DRILLING REPORT ON DOGWOOD GROUP #1A

FORT STEELE MINING DIVISION BRITISH COLUMBIA

631500E, 5472600N UTM ZONE 11U NTS 82G/6

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	VANCOUVER, B.C.	

For R. H. STANFIELD 380 – 4723 1st Street S.W.

By MASTER MINERAL RESOURCE SERVICES LTD. 32 Midpark Gardens S.E. Calgary, Alberta T2X 1N7

September 1997

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

MASTER MINERAL RESOURCE SERVICES LTD.

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INTRODUCTION:

A drilling program of three drill holes was completed between March 1996 and May 1997 on the Dogwood Group #1A. The Group comprises of five claims of 20 units each as shown in Table 1.

Three collar sites designated BURT 1-96A, BURT 1-96/97 and BURT 2-96 are within a few meters of one another. All three holes were started with percussion drilling, cuttings from which were collected for every 0.61 meters and examined. Some of the cuttings were analysed for some key elements. In two of the drill holes steel casing was used and subsequently the holes were extended by diamond drilling. Core from the diamond drilling was examined and logged. In the third drill hole (BURT 1-96A) steel casing was also used, and the hole was subsequently used to supply water for the remainder of the drilling program.

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Name	Nos	Units	Date	beampfled	applied	Expiny
	sin b					Date
Dogwood #9	209704	20	99/06/17	12,000	3	02/06/17
Dogwood #10	209705	20	00/06/17	12,000	3	03/06/17
Dogwood #11	209706	20	00/06/17	12,000	3	03/06/17
Dogwood #12	209707	20	99/06/17	12,000	3	02/06/17
Dogwood #14	209708	20	99/06/17	12,000	3	02/06/17

Table 1: Dogwood Group #1A:

Figure 1 is a map showing the Site Location in southeastern British Columbia.

LOCATION, ACCESSIBILITY AND TOPOGRAPHY:

The claim group is in southeastern British Columbia approximately 40 kilometres by Highway 3 from Cranbrook and then approximately 3 kilometres by secondary road to the southwest corner of the claim group. A secondary all-weather road follows the Sand Creek valley to its headwaters and this road crosses Dogwood #9 claim. A four-wheel drive road from the valley bottom near the town of Galloway provides access to the top of the ridge on Dogwood #10 claim. Access to the showings is usually possible by a short walk from several points along this road. **Figure 2** is a satellite image showing the regional setting of the claim group with respect to prominent cultural features, topography, UTM grid and mineral deposits on and adjacent to the claims.

The claim group is centred approximately 49⁰25'N, 115⁰12'W, UTM Zone 11U coordinates 5476000N, 630000E, in NTS quadrant 82G/6. The claims are in the Fort Steele Mining Division. Topographic relief ranges from 910 meters to 2200 meters, with steep gradients over two thirds of the claim group.

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SITE LOCATION

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 Dogwood Group #1A 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.

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.

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 finegrained 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, finegrained 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 north of the property is an excellent example of this type of mineralisation. Other related examples of this type include the Strathcona-Empire (on the Dogwood Group #1A, see Figure 2), 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 and granodiorite intrusives 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 on the property are the Burt, OK Zones (see Figure 2), and possibly the Great Western Zone north of the property. 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. This complex history is discussed in a subsequent section of the report.

The Western Rocky Mountains in this area are further subdivided into three major tecteno-stratigraphic terrains by EAST trending REVERSE FAULT SYSTEM (see Figure 3). 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 Dogwood Group #1A 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 that the Upper Sand Creek Fault), and has a southern boundary off the property 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 drilling program consists of three drill holes located within a few meters of each other. There were three drill hole collar sites. In two of the drill holes (BURT 1-96/97 and BURT 2-96), steel casing was used and subsequently the holes were extended by diamond drilling. Core from the diamond drilling was examined and logged. In the third drill hole (BURT 1-96A) steel casing was also used, and the hole was subsequently used to supply water for the remainder of the drilling program. All three holes were vertical at the collar.

Figure 4 shows the location of the drill program area with respect to the claim boundaries taken from the most recent claim map of the area.

Objectives and Summary Results

The Dogwood claim group includes several mineral deposits, including the BURT ZONE, the EMPIRE-STRATHCONA MINE, and the OK ZONE. It straddles the Sand Creek Section of the Sand Creek- Lizard Range Domain of the Rocky Mountain tectenostratigraphic province, and the Rocky Mountain Trench province. More importantly in both provinces 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 overlies younger Palaeozoic sediments due to folding and thrusting associated with the Hosmer Thrust of the Rocky Mountains.

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 downdip or enechelon to the known showings.

The closest mineral deposit to the drill sites is the Burt Zone. Strike length of the mineralised shear zone is reported to extend for 1.6 kilometres. Mineralisation is leadzinc-silver associated with quartz-carbonate gangue. The drill sites were located in the closest flat area downdip from the surface showings. The presence of massive medium to coarse -grained carbonate with evidence of "contact metamorphism" was the main reason to complete a second drill hole along the estimated strike offset.

Of particular interest was a strong sulphurous smell in the core from both holes, but no significant quantities of sulphide minerals were located.

Appendix 1 contains the geologic logs of the percussion and the diamond drill portions of the three holes, Appendix 1 also lists the analytical reports of the drill cuttings as reported by TerraMin Research Labs of Calgary.

The cuttings from the percussion drilling, and the core from the diamond drilling program are stored at the R. H. Stanfield campsite near Galloway (Figure 2).

RECOMMENDATIONS:

The results of the drilling program were inconclusive and did not provide direct evidence of the downdip extensions of the adjacent mineral deposits. The drilling does indicate the presence of carbonate rocks of sufficient width and texture to indicate proximity to a heat source – contact metamorphism (?). A follow up program of ground based geophysics, including magnetic surveys is recommended to locate potential intrusives that may be the source of mineralisation fluids for the mineral deposits on the property. Combination with ground based EM or IP surveys may also provide better targets for drilling and locating strike extensions, or strike offsets, and downdip extensions of the mineralised shear zones on the property.

