SNOWDEN

Final

Gallowai-Bul River Technical Report
Project No. 12V1249

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1 Summary

This Technical Report refers to the Gallowai Bull River Mine ("GBRM"), a deposit containing copper, gold, and silver located near Cranbrook, British Columbia. Snowden Mining Industry Consultants ("Snowden") was retained by Bul River Mineral Corp ("BRM") and Gallowai Metal Mining Corp ("Gallowai") to complete an update of the Mineral Resource and accompanying Technical Report as a result of the successful completion of phase one recommendations set forth in the RPA Technical Report dated March 30, 2012 ("RPA Report"). This Technical Report conforms to NI43-101 Standards of Disclosure for Mineral Projects. Snowden visited the BRM property on August 27 and August 28, 2012.

The project currently consists of a mineralized deposit containing copper, gold, and silver. Underground infrastructure to access this mineralization includes a mine ramp, ventilation raises, sumps, surface shop, and mobile equipment fleet. There is a 750 ton per day conventional mill with an adjoining crusher building, fine ore bin, and concentrate storage area. On the property there is an administration, security, assay laboratory, metallurgical laboratory buildings and support infrastructure. The mine is currently not operating.

Snowden understands that this Technical Report will be used to disclose the updated Mineral Resources on the project. The effective date of this report is December 13, 2012. The work on this Technical Report included a site visit in July of 2012.

1.1 Mineral Resource Estimate

Snowden conducted an update of the estimate of the Mineral Resource at the GBRM. The results of the updated Mineral Resource estimate at the base case CuEq cut-off of 0.6% CuEq are shown in

Table 1.1 and Table 1.2 and over a range of cut-offs in Table 1.3 and Table 1.4. The effective date of the estimate is December 13, 2012.

Table 1.1 Indicated Tonnes and grade at 0.6 CuEq base case cut-off

Classification	CuEq Cut-Off	Tonnes kt	Cu Eq %	Cu %	Cu klbs	Ag g/t	Ag koz	Au g/t	Au koz
Indicated	0.6	1,732	1.79	1.47	68,200	11.4	636	0.4	20

Table 1.2 Inferred Tons and grade at 0.6 CuEq base case cut-off

Classification	CuEq Cut-Off	Tonnes kt	Cu Eq %	Cu %	Cu klbs	Ag g/t	Ag koz	Au g/t	Au koz
Inferred	0.6	1,484	1.69	1.42	55,200	10.9	519	0.3	13

Notes:

1. *CIM definitions were followed for Mineral Resources.*
2. *Mineral Resources are estimated over a range of cut-off grades based on copper equivalent (CuEq). Equivalency factors include consideration of:*
   a. *Metal prices – US$3.50 per lb Cu, US$26 per oz Ag, and US$1,500 per oz Au. Assuming a US$/C$ exchange rate of US$1.00 to C$1.00 .*
   b. *Metallurgical recoveries – 90% Cu, 90% Ag, 70% Au*
3. *The operating costs used in estimating the cut-off grade are based on deposits with similar mineralization to Bul River.*
4. *Snowden did not carry out any economic analysis on the Project.*
5. *Numbers may not add due to rounding.*

Table 1.3 Inferred Tonnes and grade above a range of cut-offs

Classification	CuEq Cut-Offs	Tonnes kt	Cu Eq %	Cu %	Cu klbs	Ag g/t	Ag koz	Au g/t	Au koz
Inferred	0.0	3,090	0.96	0.8	65,600	6.3	625	0.2	17
Inferred	0.2	2,420	1.19	1	63,500	7.7	599	0.2	16
Inferred	0.4	1,985	1.39	1.17	60,700	8.9	570	0.2	15
Base Case	**0.6**	**1,484**	**1.69**	**1.42**	**55,200**	**10.9**	**519**	**0.3**	**13**
Inferred	0.8	1,222	1.9	1.61	51,300	12.4	487	0.3	12
Inferred	1.0	1,069	2.05	1.74	48,200	13.4	461	0.3	10
Inferred	1.2	895	2.23	1.9	43,900	14.4	414	0.3	9
Inferred	1.4	771	2.38	2.03	40,400	15.3	378	0.3	9
Inferred	1.6	679	2.5	2.13	37,400	15.9	348	0.4	8
Inferred	1.8	572	2.65	2.26	33,400	16.7	306	0.4	7
Inferred	2.0	474	2.8	2.4	29,300	17.6	269	0.4	6

Notes:

1. *CIM definitions were followed for Mineral Resources.*
2. *Mineral Resources are estimated over a range of cut-off grades based on copper equivalent (CuEq). Equivalency factors include consideration of:*
   a. *Metal prices – US$3.50 per lb Cu, US$26 per oz Ag, and US$1,500 per oz Au. Assuming a US$/C$ exchange rate of US$1.00 to C$1.00 .*
   b. *Metallurgical recoveries – 90% Cu, 90% Ag, 70% Au*
3. *The operating costs used in estimating the cut-off grade are based on deposits with similar mineralization to Bul River.*
4. *Snowden did not carry out any economic analysis on the Project.*
5. *Numbers may not add due to rounding.*

Table 1.4 Indicated Tonnes and grade above a range of cut-offs

Classification	CuEq Cut-Offs	Tonnes kt	Cu Eq %	Cu %	Cu klbs	Ag g/t	Ag koz	Au g/t	Au koz
Indicated	0.0	2,816	1.21	0.99	75,400	7.7	700	0.3	24
Indicated	0.2	2,461	1.37	1.12	74,300	8.7	687	0.3	24
Indicated	0.4	2,045	1.59	1.3	71,600	10.1	663	0.3	22
Base Case	**0.6**	**1,732**	**1.79**	**1.47**	**68,200**	**11.4**	**636**	**0.4**	**20**
Indicated	0.8	1,406	2.04	1.69	63,200	13.3	601	0.4	18
Indicated	1.0	1,204	2.23	1.85	59,200	14.7	568	0.4	16
Indicated	1.2	1,069	2.37	1.98	55,900	15.7	541	0.4	14
Indicated	1.4	947	2.51	2.1	52,400	16.8	512	0.4	13
Indicated	1.6	812	2.68	2.25	47,900	18.2	475	0.4	11
Indicated	1.8	666	2.89	2.45	42,500	20.1	430	0.4	9
Indicated	2.0	564	3.07	2.62	38,200	21.7	393	0.4	7

Notes:

1. *CIM definitions were followed for Mineral Resources.*
2. *Mineral Resources are estimated over a range of cut-off grades based on copper equivalent (CuEq). Equivalency factors include consideration of:*
   a. *Metal prices – US$3.50 per lb Cu, US$26 per oz Ag, and US$1,500 per oz Au. Assuming a US$/C$ exchange rate of US$1.00 to C$1.00 .*
   b. *Metallurgical recoveries – 90% Cu, 90% Ag, 70% Au*
3. *The operating costs used in estimating the cut-off grade are based on deposits with similar mineralization to Bul River.*
4. *Snowden did not carry out any economic analysis on the Project.*
5. *Numbers may not add due to rounding.*

1.2 Interpretations and Conclusions

Snowden and Moose Mountain Technical Services ("MMTS") offer the following conclusions:

- The work completed by contractor MMTS has resulted in an acceptable drillhole database for use in a Mineral Resource estimate.
- The work by MMTS has followed industry standards for data and sampling QA\QC protocols.
- The drillcore logging, sampling, and security protocols were found to be acceptable and appropriate for this particular type of mineralization. Underground channel sampling, re-sampling of historic drillcore, and bulk density measurement methodology was inspected during the site visit and found to be done to a reasonable standard and can be used for Resource Estimation.
- None of the assay results from the Munich University ("MU") or AuRIC laboratories were used for either grade modelling or interpolation.
- The verified database consists of 269 diamond drillholes, 409 underground channel samples.

1.3 Recommendations

This Technical Report is an update of the Resource Estimate reported in the Roscoe Postle Associates Inc. ("RPA") Technical Report dated March 30, 2012. Snowden recommends based on the comprehensive sampling, logging, and geologic interpretation and comparisons between the Resource Estimate in RPA (2012) and the revised tonnages and grades reported in this updated Technical Report, that GBRM proceed with a preliminary economic assessment. In Snowden's opinion the preliminary economic assessment is the next logical step in the development of GBRM. The drilling programs outlined are proposed to gather the requisite samples and information required for a more detailed geometallurgical, geotechnical, and engineering analysis and design studies required for inclusion in a preliminary economic assessment. Upon a successful completion of the preliminary economic assessment report a pre-feasibility study should be conducted.

- Bul River should continue with the improvements to the current database by organizing and compiling data following the documented procedures for re-logging and sampling un-sampled historic drillcore.
- Under the direction of Qualified Person, drill holes should be designed and drilled to provide material for metallurgical testing.
- Mineralogical test work should be conducted on selected samples to confirm and expand knowledge and understanding of the mineralization style.
- Specific Gravity measurements should continue to be taken with any additional drilling.
- A drilling program to consist of 24 diamond drillholes (4,200 m) for resource development and verification and to provide:
  - detailed information for geotechnical assessment
  - detailed geologic logging of host lithologies and structures
  - geometallurgical samples for detailed mineralogical analysis

  - increases in indicated and inferred categories.
- A drilling program to consist of 6 diamond drillholes (1,200 m) for metallurgical testing.

The proposed budget for the work program is outlined in Table 1.5.

Table 1.5 Bul River Mine Proposed Work Program Budget

Work Description	CDN$
4,200 m underground drilling (NQ) drilling at GBRM (24 holes)	300,000
2,400 m underground drilling (NQ) drilling at GBRM (six holes)	140,000
Assaying for proposed drilling programs	200,000
Detailed geologic mapping (1 geo @ 1,300/day x 30 days)	39,000
Drill program supervision (2 geo @ 800/day x 60 days)	96,000
Re-sample assaying of historic core for copper, silver and gold	250,000
G & A	77,500
Contingency (15%)	115,000
Preliminary economic assessment	250,000
Total	1,467,500

2 Introduction

This Technical Report describes the GBRM property, a mineral exploration, development, and production area located approximately 30 km east of Cranbrook, in the Province of British Columbia. The GBRM is owned by the Stanfield Mining Group.

This Technical Report has been prepared by Snowden for BRM, in compliance with the disclosure requirements of the Canadian National Instrument 43-101 (NI43-101). The trigger for preparation of this report is the successful completion of the sampling program recommendation from the previous Technical Report which resulted in a material change to the resource.

Unless otherwise stated, information and data contained in this report or used in its preparation has been provided by GBRM and its personnel.

The Qualified Persons for preparation of the report is Walter A Dzick who visited the project site on July 27 and 28, 2012 and Abolfazl Ghayemghamian who has not made a current site visit but who oversaw the Resource Estimate. The effective date of this report is December 13, 2012.

The responsibilities of each author are provided in Table 2.1.

Table 2.1 Responsibilities of each co-author

Author	Responsible for sections
Walter A Dzick	1, 2, 3, 11, 12, 14, 24, 25, 26, 27
Robert Morris	4, 5, 6, 7, 8, 9, 10, 13, 23

Unless otherwise stated, all currencies are expressed in Canadian Dollars.

3 Reliance on other experts

This report has been prepared by Snowden for BRM and Gallowai. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to Snowden at the time of preparation of this report;
- Assumptions, conditions, and qualifications as set forth in this report; and
- Data, reports, and other information supplied by BRM and other third party sources.

For the purpose of this report, Snowden has relied on ownership information provided by GBRM. Snowden has not researched property title or mineral rights for GBRM and expresses no opinion as to the ownership status of the property.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

There has been no reliance on experts who are not Qualified Persons in the preparation of this report.

Figure 3.1 List of abbreviations

μl	micron	km^2	square kilometre
°C	degree Celsius	kPa	kilopascal
°F	degree Fahrenheit	kVA	kilovolt-amperes
μg	microgram	kW	kilowatt
A	ampere	kWh	kilowatt-hour
a	annum	L	litre
bbl	barrels	L/s	litres per second
Btu	British thermal units	lb	pound
C$	Canadian dollars	m	metre
cal	calorie	M	mega (million)
cfm	cubic feet per minute	m^2	square metre
cm	centimetre	m^3	cubic metre
cm^2	square centimetre	min	minute
d	day	MASL	metres above sea level
dia.	diameter	mm	millimetre
dmt	dry metric tonne	mph	miles per hour
dwt	dead-weight ton	MVA	megavolt-amperes
ft	foot	MW	megawatt
ft/s	foot per second	MWh	megawatt-hour
ft^2	square foot	m^3/h	cubic metres per hour
ft^3	cubic foot	opt, oz/st	ounce per short ton
g	gram	oz	Troy ounce (31.1035g)
G	giga (billion)	ppm	part per million
Gal	Imperial gallon	psia	pound per square inch absolute
g/L	gram per litre	psig	pound per square inch gauge
g/t	gram per tonne	RL	relative elevation
gpm	Imperial gallons per minute	s	second
gr/ft^3	grain per cubic foot	st	short ton
gr/m^3	grain per cubic metre	stpa	short ton per year
hr	hour	stpd	short ton per day
ha	hectare	t	metric tonne
hp	horsepower	tpa	metric tonne per year
in	inch	tpd	metric tonne per day
in^2	square inch	US$	United States dollar
J	joule	USg	United States gallon
k	kilo (thousand)	USgpm	US gallon per minute
kcal	kilocalorie	V	volt
kg	kilogram	W	watt
km	kilometre	wmt	wet metric tonne
km/h	kilometre per hour	yd^3	cubic yard
		yr	year

Units of measurement used in this report conform to the SI (metric) system.

4 Property description and location

GBRM is located approximately 30 km due east of the city of Cranbrook in the Regional District of East Kootenay in British Columbia (Figure 4.1). It is one of numerous properties held by the Stanfield Mining Group in the Fort Steele Mining Division of British Columbia. The properties, referred to as the Stanfield Holdings, comprise 139 claims covering 70,869.1 ha (Figure 4.2). The mineralized bodies that are the subject of the resource estimate in this report are shown in relation to the mineral lease in Figure 4.3.

The approximate centre of the GBRM property is within National Topographic Series Map reference 82G/11W at longitude 115° 22' 54" west and latitude 49° 30' 15" north. Universal Transverse Mercator (UTM) coordinates for the project centre utilizing projection North American Datum (NAD) 83, Zone 11 are approximately 616,952 m east and 5,484,446 m north. Access to GBRM from Cranbrook is via British Columbia Provincial Highway 3 to the paved, all-weather Wardner/Fort Steele Road and then the gravel, all-weather Bull River Road to the GBRM access road. The GBRM property has the remnants of previous mine operation including tailings impoundment, waste dumps, and two open pits. One pit has been backfilled with waste and the second pit is flooded. Numerous pads have been built for baseline testing of acid rock drainage and water quality monitoring.

4.1 Land Tenure

GBRM is underlain by Mineral Tenures 515055, 515057, and 515066 and Mining Lease 212493 (Figure 4.2). The Mining Lease covers 486.03 ha and includes surface rights in addition to mineral rights. The Mining Lease was granted in February 1972 and expires February 2023, with annual lease payments of $9,740.

Ross Stanfield purchased the assets of the past-producing Dalton Mine from Placid on March 5, 1976, and transferred the assets to Bul River under incorporation on March 17, 1976. Bul River is the operator. Gallowai has earned a 50% interest in GBRM through raising and expenditure of exploration dollars since incorporation in 1980 (de Souza, 1999). The Gallowai Bul River Mine name reflects the joint ownership by the two companies.

The Stanfield Mining Group consists of Bul River, Gallowai, Zeus Mineral Corporation Ltd. (Zeus Mineral), Fort Steele Mineral Corporation Ltd. (Fort Steele Mineral), Big Bear Metal Mining Corp (Big Bear), Giant Steeples Mineral Corp. (Giant), and White Cat Mining Corp. (White Cat). Gallowai and Bul River are 100% controlled by Zeus Mineral and Fort Steele Mineral and, through separate agreements, own 60% of the Stanfield Holdings (de Souza, 1999). Big Bear, Giant, and White Cat have, through separate agreements with Bul River and Gallowai, acquired their rights to specific claim groups in the Stanfield Holdings.

The British Columbia Hydro and Power Authority (BC Hydro) signed an agreement with Placid in July 1972 allowing for right of way (Easement F9558) over part of the GBRM property in perpetuity. Power is generated from the 24MW Aberfeldie hydroelectric power station located approximately 2.5 km east-southeast of the portal. The Canadian Pacific Railway main line also crosses part of the Stanfield Holdings. Placid had built infrastructure for shipping concentrate during production and this can be easily re-established.

GBRM has been awarded a “Small Mine” permit (permit number M-33 issued July 22, 2005) from the Ministry of Energy, Mines and Petroleum Resources (MEMPR) under the British Columbia Mines Act. This allows the mining operation to produce a maximum of 75,000 t of ore per year without the need to conduct a full Environmental Impact Assessment. A tailings disposal permit is still required. Other permits have been received and environmental baseline studies are ongoing. Bul River reports that an environmental assurance bond for C$489,506 is being held in trust by the British Columbia Minister of Finance as part of the Mine Closure Plan.

Bul River reports that current surface rights are inadequate for the storage of tailings and Bul River proposes that tailings be used for backfill. Studies will need to be conducted and approval will be required before any plan is implemented.

Bul River reports that there are no outstanding environmental liabilities associated with GBRM. Snowden has not independently verified this claim.

Bul River reports that Inspectors from the Ministry of Forests, Mines and Lands (MFML) regularly visit the site and that all work done to date is in compliance. Prior to the suspension of work in 2009, all work was done under the mine plan submitted to the MEMPR in 2007 by Bul River's Qualified Person (QP).

GBRM lies within the traditional use area of the Ktunaxa people and the Tobacco Plains Indian Band (BC Hydro, 2005). Bul River does not have any agreements in place with the local First Nations but reports that preliminary consultations have been positive.

Tables listing the claims covering the mine site and within the Stanfield Holdings can be found in Appendix 1.

Figure 4.1 GBRM Location Map

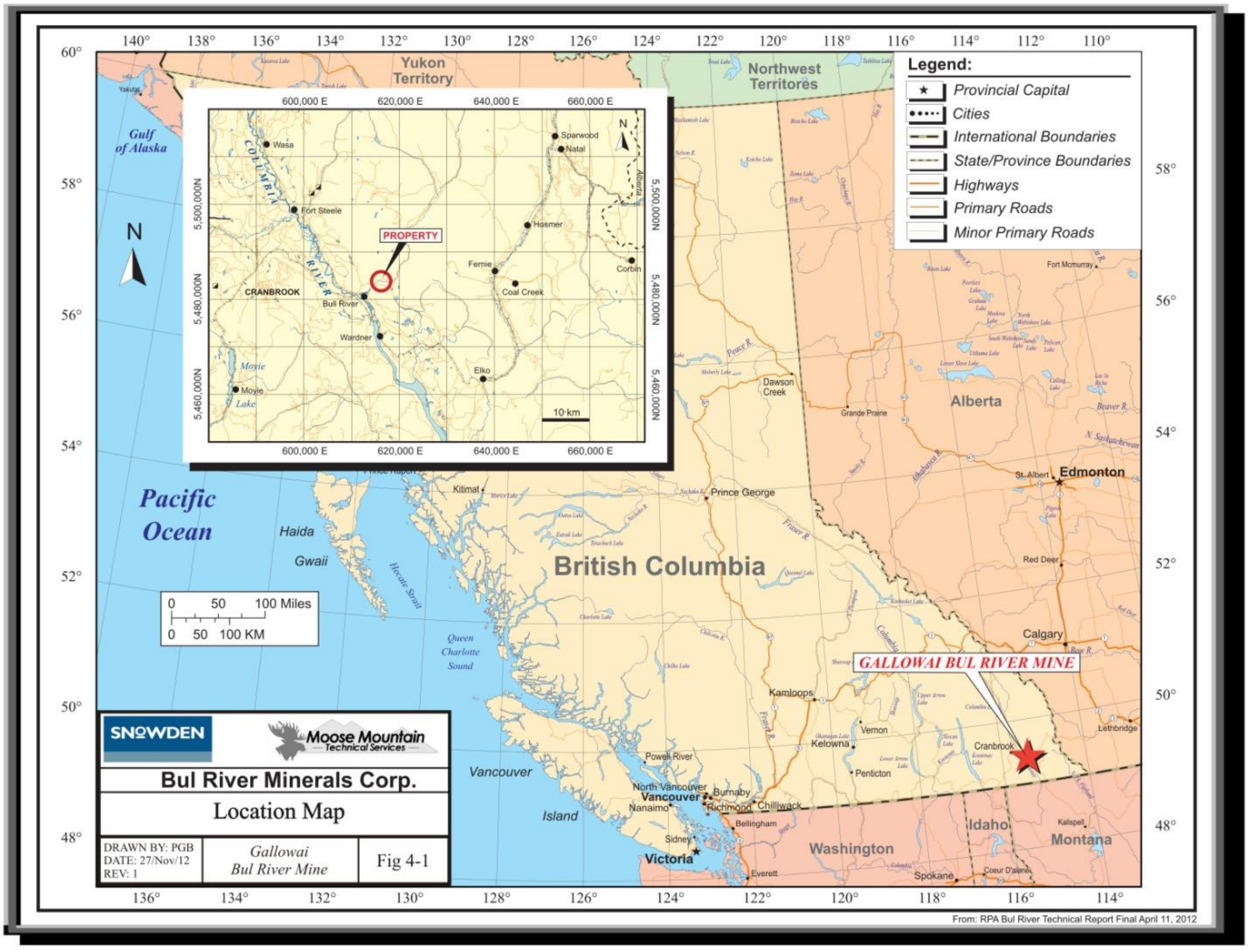


Figure 4.2 Stanfield Holdings 139 Claims Map

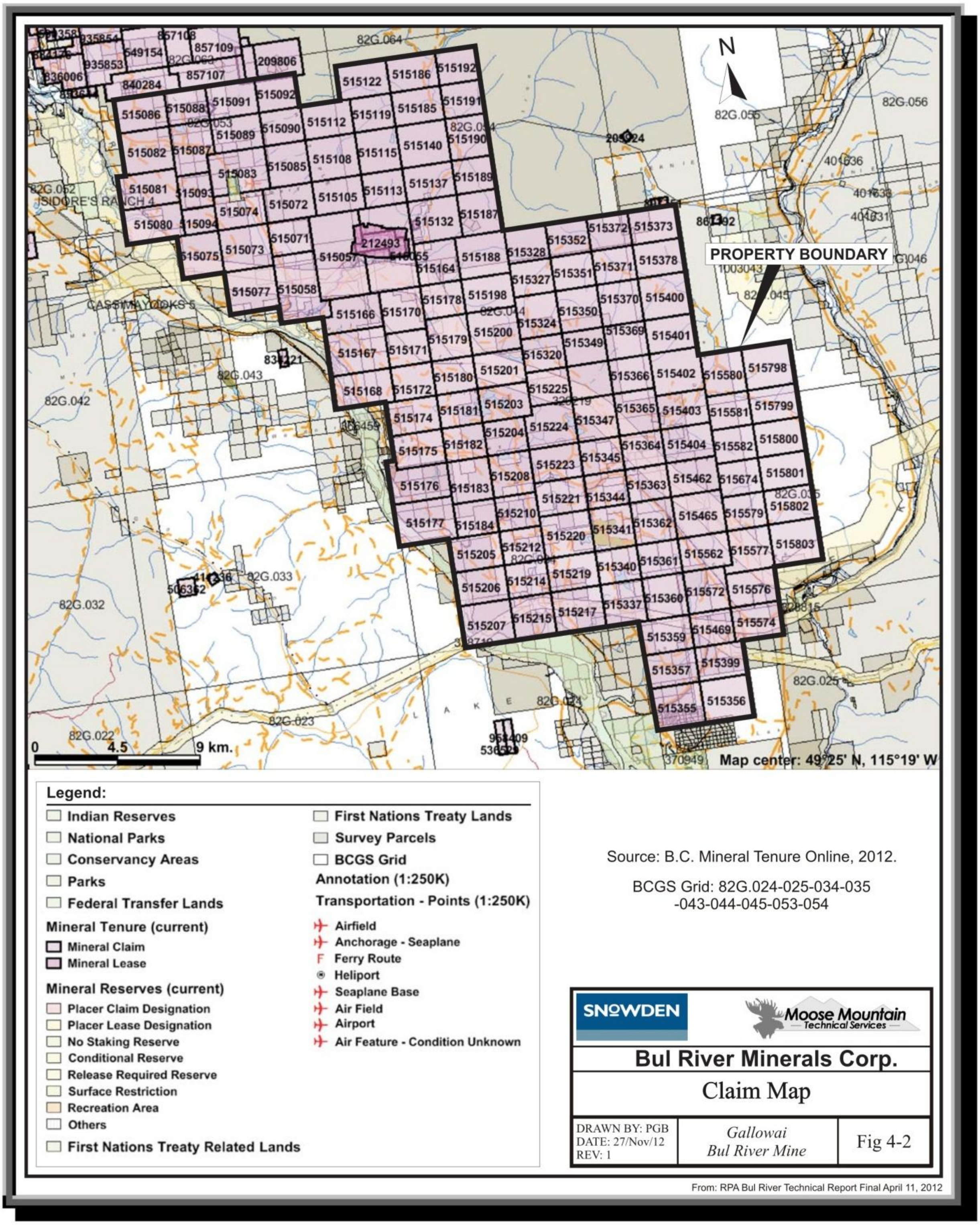
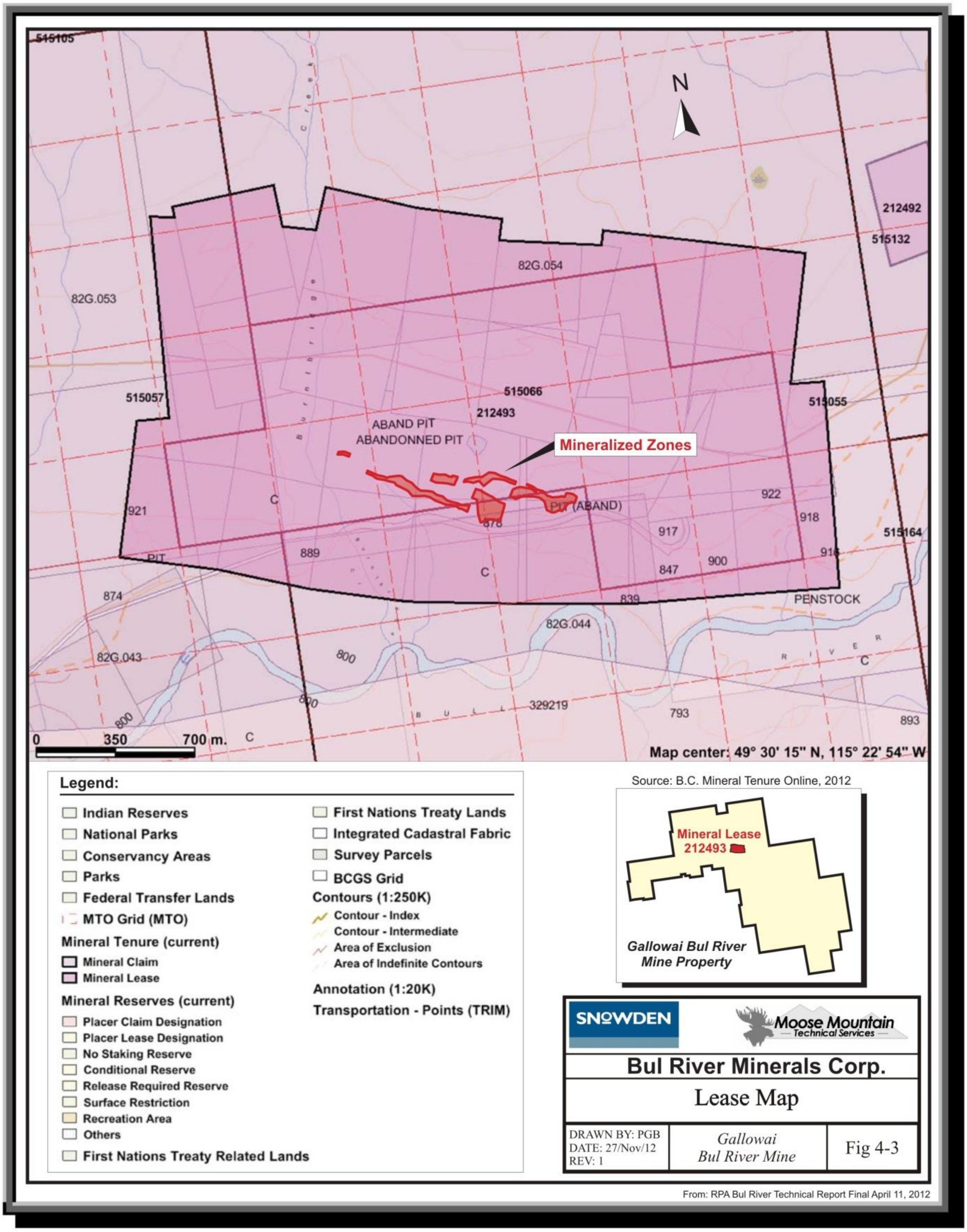


Figure 4.3 Mineralized Areas in relation to mineral lease



5 Accessibility, climate, local resources, Infrastructure and physiography

5.1 Accessibility

GBRM is located approximately 50 km by road from Cranbrook, British Columbia. Access to the GBRM property from Cranbrook is by driving northeast approximately 10 km via British Columbia Provincial Highway 3 (Crowsnest Highway) and then bearing southeast towards the town of Fernie, British Columbia, for approximately 26 km to the paved, all-weather Wardner Fort Steele Road. The Wardner Fort Steele Road is followed northwest for eight kilometres where it intersects the all-weather gravel Bull River Road. The Bull River Road is followed east-northeast for six kilometres to the GBRM mine access road.

5.2 Climate

The mean annual temperature is 8.5°C. Mean high temperatures occur in July and August, averaging 18°C, and lows in December averaging -7°C. Precipitation data from Environment Canada between 1971 and 2000 for Cranbrook shows an average annual precipitation of 403 mm (expressed in mm of water), with highest average precipitation in June (53 mm) and lowest in March (20 mm). There is an average of 69 days a year with precipitation in the form of rain and 32 days in the form of snow. Snowfall is recorded between October and May, with an annual mean of 13 mm (expressed in mm of water). The most snow falls in December which has a mean snowfall of four millimetres (expressed in mm of water).

Climate will not adversely affect operations and work can be carried out uninterrupted twelve months a year.

5.3 Local Resources

The Kootenay Regional District has a long history of mining activity, and mining suppliers and contractors are locally available. Both experienced and general labour is readily available from the city of Cranbrook with 18,270 inhabitants (2006 census) and other smaller East Kootenay communities in the vicinity with 1,819 inhabitants (2006 census). There is abundant water available to support mining operations.

5.4 Infrastructure

Currently, the major assets and facilities (with estimated areas) associated with GBRM are:

- The mineralized body (as defined with this report).
- An administrative building (690 m^2) containing dry facilities.
- An assay laboratory (242 m^2).
- A metallurgical laboratory (141 m^2).
- A 750 tpd conventional mill (2,020 m^2) with adjoining crusher building (280 m^2),fine ore bin (165 m^2), and concentrate storage facility (130 m^2).
- Mine shops (660 m2), electrical shop (140 m^2), core shack (80 m^2), Firehall (75 m^2), and Mine Rescue building (120 m^2).
- Electrical substation connected to 115 kV electrical transmission line, water wells, and septic system.
- Underground infrastructure including a mine ramp, ventilation raises, sumps, and mobile equipment fleet.
- Close proximity to a rail spur used by Placid during production but no longer active.

- Access by paved, all-weather roads.

5.5 Physiography

GBRM is located on the gentle slopes that form the base of the Steeples and Lizard Mountains which are part of the Rocky Mountain Front Range System. The project is located north of the meandering Bull River which makes up part of the Kootenay River watershed. GBRM portal elevation is approximately 950 MASL, with elevations within the Stanfield Holdings ranging from 760 MASL to 2,600 MASL.

The GBRM property lies within the Ponderosa Pine and Interior Douglas Fir biogeoclimatic zones. Grass and ground cover is dominated by rough fescue, pinegrass, Richardson’s needlegrass, Idaho fescue, northwest sedge, and bluebunch wheatgrass. Shrubs found in the area include bearberry, Saskatoon and bitterbush (Ross, 2001). The terrain is characterized by open pasture and mature vegetation that is used as forage for domestic cattle, elk, big horn sheep, white tail and mule deer, and grizzly and black bears.

Overburden varies in depth and can be up to 200 m thick and minimal bedrock is exposed at surface.

6 History

Placer gold was first discovered in the early 1860's in the Bull River Canyon and numerous small mine workings have been excavated in the area since that time. No work was reported on the GBRM site until 1968 when Placid optioned the property. Initially, Placid was targeting dyke structures similar to those found at the Sullivan Mine and other Purcell Supergroup deposits but instead intersected supergene-type copper mineralization and an underlying copper-silver vein system.

The GBRM property hosts the historic Dalton Mine which started milling on October 1, 1971, and continued from two open pits until June 10, 1974, producing 7,260 t (16.0 M lb) of copper, 6,354 kg (204,274 oz) of silver, and 126 kg (4,055 oz) of gold from 471,900 t milled (BC MINFILE). The Dalton Mine was owned by Placid Oil Co. (Placid). Placid attempted to go underground to access additional resources but was unsuccessful in getting the portal collared in blocky ground.

Ross Stanfield purchased the assets of the Dalton Mine from Placid on March 5, 1976, and transferred the assets to Bul River under incorporation on March 17, 1976. Gallowai has earned a 50% interest in the GBRM property through raising and expenditure of exploration dollars since its incorporation in 1980. The Gallowai Bul River Mine name reflects the joint ownership by the two companies. Table 6.1 is a summary of major events from 1952 to 2010.

Table 6.1 Summary of Events at GBRM

Year	Event
1952	1st Claim Holding - with Private Syndicate took control of mineral claim groups near Galloway, Fort Steele mining Division, British Columbia. Commenced active exploration - mapping and compass surveying
1958	Acquisition of first two Cats (D7's) - one since sold. 1st Roadwork - Mountain #1 - Burt Group Reopened Adits - Mountain #1 - Strathcona Empire Reopened Rimrock Adits
1958/59	First Camp Cabins constructed
1959	First Air Drill and Diamond Drill Contracts
1960	Rental of third Cat 1960, Machine Shops constructed
26 May 1969	Fort Steele Mineral Corporation Ltd - INCORPORATED
1970/71	Major expansion of Claim Holdings
1971	Placid Oil commenced production at Bull River
1974	Placid Oil closed down Bull River
5 March 1976	Ross H. Stanfield Purchased assets (Mill and Mine Lands) from Placid Oil. Records of 49,280 feet of Diamond Drilling at Bull River of which 22,599 feet of logs and core were received
17 March 1977	Bul River Mineral Corporation Ltd - INCORPORATED
15 Dec. 1977	Zeus Mineral Corporation Ltd. - INCORPORATED
16 Jan. 1978	Commencement of G Zone Adit - Mtn #4 - 1100 feet
28 Feb. 1979	1st Billing Date for Company Owned Diamond Drill
2 Dec. 1980	Gallowai Metal Mining Corporation - INCORPORATED
31 Aug. 1988	Big Bear Metal Mining Corporation - INCORPORATED
8 Sept. 1988	Giant Steeples Mineral Corporation - INCORPORATED
20 Oct. 1988	White Cat Metal Mining Corporation - INCORPORATED
1996	Underground Mine development begins under Sancold Resources Contractors Inc
22 July 2005	75,000 Tonne/year permit obtained (Does not allow for disposal of tailings)
26 May 2010	Stanfield Mining Group of Companies is granted Creditor's Protection

6.1 Mine Site Exploration

Drilling at GBRM by Bul River began in 1981 and was conducted more or less continuously until 2009 in an effort to verify and expand Placid’s estimated underground resources and explore new targets. Drilling was done primarily from surface by Bul River personnel using company owned equipment. Locally, thick overburden cover necessitated the use of a rotary percussion drill to establish bedrock before a core drill could replace it and finish the drillhole. A detailed summary of exploration drilling is discussed in Item 10, “Drilling”.

Work was conducted at GBRM without the supervision of a QP after August 2007 until work was suspended in 2009.

6.2 Database Development

Starting in 1999, the sampling of drill core and underground channel cuts and sample preparation, security, and storage were conducted by an independent consultant under “chain of custody” protocols. The work was done by one consulting firm until 2003 except for a brief period in 2001 when a second team replaced them.

An electronic database has been developed at the property where data is current, although not complete, to 2006. A great deal of drilling was done subsequent to 2006 but not logged or sampled. MMTS' 2011 field program included re-assaying of available sample pulps and the logging and sampling of unexamined drillholes.

The assay database was inspected and found to contain numerous tables. One assay table contains results from CanTech and the GBRM assay laboratory, and were partially supported by hard-copy assay certificates. Only a portion of these data, however, has corresponding hard copies. The RPA Technical Report notes that mineral resource estimates produced post-2001 used only these data. CanTech is no longer in existence but operates as a consulting firm. Another assay table contains results from AuRIC laboratories of Salt Lake City, Utah.

In the early 1980's, a relationship was established with Munich University (MU) in Germany to provide assay services to the Stanfield Mining Group. Selected intersections from early drill programs were sent to MU and returned values that convinced Bul River that potentially unrecognized precious metals were present. The work done by the MU laboratory pre-dates ISO 9000 certification and RPA notes that the MU assay results were difficult to reproduce using industry-standard fire assay methods. Bul River was sufficiently encouraged that it used a rotary percussion drill on Placid's tailings in an effort to investigate the potential for unexploited gold. RPA was not able to locate the procedures for, or results from, this initiative, but it appears that it did not progress beyond the initial sampling program. As the MU assay data cannot be verified and, as mentioned, were difficult to reproduce using industry-standard fire assay methods, none of these data have been included in RPA's estimation of Mineral Resources. As stated above and for those reasons listed none of the MU assay data was used in the Snowden update to the Resource Estimate.

MMTS's work program in 2011 and 2012 included the verification and backup documentation of the database.

6.3 Underground Development

In 1996, work began on a 5.4 m wide by 4.5 m high decline at a 16% (or 15%?) gradient to provide access for underground drilling and sampling. Bul River reports that, to date, approximately 21,000 m of development have been done, including exposure of the mineralized structures on seven levels along access drives and crosscuts. Mapping and sampling of these headings were conducted by Bul River personnel and, later, by independent consultants contracted to the Stanfield Mining Group. Once these underground workings were established, underground diamond drilling was done by independent contractors.

Underground work at GBRM has consisted of development and sill drifting in mineralized material. Some of this broken material has been processed through the GBRM mill in test batches but the mine has not produced any ore.

Geological wireframe models of the quartz-siderite veins exist in the database. These were done by Bul River staff and geological consultants previously engaged. Bul River reports that excavation models of the underground workings based on survey data are current to the suspension of mining in 2009.

An underground mine plan was filed with the MEMPR in 2007 and all subsequent underground work was done following the parameters defined in that submission. Work underground continued, more or less, unabated until 2009 when work was suspended due to the lack of funds.

In 2012, MMTS continued work on the property by completing more drill core sampling and extensive underground sampling.

6.3.1 Historic Resource/Reserve Estimates

From 1970 to 2003, nine different non-NI 43-101 compliant mineral resource estimates were produced for the project, for both internal purposes and public disclosure, and are summarized in Table 6.2. The first seven estimates preceded the 2001 date that NI 43-101 Standards of Disclosure for Mineral Projects came into force. The last two estimates, produced in 2001 and 2003, were not publicly disclosed and did not report to be NI 43-101 compliant. As these “resources” and “reserves” do not comply with NI 43-101, they are not to be relied upon, and are quoted for historic purposes only.

These estimates have not been reviewed in any detail by Snowden or MMTS.

A report, entitled “1997 Exploration Report for Gallowai Metal Mining Corporation” by Precious & General Metals was issued quoting Kassa’s non-NI 43-101 compliant mineral resources prepared in 1994 and was used to support an Offering Memorandum. This report, and other exploration reports, was the subject of an Association of Professional Engineers, Geologists and Geophysicists of Albert (APEGGA) disciplinary committee decision in 2007 where the author, the project’s registered QP, was found to have issued a report that was “deficient and misleading”.

In 1998, the Stanfield Mining Group’s Consultant and Project Engineer released estimates of “Measured and Indicated Mineral Resources” at GBRM of 5.3 Mt averaging 2.25% Cu, 36 g/t (1.06 oz/ton) Ag and 12 g/t (0.35 oz/ton) Au, which was quoted in British Columbia Ministry of Energy and Mines publications (Höy et al., 2000). In 1999, three British Columbia Geological Survey (BCGS) geologists visited the GBRM property to gain a better understanding of the geology of the deposit and attempt to verify reported resource grades. Samples were taken from reference core and from underground workings that had intersected typical mineralized structures. The BCGS geologists could not confirm the gold grades reported by Bul River. As part of its 2010 site inspection, RPA took verification samples from underground and the comparison of those results against the BCGS results were disclosed in RPA’s 2011 Technical Report and were found to compare favourably. These results are quoted in Section 14.

Table 6.2 Historic, Non-NI 43-101 Compliant Mineral Resource/Mineral Reserve Estimates

Author	Year	Classification	Tonnage (Mt)	Cu (%)	Ag (g/t)	Au (g/t)	Cut off grade
F.P. Kerr, P.Eng. (Placid)[1]	1970	Proven reserves	0.772	2.15	52.3	-	Unknown
M.C. Chiang (Placid)	1972	Mineral resource	0.732	1.94	-	-	1.0% Cu[2]
Kassa Resource Consultants[3]	1984	Probable reserves	2.00	2.25[4]	33.0[4]	10.9[4]	Unknown
Precious and General Metals[5]	1987	Unknown	Unknown				
Master Mineral Resources[6]	1990	Unknown	8.7	2.25	33.0	10.9	Unknown
Precious and General Metals	1994	Drill proven, possible, indicated & inferred reserves	8.7	2.25	33.0	10.9	Unknown
SMG’s independent consultant	1998	Measured and indicated	5.3	2.25[7]	36.0[7]	12.0[7]	Unknown
Morton Limited Partnership[5]	2001	Inferred	0.288	3.03	22.0		1.0% Cu[8]
Greg Z. Mosher, P.Geo.[5]	2003	Inferred	1.52	1.87	15.2	0.2	1.0% Cu

Notes:

1) *Estimate done to support Placid’s Pre-Feasibility Study.*
2) *A minimum 1.44 m mining width was used.*
3) *Based on assay data from Munich University.*
4) *Respective grades are averaged between classifications.*

5) *Calculated for internal analysis and not publically disclosed.*
6) *MMR estimated the tonnage of the quartz-carbonate vein material as 8.7 Mt but did not assign a grade. A grade was assigned by P&GM based on tonnage similarity with Kassa estimate.*
7) *Grade based on 1994 Kassa estimate.*
8) *A one-metre composite length was used.*

In 2011 RPA published a NI 43-101 Technical Report documenting the history of work on the property and making recommendations for data compilation and exploration.

In 2012 RPA published a NI 43-101 compliant resource estimate, showing an inferred resource of 746,000t grading 2.61% Cu, 16.40 g/t Ag, and 0.17 g/t Au. The RPA resource used a cut off grade of 1.9 % copper equivalent, where equivalency factors considered metal prices of US$3.50/lb Cu, US$26/oz Ag, and US$1,550/oz Au, a US$/C$ exchange rate of 1:1, metallurgical recoveries of 90% Cu, 90% Ag, and 65% Au. A minimum mining width of 3 m was used.

7 Geological setting and mineralisation

GBRM is located within the Belt-Purcell Basin, a Meso-Proterozoic intracontinental rift filled by marine and fluviatile sediments that comprise the Belt-Purcell Supergroup (Figure 7.1). Approximately 10% of the exposed area of these rocks is in Canada, where it is referred to as the Purcell Basin and Purcell Supergroup. The remaining 90% is within the United States where it is called the Belt Basin and Belt Supergroup (Lydon, 2007).

The western Rocky Mountains represent the eastern edge of the Purcell anticlinorium that abuts the Rocky Mountain thrust belt. Three tectono-stratigraphic terranes subdivide the area covered by the Stanfield Holdings. The Steeples Range domain is bounded to the north by the Dibble Creek fault and to the south by the Bull River Canyon fault and lies to the north of the other domains. The Sand Creek-Lizard Range domain lies south of the Bull River Canyon fault and north of the Sand Creek fault and contains the Lizard Range of mountains. The southern domain is the Broadwood Anticline whose boundary is the Sand Creek fault to the north and Mount Broadwood to the south. The Steeples Range and Sand Creek–Lizard Range domain are part of the Lizard segment of the Hosmer Thrust (Masters, 1990).

GBRM lies within the Rocky Mountain trench, which forms the valley of the Kootenay River system in the area, and is contained within the Hosmer thrust sheet east of the inferred trace of the Rocky Mountain trench fault. The Hosmer thrust sheet is the structurally highest thrust package in the Western Range of the Rocky Mountains. The Rocky Mountain trench fault is a west-side-down Tertiary normal fault with a minimum of five kilometres of vertical displacement. Structure in the area is dominated by broad, open, east-plunging folds (Höy et al., 2000). In the vicinity of GBRM, the trench is synclinal with major west dipping faults on its east side (Masters, 1990).

The GBRM deposit is hosted within the Aldridge Formation that lies at the base of the Purcell Supergroup. Within an approximate 30km radius of Cranbrook, British Columbia, the Aldridge Formation also hosts the Sullivan, Estella, Kootenay King, and St. Eugene mineral deposits (Allen, 1989). The Aldridge Formation is characterized by thick successions of graded sandy turbidites and interbedded laminated siltstones and argillites. The turbidites are intruded by the dioritic to gabbroic Moyie sills and dykes. To the east, the Upper Aldridge rocks, composed of argillites and siltites, overlie the turbidites. Mineralization is typically fine grained pyrite and pyrrhotite, up to several percent, that oxidizes when exposed on surface (Höy et al., 2000).

Regionally, the Moyie sills display the thrust and fold structures of the Late Jurassic to Early Cretaceous fault system that later cut the Tertiary-age Rocky Mountain trench fault (van der Velden and Cook, 1996). Extensional faulting and sporadic magmatism occurred from about 1,500 Ma to 1,320 Ma and is at least partially coincident with the East Kootenay Orogeny. The East Kootenay Orogeny reflects burial metamorphism of the thick sedimentary pile in the high geothermal gradient of an actively rifting environment. Syn-sedimentary faulting associated with rifting resulted in the rift-fill thicknesses of turbidites and intercalated sills of the Aldridge sequence of up to 12km. Two directions of syn-sedimentary faulting have been recognized: north to northwest trending rift-parallel (extensional) and east to northeast trending transfer faults. Examples of the former include faults that control the north trending Sullivan Corridor and the Iron Range fault northeast of Creston. Examples of the later include precursors to the Moyie-Dibble Creek fault, which lies north of GBRM, and St. Mary-Boulder Creek fault system (Lydon, 2007).

Beginning with the East Kootenay Orogeny, the northwest portion of the Purcell Basin appears to have been subjected to east-west faulting along with magmatic generation along its western boundary. During the subsequent Goat River Orogeny, the Purcell Anticlinorium was formed as a result of crustal shortening.

Further east, the Creston Formation is exposed. Creston Formation rocks comprise a shallow water platformal and fan-delta succession of predominantly quartzites and siltites. South of the Bull River, Creston Formation rocks are overlain by Kitchener Formation carbonate rocks. Cretaceous monzonite stocks intrude Purcell Supergroup rocks and younger Paleozoic shallow water sediments (Höy et al., 2000).

