling and the cuttings from the 1996-drill program were sampled every 1.52 meters (five feet), equivalent to anticipated bench width in open shelf mining of the deposit. The cuttings were examined, and initially in the program, the lithology logged using visual criteria like mineralogy, grain size proportion, and colour --specifically attributable to secondary iron. Subsequently however, it was determined that chemical grade criteria using specific elements useful for determining product specifications, was a more reliable method for determining "grade". Samples from the 1996 program were cut and analyzed for total iron (as % Fe_2O_3) and for alkalis generally at 1.52 meter interval.

In the 1998 drilling program diamond drilling was used and the whole section was recovered as core. This was done partly to get a better understanding of the alteration of the deposit (particularly the argillic to propylitic alteration versus concentration of alkalis), and to have the core available for future examination and physical testing for products such as building stone.

FELDSPAR -- INDUSTRIAL MINERAL PRODUCT SPECIFICATIONS VS. CHEMICAL COMPOSITION (GRADE CRITERIA):

Although feldspar is a common rock-forming mineral, commercial concentration of feldspars are found in pegmatite, alaskite, aplite, feldspathic sand and feldspathic quartzite. Where concentrations are high the tonnage is relatively low, except in secondary deposits like feldspathic sand and in intrusive rocks. Intrusives of batholithic proportions that are almost mono-minerallic feldspar are rare. The Aspen claim deposit is one of these rare types with a potential for large tonnage and low impurities like quartz, mica and secondary minerals like magnetite.

Feldspar is used mainly in the glass and ceramic group of industries. In both industries there is a considerable overlap of chemical specifications, with higher tolerance for iron in the glass industry. Only the grain/particle size range specifications vary from -30 to about +140 mesh for the glass industry, and -140 mesh to as fine as -325 mesh for the ceramic industries. This allows the same source material to undergo primary processing to produce glass grade, with subsequent processing to increase purity and reduce particle size for the ceramic grade.

DESCRIPTION OF PART OF 1998 DRILLING PROGRAM (F6-98 DRILL HOLE):

Between December 4 and December 18, 1998, one diamond drill hole "F6-98" was completed for R. H. Stanfield by Schmidt Drilling on Aspen 10. The following table summarizes the location of the drill collars.

<u>Drill Hole #</u>	<u>UTM (NAD 83 Datum)</u>		<u>Dip</u>	<u>Length</u>	<u>Collar Elev.</u>
	<u>North</u>	<u>East</u>			
F6 - 98	5482937.6	613964.5	-90	378.8m	849.7m

The collar was surveyed by Mel Kearney, mine surveyor at the Bul River Mine, and was tied in to base stations established a few years ago at the adjacent Bul River Mine site and the Aspen claims. The drilling program was supervised by site geologist Darren G. Anderson.

The diamond drill log is in **Appendix 1**. Based on the examination of cuttings from previous drilling programs and the correlation of visible criteria with some of the analysis done on the cuttings, a classification of the monzonite-diorite into Types A to E was set up to facilitate subsequent logging and correlation. The classification is included in Appendix 1, and is open to revision as and when new data requires, and as yet the core logging has shown that it is quite valid. It is based on colour of alteration products, e.g. purple associated with intense argillic alteration.

Whole core is necessary for some of the physical testing, e.g. compression tests for building stone, and after the completion of these tests, the core will be split and analyzed for %Fe₂O₃, and for one or more major elements, e.g. alkalis. Subsequently these chemical analysis will be used in making composite samples of the drill cuttings for further process and product testing programs. There are now visual criteria to allow determination of grades by examination of drill cuttings from future drilling programs. Chemical boundaries and thresholds are the only way to determine grade cut-off initially for compositing, and subsequently for mine planning in combination with economic and market analysis.

CONCLUSIONS AND RECOMMENDATIONS:

It has been possible to divide the major portion of the deposit based on chemical grade criteria. Bench scale tests in progress allow determining which iron threshold(s) of the raw material will produce specific range of products. The alkalis also are useful in further subdividing the deposit based on potential product specifications. However, for grade control during step-out drilling, mine development and mining it will be necessary to rely almost solely on visual criteria, since results of chemical analysis are not immediately available. Correlation of alkali and iron content with visual criteria based on the classification scheme in Appendix 1, provides a relatively easy and inexpensive method for "grade determination".

It is recommended that the classification method and the underlying principle of correlating alkali and iron content with colour and nature and extent of hydrothermal alteration be refined by chemical analysis of the drill core.

