

FURTHER INVESTIGATION OF COMMERCIAL FELDSPAR RESOURCE ON ASPEN GROUP #1

FORT STEELE MINING DIVISION BRITISH COLUMBIA 49°30'N, 115°25'W

FOR R. H. STANFIELD 350 - 4723 1 St. Street S.W. Calgary, Alberta GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORTS

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By Pilsum P. Master, P.Geol. MASTER MINERAL RESOURCE SERVICES LTD. Calgary, Alberta

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GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT



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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. Currently the deposit is recognized as a large intrusive stock identified as monzonite with feldspar as the main mineral component, and quartz and mica as the other rock forming minerals in relatively small proportion.

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

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 siderite content. Material characterization to date indicates that all physical and chemical properties meet the specifications for the glass and ceramic industry. 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 clams 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. **Figure 1** is a satellite image (in 321plus4 band), showing the major physiographic and cultural features of the area Secondary gravel roads provide access to the Aspen Group #1. Most of the claims are 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.

The claims are in the Fort Steele Mining Division in N.T.S. 82G/6, centered approximately at $49^{0}25'45''$ N, $115^{0}25'$ W. **Figure 2** is an airphoto mosaic showing the outline of the Aspen claims. **Figure 3** is a larger scale topographic map showing the location of the drill holes with respect to physiographic, cultural features, and the claim boundaries. Topographic relief ranges from 840 meters to 1030 meters.

Figure 1A



SITE LOCATION



PROPERTY:

Name of Claim	Number of Units	<u>Tenure Number</u>
Aspen #9	20	321708
Aspen #10	20	322366
Aspen #11	20	311912
Aspen #12	20	311913
Aspen #13	10	340111

OBJECTIVES, SCOPE AND DESCRIPTION OF WORK DONE:

The Aspen Group #1 is 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 core was examined by the author of this report (see November 1994 assessment report) 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, therefore, in 1996 three percussion drill holes (F2, 3,4 - 96) were completed to investigate the area to the south (see Figure 3). 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.

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 the lithology logged using visual criteria like mineralogy, grain size proportion, and colour --specifically attributable to secondary iron. Samples were cut and analyzed for total iron content for each 1.52 meter interval. **Appendix 1** includes logs of the drill holes with the iron analysis. The iron content was composited by weight over sections of the feldspar deposit as differentiated by colour change(s) and grain size variability.



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.

1996 DRILLING PROGRAM (F-96 HOLES):

Between July 27 and August 10, 1996, four percussion drill holes were completed for R. H. Stanfield by Schmidt Drilling on Aspen 11. The following table summarizes the location of the drill collars.

<u>Drill Hole #</u>	UTM (NAI	<u>) 83 Datum)</u> Fast	Dip	Length	<u>Collar Elev.</u>
	<u>rtorth</u>	East			
F1 - 96	5483810	613521	-90 ⁰	106.06m	851.76m
F2 - 96	5482288	613261	-90 ⁰	106.06m	909.86m
F3 - 96	5482377	613024	-90 ⁰	219.70m	902.14m
F4 - 96	5482317	613417	-90 ⁰	154.55m	912.35m

Hole F1-96 is north and west of the discovery area where the drill holes of the 1987 and 1994 program are located (Figure 3). Holes F2, F3 and F4 are located in the area to the south end of the large aeromagnetic anomaly that outlines the extent of the feldspar intrusive

The drill hole logs are in **Appendix 1**. Every 1.52 meter section of the drill holes through the feldspar intrusive was sampled and analyzed for total iron (reported as Fe_2O_{3}). The results of the analysis are also in **Appendix 1**, together with the weighted average total iron over sections demarcated on the basis of the colour due to iron oxides and/or grain size variation.

There is not enough data yet to connect grade boundaries between drill holes, but it is evident that overall the iron content in holes F2, F3 and F4 is less than in the discovery area where the average iron (as Fe_2O_3) was just over 3%. No feldspar intrusive was intersected in hole F1, which supports the interpretation of aeromagnetic data from previous surveys.

CONCLUSIONS AND RECOMMENDATIONS:

Based on the material characteristics of samples from the original discovery area, the iron content in the coarser fractions was less than the maximum specified for most glass grades, and work is in progress to reduce the iron content in the finer fractions to meet the 0.07% maximum specified for most ceramic grades.

The drilling program in the southern extension of the intrusive indicates that the iron content is generally <1% and in places less than 0.5% compared to over 3% in the raw material of the original discovery area. This indicates that a better grade feldspar is available for ceramic grades in the southern area, and further drilling, sampling and material characterization is recommended for this area.

COSTS STATEMENT:

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

Direct Costs

Mobilization and Demobilization	1,000.00
Drilling Costs (1871' x \$30)	56,130.00
20 Bags Seisgel Mud @ \$24.00/per	480.00
4- 20 Litre Hammer oil @ \$48.00/per	192.00
2- 6 5/8" drive shoes @ \$58.00/per	116.00
233'- 6 5/8 Casing @ \$7.50/ft	1,747.50
1- 6 ¼ Button Bit @ \$600/per	600.00
2- 5 1/8 Hammer Bit @ \$380.00/per	760.00
271'- 5 9/16 Casing @ \$6.75/ft	1,829.25
Transport of Casing to Galloway	850.00