Table 7.1 Gallowai Bul River Mine Regional Stratigraphy

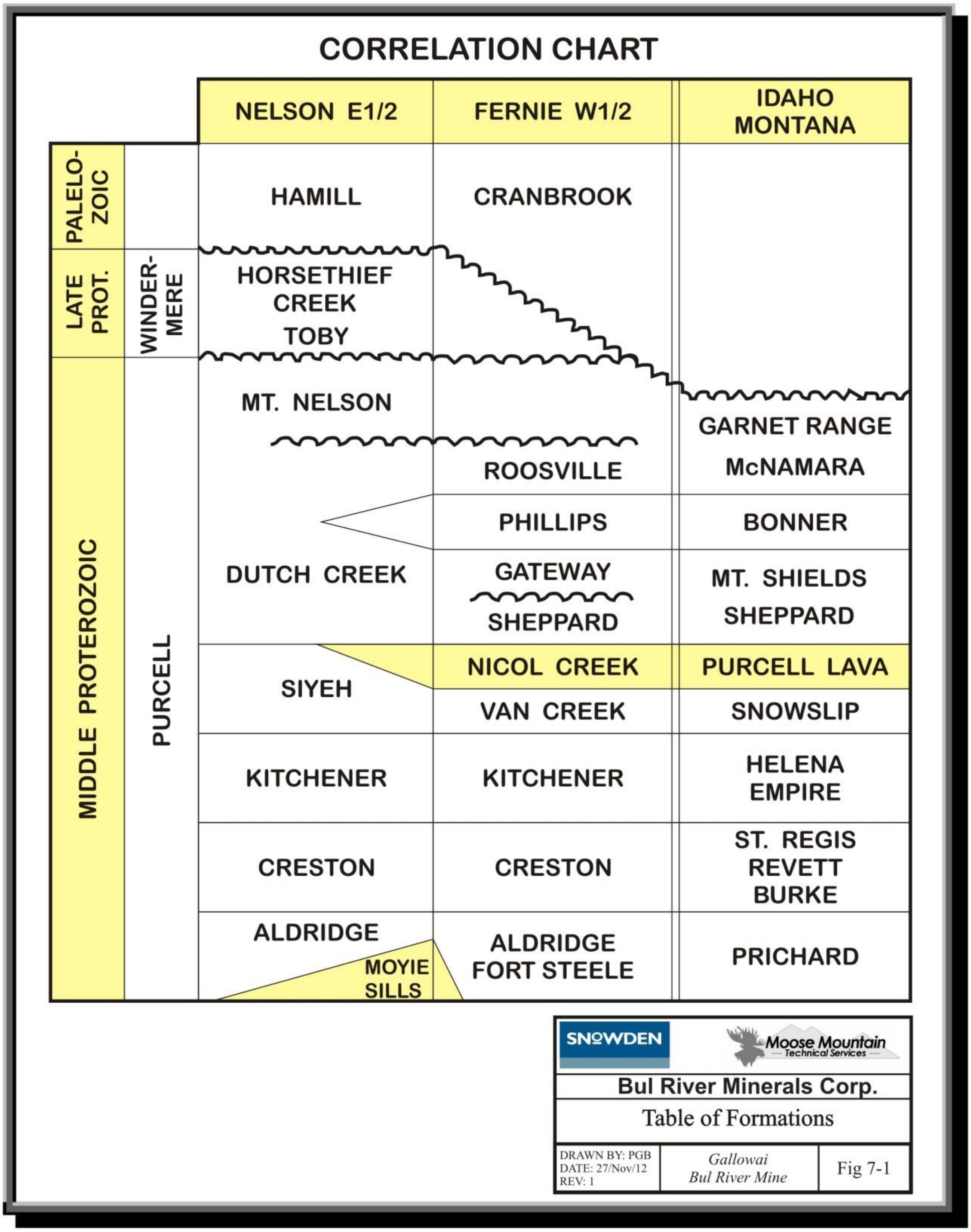
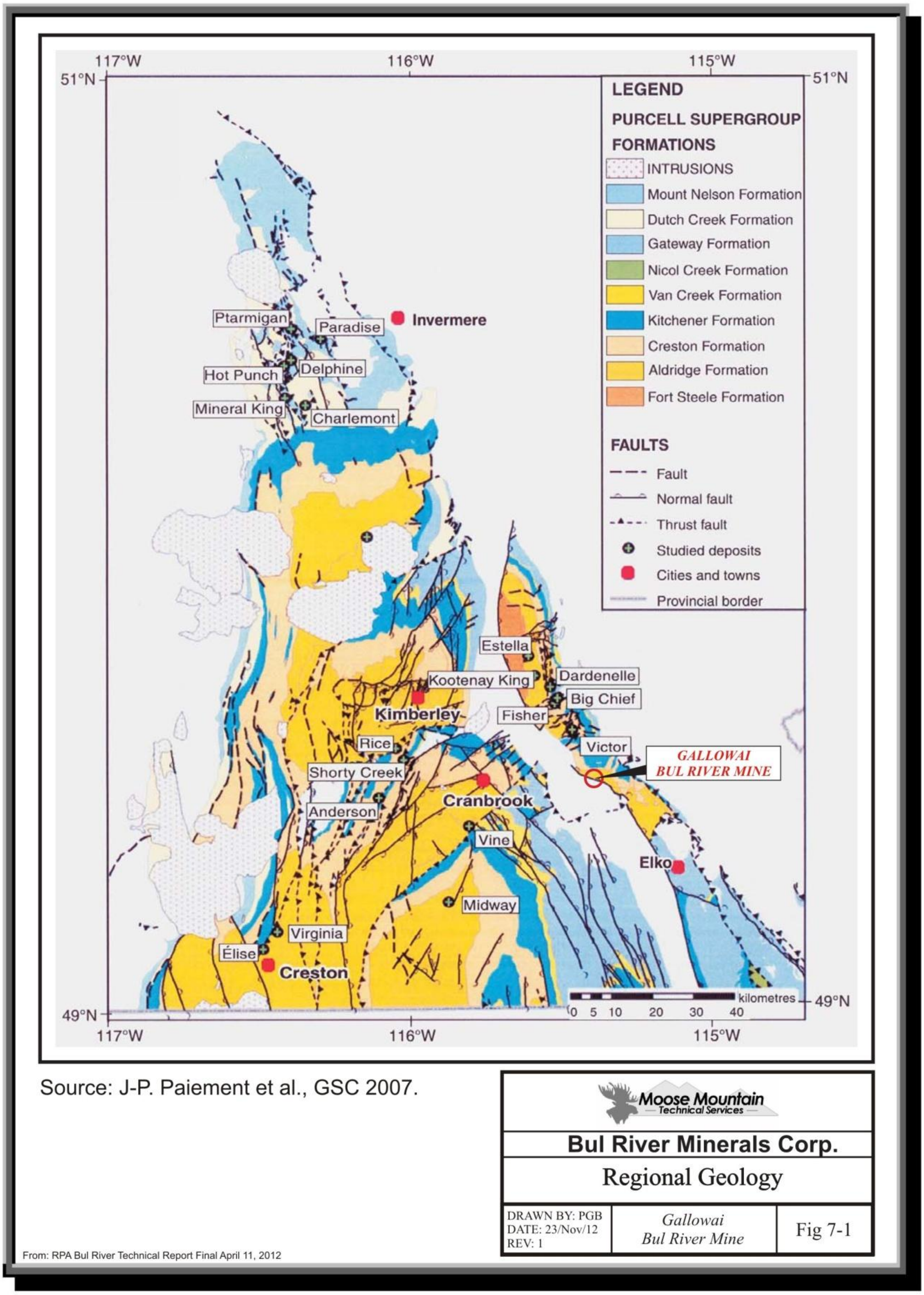


Figure 7.1 Regional Geology



7.1 Local geology

The GBRM deposit is hosted within poorly exposed graded turbidite beds of the middle Aldridge Formation of the Middle Proterozoic Purcell Supergroup. Interbedded quartzites, siltstones, and argillites make up a turbidite sequence whose bedding plane strikes approximately east-west and dips 20° to 30° to the north (Baldys, 2001). The host rocks of the deposit are a northward pinching series of anticlines and synclines (de Souza, 2000).

The quartzite unit is described by Baldys, 2001 as, in fact, thickly bedded quartz arenite and quartz wacke. The quartz arenite is dominated by sand-size fragments of quartz while the quartz wacke consists of poorly sorted mineral and rock fragments in a matrix of clay and fine silt. These arenite and wacke beds are up to one metre in thickness and are massive to graded, fining upward. Arenaceous beds are medium to thickly bedded and are commonly separated by thin layers of argillaceous siltstone.

Laminated siltstone is composed of organic carbon, biotite, feldspar, detrital quartz, sphene, tourmaline, apatite and, diagenetic pyrite, and pyrrhotite. Wispy or disseminated pyrrhotite is common and, along with pyrite, makes up less than two percent of unaltered rock.

The Aldridge Formation is intruded by a series of dykes varying in composition from diorite to gabbro known as the Moyie intrusive suite. The mid-Proterozoic Moyie dykes trend approximately east-west and dip at 30° to 80° to the south and are composed predominantly of hornblende and plagioclase phenocrysts in a fine grained groundmass of plagioclase, quartz, hornblende, chlorite and epidote (Baldys, 2001). These dykes have been traced from the Bull River eastward to the flank of Iron Mountain where they form the target of two adits (de Souza, 2001).

Overburden consists of Pleistocene glaciofluvial and colluvial sediments and varies in thickness across the GBRM property up to 200 m in thickness as defined by gravity surveys conducted in 2006.

7.2 Mineralisation

The GBRM mineralized zones comprise a vertical to subvertical network of sulphide-bearing quartz carbonate veins striking approximately east-west hosted in sheared and brecciated Aldridge Formation sediments. The vein systems form complex networks within, and adjacent to, the shear zone and often encompasses crushed, deformed and brecciated host rocks (Baldys, 2001). Host rocks are either partly silicified and chloritized argillites, argillaceous quartzites and quartzites (Masters, 1990). The veins pinch and swell forming stockworks or thick tabular bodies that are often cut by smaller veins and stringers of quartz and quartz-siderite. The main vein structure and associated stringer zones can range from a few centimetres to 30 m wide. In 1991, Masters defined five subparallel to en echelon “vein systems” and differentiated them from the Pit Zone that lies within the footwall (Masters, 1991).

Mineralization consists of pyrite, pyrrhotite, and chalcopyrite with minor local galena, sphalerite, arsenopyrite, and cobaltite and traces of tetrahedrite and native gold. Sulphides range from massive, irregular bodies within the vein system to thin discontinuous veins, veinlets, and disseminations in the host rock (Höy et al., 2000).

Gangue mineralogy of the veins is variable, with the eastern parts of the deposit consisting of quartz and siderite. The western part of the vein system is dominated by siderite (Baldys, 2001).

8 Deposit types

The Bul River deposit has been described as a Churchill-type vein copper-silver deposit (Lefebure, 1996). The deposit type displays characteristics of relatively low tonnage (typically range from 10Kt to 1Mt) but high-grade (typically range from 1% to 4% Cu). Frequently occurring in Proterozoic-age extensional sedimentary basins, Churchill-type deposits are associated with rifting, can comprise single vein to complicated vein systems that vary from centimetres to tens of metres in width, and can extend hundreds of metres along strike and down dip. Commonly hosted in clastic metasediments, veins and vein systems are often spatially associated with mafic dykes and sills. The veins are generally associated with major faults related to crustal extension that controls the ascent of hydrothermal fluids to favourable sites for metal deposition. Fluids are believed to be derived from those mafic intrusives that are associated with the vein systems.

Mineralization in Churchill-type deposits is predominantly chalcopyrite, pyrite, and chalcocite with subordinate pyrrhotite, galena, bornite, tetrahedrite, argentite, and covellite and is generally younger than the host lithology. Dilation of veins is commonly caused by cross-structures or folding and results in concentrations of mineralization. Likewise, the intersection of veins is a locus of ore deposition. Mineralization can occur as massive and/or semi-massive sulphides that may be identified as conductors by electromagnetic (EM) surveys. Mafic intrusive bodies and related structures can be defined by magnetic, very low frequency (VLF), or EM surveys.

Alteration usually occurs within host rock in contact with veins and up to tens of metres from the veins with carbonatization and silicification as typical alternation types in metasediments (BC MINFILE).

As a vein deposit, GBRM shares similarities with the St. Eugene deposit and, to a lesser extent, with Coeur d’Alene District’s quartz-Fe carbonate-galena-sphalerite-tetrahedrite deposits. The St. Eugene deposit is the largest vein deposit in the Purcell Supergroup and produced about 113kt of lead, 182t of silver, and 80kg of gold from 1.5Mt of ore mined between 1899 and 1929 from Upper Aldridge and Creston Formation rocks. It is hosted by clastic sediments metamorphosed and intruded by igneous rocks during the East Kootenay Orogeny (Lydon, 2000). Veins exhibit en echelon orientation with considerable bifurcation, divergence, and attitudinal digression typical of veins noted in deposits within the Coeur d’Alene District (de Souza, 2000).

9 Exploration

Ross Stanfield purchased the assets of the Dalton Mine from Placid on March 5, 1976. There is no record of work until 1974 when exploration was conducted on nearby properties within the Stanfield Holdings (i.e., G-Zone and Copper King, see Item 23 “Adjacent Properties”).

Drilling at GBRM began in 1981 and was conducted more or less continuously until 2009 in an effort to verify and expand estimated underground resources and explore new targets. Drilling programs are discussed in detail in Item 10 “Drilling”.

In 1996, work began on a 5.4 m wide by 4.5 m high decline at a -15% gradient to provide access for underground drilling and sampling. Bul River reports that, to date, approximately 21,000 m of underground development have been done including exposure of the mineralized structures on seven levels along access drives and crosscuts.

Starting in 1999, underground sampling of development walls and stopes was conducted by independent contract workers. This work, along with surface and underground diamond drilling, and baseline studies, continued on the GBRM property under various practitioners until 2009 when work was suspended due to a lack of funds.

9.1 Geophysical Surveys

In 1978, approximately 1,000 line-km of aerial infrared photograph and 92.5 line-km of ground geophysical surveys were conducted over the 30 claim Steeples Group in the vicinity of GBRM. The purpose of the survey was to determine if infrared aerial photography or a ground EM survey could help discover and define mineral deposits on the Stanfield Holdings. The infrared photography failed to detect any additional mineralization and EM survey found weak conductors that did not display sufficient continuity for further investigation (Allen, 1978).

In 1981, a helicopter borne EM survey was flown over the Stanfield Holdings and identified two EM-magnetic anomalies in the vicinity of the GBRM. A ground geophysical program was recommended (Apex, 1981). RPA could find no evidence that this follow-up program was carried out.

In 1992, the Stanfield Holdings were explored again using helicopter-borne DIGHEM magnetic and EM surveys. Results were initially interpreted by CGG GEOTERREX-DIGHEM of Mississauga, Ontario, and correlated with the known geology by MMRS. Results, according to de Souza (1999), supported known geological interpretations.

9.2 Stream Sediment Geochemistry

A stream sediment sampling program was completed in 1998 over some, but not all, of the Stanfield Holdings. Bul River reported anomalous gold results from the Copper King and Trilby zones. Follow-up geological, geophysical, and geochemical surveys were recommended. MMTS has not seen any results from these proposed programs and does not know if the work was done or not.

10 Drilling

Drilling at GBRM began in 1981. A combination of percussion and diamond drilling was done from surface. Once the underground access was established, the majority of the drilling was pursued underground.

A great deal of work has been done at GBRM over the years, but documentation is incomplete. What follows is a summary of work compiled from available records, assessment reports filed with the BC government, and internal summary reports.

10.1 Percussion Drilling

Overburden thickness at the GBRM property can exceed 200 m locally. As a means to ensure that holes intersected bedrock, Bul River initiated a procedure where a truck-mounted rotary percussion drill was used to pre-collar diamond drillholes. The hole would be advanced and cased until bedrock was established and the percussion drill would be replaced by a diamond drill.

10.2 Diamond Drilling

The first surface diamond drilling was reported to have occurred in 1974. Early drillhole locations were documented on drill logs relative to Placid's mine grid. These mine grid coordinates were later converted by Bul River to UTM (NAD 83) coordinates prior to input into the database. In 1995, Cansel Survey Ltd. (Cansel) of Calgary, Alberta was contracted to survey historic drill collars using UTM (NAD 83) coordinates. Collar coordinates for holes drilled prior to 1995 which have not been resurveyed are not reliable because of the lack of completeness and the questionable dependability of the conversion. In 2012, MMTS and Bul River staff located many of the old drillhole collars on the mine property and verified the Cansel Survey work.

Drilling was done using a number of different diamond drills owned by the Stanfield Mining Group using company personnel. Drillholes were sometimes spotted using a compass and chain from reference points on the Placid mine grid or by Global Position System (GPS). The hole was started using the percussion drill that cased down through the overburden until bedrock was encountered. Once the hole was anchored, the percussion drill was removed and the core drill would set up on the established casing. Occasionally, the core drill would case through overburden as well as core the holes.

MMTS has relied on drilling statistics from Morton (2001a), shown in Table 10.1, but notes that often locations are not given. MMTS also notes that Morton included production statistics from drilling done on other areas within the Stanfield Holdings but outside of the GBRM property boundaries. This results in discrepancies between the reported work and records contained in the database. Assessment reports filed on the British Columbia Assessment Report Index System (ARIS) were searched, but not all work was filed. In total there was 100,005.1 m of surface diamond drilling completed on the entire property.

MMTS has verified 260 underground diamond drillholes and 25 surface diamond drillholes that have been used in the resource estimate. The underground drillholes total 63,721.8 m of drilling, while the twenty-five surface holes total 24,331.0 m of drilling for a total of 88,052.8 m.

Appendix B lists the drillholes used in the resource estimate and shows the location of the holes, total depth of drilling, orientation of the holes, and the mineralized intervals in each hole. As the mineralized bodies are generally steeply dipping, the relationship between true thickness and drilled thickness is variable. Drillholes collared from underground were typically oriented to intersect the mineralization close to right angles, though the drillholes from surface had more difficulty intercepting the mineralization at high angles. In MMTS's opinion, the difference in intersection widths is relatively minor and will have no material impact on the resource estimate. Recovery and RQD has been recorded for all of the drillholes examined by MMTS. Core recovery typically is acceptable.

Table 10.1 Summary of Drilling, Bul River Mines and Area

Year	Event	UG Diamond Drilling (m)	Diamond Drilling (m)	Percussion Drilling (m)
1974	Underground Drilling at Rimrock - Wescore Drilling Ltd Contract	?		
1975	5 Diamond Holes - Wescore - O.K.Claims		?	
1976	12 Diamond Drill Holes - Wescore		?	
1979	5 Diamond Drill Holes on Cedar 8 and Cedar 10		?	
1979	Underground Diamond Drilling at G Zone	?		
1980	Commenced Copper King exploration - Diamond Drilling		3920.3	
1981	Major Drilling program for Reserves Expansion at Bull River commences - Diamond Drill Holes		5733.6	
1982	Continuation of Reserves augmentation at Bul River – Diamond Drilling		3219.9	
1983	Porcupine Hill Drilling - 3,474ft		1058.9	
1984	Mine site		1036.3	868.7
1985	Aspen and East/West Steeples		66.8	899.5
1986	One hole mine site and Cedar, eight holes Aspen		2648.1	552.6
1987	Three holes mine site, one Cedar, 30 holes Aspen, Alder, Balsam, Dogwood, Elderberry, Steeples claims		2853.2	2812.4
1988	Two holes mine site, 25 holes at Aspen, Cedar, Dogwood, Elderberry, Steeples claims		1488.3	1837.3
1989	Five holes mine site, one at Aspen, 15 at Steeples claims		5284.0	1367.3
1990	13 holes mine site, 20 holes Aspen and Cedar claims		6272.5	2263.7
1991	7 holes mine site, 5 holes Dogwood and Elderberry claims		4545.8	247.8
1992	Four holes mine site, two holes Cedar claim		2851.1	0.0
1993	Two holes mine site		1908.1	0.0
1994	One hole mine site, four holes Aspen and Steeples claims		406.0	617.8
1995	Two holes mine site		2139.1	0.0
1996	One hole Cedar,19 holes Aspen Feldspar, Dogwood, EC, Joy, Steeples claims		157.0	2830.1
1997	Five holes Burt, Cedar, Joy, EC claims, 12 holes Aspen Feldspar, mine site, EC, Dogwood, Joy claims		3877.4	1145.1
1998	Underground drilling, Boisvenu, six holes mine site, six holes Aspen Feldspar	6508.0	6737.0	
1999	Underground drilling, Boisvenu, four holes Aspen Feldspar	11169.0	1741.0	
2000	Underground drilling, Boisvenu	13275.7		

Year	Event	UG Diamond Drilling (m)	Diamond Drilling (m)	Percussion Drilling (m)
2001	Underground drilling, Boisvenu	5629.5		
2002	Underground drilling, Boisvenu, one hole Cedar claim	846.0	1332.6	
2004	Underground drilling, Boisvenu, 9 holes Grand	2743.3	3015.0	
2005	Underground drilling, Atlas, 9 holes Grand, one hole Steeples claim	541.5	5317.0	
2006	Underground drilling, Atlas, two holes mine site	431.1	590.0	
2006	Underground drilling, Advanced	12187.1		
2007	Underground drilling, Cabo, three holes mine site, two Aspen claim, 9 across Bull River	4189.0	7024.0	
2008	Underground drilling, Cabo, 18 holes mine site, two Aspen, 9 across Bull River	7615.9	19676.0	
2009	Underground drilling, Cabo, six holes mine site west, one hole Big Sand Cr.	7350.8	5106.0	
	Totals =	**72,486.9**	**100,005.1**	**15,442.7.2**

11 Sample preparation, analyses, and security

11.1 Sampling

Written protocols for historical sampling exist but are not dated; therefore, MMTS cannot, with any degree of confidence, presume that these procedures were followed from the inception of drilling at GBRM. Other sampling protocols were documented in 2001 and appear to have been followed until 2009 when drilling was suspended.

The verification sampling undertaken by MMTS in 2011, on behalf of Bul River, has been done under the direct supervision of a QP and a defined set of protocols (Moose Mountain, 2011).

11.2 Pre-2001 Sampling

The written protocol states that, for diamond drill core, the logging geologist was responsible for documenting the recovery, RQD and lithology and marking intervals for sampling. Prior to 1999, this work was conducted by Bul River personnel. In 1999, verifiable "chain-of-custody" protocols were initiated that saw the logging and sampling of drill core and underground channel samples conducted by individuals independent of Bul River (Mosher, 2003).

Samples were designated on 2 m intervals in zones of weak or absent alteration and mineralization. If alteration and mineralization were favourable, samples were taken on intervals of one metre or less. Zones of poor recovery were sampled only between wooden blocks inserted by the drilling contractor (core run interval). Intact core was halved longitudinally by a core saw. Duplicate sample tags were written with one tag placed in the sample bag to accompany the halved core to the laboratory and the other was affixed to the core box.

Sample tags were prepared by the logging geologist and accompanied the samples to the laboratory. An inspection of early drill logs by MMTS found limited entries for RQD or core recovery and no other dedicated RQD files were located in the electronic or hardcopy databases. For percussion drill samples, the logging geologist was required to weigh each sample and log it for recovery, RQD, and lithology. MMTS could not locate any percussion drill logs.

11.3 2001 - 2009 Sampling

In 2001, a more rigorous program of data collection and management was implemented that included written protocols for logging, sampling, and sample preparation. Some of the program was short lived, but other aspects carried on. All procedures written for drill core applied to re-sampling as well as primary sampling. MMTS notes that these new protocols were implemented when the original "chain-of-custody" team was replaced briefly in 2001 (Mosher, 2003). After the departure of the replacement team, the original group was reinstated and continued to work at the GBRM until 2003. Drilling resumed in 2004 and continued until 2009. MMTS has no evidence to support any "chain-of-custody" protocols being followed after 2003.

Samples were selected by the geologist using uniform (1 m) or semi-uniform (1 m ± 20 cm) sample lengths in mineralized zones and sample tags assigned. Core recovery was calculated for the respective sample runs and recorded in the drill log, and the core was photographed. The core was cut longitudinally in equal portions to obtain a non-biased representative sample, with half of the core placed in a sample bag and the remaining half returned to the core box for reference. In the case of re-sampling, if insufficient material was available, the core was left for reference. MMTS notes that a minimal number of core photographs were found in the database.

Sampling was done selectively on the basis of alteration, lithology, and mineralogy at the discretion of the logging geologist. Sampling appears to have been done in, and proximal to, mineralized structures, so the sample density in the database is quite low. Part of this low density may be due to the assay database being incomplete. Bul River has gone to great effort to retain all drill core in two secure locations.

Sampling was not done for the entire length of the hole but at, or near, mineralized structures potentially excluding any mineralization not proximal to a vein structure. In MMTS's opinion, the sampling methodology is adequate and the data generated are suitable for use in the estimation of Mineral Resources.

11.4 2011 Logging and Sampling conducted by MMTS

Verification sampling has been undertaken by MMTS on behalf of Bul River in 2011 and 2012 under the direct supervision of a QP and a defined set of written protocols (Moose Mountain, 2011). The work was been conducted by MMTS employees with the exception of one Bul River employee who cut the core samples. MMTS 2011 sampling included the following:

- 1,126 sample pulps (including QA/QC samples) located and sent for re-assaying,
- 82 drillholes logged and 1,193 samples (including QA/QC samples) taken,
- 342 samples from 24 drillholes tested for specific gravity.

In 2012 MMTS continued core logging and sampling at the mine, collecting the following:

- 842 core samples (including QA/QC samples),
- 68 coarse reject samples (including QA/QC samples),
- 264 samples from 49 drillholes tested for specific gravity.

Drill core footage blocks were visible and easily read. Drilling was conducted in imperial measure and MMTS did not convert downhole distances to metric before logging (as was previously done by Bul River).

Due to the magnitude of drillholes drilled but not logged or sampled and time constraints, MMTS selectively logged and sampled drillholes with obvious mineralization, veining and structure. The selected holes were photographed and measured against footage markers to establish core recovery. RQD measurements were taken and the core was logged for lithology, alteration and structure (in imperial units), and bedding and vein angles noted with respect to the core axis. Where mineralization was oxidized, the core was cut in half longitudinally to result in a fresh surface being available for inspection.

Samples were selected by the logging geologist with uniquely numbered core tags stapled to the core box, and red flagging placed at the beginning of each sample interval. As the entire hole was not logged, logging was done by sample interval and sample numbers were noted in the drill logs. By MMTS convention, samples were a minimum of 0.3 m and a maximum of 1.5 m in length, but preferably 1 m sample long. Sampling was also continued into at least 0.5 m in to the footwall and hanging walls of the mineralized zones.

Drill core selected for sampling was halved longitudinally, using a core saw, as laid out by the logging geologist. The core was cut, but not sampled, by a Bul River employee. Both halves of the core were returned to the core box and sampling was done by the logging geologist. One half of the core was placed in a plastic sample bag along with a tag that matched the one affixed to the core box. The sample bag was closed using a “zap strap” plastic tie, stored in an MMTS vehicle, and taken off-site every evening. Samples were stored in the local town of Fernie, BC until a sufficient number were accumulated for shipping to the laboratory via commercial carrier. The remaining core was returned to the racks, in an orderly manner, for future reference and sampling.

Existing assay pulps from samples analyzed at CanTech and GBRM were also collated for re-assay by MMTS. The pulps had been stored at the GBRM site and dutifully tracked; MMTS verified their sample numbers against a master list provided by Bul River.

The procedure followed by MMTS has the potential to understate the contained mineral content since only zones of obvious veining mineralization were selected for logging and sampling. Any mineralization within the host rock lithology was less likely to be selected resulting in a potentially more conservative resource estimate.

11.5 Underground Sampling

The database contains assay records from underground sampling and Morton (2001a) provides a description of the procedure. Samples were taken from mineralized material exposed in crosscuts and stopes. Sample intervals were marked, generally in 1 m intervals, on the walls and surveyed from underground survey stations. Sample intervals extended beyond the vein contacts into the host lithologies (Mosher, 2003). Using a saw with a diamond impregnated blade, samples were cut approximately 1.5 m from, and parallel to, the sill. Each channel was cut approximately 2.5 cm wide and 2.5 cm deep, chipped into clean 20L buckets at prescribed sample lengths. The sample was then transferred to an 18 cm by 24 cm plastic sample bag. The sample bags were labelled by location and then taken to the on-site laboratory where they were crushed, pulverized, split, and placed in a sample bag for shipping to the independent laboratory for analysis. The remaining reject was placed in a 20L plastic pail for storage on site. MMTS notes that the database contains 80 back samples, but no written procedure is available to describe how these were taken, and they have not been included in any estimation of Mineral Resources.

Some channel sample locations were examined underground by MMTS during its initial site visit. Where observed, the channel samples were taken across host rock and mineralized vein contacts and should, in MMTS's opinion, reasonably reflect the grades and true widths of the material sampled.

MMTS completed an extensive underground sampling program in 2012, collecting 2,159 samples, including standards, blanks and duplicates (QA/QC samples). The majority of the samples were taken from the back of the sill drifts with less frequent samples from face and rib exposures.

Procedure for sampling on the back:

- For sampling the back when in a sill drift, sample lines are marked every 8 m along the drift. Each line is divided into approximately 1 m samples across the width of the back. The back is typically 4 m to 5 m wide. Sampling is done from South to North (i.e. HW to FW sides of the vein).
- Location of the sample line is measured from the nearest or most appropriate survey station.
- Coordinates of each survey station are known by BRM staff, and are provided to MMTS.
- Using maps of the underground workings, the sample locations are plotted and coordinates for each sample line starting point are determined. The elevation of the nearest survey station is used for the elevation of the sample lines. Where samples are taken on a face, the distance from the back to the sample line is measured, to later determine the sample line elevation. The coordinates are entered into a database. The sample lines are entered into the database as drillholes.
- When sampling along the back, sample stations are marked every 8 m from an appropriate survey station, using a measuring tape.
- Once a few sample stations are marked out, the geologist goes up in the bucket of the scoop, with a helper from BRM. The geologist marks one metre samples across the back. The geologist then goes down, and two BRM staff members go up in the bucket for chipping. The tarp is laid out in the bucket to collect the rock that falls during chipping. Once collecting the sample is complete the tarp is bundled up, and the sample is passed off to MMTS to bag, and tag.

- MMTS geologists supervise the chipping, to ensure it is conducted in an appropriate manner, and the most representative samples possible are obtained.

11.6 Assay Analysis Pre 2009

Samples from drillholes in the early 1980s were analyzed at MU by fire assay (FA) and finished using atomic absorption spectrometry (AAS). Later, analyses were done using Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) and X-Ray Fluorescence Spectrometry (XRF) for gold (de Souza, 1999). Sample preparation consisted of crushing and pulverizing until 100% passed 100µm and re-homogenizing by mixing. Aliquot size is not known. These results were rejected by MMTS for use in the estimation of Mineral Resources due to the difficulty in reproducing the data.

In 1999, a “chain-of-custody” protocol was established where samples were collected, prepared for analysis, shipped, and interpreted by individuals independent of Bul River. Prior to establishment of this protocol, about 700 samples had been collected by Bul River personnel that had not been submitted for assay. Although these samples did not meet the criteria of the protocols, they were included in the database since they were similar in magnitude and variability to those collected after the procedures were enacted (Mosher, 2003).

Both drill core and underground channel samples were processed in the GBRM laboratory. Samples were picked up daily and placed in chronological order, and sample numbers were cross checked. Each sample was crushed using a jaw crusher and then passed through a 25 cm cone crusher until they were reduced to minus 10 mesh. The sample was then passed through a Johnson or Gilsen splitter two or three times until a subsample of 300 g to 400 g was obtained. The sample was homogenized between each splitting using riffling pans.

Some of these samples were placed in a heat-sealed sample bag packed in a 20L plastic pail for shipping to the independent laboratory (AuRIC) for analysis. The assay samples were kept in secure storage until shipped. The remaining reject was placed in a 20L pail for secure storage on site. No details on sample preparation procedures conducted at AuRIC are available. Assay results, however, are documented and indicate that methods used include chemical assay with solvent extraction (SX) and graphite furnace atomic absorption (GFAA) finish, chemical assay with analytical finish, and hydrometallurgical extraction with analytical finish. The results from these analyses were not used by MMTS in the resource estimate due to the non-industry standard methods employed.

From November 2000 to October 2001, samples were analyzed at CanTech until Bul River hired a Certified BC Assayer (Mosher, 2003). At CanTech, one half tonne assay charges (15 g) were analyzed using near total digestion with a combination of four acids, nitric (HNO_3), perchloric ($HClO_4$), hydrofluoric (HF), and hydrochloric (HCl) and ICP-Optical Emission Spectrometry (OES). Copper results exceeding 5,000 ppm and silver exceeding 50 ppm were re-analyzed using AAS. QA/QC procedures called for every 25th sample to be an assay duplicate of the preceding sample and every 20th sample to be a Certified Reference Material (CRM) standard. In December 2002, all pulps analyzed at CanTech were returned to GBRM and analyzed for gold. These sample pulps, in addition to blanks and CRMs totalling 1,126 samples, were sent to ACME laboratories in Vancouver, BC by MMTS in 2011.

The GBRM laboratory was employed primarily for grade control while underground development was being conducted. It became the primary drill core and underground channel sample assay laboratory after 2001. The samples analyzed at the GBRM laboratory were crushed to approximately 3 mm in size, then riffle split to approximately 500 g, and then pulverized to minus 100 mesh. A 15 g subsample was analyzed for gold by FA with an AAS finish. Copper and silver results were obtained by aqua regia digestion and AAS.

The written procedures state that internal QA/QC checks were to be done routinely and periodically inspected by the designated geologist. Bul River laboratory personnel, however, reported that, in 2010, only CRM provided by the manufacturer of the AAS were read at the beginning and end of each assay run to ensure proper instrument calibration and no other industry-standard internal QA/QC procedures were followed. The written procedures also state that precision, accuracy, and contamination checks should be monitored on a batch to batch basis by the designated geologist by examining results from the insertion of duplicates, blanks, and CRM, but results lacked documentation.

11.7 2011 - 2012 Sampling by MMTS

Recently logged core samples and selected historical assay pulps and rejects have been analyzed by ACME Analytical Laboratories Ltd. (ACME) in Vancouver, BC. ACME is certified ISO 9001:2008 and is pending ISO/IEC 17025 accreditation. All work done by MMTS was designed by, and carried out under the supervision of, Robert Morris, P.Geo., who meets the definition of a Qualified Person (QP) as defined by NI 43-101.

The MMTS sampling program had two components. The first consisted of re-assaying existing pulps, following established quality assurance/quality control (QA/QC) procedures, which had been returned to the GBRM from CanTech and had been stored, under lock and key, at the GBRM assay laboratory. These duplicate assays also provide a check of the original CanTech and GBRM assay laboratory results. The second component of the program was the original assaying of core that had been unlogged and unsampled before MMTS' arrival. These new core samples were subject to the same QA/QC procedures as the CanTech sample pulps.

The sample pulps submitted to ACME did not pass ACME's preparation QA/QC protocols and were subsequently re-pulverized at additional cost. This preparation procedure, namely code P200, consists of drying the sample at 60°C and pulverizing to 85% passing 200 mesh (75 μm). The samples were then subjected to the 7TD1 procedure which consists of a hot four-acid digestion for sulphide and silicate ores followed by copper and silver analysis using Induced Couple Plasma – Optical Emission Spectroscopy (ICP-OES) on a minimum 1 g pulp. For gold, the ACME procedure used was 3B01 which consists of a 30 g fire assay fusion (FA) with final analysis by ICP-OES. For samples that were above the tolerances of this method, procedures G601 (FA on a 30 g sample) and G612 (final gravimetric analysis of gold and silver) were used.

11.8 Security

GBRM employs 24 hour security staff and has a fenced perimeter. Mine access is controlled through a secure manned gatehouse and scheduled patrols are conducted. The mine buildings, including the assay laboratory, and core logging areas are routinely locked and patrolled. Sample pulps are stored within a locked sea container. The core logging facility, which MMTS used for its field program, is adequately configured for its intended purpose. MMTS feels that the core/sample storage facilities, and environmental and assay laboratories, are secure.

11.9 Author's opinion on the adequacy of sample preparation, security, and analytical procedures

11.9.1 Snowden's Opinion

In the opinion of Snowden, the sample preparation procedures used for assays at the GBRM are appropriate for the mineralization. Security and chain-of-custody procedures appear adequate. Sample preparations and assaying were conducted under the supervision of a British Columbia Certified Assayer and supported by written protocols. These samples were subsequently re-analysed as part of the MMTS sampling program and the results compared favourably. In Snowden's opinion, the results from the GBRM laboratory are appropriate for supporting an estimation of Mineral Resources.

The work by MMTS in 2011 and 2012 was, in Snowden's opinion, done to industry standard, with the exception of drill core logging by sample interval. Logging of lithology, alteration, and mineralization by sample interval is unconventional but appropriate for this program given the amount of unexamined drill core and time constraints. Snowden notes that drill logs will, by design, contain gaps and data density will be biased toward mineralized areas.

The 2011 and 2012 MMTS logging and sampling programs were designed and supervised by a QP, as defined by NI 43-101, and followed exploration best practices as defined by CIM. In Snowden's opinion, the MMTS data is verifiable and can be used in the estimation of Mineral Resource

12 Data verification

The database utilized for the Resource Estimate update was based on the results of the work conducted by MMTS in 2011 and 2012. As stated in the March 2012 RPA technical report the previous database suffered from inconsistencies and other issue which rendered it unusable for resource estimation. The current database is the result of the sampling of un-sampled drillcore, re-assaying of pulps, and channel samples taken in 2011 and 2012. All the samples were submitted with blanks and standards.

12.1 Database

During the Snowden site visit in August of 2012 MMTS was in the process of sampling historic drillcore and obtaining the channel samples from the underground workings as recommended in the March 30, 2011 RPA Technical Report. The samples obtained by MMTS in this program were submitted with blanks and standards at a nominal rate of 2 standards and one blank inserted into the sample stream for every 25 samples submitted to lab. The work conducted by MMTS has resulted in the compilation of a verified database consisting of 409 underground channel samples and 269 drillholes for a total of 678 drillholes and channel samples. In addition 590 bulk density determinations from 59 drillholes were obtained. The original data was in excel format. The steps taken by Snowden to verify the data are discussed in the following sections.

12.1.1 Data Validation Survey and Collars

Due to the stated lack of confidence in collar surveys and assays outlined in the RPA report dated March 30, 2012 none of the surface diamond drillholes were used in either geologic interpretation nor Resource Estimation of the GBRM. Upon receiving the initial database Snowden performed a detailed validation by importing the data into PosgreSQL and reviewed through SQL queries. From this analysis the following issues were discovered.

- 76 collars without corresponding assays
- 107 sample intervals found with no Cu or Ag determinations
- 6 drillholes with no survey at the collar
- 27 overlaps in the FROM TO intervals.

The 76 collars with no corresponding assays, 107 sample intervals with no Cu or Ag determination, and the 6 drillholes with no survey at the collar were all eliminated from the database. The 27 overlap errors were examined and found to be only several centimetres. These were corrected and the drillholes remained in the database. The database was imported into Datamine software and de-surveyed for visual validation. During the visual data verification no significant errors were discovered.

12.1.2 Analysis of Blanks, Standards, and Duplicates for 2011/2012

During the channel sampling and drill core re-sampling program MMTS routinely inserted blanks and standards into the sample stream at a nominal rate of 1 blank and two standards for every 25 samples submitted to the assay lab. In addition to the blanks and standards submitted to the assay lab MMTS also submitted approximately 300 pulps from the GBRM mine laboratory for assay checks of Cu, Ag, and Au determinations. Snowden examined the results of the QA/QC procedures and notes the following:

Certified standard samples

Certified standard samples (standards) or CRM (certified reference materials) are used to measure the accuracy of analytical processes and are composed of material that has been thoroughly analysed to accurately determine its grade within known error limits. Standards or CRM's are submitted by the geologists into the sample stream, and the expected value is concealed from the laboratory, even though the laboratory will inevitably know that the sample is a standard of some sort. By comparing the results of a laboratory's analysis of a standard to its certified value, the accuracy of the assay results of the laboratory is measured.

MMTS used four different CRM's or standards when submitting samples for analysis. The CRM was prepared by WCM Minerals of Burnaby, BC. The true reference values for the four CRM's are shown in Table 12.1.

Table 12.1 Certified Reference Material – Expected Values

CRM Name	Certified Value			Standard Deviation		
	Cu%	Ag g/t	Au ppb	Cu	Ag	Au ppm
Xx 121	0.97	33	-	0.02	1.13	-
Xx 145	3.10	93	-	0.90	3.36	-
Xx 163	1.06	99	4350	0.02	2.37	0.13
Xx 184	0.192	13	190	0.04	0.77	0.02

Analysis of the standards or CRM inserted into the sample stream for the samples submitted by MMTS are shown in Figure 12.1 to Figure 12.10.

Standards

Snowden analysed the results of Au, Cu and Ag of 13 assays of CRM 121 and 12 assays of CRM 145, CRM 163 and CRM 184.

A standard assay is considered to have failed if it registers more than +/- 3 standard deviations from the certified value of the standard.

Standard Xx 163 was used 12 times and had one failure of Au, two failures of Cu, and three failures of Ag. The copper results in general plot within the expected variances with the exception of one high and one low value with the remainder of the values plotting around the reference mean. The gold results for standard 163 indicate one failure and the remainder of the values plotting slightly lower than expected but still within the accepted tolerance. While the silver results show two high and one low failure there is a tendency for the silver values to be slightly higher than expected. Snowden recommends this anomaly be investigated further.

Standard Xx 184 was used 12 times and exhibited no failures.

Standard Xx 145 was used 12 times and no Cu failures were noted but two failures of Ag were seen. Overall the copper and silver results are acceptable. There is no Au recommended value for this standard.

Standard Xx 121 was used 13 times. Five failures are noted for Cu and the mean grade is close to the lower limit. This standard results require further investigation. One failure is noted for Ag. The Cu and Ag determinations are acceptable.

Snowden recommends GBRM investigate low assay values for standard Xx145 and Xx 121 to monitor standard sample submission rigorously to achieve the best accuracy possible.