GENERAL INFORMATION^(*) ON BURT 1--96/97, BURT 1A-97, BURT 2-97:

A.) Rotary Percussion Drill

Dates Drilled:	Burt 1-96/97 August 11-August 30/96		
	Burt 1a/97 March 11-March 19		
	Burt 2/97	April 12,13,23,24,25	
Contractor	Schmidt Drilling Ltd. PO Box 98 Tees, Alberta T0C 2N0		
Crew	Driller-Darcy Schmidt, Driller-Kevin Schmidt Helpers-, Tom		
	Morris, Bob Bell, David Morris, Dan Sim		
Contractor Equipment	Ingersol Rand TH-60 Truck Mounted Rotary Percussion Drill		
	Rig, 600 CFM Air Compressor, Western Star Flatbed, 1000 Ga.		
	Tanker and Pipe Truck, 915 Weldco Casing Hammer, 5 x 10		
	mud pump, Tool Shed Trailer (8 x 15) and ³ / ₄ ton 4x4 Diesel		
	Crew Cab and	Slip Tank	

B.) Diamond Drill

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Dates Drilled:	Burt 1-96/97	March 20/97-April 11/97			
	Burt 2-97	April 14/97-May 20/97			
Contractor	Schmidt Drillin	ng Ltd. PO Box 98 Tees,	Alberta T0C 2N0		
Crew	Driller-Darcy S	Schmidt, Driller-Kevin Sc	hmidt Helpers- , Tom		
	Morris, Bob Bo	ell, Dan Sim			
Site Crew	Manager- Mr.	. R. Stanfield Jr.	Box 94, Galloway BC		
	Co-ordinator-	Mr. T. Hewison	Box 94, Galloway BC		
	Drilling Const	ultant- Mr. G.	Box 94, Galloway BC		
	Peterson				
Equipment	Ingersol Rand TH-60 Truck Mounted Rotary Percussion Drill				
	Rig, 600 CFM	Air Compressor, West	ern Star Flatbed,1000		
	Ga. Tanker a	nd Pipe Truck,Tool Sh	ed Trailer (8 x 15) and ¾		
	ton 4x4 Diesel	Crew Cab and Slip Tai	nk. Schramm Coring		
head with side inlet swivel Model T660, Model 2500 Foo			0, Model 2500 Foot		
	Clamp to hold drill rods, Wheatley Tri-plex Hi-Pressure				
	pump, 16' Gooseneck Stock Trailer				

(*) Information supplied by R. H. Stanfield group of companies

STATEMENT OF COSTS^(*):

Diamond Drill Holes

	BURT 1-96/97	BURT 2-97
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Background		
Drilling days	23	29
Period days	23	34
Driller r&b days	23	29
Total depth	2040'	1890'
D/D depth	940'	1780'
Direct Costs		
Drilling Costs (hrs x \$185)	46805.00	58645.00
Boart Longyear NQ Series 6 Bits @ \$565.00/per	1130.00	2825.00
NQ Drill Rod String @ \$2.56/ft	5222.40	4838.40
NQ Premium Reaming Shell @ \$540.00/per	540.00	1080.00
20L Drill Rod Grease @ \$110.00/per	440.00	990.00
20L Pail Linseed Oil @ \$89.00/per		89.00
20L Pail EZ Mud Polymer @ \$120.00/per	120.00	240.00
Other Supplies (lubricants, cleaners)	50.00	50.00
Goulds 7G 1 ¹ / ₂ Submersible Pump @ 934.20		934.20
Direct Cost Totals \$	54307.40	69691.60
Indirect Costs		
Drilling Consultant (on Site) 9 Days @	2276.55	
252.95/day	3965.00	4030.00
R&B @\$65.00/day/man	4600.00	5800.00
Foreman's Wage @ \$200.00/day	1495.00	1885.00
Foreman's R&B @ \$65.00/day	1150.00	1450.00
Foreman's 4x4 @\$50.00/day		
Ancillaries		
Caterpillar D7F Tractor @\$110.00/hr	1760.00	1760.00
HondaEB5000X Generator @ \$30.00/day	690.00	870.00
Case 580D Backhoe @ \$42.00/hr		ļ
Indirect Total Costs	15936.55	15795.00
Trade I Craste	70243 95	85486 60
I OTAL COSTS	10473.73	

(*) Supplied by the R. H. Stanfield group of companies.

Rotary Percussion Holes

DRILL HOLE	BURT 1-96/97	BURT 1A-97	BURT 2/97
Background			
Drilling days	16	5	5
Period days	20	9	14
Driller r&b days	16	5	5
Total depth	1100'	280'	370'
Direct Costs			
Mobilization and Demobilization	1000.00		
Drilling Costs (#of Hrs. x \$185.00)	28212.50	8325.00	10175.00
6 5/8 Drive Shoe @ \$98.50	58.00*	98.50	98.50
8" Ring Bit @ \$401.50		401.50	401.50
6 5/8" Casing @ \$8.75/ft	187.50	568.75	568.75
20L Pail Foam @ \$120.00/per	900.00		
Hammer Oil @ \$48.00/per	144.00	48.00	96.00
5" TriCone Button Bit @ \$1300.00	1300.00		
Seis-Gel Mud @ \$24.00/bag	240.00		
Liquid Gel @31.00/per	93.00		
6 ¼ TriCone Button Bit	600.00		
5 9/16 Steel Casing @ \$6.95/ft	3753.00		
4 ³ / ₄ Button Bits @ \$600.00/per	1200.00		
6 ¼ Hammer Bit @ \$690.00/per	690.00		
4 ¹ / ₂ " Steel Casing @ \$4.70/ft		1320.70	1645.00
Total Direct Costs	38378.00	10762.45	12984.75
Indirect Costs			
R&B @\$65.00/day/man	3120.00	650.00	650.00
Foreman's Wage @ \$200.00/day	3200.00	1000.00	1000.00
Foreman's R&B @ \$65.00/day	1040.00	325.00	325.00
Foreman's 4x4 @\$50.00/day	800.00	250.00	250.00
Consultant's R&B @ \$65.00/day			
Consultant Fees @ \$350.00/day			
Consultant 4x4 @\$50.00/day			
Total Indirect Costs	8160.00	2225.00	2225.00
Total Costs	46538.00	12987.45	15209.75

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ADDITIONAL COSTS:

Geology Consultant fees: 10 days @ \$350/day	\$ 3,500.00
Geology Consultant room and board: 5 days @ \$65/day	\$ 325.00
Geology Consultant 4x4 truck: 5 days @ \$50/day	\$ 250.00
Chemical analysis	\$ 1,400.00

Sub-Total

\$ 5,475.00

SUMMARY OF TOTAL COST:

Rotary Percussion		\$	74,735.20
Diamond Drilling		\$	155,730.55
Geologic and Analysis		<u>\$</u>	5,475.00

MASTER MINERAL RESOURCE SERVICES LTD.

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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 for the past twenty-seven years.

This Report on the Dogwood Group #1A is based upon my involvement in the compilation of geological literature, selection of drill targets, examination of drill sites, logging of drill cuttings, splitting of samples, 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.