In addition, other aeromagnetic anomalies on the Steeples claims, with the same characteristics as the one corresponding to this showing, be examined and evaluated by ground follow-up programs of detailed mapping, geophysics and drilling.

COSTS STATEMENT:

(Based on information provided by R. H. Stanfield and Bul River Mineral Corporation Ltd.)

General Information on F6-98

A:) Diamond Drilling

Dates Drilled	December 8, 1998 to December 16, 1998	
Contractor	Schmidt Drilling Ltd. PO Box 98 Tees, Alberta T0C 2N0	
Crew	Drillers- Darcy Schmidt, Kevin Schmidt Helpers- Ken Miller, L. Laye, Rod Kellner	
Site Crew	Manager- Ross Stanfield	Box 94, Galloway BC
	On-Site Geologist- Darren Anderson	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 Triplex Hi-Pressure pump, 16' Gooseneck Stock Trailer	

B:) Claim Information

Claim Group	ABJ Group #2
Claims	Aspen #10, Joy #10, Joy #7, Joy #5, Balsam #6

Statement of Costs

Diamond Drill Hole F6-98

Section A: (Background)

Drilling Days	8
Period Days- December 8 to 16 1998	8
Number of Driller R&B Days	37
Total Diamond Drilling	1250

Section B: Direct Costs

I.) Contractor Rates, Drill Rig Charges

	Hours	Rate/Hr	Total
Schmidt Drilling Rate	164.5	\$185.00	\$30,432.50
Schmidt Travel Time	16	\$72.00	\$1,152.00

II.) Drill Bits

	Qty	Cost/per	Total
Series 6 NQ Longyear	2	\$585.00	\$1,170.00
6 1/4" Driver Bit	1	\$395.00	\$395.00
8" Ring Bit	1	\$401.50	\$401.50
6 5/8" Drive Shoe	1	\$58.00	\$58.00
NQ Reaming Shell	1	\$540.00	\$540.00

III.) Drill Muds

	Qty	Cost/per	Total
20L UltraVis Mud	12	\$100.00	\$1,200.00

IV.) Drill Pipe

	Footage	Cost/per	Total
6 5/8" Casing	85	\$8.75	\$743.75
NQ Drill Pipe	1250	\$2.56	\$3,200.00
NW Casing	90	\$11.38	\$1,024.20

V.) Miscellaneous

	Qty	Cost/per	Total
Complete Core Barrel Assembly	1	\$982.60	\$982.60
NQ Corelifters	3	\$9.24	\$27.72
NQ Corelifter Cases	3	\$16.08	\$48.24

Section C: Indirect Costs

	# of days	\$/day	Total
R&B Contractor	37	\$65.00	\$2,405.00
Wage Foreman	8	\$200.00	\$1,600.00
Wage On Site Geologist	5	\$200.00	\$1,000.00
R&B Foreman	8	\$65.00	\$520.00
R&B On Site Geologist	5	\$65.00	\$325.00
4x4 Foreman	8	\$50.00	\$400.00
4x4 On Site Geologist	5	\$50.00	\$250.00

Section D: Ancillaries

	Hours	Rate/Hr	Total
Case 580D Backhoe	4	\$42.00	\$168.00

Total Costs for Diamond Drill Hole F6-98 **\$48,043.51**

REFERENCES:

- Hoy, T., Van Der Heyden, P.; 1988; Geochemistry, Geochronology and Tectonic Implications of two Quartz Monzonite Intrusions, Purcell Mountains, Southeastern British Columbia; vol.25, pp. 106-115.
- Lamb, A.T., Smith, D.W.; 1962; Refraction Profiles Over the Southern Rocky Mountain Trench Area of B.C.; Journal of the Alberta Society of Petroleum Geologists; vol.10, pp. 428-437.
- Leech, G.B.; 1962; Structure of the Bull River Valley near Latitude 49°35'; Journal of the Alberta Society of Petroleum Geologists; vol.10, pp. 396-407
- Leech, G.B.; 1958; Fernie Map Area, West Half, British Columbia; Geological Survey of Canada; Paper 58-10.
- Lefond, S.J.; 1983; Industrial Minerals and Rocks, 5th Edition, Society of Mining Engineers, AIME.
- Master, P.P.; 1994; Investigation of Commercial Feldspar Resource on Aspen 9,10,11 and 12 Claims; Assessment Report filed for R. H. Stanfield.
- Master, P.P.; 1996; Further Investigation of Commercial Feldspar Resource on Aspen Group #1; Assessment Report filed for R. H. Stanfield.
- Master, P.P.; 1997; Drilling Report on Aspen Group #1; Assessment Report filed for R. H. Stanfield.
- Master, P.; 1990; General Geology of the Gallowai Property, A Tecteno-Stratigraphic Classification; Report in company files.
- Master, P.; 1991; DIGHEM Airborne Survey on the Steeples Claim Block and Portion of the Aspen Claim Block; Report filed for assessment work. Report in company files.
- Master, P.; 1993; DIGHEM Airborne Survey on the West Steeples Claim Block and Portion of the Aspen Claim Block; Report filed for assessment work. Report in company files.
- Master, P.; 1993; I-Power Vision Imaging of Geophysical Data from DIGHEM Airborne Survey on the East Steeples Claim Block; Report filed for assessment work. Report in company files.
- Master, P.; 1999; Rock and Stream Sediment Geochemistry and Petrographic Analysis on Steeples Claims #2 to 10, 12 to 19 and 21 to 30; Assessment Report filed for R. H. Stanfield.