Total Direct Costs

Indirect Costs

R+B @ \$65/man/day -13 days	3,380.00
Foreman 130 hrs. @ \$20.00 per/hour	2,600.00
Foreman 13 days 4X4 @50.00	650.00
Consultant Fees 11 Days @ \$350.00/day	3,850.00
Consultant R+B \$65/day 5 days	325.00
Consultant 5 days 4X4 @ \$50.00/day	250.00
Chemical Analysis	1,800.00
Co-ordinator sampling, site reclaim. \$140/day	1,400.00
Co-ordinator 4X4 \$50/day	500.00
Co-ordinator R+B \$65/day 10 days	650.00

Total Indirect Costs

<u>\$15,405.00</u>

Total Costs		<u>\$79,109.75</u>
Statement of Work		
August 2, 1996	\$ 16,000	
September 25, 1996	\$ 14,000	
PAC	\$ <u>49,109.75</u>	
Total	\$ 7	9,109.75

\$<u>63,704.75</u>

General Information

Contractor	Schmidt Drilling Ltd. P.O. Box 98, Tees, Alberta T0C 2N0
Crew	Driller-Darcy Schmidt Helpers-Bob Bell, Don Brown
Contractor Equipment	Ingersol Rand TH60 Truck Mounted Rotary Percussion Drill Rig, 600CFM
	Air Compressor.
	Western Star Flatbed, 1000 Ga. Tanker and Pipe Truck
	915 Weldco Casing Hammer, 5 x10 mud pump
	Tool Shed Trailer (8x15) and 3/4 ton 4x4 Diesel Crew Cab and Slip Tank
Company Equipment	F250 Bush Box 4x4 Pickups

Costs with respect to each drill hole

<u>F1-96</u>

July 27-30	4 days
Mob and Demob	\$ 1000.00
Fixed Costs	\$ 4473.00
Room and Board x4 days	\$ 1040.00
4X4 x4 days	\$ 200.00
Foreman 4x10hr.x20/hr	\$ 800.00
Drilling 0'-351'@ \$30.00 per ft.	\$ 10530.00
Total	\$18,043.00

<u>F2-96</u>

July 31- August 1 2 days

Mob and Demob	
Fixed Costs	\$ 102.00
Room and Board x2 days	\$ 520.00
4X4 x2 days	\$ 100.00
Foreman 2x10hr.x20/hr	\$ 400.00
Drilling 0'-350'@ \$30.00 per ft.	\$ 10,500.00
Total	\$ 11,622.00

<u>F3-96</u>

August 1 - August 7	4 days
Mob and Demob	
Fixed Costs	\$ 1081.50
Room and Board x4 days	\$ 1040.00
4X4 x4 days	\$ 200.00
Foreman 4x10hr.x20/hr	\$ 800.00
Drilling 0'-725'@ \$30.00 per ft.	\$ 21,750.00
Total	\$ 24,871.50

<u>F4-96</u>

August 8 - August 10	3 days
Mob and Demob	
Fixed Costs	\$ 918.25
Room and Board x3 days	\$ 780.00
4X4 x3 days	\$ 150.00
Foreman 3x10hr.x20/hr	\$ 600.00
Drilling 0'-445'@ \$30.00 per ft.	\$ 13,350.00
Total	\$ 15,798.25

Pilsum Master, P.Geol. (Consultant)

11 days @ \$ 350.00	\$ 3850.00
5 days @ \$ 65.00 R+B	\$ 325.00
5 days 4X4 @ \$50	\$ 250.00
•	
Chemical Analysis	\$ 1800.00
Total	\$ 6225.00

<u>T. Hewison</u> Hole Co-ordinator (ie: samples, sample prep, site reclaimation)

10 days @ \$140.00/day	\$ 1400.00
10 days 4X4 @ \$50/day	\$ 500.00
Room and Board x 10 days	\$ 650.00
Total	\$ 2550.00

Grand Total

<u>\$ 79, 109.75</u>

REFERENCES:

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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 49⁰35'; 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.;1991; DIGHEM Airborne Survey on the Steeples Claim Block and portion of the Aspen Claim Block, Assessment Report filed for R. H. Stanfield.

Master, P.P.;1994; Investigation of Commercial Feldspar Resource on Aspen 9,10,11 and 12 Claims; Assessment Report filed for R. H. Stanfield.

STATEMENT OF QUALIFICATION:

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 have practiced my profession for the past twenty nine years, including twelve years in the geology, material characterization, process and product research for a range of industrial minerals and materials.

I hold no interest in the properties or securities of R. H. Stanfield, or affiliates thereof, nor do I expect to receive any directly or indirectly.

This report on the feldspar deposit is based on my direct involvement in the research, planning, examination of drill cuttings, outcrops, planning and the selection of physical and chemical properties to complete grade determinations and material characterization.

PERMIT TO PRACTICE MASTER MINERAL RESOURCE SERVICES LTD.
Signature
PERMIT NUMBER: P 5336
Geologists and Geophysicists of Alberta

CERTIFICATE

October 15, 1996

I, Phil D. de Souza, certify that:

I am a graduate of the Camborne School of Mines, Cornwall, England and that I hold the degree of ACSM First Class in Mining Engineering therefrom.

I am a member of the Canadian Institute of Mining and Metallurgy and a member of the American Institute of Mining, Metallurgical and Processing Engineers.

I am a licensed Professional Engineer of the Provinces of Alberta, British Columbia and Ontario, Canada, and have been practising my profession for the past thirty two years.

This report by Pilsum Master, P.Geol. (Alberta) entitled: "Further Investigation of Commercial Feldspar Resource on Aspen Group #1", for R. H. Stanfield, has been reviewed by me and results from my direct project involvement in the Stanfield Group since 1987.