PERM	
MASTER MIN	Amustu
Date	Spt 6,97
PERMI The Associa	T NUMBER: P 5336 ation of Professional Engineers,
Geologists	and Geophysicists of Alberta

CERTIFICATE

September 4, 1997

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 Province 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: "Drilling Report on Dogwood Group #1A", for R. H. Stanfield has been reviewed by me and results from my direct 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.

Phil D. de Souza, A.Q.S.M., P.Eng. Mining Engineer

APPENDIX 1

DRILL LOGS & CHEMICAL ANALYSIS REPORTS

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BUL RIVER MINERAL CORPORATION LTD. R. H. STANFIELD			
BUL RIVER MINERAL CORPORATION LTD. R. H. STANFIELD Image: Constraint of the state of the st			
PROJECT BURT LOCATIO 631500E, 5472600N, UTM Zone 11U DIP-so AT: collar AT: collar CLAIMS: Dogwood Group #1A DIP-so AT: collar AT:			
CLAIMS: Dogwood 10 of Dogwood Group #1A DIP:-90 AT: collar Image: Collar Structure Structu			
DRILL POLE NO: Burt 1A-97 DRILLED BY:Schmidt Drilling Ltd., P.O.Box 98, Tees, Alberta Image: Control of the state			
DATES DRILLED: March 11-19, 1997 DATES LOGGED BY: Pilsum Master, P.Geol. DATES LOGGED BY: Pilsum Master, P.Geol. DATES LOGGED: April 17, 1997 DATES LOGGED: April 12, 1997 DATES LOGGED: April 12, 1997 DATES LOGGED: April 17, 1997 DATES LOGGED: April 17, 1997 DATES LOGGED: April 17, 1997 DATES LOGGED: April 12, 1997 <thdates 12,="" 1997<="" april="" logged:="" th=""> <thdates< td=""><td></td><td></td><td></td></thdates<></thdates>			
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TOTAL 84.8m TOTAL 84.8m Image: Constraint of the constraint of th			1 f
Image: constraint of the state of the s	+	1	
FROM (Ft	+		
FROM (Ft FROM TO DESCRIPTION SAMPLE SiO2 Al2O3 CaO MgO Na2O K2O Fe2O3 MnO TiO2 LOI Total Ba Be Cr Li Rb Sr V Ag Cc (Metres) (Metres) (Metres) NUMBER %			
(Metres) (Metres) NUMBER %			Ni Dh
Inclusion Inclusion <t< td=""><td></td><td></td><td></td></t<>			
65.00 19.70 100.00 30.30 Arollaceits Sano llow cray Burt 1.97 65 70 66 1 133 2 350 2 703 1 591 3 482 5 26 0 142 0 28 28 00 42 500 0 4 50 55 0 0 4 50 5	ppm ppr	om ppm	ppm ppm p
	8 1	19 3	15 19
Dearded with remainde-calobrate barlos Burt 1-97 / 0 / 70 00.0 13.3 1.343 2.47/0 1./39 13.007 525 0.105 0.35 2.8 99.08 510 2.4 45 30 187 39 130 0.1 0.3 0.1 0.	8 2	20 5	15 16
1 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		11 4	10 24
		15 5	10 20
		10 /	11 18
		21 10	11 20
100.00 30.30 140.00 42.42 Argillaceus Quartzite (Arg-Otzite) aray banded. Burt 1-97 100 105 652 142 2566 2.802 1537 3723 450 0.005 0.37 44 9572 300 2.5 50 34 200 55 110 0.1 0.2		15 5	10 21
some carbonate. 5% disseminated pyrite- but 1.97 105 110 66 5 131 2 644 2 868 1 645 3 157 4 29 0.003 0.35 4 8 99 51 500 2.3 40 50 204 61 110 0.0 0.1		10 5	0 10
pyrrhotite. Some sections mixed with gravel. Burt 1-97 110 115 652 137 2616 2968 1752 3205 470 0.094 0.37 46 992 540 23 55 33 171 71 120 0.4 04		14 5	9 15
other sections darker coloured, less banded. Burt 1-97 115 120 648 14.0 2.280 3.018 1739 3.482 5.12 0.085 0.38 4.8 99.75 550 2.5 50 34 190 63 120 0.1 0.4		18 6	11 19
or more silisic Burt 1-97 120 125 66.7 10.5 3.400 3.217 1.604 3.169 4.62 0.098 0.37 6.0 99.69 530 2.0 64 29 172 97 120 0.1 0.7		15 5	17 20
Burt 1-97 125 130 65.5 11.7 3.749 3.167 1.564 3.302 4.06 0.103 0.35 6.0 99.47 540 2.0 71 32 177 85 110 0.1 0.2	5 1	14 5	11 18
Burt 1-97 130 135 65.2 13.0 3.456 3.001 1.415 3.254 3.89 0.092 0.33 5.4 99.04 530 2.0 57 33 182 73 110 0.1 0.2	5 1	14 5	11 20
Burt 1-97 135 140 65.2 13.1 3.246 2.984 1.429 3.374 4.10 0.085 0.33 5.2 99.14 540 2.1 62 34 188 65 110 0.1 0.2	6 1	13 5	11 18
140.00 42.42 280.00 84.85 Arg-Qtzite: gray, variability in percentage of Burt 1-97 140 145 65.0 13.5 3.148 3.167 1.429 3.495 4.10 0.084 0.32 5.6 99.86 540 2.2 56 32 193 66 100 0.1 0.2	5 1	13 4	11 16
fines and carbonate proportion. Pyrite-pyrithotite Burt 1-97 145 150 64.8 13.1 3.148 3.465 1.375 3.338 4.22 0.084 0.32 5.8 99.70 540 2.2 51 32 187 61 100 0.1 0.3	5 1	12 4	11 16
5-10% as disseminated. Burt 1-97 150 155 63.7 13.1 3.344 3.382 1.375 3.374 4.25 0.089 0.32 6.8 99.81 530 2.2 53 34 182 64 100 0.1 0.2	. 5 1	12 5	10 18
Burt 1-97 155 160 64.4 13.1 3.805 3.200 1.294 3.519 4.28 0.092 0.33 5.6 99.64 550 2.2 58 30 187 80 100 0.1 0.2	. 5 1	13 5	10 18
Burt 1-97 160 165 65.2 13.0 3.288 3.117 1.182 3.531 3.88 0.083 0.33 5.4 99.01 550 2.4 49 32 194 71 90 0.1 0.2	. 5 1	10 4	9 16
Burt 1-97 165 170 65.9 13.1 2.756 3.299 1.143 3.796 4.12 0.077 0.33 5.0 99.54 560 2.3 48 33 206 63 90 0.1 0.1	5 1	11 4	10 17
Burt 1-97 170 175 66.3 13.0 2.868 3.316 1.122 3.639 3.99 0.080 0.33 4.8 99.42 550 2.5 55 39 200 61 100 0.1 0.1	4 1	11 5	9 17
Burt 1-9/ 1/5 180 64,6 13.1 3.386 3.482 1.361 3.495 3.96 0.089 0.33 5.6 99.44 540 2.0 39 34 194 69 90 0.1 0.1	4 1	10 4	9 16
BUILT1-97 100 105 04.0 12.0 3.47U 3.253 1.373 3.193 3.88 0.085 0.35 6.0 98.84 510 2.3 50 31 178 73 100 0.1 0.1 0.1	5 1	10 4	10 18
	6 1	14 4	13 18
Duri 1797 195 200 62 0 133 4 547 3515 1 402 3 150 4 33 0 1039 10.37 50 195.75 540 2.3 55 29 1/6 /4 100 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2		13 5	14 1/
Burt 1-97 1200 200 5.61 6 133 4.631 3.515 1.402 3.517 4.53 0.102 0.37 0.6 99.57 3.502 2.2 52 28 17/5 86 100 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1		14 5	12 16
Burt 1-7 205 200 631 139 3009 3316 1440 3784 423 3784 142 3784 65 0.077 0.37 56 030 2.3 50 31 176 91 100 0.1 0.1		14 5	12 10
Burt 1-97 210 215 652 13.7 2.728 3.150 1442 3.543 4.33 0.072 0.37 5.0 99 55 510 2.5 51 30 50 60 110 0.1 0.1		15 5	12 10
Burt 1-97 215 220 65.2 13.9 2.546 3.051 1.375 3.687 4.43 0.065 0.37 4.6 99.5 1.570 2.4 45 36 109 63 110 0.1 0.1	5 1	15 4	12 17
Burt 1-97 220 225 64.4 13.7 2.980 3.266 1.469 3.567 4.19 0.075 0.37 5.6 99.57 530 2.3 51 35 138 61 110 0.1 0.1	6 1	14 5	12 16
Burt 1-97 225 230 62.5 13.9 3.400 3.349 1.483 3.555 4.69 0.081 0.33 6.0 99.20 560 2.0 46 27 188 66 110 0.1 0.1	7 1	17 4	15 18
Burt 1-97 230 235 62.0 14.6 3.134 3.134 1.604 3.928 4.88 0.071 0.38 5.4 99.12 640 2.0 45 31 206 68 110 0.1 0.1	7 1	16 5	15 17
Burt 1-97 235 240 63.7 14.2 2.700 2.968 1.294 3.844 4.53 0.065 0.38 5.4 99.13 580 1.9 48 32 203 53 110 0.1 0.1	6 1	16 4	14 16
Burt 1-97 240 245 64.2 13.0 3.442 3.432 1.348 3.434 4.38 0.081 0.37 6.0 99.61 540 2.0 48 32 184 62 110 0.1 0.1	5 1	11 4	9 16
Burt 1-97 245 250 64.0 13.3 3.218 3.283 1.672 3.410 4.40 0.085 0.33 6.2 99.88 520 2.2 71 30 176 57 100 0.1 0.1	6 1	14 5	11 14
Burt 1-97 250 255 62.9 13.5 3.162 3.449 1.698 3.205 4.98 0.085 0.35 6.4 99.71 520 2.3 70 31 168 60 90 0.1 0.1	7 1	17 5	16 14
Burt 1-97 255 260 62.9 14.7 2.518 3.217 1.793 3.760 4.80 0.071 0.38 5.6 99.77 550 2.4 56 31 190 53 110 0.1 0.1	6 2	21 4	13 12
Burt 1-97 260 265 61.6 14.4 2.868 3.498 1.739 3.663 5.21 0.079 0.37 6.2 99.61 570 2.4 61 31 184 61 100 0.1 0.3	8 1	17 5	15 15
Burt 1-97 265 270 59.0 14.9 3.609 3.565 1.604 3.278 5.82 0.103 0.35 7.2 99.48 520 2.1 56 28 166 76 90 0.1 0.1	9 2	26 5	17 14
Burt 1-97 270 275 63.1 14.4 2.966 3.200 1.688 3.736 4.55 0.084 0.37 5.8 99.88 550 2.3 66 31 193 61 100 0.1 1.0	6 1	15 4	13 14 2
Burt 1-97 275 280 63.5 13.9 3.316 2.968 1.739 3.627 4.98 0.067 0.37 5.4 99.84 560 2.3 58 30 179 85 110 0.1 0.1	1 7 4	10 6	17 12