Figure 12.1 Standard 163 Au results

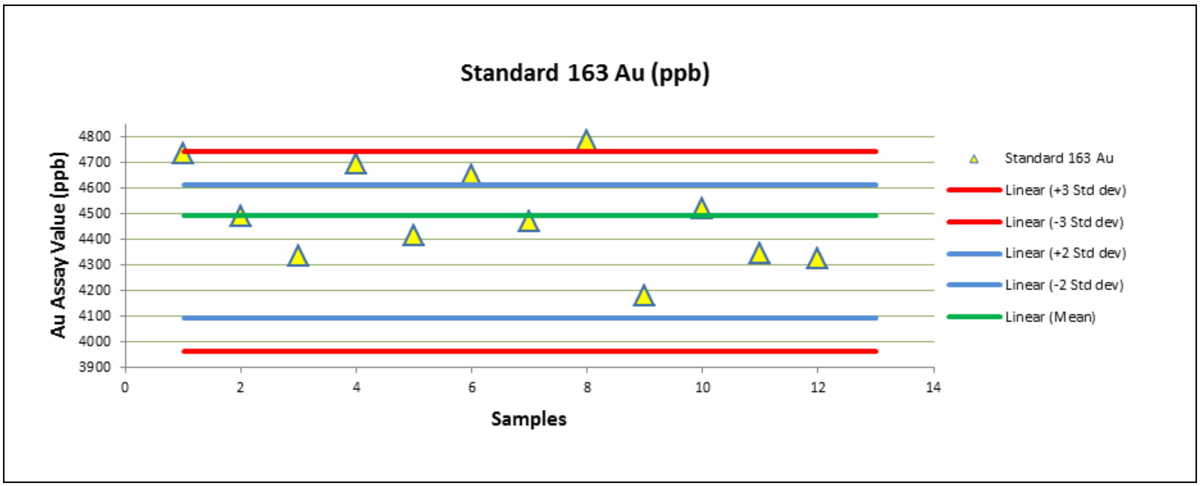


Figure 12.2 Standard 184 Au results

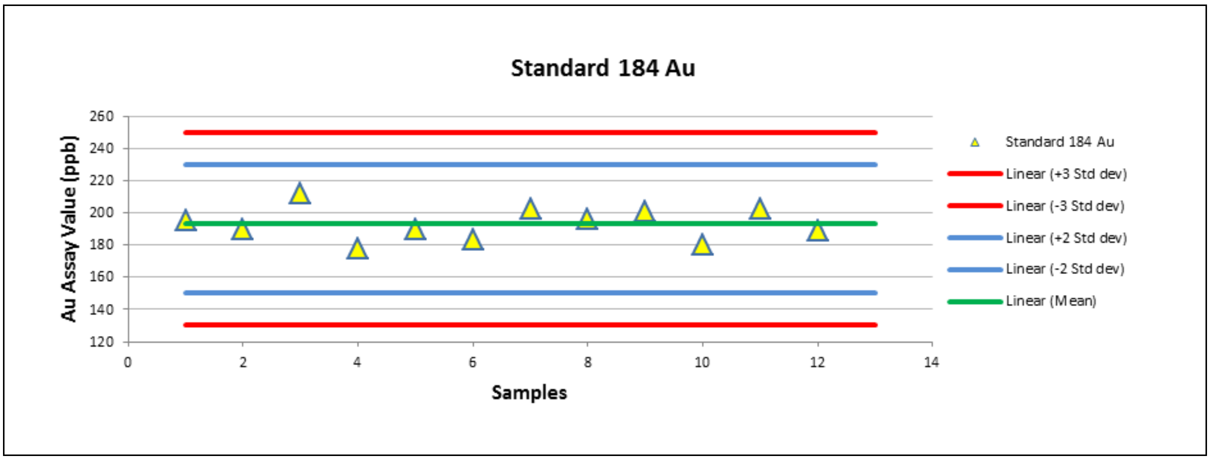


Figure 12.3 Standard 121 Cu results

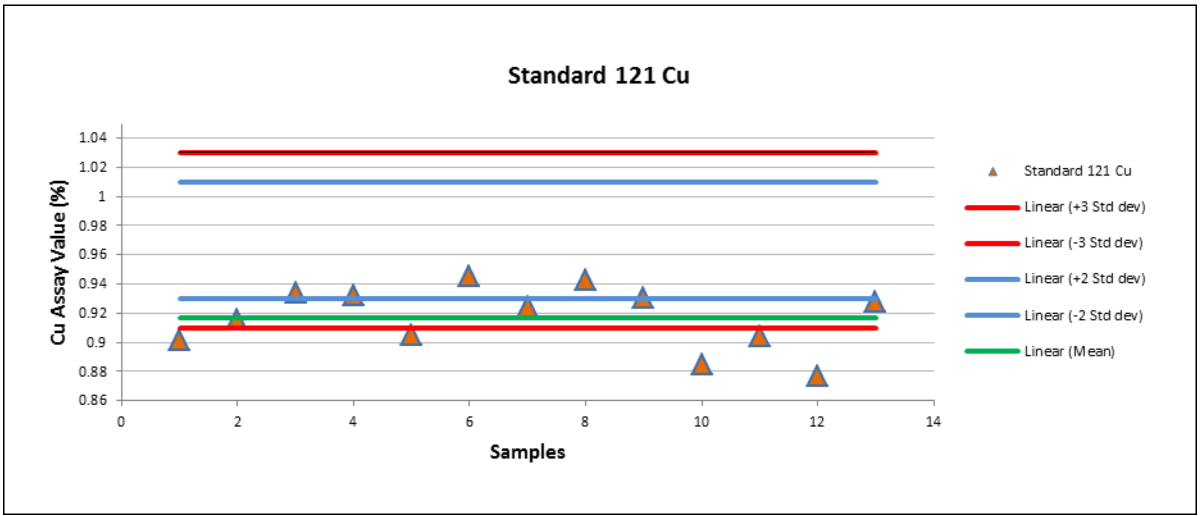


Figure 12.4 Standard 145 Cu results

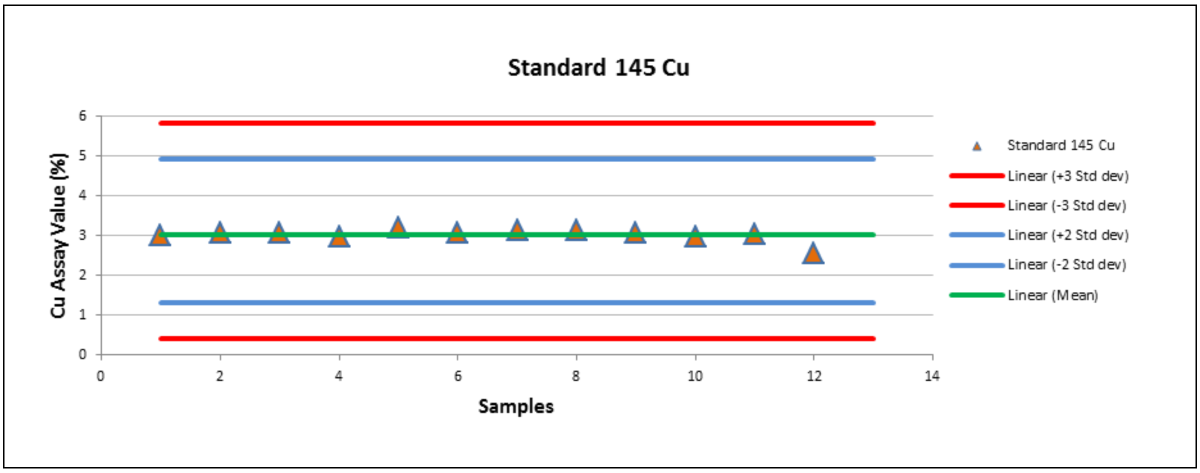


Figure 12.5 Standard 163 Cu results

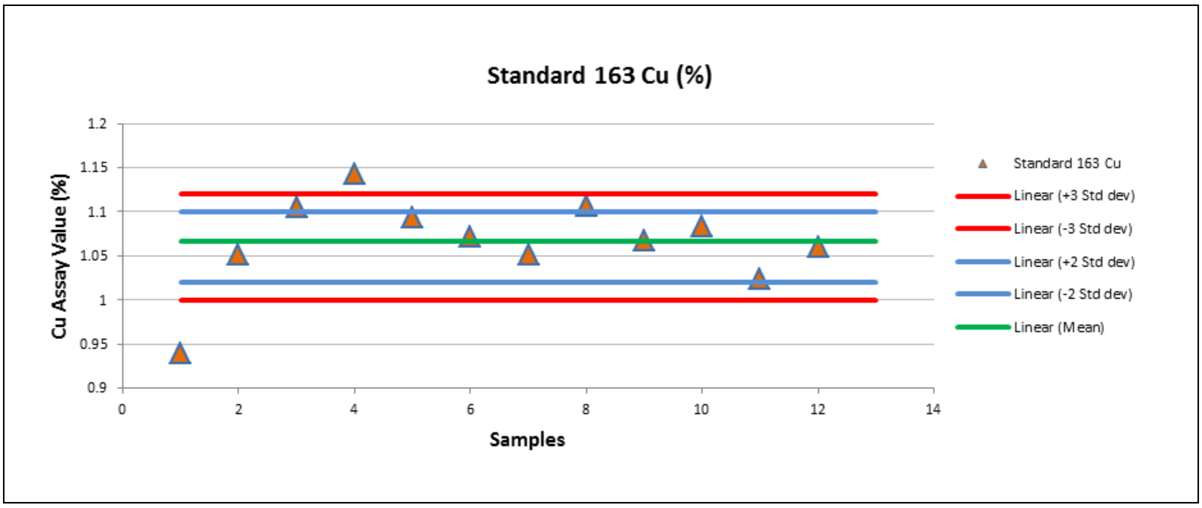


Figure 12.6 Standard 184 Cu results

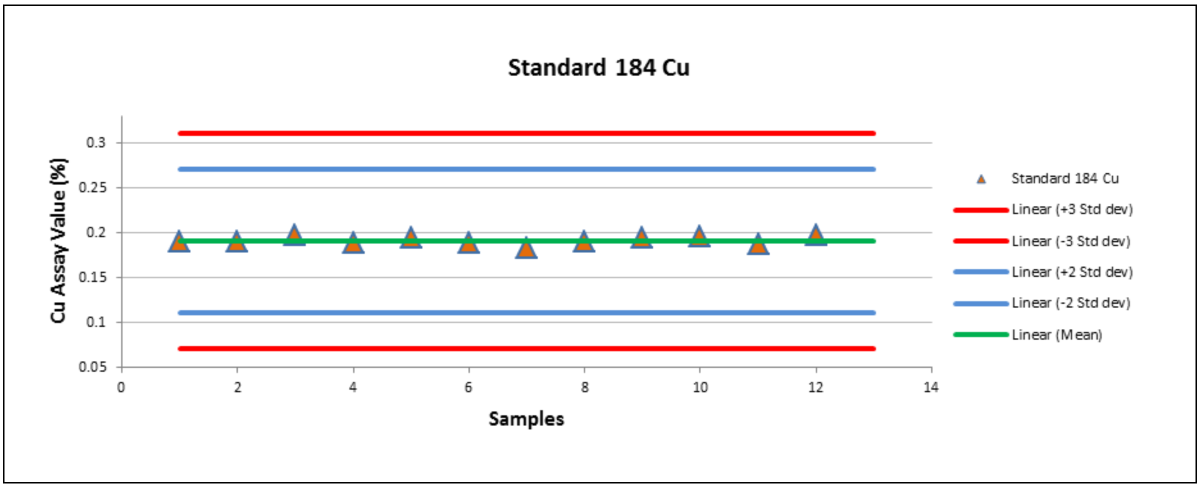


Figure 12.7 Standard 121 Ag results

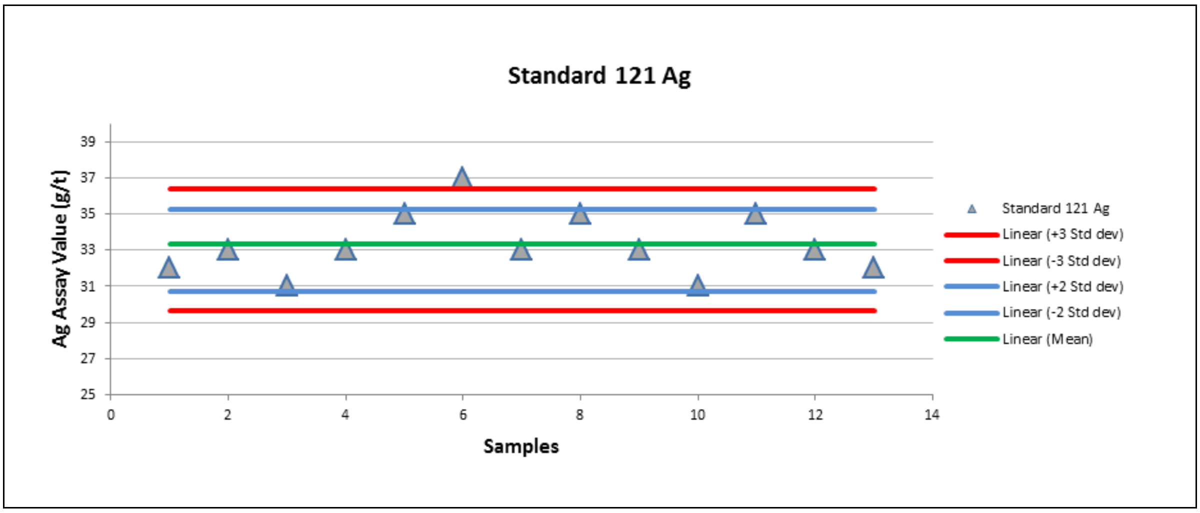


Figure 12.8 Standard 145 Ag results

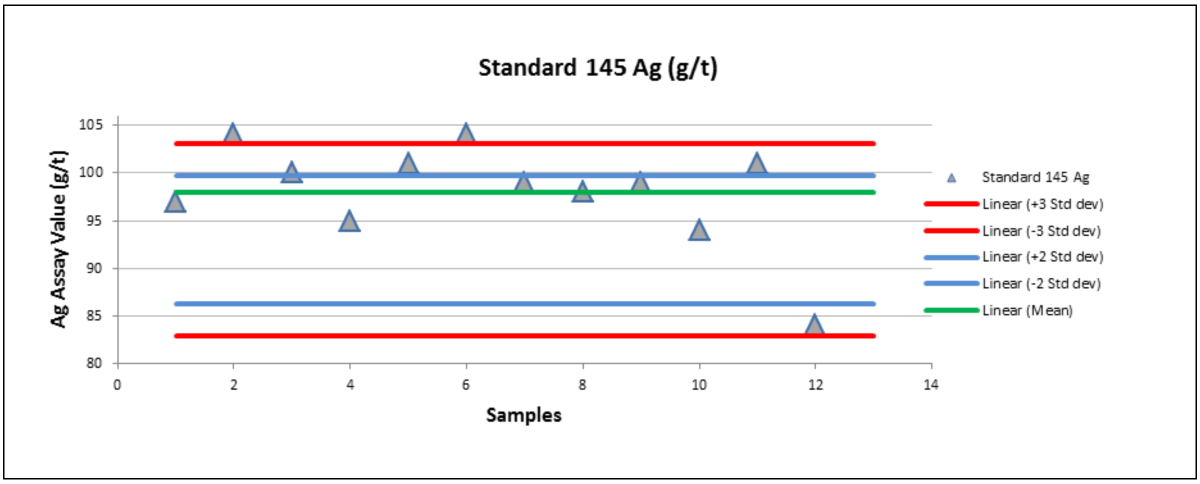


Figure 12.9 Standard 163 Ag results

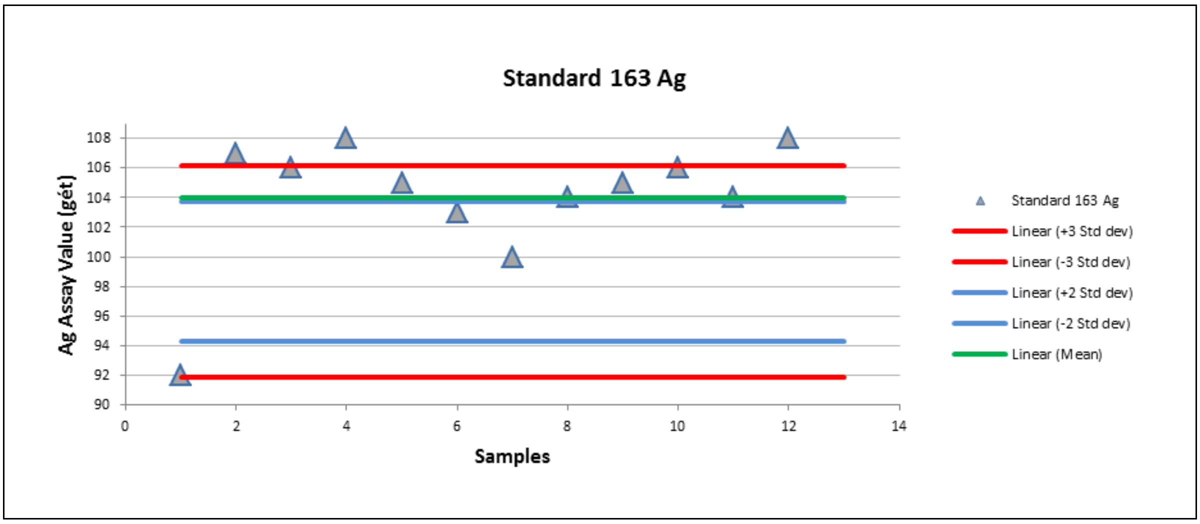
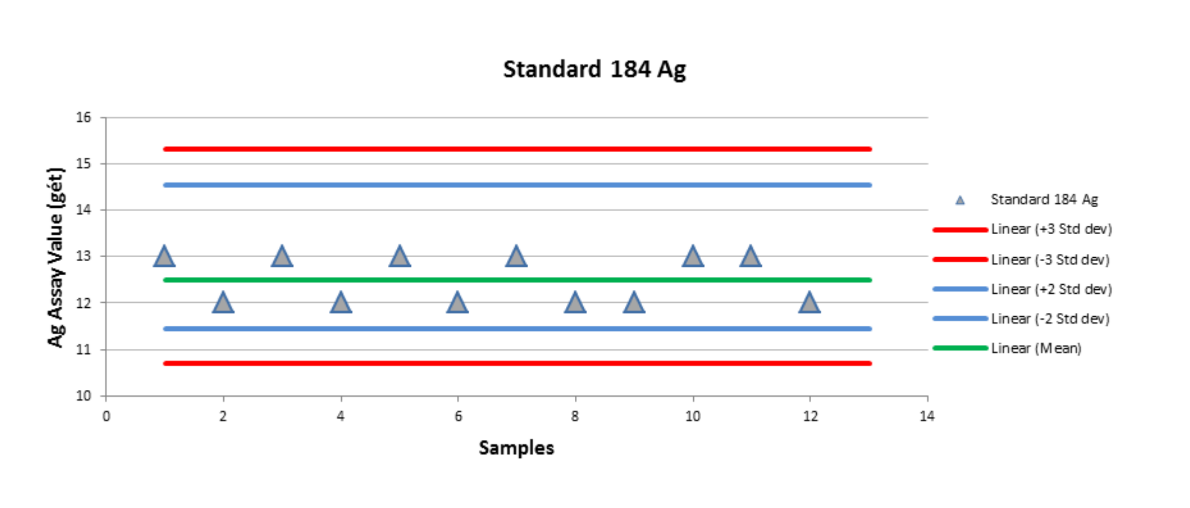


Figure 12.10 Standard 184 Ag results



Blanks

Field blank samples are composed of material that is known to contain Au, Cu and Ag grades that are less than the detection limit of the analytical method in use, and are inserted by the geologists into the sample stream. Blank sample analysis is a method of determining sample switching and cross-contamination of samples during the sample preparation or analysis processes.

Snowden analysed the results of the 49 blank insertions in to the Au, Cu and Ag sample assay streams. Snowden found no evidence of systematic contamination during the sample preparation phase as all the samples of all three elements (Cu, Ag, and Au) fall close to detection limits. The results of the analysis are shown in the graphs below.

Figure 12.11 Au Blank Chart

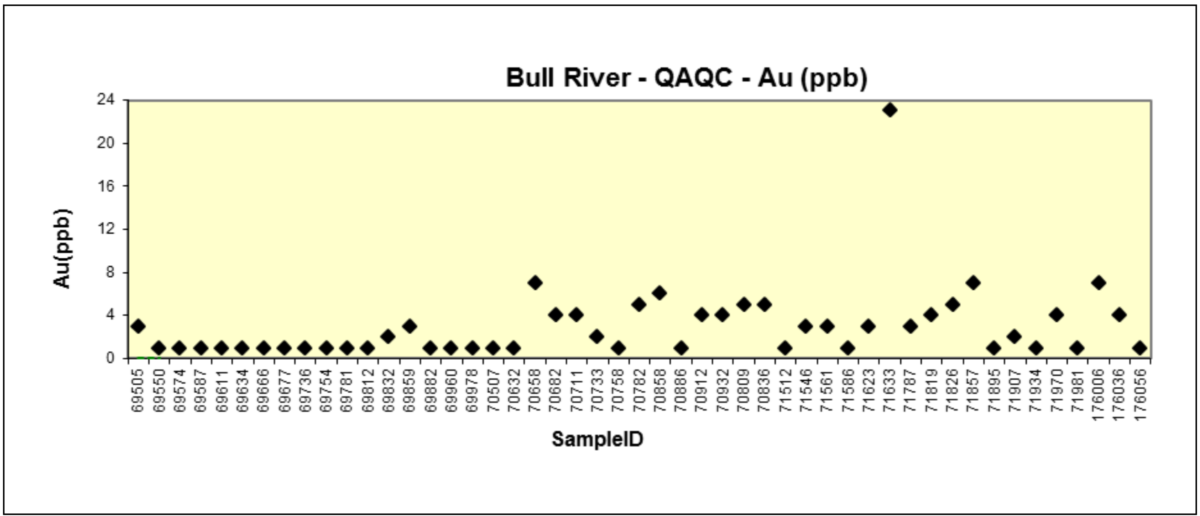


Figure 12.12 Cu Blank Chart

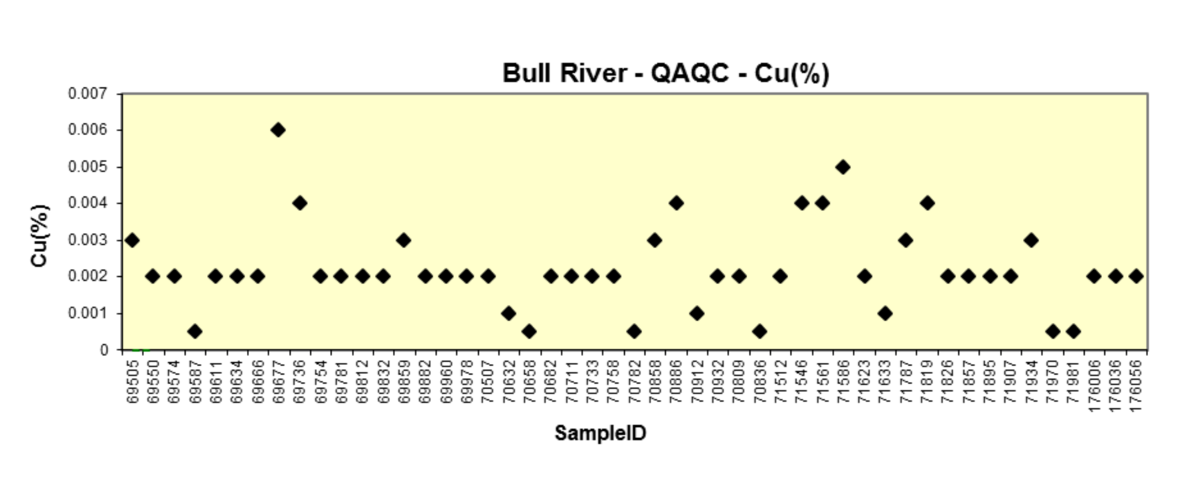
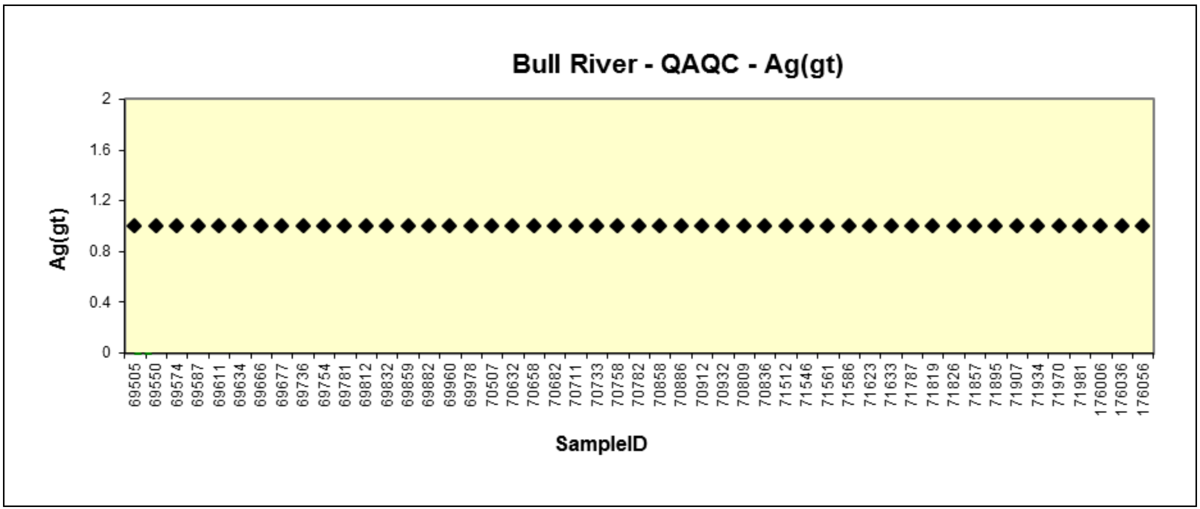


Figure 12.13 Ag Blank Chart



12.1.3 Duplicate Analysis

The precision of sampling and analytical results can be measured by analysing the same sample using the same methodology. The variance between the measured results is a measure of their precision. Precision is affected by mineralogical factors such as grain size and distribution and inconsistencies in the sample preparation and analysis processes.

A brief description of the plots employed in the analysis of MMTS duplicate data, as presented in this report, are briefly described below:

- **Scatter plot**: assesses the degree of scatter of the duplicate result plotted against the original value, which allows for bias characterisation and regression calculations.
- **Precision plot**: half absolute difference (HAD) of the sample pairs against their mean. The reference lines indicate different levels of precision.
- **Relative difference plot**: relative difference of the paired values divided by their average.
- **Ranked half absolute relative difference (HARD) plot**: half absolute relative difference of samples plotted against their rank % value. For field duplicate samples, the sample threshold is accepted to be approximately 30% or below at the 90th percentile, depending on the nature of mineralisation.

As part of the work program outlined in the RPA report MMTS submitted approximately 300 pulp duplicates. Analysis of the results are shown in the graphs below. The analysis indicate a reasonably good correlation between the assays values for Copper determinations with the correlation coefficient at 0.989 (see Figure 12.14 to Figure 12.17). For the Silver determinations the correlation coefficient is 0.956 and the graphs indicate a fairly good correlation between the lab determinations (see Figure 12.18 to Figure 12.21). Some anomalies are seen in the very low ranges of the charts for Au due to two different detection limits used between the two lab Acme and CanTech GM. Snowden concludes these anomalies are not significant to the resource estimation. On the Au plots a line of significance is seen on the charts to illustrate those assay values. For the Gold determinations the correlation of coefficient is 0.807. Snowden believes the lower correlation for the Gold assay determinations is caused by the large number of determinations in the data set which are at or near the detection limit for the analysis (see Figure 12.22 to Figure 12.25).