I certify that neither I nor my Associates or Partners hold any interest or securities in any of the four corporations owning an interest in the properties, nor do I, or we expect to receive any directly or indirectly.

de Souza P. n Phil D. de Souza, A.C. M. PEng. Mining Engineer

APPENDIX 1

DRILL LOGS ANALYTICAL REPORT

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BUL RIVE	R MINERAL	CORPOR	ATION LTD.			R. H. STA	NFIELD
PROJECT	<u>}</u>	Feldspar	LOCATION	ASPEN CLAIMS, UTM, NAD-83, 5483810N, 613	521E, COLLA	R ELEV. 851.	76M
CLAIMS:	ASPEN 11	OF ASPEN	N GROUP #1				
DRILL HO	DLE NO:	F1 - 96					
		DRILLED	BY:	Schmidt Drilling Ltd. P.O. Box 98, Tees, Alberta			
		DATES D	RILLED:	July 27 - 30, 1996			
		LOGGED	BY:	Pilsum Master, P.Geol.			
		DATES L	OGGED:	August 19 - 23, 1996			
FROM (Ft	FROM	TO (Ft)	то	DESCRIPTION	SAMPLE #	TOTAL Fe %	<u> </u>
	(Metres)		(Metres)				
0.00	0.00	265.00	80.30	Overburden			
265.00	80.30	270.00	81.82	Argillaceous Quartzite			
270.00	81.82	275.00	83.33	Argillaceous Quartzite			
275.00	83.33	280.00	84.85	Argillaceous Quartzite			
280.00	84.85	285.00	86.36	Regolith(?), kaolinised, recognisable feldspar		3.60	
285.00	86.36	290.00	87.88	Argillaceous Quartzite			
290.00	87.88	295.00	89.39	Argillaceous Quartzite	<u></u>		
295.00	89.39	300.00	90.91	Argillaceous Quartzite			
300.00	90.91	305.00	92.42	Argillaceous Quartzite			
305.00	92.42	310.00	93.94	Argillaceous Quartzite		·	
310.00	93.94	315.00	95.45	Argillaceous Quartzite	<u> </u>		
315.00	95.45	320.00	96.97	Argillaceous Quartzite			
320.00	96.97	325.00	98.48	Argillaceous Quartzite			
325.00	98.48	330.00	100.00				
330.00	100.00	335.00	101.52	Argillaceous Quartzite			
335.00	101.52	340.00	103.03				
340.00	103.03	345.00	104.55	Argillaceous Quartzite	+		
345.00	104.55	350.00	106.06	Argillaceous Quartzite			
	1			END OF HOLE		L	L