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BUL RIV	ER MINE	RAL COF	RPORAT	ION LTD.	R. H	1. ST.	ANFI	ELD																								
PROJECT	BURT		LOCATIO	631500E, 5472600N, UTM Zone 11U																												
CLAIMS:	Dogwood 1	10 of Dogwo	od Group #	HA	DIP: -90	AT:	collar	-								<u> </u>																
DRILL HO	E NO:	Burt 1-96/9	97	DRILLED BY:Schmidt Drilling Ltd., P.O.Box 98,T	ees, Alberta												-						-									
				DATES DRILLED: August 11- 30, 1997		1																										
				LOGGED BY: Pilsum Master, P.Geol.			1																									
				DATES LOGGED: August 22, 30, 1997			·																									
					TOTAL	333.3	33m											•														
					LENGTH:	1	1																			-						
								1																								
FROM (Ft)	FROM	TO (Ft)	то	DESCRIPTION	Sample		SiO	2 Al ₂ O ₃	CaO	MgO	Na ₂ O	K₂O	Fe ₂ O ₃	MnO	TiO ₂	LOI	Total	Ba	Be	Cr	Li	Rb	Sr	v	Ag	Cd	Co	Cu	Mo	Ni	Pb	Zr
	(Metres)		(Metres)		Number		%	6 %	%	%	%	%	%	%	%	%	%	nom	nom	000	nom	nnm	nom	nom	nnm	nom	nom	nom	nnm	DDm	nnm	000
0.00	0.00	50.00	15.15	Mixed boulders, cobbles, pebbles, Argillite	Nothing significant	for cu	ttinas t	o be ana	alvsed									FF				FF	FF		FF							
50.00	15.15	285.00	86.36	Quartzite: gray, very little carbonate		1	T	1	1																			-+	+	-+		
				no reaction with HCI							_																			\rightarrow		
285.00	86.36	320.00	96.97	Quartzite, gray with significant quartz-carbonate		1																										
320.00	96.97	360.00	109.09	Quartzite, gray, some quartz-carbonate		1			1							1																
360.00	109.09	395.00	119.70	Quartzite, gray with negligible quartz-carbonate		1										+																
395.00	119.70	425.00	128.79	Quartzite, gray with no quartz-carbonate													<u> </u>															
425.00	128.79	455.00	137.88	Argillaceous-Quartzite, cuttings predominantly																												
				finer grained																												
455.00	137.88	480.00	145.45	Argillaceous-Quartzite, with quartz-carbonate																												
480.00	145.45	535.00	162.12	Argillaceous-Quartzite, significant quartz-carbonate		1			-							1	1															
535.00	162.12	590.00	178.79	Argillaceous-Quartzite, some quartz-carbonate		1																										
590.00	178.79	1100.00	333.33	Mixed cuttings, Argillaceous-quartzite, quartzite					1							1												· · · · ·				
				argillite(?), with variable proportion of quartz-																												
				carbonate.																												
		1100.00	333.33	Began core drilling (see diamond drill log Burt 1-97)																												