Figure 12.14 Logscale Scatterplot - Copper

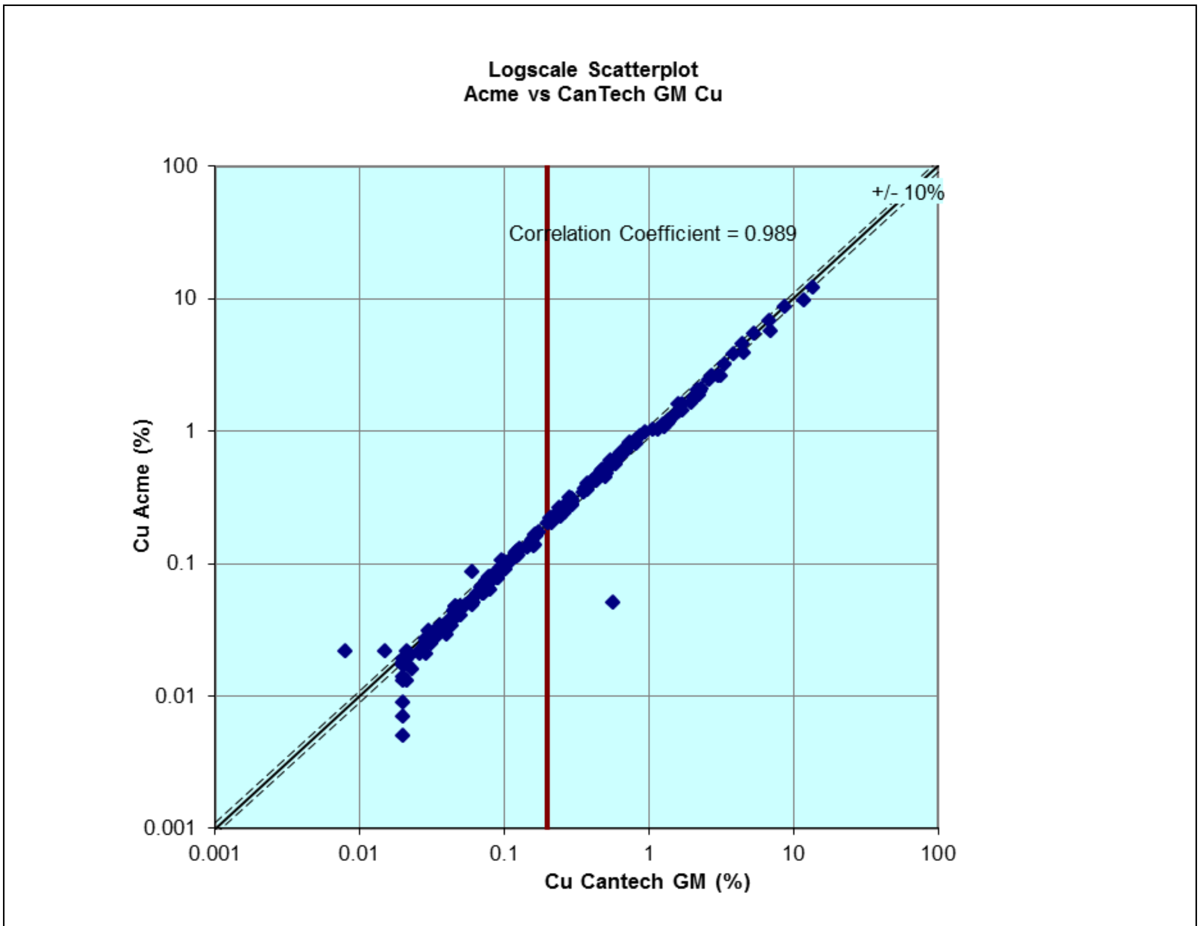


Figure 12.15 Precision Plot % Cu

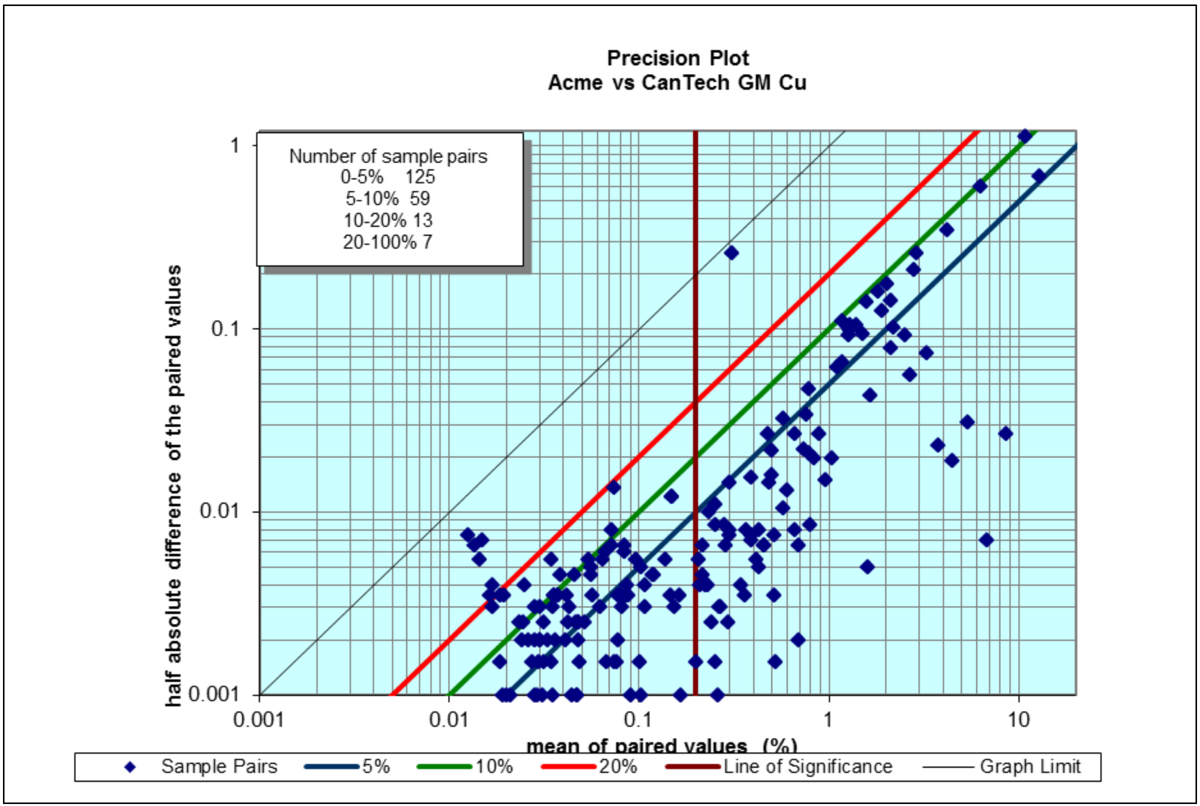


Figure 12.16 Relative Difference Plot - Cu

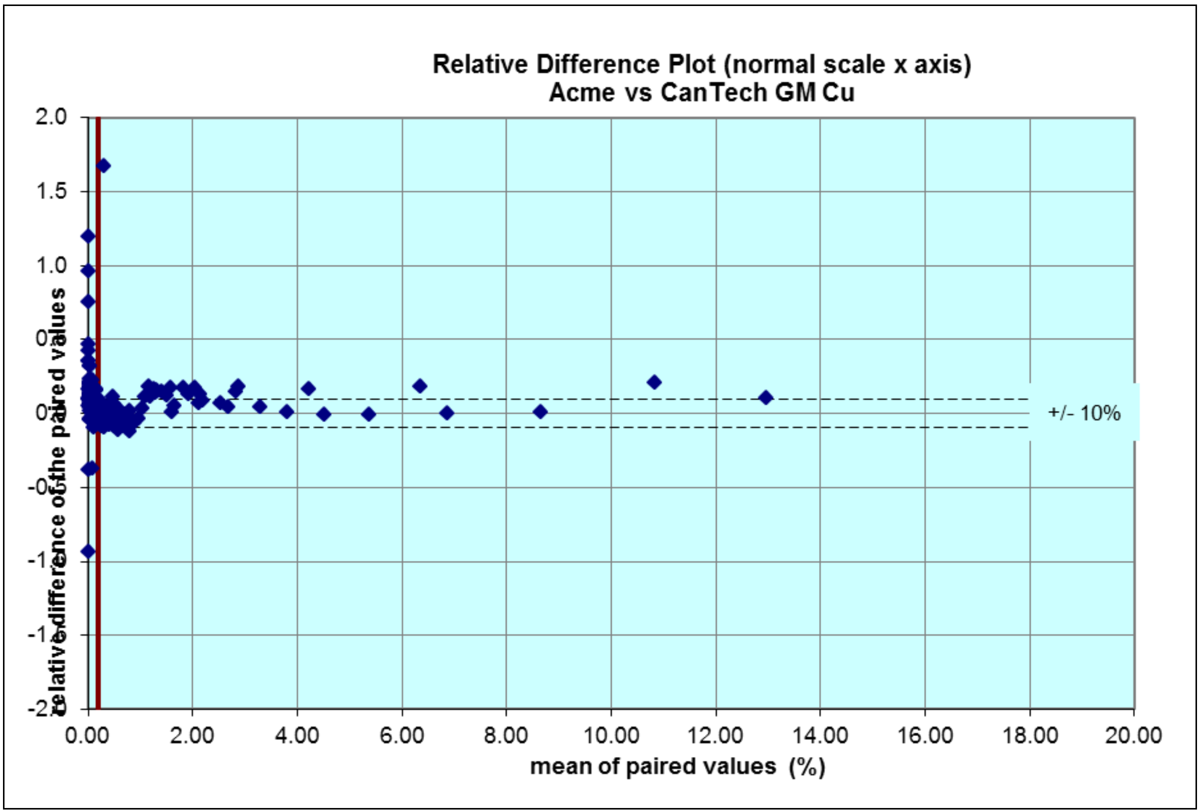


Figure 12.17 Ranked HARD Plot Cu

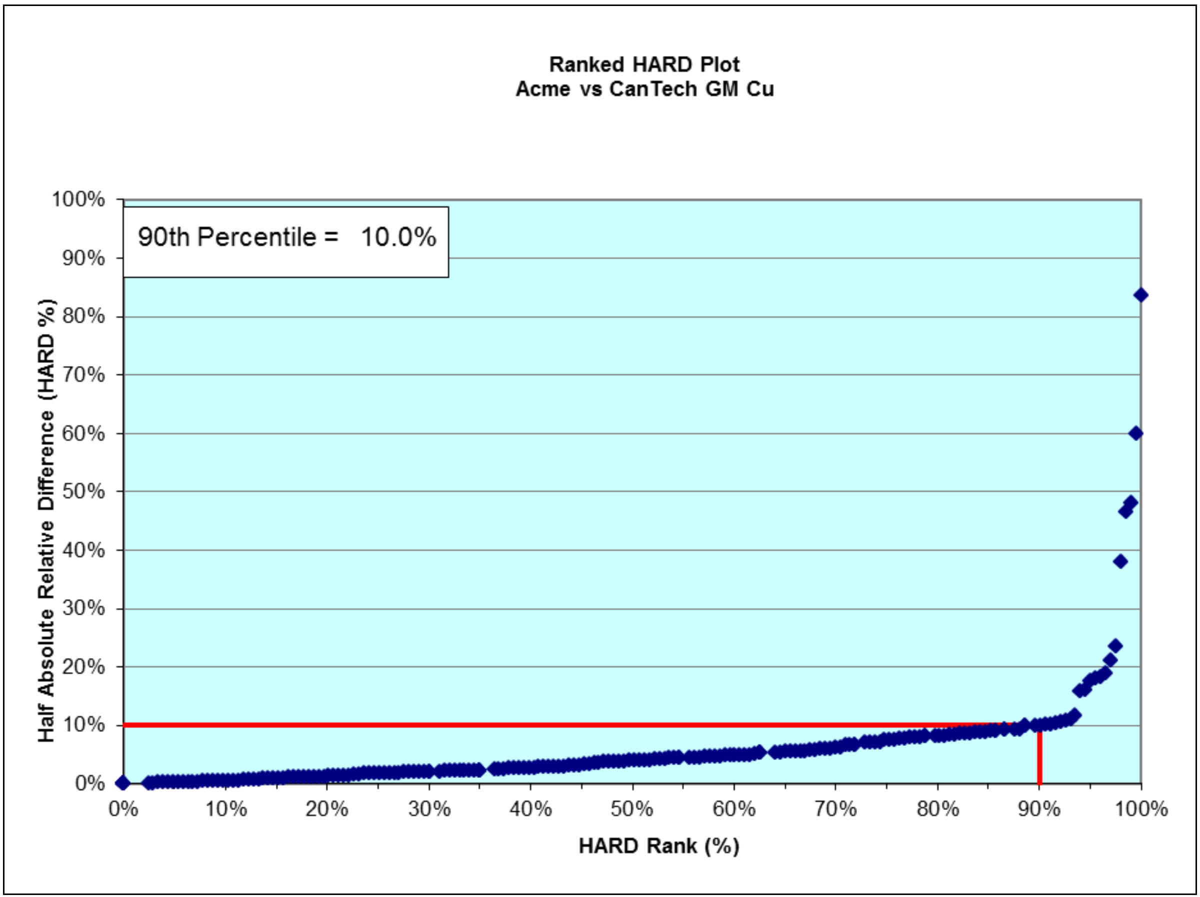


Figure 12.18 Logscale Scatterplot - Ag

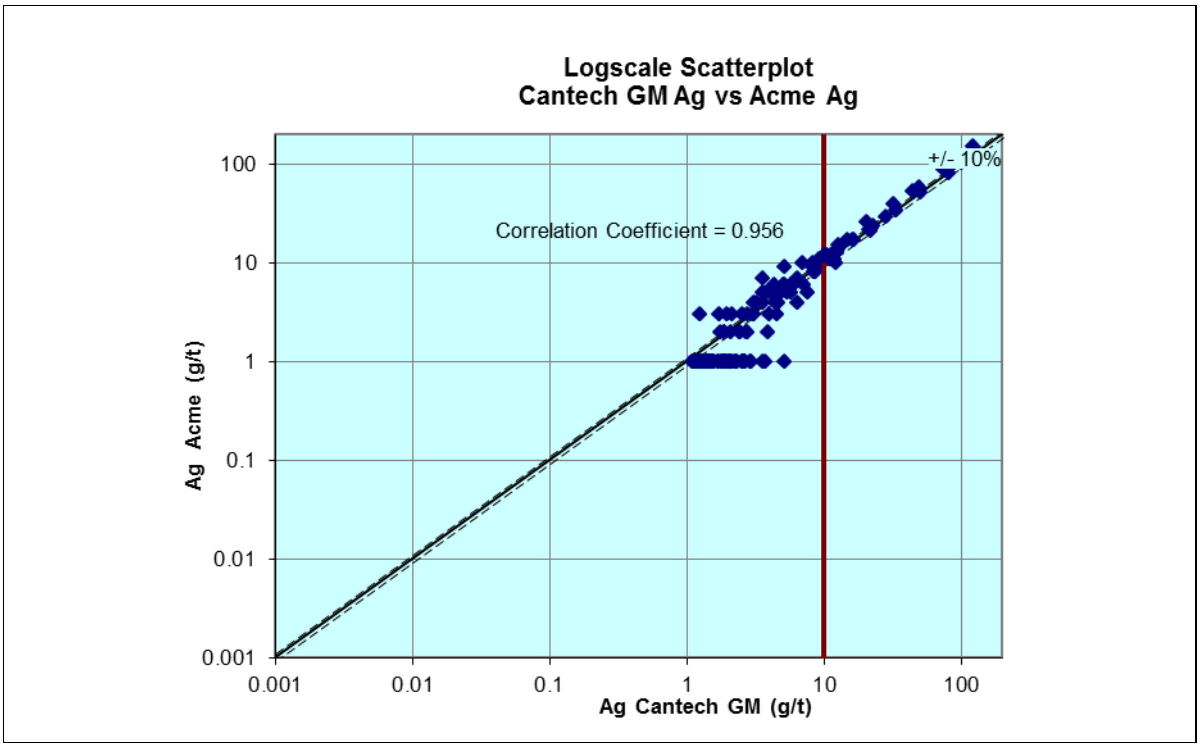


Figure 12.19 Precision Plot - Ag

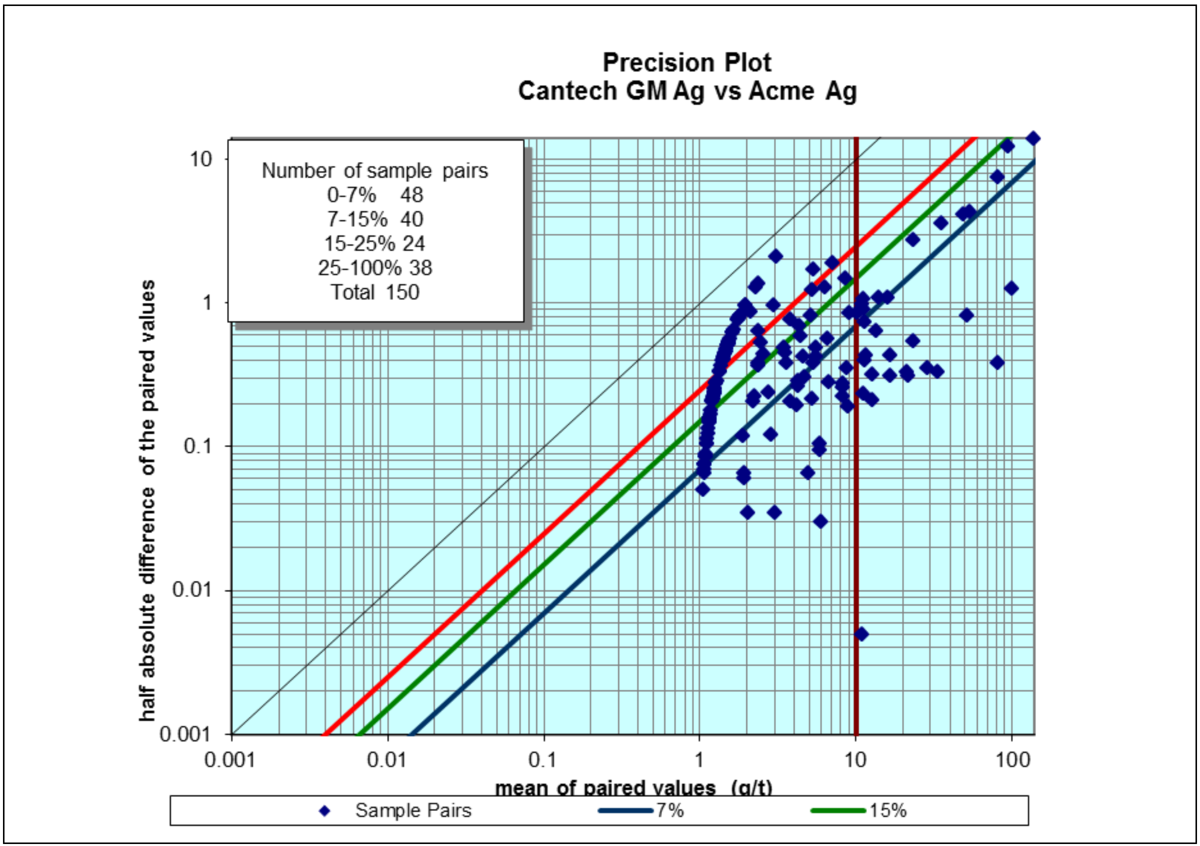


Figure 12.20 Relative Difference Plot - Ag

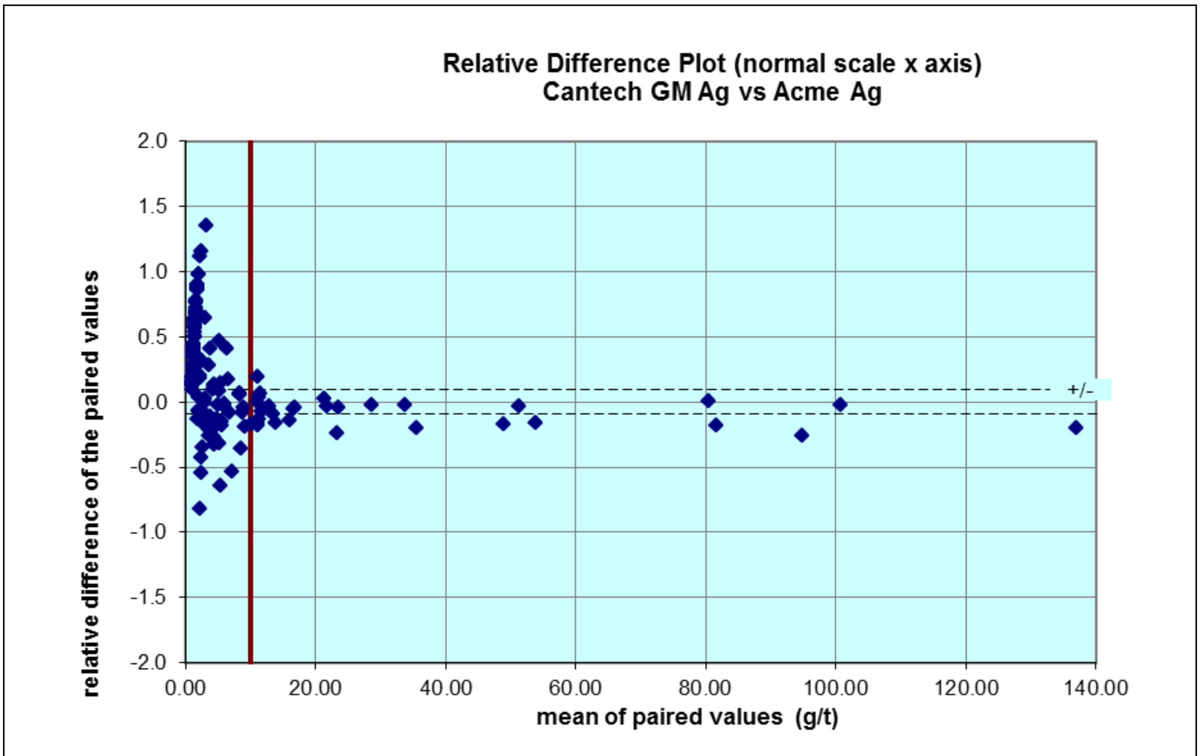


Figure 12.21 Ranked HARD Plot - Ag

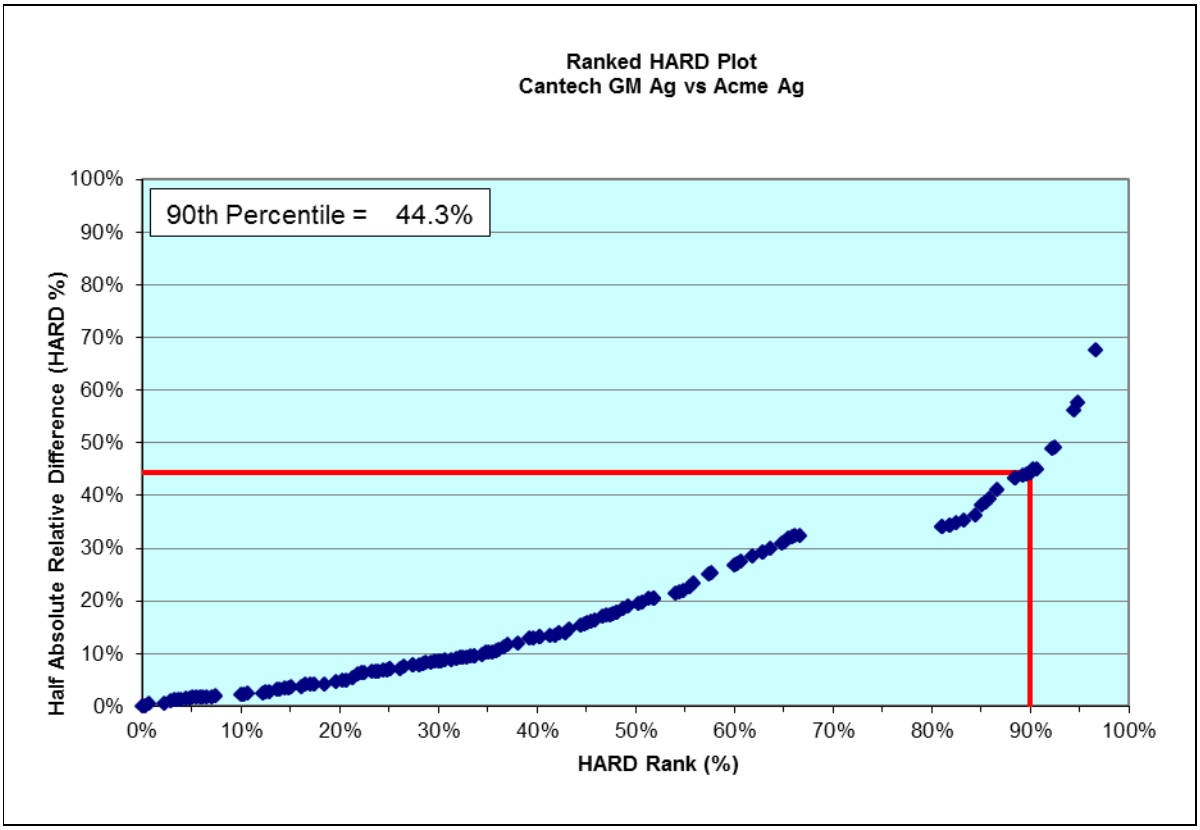


Figure 12.22 Logscale scatterplot - Au

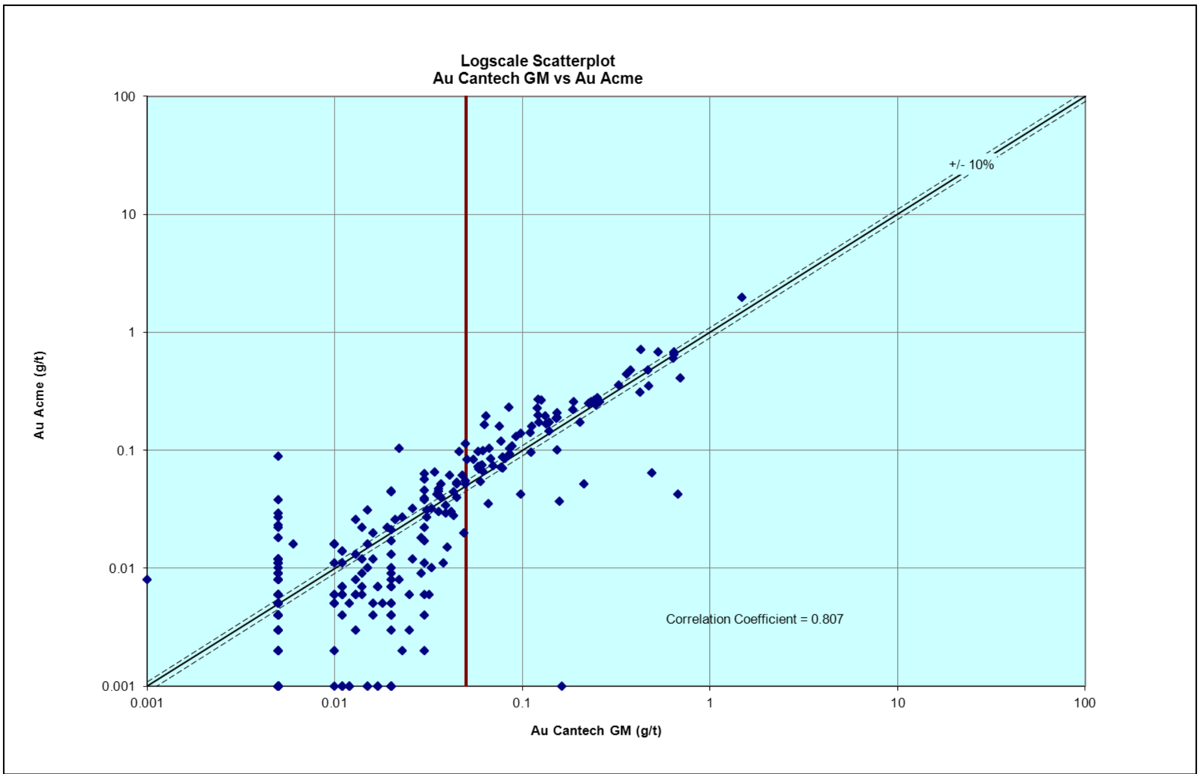


Figure 12.23 Precision Plot - Au

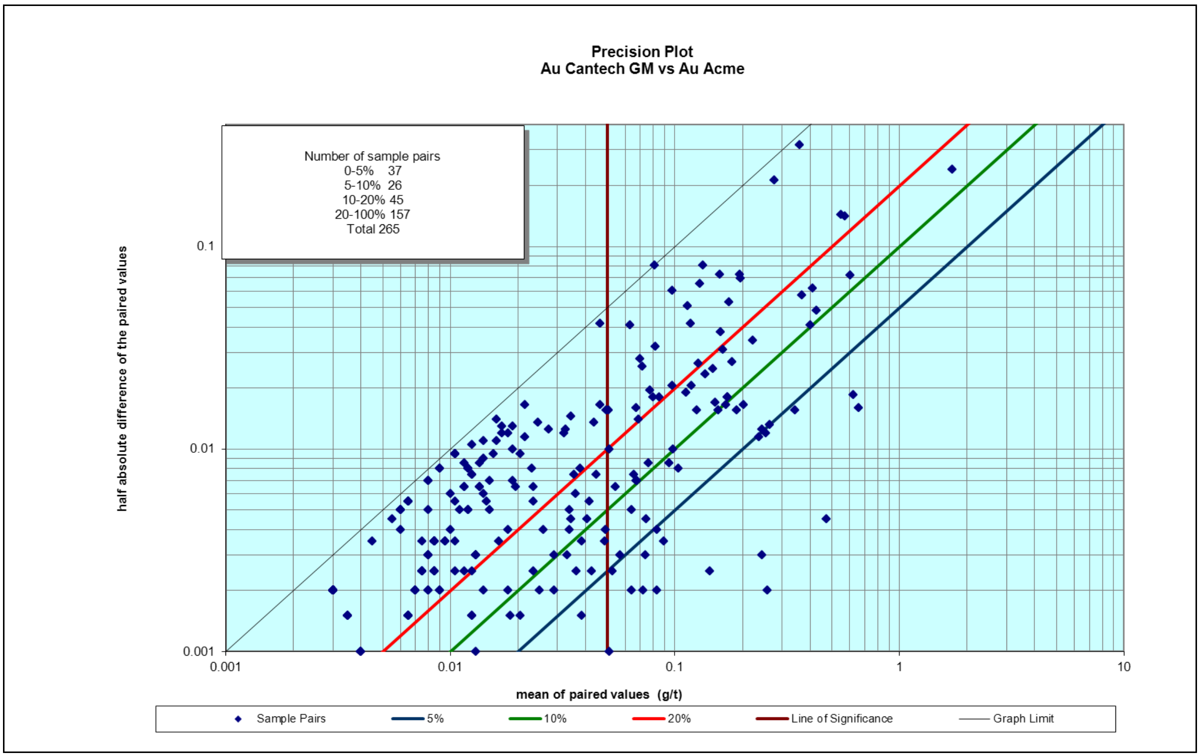


Figure 12.24 Relative Difference Plot - Au

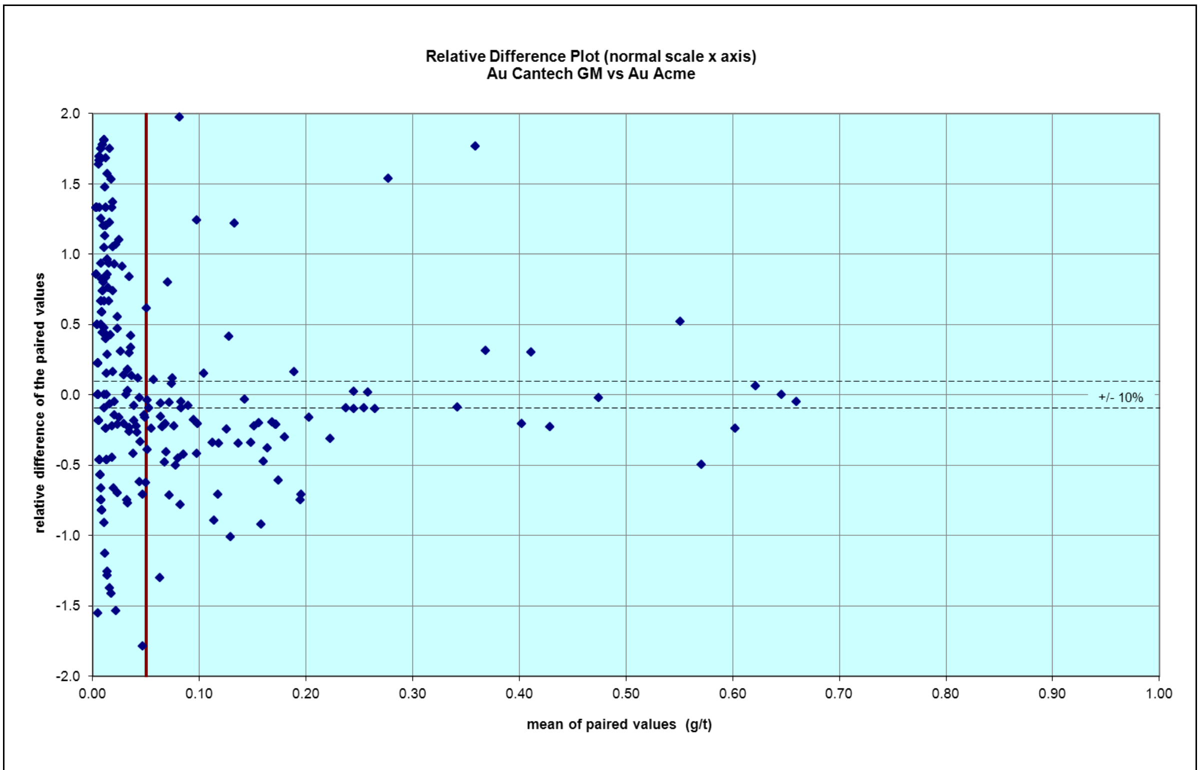
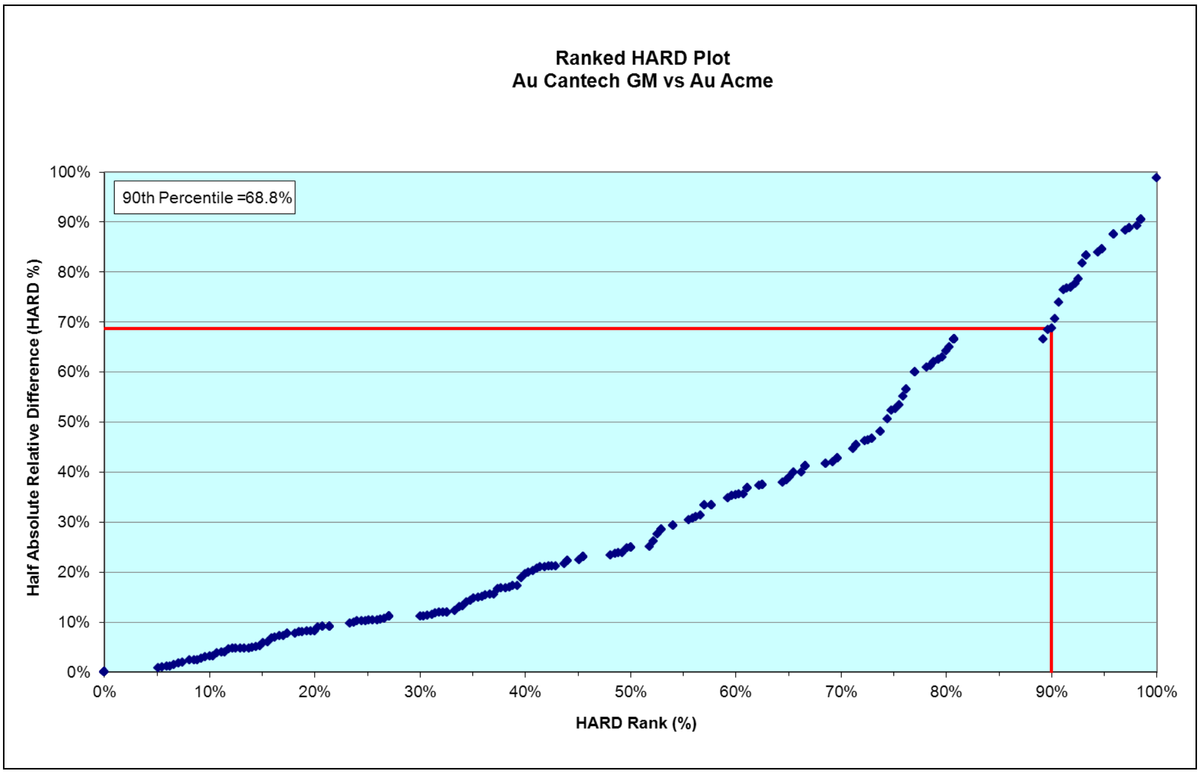


Figure 12.25 Ranked HARD Plot - Au



12.2 Qualified person's opinion on the adequacy of the data for the purpose of Resource Estimation

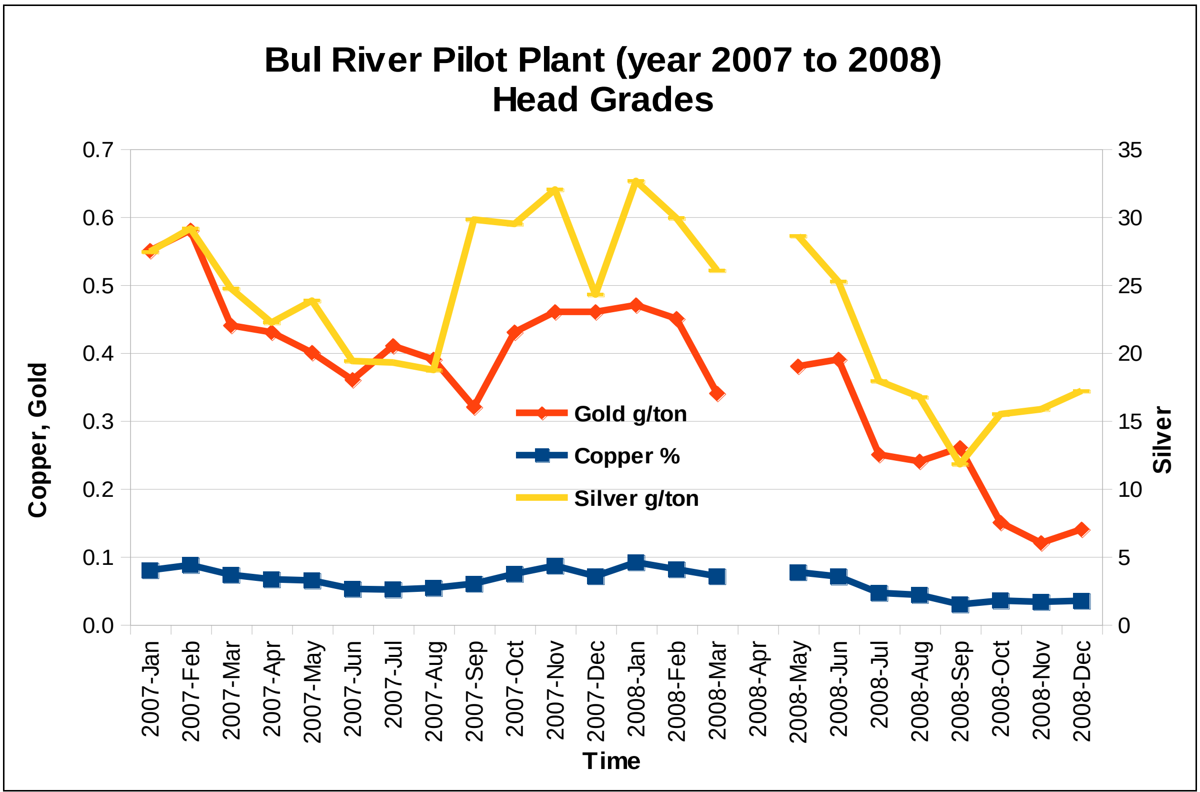
Snowden is of the opinion that sample preparation, analyses, and security of diamond drill core samples and underground channel samples for the Bul River Mine is of industry standard and that the assay data are suitable for use in resource estimation. Drillhole collars, channel samples, and surveys within the database have been verified. Assay verification through assay certificate checking was performed by MMTS and independently verified by Snowden.

13 Mineral processing and metallurgical testing

Bul River conducted and extended on site pilot plant testing between January 2007 and December 2008. The limited historical records show that during a period of 24 months of metallurgical testing, the pilot plant operated for 596 days, processed a total of 2.65 million pounds of material containing an average grade of 3.04% Cu, 0.35 g/ton Gold, and 23 g/ton Silver. The concentrate produced was of industry standard commercial quality, it totalled approximately 262,000 lb, with an average metal content of 27.36% Copper, 2.58 g/ton Gold, and 206 g/ton Silver. The pilot plant achieve average metal recovery of 89% Cu, 73% Au, and 88% Ag.

The source of the material tested is shown in the records as obtained from the underground mine levels 4, 5, 6, 7, and 8, and from a stockpile. The pilot plant grade variation on a monthly basis is shown in Figure 13.1. The copper head grades ranged from 1.5% to 4.5%, gold head grade ranged from 0.12 g/ton to 0.58 g/ton, and silver head grades ranged from 11.8 g/ton to 32.6 g/ton. Figure 13.1 also suggests that the mineralization of copper, gold and silver occurs concurrently, i.e., higher grades in one metal is accompanied with higher grades in the others, the opposite trend is also valid.

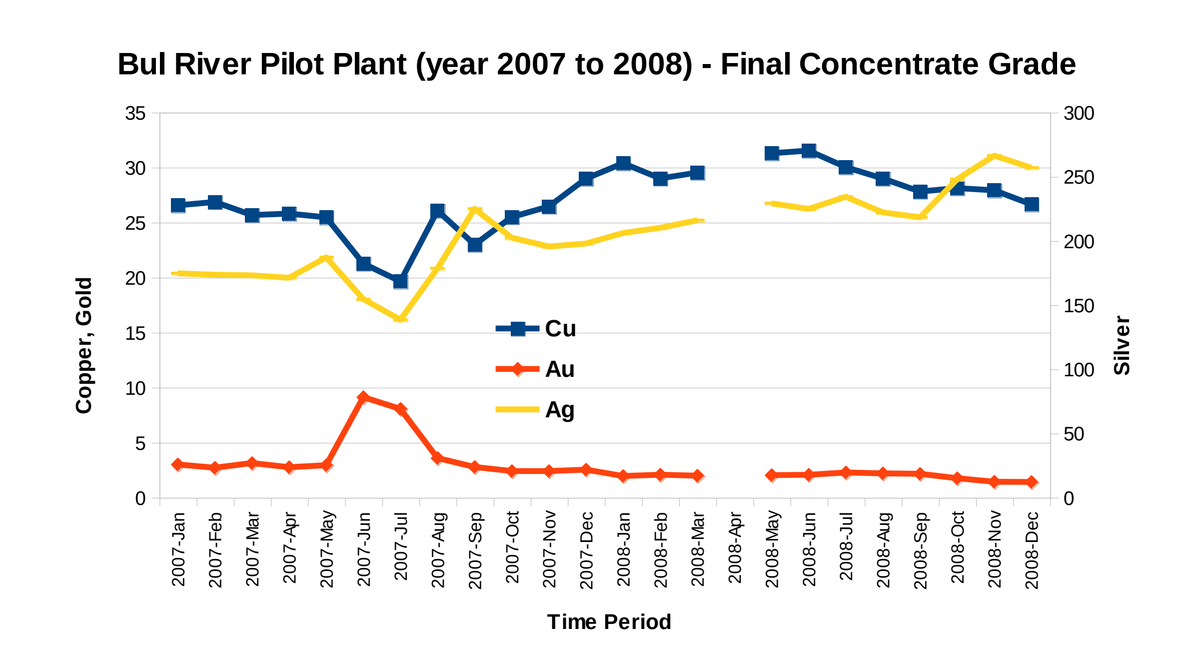
Figure 13.1 Pilot plant average monthly head grades (Au, Ag, Cu)



The overall copper recovery averaged 89%, but when viewed on a monthly basis, it consistently shows values above 90% during the last 16 months of testing (Figure 13.2Figure 13.1). Silver showed a similar metallurgical performance to that observed for copper. Gold recovery deteriorated during the same period.

The pilot plant test results suggest a good response from Bul River mineralization to conventional flotation processing. The results to date suggest room for further optimizing the gold recovery within the overall economic of the project.

Figure 13.2 Pilot plant monthly metal recovery



14 Mineral Resource estimates

Snowden was retained to update the estimate for the Mineral Resources at GBRM. The Mineral Resource estimates are currently reported for the mining operations at GBRM. As part of the recommendations made in the RPA Technical Report dated March 30, 2012, MMTS was engaged to bring the GBRM database up to a standard that would support a Mineral Resource estimate. Snowden has concluded that the database constructed through the efforts of MMTS has resulted in a database that is suitable for that purpose. Channel samples were obtained on roughly eight metre centres throughout the area of mineralization exposed in the mine workings. In additional to the channel samples MMTS has performed logging and sampling of untested drillcore and re-sampling of pulps. The Mineral Resources are reported over a range of cut-offs in Table 14.1and Table 14.2.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. No Mineral Reserves have been estimated. The Project has no mine design or defined economic parameters at this time.

This report uses definitions from and follows the guidelines of the CIM Definition Standards for Mineral Resources and Mineral Reserves and is reported in the format defined in Form F1 of NI 43-101.

14.1 Summary

The estimate was constructed from a block model constrained through three-dimensional wireframes created by MMTS and validated by Snowden. The wireframes were constructed based on an interpretation of logged data and consideration of mineralized areas. Grade was interpolated into the model blocks using an ordinary kriging method. The Mineral Resources are reported over a range of cut-offs in Figure 14.1. The effective date of the estimate is December 13th, 2012. The Mineral Resource was prepared by Dr. Adrian Martínez-Vargas under the supervision of Abolfazl Ghayemghamian. The Qualified Person for this Mineral Resource is Abolfazl Ghayemghamian.

Table 14.1 December 13th, 2012 Inferred Mineral Resources reported at a range of cut-off grades

Classification	CuEq Cut-Offs	Tonnes kt	Cu Eq %	Cu %	Cu klbs	Ag g/t	Ag koz	Au g/t	Au koz
Inferred	0.0	3,090	0.96	0.8	65,600	6.3	625	0.2	17
Inferred	0.2	2,420	1.19	1	63,500	7.7	599	0.2	16
Inferred	0.4	1,985	1.39	1.17	60,700	8.9	570	0.2	15
Base Case	**0.6**	**1,484**	**1.69**	**1.42**	**55,200**	**10.9**	**519**	**0.3**	**13**
Inferred	0.8	1,222	1.90	1.61	51,300	12.4	487	0.3	12
Inferred	1.0	1,069	2.05	1.74	48,200	13.4	461	0.3	10
Inferred	1.2	895	2.23	1.9	43,900	14.4	414	0.3	9
Inferred	1.4	771	2.38	2.03	40,400	15.3	378	0.3	9
Inferred	1.6	679	2.50	2.13	37,400	15.9	348	0.4	8
Inferred	1.8	572	2.65	2.26	33,400	16.7	306	0.4	7
Inferred	2.0	474	2.80	2.4	29,300	17.6	269	0.4	6

Notes:
1. *CIM definitions were followed for Mineral Resources.*
2. *Mineral Resources are estimated over a range of cut-off grades based on copper equivalent (CuEq). Equivalency factors include consideration of:*
   a. *Metal prices – US$3.50 per lb Cu, US$26 per oz Ag, and US$1,500 per oz Au. Assuming a US$/C$ exchange rate of US$1.00 to C$1.00 .*
   b. *Metallurgical recoveries – 90% Cu, 90% Ag, 70% Au*
3. *The operating costs used in estimating the cut-off grade are based on deposits with similar mineralization to Bul River.*
4. *Snowden did not carry out any economic analysis on the Project.*
5. *Numbers may not add due to rounding.*

Table 14.2 December 13th, 2012 Indicated Mineral Resources reported at a range of cut-off grades

Classification	CuEq Cut-Offs	Tonnes kt	Cu Eq %	Cu %	Cu klbs	Ag g/t	Ag koz	Au g/t	Au koz
Indicated	0.0	2,816	1.21	0.99	75,400	7.7	700	0.3	24
Indicated	0.2	2,461	1.37	1.12	74,300	8.7	687	0.3e	24
Indicated	0.4	2,045	1.59	1.30	71,600	10.1	663	0.3	22
Base Case	**0.6**	**1,732**	**1.79**	**1.47**	**68,200**	**11.4**	**636**	**0.4**	**20**
Indicated	0.8	1,406	2.04	1.69	63,200	13.3	601	0.4	18
Indicated	1.0	1,204	2.23	1.85	59,200	14.7	568	0.4	16
Indicated	1.2	1,069	2.37	1.98	55,900	15.7	541	0.4	14
Indicated	1.4	947	2.51	2.10	52,400	16.8	512	0.4	13
Indicated	1.6	812	2.68	2.25	47,900	18.2	475	0.4	11
Indicated	1.8	666	2.89	2.45	42,500	20.1	430	0.4	9
Indicated	2.0	564	3.07	2.62	38,200	21.7	393	0.4	7

Notes:

6. *CIM definitions were followed for Mineral Resources.*
7. *Mineral Resources are estimated over a range of cut-off grades based on copper equivalent (CuEq). Equivalency factors include consideration of:*
   c. *Metal prices – US$3.50 per lb Cu, US$26 per oz Ag, and US$1,500 per oz Au. Assuming a US$/C$ exchange rate of US$1.00 to C$1.00 .*
   d. *Metallurgical recoveries – 90% Cu, 90% Ag, 70% Au*
8. *The operating costs used in estimating the cut-off grade are based on deposits with similar mineralization to Bul River.*
9. *Snowden did not carry out any economic analysis on the Project.*
10. *Numbers may not add due to rounding.*

14.2 Disclosure

Mineral Resources reported in Section 14 were prepared by Mr Adrian Martinez-Vargas Consultant, a full time employee of Snowden under the supervision of Mr. Abolfazl Ghayemghamian Senior Consultant also a full time employee of Snowden and reviewed by Mr. Walter A Dzick, Principal Consultant for Snowden.

With the exception of Mr. Adrian Martinez-Vargas, all Snowden employees named above are Qualified Persons as defined in NI43-101. Snowden is independent of GBRM.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. No economic analysis has yet been made to determine the economic cut-off grade that will ultimately be applied to the deposit at GBRM.

14.2.1 Known issues that materially affect mineral resources

Snowden is unaware of any issues that may materially affect the mineral resources in a detrimental sense.

- GBRM has represented that there are no outstanding legal issues; no legal action, and injunctions pending against the Project.
- GBRM has represented that the mineral and surface rights have secure title.
- There are no known marketing, political, or taxation issues.
- GBRM has represented that the Project has strong local community support.
- There are no known infrastructure issues.

14.3 Assumptions, methods and parameters – Snowden resource estimate

The Mineral Resource estimates for the GBRM deposit were prepared using the following steps:

- Compilation and verification of drillhole data, including independent data verification, and database verification. Data validation was undertaken by MMTS and reviewed by Snowden.
- Analysis of drillhole sample QA/QC data.
- Verification of Bul River Mine geology and mineralisation models against drillhole information.
- Coding of drillhole data within mineralised estimation domains.
- Sample length compositing. Analysis of extreme data values and application of top cuts, where necessary.
- Exploratory analysis of gold grades and density values within mineralised estimation domains.
- Variogram analysis.
- Creation of block model.
- Estimation of gold grades into blocks using ordinary kriging

- Estimation of density into blocks using ordinary kriging where possible
- Validation of estimated block grades against input sample composite grades.
- Confidence classification of estimates with respect to CIM guidelines.
- Resource tabulation and resource reporting.

14.3.1 Database

The final database was provided by MMTS on December 13, 2012. The database consisted of 678 drillholes collar and channel samples in underground galleries; a surveying table with the orientation of the drillholes and the channel samples; 4500 rows of assays from drillholes and channels; and 590 S.G. (bulk density) determinations from 59 drillholes. The raw drillhole data and specific gravity measurements was provided in Excel format, surface topography and nine vein shapes, overburden shape, mine workings shapes in dxf format.

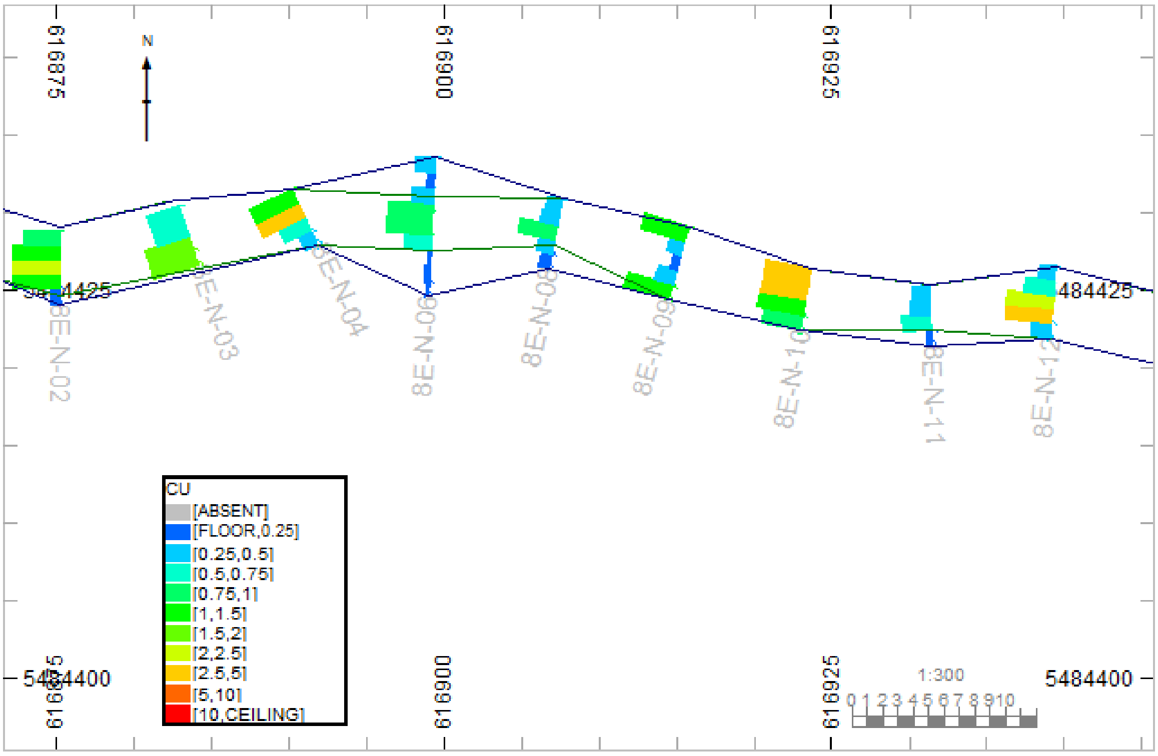
All the distance units are in metres. The copper (Cu) grades are in percent, silver (Ag) in g/t, and gold (Au) in ppb.

The original database was in Excel format. For estimation purposes Snowden converted the determinations that were below the detection limit to half of the detection limit. All QA/QC samples (standard duplicates and blanks) were removed from the database before resource estimation.

14.3.2 Wireframing and geologic interpretation

MMTS interpreted the mineralization using the geological understanding of the Bul River mineralization and the log information available in the drillhole database. As result of this work a set of 9 veins were modelled by MMTS using GEMS 3D software. Snowden reviewed the grade distribution and identified and modelled a high grade and a low grade domains within veins five, six, eight, and nine. These domains are spatially continuous and separable (Figure 14.1). MMTS created as-built wireframes for all the underground access and workings (drifts). This was used to identify the material resources already mined and ensure it is not reflected in the resource estimation.

Figure 14.1 Plan view assay values within the wireframes at elevation 630 m



14.3.3 Data Coding and Compositing

All assay data was coded with a vein number. The vein codes used are shown in Table 14.3. In total 13 estimation areas were coded into the database, besides the nine veins there are also four low grade zones located within veins five, six, eight, and nine.

Table 14.3 Vein Codes

Vein	Vein ID	Vein Code*
Marker	2	102
Lv3	3	103
Lv4	4	104
Main Central	5	105
		5 (low grade)
Main North	6	106
		6 (low grade)
Main South A	7	107
Main South B	8	108
		8 (low grade)
West 2	9	109
		9 (low grade)
Far West	10	110

After coding the data was composited to 1.0 metre length intervals within each one of the 13 mineralized domains. The one metre composite length was chosen as it is the most common sample length within the mineralized area. The compositing program avoids the presence of small residual composite samples by distributing these residuals evenly throughout the composite run. Histograms for the raw data sample length and the composited sample lengths are shown in Figure 14.2 and Figure 14.3.

Figure 14.2 Raw data sample length histogram

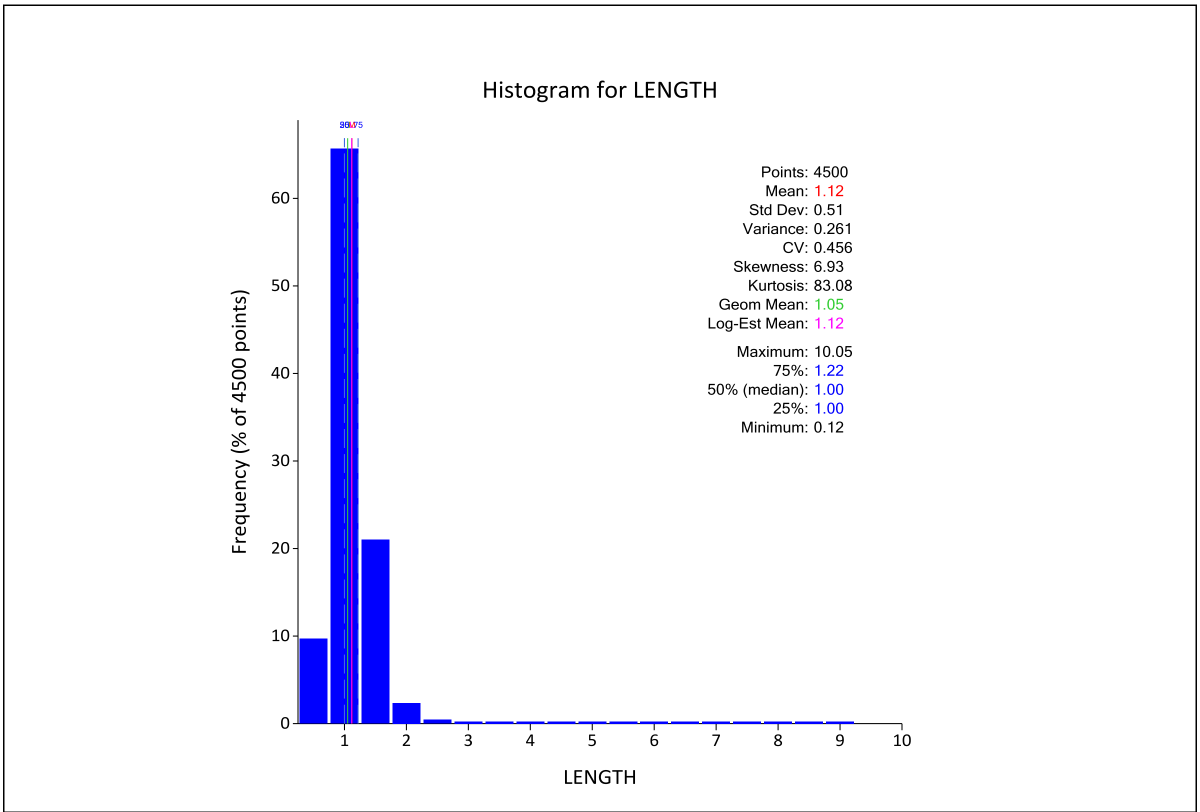
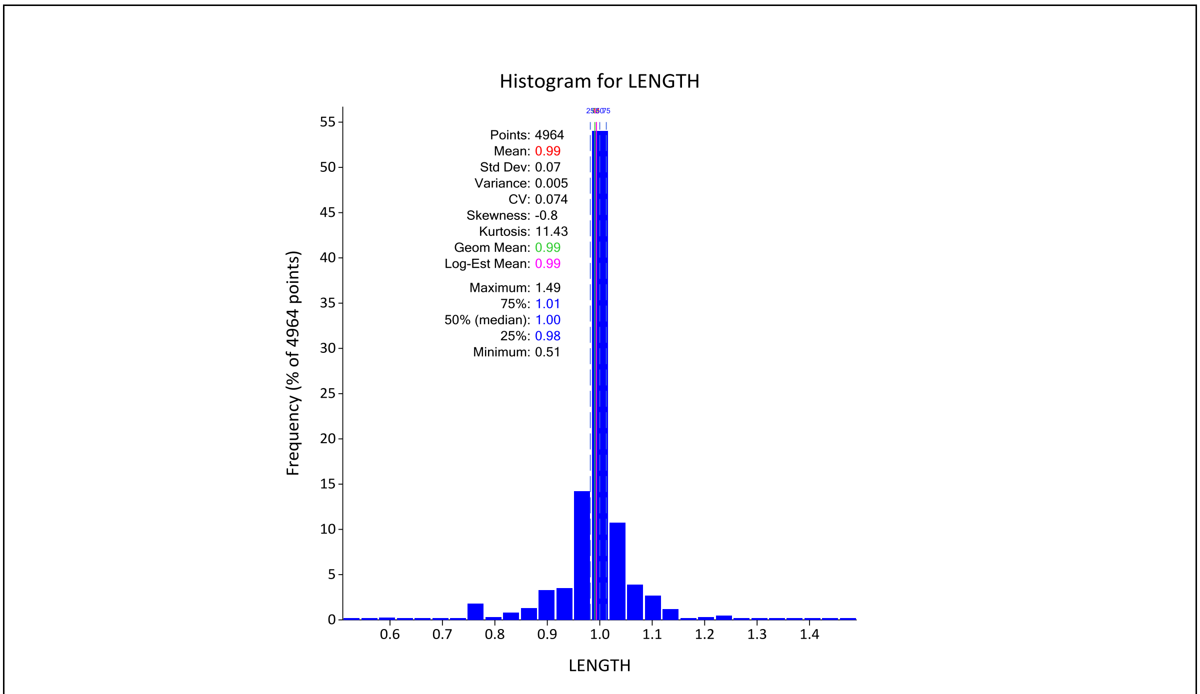


Figure 14.3 Histogram of composite sample lengths



Composite statistics for the nine high grade and four low grade mineralized zones are shown in Table 14.4 to Table 14.6.

Table 14.4 Composite statistics for Cu (%)

Domain	Samples	Min	Max	Mean	St. dev.	CV
Total	5035	0.00	15.77	0.72	1.37	1.92
Non Mineralized	2171	0.00	10.95	0.33	0.86	2.60
5 low	15	0.03	0.38	0.10	0.09	0.93
6 low	129	0.00	1.50	0.24	0.30	1.25
8 low	164	0.00	1.24	0.11	0.14	1.32
9 low	279	0.00	0.95	0.12	0.12	1.01
102 hi	91	0.01	11.84	1.84	2.31	1.25
103 hi	13	0.01	4.46	1.01	1.44	1.42
104 hi	46	0.00	6.46	1.55	1.50	0.97
105 hi	60	0.03	7.71	1.54	1.53	0.99
106 hi	501	0.01	15.77	2.02	2.32	1.15
107 hi	90	0.01	6.54	0.70	1.19	1.72
108 hi	409	0.03	11.90	1.90	2.07	1.09
109 hi	622	0.00	7.53	0.71	0.70	0.99
110 hi	445	0.00	2.76	0.37	0.40	1.07

Table 14.5 Composite statistics for Ag (g/t)

Domain	Samples	Min	Max	Mean	St. dev.	CV
Total	5035	0.00	206.00	6.10	12.58	2.06
Non Mineralized	2171	0.00	206.00	3.38	9.25	2.74
5 low	15	1.00	3.00	1.20	0.56	0.47
6 low	129	0.10	19.00	2.71	3.31	1.22
8 low	164	0.20	16.00	1.37	1.63	1.19
9 low	279	0.80	9.00	1.18	0.67	0.57
102 hi	91	0.09	93.00	16.56	19.17	1.16
103 hi	13	1.00	35.44	9.18	11.90	1.30
104 hi	46	1.00	85.81	17.30	18.41	1.06
105 hi	60	1.00	46.90	10.57	9.76	0.92
106 hi	501	1.00	149.00	16.91	19.98	1.18
107 hi	90	0.40	106.65	10.11	17.64	1.75
108 hi	409	0.29	160.00	14.52	20.14	1.39
109 hi	622	0.90	49.88	4.60	5.04	1.10
110 hi	445	0.20	23.00	2.74	2.79	1.02

Table 14.6 Composite statistics for Au (g/t)

Domain	Samples	Min	Max	Mean	St. dev.	CV
Total	5039	0.00	22.83	0.21	0.68	3.31
Non Mineralized	2174	0.00	17.00	0.12	0.59	4.80
5 low	15	0.00	0.03	0.01	0.01	0.71
6 low	129	0.00	0.42	0.03	0.05	1.45
8 low	164	0.00	1.58	0.05	0.14	3.08
9 low	279	0.00	8.29	0.14	0.53	3.76
102 hi	91	0.00	1.51	0.17	0.23	1.39
103 hi	13	0.00	0.66	0.12	0.18	1.49
104 hi	46	0.00	0.99	0.19	0.20	1.07
105 hi	60	0.00	0.95	0.17	0.18	1.02
106 hi	502	0.00	10.00	0.36	0.65	1.79
107 hi	90	0.00	0.62	0.08	0.13	1.71
108 hi	409	0.00	8.51	0.42	0.73	1.73
109 hi	622	0.00	22.83	0.41	1.24	3.00
110 hi	445	0.00	3.02	0.16	0.30	1.94

Snowden conducted statistical analysis on the sample data from within the mineralized veins and those results are presented in Figure 14.4 to Figure 14.6.

Figure 14.4 Log Histogram for Cu

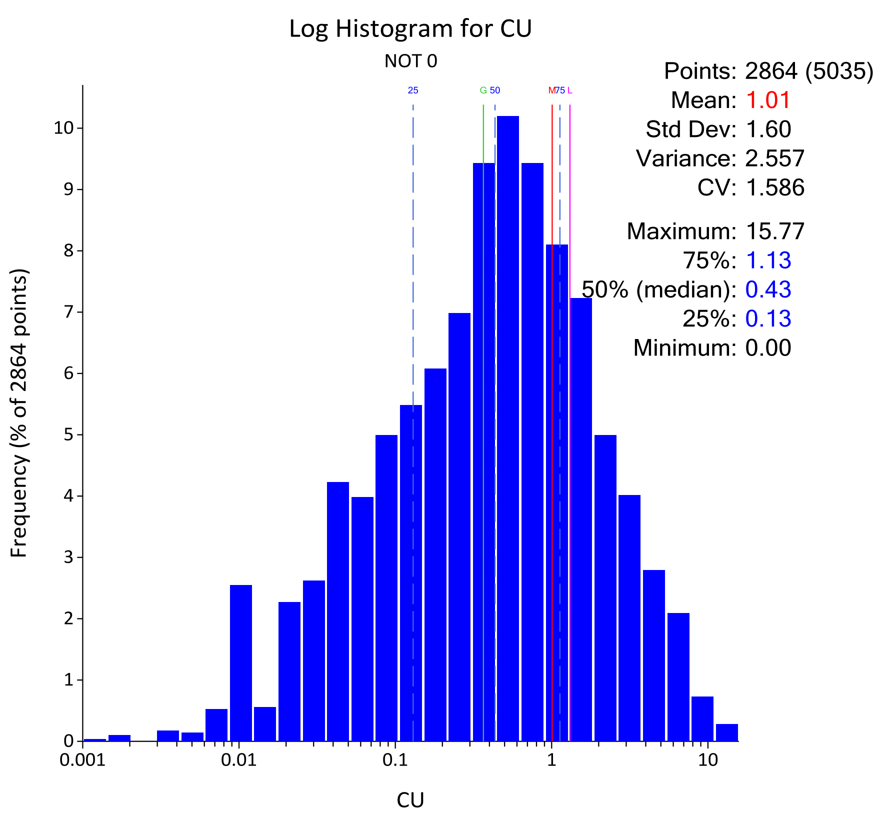


Figure 14.5 Log histogram for Ag

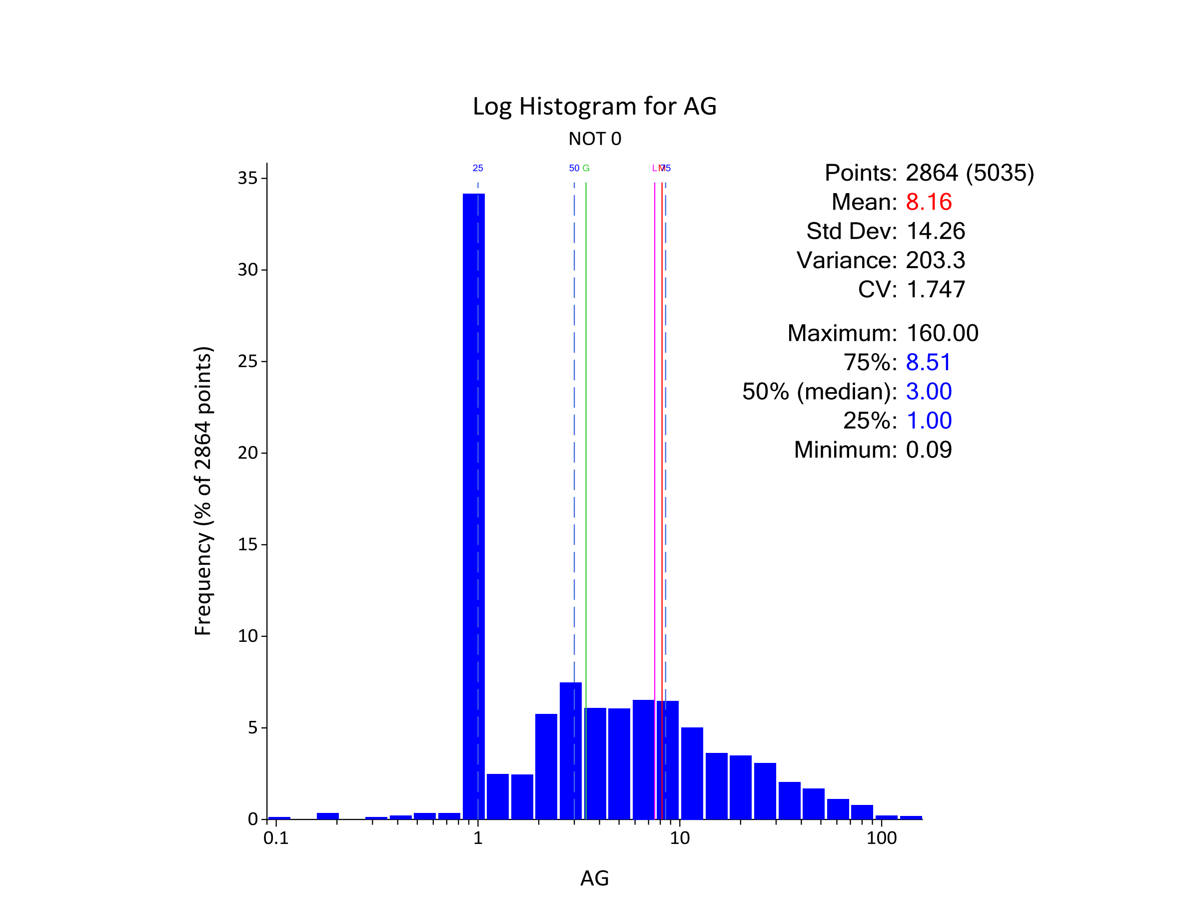
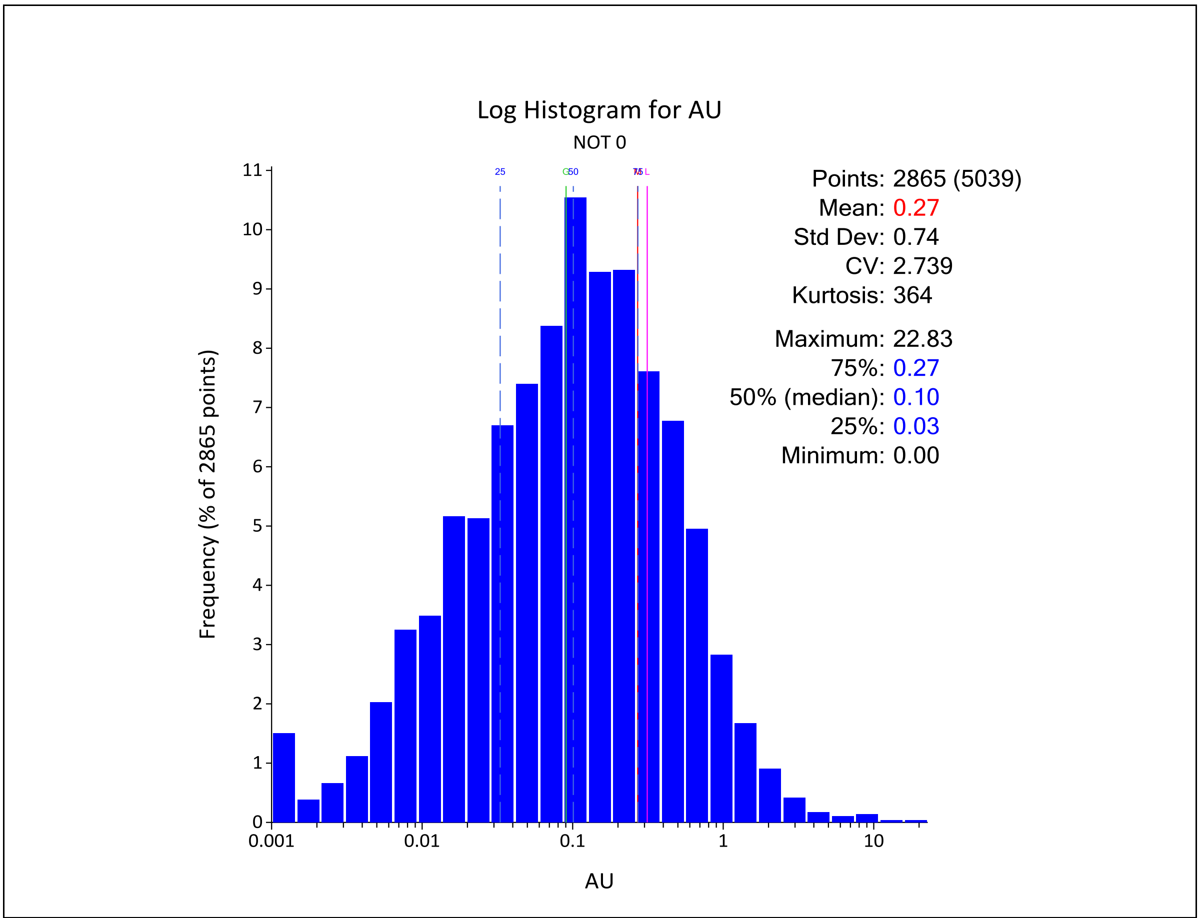


Figure 14.6 Log Histogram for Au



14.3.4 Top Cutting

Analysis of the data set for all elements outlined the requirement for top cutting to avoid overestimating due to the effect if high grade outlying assays. Snowden based the top cutting strategy on an analysis of the probability distribution functions and histograms for Cu, Ag, and Au distributions within the modelled veins. The log probability plots for this analysis are shown in Figure 14.7 to Figure 14.9. Top cuts were applied to the composited data and are seen in Table 14.7. No top cut was applied to the Cu% assay data.