STATEMENT OF QUALIFICATION:**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 practiced my profession since 1967.

This Drilling Report on the ABJ Group #2 is based upon my direct involvement in:

- a. The research, planning, examination of drill cuttings, drill core, outcrops, planning and selection of physical and chemical properties to complete grade determinations and material characterization.
- b. The compilation of geological literature, computer imaging and compilation using DIGHEM airborne geophysical data, TRIM topography in digital format.
- c. Computer imaging and CAD production of maps, and figures and report writing.

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	<i>Pilsum Master</i>
Date	<i>March 18, 99</i>
PERMIT NUMBER: P 5336	
The Association of Professional Engineers, Geologists and Geophysicists of Alberta	

APPENDIX 1
DRILL LOGS
CLASSIFICATION OF MONZONITE-DIORITE

BUL RIVER MINERAL CORPORATION LTD.					R. H. STANFIELD				
PROJECT: Feldspar Delineation		LOCATION: north east (north of power line) of F1-98							
CLAIMS: Aspen 10									
DRILL HOLE NO: F6-98		DRILLED BY: Schmidt Drilling Ltd.			DIP:	-90	AT:	0.0 ft	
		DATES DRILLED: Dec. 10/ 98 - Dec. 18/ 98							
		LOGGED BY: Darren Anderson							
		DATES LOGGED: Dec. 19/ 98 - Dec. 22 / 98							
					TOTAL	LENGTH:	1250.0 ft.	(378.8 meters)	
FROM (Ft)	FROM (Metres)	TO (Ft)	TO (Metres)	DESCRIPTION	SAMPLE #	INTERVAL		TOTAL Fe %	Fe₂O₃ %
						From (ft)	To (ft)		
0.00	0.00	90.00	27.27	Overburden; an assortment of boulders, cobbles and pebbles of dominantly sedimentary affiliation.					
90.00	27.27	316.50	95.91	Interbedded limestone with argillite and mudstone; moderately competent interval with sporadic fault gouge throughout. From 316.5- 280 ft- the rock appears to be an unconformity. Lower contact with feldspar unit is at 45-50 degrees to the core axis.					
316.50	95.91	450.00	136.36	Type "D"; purple coloured groundmass with epidote altered plagioclase phenocrysts; average size of phenocrysts are 3mm x 1.5 mm; mod. Competent; moderate R.Q.D with a high recovery; core increases in incompetency from 400 ft to top of interval; abundant fractures with hematite and magnetite mineralization on the fracture planes; 20% of interval is composed of gouge					
450.00	136.36	481.00	145.76	Type "B"; pinkish white coloured groundmass with epidote altered plagioclase phenocrysts; minor					