		—											
BUT.B	IVER MIN	TERAL	CC	RPORATIO	ON LTD	N LTD			RHST	NEIELD			
PROJE	CT:	Feldsc	ar	LOCATION	ASPEN CLAIMS, U	SPEN CLAIMS, UTM, NAD-83: 5482288N, 613261E, COLLAR ELEV, 90						<u> </u>	
CLAIM	ASPEN 1	1 OF AS	PEN	GROUP #1									
DRILL	HOLE NO:	F2 - 9	3		Coharidt Deilling 14		Dev 00 To			<u> </u>			
		DATE	S D	BILLED:	July 31 - August 1	<u>a., P.Q</u> 1996	. Box 98, 1e	es, Alberta TUC 2NU		+			
		LOGG	ED	BY:	Pilsum Master, P.C.	Geol.							
		DATE	S L	OGGED:	August 19 - 23, 19	96							
<u> </u>										<u> </u>			
FROM (TIFROM	TO (F	<u>n</u>	то	DESCRIPTION				SAMPLE #	TOTAL FR	Over	WEIGHTE	<u> </u>
	(Metres)	1		(Metres)						I OTALIO	Metres	Fe%	ī
0.	0.0	0	5.00	1.52	FELDSPAR PORP	HYRY	(monzonite)	buff,<1/8",some FeOx		1.27			
5.0	1.5	2 10	5.00	3.03	FELDSPAR PORP	HYRY	(monzonite)	buff,<1/8",some FeOx		0.72			
15.0	0 4.5	5 2	0.00	6.06	FELDSPAR PORP	HYRY	(monzonite)	buff.<1/8".some FeOx		0.82			
20.	6.0	6 2	5.00	7.58	FELDSPAR PORP	HYRY	(monzonite)	buff,<1/8",some FeOx		0.60			
25.	0 7.5	8 3	0.00	9.09	FELDSPAR PORP	HYRY	(monzonite)	:buff,<1/8",some FeOx		0.77	10.01		
30.	0 9.0		0.00	12.12	FELDSPAR PORP	HYRY	(monzonite)	buff <1/8" medium FeOx		0.85	10.61	0.56	
40.	0 12.1	2 4	5.00	13.64	FELDSPAR PORP	HYRY	(monzonite)	:buff,<1/8",medium FeOx		0.73	4.55	0.37	
45.	0 13.6	4 5	0.00	15.15	FELDSPAR PORP	HYRY	(monzonite)	:buff,more sandy,medium FeOx		0.85			
50.	0 15.1	5 5	5.00	16.67	FELDSPAR PORP	HYRY	(monzonite)	buff,more sandy,medium FeOx		0.75		<u> </u>	
60.0	0 18.1	8 6	5.00	19.70	FELDSPAR PORP	HYRY	(monzonite)	buff.more sandy.medium FeOx		0.63			
65.	0 19.7	0 7	0.00	21.21	FELDSPAR PORP	HYRY	(monzonite)	buff,more sandy,medium FeOx		0.88			
70.	21.2	1 7	5.00	22.73	FELDSPAR PORP	HYRY	(monzonite)	buff,more sandy,medium FeOx		0.90			
75.	22.7	3 8	J.00	24.24	FELDSPAR PORP	HYRY	(monzonite)	Duff,more sandy,medium FeOx		0.71			
85.	24.2	6 9	0.00	27.27	FELDSPAR PORP	HYRY	(monzonite)	buff.more sandy.medium FeOx		1.15			
90.	27.2	7 9	5.00	28.79	FELDSPAR PORP	HYRY	(monzonite)	:buff,more sandy,medium FeOx		0.97			
95.	28.7	9 10	0.00	30.30	FELDSPAR PORP	HYRY	(monzonite)	buff,more sandy,medium FeOx		0.83			
100.	0 <u>30.3</u>	0 10	5.00	31.82	FELDSPAR PORP		(monzonite)	buff,more sandy,medium FeOx		1.05	10.70	0.55	
110.	0 33.3	3 11	5.00	34.85	FELDSPAR PORF	HYRY	(monzonite)):buff to chocolate, gravel size, fir	es	0.82	19.70	0.55	
115.	0 34.8	5 12	0.00	36.36	FELDSPAR PORF	HYRY	(monzonite)	:buff to chocolate, gravel size, fir	es	0.93			
120.	36.3	6 12	5.00	37.88	FELDSPAR PORF	HYRY	(monzonite)	buff to chocolate, gravel size, fir	les	0.69	6.06	0.56	
125.	37.8	9 13	5.00	39.39	FELDSPAR PORP	HYRY	(monzonite)	grey, gravel size, no fines		0.86	3.03	0.57	
135.	40.9	1 14	0.00	42.42	FELDSPAR PORF	HYRY	(monzonite)):light flesh colour,gravel with fine	es l	0.43	0.00	0.07	
140.	42.4	2 14	5.00	43.94	FELDSPAR PORF	PHYRY	(monzonite)	light flesh colour, gravel with fine	es	0.45			
145.	0 43.9	4 15	0.00	45.45	FELDSPAR PORF	HYRY	(monzonite)	light flesh colour, gravel with fine	35	0.58			
150.	0 45.4	7 16	0.00	40.97	FELDSPAR PORP	HYRY	(monzonite)	light flesh colour gravel with fin	35	0.4/			<u> </u>
160.	48.4	8 16	5.00	50.00	FELDSPAR PORF	HYRY	(monzonite)	light flesh colour, gravel with fine	es l	0.35		<u> </u>	<u> </u>
165.	50.0	0 17	0.00	51.52	FELDSPAR PORF	PHYRY	(monzonite)	light flesh colour, gravel with fine	es	0.45			
170.	0 51.5	2 17	5.00	53.03	FELDSPAR PORF	PHYRY	(monzonite)):light flesh colour, gravel with fine	es	0.34			
180.	0 54.5	5 18	5.00	56.06	FELDSPAR PORF	HYRY	(monzonite)); light flesh colour, gravel with fin		0.33			ł
185.	0 56.0	6 19	0.00	57.58	FELDSPAR PORF	HYRY	(monzonite)	light flesh colour, gravel with fine	85	0.38			
190.	0 57.5	8 19	5.00	59.09	FELDSPAR PORF	HYRY	(monzonite)	ilight flesh colour, gravel with fine	85	0.37			ļ
195.	0 59.0	9 20	0.00	60.61	FELDSPAR PORP	HYRY	(monzonite)):light flesh colour,gravel with fine Vight flesh colour gravel with fine	98	0.38	10 70	0.27	.[
205.	0 62.1	2 21	0.00	63.64	FELDSPAR PORF	HYRY	(monzonite)	ight flesh colour,gravel, clav		0.42	19.70	0.21	
210.	63.6	4 21	5.00	65.15	FELDSPAR PORF	HYRY	(monzonite	light flesh colour,gravel, clay		0.50			
215.	65.1	5 22	0.00	66.67	FELDSPAR PORF	HYRY	(monzonite)):light flesh colour,gravel, clay		0.49			
220.	0 66.6	8 22	0.00	68.18	FELDSPAR PORF	HYRY	(monzonite)	light flesh colour, gravel, clay		0.38			
230.	69.7	0 23	5.00	71.21	FELDSPAR PORF	HYRY	(monzonite)	light flesh colour, gravel, clay		0.55			1
235.	0 71.2	1 24	0.00	72.73	FELDSPAR PORF	HYRY	(monzonite)	light flesh colour,gravel, clay		0.63			
240.	72.7	3 24	5.00	74.24	FELDSPAR PORF	HYRY	(monzonite):light flesh colour,gravel, clay		0.75			
245.	0 757	6 25	0.00 5.00	77 27	FELDSPAR POR	PHYRY	(monzonite)):light flesh colour, gravel, clay		0.64			
255.	00 77.2	7 26	0.00	78.79	FELDSPAR PORF	HYRY	(monzonite)):light flesh colour,gravel, clay		0.80			
260.	78.7	9 26	5.00	80.30	FELDSPAR PORF	HYRY	(monzonite):light flesh colour,gravel, clay		0.42	2		
265.	80.3	27	0.00	81.82	FELDSPAR POR	HYRY	(monzonite):light flesh colour,gravel, clay		1.08		0.07	
275	0 81.8	3 28	0.00	84 85	FELDSPAR POR		(monzonite):buff.medium FeOx, clay anglor	1.	0.35	21.21	0.3/	
280.	00 84.8	5 28	5.00	86.36	FELDSPAR PORF	HYRY	(monzonite):buff,medium FeOx, clay agglon	1.	1.43			
285.	86.3	6 29	0.00	87.88	FELDSPAR PORF	HYRY	(monzonite):buff,medium FeOx, clay agglon).	0.46	-		
290.	0 87.8	8 29	5.00	89.39	FELDSPAR POR		(monzonite):buff,medium FeOx, clay aggion	<u>. </u>	0.81	7 50	0.55	
300	90.9	1 30	5.00	92.42	FELDSPAR PORF	HYRY	(monzonite):yellow FeOx, clay aggion	· · · · · · · · · · · · · · · · · · ·	Not sampled	1.36	0.35	1
305.	0 92.4	2 31	0.00	93.94	FELDSPAR PORF	HYRY	(monzonite):yellow FeOx, clay agglom.		Not sampled	1		
310.	93.9	4 31	5.00	95,45	FELDSPAR PORF	HYRY	(monzonite):yellow FeOx, clay agglom.		Not sampled	1		
315.	0 95.4	10 <u>32</u>	0.00	96.97	FELDSPAR PORF	HYRY	(monzonite	Evelow FeOx, clay aggiom.		Not sampled	1		
325	00 98.4	8 33	0.00	100.00	FELDSPAR PORF	HYRY	(monzonite);yellow FeOx, clay aggion.		Not sampled	1	1	
330.	100.0	0 33	5.00	101.52	FELDSPAR PORF	HYRY	(monzonite):yellow FeOx, clay agglom.		Not sampled	1		
335.	101.5	2 34	0.00	103.03	FELDSPAR PORF	PHYRY	(monzonite):yellow FeOx, clay agglom.		Not sampled	1		1
340.	103.0	3 34	5.00	104.55	FELDSPAR POR		(monzonite):yellow FeOx, clay aggiom.		Not sampled	<u> </u>	+	
	104.0	~ 35	0.00	100.00	END OF HOLE	ant	Tunouzounte	.yonuw roux, uay aggiotti.		Not sampled	·		