Table 14.7 Top cuts as applied to composited data

Element	Top-cut	Value
Cu	-	% Cu
Ag	100.0	g/t Ag
Au	7.0	g/t Au

Figure 14.7 Probability plot for Cu

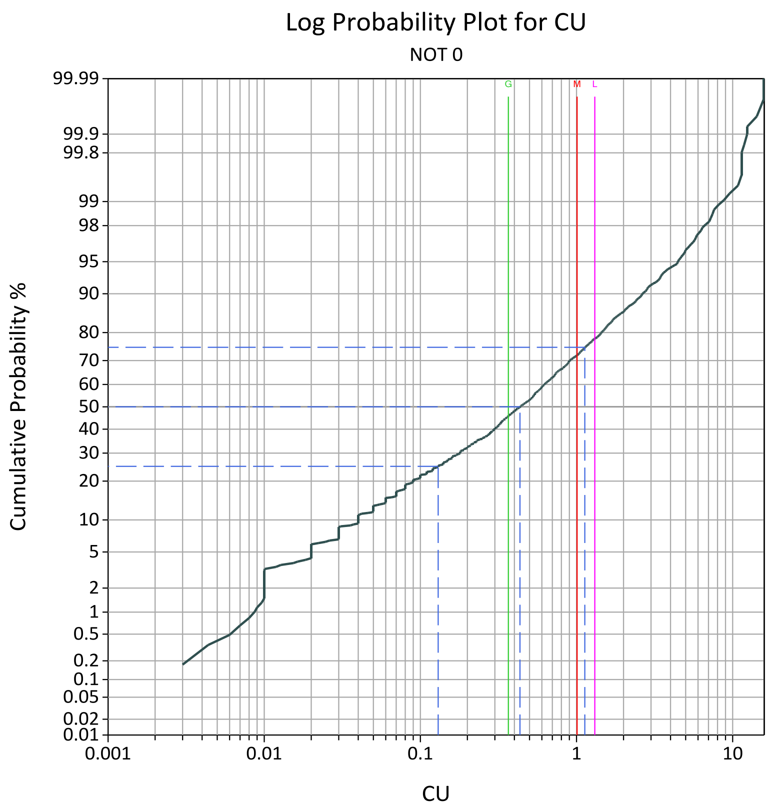


Figure 14.8 Probability plot for Ag

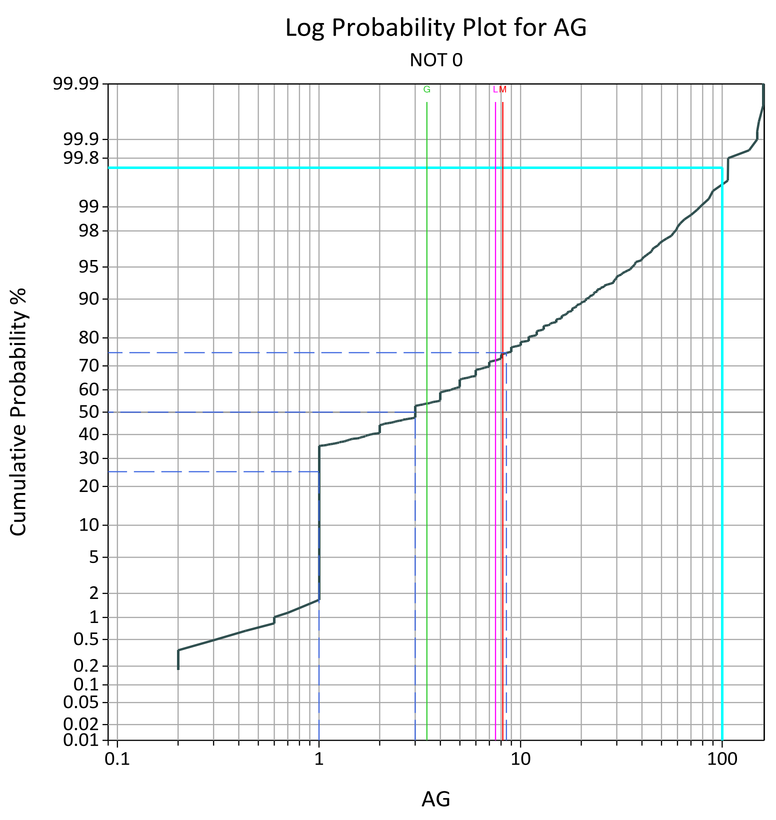
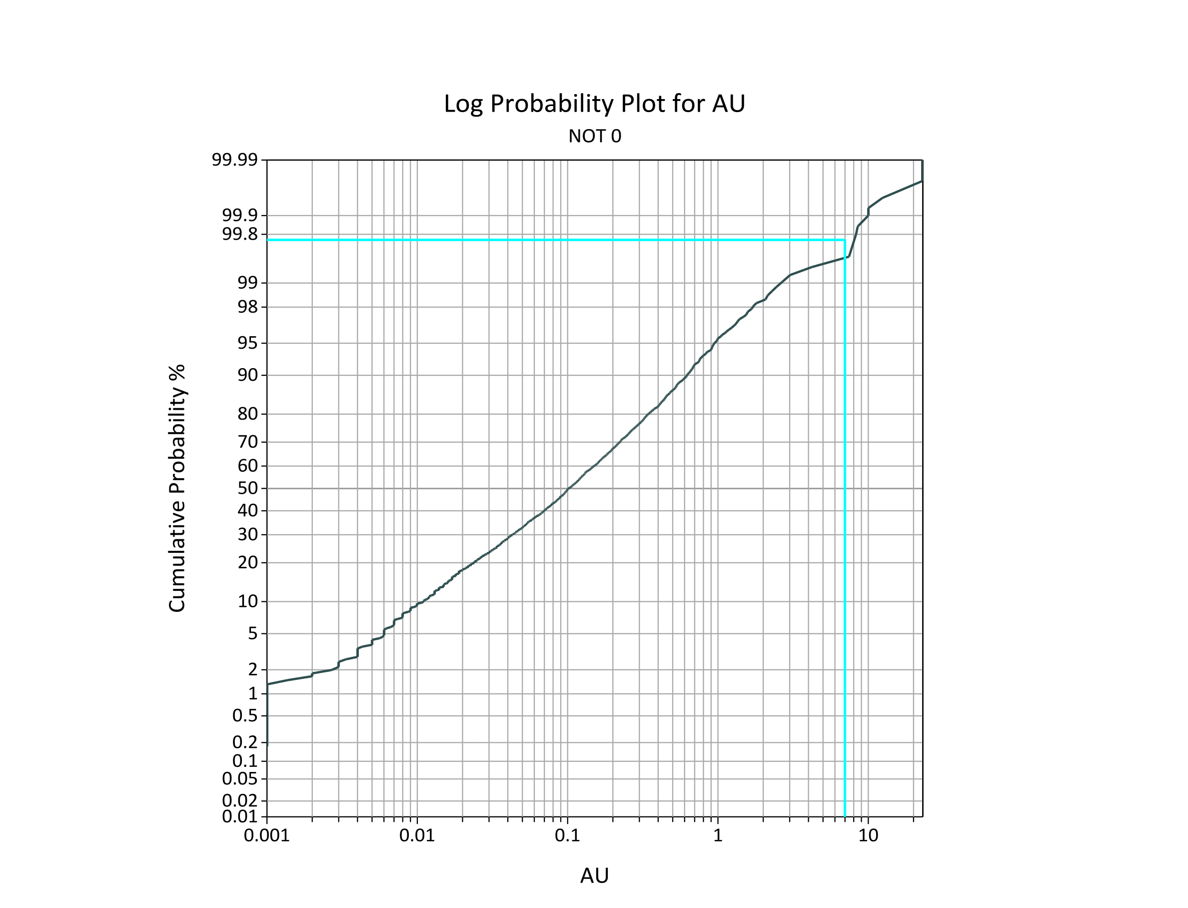


Figure 14.9 Probability plot for Au



14.3.5 Block Model

For the estimation a block model was created in Datamine software with a parent cell size of 5 m by 5 m by 5 m. This block size was selected because it represents approximately 1/4 of the distance between levels and it is about half the distance between the traverse channel samples taken in the underground workings across the mineralization. The basic block model parameters are shown in Table 14.8.

Table 14.8 Block Model Parameters

Parameter	Value
Xmin	616100
Ymin	5483910
Zmin	430
Cell size in X direction	5
Cell size in Y direction	5
Cell size in Z direction	5
Number cells in X direction	334
Number cells in Y direction	304
Number cells in Z direction	112

14.3.6 Variography

The mineralized zones were combined into two zones in order to obtain sufficient data points to the construction of meaningful variograms. Veins number nine and ten were combined to create the west zone and veins two through eight were combined to form the east zone. The two zones differ by orientation as seen in Figure 14.10.

Figure 14.10 Vein orientation

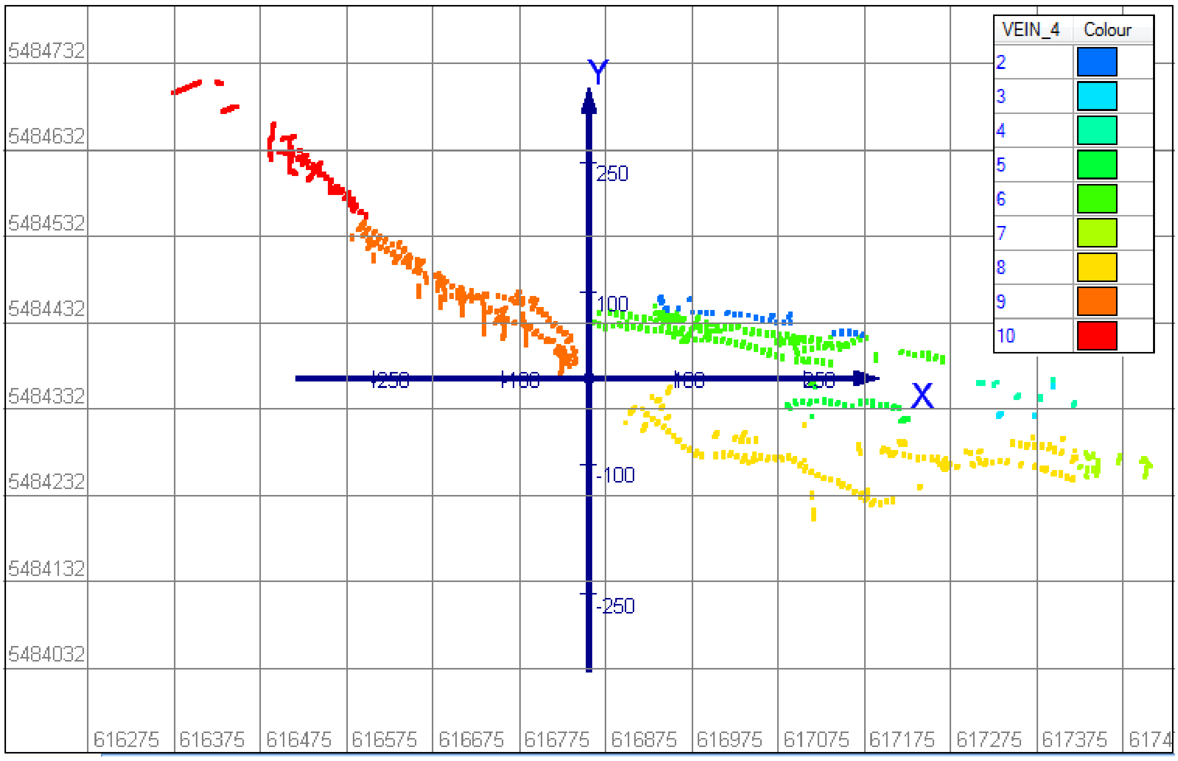


Figure 14.11 East Zone Cu experimental variograms

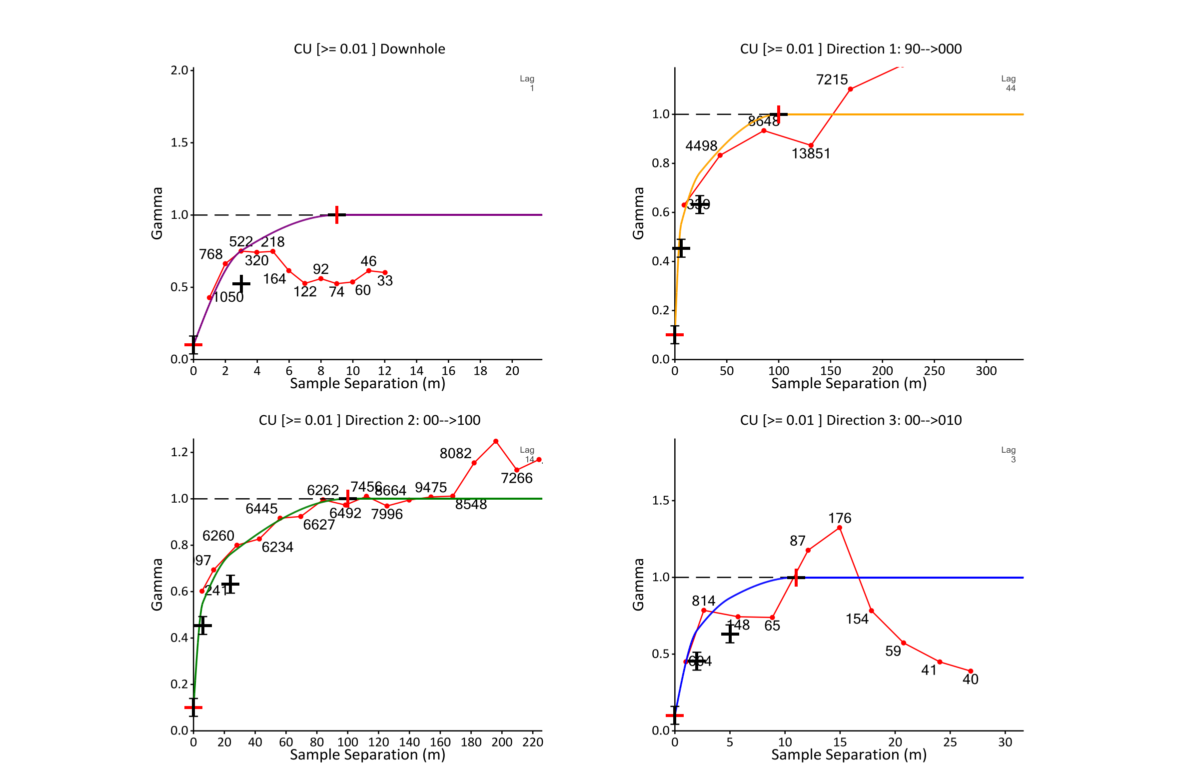


Table 14.9 East Domain Cu variography

			Structure 1		Structure 2		Structure 3	
Direction	**Orientation**	**Nugget**	**Sill**	**Range**	**Sill**	**Range**	**Sill**	**Range**
1	090-->000	0.14	0.4	6	0.18	24	0.29	100
2	000-->100	0.14	0.4	6	0.18	24	0.29	100
3	000-->010	0.14	0.4	2	0.18	5	0.29	11

Figure 14.12 West Zone Cu experimental variograms

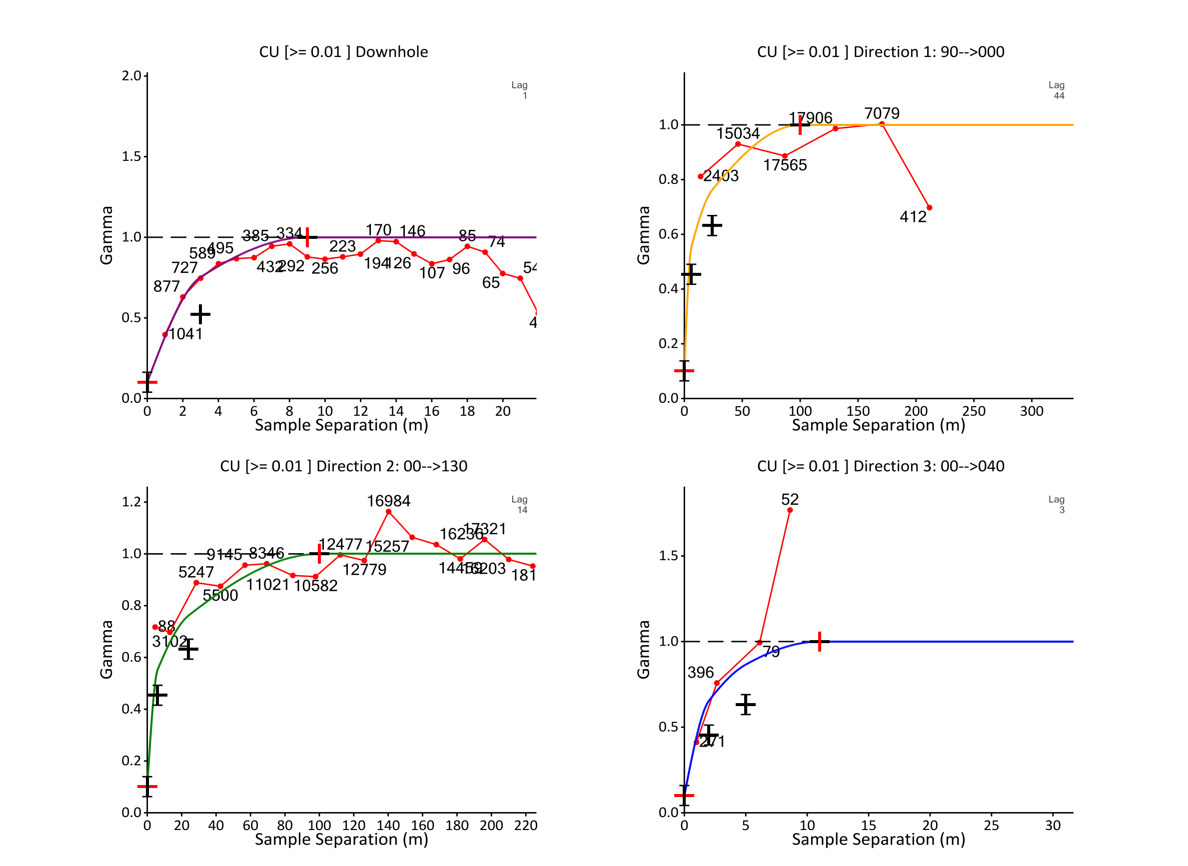


Table 14.10 West Domain Cu variography

			Structure 1		Structure 2		Structure 3	
Direction	Orientation	Nugget	Sill	Range	Sill	Range	Sill	Range
1	090-->000	0.14	0.4	6	0.18	24	0.29	100
2	000-->130	0.14	0.4	6	0.18	24	0.29	100
3	000-->040	0.14	0.4	2	0.18	5	0.29	11

The experimental variograms were calculated and fitted in the main vein direction using normal scores transformation in order to improve the continuity of the variograms. The East zone variograms and details are shown in Figure 14.11 and Table 14.9 respectively. The West zone variograms and details are shown in Figure 14.12 and Table 14.10 respectively. Analysis of both the East and West zones shows little anisotropy within the plane of the veins evidenced by the similar ranges for the first and second structures of the variogram. The third structure is across the strike of the veins and in both zones the range is 5 metres.

14.3.7 Estimation parameters

The grades for Cu, Ag, and Au were interpolated into the block model independently within each of the 13 estimation domains using ordinary kriging. A search ellipse with axis in the same orientation as the three major directions seen in the variograms was used to select samples for interpolation into the blocks. Discretization was set at 4, 4, and 3 for x y and z directions. The minimum samples was set at 8 and the maximum sample count was set to 25 for the first pass. The minimum sample count was set to 12 and the maximum sample count was set to 25 for the second pass. The minimum sample count was set to 3 and the maximum sample count was set to 25 for the third and final pass. The search ellipse and estimation parameters are outlined in Table 14.11.

Table 14.11 Search ellipse and estimation parameters

Parameter		Value	
Veins		**2 to 8**	**9 and 10**
Size	Semi-axis a	60	60
	Semi-axis b	60	60
	Semi-axis c	15	15
Orientation	Semi-axis a	090-->000	090-->000
	Semi-axis b	000-->130	000-->100
	Semi-axis c	000-->040	000-->010
Maximum number of samples per drillhole		5	5
First search pass			
Minimum number of samples		8	8
Maximum number of samples		25	25
Second search pass			
Size increment		2	2
Minimum number of samples		12	12
Maximum number of samples		25	25
Third search pass			
Size increment		6	6
Minimum number of samples		3	3
Maximum number of samples		25	25

14.3.8 Block Model Validation

Model validation was done through comparison of the mean grades in the composited data to the mean grades in the block model (Table 14.12). Slice validation was also performed and the resulted of that analysis are seen in Appendix B.

Figure 14.13 and Figure 14.14 below show a comparison of the sample assay grades and block model grades.

Table 14.12 Comparison of mean values block model vs composite samples

Domain	AG		AU		CU	
	Model	Composite	Model	Composite	Model	Composite
5	1.18	1.20	0.01	0.01	0.09	0.10
6	2.92	2.85	0.03	0.03	0.26	0.25
8	1.31	1.40	0.04	0.05	0.11	0.11
9	1.18	1.16	0.13	0.14	0.13	0.12
102	13.09	17.54	0.12	0.17	1.42	1.97
103	9.26	9.18	0.13	0.12	1.02	1.01
104	10.43	17.78	0.13	0.19	1.01	1.59
105	11.72	15.38	0.20	0.27	1.79	2.34
106	18.31	17.19	0.36	0.36	2.17	2.00
107	13.51	12.21	0.11	0.10	1.02	0.91
108	13.12	15.31	0.41	0.42	1.90	2.00
109	3.75	4.47	0.35	0.42	0.63	0.70
110	3.21	3.02	0.13	0.16	0.48	0.43

Figure 14.13 Comparison of sample assay grades to block interpolated grades (1)

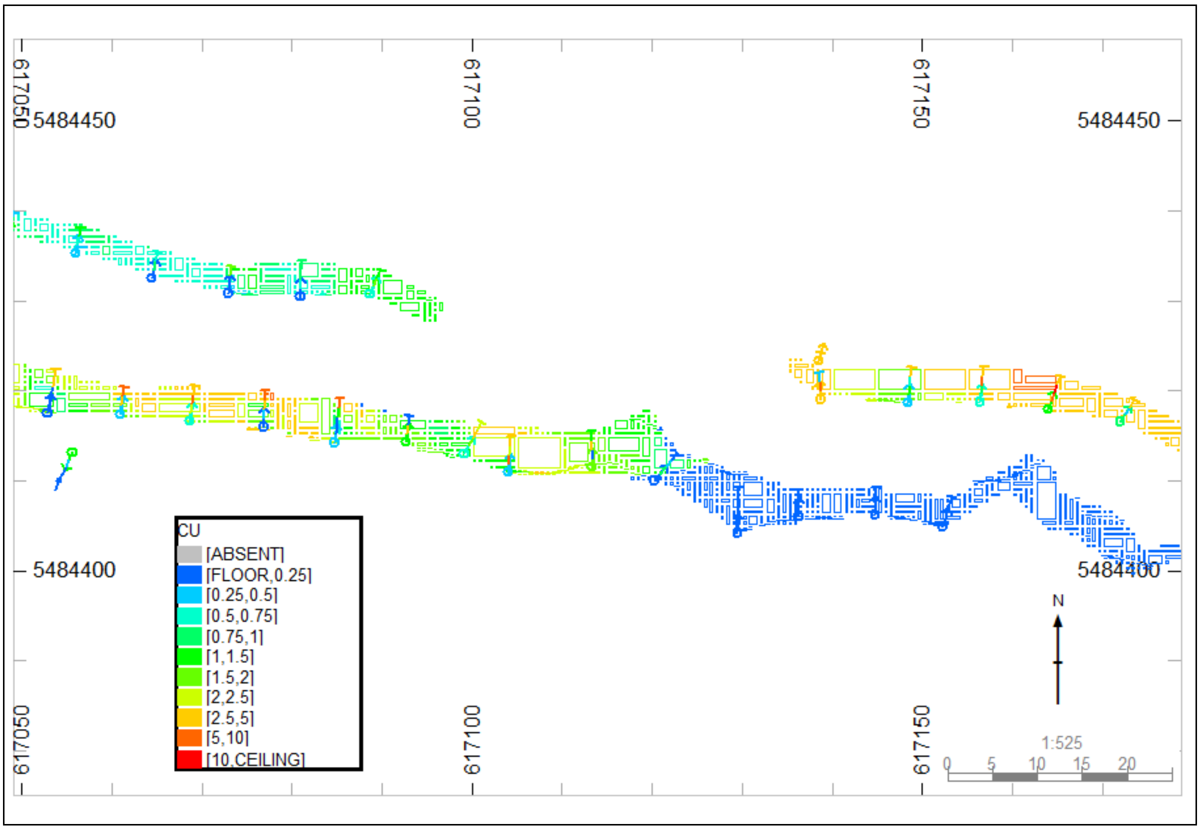
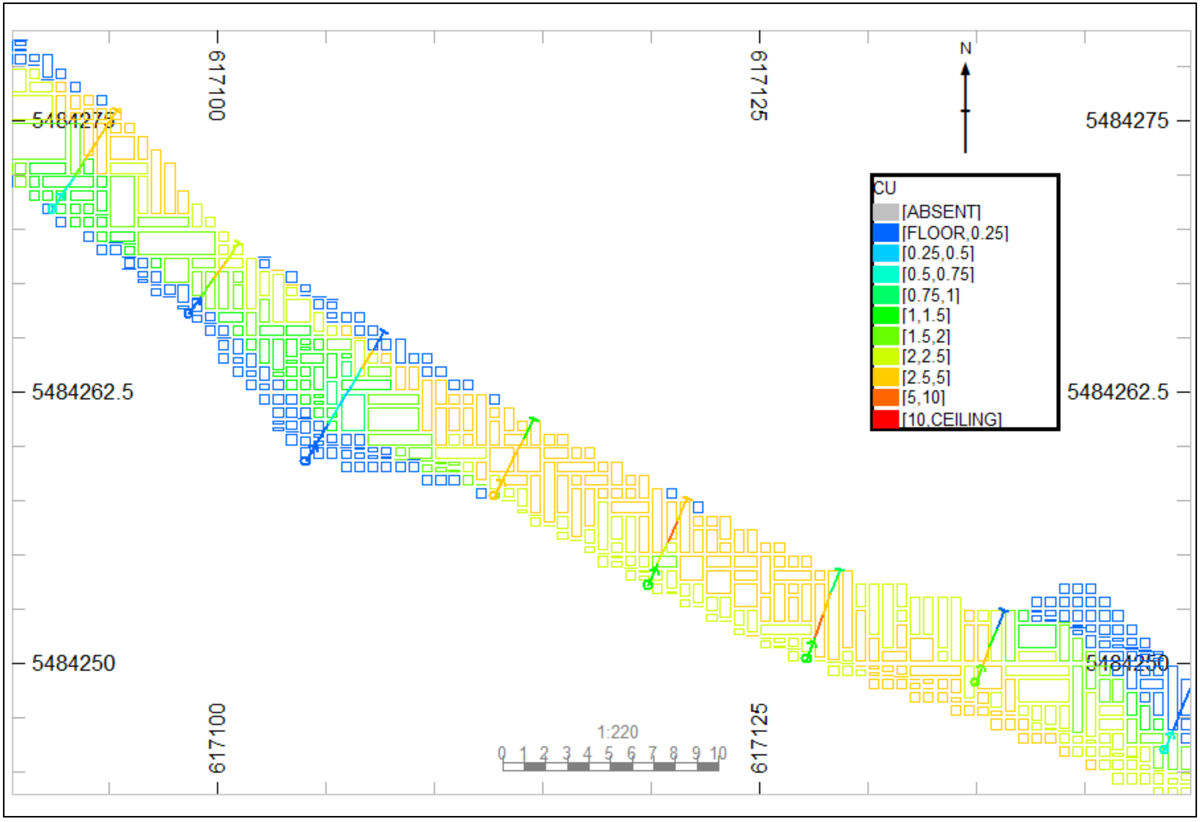


Figure 14.14 Comparison of sample assay grades to block interpolated grades (2)



14.3.9 Mineral Resource classification

The mineral resource confidence classification of the Bul River mine resource estimate has incorporated several factors, such as confidence in the accuracy of the drillhole data, availability of specific gravity measurements, level of geologic interpretation, geologic continuity, data density, spatial grade continuity and estimation quality. These classification categories meet CIM definitions for classification of mineral resources.

The portion of the resource model where there was sufficient confidence in the estimate was classified as Indicated and the other areas the resource is classified as Inferred. The Inferred classification is seen in Table 14.1. The Indicated classification is seen in Table 14.2.

The cut-off grade determination used the following parameters for establishing the CuEq or copper equivalent grade. These were the similar to the parameters utilized in the RPA march 30, 2012 report.

- Metallurgical recoveries = 90% copper, 90% silver, 70% gold (RPA = 65%)
- Copper price = US$3.50/lb
- Silver price = US$26.00/oz
- Gold price = US$1,500/oz
- Exchange rate = US$1.00 to C$1.00

14.3.10 Mineral Resource reporting

Mineral Resources are reported at Bul River in Table 14.1 to Table 14.2. Tonnes and grade are reported above a range of cut-offs grades. No detailed economic analysis has been made to determine the economic cut-off that will ultimately be applied to the Bul River mine deposit.

15 Mineral Reserve estimates

There are no Mineral Reserves at GBRM at this time.

16 Mining methods

There is no relevant data for this section.

17 Recovery methods

There is no relevant data for this section.

18 Project infrastructure

There is no relevant data for this section.

19 Market studies and contracts

There is no relevant data for this section.

20 Environmental studies, permitting, and social or community impact

20.1 Regulatory Framework

The Bul River Gallowai Mine is currently permitted under a BC Mines Act Ministry of Mines (MEM) Permit M-33, issued on August 9, 1979, which authorizes production of ore up to 75,000 tpa. The last revision of the Permit was dated July 22, 2005. Under this authorization, operation of the existing Process Plant or deposition of process tailings on site is not allowed.

Any increase in production, or operating proposal that would include utilization of the Process Plant or depositing of tailing materials on site, would require an amendment to the MEM operating permit and is referred to in this document as the "Bul River Mine Restart", or simply "the project".

The project would not likely fall within the category of a "reviewable project" of the British Columbia Environmental Assessment Act (BCEAA), administered by the BC Environmental Assessment Office (BCEAO), and should not trigger the Canadian Environmental Assessment Act (CEAA).

The project is not likely to trigger any of the foreseeable triggers of the BCEAA or CEAA, and would likely proceed on the basis of an expansion to an existing facility under the Mines Act of BC.

Other requirements of Provincial and Federal Acts and Regulations will also apply, depending upon final design components. An amendment of the existing Waste Management Permit under the Environmental Management Act for approval to deposit tailings and to operate the Processing Plant will be required.

20.1.1 Provincial Processes

The cost of preparing the Mines Act and Environmental Management Act Applications, including the cost of background studies and mitigation planning, is estimated to be approximately $370,000.

A significant aspect of permit applications for the project will include the need for amendments to an acceptable mine and reclaimation plan, an environmental management system, a sediment control and water management plan and a mine abandonment plan. Other specific environmental plans may include fish habitat mitigation, wildlife habitat mitigation, access management, selenium management, special waste management, and others. Cost and time for major environmental plans are included in the cost of the applications, however the cost of specific plans are not included, as the scope of their requirements have not been fully developed.

20.1.2 Federal Processes

Federal environmental assessments must be conducted prior to a project proceeding if: a federal authority is the proponent of the project, federal money is involved, the project involves land in which a federal authority has an interest, or some aspect of the project requires federal approval or authorization.

Although details of the project have not been fully developed, it seems likely that Federal Environmental Assessment will not be required.

20.2 Local and Regional Processes

20.2.1 Regional Land Use Planning

The Project is located on private land and adjacent to lands that have been zoned in the East Kootenay Land Use Plan for resource use and development, including mining (CORE 1994; Government British Columbia 1995). Under the Kootenay-Boundary Land Resource Management Plan Implementation Strategy (Kootenay Inter-Agency Management Committee 1997), the Project area is within the Integrated Land Use Zone designation, defined as an area where a range of land uses are accepted.

20.2.2 Local Land Use Planning

The existing Bul River Operations in the Galloway area are in a development area zoned for mining activities thus it is assumed that the Project would not require zoning modifications by local communities or the Regional District of East Kootenay.

Due to the proximity to the Bull River/Kootenay River and the Canada/US border, the high wildlife and fisheries values, and the public and commercial use of the area, it is likely that impact management and communication with potentially effected stakeholders will require significant time and resources.

Other licensed land use tenures in the Project area include mineral resources, forest resources, registered trap lines, guide outfitter areas, and commercial recreation areas. All current tenure holders would require consultation and possible accommodation as a result of predicted impacts to their operations.

Non-tenured land use in and adjacent to the project area include hiking, camping, hunting, fishing, skiing, and motorized recreation with ATVs and snowmobiles.

20.2.3 Environment

The recommended approach to Environmental issues for the MEM and MOE applications is:

- describe the history of, and existing conditions, under the headings below,
- describe the proposed changes to the existing operations,
- indicate possible key impacts, and then
- recommend mitigation, monitoring and closure plans.

Background studies, including several conducted over the history of the operation of the Bul River mine can be utilized to support MEM and MOE permit applications. Some specific studies may still be required, but are likely to be relatively minor in nature and would likely include the following:

20.2.4 Water

- The Bul River project is adjacent to the Bull River, which flows into the Kootenay River, then into the United States, approximately 65 kilometres to the south.
- The Bul River and its tributaries have characteristically clean waters, and is representative of other area streams with industrial resource extraction activities such as forest harvesting and mining.
- The proposed Bul River mine disturbances are not expected to have a significant impact on water resources.

20.2.5 Air

- The project area is active for resource extraction, and several roads in the area can contribute to air borne dust emissions. No permanent residents are in the immediate area, but recreational use is significant year round.
- Background air quality in the area is expected to be good.
- Mitigation measures to protect air quality include mine site traffic dust control, early reclamation of disturbed areas, and management of particulate emissions from the Processing Plant.

20.2.6 Fisheries

- The Bul River and its tributary streams contain several species of fish, including Bull Trout, Cutthroat Trout, and Mountain Whitefish. These species are important components of both public and commercial recreation in the project area.
- Significant resources would be required to study the baseline, projected impacts and mitigation measures needed to satisfy Permit application criteria.
- No significant impact to fisheries is anticipated from the proposed Bul River project with careful execution of mitigation and reclamation plans.

20.2.7 Wildlife

- The Bul River project area contains habitat for several species of wildlife including Black and Grizzly bears, wolves, coyotes, wolverine, marten, lynx, bobcat, moose, mule and whitetail deer, and elk and sheep. Numerous other species of birds, amphibians and smaller mammals are also likely present during some of all of their life cycles.
- The project area does not propose to disturb additional areas of ungulate winter range, although reclamation of the site after mining will address this value component.
- With early and well planned mitigation and reclamation of disturbances, it is anticipated that impacts to wildlife in the project area will not be significant.

20.2.8 Hydrology

- The Bul River and its tributaries near the project area are not directly affected by the Bul River project.
- As a result of planning and site management, it is anticipated that no significant impacts to the Bull River hydrology will occur.

20.2.9 Noise and Visuals

- The Bul River Valley in the area of the Bul River mine hosts a wide variety of visual landscapes, and is likely at a low background level for noise.
- Further studies on both noise and visual impacts will be required for any environmental impact assessments.
- Due to the relatively small size of the mining and spoil areas, and the temporary nature of the disturbances, the overall impact of noise and visuals is expected to be minimal, with mitigation measures.

20.2.10 Land and Resource Use

- The land uses as described above provide a strong framework for inclusion of identified features significant to the Bul River project.

- It is anticipated that the Bul River project will be compatible with the objectives of Regional and Local Land Use Plans.

20.2.11 Archaeological and Heritage Resources

- The Bul River valley has been utilized by Aboriginal peoples well before contact with Europeans, and is likely to contain archaeological and heritage resources.
- Detailed studies on the existing and potential resources within the project area may be required, although the project is not expected to impact areas not already disturbed by mining activities.

20.2.12 First Nations

An important component of project approval will be the requirement to consult, and accommodate if necessary, the impact to identified First Nations Communities in the Project area. Although consultation is the duty of government, certain aspects of the consultation process can, and will likely be, delegated to the Project proponents.

The Ktunaxa Nation has occupied the lands adjacent to, and including the Kootenay and Columbia rivers and the Arrow Lakes of BC for more than 10,000 years. The territory of the Ktunaxa Nation is roughly 70,000km^2 within the Kootenay region of southeastern BC and parts of Alberta, Montana, Washington and Idaho.

The Project lies within Ktunaxa traditional territory.

20.2.13 Consultation

The proponent's consultation should be focused on developing a full understanding of First Nation treaty rights, treaty lands, citizens, and treaty interests in the project area in order that the Province will have sufficient information to evaluate the relationship between the project and the rights and interests which arise under treaty.

The Bull River Area, where the Project is located, is on private land and is not included in the Treaty negotiation process presently under way with the Ktunaxa First Nation, British Columbia, and the Federal Government.

20.2.14 Engagement

Depending upon the specifics of the consultation process, and if any accommodation of impacts to the Ktunaxa First Nation is determined, a plan for engagement would be developed and implemented.

20.2.15 Social and Economic

The major focus of social impacts of the proposed Bull River Restart will be to re-employ approximately 100 employees laid off when the mine operation was suspended in 2011.

The direct and indirect impact of wages and related tax revenue will be significant for the East Kootenay, where job losses in the Forestry sector have been significant, especially in the rural areas like those near the project area.

The Public Consultation Policy Regulation in BC sets out standards for public consultation in the Mine Permitting process. Depending upon the level of public interest and the significance of the issues, public hearings may also be required.

The project proponent will be required to have Safety and Health Policies consistent with government requirements and at a standard that is high enough to attract and maintain a skilled workforce. A commitment to sustainability governance will also be an asset to maintaining the necessary social license to operate in the area with local community support.

Benefits of the project include direct and indirect employment, local spending by the mine operation, contractors and employees, and significant contributions to local, regional, provincial, and federal taxes.

A policy of local spending and local employment practices for area residents is recommended, as is a policy to attract, train and retain First Nations employees and contractors.

20.2.16 Stakeholder Identification, Engagement, and Consultation

Stakeholders with an interest in the project should be identified early in the permitting process, so that their input may be considered and applied where appropriate. It is recommended that engagement with identified stakeholders by project proponents be initiated as soon as possible.

Communication should begin as early as the exploration stage, and should increase accordingly, once a Final Project Description is generated. Meaningful dialogue with stakeholders including engagement and consultation will improve project timelines, reduce unnecessary costs, and enhance the probability of appropriate approvals.

21 Capital and operating costs

There is no relevant data for this section.

22 Economic analysis

There is no relevant data for this section.

23 Adjacent properties

The Stanfield Holdings comprise a group of occurrences close to GBRM that have been explored by Gallowai and Bul River. These occurrences include the Old Abe, the Copper King, the G Zone, the Trilby, the Empire Strathcona, and the Feldspar Deposit. Other unnamed prospects are also described by Mosher (2003). A summary of relevant adjacent property location and mineralisation styles is included in Table 23.1.

Table 23.1 Summary of adjacent property mineralisation styles and locations

Name	Location UTM	Minerals	Description of Property	Reference
Old Abe	5,485,500N 616,500E	Cu, Pb, Ag	Veins and Dykes in Aldridge Argillite, Trenches and Adits	1899 - MEMPR Annual Rep. p658
Central Adit	5,484,900N 617,050E	Cu, Ag	Veins and Dykes Adit	1898 - MEMPR Annual Rep. p1005
Dalton	5,484,500N 617,000E	Cu, Ag, Au	Veins in Shear Zones in Aldridge and Subcropping. Two Open Pits	1969 - MEMPR Geol. Exp & Mining. p348
Copper King	5,486,000N 619,500E	Cu, Pb, Ag	Veins and Dykes in Aldridge Argillite, Quartzite adits	1898 MEMPR p 1006 1925 MEMPR p228 1972 MEMPR p64
Trilby Group	5,484,600N 620,000E	Pb, Cu, Ag	Veins and Dykes in Aldridge Argillite	1898 MEMPR p 1005 1925 MEMPR p229
Eagle Plume	5,493,000N 608,800E	Cu, Au, AG	Vein in Kitchener Limestone and Siltite	1927 MEMPR p127
Bull River Iron	5,485,150N 622,550E	Fe	Hematite filled fissures in Kitchener Dolomites	1920 MMPR p117/118
Viking	5,480,600N 624,000E	Cu, Pb, Ag	Vein in Creston green Siltites	1977/78 Preliminary Map 34
Great Western	5,480,500N 624,900E	Pb, Zn	Vein in Aldridge Argillites	1926 MEMPR pp244-246
Dean	5,473,000N 628,800E	Cu, Ag	Vein in Aldridge Argillite	1898 MEMPR p1003
Empire Strathcona	5,473,600N 630,850E	Cu, Ag	Vein in Aldridge Argillite	1898 MEMPR p1002 1929 MEMPR p298 1930 p243/244
Burt	5,474,200N 632,500E	Pb, Zn, Ag, Au	Vein in Aldridge Argillites	1937 pg 42/42

In the immediate GBRM area there are at least two significant mineral occurrences, one at each end of the mine area, Old Abe in the west, and Copper King in the east. Chiang, 1973, notes that both prospects, as well as the mine, are related to two or three diorite dykes that strike east/west through the area. The dykes are dioritic in composition with up to 1% fine-grained pyrite and rare chalcopyrite. Contacts show a “chilled zone” in the diorite up to 3 m wide with included country rock xenoliths, while the sediments are altered to light grey, “flint-like”, and dense. There are two types of quartz-siderite veins associated with the dykes, one occurs within the dyke and has the same orientation as the dyke, while the second cross-cuts the dykes and extends into the country rock. The exact relationship between the dykes and the mineralization is unknown but could well provide direction to future exploration.

23.1 Old Abe

The Old Abe prospect lies approximately 1,000 m northwest and approximately 300 m in elevation above the GBRM portal. Placid drilled two holes but only minor sulphides were intersected (Mosher, 2003).

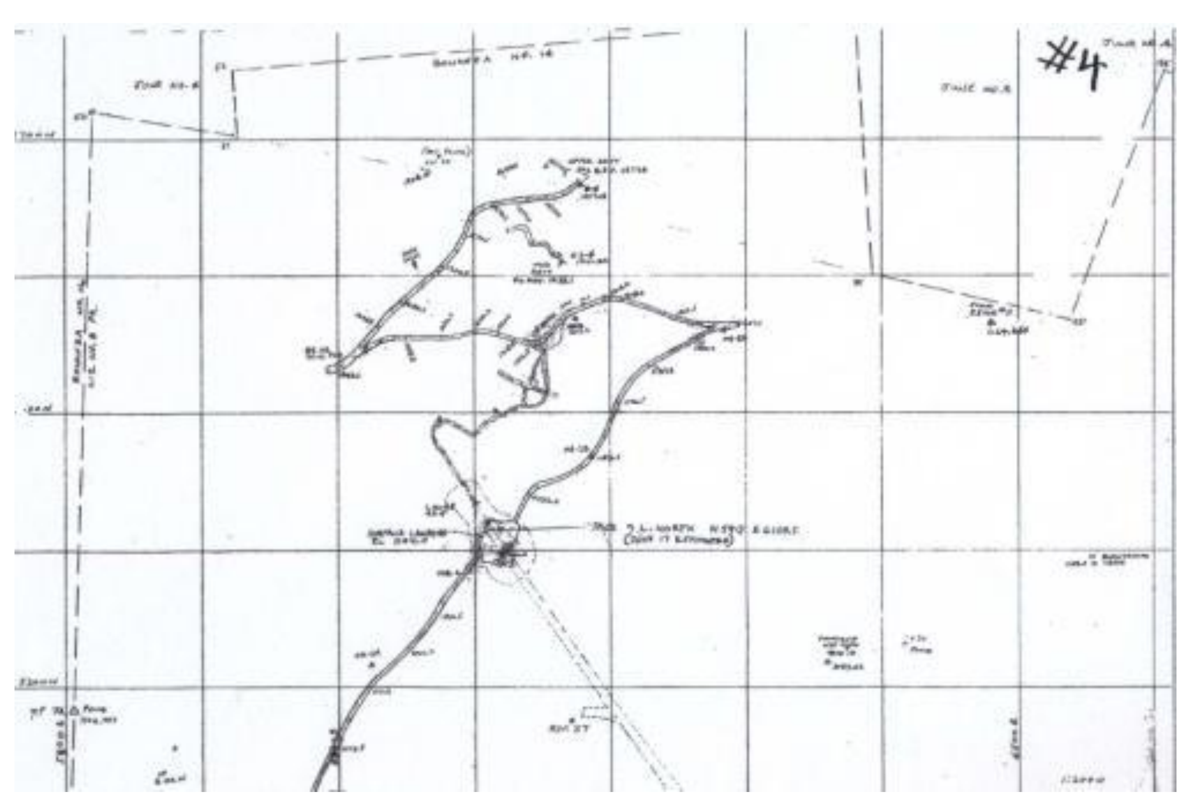
Chiang, 1973, notes that there are several quartz-siderite veins exposed between the lower and middle adits. The veins range in width from less than 0.1 m to 1.2 m, and are dominated by quartz with lesser siderite, with minor pyrite, pyrrhotite, galena, and chalcopyrite. Drillhole BR-112 failed to intercept the vein while BR-113 was far to the south of the veins. Chiang estimates that the veins are 300 m long, average 0.6 m wide, and grade 0.4% Cu. He concludes that there is no significant economic value in the prospect.

In 2012 MMTS visited the Old Abe portals in an attempt to observe the mineralization. Since the work by Chiang in 1972 the area has been extensively covered by the slumping of cover material and all three portals are inaccessible. Prospecting below the middle adit produced three grab samples that show the presence of mineralization (Table 23.2).

Table 23.2 Old Abe Grab Samples, 2012

Sample	Type	Sample Weight	Au (ppb)	Cu (%)	Ag (g/t)
4368	Rock	5.25	251	0.114	19
4369	Rock	2.71	33	0.025	28
4370	Rock	1.85	346	1.064	12

Figure 23.1 Old Abe Survey Map



The survey map shows the location of the three adits at Old Abe, with the lower adit directly above the 9 Level workings of the Bul River mine, as surveyed in August 1999. The map (Figure 23.2) shows the geology around the three adits at Old Abe (Chiang, 1973). Photos of the upper and middle adit are shown in Figure 23.3 and Figure 23.4). Drillhole, BR-113 is in the extreme southwest, while BR-112 is due west of the middle adit. The trace of the vein is shown to be nearly north/south. MMTS samples were collected along the road below the middle adit.