Sheet1

DIAMO	ND DRI	LL LOG			N	ASTER MINER	AL RESOURCE SERVICE	<u>=s lt</u>
Hole No.	BURT 1-	96/97 Page 1 of 1 Project : BURT		Eloveticas 4000	Property	y: DOGWOOD	BROUP #1A	
Diectiv	arvey Dat	e Location :631500E, 5472600N UTM Zone 110	Holo: 618 18m	Elevation: 1080	<u>n</u>	Dib: -a0,		
Djecuv	<u>. </u>						<u> </u>	
Commer	iced: DD	March 20,97 Logged by: Pilsum Master, P.Geol. Collar Bearing/Dip: 0% azimuth	, -90 ⁰ dlip .		······			
Complet	ed: April		SE Dates Logo	aina: April 17, 199	7 Depth	Bearing/Di	p:	
••••••	•			 .	Depth	Bearing/Di	p:	
From	То	Description	Sample No	From - To	Width		Analysis	
<u>m</u>	333.33	Overhurden cased in see percussion drilling logs				11		<u> </u>
, 33.33	342.42	Argillaceous Quartzite (Arg-Otzite): medium green to grey, some banding, a few carbonate (CO ₂) veins						
342.42	344.84	Dyke: diorite(?) medium grained						
344.84	375.76	Arg-Qtzite: some flow banding						
		363.64 – 364.55: Dyke, medium grained, and/or contact zone, massive and lighter coloured	1					
375.76	381.82	Qtzite: massive competent, medium grained						
381.82	427.27	Arg-Qtzite: with fragments of dyke material. Gross flow banding, and number of turbidite slump blocks						
		Appears reasonably silicified						
07.07	447 50	408.48 - 410: very coarse, intrusive (?), lots of CO ₃ (effer. With HCl)						
427.27	447.58	Arg-Qtzite: bleached looking, not fractured, some CO_3 veinlets						
117 58	462 12	435.55 - 450.07; Droken core Questritic Argillite (Otzitic Arg): grey very uniform looking not as bleached looking as 427.27, 447.59						
++1.50	402.12	Section						
462.12	485.46	Otzitic-Arg: littleor no flow banding						
		462.12 – 463.64: more bleached and brecciated (bx), still competent with little or no sulphides (fault?)						
485.46	488.79	Fault bx: highly bleached, CO ₃ veinlets, still fairly competent, no sign of sulphides						
488.79	538.79	Qtzitic Arg: more argillaceous than 462.12- 485.46, flow banding @60 ^o to CA, with significant lighter						
		Coloured bands. More CO ₃ stringlets @ $45-70^{\circ}$ to CA, some discontinuous and irregular.						
538.79	556.06	Qtzitic Arg:, faint flow bands @ 40° to CA, CO ₃ stringers variable direction and proportion, pyrite (pt)						
FF(0(601.01	and pyrrhotite (pyrh) <1%						
556.06	581.81	Interingering contacts with sections above and below. Arg-Qtzite: more bleached, little or no flow						
581 81	618 18	1 outsitic Arg: Flow handing 50° to CA some bleached sections exhibit 'nseudomorph" flow hands						
201.01	618.18	End of Hole						
	410110		1					
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	RAL CORPOR			PH S																						┢───┤	┥───┤		<u> </u>	_
PPO IECT BUDT		TIO 631500E 5472600N LITM Zono 1111		1.11.0																								!		
CLAIMS: Dorwood	10 of Dogwood Grou	IN #14		-																								I		
DDILL HOLE NO.	Burt 2 97	DBULED BY:Sohmidt Drilling Ltd. D.O. Dou 00	DIP: -90	A1:	conar	-																								
DRILL HOLE NO.	Duit 2-3/	DATES ODILLED: April 12, 12, 22, 24, 25, 4007	, lees, Alberta	a																						L				
		LOCCED RV: Diloum Macters D.Occi		+ +		·· · · · · · · · · · · · · · · · · · ·								_																
		LOGGED BY: Plisum Master, P.Geol.																											[
		DATES LOGGED: August 22, 30, 1997			_															1						1				
			IOIAL	Dedrock	@ 24.85	m	\vdash			L		ļ																1		
			LENGTH:	cased to 1	26m					L		ļ																		
							ļ					L																		
FROM (Ft) FROM	TO (Ft) TO	DESCRIPTION	Sample	Ð	SiO	2 Al ₂ O ₃	CaO	MgO	Na ₂ O	K₂O	Fe ₂ O ₃	MnO	TiO ₂	LOI	Total	Ba	Be	Сг	Li	Rb	Sr	V	Ag	Cd	Co	Cu	Mo	Ni	Pr	z
(Metres)	(Metre:	s)	Nu	mber	9	6 %	%	%	%	%	%	%	%	%	%	onm	nom	000	nnm	nnm	DOM	opm	nom	000	nom	000	0.000		-	+
0.00 0.00	0.00 0.00 82.00 24.85 Mixed boulders, cobbles, pebbles, Argillite			nificant for c	uttinas t	o be ana	aivsed		<u> </u>							PPIII			ppin	ppm	ppin	PPIII					- PMI	ppm	ppm	- ppr
	24	1.85 Bedrock see log of diamond drill hole BURT 2-97			T	T			<u> </u>	-								· ·					+			┌──┤			<u> </u>	+
									+																+	/───┤			<u> </u>	
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DIAMOND DRILL LOG

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MASTER MINERAL RESOURCE SERVICES LTD.