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BUL RIV	'ER MINE	RAL CO	RPORAT	ION LTD.		R. H. STA	NFIELD		
PROJECT	Γ:	Feldsnar	LOCATI	ASPEN CLAIMS LITM NAD-83 5482377N 613024E COLLAR FLEV 902 14M		·····	· · · · ·	1	<u> </u>
CT ATME	ASDEN 11	OF ASPEN							
DDTT I	ADI LIVIT		I GROOF F					<u> </u>	
DRILL H	JLE NO:	F3 - 90	!						
		DRILLED	BY:	Schmidt Drilling Ltd., P.O. Box 98, Tees, Alberta TOC 2N0	I				
		DATES D	RILLED:	August 1 - 7, 1996					
		LOGGED	BY:	Pilsum Master, P.Geol.					
		DATES L	OGGED:	August 19 - 23, 1996					
			i		1	[
EPOM (Et	FROM	TO (Eth	10	DESCRIPTION		TOTAL FO	0.00	MEICUTE	
PROM (PI	(Reduce)	10 (FI)	10		SAMPLE #	TOTAL FE	Over	WEIGHTE	<u> </u>
	(Metres)		(Metres)				Metres	Fe %	
0.00	0.00	65.00	19.70	Overburden					
65.00	19.70	70.00	21.21	FELDSPAR PORPHYRY (monzonite):grey/buff,pink phenocry,gravel+fines		0.74			
70.00	21.21	75.00	22.73	FELDSPAR PORPHYRY (monzonite):grey/buff,pink phenocry,gravel+fines		0.69			
75.00	22.73	80.00	24.24	FELDSPAR PORPHYRY (monzonite):grey/buff.pink phenocry.gravel+fines		0.45			
80.00	24.24	85.00	25.76	FELDSPAR PORPHYRY (monzonite): grey/buff nink phenocry gravel+fines		0.47	6.06	0.39	
85.00	25.76	90.00	27 27	EELDSPAR PORPHYRY (monzonite) grey/buff pink phenocny greyel+fines+high EeOy		1 21	0.00		
00.00	20.70	05.00	21.27	EEI DSDAD DODDHVDV (monzonite);grey/buff pink phonoon; amvaltfings thick EsOu		1.21			
90.00	21.21	95.00	20.79	CELOSPAR PORPHIRE (monzonice).grey/oun,pink phenocry,graver+fines+high FeOx		1.08			
95.00	28.79	100.00	30.30	FELDSPAR PORPHITRY (monzonite):grey/butt,pink phenocry,gravet+fines+high FeOx		1.30			
100.00	30.30	105.00	31.82	FELDSPAR PORPHYRY (monzonite):grey/buff,pink phenocry,gravel+fines+high FeOx		1.35			
105.00	31.82	110.00	33.33	FELDSPAR PORPHYRY (monzonite):grey/buff,pink phenocry,gravel+fines+high FeOx		1.52			
110.00	33.33	115.00	34.85	FELDSPAR PORPHYRY (monzonite):grey/buff,pink phenocry,gravel+fines+high FeOx		1.26			
115.00	34.85	120.00	36.36	FELDSPAR PORPHYRY (monzonite):grey/buff.pink phenocry.gravel+fines+high FeOx		1.08			
120.00	36.36	125.00	37.88	FELDSPAR PORPHYRY (monzonite);grey/buff.pink phenocry.gravel+fines+high FeOx		1.38			
125.00	37.88	130.00	39.39	FELDSPAR PORPHYRY (monzonite):grey/buff pipk phenocry gravel+fines+high FeOx		1.12		· · · · · · · · · · · · · · · · · · ·	-
130.00	30.30	135.00	40.91	EELDSPAR PORPHYRY (monzonite):grey/buff pink phenocry gravel+fines+high EeOy	· · · · · ·	1.02		<u> </u>	
135.00	40.01	140.00	40.01	EELDOP AR PORPHYRY (monzonite) grey/buff, pink phenody, graver findes thigh FeOr	· · · · · · · · · · · · · · · · · · ·	1.02		[
135.00	40.91	140.00	42.42	FELDSPAR PORPHTRT (monzonite).grey/buil.pink phenocry.gravel+lines+high FeOx		1.20			
140.00	42.42	145.00	43.94	FELOSPAR PORPHTRY (monzonite):grey/buit,pink pnenocry,gravei+rines+nigh FeOx		1.07			L
145.00	43.94	150.00	45.45	FELDSPAR PORPHYRY (monzonite):grey/buff,pink phenocry,gravel+fines+high FeOx		1.24			
150.00	45.45	155.00	46.97	FELDSPAR PORPHYRY (monzonite):grey/buff.pink phenocry,gravel+fines+high FeOx		1.29	21.21	0.81	1
155.00	46.97	160.00	48.48	FELDSPAR PORPHYRY (monzonite):grey/buff,less gravel more fines+little-med. FeOx		1.48	3.03	0.91	
160.00	48.48	165.00	50.00	FELDSPAR PORPHYRY (monzonite):buff to red,gravel,sand + fines, medhigh FeOx		1.24			
165.00	50.00	170.00	51.52	FELDSPAR PORPHYRY (monzonite):buff to red.gravel.sand + fines, medhigh FeOx		1.32			
170.00	51.52	175.00	53.03	FELDSPAR PORPHYRY (monzonite):buff to red.gravel.sand + fines, medhigh FeOx		0.86	4.55	0.75	
175.00	53.03	180.00	54.55	FELDSPAR PORPHYRY (monzonite): buff to red higher clay lower FeOx		1.04			
180.00	54 55	185.00	56.06	EELDSPAR PORPHYRY (monzonite); buff to red higher clay lower EeOy		0.69	2.03	0.57	