Figure 23.2 Old Abe Geology Map

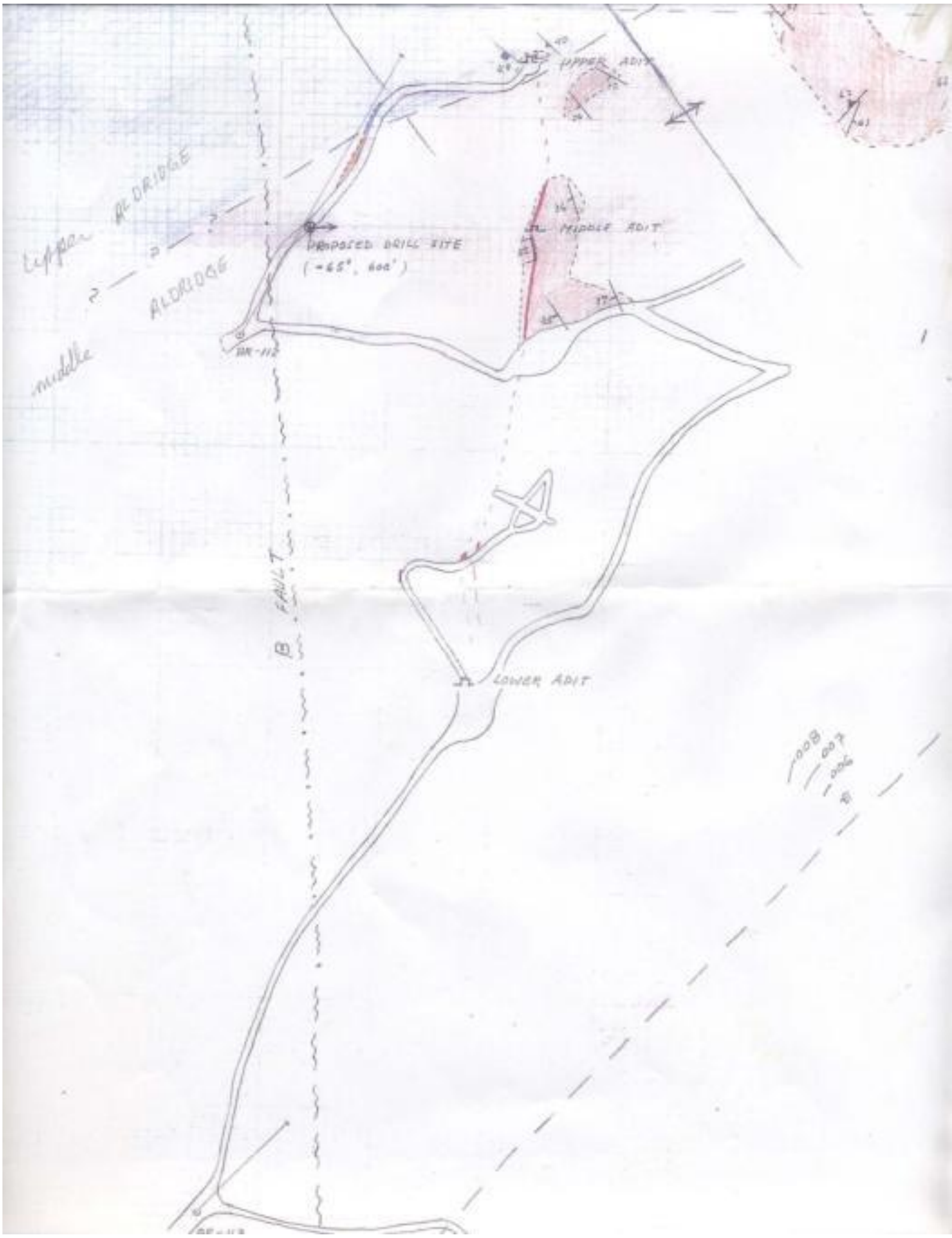


Figure 23.3 The upper portal at Old Abe

Figure 23.4 The middle portal at Old Abe

23.2 Copper King

The Copper King occurrence is located approximately 1,300 m east of the GBRM portal. The workings comprise two adits, the lower of which is no longer accessible. The upper adit is approximately 80 m in length and was excavated along a 30 m wide east trending diorite dyke. At approximately 15 m along the west-bearing adit, a 20 m long shaft was driven to surface (ten metres) and sunk ten metres below the level. A second shaft was sunk 15 m near the western extent of the adit and several small crosscuts were driven off the access. The adit terminated with a 30cm vein exposed that was mineralized with pyrrhotite and minor chalcopyrite and arsenopyrite (Mosher, 2003).

In 1979, 3,920 m of core (diameter unknown) was drilled by Bul River at Copper King (Morton, 2001a). No results were available to MMTS.

Jenks, 1972, reports that some 244 m of underground tunneling was completed between 1924 and 1926. The mineralization is associated with three east/west trending diorite dykes that dip between 70° north to vertical. The individual dykes range from 24 m to 43 m wide for an aggregate width of approximately 91 m. Jenks suggests that the dykes occupy an east/west fault system. In contact, the sediments up to 6 m of light green to buff coloured clay alteration. The diorite has up to a 5% pyrite content. The quartz-siderite veins occur within and along the margins of the dykes.

Chiang, 1973, reports that the vein at Copper King is exposed in an adit for 80 m and has a width of 0.3 – 0.6 m and a copper grade of 1.2%. The vein consists of 55% quartz, 25% siderite, 15% rock fragments, 2% galena, 2% pyrite, and less than 1% chalcopyrite. There are a few off-shoot veins containing mainly quartz and siderite with trace galena and chalcopyrite. The main vein has the same orientation as the diorite dyke which is almost vertical and strikes east/west.

In 2012 MMTS visited the Copper King prospect and collected three rock samples (Table 23.3) The samples indicate copper, silver, and gold values above background.

Table 23.3 Copper King – rock chip sample results

Sample	Type	Sample Description	Sample Weight (kg)	Au (ppb)	Cu (%)	Ag (g/t)
4365	Rock	Grabs from 3 m of vein length, 0.35 m vein width	0.86	351	1.957	26
4366	Rock	Channel across 0.65 m vein	2.48	477	0.851	22
4367	Rock	Grabs from 2 m of vein length	4.56	250	0.974	37

The survey map (Figure 23.5) shows the location of the main adit at Copper King. The entry is at the east end of the map and the various shafts to the west of the entry, as surveyed in August 1999. MMTS sample 4365 was collected near station 4, sample 4366 was from 2 m west of station 6, and sample 4367 was from near station 8. Photos of the adits are shown in Figure 23.7 and Figure 23.8.

Figure 23.5 Copper King survey map

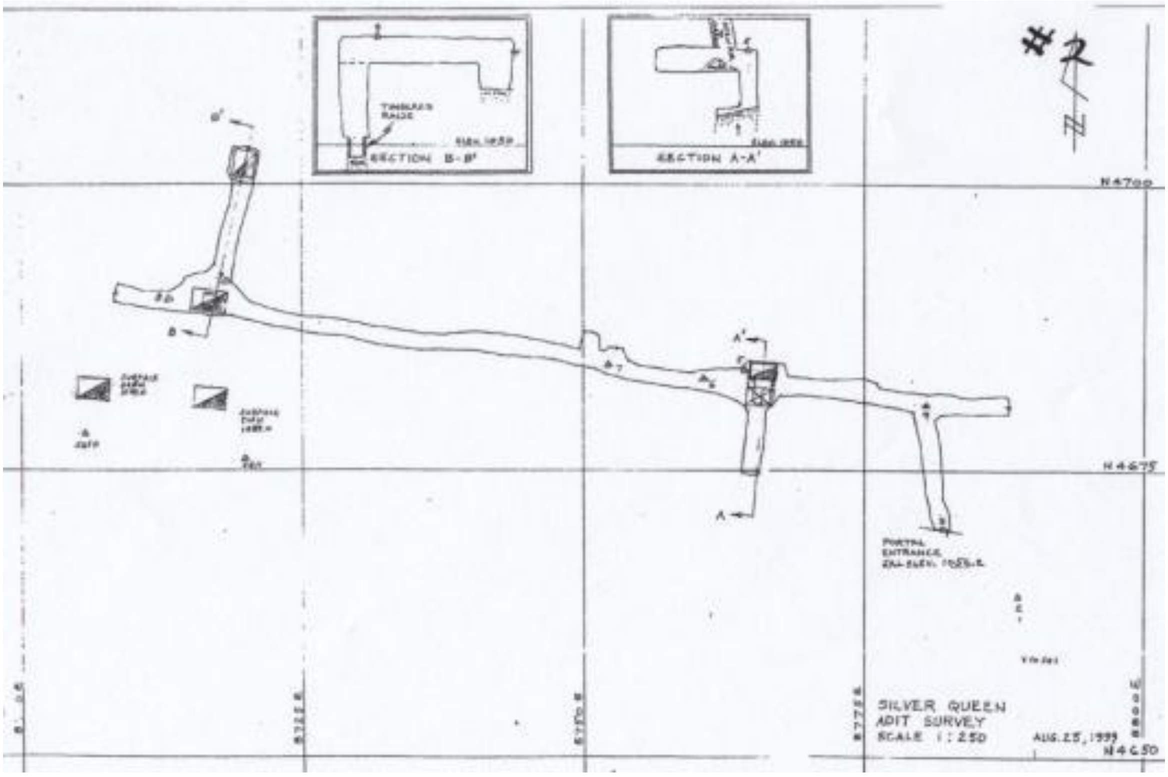


Figure 23.6 Copper King Geology Map

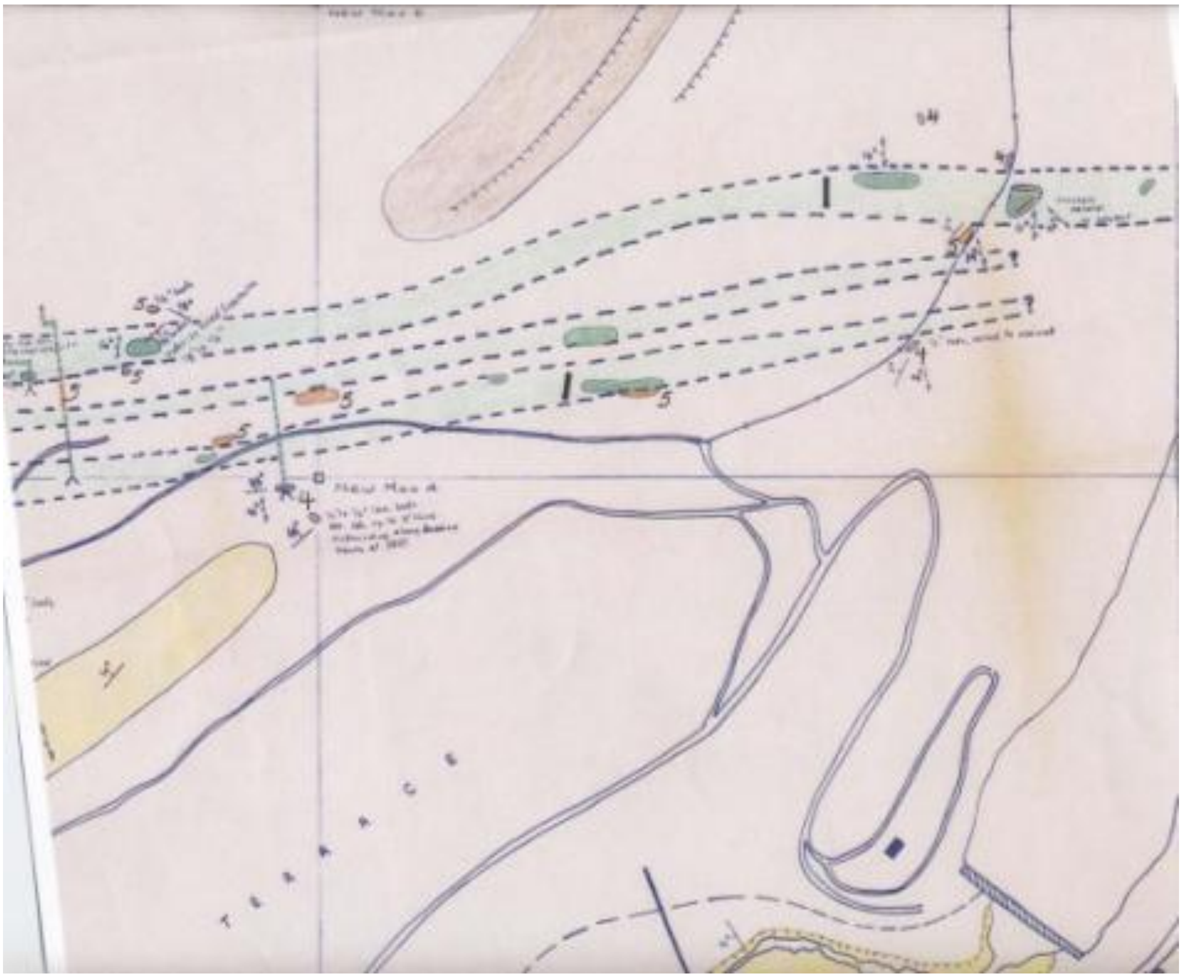


Figure 23.7 The main portal at Copper King

Figure 23.8 Vein in Copper King adit

23.3 Trilby

Located three kilometres east of the GBRM portal, the Trilby showing is located on the east side of the Bull River and hosts four short adits up to 50 m long. Mineralization consists of galena, pyrite, and chalcopyrite as blebs and pods with Moyie diorite dykes that crosscut Aldridge Formation shales and argillites. The east striking, vertically dipping dykes are parallel and host sulphides pods up to 38 cm wide (BC MINEFILE).

Field traverses were done over an area of anomalous magnetic susceptibility on these prospects. Grab and composite samples were taken from outcrop subjected to whole rock analysis and petrographic study. Bul River reported that samples of altered diorite from Copper King showed anomalous gold values and elevated Fe_2O_3, as defined by whole rock analysis, and was the likely cause of the magnetic anomaly. The Trilby traverse also yielded samples with elevated Fe_2O_3 and petrographic analysis indicated the presence of titanium and iron in rocks adjacent to the Trilby showings (de Souza, 1999).

23.4 G Zone

Located along Sand Creek Range, anomalous lead and silver occurrences were reported from surface showings and from an adit that mined into the G-Zone vein. Small raises driven from the adit were reported to have also intersected the vein that strikes northeast and varies in dip from vertical to 74° to the southeast (Mosher, 2003).

The G-Zone is hosted within a mid-Proterozoic cross fault that cuts Middle to Lower Aldridge argillite. The fault that hosts the G-Zone is one of many north-northeast- to east-northeast-trending, 70° east dipping cross faults that cut the locally flat-lying sediments. Some of these structures host high-grade silver-lead-zinc vein mineralization.

In 1997 and 1998, 335 m of adit rehabilitation was done and underground drilling (depth and diameter unknown) was conducted by Bul River (Morton, 2001a). The results of this work are unknown.

A drill program comprising four surface holes totalling, approximately 1,200 m is proposed for 2012 by Bul River and is discussed in more detail below.

23.5 Empire Strathcona

The Empire Strathcona adits lie southeast of GBRM near the town of Galloway, British Columbia. Mineralized quartz-siderite-calcite vein systems occur within shear zones that have been traced along strike for approximately 1,000 m. Mineralization consists of stringers and blebs of chalcopyrite occurring with minor pyrite and pyrrhotite up to two metres in thickness. The sediments dip approximately 45° to the northeast and the veins dip from vertical to 50° degrees to the southwest (BC MINFILE).

Four adits have been excavated. The first drifted approximately 40 m along the mineralized structure and a short crosscut exposes the footwall. 50 m below the collar of the adit, an open cut exposes the 1.8 m wide vein. The second adit, located approximately 40 m in elevation below the open cut, is no longer accessible due to ground failure. The mineralized vein, however, is exposed in an open pit and measures 1.4 m wide. Another adit lies approximately 30 m below the second and is also impassible due to ground failure. The fourth adit, which is approximately 150 m in elevation below the first, was driven approximately 70 m where it intersected the three metre wide vein. A six metre drift was driven north where an 11 m winze was sunk on the mineralized structure. A second drift, driven to the southeast approximately 12 m, leads to a small stope that mined the vein (Morton, 2001a).

23.6 Feldspar Deposit

The Feldspar deposit, located approximately five kilometres west of GBRM, is a feldspar porphyry intrusive measuring approximately 2,800 m by 800 m that has been identified by airborne (DIGHEM) geophysics.

In 1987, while testing the extent of the GBRM deposit, a vertical diamond drill hole intersected 480 m of porphyry material.

In 1992, a DIGHEM airborne geophysical program identified a large magnetic anomaly in the area (Masters, 1996). In 1994, surface mapping and two percussion drill holes were utilized to delineate the extent of the deposit. Chip samples from the drilling were taken every 0.61 m (two feet). Core samples and chip samples were composited, crushed, pulverized, and subjected to whole rock analysis. Eight core samples were submitted to Vancouver Petrographics for detailed description. The samples were found to be quartz-free, feldspar-rich intrusive rocks made up of euhedral phenocrysts of andesine in relatively coarse, granular/interlocking groundmass of feldspar and accessory hornblende and/or pyroxene. No nepheline or other feldspathoids were recognized. Three of the samples were classified as monzonite and five were classified as diorite. Minor disseminated magnetite and traces of pyrite were noted (Masters, 1994).

Twelve additional percussion holes were drilled in 1996 and sampled every 1.52 m. A total of 779 samples were logged for mineralogy, grain size proportion, and colour. Samples were cut and analyzed for iron content (Masters, 1997).

In 1996, additional petrographic studies were done at the Earth Mechanics Institute at the Colorado School of Mines that identified the deposit as monzonite-diorite in composition (de Souza, 1999). No criteria were given for the samples selected. Twelve percussion holes were drilled in 1996 (Anderson, 2000).

In 1997 and 1998, process testing was done in an attempt to remove the iron content (de Souza, 1999). RPA was not able to determine the outcome of these investigations.

In 1998, diamond drill holes replaced percussion holes and were concentrated on the western portion of the intrusive body. Holes were drilled using NQ (47.6 mm diameter) and BQ (36.4 mm diameter) size equipment. The core was visually classified into different alteration types and some core was tested for magnetic susceptibility using a KT-9 Kappameter (Anderson, 2000).Using visual classification and magnetic susceptibility readings, Bul River geologists were able to estimate the total iron content within specific alteration domains without waiting for chemical analysis.

23.7 Porcupine Hill

Porcupine Hill is located close to the main camp near Galloway, British Columbia. It was the target of a 1,059 m drill program in 1983. Results from this program are unknown.

23.8 Other Prospects

Mosher (2003) describes several unnamed trenches, pits, and an adit that exposes east-trending, vertically dipping quartz siderite veins up to 60cm in width that can be traced for several hundred metres. Located approximately 300 m northeast of the GBRM portal, the veining occurs within and along the contacts of the most northerly diorite dyke that crosses the GBRM property and contains locally semi-massive galena and minor chalcopyrite.

24 Other relevant data and information

There is no other relevant data and information to disclose.

25 Interpretation and conclusions

Snowden and MMTS make the following conclusions:

- The work completed by contractor MMTS has resulted in an acceptable drillhole database for use in a Mineral Resource estimate.
- The work by MMTS has followed industry standards for data and sampling QA\QC protocols.
- The drillcore logging, sampling, and security protocols were found to be acceptable and appropriate for this particular type of mineralization.
- Underground channel sampling, re-sampling of historic drill core, and bulk density measurement methodology was inspected during the site visit and found to be done to a reasonable standard and can be used for Resource Estimation.
- None of the assay results from the Munich University or AuRIC laboratories were used for either grade modelling or interpolation.
- The verified database consists of 269 diamond drillholes, 409 underground channel samples.
- In Snowden's opinion re-assaying of pulps from GBRM done my MMTS indicate reasonably good agreement and these assays are appropriate for use in a Mineral Resource estimate.

26 Recommendations

Snowden recommends GBRM begin a Preliminary Economic Assessment (PEA) of the GBRM. The work program outlined is recommended to gather the data required for a PEA.

This Technical Report is an update of the Resource Estimate reported in the RPA Technical Report dated March 30, 2012. Snowden recommends based on the comprehensive sampling, logging, and geologic interpretation and comparisons between the Resource Estimate in RPA report and the revised tonnages and grades reported in this updated Technical Report that GBRM proceed with a preliminary economic assessment. In Snowden's opinion the preliminary economic assessment is the next logical step in the development of GBRM. Snowden recommends GBRM begin work towards that end. The drilling programs outlined are proposed to gather the requisite samples and information required for a more detailed geometallurgical, geotechnical, and engineering analysis and design studies required for inclusion in a preliminary economic assessment. Upon successful completion of the preliminary economic assessment report a pre-feasibility study should be conducted.

- Bul River should continue with the improvements to the current database by organizing and compiling data following the documented procedures for re-logging and sampling un-sampled historic drillcore.
- Under the direction of Qualified Person, drill holes should be designed and drilled to provide material for metallurgical testing.
- Mineralogical test work should be conducted on selected samples to confirm and expand knowledge and understanding of the mineralization style.
- Specific Gravity measurements should continue to be taken with any additional drilling.
- A drilling program to consist of 24 diamond drillholes (4,200 m) for resource development and verification and to provide:
  - detailed information for geotechnical assessment
  - detailed geologic logging of host lithologies and structures
  - geometallurgical samples for detailed mineralogical analysis
- A drilling program to consist of 6 diamond drillholes (1,200 m) for metallurgical testing

The proposed budget for the work program outlined above is in Table 26.1.

Table 26.1 Bul River Mine Proposed Work Program Budget

Work Description	CDN$
4,200 m underground drilling (NQ) drilling at GBRM (24 holes)	300,000
2,400 m underground drilling (NQ) drilling at GBRM (six holes)	140,000
Assaying for proposed drilling programs	200,000
Detailed geologic mapping (1 geo @ 1,300/day x 30 days)	39,000
Drill program supervision (2 geo @ 800/day x 60 days)	96,000
Re-sample assaying of historic core for copper, silver and gold	250,000
G & A	77,500
Contingency (15%)	115,000
Preliminary economic assessment	250,000
Total	**1,467,500**

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28 Certificates

CERTIFICATE of QUALIFIED PERSON

(a) I, Walter Allan Dzick, Principal Consultant Applied Geosciences of Snowden Mining Industry Consultants Pty Ltd., 600-1090 West Pender St., Vancouver, British Columbia Canada, do hereby certify that:

(b) I am the co-author of the technical report titled Gallowai Bul River Technical Report and dated December 13, 2012 (the 'Technical Report') prepared for Bul River Mineral Corp. and Gallowai Metal Mining Corp.

(c) I graduated with an B.Sc. Geology New Mexico State University in 1978, MBA University of Nevada Reno 2007.

I am a CPG #11458 with membership in AIPG, AusIMM, and SME.

I have worked as a geologist continuously for a total of 30 years since my graduation from university.

I have read the definition of 'qualified person' set out in National Instrument 43-101 ('the Instrument') and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements of a 'qualified person' for the purposes of the Instrument. I have been involved in mining and resource evaluation consulting practice for 12 years.

(d) I have made a current visit to the Gallowai Bul River Mine from July 27, 2012 to July 28, 2012. I am responsible for the preparation of sections 1, 2, 3, 11, 12, 14, 24, 25, 26 and 27 of the Technical Report.

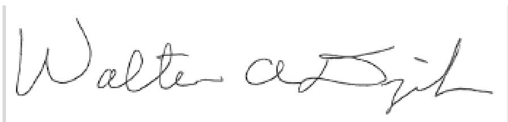
(f) I am independent of Bul River Mineral Corp as defined in section 1.4 of the Instrument.

(g) I have not had prior involvement with the property that is the subject of the Technical Report.

(h) I have read the Instrument and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

(i) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Vancouver BC this March 20, 2013.



Walter A Dzick

CERTIFICATE of QUALIFIED PERSON

I, Abolfazl Ghayemghamian, Senior Consultant of Snowden Mining Industry Consultants Pty Ltd., 600 - 1090 West Pender St., Vancouver, British Columbia, Canada, do hereby certify that:

I am a graduate of the Tehran University with a BSc. in Mining Exploration Engineering in 1992. I obtained a MSc. in Mining Exploration Engineering from Tehran Polytechnic in 1995. I have practiced my profession continuously since 1993. From 1993 to 1995, I conducted regional exploration in Iran, from 1995 to 2001, I conduced mineral resource estimation on a variety of base and precious metals deposits of hydrothermal, sedimentary, and magmatic origins. From

2001 to 2004, I was a Senior Exploration Geologist responsible for the resource estimation and exploration projects for base and precious metals in different part of Iran. In 2004, I immigrated to Canada and worked as resource estimation geologist on precious and base metal on epithermal, Archean gold deposit in Canada, and Russia. Since 2006, I am a Senior Resource Geologist and authored and co-authored several independent technical reports on several base and precious metals exploration and mining projects in Canada, Peru, Turkey, USA and Mexico;

I am a professional geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia (License# 31585).

I certify that by virtue of my education, affiliation to a professional association and past relevant work experience, that I fulfill the requirements of a “qualified person” for reviewing this report as defined by and for the purposes of National Instrument 43-101.

I have not personally inspected the subject property and surrounding areas.

I reviewed section 14 of the Technical Report.

I am, as a “qualified person”, independent of the issuer as described in Section 1.5 of National Instrument 43-101;

I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Bul River Mineral Corp Property or the securities of Bul River Mineral Corp.

Dated at Vancouver, British Columbia this 20th day of March, 2013.

Abolfazl Ghayemghamian, P.Geo

Senior Resource Geologist

CERTIFICATE & DATE – ROBERT J. MORRIS

I, Robert J. Morris, M.Sc., P.Geo, of 9053 Hwy 3W, Fernie B.C., V0B 1M1, do hereby certify that:

1. I am a Principal Geologist with Moose Mountain Technical Services.
2. I graduated with a Bachelor of Science degree in geology from the University of B.C. in 1973 and a Master of Science degree in geology from Queen's University in 1978.
3. I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta. (#75480), and Geoscientists of British Columbia (#18301).
4. I have worked as a Geologist for 39 years since my graduation from university. My experience in gold-copper exploration and mining includes work on Galore Creek, Kemess North, Huckleberry, QB in Chile, and Petaquilla in Panama.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional associations (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I have prepared and am responsible for sections 4, 5, 6, 7, 8, 9, 10, 13 and 23 of the Technical Report titled "Gallowai-Bul River Technical Report" with the effective date of 13 December 2013.
7. I made a personal inspection of the property on multiple days of the summer of 2012.
8. I have prior involvement with the property as a QP for the report " TECHNICAL REPORT ON THE GALLOWAI BUL RIVER MINENEAR CRANBROOK, BRITISH COLUMBIA, CANADA" by RPA dated 30 March 2012.
9. To the best of my knowledge, information and belief at the effective date, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
10. I am independent of the issuer, as specified in Section 1.5 of NI 43-101.
11. I have read NI 43-101, and the Technical Report has been prepared in compliance with that instrument.

Dated this 20th day of March 2013.

"Signed and sealed"

Signature of Qualified Person

Robert J. Morris, M.Sc., P.Geo.

Print Name of Qualified Person

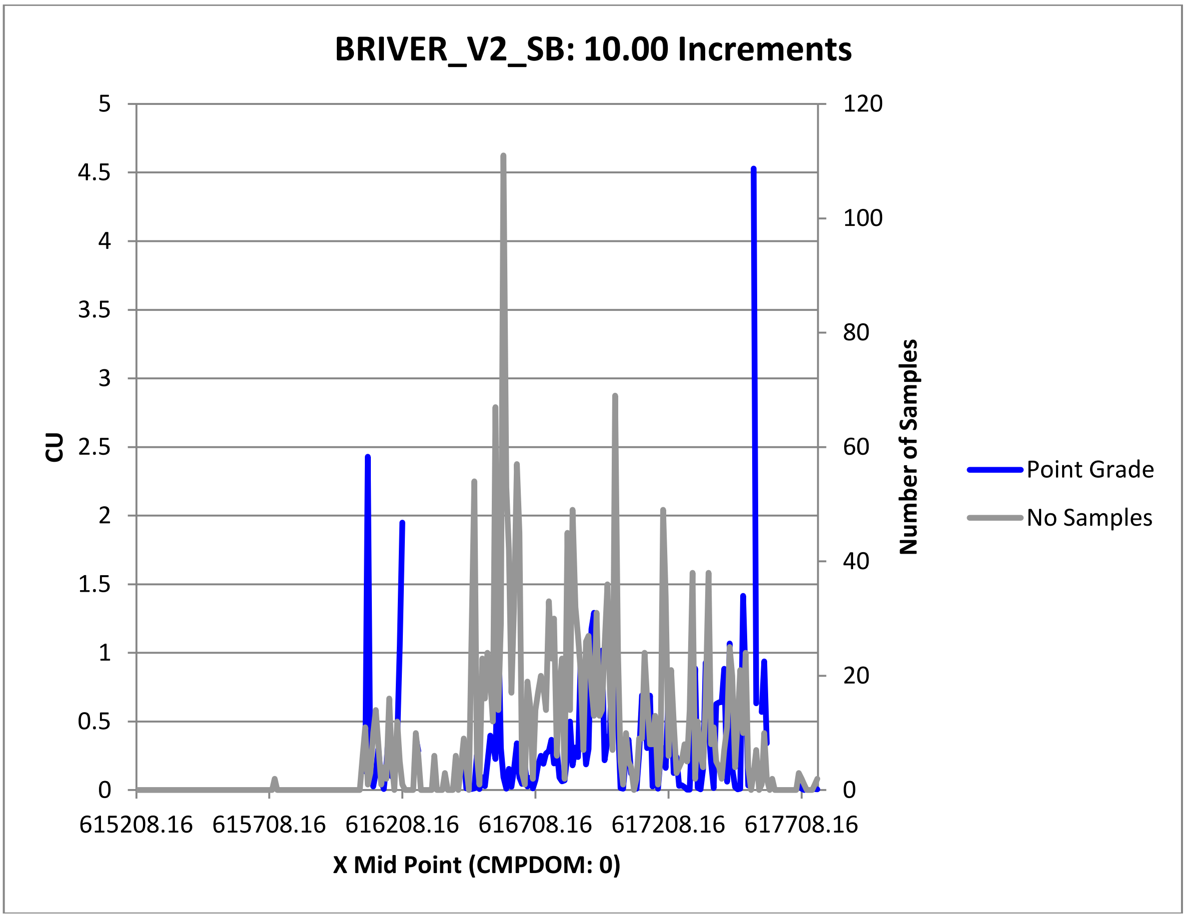
Appendix A GALLOWAI BUL RIVER MINE LAND TENURE AND OTHER LAND TENURES IN THE STANFIELD HOLDINGS

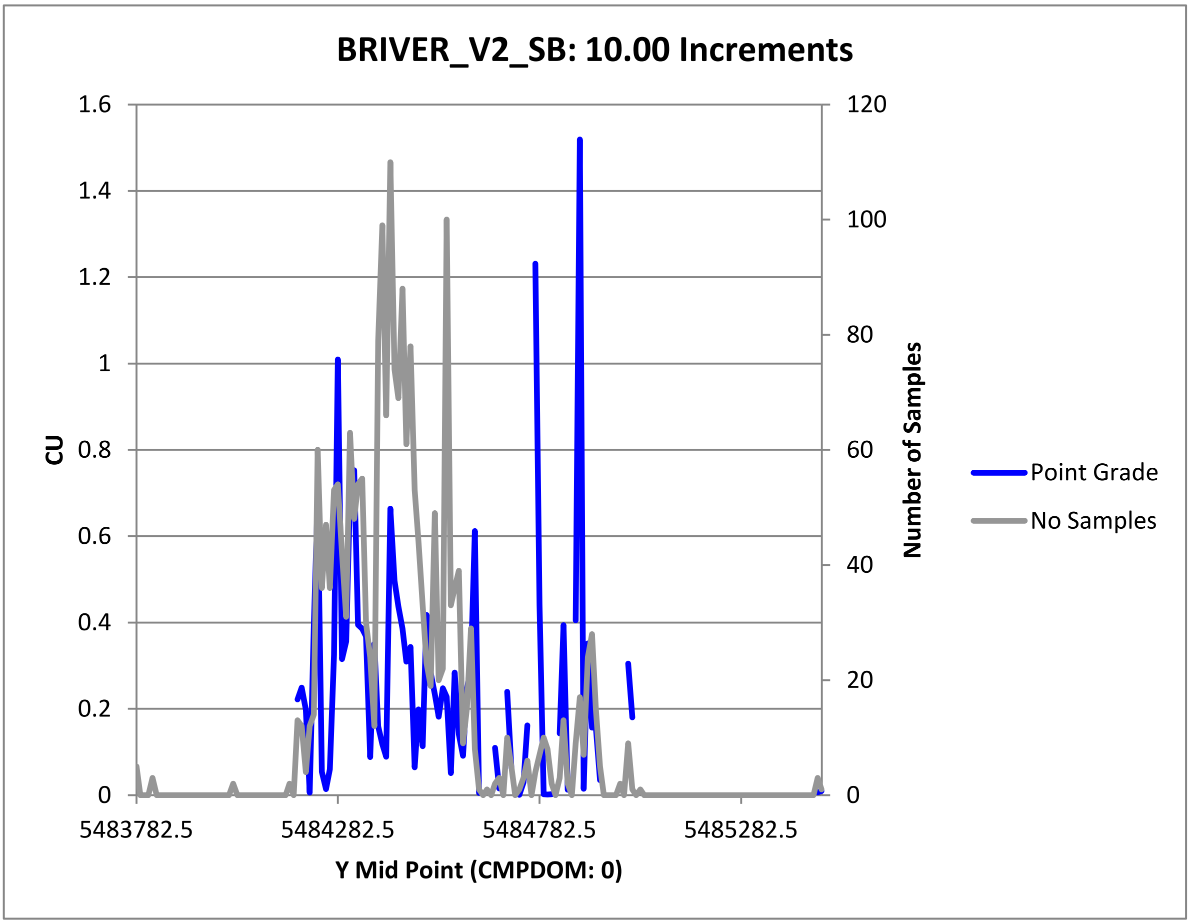
Tenure								
Tenure Number	Claim Name	Owner	Tenure Type	Sub Type	Map Number	Issue Date	Expiry Date	Area (ha)
212493		252011 (100%)	Mineral	Lease	082G043	21-Feb-72	21-Feb-13	486.03
515055		252011 (100%)	Mineral	Claim	082G	23-Jun-05	20-Oct-13	1028.13
515057		252011 (100%)	Mineral	Claim	082G	23-Jun-05	09-Nov-12	1238.01
515066	MINE SITE	252011 (100%)	Mineral	Claim	082G	23-Jun-05	23-Jun-15	251.78

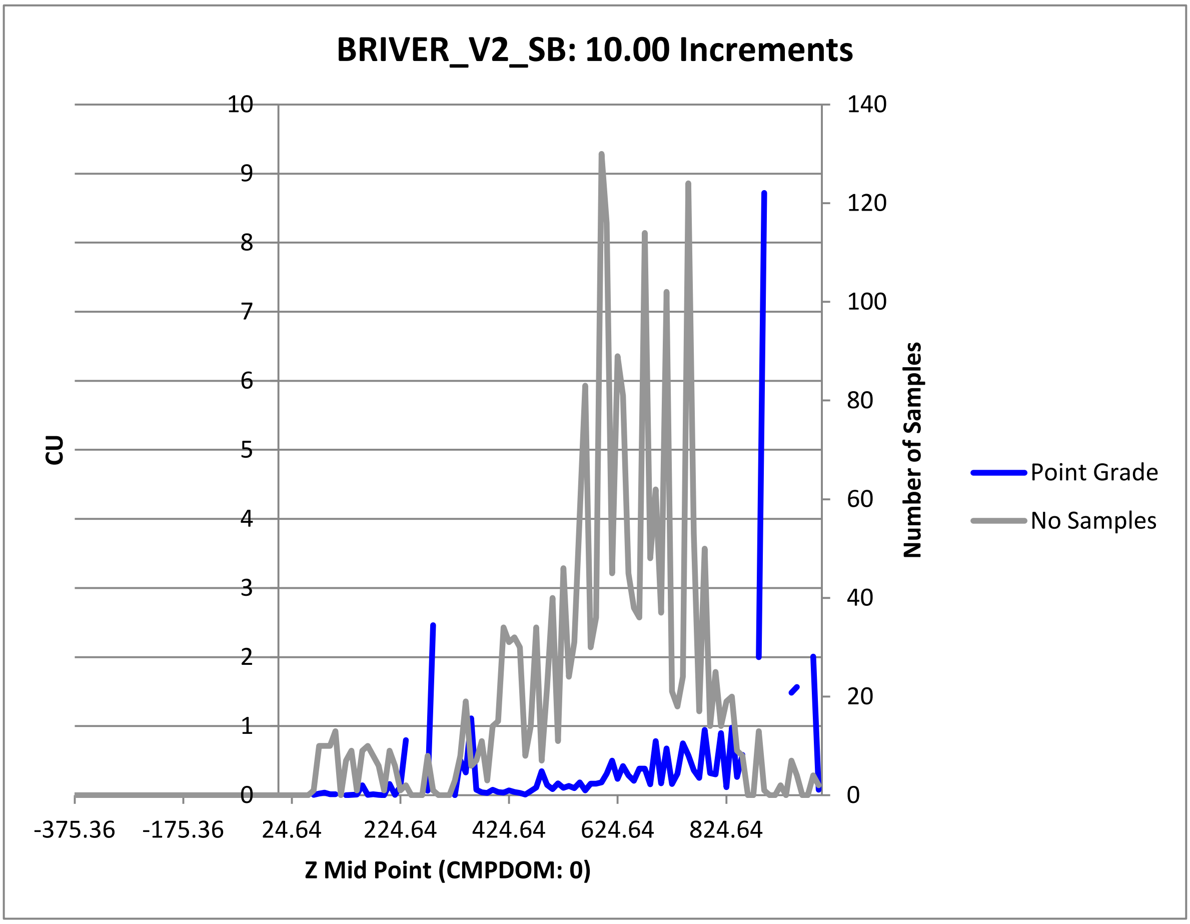
Tenure							
Tenure Number	Owner	Tenure Type	Sub Type	Map Number	Issue Date	Expiry Date	Area (ha)
212492	252011 (100%)	Mineral	Lease	082G054	1971/nov/23	2012/nov/23	14.4
515058	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/aug/04	881.53
515071	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	419.61
515072	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	503.37
515073	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	629.46
515074	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/dec/22	475.23
515075	520111 (100%)	Mineral	Claim	082G	2005/jun/23	2012/apr/18	524.51
515077	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/aug/04	629.61
515080	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/apr/18	587.23
515081	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/apr/18	587.04
515082	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/apr/18	628.75
515083	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/dec/22	659.14
515085	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	524.15
515086	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/apr/18	502.8
515087	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/jun/04	586.87
515088	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/may/16	419
515089	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	503.01
515090	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	419.16
515091	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	502.82
515092	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	419.01
515093	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/jun/23	335.49
515094	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/jun/23	251.69
515105	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/nov/09	503.3
515108	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/dec/22	628.88
515112	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	502.9
515113	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/nov/09	419.39
515115	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	524.03
515119	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	419.05
515122	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	502.68
515132	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/nov/09	629.33
515137	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2012/dec/22	503.26
515140	252011 (100%)	Mineral	Claim	082G	2005/jun/23	2013/dec/22	628.83
515164	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/28	524.65
515166	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	545.86
515167	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	735.08
515168	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	588.29
515170	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	524.87
515171	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.06
515172	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.2
515174	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	504.43
515175	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	504.62
515176	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	609.94
515177	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	736.42
515178	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/05	419.88
515179	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/05	525.04
515180	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/05	420.19
515181	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.37
515182	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.54
515183	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	525.87
515184	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.85
515185	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2013/dec/22	502.86
515186	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2013/dec/22	502.68
515187	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/nov/09	524.43
515188	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/28	629.58
515189	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2013/dec/22	419.39
515190	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2013/dec/22	524.03
515191	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2013/dec/22	419.07
515192	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2013/dec/22	418.92
515198	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/05	503.85
515200	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/05	630.05
515201	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/05	504.23
515203	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	504.43
515204	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.53
515205	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	505.19
515206	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	505.32
515207	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	631.86
515208	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	525.86
515210	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.85
515212	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	420.99
515214	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	421.1
515215	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	526.56
515217	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	631.9
515219	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	505.33
515220	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	631.43
515221	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/apr/18	504.95
515223	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jun/17	504.78
515224	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/24	609.72
515225	252011 (100%)	Mineral	Claim	082G	2005/jun/24	2012/jul/05	420.31
515320	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	420.16
515324	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	525
515327	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	419.85

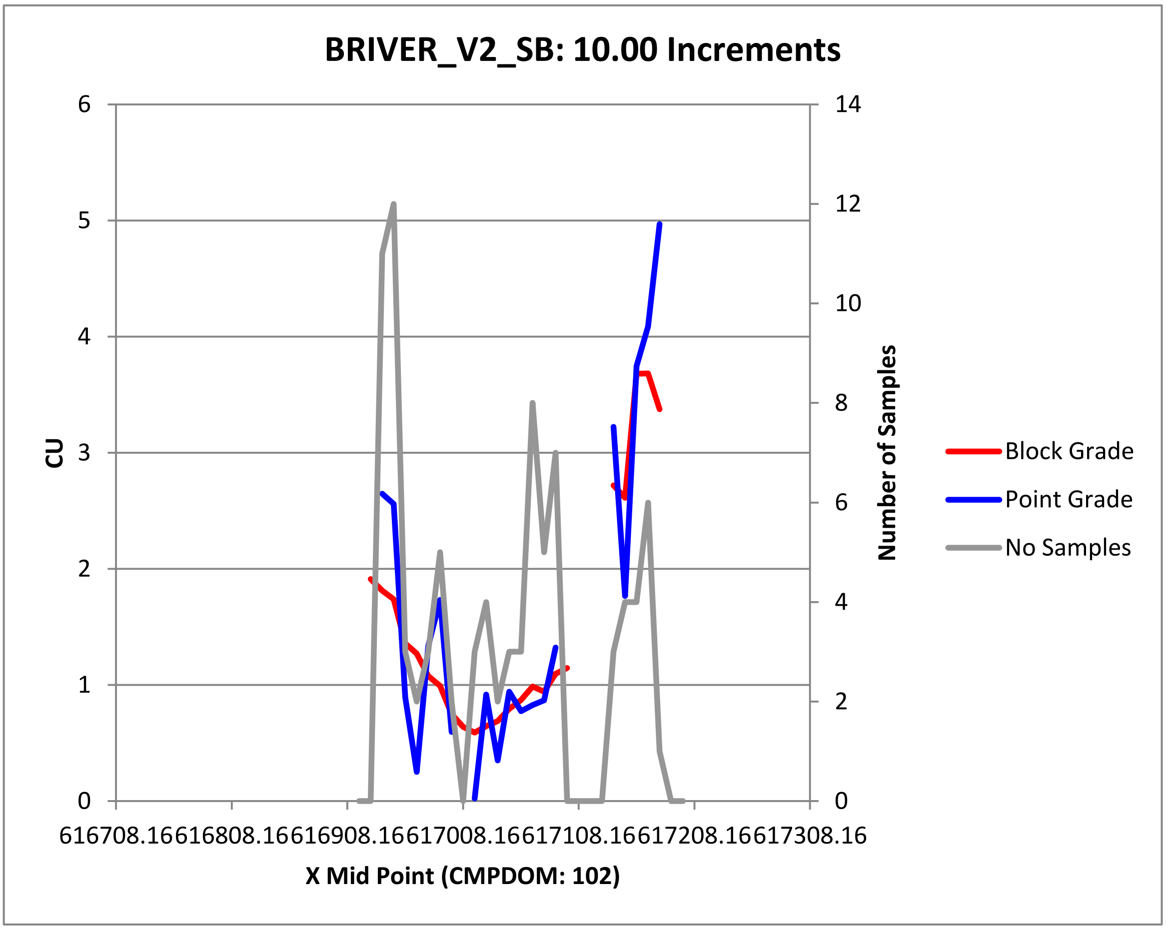
Tenure Number	Owner	Tenure Type	Sub Type	Map Number	Issue Date	Expiry Date	Area (ha)
515328	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	419.7
515337	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	526.58
515340	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	421.1
515341	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	526.17
515344	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	420.78
515345	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	420.64
515347	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	525.6
515348	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	420.31
515349	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	420.16
515350	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	525.01
515351	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	419.85
515352	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	419.7
515355	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	615.67
515356	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	632.54
515357	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	505.86
515359	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	505.69
515360	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	526.56
515361	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	421.09
515362	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2013/sep/30	526.18
515363	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/aug/11	420.78
515364	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	420.64
515365	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	525.61
515366	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	420.31
515369	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	420.17
515370	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	525.01
515371	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	419.85
515372	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2013/jul/07	419.71
515373	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2013/jul/11	503.65
515378	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	503.82
515399	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/apr/18	505.85
515400	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	630.01
515401	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/07	504.2
515402	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	630.5
515403	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jun/17	504.61
515404	252011 (100%)	Mineral	Claim	082G	2005/jun/27	2012/jul/20	504.78
515462	252011 (100%)	Mineral	Claim	082G	2005/jun/28	2012/jul/13	504.94
515465	252011 (100%)	Mineral	Claim	082G	2005/jun/28	2012/aug/09	631.42
515469	252011 (100%)	Mineral	Claim	082G	2005/jun/28	2012/apr/18	421.4
515562	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/aug/09	505.31
515572	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/apr/18	526.55
515574	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/oct/05	505.68
515576	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/aug/11	505.51
515577	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/aug/02	547.44
515579	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2013/jul/29	420.96
515580	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/jun/14	525.47
515581	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/jul/16	420.55
515582	252011 (100%)	Mineral	Claim	082G	2005/jun/29	2012/jul/28	420.69
515674	252011 (100%)	Mineral	Claim	082G	2005/jun/30	2012/jul/28	420.82
515798	252011 (100%)	Mineral	Claim	082G	2005/jul/01	2012/jul/05	630.57
515799	252011 (100%)	Mineral	Claim	082G	2005/jul/01	2012/jul/16	504.66
515800	252011 (100%)	Mineral	Claim	082G	2005/jul/01	2012/jul/28	504.82
515801	252011 (100%)	Mineral	Claim	082G	2005/jul/01	2012/jul/28	504.99
515802	252011 (100%)	Mineral	Claim	082G	2005/jul/01	2012/jul/23	505.16
515803	252011 (100%)	Mineral	Claim	082G	2005/jul/01	2012/aug/02	631.66