				chlorite altered phenocrysts; fault zone at 466-472; defined by gouge and broken material; upper and lower fault contacts at 45 degrees to the core axis.				
481.00	145.76	579.00	175.45	Type "D"; purple coloured groundmass with epidote altered plagioclase phenocrysts; average size of phenocrysts are 3mm x 1.5 mm; mod.competent; moderate R.Q.D with a high recovery; fault zones at 570-579--broken material with gouge throughout				
579.00	175.45	655.00	198.48	Type "B"; pinkish white coloured groundmass with epidote altered plagioclase phenocrysts; minor chlorite altered phenocrysts; competent.				
655.00	198.48	664.00	201.21	Type "D2"; purple, argillically altered groundmass with pink coloured plagioclase phenocrysts; approx. 40% of the core consists of phenocrysts that are up to 3mm x 1mm in dimension; trace epidote altered phenocrysts; competent interval with a hogh RQD and recovery.				
664.00	201.21	696.00	210.91	Type "B"; pinkish white coloured groundmass with epidote altered plagioclase phenocrysts; minor chlorite altered phenocrysts; competent with high RQD. and recovery				
696.00	210.91	704.00	213.33	Type "D2"; greyish purple, argillically altered groundmass with pink coloured plagioclase phenocrysts; approx. 40% of the core consists of phenocrysts that are up to 3mm x 1mm in dimension; trace epidote altered phenocrysts; competent interval with a high RQD and recovery; core does not react with HCL.				
704.00	213.33	736.00	223.03	Type "B"; pinkish white coloured groundmass with				

				epidote altered plagioclase phenocrysts; minor chlorite altered phenocrysts; competent with high RQD. and recovery; fault zone at 713-723.					
736.00									
	223.03	745.00	225.76	Type "D2"; greyish purple, argillically altered groundmass with pink coloured plagioclase phenocrysts; approx. 40% of the core consists of phenocrysts that are up to 3mm x 1mm in dimension; trace epidote altered phenocrysts; competent interval with a high RQD and recovery.					
745.00									
	225.76	785.00	237.88	Type "B2"; pinkish to pinkish white green groundmass (dominantly pinkish white); epidote and sericitically altered plagioclase phenocrysts; there is also an abundance of chlorite altered plagioclase phenocrysts; competent core with a high RQD and high recovery.					
785.00									
	237.88	905.00	274.24	Type "D2"; greyish purple, argillically altered groundmass with pink coloured plagioclase phenocrysts; approx. 40% of the core consists of phenocrysts that are up to 3mm x 1mm in dimension; trace epidote altered phenocrysts; variably competent core; high recovery and moderate RQD; recemented fault breccia at 815-817					
905.00									
	274.24	955.00	289.39	Type "B2"; pinkish to pinkish white green groundmass (dominantly pinkish white); epidote and sericitically altered plagioclase phenocrysts; there is also an abundance of chlorite altered plagioclase phenocrysts; competent core with a high RQD and high recovery.					
955.00									
	289.39	960.00	290.91	Type "D2"; greyish purple, argillically altered groundmass with pink coloured plagioclase phenocrysts; approx. 40% of the core consists of phenocrysts that are					

				up to 3mm x 1mm in dimension; trace epidote altered phenocrysts; competent core; high recovery and high RQD; recemented fault breccia at 815-817					
960.00									
	290.91	1180.00	357.58	Type "B2"; pinkish to pinkish white green groundmass (dominantly pinkish white); epidote and sericitically altered plagioclase phenocrysts; there is also an abundance of chlorite altered plagioclase phenocrysts; competent core with a high RQD and high recovery.					
				large fault defined by gouge and sandy washout at 1020-1150; lost 13 ft of core due to washout					
1180.00									
	357.58	1205.00	365.15	Type "D"; purple coloured groundmass with epidote altered plagioclase phenocrysts; average size of phenocrysts are 3mm x 1.5 mm; mod. Competent; moderate R.Q.D with a high recovery.					
1205.00									
	365.15	1211.00	366.97	Type "B"; pinkish white coloured groundmass with epidote altered plagioclase phenocrysts; minor chlorite altered phenocrysts; moderately competent core with high recovery and moderate RQD					
1211.00									
	366.97	1250.00	378.79	Type "D"; purple coloured groundmass with epidote altered plagioclase phenocrysts; average size of phenocrysts are 3mm x 1.5 mm; mod. Core is extremely incompetent with a low RQD and abundant fault gouge-70-80%; 90-93% recovery.					
			378.79	END OF HOLE					

TYPES OF ALTERATION

ARGILLIC : OR CLAY

SOURCE MINERALS: K-SPAR, MICA, PLAGIOCLASE
(in order of preference)
MINERAL PRODUCTS: SERICITE, KAOLIN,
HEMATITE

PROPYLLITIC:

SOURCE MINERALS: PLAGIOCLASE
MINERAL PRODUCTS: EPIDOTE, CARBONATE
(CALCITE AND/OR SIDERITE)

CHEMICAL CLUES TO ALTERATION

FOR UNALTERED:

K_2O / Na_2O : close to 1:1
LOI: between those for Argillic and
Propyllitic types (see below)
Fe content: lower than for Argillic and
Propyllitic types (see below)