185.00	56.06	100.00	57.59	EELDSDAR DORDHVRY (monzonite); buff to red more anyal loss from med. EeOv		1.49	3.03	0.57	
100.00	50.00	190.00	57.30	FELDOFAR FORFITTRY (monzonite).out to red, more graveness tales, med. FeOx		1.40			
190.00	57,56	195.00	59.09	FELDSPAR PORPHYRY (monzonite):burn to red,more gravel less fines, med. redx		1.25			
195.00	59.09	200.00	60.61	FELDSPAR PORPHYRY (monzonite):buff to red,more gravel less tines, med. FeOx		1.33			
200.00	60.61	205.00	62.12	FELDSPAR PORPHYRY (monzonite):buff to red,more gravel less fines, med. FeOx		1.11	·		
205.00	62.12	210.00	63.64	FELDSPAR PORPHYRY (monzonite):buff to red,more gravel less fines, med. FeOx		1.06	1		
210.00	63.64	215.00	65.15	FELDSPAR PORPHYRY (monzonite):buff to red,more gravel less fines, med. FeOx		0.79			
215.00	65.15	220.00	66.67	FELDSPAR PORPHYRY (monzonite):buff to red, equal gravel and fines, med. FeOx		0.72	1		
220.00	66.67	225.00	68.18	FELDSPAR PORPHYRY (monzonite):buff to red, equal gravel and fines, med. FeOx		0.99			
225.00	68.18	230.00	69.70	FELDSPAR PORPHYRY (monzonite); buff to red equal gravel and fines, med. FeOx		1.30			
230.00	69.70	235.00	71.21	FELDSPAR PORPHYRY (monzonite) buff to red equal gravel and fines med. FeOy		1 54			
235.00	71 24	240.00	70 72	FEI DSPAR PORPHYRY (monzonite); buff to red equal gravel and fines, med. FOX		1.04			
240.00	70 70	240.00	74.04	EEI DSDAD DODDHVDV (monzonito);buti to red causi and intes, filed. FeOx		1.00			
240.00	12.13	245.00	74.24	FELDSPAR PORPHTRT (monzonite):but to red, equal gravel and lines, med. FeUX	· ·	1.56			
245.00	/4.24	250.00	75.76	FELDSPAR PORPHYRY (monzonite):but to red,equal gravel and tines, med. FeOx		1.32			· · · ·
250.00	75.76	255.00	77.27	FELDSPAR PORPHYRY (monzonite):buff to red, equal gravel and fines, med. FeOx		1.42			
255.00	77.27	260.00	78.79	FELDSPAR PORPHYRY (monzonite):buff to red,equal gravel and fines, med. FeOx		1.50			
260.00	78.79	265.00	80.30	FELDSPAR PORPHYRY (monzonite):buff to red, equal gravel and fines, med. FeOx		1.75			
265.00	80.30	270.00	81.82	FELDSPAR PORPHYRY (monzonite):buff to red, equal gravel and fines, med. FeOx		1.73			
270.00	81.82	275.00	83.33	FELDSPAR PORPHYRY (monzonite):buff to red.equal gravel and fines. med. FeOx		1.62			
275.00	83.33	280.00	84,85	FELDSPAR PORPHYRY (monzonite):buff to red.egual gravel and fines, med. FeOx		1.50	28,79	0.89	
280.00	84.85	285.00	86.36	FELDSPAR PORPHYRY (monzonite); buff to red equal gravel and fines med -high EeOv		1 33			
285.00	86.36	290.00	87.88	FEI DSPAR PORPHYRY (monzonite); buff to red equal gravel and fines, mod. high FeOv		1.00			·
200.00	97.00	205.00	90.20	EEI DSDAD DODDHVDV (monzonite);built to red, cqual gravel and fines, med. High FeOX		4.67			
290.00	07.88	295.00	09.39	FELDSFAR FORFITRT (monzonite):out to rec, equal gravel and times, medfligh FeOX		1.57	0.00	1.00	
295.00	89.39	300.00	90.91	FELDSPAR PORPHYRY (monzonite):oun to red,gravel and more tines, med high FeOx		1.66	6.06	1.00	
300.00	90.91	330.00	100.00	FELDSPAR PORPHYRY (monzonite):buff to red,gravel and more fines, med high FeOx					· · · ·
330.00	100.00	355.00	107.58	FELDSPAR PORPHYRY (monzonite):grey/ white, plagioclase rich, low FeOx					
355.00	107.58	360.00	109.09	FELDSPAR PORPHYRY (monzonite):grey/ white, plagioclase rich, very high clay, low FeOx					
360.00	109.09	420.00	127.27	FELDSPAR PORPHYRY (monzonite):buff to red,gravel and more fines, med high FeOx					
420.00	127.27	625.00	189.39	FELDSPAR PORPHYRY (monzonite):buff to red, more gravel, medhigh FeOx					
625.00	189.39	725.00	219.70	FELDSPAR PORPHYRY (monzonite); less red more grey, pink K-spar, less FeOx					
				END OF HOLE			1	1	