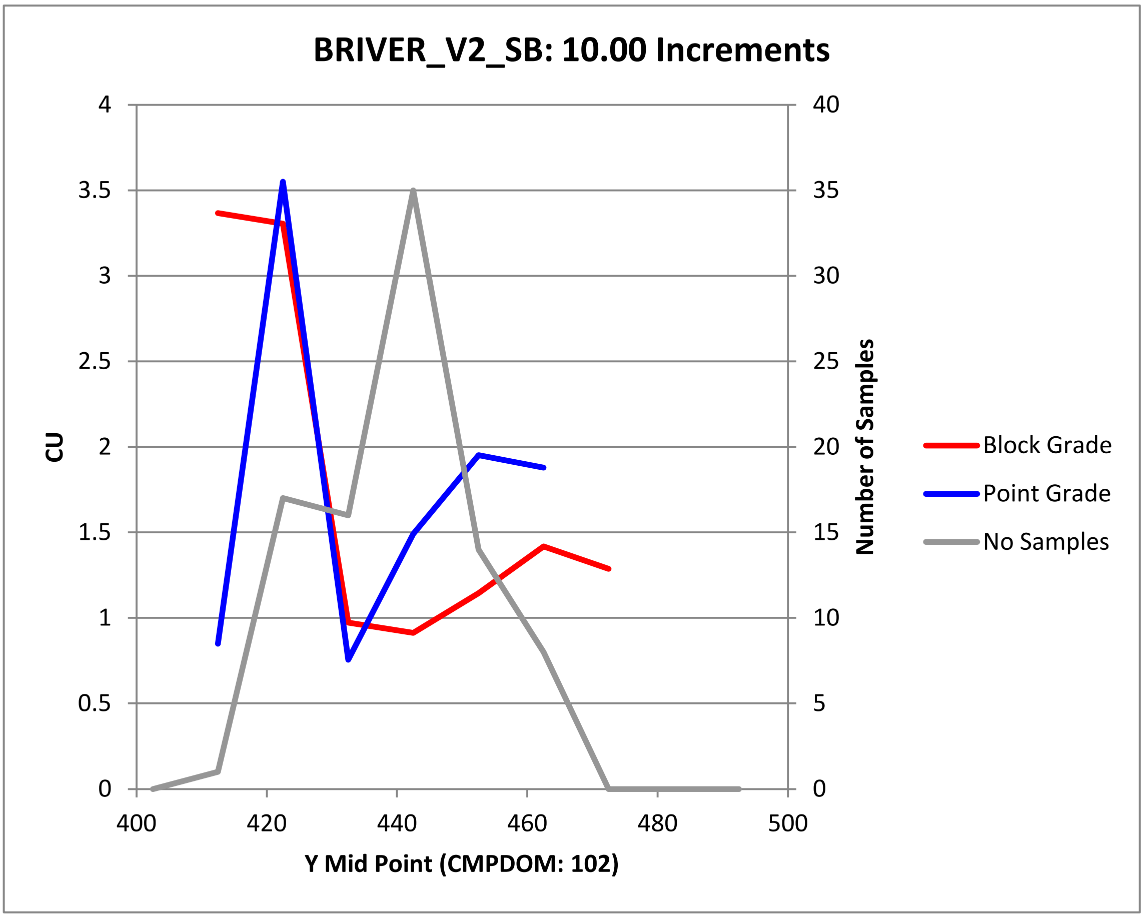
Appendix B Model Validation Slice Plots

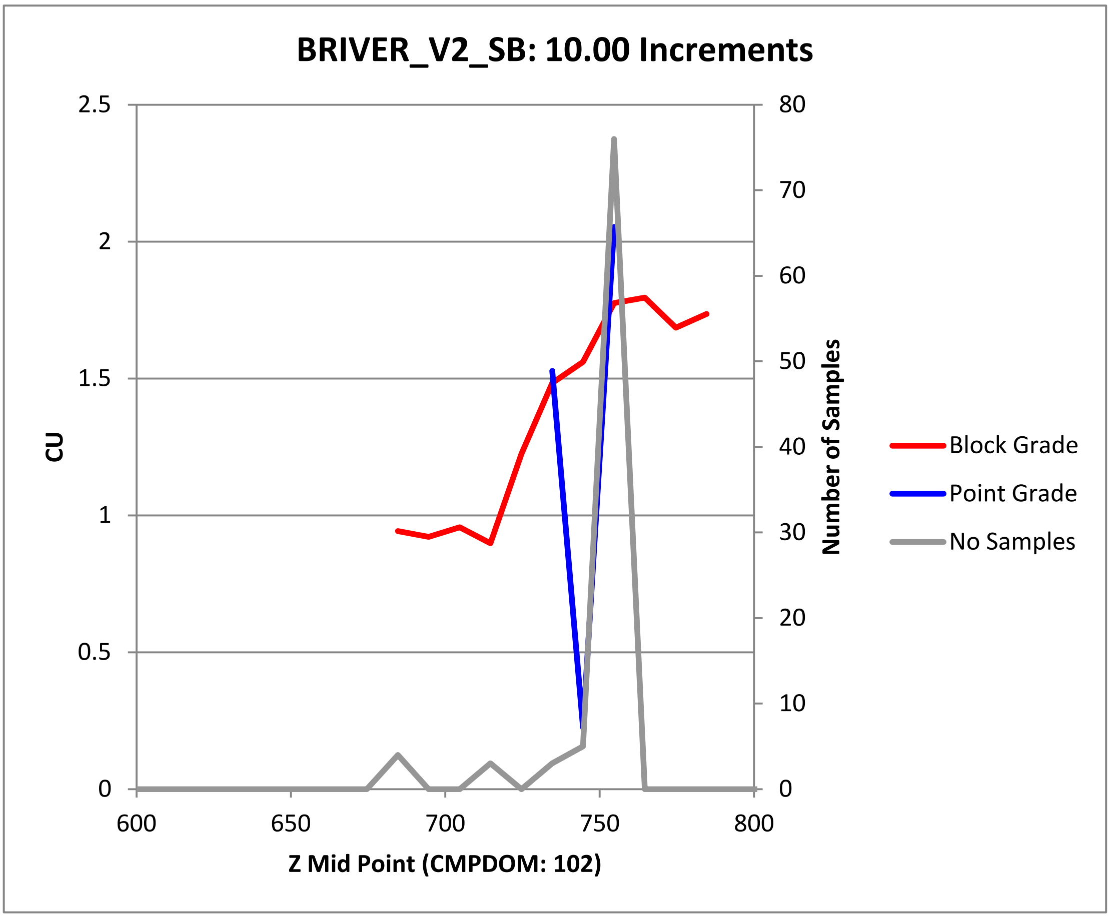

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
X Mid Point (CMPDOM: 0)
Point Grade
No Samples
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
120
100
80
60
40
20
0
615208.16
615708.16
616208.16
616708.16
617208.16
617708.16

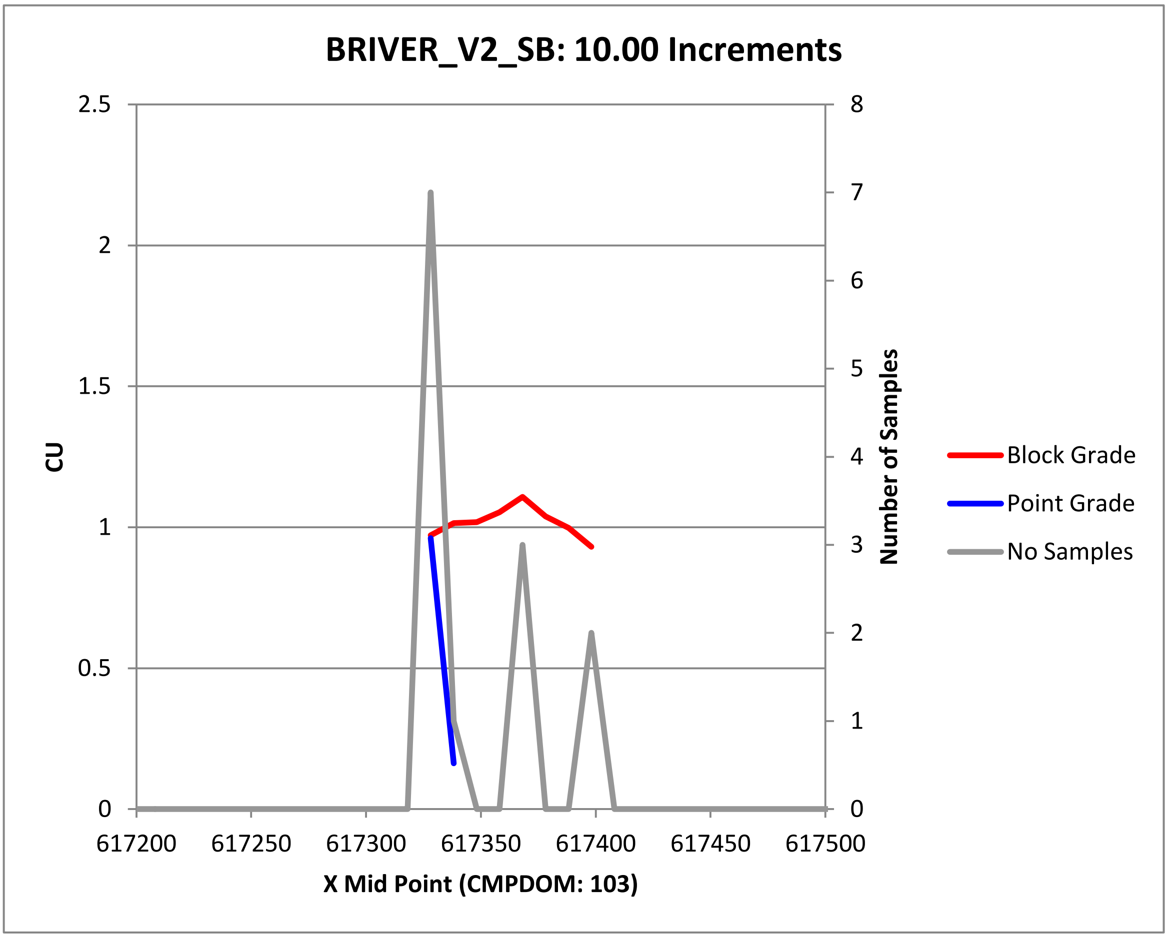

BRIVER_V2_SB: 10.00 Increments
CU
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
120
100
80
60
40
20
0
Number of Samples
5483782.5
5484282.5
5484782.5
5485282.5
Y Mid Point (CMPDOM: 0)
Point Grade
No Samples

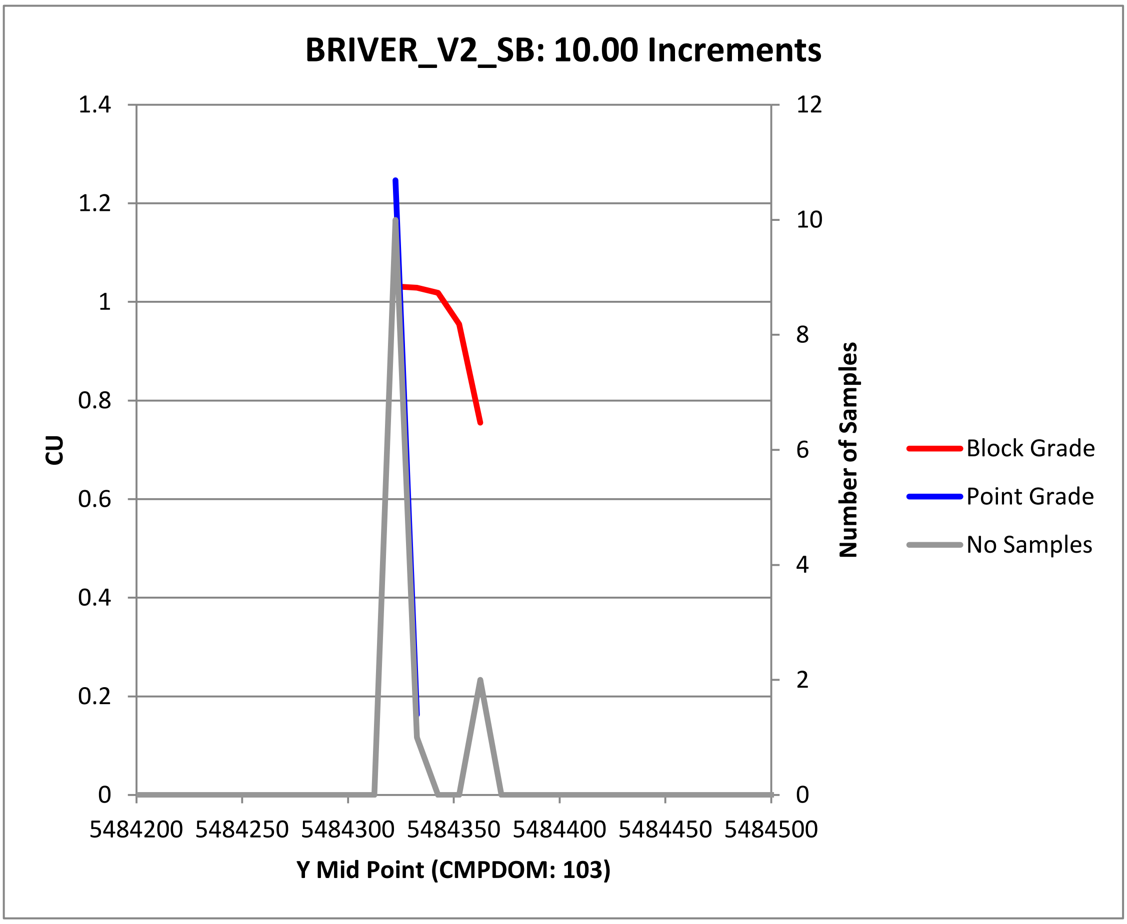

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
Z Mid Point (CMPDOM: 0)
Point Grade
No Samples
0
1
2
3
4
5
6
7
8
9
10
0
20
40
60
80
100
120
140
-375.36
-175.36
24.64
224.64
424.64
624.64
824.64

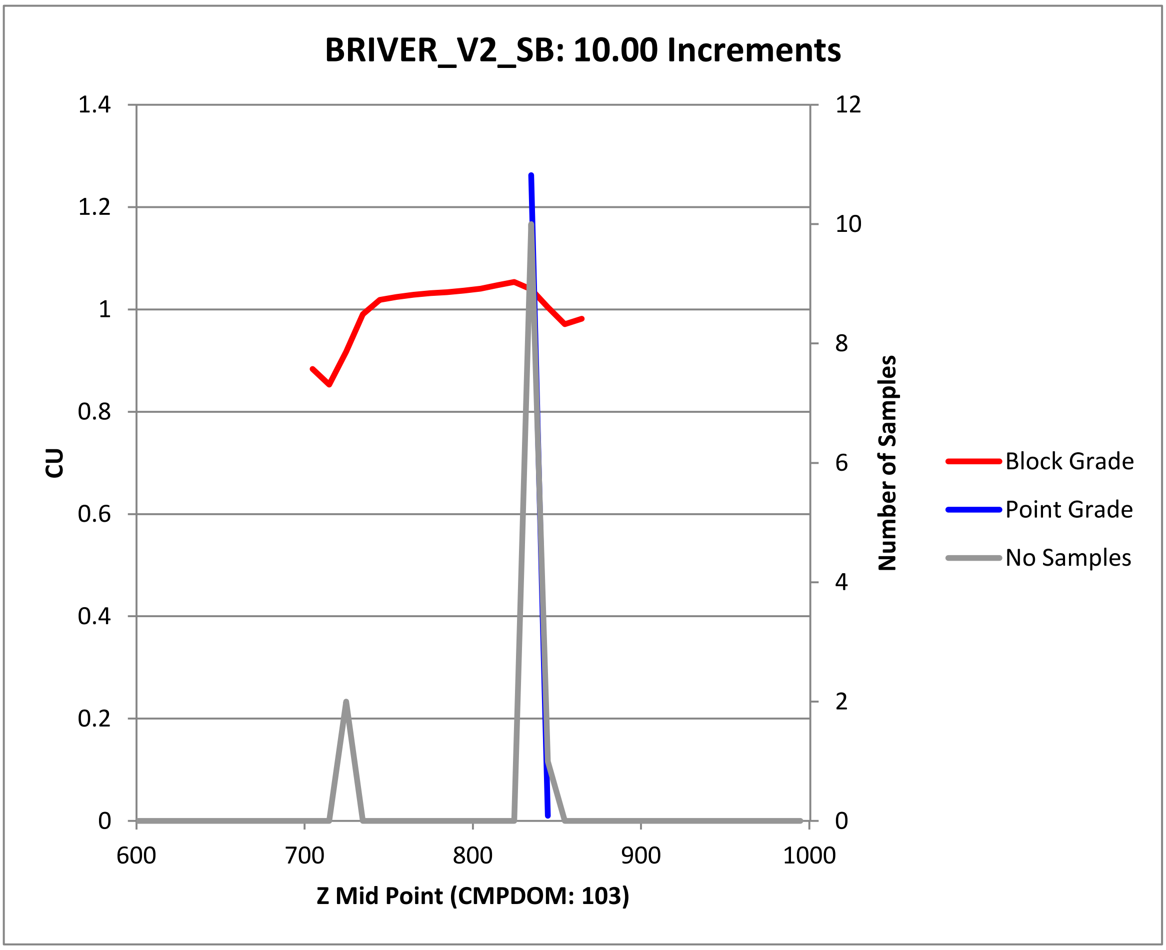

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
X Mid Point (CMPDOM: 102)
0
1
2
3
4
5
6
0
2
4
6
8
10
12
14
616708.16
616808.16
616908.16
617008.16
617108.16
617208.16
617308.16
Block Grade
Point Grade
No Samples

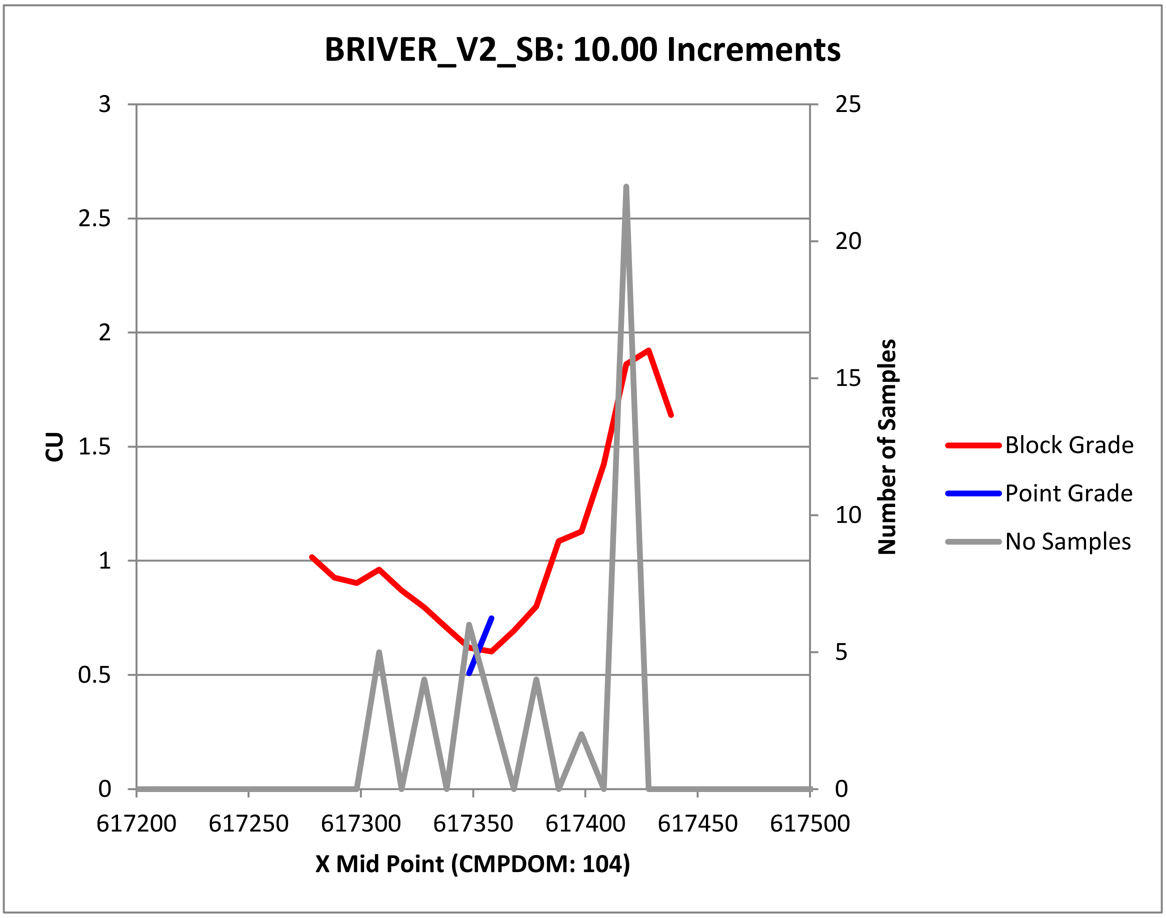

BRIVER_V2_SB: 10.00 Increments
CU
4
3.5
3
2.5
2
1.5
1
0.5
0
40
35
30
25
20
15
10
5
0
Number of Samples
400
420
440
460
480
500
Y Mid Point (CMPDOM: 102)
Block Grade
Point Grade
No Samples

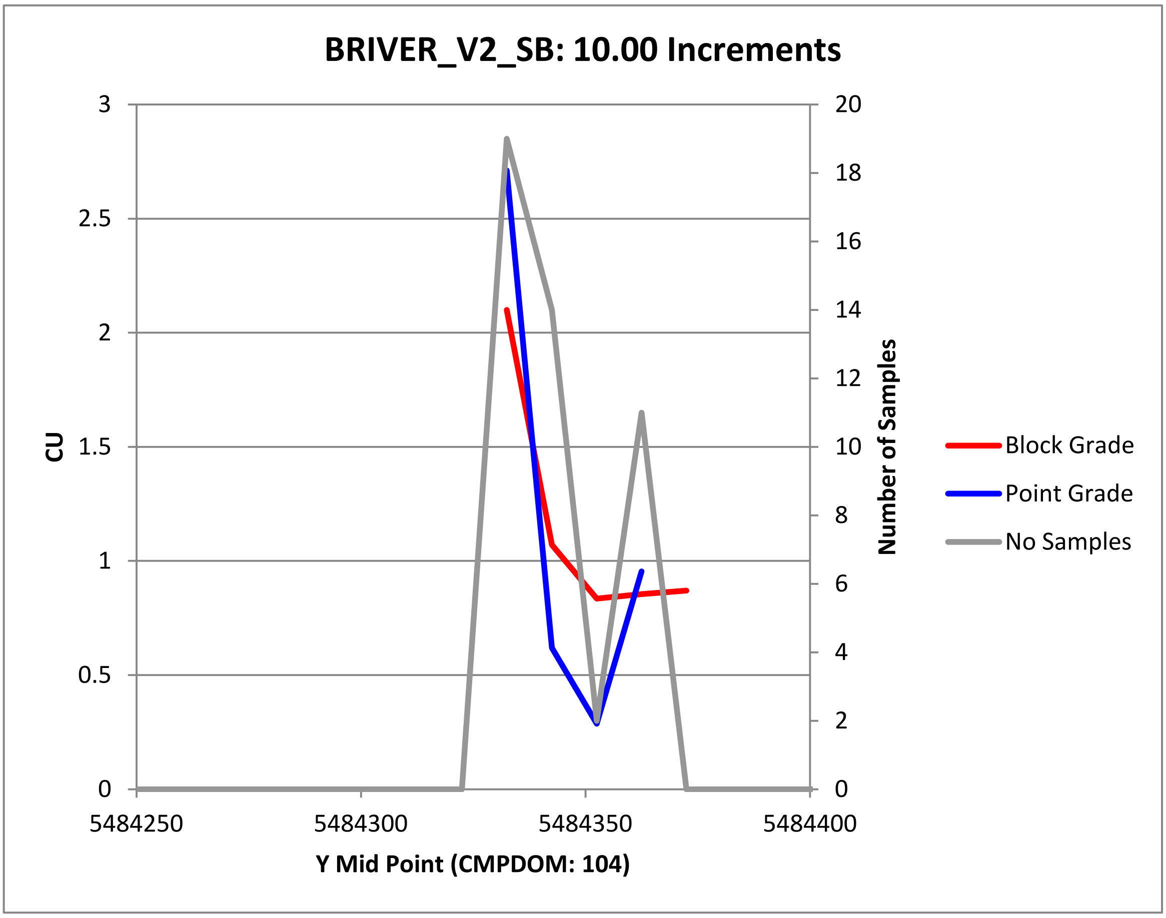

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
Z Mid Point (CMPDOM: 102)
Block Grade
Point Grade
No Samples
2.5
2
1.5
1
0.5
0
80
70
60
50
40
30
20
10
0
600
650
700
750
800

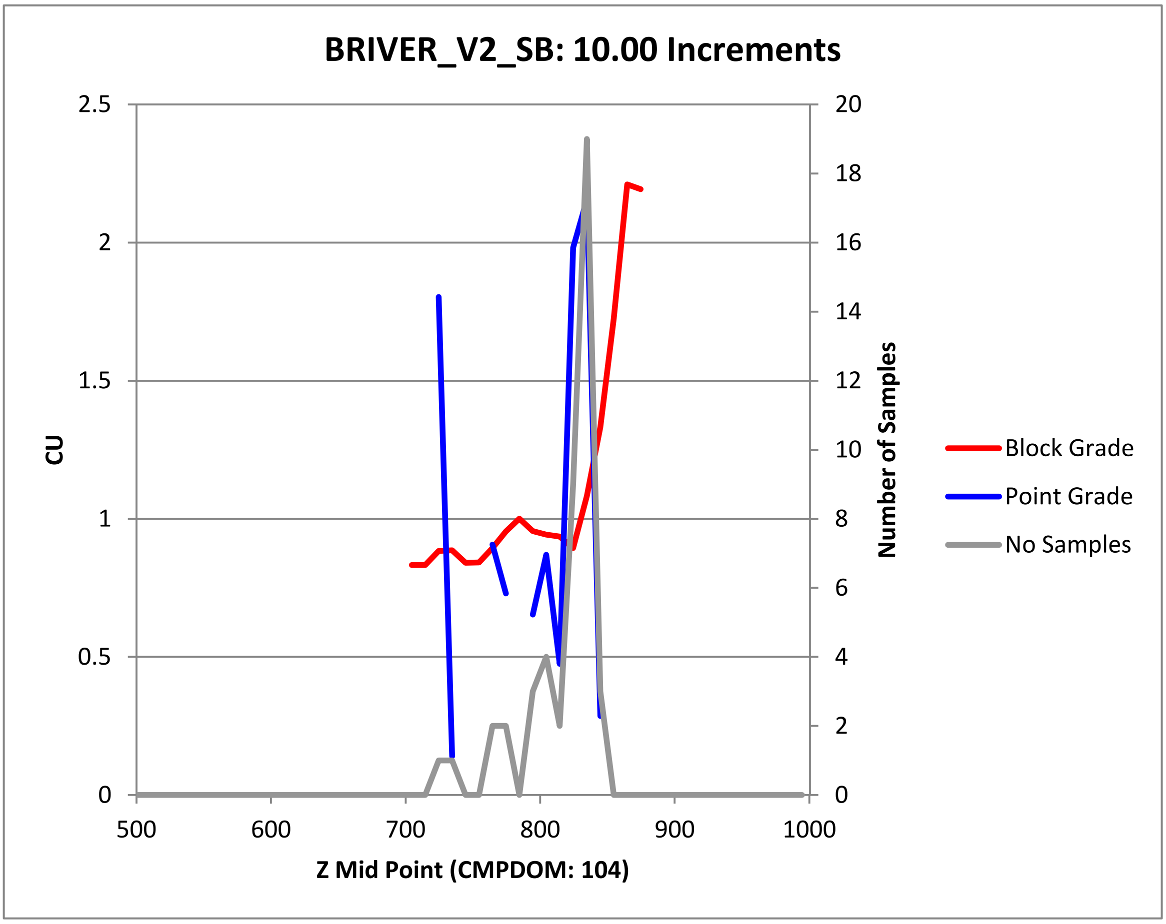

BRIVER_V2_SB: 10.00 Increments
CU
2.5
2
1.5
1
0.5
0
Number of Samples
8
7
6
5
4
3
2
1
0
617200
617250
617300
617350
617400
617450
617500
X Mid Point (CMPDOM: 103)
Block Grade
Point Grade
No Samples

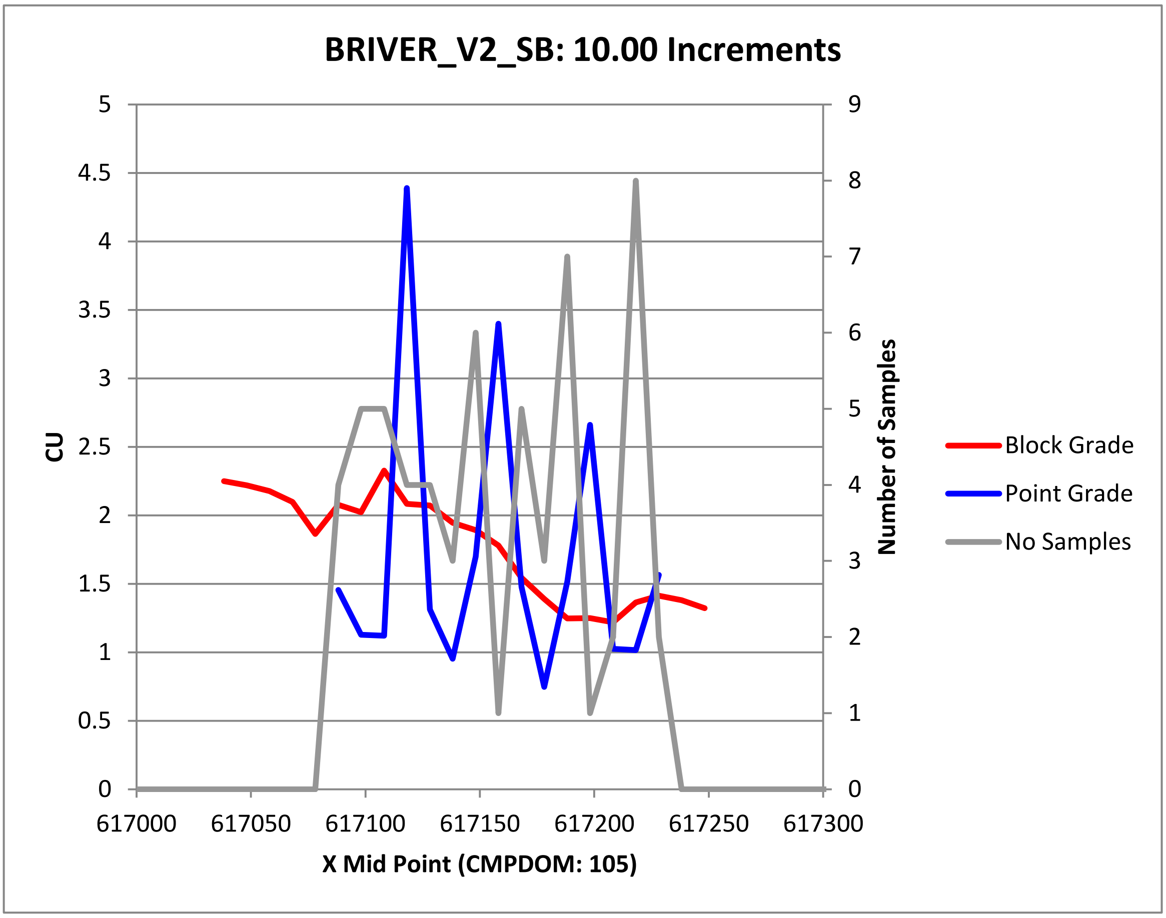

BRIVER_V2_SB: 10.00 Increments
CU
1.4
1.2
1
0.8
0.6
0.4
0.2
0
12
10
8
6
4
2
0
Number of Samples
5484200
5484250
5484300
5484350
5484400
5484450
5484500
Y Mid Point (CMPDOM: 103)
Block Grade
Point Grade
No Samples

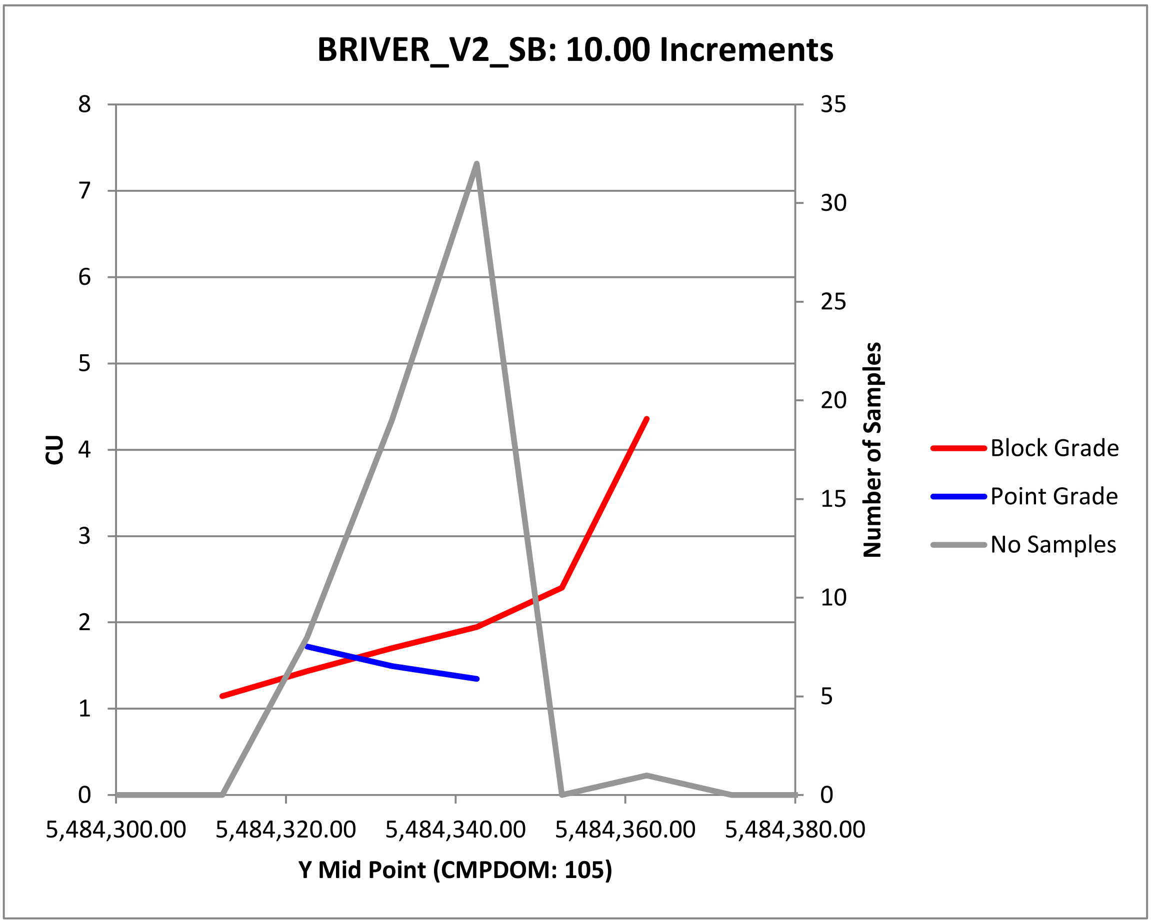

BRIVER_V2_SB: 10.00 Increments
CU
1.4
1.2
1
0.8
0.6
0.4
0.2
0
600
700
800
900
1000
Z Mid Point (CMPDOM: 103)
12
10
8
6
4
2
0
Number of Samples
Block Grade
Point Grade
No Samples

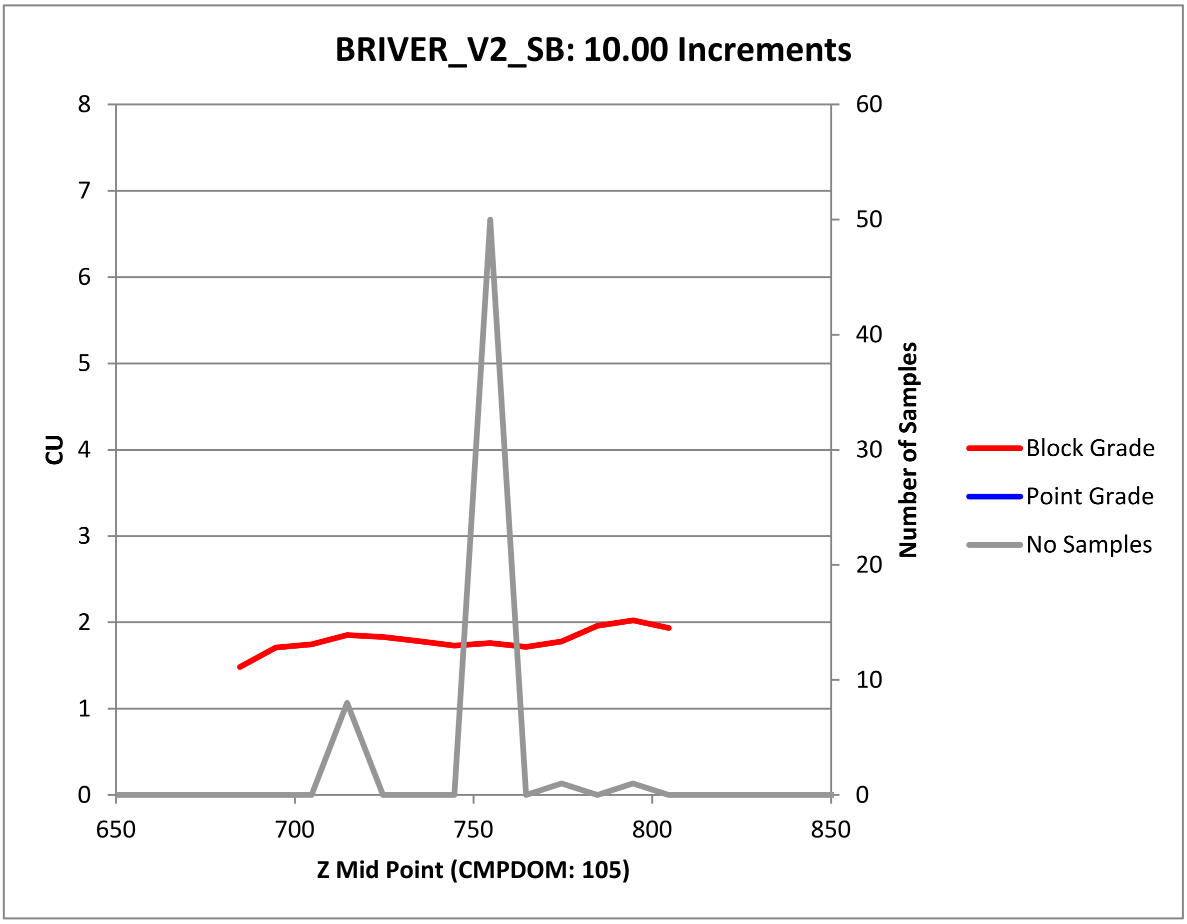

BRIVER_V2_SB: 10.00 Increments
CU
3
2.5
2
1.5
1
0.5
0
25
20
15
10
5
0
Number of Samples
617200
617250
617300
617350
617400
617450
617500
X Mid Point (CMPDOM: 104)
Block Grade
Point Grade
No Samples

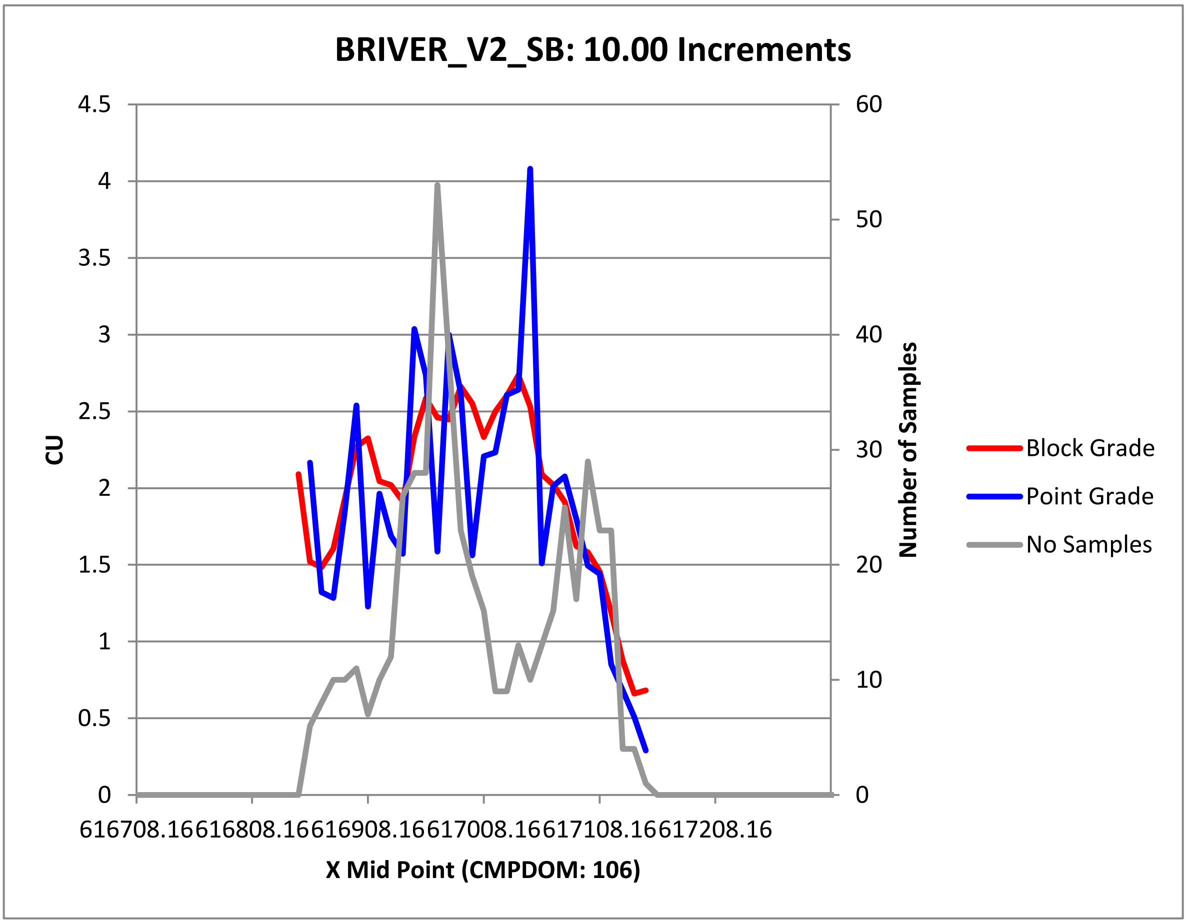

BRIVER_V2_SB: 10.00 Increments
CU
3
2.5
2
1.5
1
0.5
0
20
18
16
14
12
10
8
6
4
2
0
Number of Samples
5484250
5484300
5484350
5484400
Y Mid Point (CMPDOM: 104)
Block Grade
Point Grade
No Samples

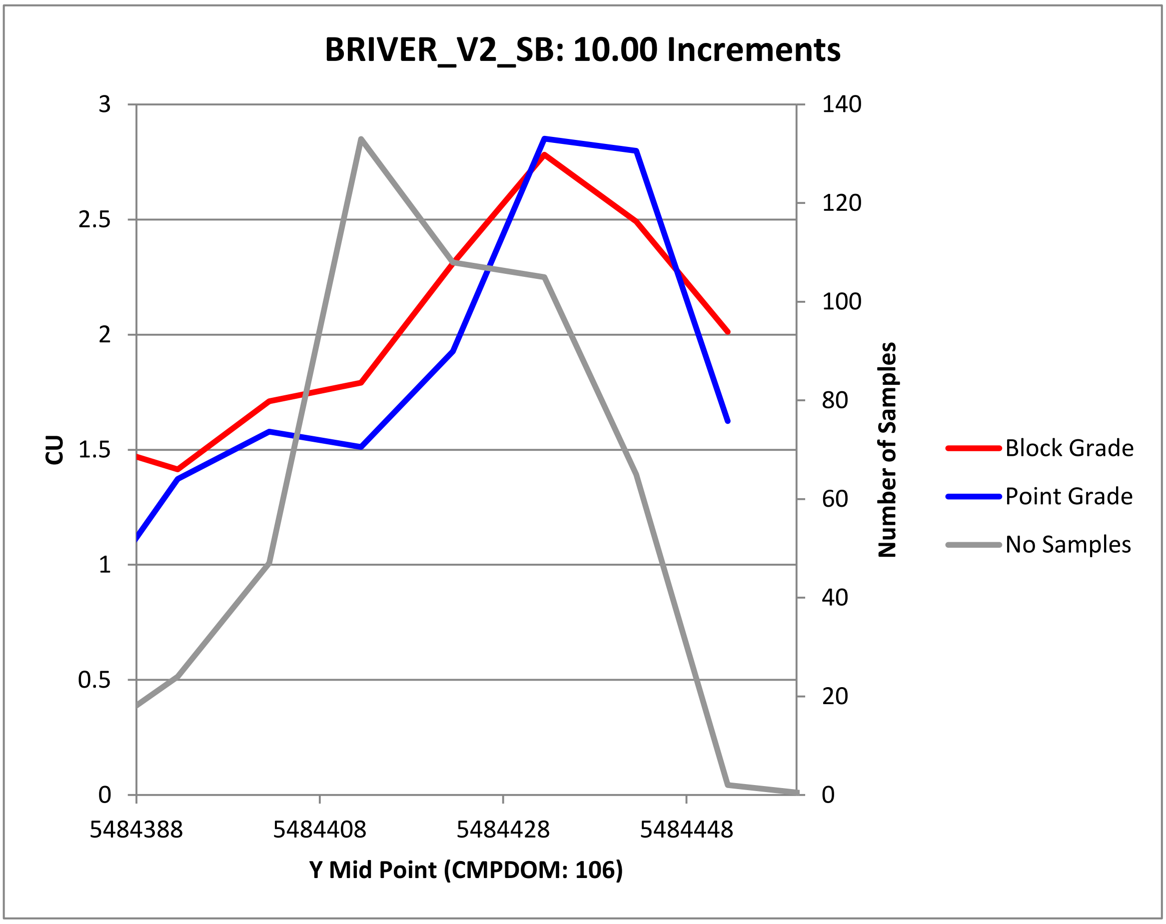

BRIVER_V2_SB: 10.00 Increments
CU
2.5
2
1.5
1
0.5
0
500
600
700
800
900
1000
Z Mid Point (CMPDOM: 104)
20
18
16
14
12
10
8
6
4
2
0
Number of Samples
Block Grade
Point Grade
No Samples

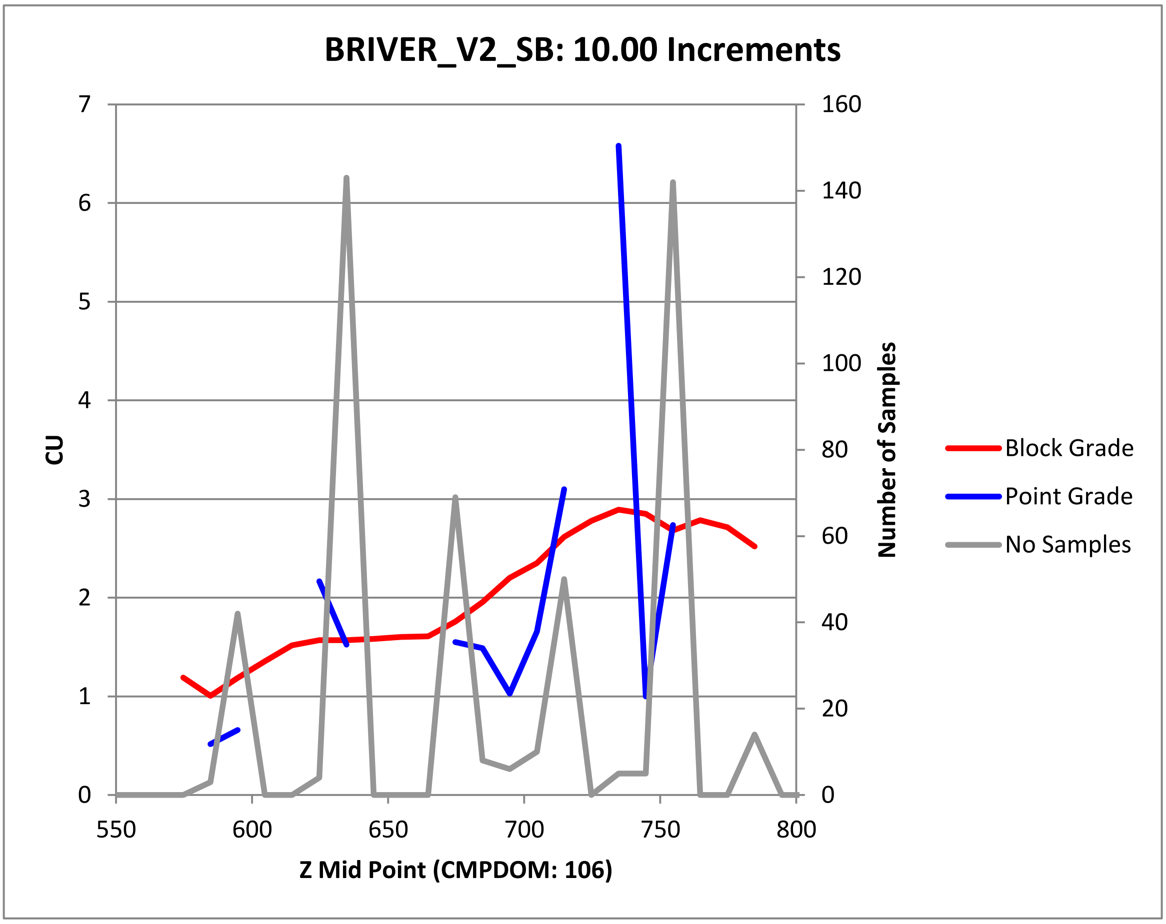

BRIVER_V2_SB: 10.00 Increments
CU
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
9
8
7
6
5
4
3
2
1
0
Number of Samples
617000
617050
617100
617150
617200
617250
617300
X Mid Point (CMPDOM: 105)
Block Grade
Point Grade
No Samples