Hole No	BURT 2-	97 Page 1 of 2 Project: BU	JRT			Propert	y: Dogwood Gr	ROUP #1A		
Collar S	urvey Dat	e Location : 631500E, 5472600N UTM Zone 11U		EI	evation 1080m		Dip	·····		
Objectiv	e	Len	ngth of Hole:	572.72m to I	May 20, 1997					
Comme	nced: DD	April 14, 1997 Logged by: Pilsum Master, P.Geol Collar Bearing/Dip: 0 ^o az	zimuth, -90°	, @ 54m						
			IE, @373m –							
		67 [°] &76 [°] NE, @472m –65 [°]	5°&70°NE, @5	548m —						
		65° & 13°N								
Complet	ed: Drillin	ng and logging reported Sampled by: No core samples for analysis	D	ates Logging	j: April 17, May	Depth	Bearing/Dip:			
to May 2	0, 199/10	Drassessment report	20	0, 1997	Farm Tr		Bearing/Dip:	Anchesia		
From	10	Description	5	ample No.	From – To	wiath	<u> </u>	Analysis	<u>-</u>	
0	24.85	Overburden, cased to 120m A respectively to light colour handing evenly encoded $@70^{\circ}$ to CA. Exactly respectively on the set of the set	CA with							1
24.85	42.42	Arg-Qualte: grey to light colour banding evenly spaced (a) 70 to CA. Fractures at large angle to the colour banding evenly spaced (a) 70 to CA.								I
1		20.20 20.01 broken core								1
42.42	02.02	50.50 - 50.91. DIOKEN COLC								I
42.42	33.33	65.15 60.70. Erectured and broken core, py, pyth 2% along fractures								
03.03	116 67	Δr_{α} -Otzite: some lighter hands $\otimes 60^{\circ}$ to CA								1
116 67	256.06	Otzitic. Arg: flow handing $(200)^{\circ}$ to CA broken core								1
110.07	200.00	92.42 - 107.58; guite broken and fractured								1
		94.55 - 107.58; no sample, drilled with hammer								1
		131.81 – 145.45: core guite broken and fractured								i
256.06	262.12	Broken core, in fault zone, in Otzitic-Arg with typical floe banding @80° to CA								l l
262.12	275.91	Distinct fault with iregular/discontinuoues CO ₃ - chlorite stringers. Lots of gouge zones, sulphur	r smell on							l l
		Breaking core but no significant sulphides seen.								ł
275.91	281.82	Intrusive, equigranular, propyllitic alteration, rock id as monzonite-diorite (?)								1
		Strong smell of sulphur on breaking core								1
281.82	291.52	Monzonite-Diorite: medium grained slightly more altered.								1
291.52	305.91	Monzonite-diorite: quite altered almost "bleached"								ł
305.91	324.39	Monzonite-Diorite: medium grained slightly more altered.								
		Strong smell of sulphur on breaking core								
324.39	332.12	Siltstone (?): finer grained equigranular, contact phenomena (?)								
000.10	242.04	Strong smell of sulphur on breaking core								
332.12	343.94	Monzonite-Diorite(?): quite silicitied		-						
242.04	251.26	Strong smell of sulphur on breaking core Broken core foult (2) Core intrucive contact mixture, quite blanched with sections quite arcillic								
545.94	551.50	Strong smell of sulphur on breaking core								
351 36	353 33	Very altered to clay minerals with yors some broken core								
353.33	358.79	Arg-Otzite(?), silicified contact zone or xenolith								
358.79	372.73	Monzonite-Diorite again, silicified, some broken core and gouge clau coating some of the core								
372.73	405.45	Monzonite-Diorite, very ground and broken core, bleached look, Fault Zone								
405.45	425.46	Fault Zone, very ground and broken core and portions hihly altered to clay.								1
425.46	478.79	Arg-Qtzite: grey green, some flow banding @ 75° to Caand lots of CO, stringers								
478.79	479.09	Clay gouge zone								1

DIAMOND DRILL LOG

MASTER MINERAL RESOURCE SERVICES LTD.

Hole No.	Hole No. BURT 2-97 Page 2 of 2 Project: BURT Property : DOGWOOD GROUP #1A From To Description Sample No. From - To Width ANALYSIS (in PPM unless otherwise stated)													
From	То	Description	Sample No.	From - To	Width	ANALYSIS (i	n PPM unle	ss otherwis	e stated)					
479.09	498.49	Qtzite: grey, buff, bleached looking, some breccia (bx), partly broken core												
498.49	572.77	Arg-Qtzite: quite silisic, flow banding @75 ^o to CA, CO ₃ veinlets common												
		Strong smell of sulphide on breaking core, but no significant sulphides seen	1											
	572.77	End of Logging for Assessment Record Period												
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Job No:

97-120

TERRAMIN RESEARCH LABS Ltd.

Client: Bul River Mineral Corp. Project: Burt

Sample Number	from	to	Ag ppm	Cd ppm	Co ppm	Cu ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
Burt 1-97	65	70	0.1	0.2	8	19	3	15	19	86
Burt 1-97	70	75	0.1	0.3	8	20	5	15	16	86
Burt 1-97	75	80	0.1	0.3	5	11	4	10	24	75
Burt 1-97	80	85	0.1	0.1	5	13	5	10	20	47
Burt 1-97	85	90	0.1	0.1	6	15	7	11	18	56
Burt 1-97	90	95	0.1	0.1	6	15	7	11	20	53
Burt 1-97	95	100	0.1	0.2	9	21	10	15	21	74
Burt 1-97	100	105	0.1	0.1	6	15	5	10	17	52
Burt 1-97	105	110	0.1	0.1	5	12	5	9	19	43
Burt 1-97	110	115	0.1	0.4	6	14	5	9	21	100
Burt 1-97	115	120	0.1	0.4	6	18	6	11	19	113
Burt 1-97	120	125	0.1	0.2	6	15	5	17	20	68
Burt 1-97	125	130	0.1	0.2	5	14	5	11	18	59
Burt 1-97	130	135	0.1	0.2	5	14	5	11	20	68
Burt 1-97	135	140	0.1	0.2	6	13	5	11	18	63
Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97	140 145 150 155 160	145 150 155 160 165	0.1 0.1 0.1 0.1 0.1	0.2 0.3 0.2 0.2 0.2	5 5 5 5 5 5	13 12 12 13 10	4 4 5 5 4	11 11 10 10 9	16 16 18 18 16	58 82 72 60
Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97	165 170 175 180 185	170 175 180 185 190	0.1 0.1 0.1 0.1 0.1	0.1 0.1 0.1 0.1 0.2	5 4 4 5 6	11 11 10 10 14	4 5 4 4 4	10 9 10 13	17 17 16 18 18	56 53 57 64 75
Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97	190 195 200 205 210	195 200 205 210 215	0.1 0.1 0.1 0.1 0.1	0.2 0.1 0.1 0.1 0.1	6 5 7 5 6	13 14 15 14 15	5 5 5 5 5 5	14 12 12 12 12	17 16 16 16 17	72 62 69 48 41
Burt 1-97	215	220	0.1	0.1	5	15	4	12	17	39
Burt 1-97	220	225	0.1	0.1	6	14	5	12	16	49
Burt 1-97	225	230	0.1	0.1	7	17	4	15	18	55
Burt 1-97	230	235	0.1	0.1	7	16	5	15	17	52
Burt 1-97	235	240	0.1	0.1	6	16	4	14	16	50
Burt 1-97	240	245	0.1	0.1	5	11	4	9	16	57
Burt 1-97	245	250	0.1	0.1	6	14	5	11	14	43
Burt 1-97	250	255	0.1	0.1	7	17	5	16	14	48
Burt 1-97	255	260	0.1	0.1	6	21	4	13	12	34
Burt 1-97	260	265	0.1	0.3	8	17	5	15	15	89
Burt 1-97	265	270	0.1	0.1	9	26	5	17	14	40
Burt 1-97	270	275	0.1	1.0	6	15	4	13	14	220
Burt 1-97	275	280	0.1	0.1	7	19	6	17	13	40