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BUL RIV	ER MINI	ERAL CO	RPORAT	ION LTD.		R. H. STA	NFIELD		
PROJEC	Feldspar		LOCATI	ASPEN CLAIMS, UTM, NAD-83, 5482317N, 613417E, COLLAR ELEV. 912.35M					
CLAIMS:	ASPEN 11	OF ASPEN	I GROUP #	1					
DRILL HO	DLE NO:	F4 - 96							
		DRILLED	BY:	Schmidt Drilling Ltd., P.O.Box 98, Tees, Alberta T0C 2N0					
		DATES D	RILLED:	August 8 - 10, 1996					
		LOGGED	BY:	Pilsum Master, P.Geol.					
		DATES L	OGGED:	August 19 - 23, 1996					
		<u> </u>							
FROM (Ft	FROM	TO (Ft)	то	DESCRIPTION	SAMPLE #	TOTAL Fe	Over	WEIGHTED)
	(Metres)		(Metres)				Metres	Fe %	
0.00	0.00	5.00	1.52	Overburden					
5.00	1.52	135.00	40.91	Argillaceous Limestone: dark (black), strong effervescence with dilurte HCI					
135.00	40.91	165.00	50.00	Siliceous Limestone: grey, strong effervescence with dilute HCI					
165.00	50.00	220.00	66.67	Grey Limestone mixed with Feldspar Porphyry (sill or dyke?)					
220.00	66.67	225.00	68.18	FELDSPAR PORPHYRY (monzonite): buff, gravel to fine, low FeOx		1.42			
225.00	68.18	230.00	69.70	FELDSPAR PORPHYRY (monzonite): buff, gravel to fine, low FeOx		1.19			
230.00	69.70	235.00	71.21	FELDSPAR PORPHYRY (monzonite): buff, gravel to fine, low FeOx		1.44			
235.00	71.21	240.00	72.73	FELDSPAR PORPHYRY (monzonite): buff, gravel to fine, low FeOx		0.81			
240.00	72.73	245.00	74.24	FELDSPAR PORPHYRY (monzonite): buff, gravel to fine, low FeOx		0.61	7.58	0.72	
245.00	74.24	250.00	75.76	FELDSPAR PORPHYRY (monzonite): buff to brown, gravel to fine, some pink Kspar, med.Fe	Ox	0.99			
250.00	75.76	255.00	77.27	FELDSPAR PORPHYRY (monzonite): buff to brown, gravel to fine, some pink Kspar, med. Fe	<u>Ox</u>	1.04			
255.00	77.27	260.00	78.79	FELDSPAR PORPHYRY (monzonite): buff to brown, gravel to fine, some pink Kspar, med. Fe		0.97			
260.00	78.79	265.00	80.30	FELDSPAR PORPHYRY (monzonite): buff to brown, gravel to fine, some pink Kspar, med.Fe		1.14			
265.00	80.30	270.00	81.82	FELDSPAR PORPHYRY (monzonite): buff to brown, gravel to fine, some pink Kspar, med. Fe	Ox Ox	1.21		0.70	
270.00	81.82	275.00	83.33	FELDSPAR PORPHYRY (monzonite): but to brown, gravel to fine, some pink Kspar, med.Fe	UX	1.15	9.09	0.72	
275.00	83.33	280.00	84.85	FELDSPAR PURPHYRY (monzonite): grey, gravel to tine, low FeUx		1.3/	0.00	0.01	
280.00	84.85	285.00	86.36	FELDSPAR PURPHYRY (monzonite): grey, gravel to tine, low FeUx	l	1.40	3.03	0.91	
285.00	86.36	290.00	87.88	FELDSPAR PORPHTRY (monzonite): buff to brown, gravel to fine, some pink Kspar, med.Fe	0x	1.14		<u> </u>	
290.00	87.88	295.00	89.39	FELDSPAR PORPHYRY (monzonite): but to brown, gravel to fine, some pink Kspar, med.Fe	0.	1.36	4.55	0.04	
295.00	89.39	300.00	90.91	FELDSPAR PORPHYRY (monzonite): but to brown, gravel to fine, some pink Kspar, med.Fe		1.34	4.55	0.84	
300.00	90.91	390.00	118.18	FELDSPAR PORPHYRY (monzonite): but to brown, gravel to tine, some pink Kspar, med.Fe	UX Faller	No sample			
390.00	118.18	510.00	154.55	FELDSPAR PORPHYRY (monzonite): grey, gravel to tine, less coarse at bottom of hole, low	FeOx	NO sample		├ ────┼	