FOR ARGILLIC:

K_2O / Na_2O : >1:1
LOI : lower than Unaltered and Propyllitic
types
CaO: lower than Unaltered and Propyllitic
types
Fe content: highest of all types. Also Fe is
tied up as Magnetite and Hematite,
not much Siderite. Therefore, acid
leaching not of much help --use
Magnetic and Dithionite leaching

For Propyllitic:

K_2O / Na_2O : lower than Unaltered and
Argillic types (generally <1%)
LOI: highest LOI of all, due to presence of
carbonates as alteration products
CaO + MgO : highest of all particularly if
carbonate alteration is to
calcite /dolomite rather than
siderite

TYPE E: TOTAL ARGILLIC

"Brick Colour" Little Contrast between Phenocrysts and Groundmass

High K₂O, lower LOI, lower CaO

Very High Fe as MAGNETITE + HEMATITE (Fe₂O₃)

Phenocrysts: Argillic: Sericitic to Kaolin: Orange

Groundmass: Argillic Sericitic : Purple cast

TYPE D: MOSTLY ARGILLIC

"Green Eyes" in Purple Matrix

High K₂O, lower LOI, lower CaO

Very High Fe as MAGNETITE + HEMATITE (Fe₂O₃)

Propylitic: Epidote : Green

Phenocrysts:

Argillic:: Kaolin + Sericite: Purple Cast

Groundmass: Argillic: Sericite: Purple Cast

TYPE C: UNALTERED

"Flesh Colour" No Purple or Green in Phenocrysts or Groundmass

Low Fe

Phenocrysts: Unaltered Plagioclase

Groundmass: Unaltered Plagioclase

TYPE B: MOSTLY PROPYLLITIC SOME ARGILLIC

(Groundmass Only)

*"Green Eyes" in Pinkish to White to Greenish Matrix
("FLESH COLOUR")*

High Fe as MAGNETITE + SIDERITE

Phenocrysts: Unaltered or Propylitic: Epidote: White or Green

Propylitic: Epidote + Carbonate : Green

Groundmass:

Argillic: Sericite: Pink

TYPE A: TOTAL PROPYLLITIC

"Green Eyes" in White to Grey Matrix "Bleached" look

High Fe as MAGNETITE + SIDERITE

Phenocrysts: Unaltered or Propylitic: Epidote: White or Green

Groundmass: Propylitic: Epidote + Carbonate : Green

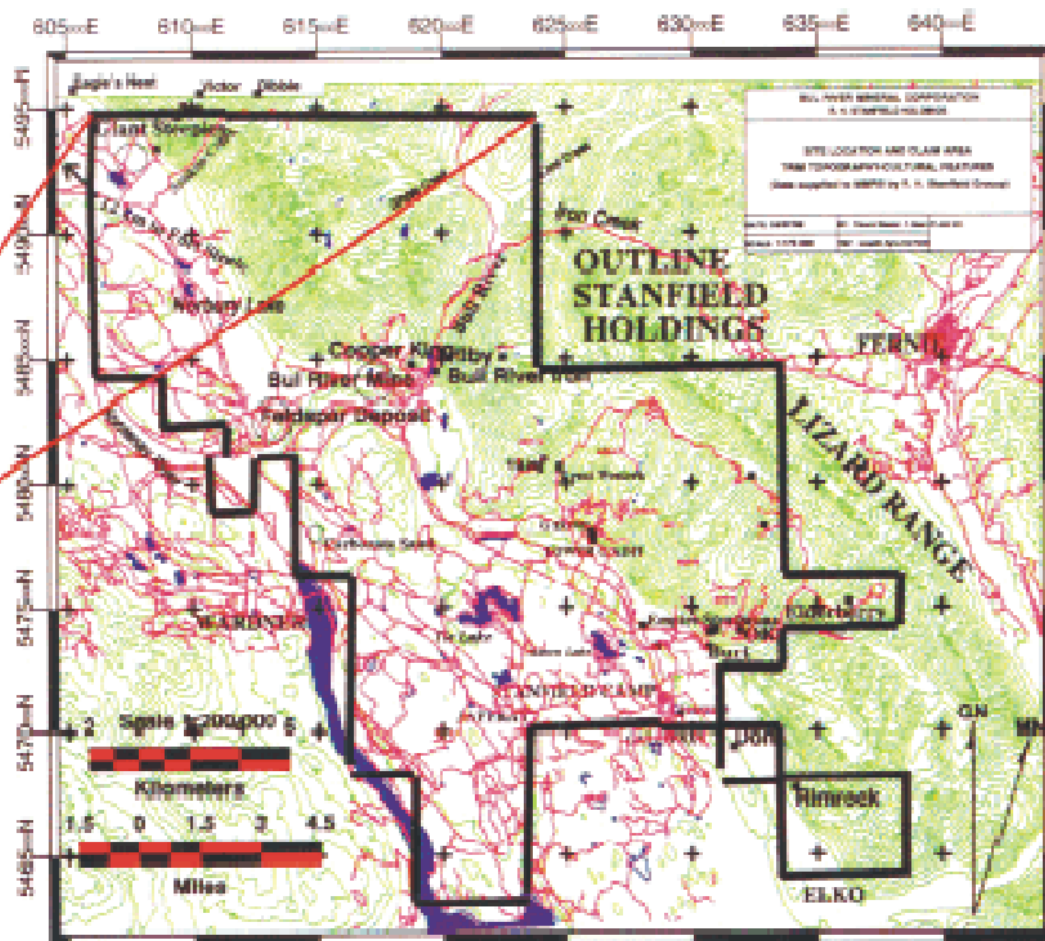
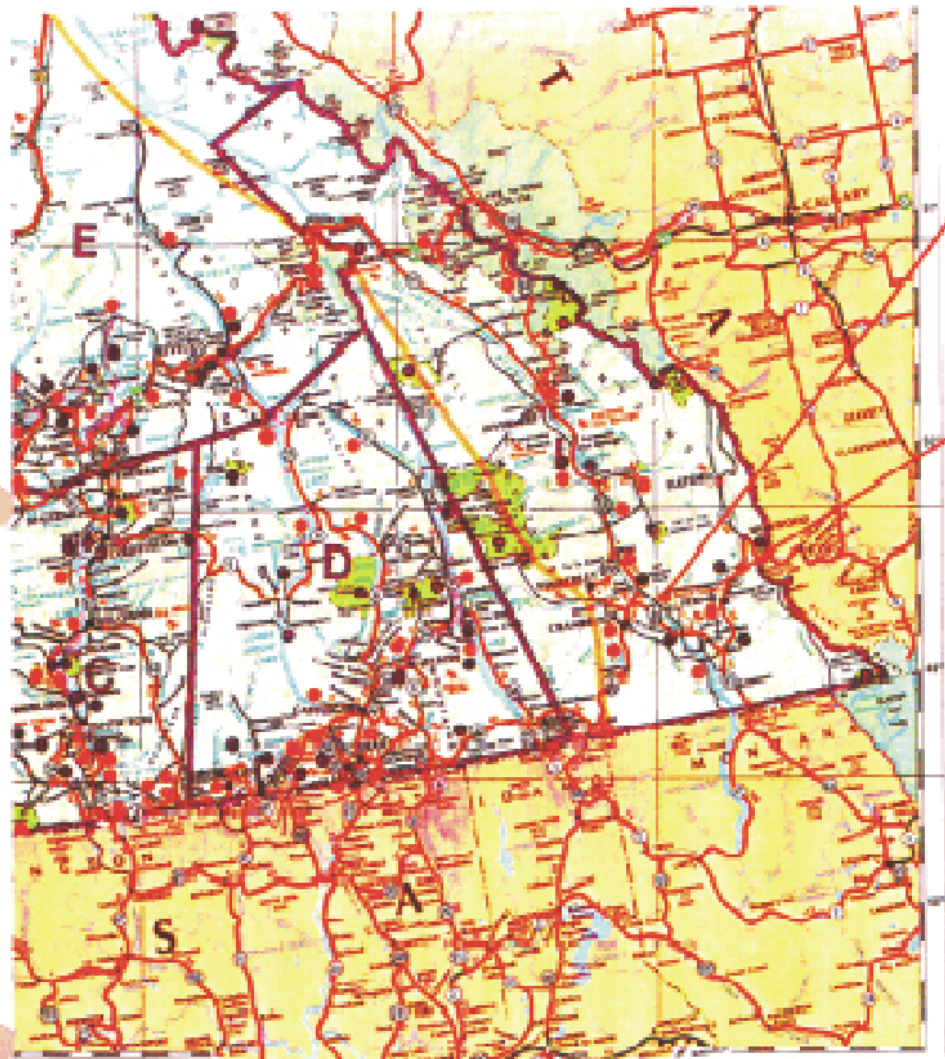
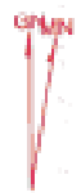