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Bul River Mineral Corp.



Job No:

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97-120

TERRAMIN RESEARCH LABS Ltd.

Client:

					Pro	oject: Bu	rt	·	
Sample Number	from	to	Ba ppm	Be ppm	Cr ppm	Li ppm	Rb ppm	Sr ppm	V ppm
Burt 1-97	65	70	520	2.4	56	31	186	55	120
Burt 1-97	70	75	510	2.4	46	30	187	39	130
Burt 1-97	75	80	530	2.5	42	35	197	63	110
Burt 1-97	80	85	530	2.5	41	32	194	79	110
Burt 1-97	85	90	530	2.4	44	29	197	62	110
Burt 1-97	90	95	560	2.3	38	29	195	65	110
Burt 1-97	95	100	560	2.5	96	34	200	65	110
Burt 1-97	100	105	550	2.5	40	36	204	61	110
Burt 1-97	105	110	510	2.3	65	30	168	68	110
Burt 1-97	110	115	540	2.3	55	33	171	71	120
Burt 1-97	115	120	550	2.5	59	34	190	63	120
Burt 1-97	120	125	530	2.0	64	29	172	97	120
Burt 1-97	125	130	540	2.0	71	32	177	85	110
Burt 1-97	130	135	530	2.0	57	33	182	73	110
Burt 1-97	135	140	540	2.1	62	34	188	65	110
Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97	140 145 150 155 160	145 150 155 160 165	540 540 530 550 550	2.2 2.2 2.2 2.2 2.2 2.4	56 51 53 58 49	32 32 34 30 32	193 187 182 187 194	66 61. 64 80 71	100 100 100 100 90
Burt 1-97	165	170	560	2.3	48	33	206	63	90
Burt 1-97	170	175	550	2.5	55	39	200	61	100
Burt 1-97	175	180	540	2.0	39	34	194	69	90
Burt 1-97	180	185	510	2.3	50	31	178	73	100
Burt 1-97	185	190	540	2.3	53	28	180	69	100
Burt 1-97	190	195	540	2.3	55	29	176	74	100
Burt 1-97	195	200	530	2.2	52	28	178	86	100
Burt 1-97	200	205	500	2.3	56	31	176	91	100
Burt 1-97	205	210	530	2.3	51	30	198	66	110
Burt 1-97	210	215	510	2.5	51	33	200	62	110
Burt 1-97	215	220	520	2.4	46	36	193	63	110
Burt 1-97	220	225	530	2.3	51	35	188	61	110
Burt 1-97	225	230	560	2.0	46	27	188	66	110
Burt 1-97	230	235	640	2.0	45	31	206	68	110
Burt 1-97	235	240	580	1.9	48	32	203	53	110
Burt 1-97	240	245	540	2.0	48	32	184	62	110
Burt 1-97	245	250	520	2.2	71	30	176	57	100
Burt 1-97	250	255	520	2.3	70	31	168	60	90
Burt 1-97	255	260	550	2.4	56	31	190	53	110
Burt 1-97	260	265	570	2.4	61	31	184	61	100
Burt 1-97	265	270	520	2.1	56	28	166	76	90
Burt 1-97	270	275	550	2.3	66	31	193	61	100
Burt 1-97	275	280	560	2.3	58	30 ·	179	85	110



TERRAMIN RESEARCH LABS Ltd.

Job No: 97-120

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Client: Bul River Mineral Corp. Project: Burt