Job No: 96-224

Sample Number	from ft	to ft	Total Fe %
F 1-96 F 1-96 F 2-96 F 2-96 F 2-96	280 315 0 5 10	285 320 5 10 15	3.60 2.30 1.27 0.72 0.92
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	15 20 20 25 30	20 25 25 30 35	0.83 0.60 0.76 0.77 0.85
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	35 40 45 50 55	40 45 50 55 60	0.94 0.73 0.85 0.75 0.81
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	60 65 70 75 80	65 70 75 80 85	0.63 0.88 0.90 0.71 0.36
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	85 90 95 100 105	90 95 100 105 110	1.15 0.97 0.83 1.05 0.94
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	110 115 120 125 130	115 120 125 130 135	0.82 0.93 0.69 0.86 0.87
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	135 140 145 150 155	140 145 150 155 160	0.43 0.45 0.58 0.47 0.39
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	160 165 170 175 180	165 170 175 180 185	0.35 0.45 0.34 0.44 0.33

TERRAMIN RESEARCH LABS Ltd.

Client:	Bul	River	Mineral	Согр.
Project:				



Job No: 96-224

Samole	from	to	Total Fo
Number	ft	ft	%
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	185 190 195 200 205	190 195 200 205 210	0.38 0.37 0.38 0.42 0.43
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	210 215 220 225 230	215 220 225 230 235	0.50 0.49 0.38 0.51 0.55
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	235 240 245 250 255	240 245 250 255 260	0.63 0.75 0.64 0.35 0.80
F 2-96 F 2-96 F 2-96 F 2-96 F 2-96 F 2-96	260 265 270 275 280	265 270 275 280 285	0.42 1.08 0.35 0.65 1.43
F 2-96 F 2-96 F 2-96 F 3-96 F 3-96	285 290 295 65 70	290 295 300 70 75	0.46 0.81 0.84 0.74 0.69
F 3-96 F 3-96 F 3-96 F 3-96 F 3-96 F 3-96	75 80 85 90 95	80 85 90 95 100	0.45 0.47 1.21 1.08 1.30
F 3-96 F 3-96 F 3-96 F 3-96 F 3-96 F 3-96	100 105 110 115 120	105 110 115 120 125	1.35 1.52 1.26 1.08 1.38
F 3-96 F 3-96 F 3-96 F 3-96 F 3-96 F 3-96	125 130 135 140 145	130 135 140 145 150	1.12 1.02 1.26 1.07 1.24

TERRAMIN RESEARCH LABS Ltd.

Client:	Bul	River	Mineral	Corp.
Project:				



Job No: 96-224

Sample Number	from ft	to ft	Total Fe %
F 3-96	150	155	1.29
F 3-96	155	160	1.48
F 3-96	160	165	1.24
F 3-96	165	170	1.32
F 3-96	170	175	0.86
F 3-96	175	180	1.04
F 3-96	180	185	0.68
F 3-96	185	190	1.48
F 3-96	190	195	1.25
F 3-96	195	200	1.33
F 3-96 F 3-96 F 3-96 F 3-96 F 3-96 F 3-96	200 205 210 215 220	205 210 215 220 225	1.11 1.06 0.79 0.72 0.99
F 3-96 F 3-96 F 3-96 F 3-96 F 3-96 F 3-96	225 230 235 240 245	230 235 240 245 250	1.30 1.54 1.60 1.56 1.32
F 3-96	250	255	1.42
F 3-96	255	260	1.50
F 3-96	260	265	1.75
F 3-96	265	270	1.73
F 3-96	270	275	1.62
F 3-96 F 3-96 F 3-96 F 3-96 F 3-96 F 3-96	275 280 285 290 295	280 285 290 295 300	1.50 1.33 1.49 1.57 1.66
F 4-96	220	225	1.42
F 4-96	225	230	1.19
F 4-96	230	235	1.44
F 4-96	235	240	0.81
F 4-96	240	245	0.61
F 4-96	245	250	0.99
F 4-96	250	255	1.04
F 4-96	255	260	0.97
F 4-96	260	265	1.14
F 4-96	265	270	1.21

TERRAMIN RESEARCH LABS Ltd.

Client: Bul River Mineral Corp. Project:



Job	No:	96-224
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Sample Number	from ft	to ft	Total Fe %
F 4-96 F 4-96 F 4-96 F 4-96 F 4-96	270 275 280 285 290	275 280 285 290 295	1.15 1.37 1.40 1.14 1.36
F 4-96	295	300	1.34

TERRAMIN RESEARCH LABS Ltd.

Client: Bul River Mineral Corp. Project:



ASPEN 13 ASP