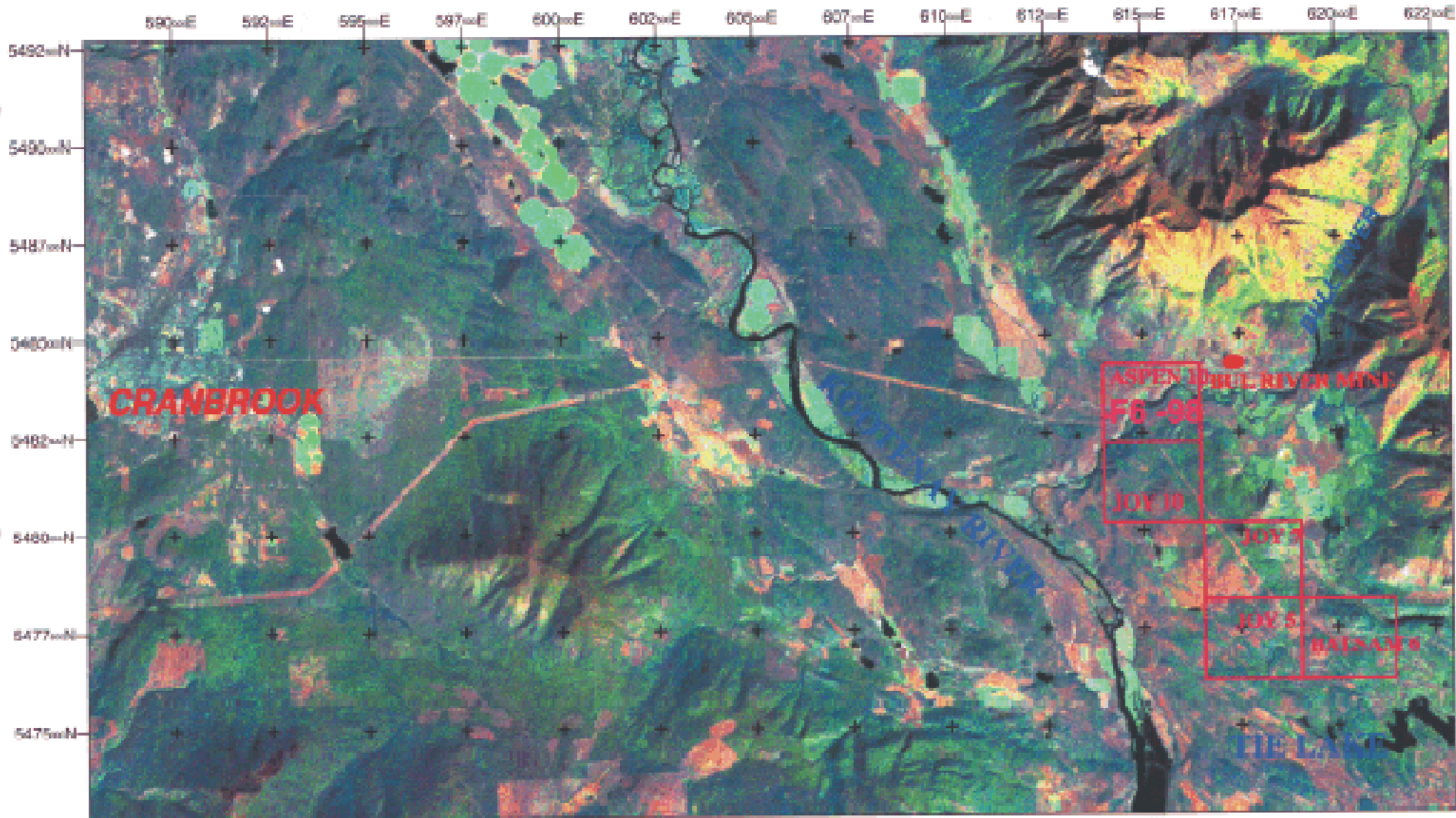
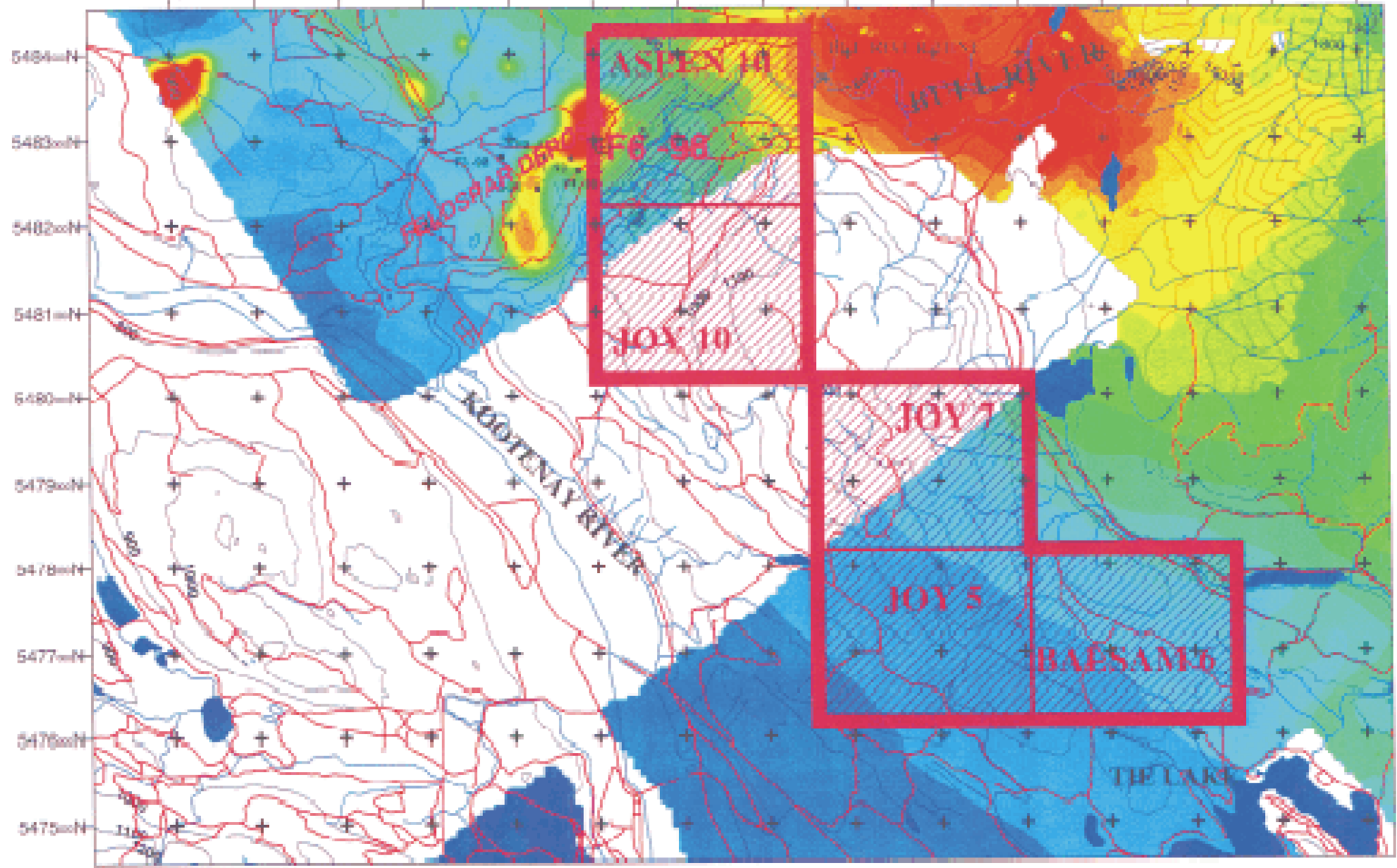


Figure 1



W. H. STAMFIELD AS/GRUP 11	
CLAIMS OUTLINE WITH RESPECT TO DRILL HOLE LOCATION AND REGIONAL FEATURES SATELLITE IMAGERY (SOURCE: Esri.com)	
DATE: April 2004	BY: Steve Baskin, Steve Wynn
PROJECT: Data for ESRI, Inc. (www.esri.com) FIGURE 2	

609°E 610°E 611°E 612°E 613°E 614°E 615°E 616°E 617°E 618°E 619°E 620°E 621°E 622°E 623°E



PseudoScale



D. H. STANFIELD-ABRIDGE
 CLAIM OUTLINE WITH RESPECT TO
 PMS 1 AND 2 / GEOPHYSICAL, TOPOGRAPHY,
 AND CULTURAL FEATURES
 GDEM GEOPHYSIC DATA
 TO-OUTLINE FELDSPAR DEPOSIT
 DATE: 04/11/2009 BY: D.H. STANFIELD-ABRIDGE
 SHEET 1 OF 10 SHEETS TOTAL SHEETS: 10 **FIGURE 3**