Sample Number	from	to	SIO2 %	Al ₂ O ₃ %	CaO %	MgO %	Na₂O %	K₂O %	⊦e₂O₃ %	MnO %	11O2 %	LOI %	iotal %
Burt 1-97	65	70	66.1	13.3	2.350	2.703	1.591	3.482	5.26	0.143	0.38	3.8	99.13
Burt 1-97	70	75	68.0	13.5	1.343	2.470	1.739	3.507	5.25	0.105	0.35	2.8	99.08
Burt 1-97	75	80	66.7	13.5	2.644	2.736	1.618	3.687	4.23	0.119	0.37	3.8	99.44
Burt 1-97	80	85	65.7	13.3	3.246	2.520	1.672	3.711	4.30	0.124	0.35	4.6	99.51
Burt 1-97	85	90	66.3	13.3	3.134	2.421	1.550	3.796	4.72	0.121	0.33	4.0	99.70
Burt 1-97	90	95	65.7	13.7	3.120	2.504	1.564	3.748	4.80	0.125	0.35	4.2	99.75
Burt 1-97	95	100	65.0	13.9	2.504	2.553	1.361	3.796	5.59	0.089	0.35	4.6	99.72
Burt 1-97	100	105	65.2	14.2	2.546	2.802	1.537	3.723	4.50	0.086	0.37	4.4	99.41
Burt 1-97	105	110	66.5	13.1	2.644	2.868	1.645	3.157	4.29	0.093	0.35	4.8	99.51
Burt 1-97	110	115	65.2	13.7	2.616	2.968	1.752	3.205	4.70	0.094	0.37	4.6	99.22
Burt 1-97	115	120	64.8	14.0	2.280	3.018	1.739	3.482	5.12	0.085	0.38	4.8	99.75
Burt 1-97	120	125	66.7	10.5	3.400	3.217	1.604	3.169	4.62	0.098	0.37	6.0	99.69
Burt 1-97	125	130	65.5	11.7	3.749	3.167	1.564	3.302	4.06	0.103	0.35	6.0	99.47
Burt 1-97	130	135	65.2	13.0	3.456	3.001	1.415	3.254	3.89	0.092	0.33	5.4	99.04
Burt 1-97	135	140	65.2	13.1	3.246	2.984	1.429	3.374	4.10	0.085	0.33	5.2	99.14
Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97 Burt 1-97	140 145 150 155 160	145 150 155 160 165	65.0 64.8 63.7 64.4 65.2	13.5 13.1 13.1 13.1 13.1 13.0	3.148 3.148 3.344 3.805 3.288	3.167 3.465 3.382 3.200 3.117	1.429 1.375 1.375 1.294 1.182	3.495 3.338 3.374 3.519 3.531	4.10 4.22 4.25 4.28 3.88	0.084 0.084 0.089 0.092 0.083	0.32 0.32 0.32 0.33 0.33	5.6 5.8 6.8 5.6 5.4	99.86 99.70 99.81 99.64 99.01
Burt 1-97	165	170	65.9	13.1	2.756	3.299	1.143	3.796	4.12	0.077	0.33	5.0	99.54
Burt 1-97	170	175	66.3	13.0	2.868	3.316	1.122	3.639	3.99	0.080	0.33	4.8	99.42
Burt 1-97	175	180	64.6	13.1	3.386	3.482	1.361	3.495	3.96	0.089	0.33	5.6	99.44
Burt 1-97	180	185	64.6	12.6	3.470	3.283	1.375	3.193	3.88	0.085	0.35	6.0	98.84
Burt 1-97	185	190	64.2	13.0	3.400	3.498	1.483	3.314	4.16	0.085	0.37	5.8	99.24
Burt 1-97	190	195	62.9	13.3	4.029	3.648	1.510	3.362	4.53	0.099	0.37	6.0	99.75
Burt 1-97	195	200	62.0	13.3	4.547	3.515	1.402	3.157	4.33	0.102	0.37	6.8	99.57
Burt 1-97	200	205	61.6	13.3	4.631	3.515	1.415	3.278	4.62	0.101	0.35	7.0	99.83
Burt 1-97	205	210	63.1	13.9	3.092	3.316	1.442	3.784	4.59	0.077	0.37	5.6	99.22
Burt 1-97	210	215	65.2	13.7	2.728	3.150	1.442	3.543	4.33	0.072	0.37	5.0	99.55
Burt 1-97	215	220	65.2	13.9	2.546	3.051	1.375	3.687	4.43	0.065	0.37	4.6	99.21
Burt 1-97	220	225	64.4	13.7	2.980	3.266	1.469	3.567	4.19	0.075	0.37	5.6	99.57
Burt 1-97	225	230	62.5	13.9	3.400	3.349	1.483	3.555	4.69	0.081	0.33	6.0	99.20
Burt 1-97	230	235	62.0	14.6	3.134	3.134	1.604	3.928	4.88	0.071	0.38	5.4	99.12
Burt 1-97	235	240	63.7	14.2	2.700	2.968	1.294	3.844	4.53	0.065	0.38	5.4	99.13
Burt 1-97	240	245	64.2	13.0	3.442	3.432	1.348	3.434	4.38	0.081	0.37	6.0	99.61
Burt 1-97	245	250	64.0	13.3	3.218	3.283	1.672	3.410	4.40	0.085	0.33	6.2	99.88
Burt 1-97	250	255	62.9	13.5	3.162	3.449	1.698	3.205	4.98	0.085	0.35	6.4	99.71
Burt 1-97	255	260	62.9	14.7	2.518	3.217	1.793	3.760	4.80	0.071	0.38	5.6	99.77
Burt 1-97	260	265	61.6	14.4	2.868	3.498	1.739	3.663	5.21	0.079	0.37	6.2	99.61
Burt 1-97	265	270	59.0	14.9	3.609	3.565	1.604	3.278	5.82	0.103	0.35	7.2	99.48
Burt 1-97	270	275	63.1	14.4	2.966	3.200	1.698	3.736	4.55	0.084	0.37	5.8	99.88
Burt 1-97	275	280	63.5	13.9	3.316	2.968	1.739	3.627	4.98	0.067	0.37	5.4	99.84





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TERRAMIN RESEARCH LABS Ltd.

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	97-190							Client: Project:	Bul River BURT	Mineral C	согр.
Sample Number		SiO2 %	Al ₂ O ₃ %	CaO %	MgO %	Na₂O %	K₂O %	Fe ₂ O ₃ %	MnO %	TiO2 %	LOI %
Burt 2 2-96 Burt 1 96/97 Burt 1-97	1096-1338 1265 1152	0.2 0.2 1.9	0.2 0.2 0.2	33,436 43,509 42,949	19.233 10.528 10.081	0.050 0.039 0.059	0.012 0.006 0.025	0.11 0.06 0.11	0.010 0.005 0.008	0.02 0.02 0.02	45.6 44.4 44.4
Sample Number		Ba ppm	Be ppm	Cr ppm	Li ppm	Rb ppm	Sr ppm	V ppm			
Burt 2 2-96 Burt 1 96/97 Burt 1-97	1096-1338 1265 1152	200 280 250	0.6 0.7 0.7	10 5 5	10 12 13	6 6 6	78 69 86	10 10 20)		

Ζn Sample Cd Со Cu Рb Мо Ni Ag Number ppm ppm ppm ppm ppm ppm ppm ppm Burt 2 2-96 1096-1338 Burt 1 96/97 1265 Burt 1-97 1152 4 2 3 28 0.1 119 1.6 4 1 < 1 4 3 0.2 < 1 9 1 0.1 21 0.8 1 1 1 0.2 47

GRAB SAMPLES OF CORE TO CONFIRM PRESENCE OF CARBONATE

5484000

Bul Kiver Mine

5481000N

5480000N

5479000N

5478000N

5477000N

5476000N

547500N

5474000N

5472000

5471000N

5470000N

5469000N

5468000N

5467000N-

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Kilometers

Nautical Miles

Kootenay River

August 1997 FIGURE 2, LOCATION BY REGION SATELLITE IMAGERY, DOGWOOD GROUP #1a R. H. STANFIELD

ltn #5

Mtn⁺#3

Tie Lake

547300N DOGWOOD GROUP #1A Camp

Galloway