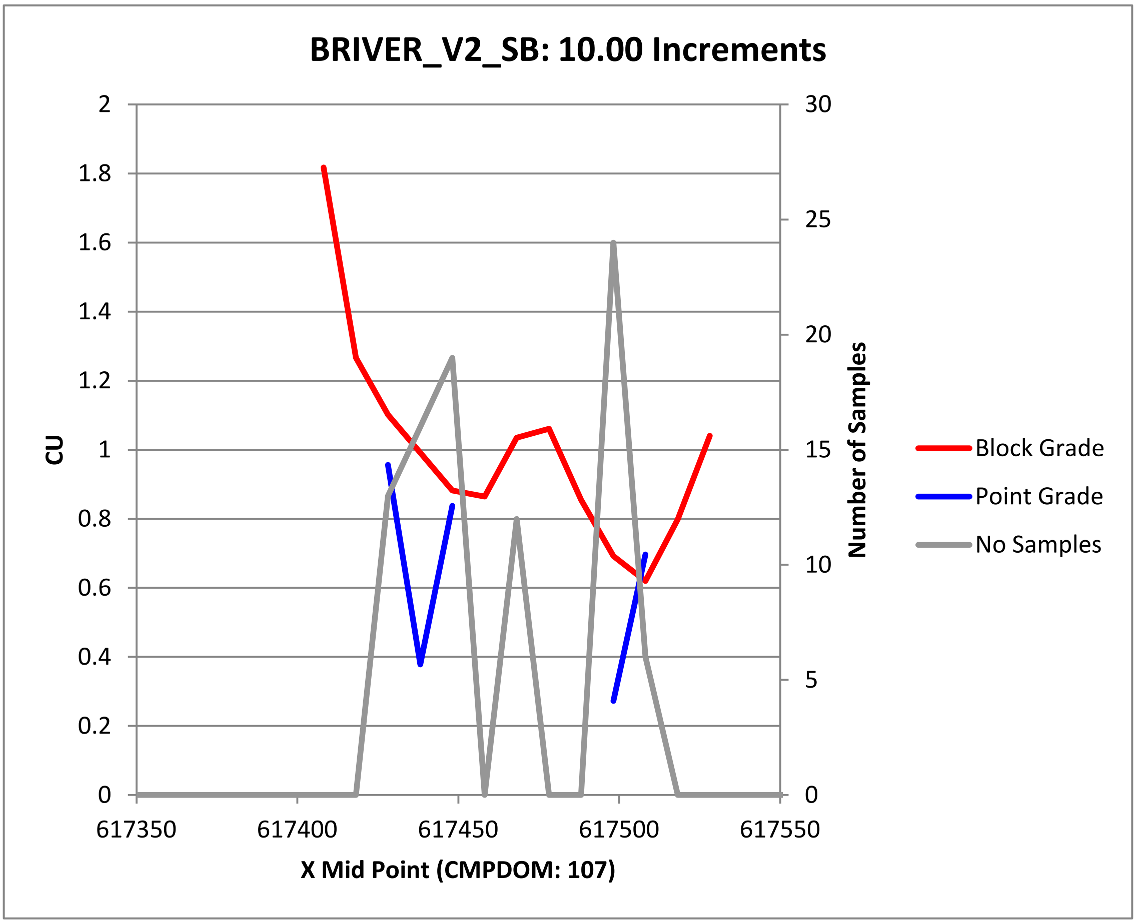

BRIVER_V2_SB: 10.00 Increments
CU
0
1
2
3
4
5
6
7
8
Number of Samples
0
5
10
15
20
25
30
35
5,484,300.00
5,484,320.00
5,484,340.00
5,484,360.00
5,484,380.00
Y Mid Point (CMPDOM: 105)
Block Grade
Point Grade
No Samples

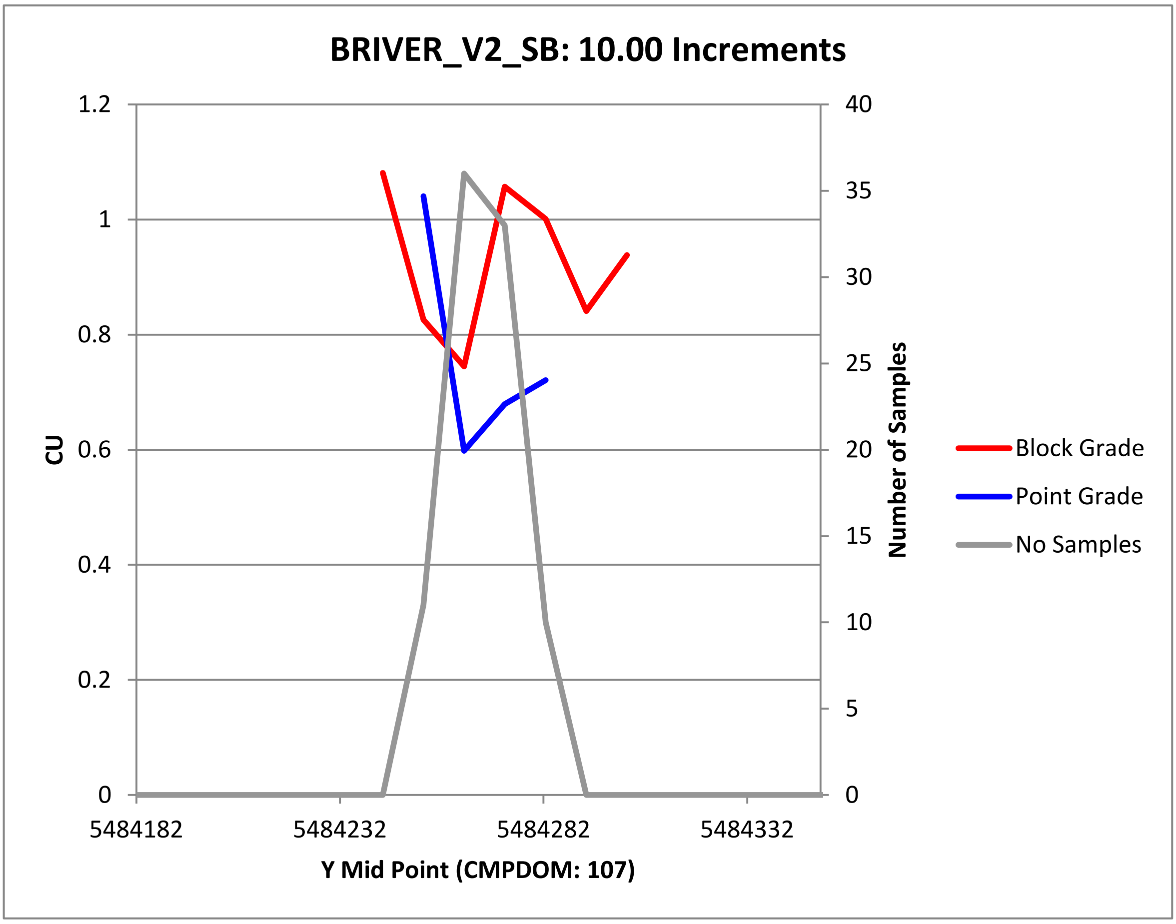

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
Z Mid Point (CMPDOM: 105)
0
1
2
3
4
5
6
7
8
0
10
20
30
40
50
60
650
700
750
800
850
Block Grade
Point Grade
No Samples

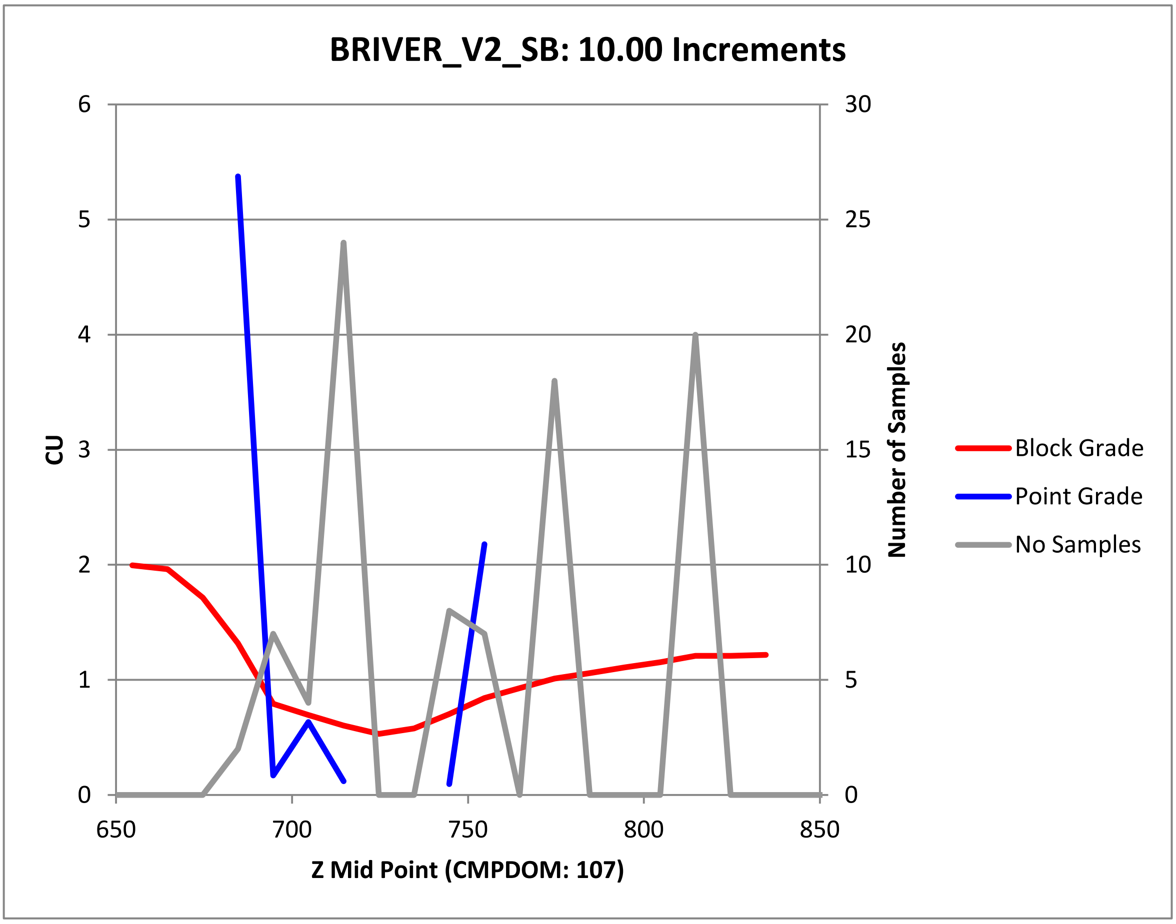

BRIVER_V2_SB: 10.00 Increments
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
CU
60
50
40
30
20
10
0
Number of Samples
616708.16616808.16616908.16617008.16617108.16617208.16
X Mid Point (CMPDOM: 106)
Block Grade
Point Grade
No Samples

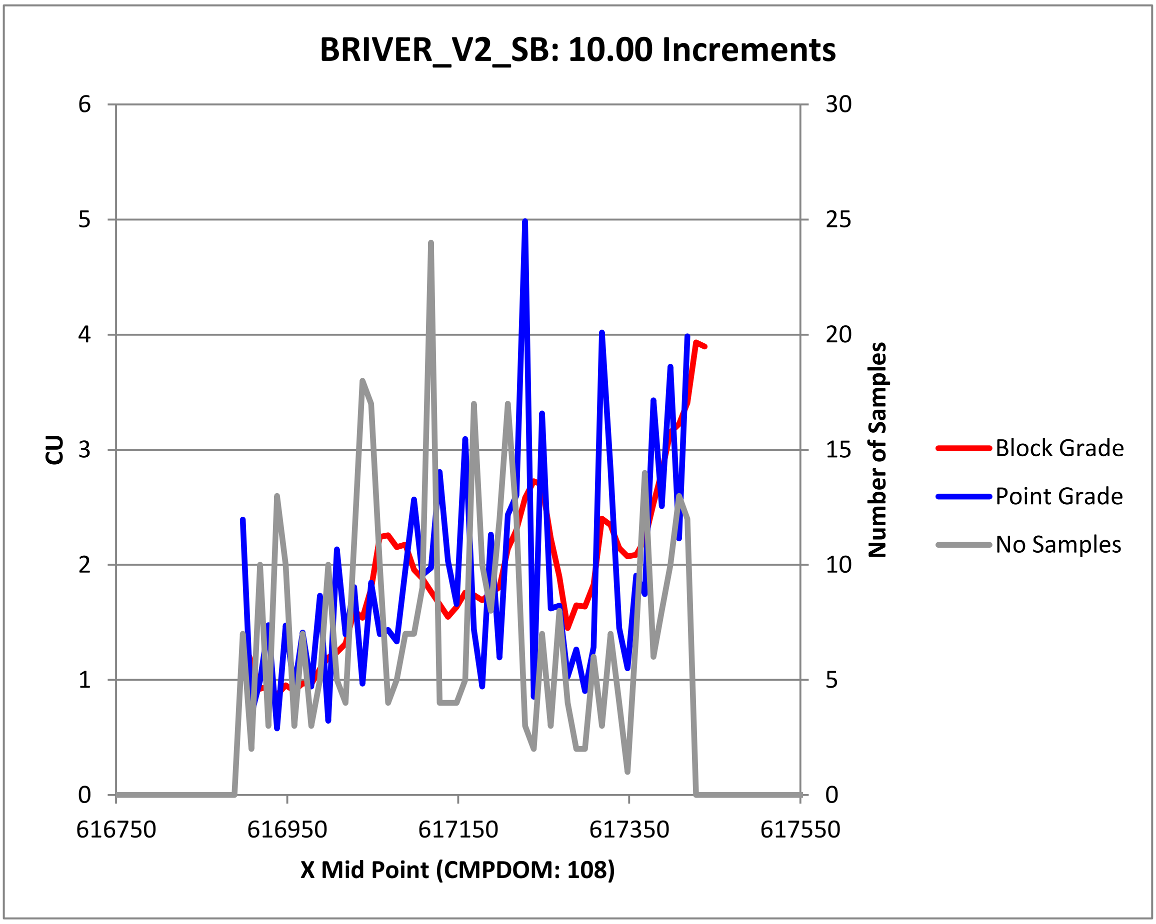

BRIVER_V2_SB: 10.00 Increments
CU
3
2.5
2
1.5
1
0.5
0
140
120
100
80
60
40
20
0
Number of Samples
5484388
5484408
5484428
5484448
Y Mid Point (CMPDOM: 106)
Block Grade
Point Grade
No Samples

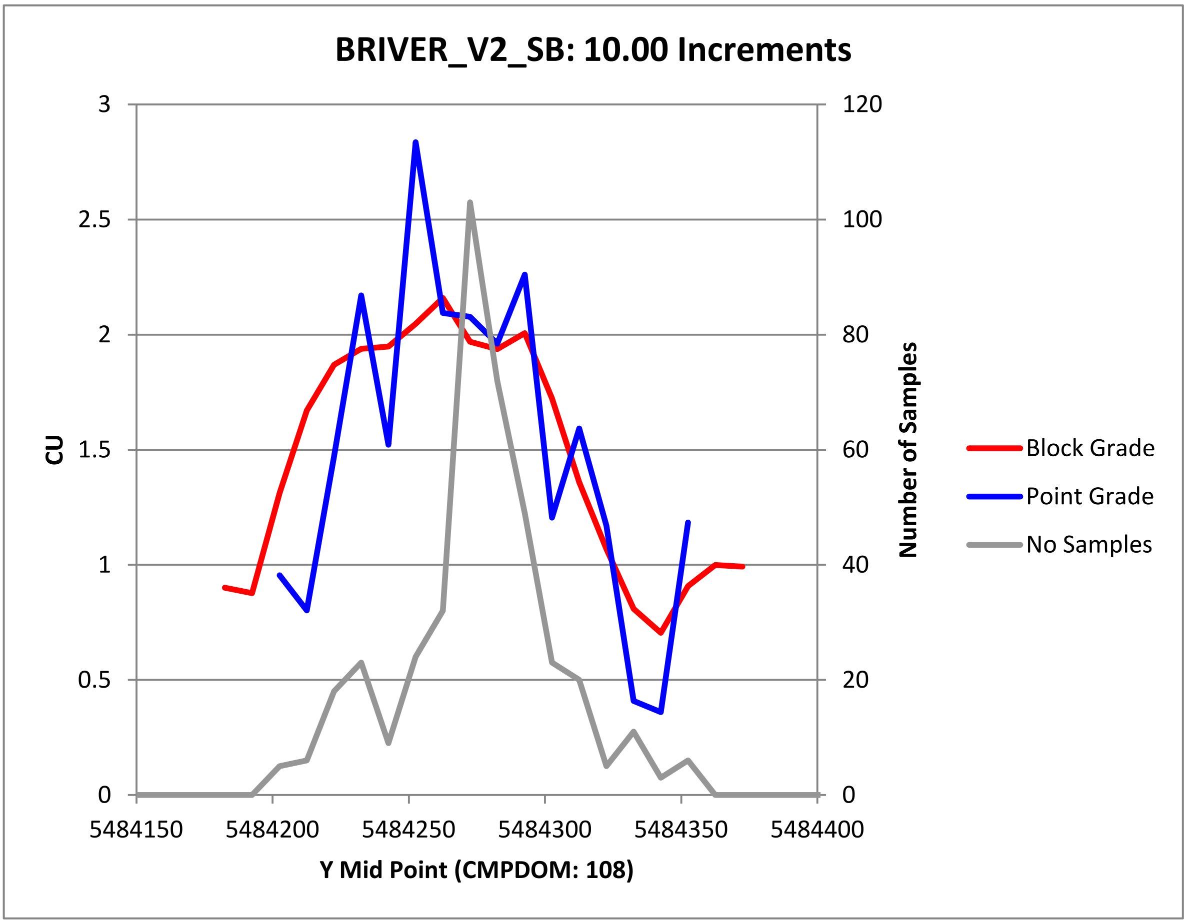

BRIVER_V2_SB: 10.00 Increments
CU
0
1
2
3
4
5
6
7
Number of Samples
0
20
40
60
80
100
120
140
160
550
600
650
700
750
800
Z Mid Point (CMPDOM: 106)
Block Grade
Point Grade
No Samples

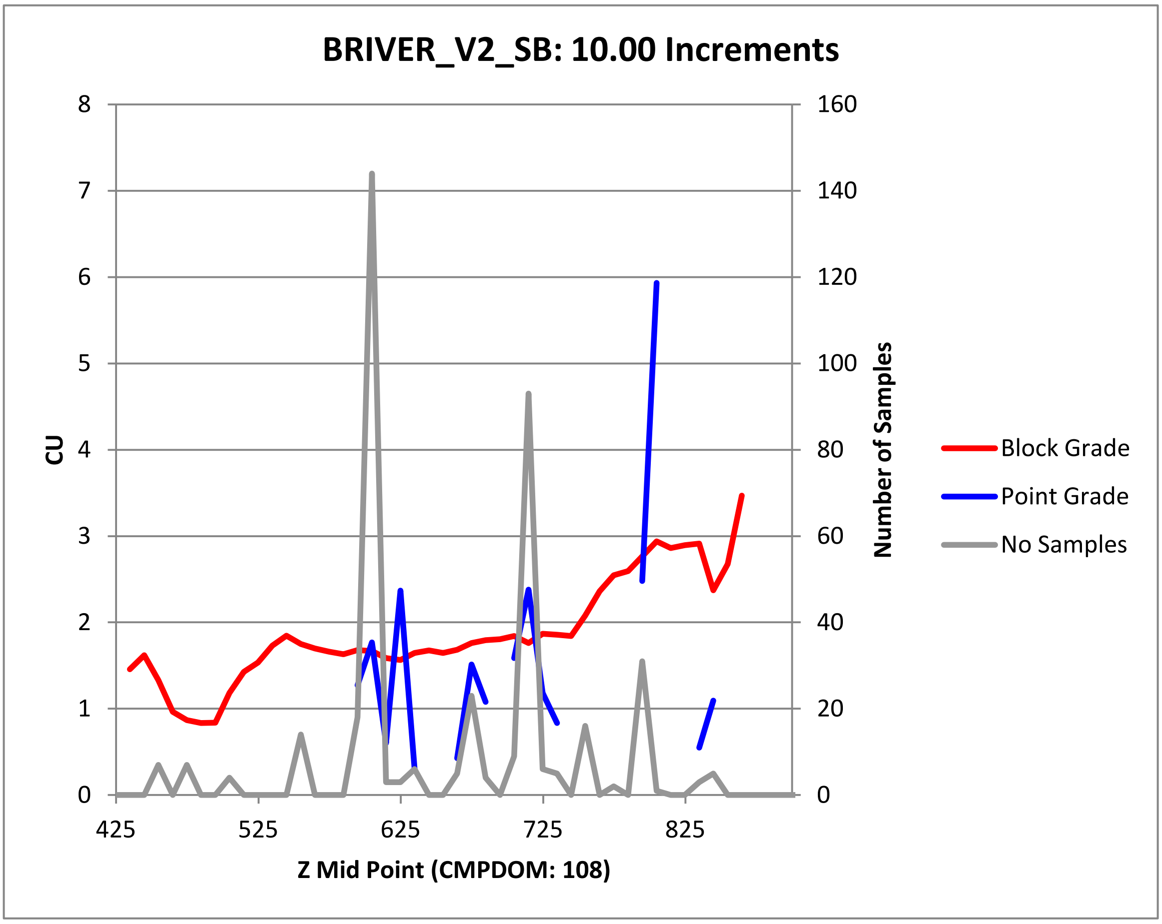

BRIVER_V2_SB: 10.00 Increments
CU
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
617350
617400
617450
617500
617550
X Mid Point (CMPDOM: 107)
Number of Samples
30
25
20
15
10
5
0
Block Grade
Point Grade
No Samples

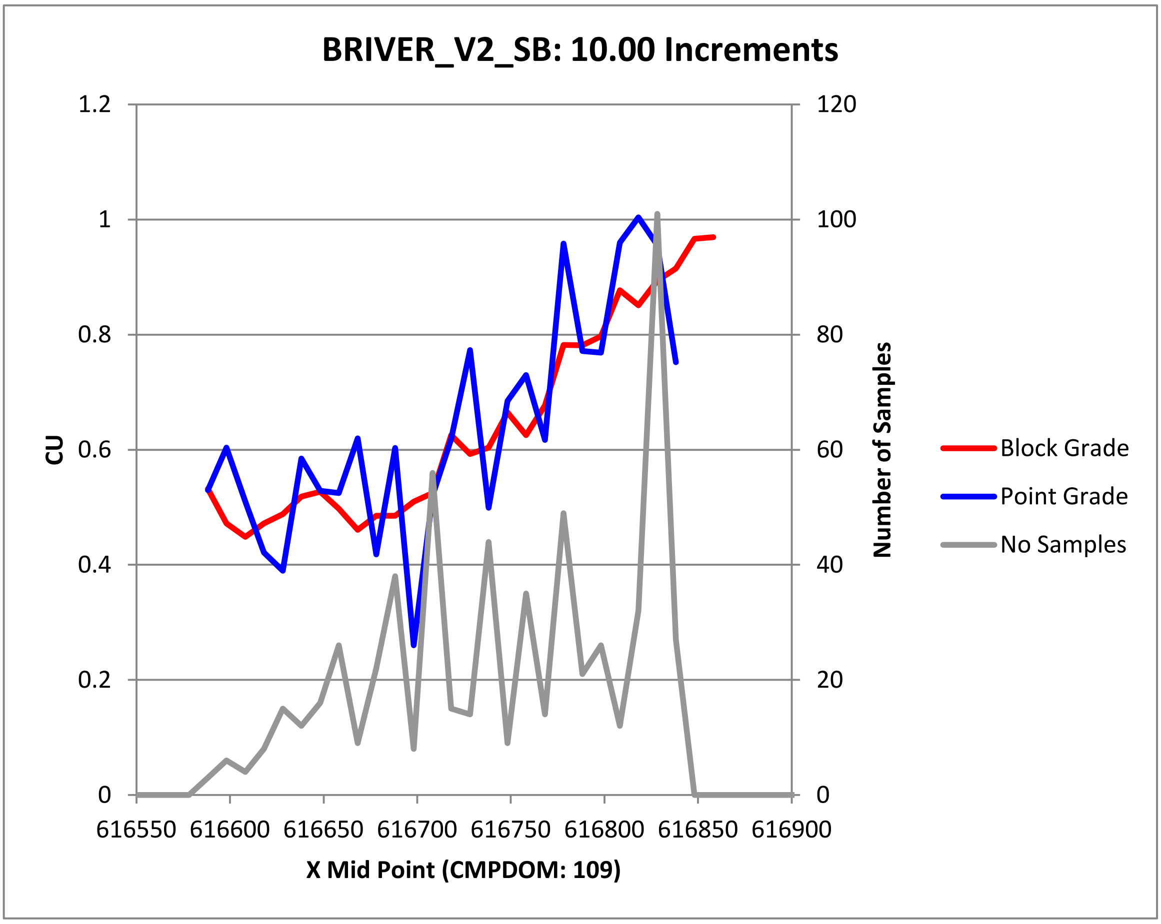

BRIVER_V2_SB: 10.00 Increments
CU
1.2
1
0.8
0.6
0.4
0.2
0
40
35
30
25
20
15
10
5
0
Number of Samples
5484182
5484232
5484282
5484332
Y Mid Point (CMPDOM: 107)
Block Grade
Point Grade
No Samples

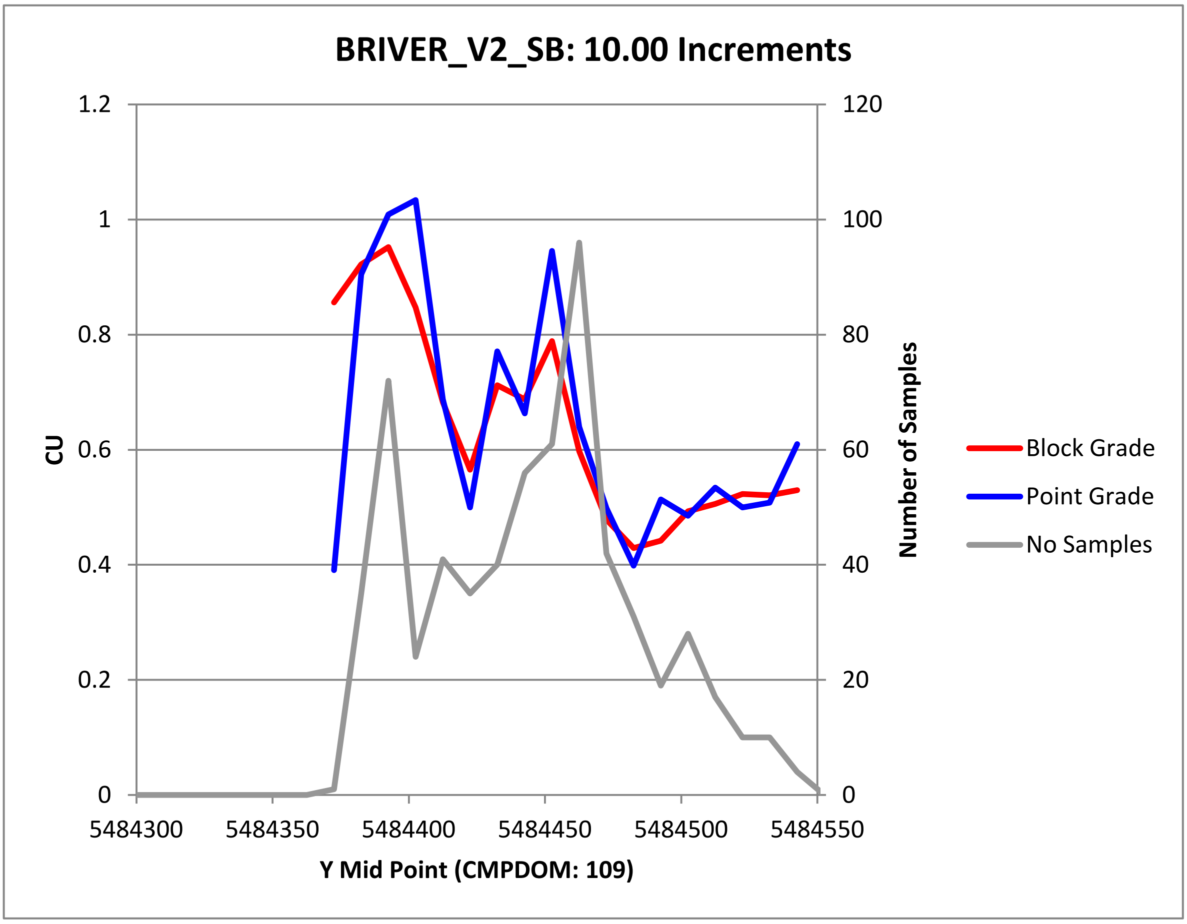

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
Z Mid Point (CMPDOM: 107)
0
1
2
3
4
5
6
0
5
10
15
20
25
30
650
700
750
800
850
Block Grade
Point Grade
No Samples

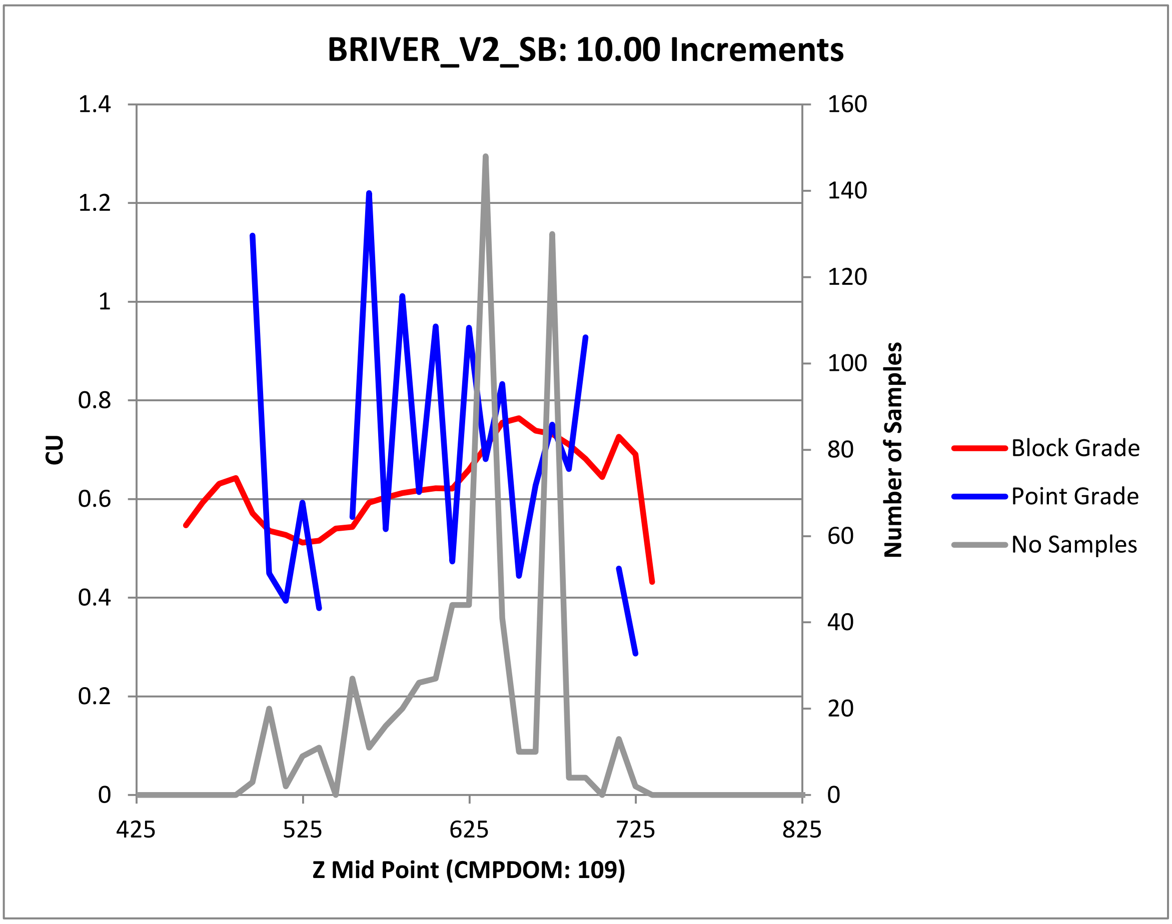

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
X Mid Point (CMPDOM: 108)
0
1
2
3
4
5
6
0
5
10
15
20
25
30
616750
616950
617150
617350
617550
Block Grade
Point Grade
No Samples

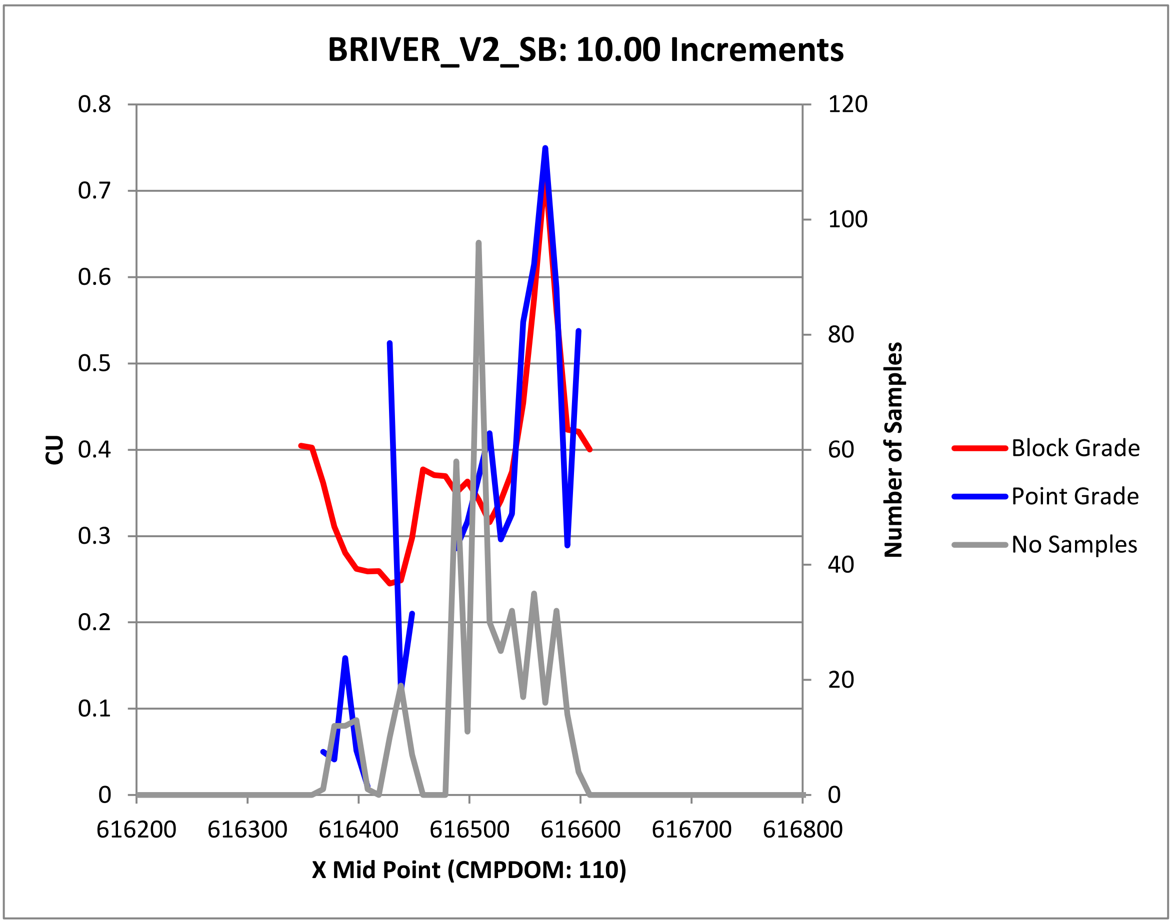

BRIVER_V2_SB: 10.00 Increments
CU
3
2.5
2
1.5
1
0.5
0
120
100
80
60
40
20
0
Number of Samples
5484150
5484200
5484250
5484300
5484350
5484400
Y Mid Point (CMPDOM: 108)
Block Grade
Point Grade
No Samples

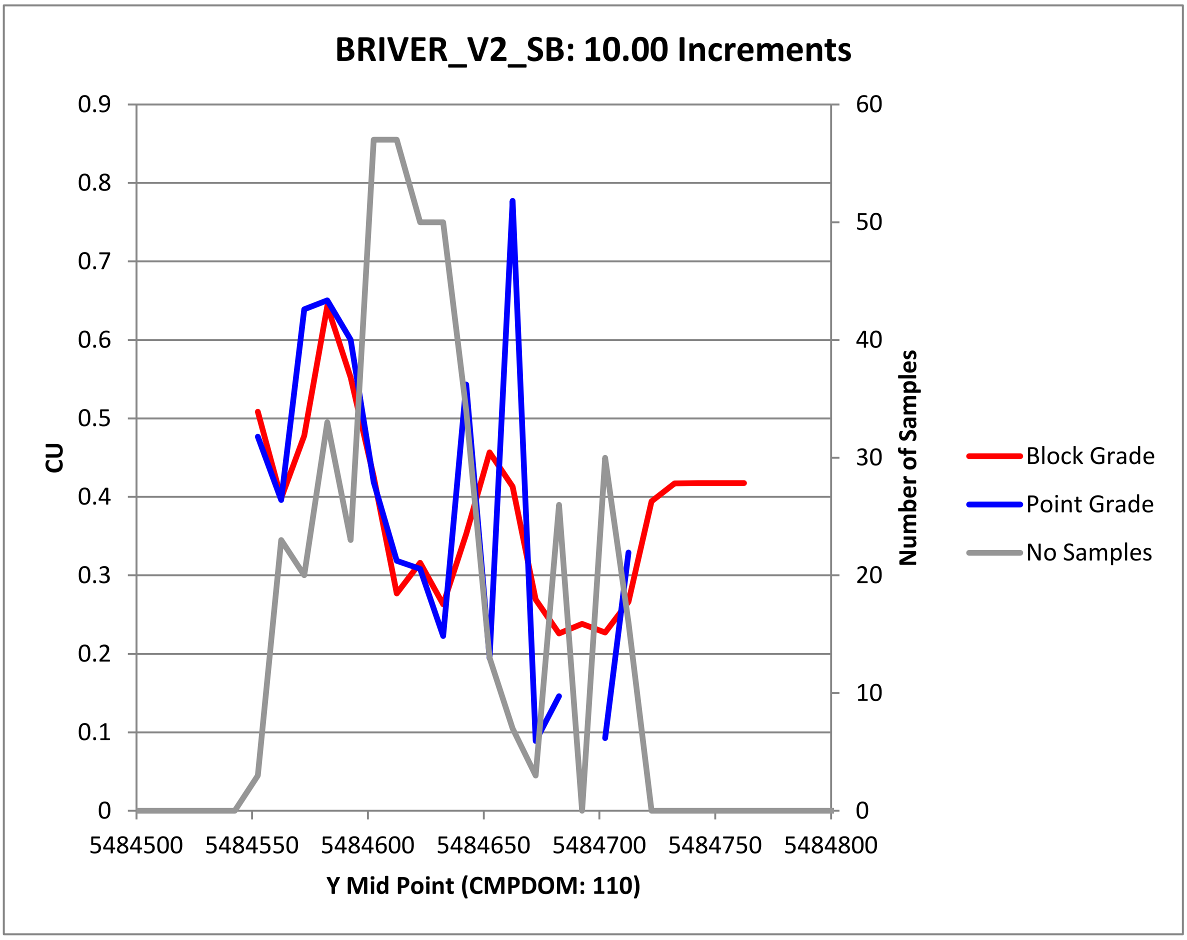

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
Z Mid Point (CMPDOM: 108)
Block Grade
Point Grade
No Samples
0
1
2
3
4
5
6
7
8
0
20
40
60
80
100
120
140
160
425
525
625
725
825

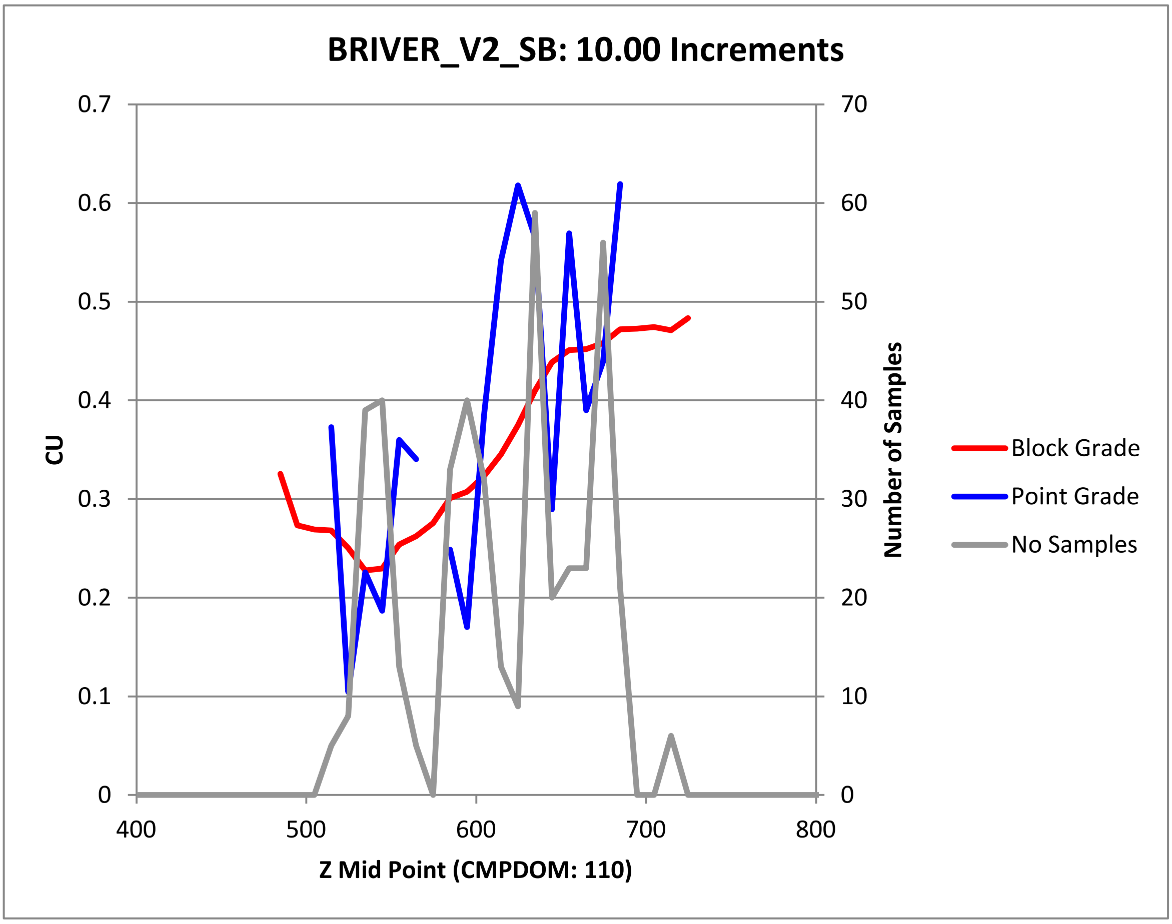

BRIVER_V2_SB: 10.00 Increments
CU
1.2
1
0.8
0.6
0.4
0.2
0
120
100
80
60
40
20
0
Number of Samples
616550
616600
616650
616700
616750
616800
616850
616900
X Mid Point (CMPDOM: 109)
Block Grade
Point Grade
No Samples

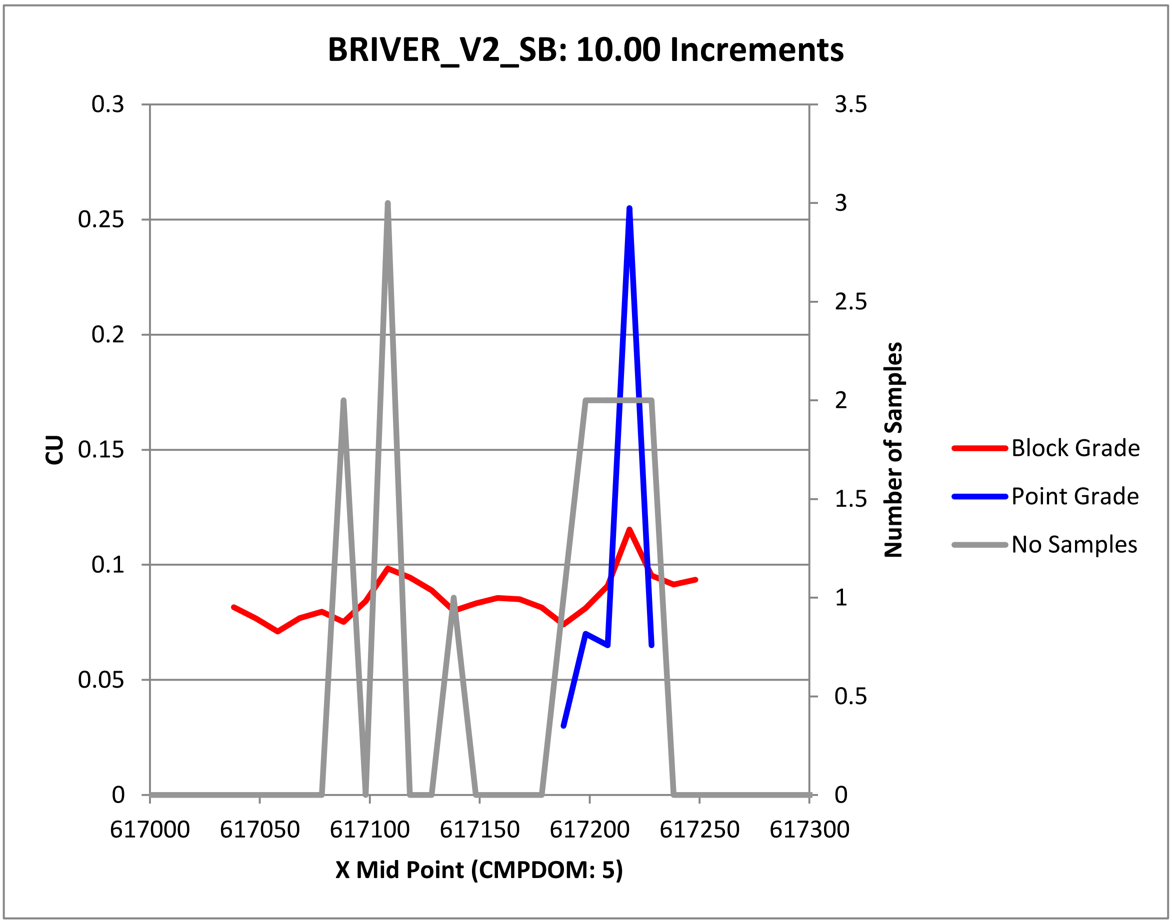

BRIVER_V2_SB: 10.00 Increments
CU
1.2
1
0.8
0.6
0.4
0.2
0
120
100
80
60
40
20
0
Number of Samples
5484300
5484350
5484400
5484450
5484500
5484550
Y Mid Point (CMPDOM: 109)
Block Grade
Point Grade
No Samples

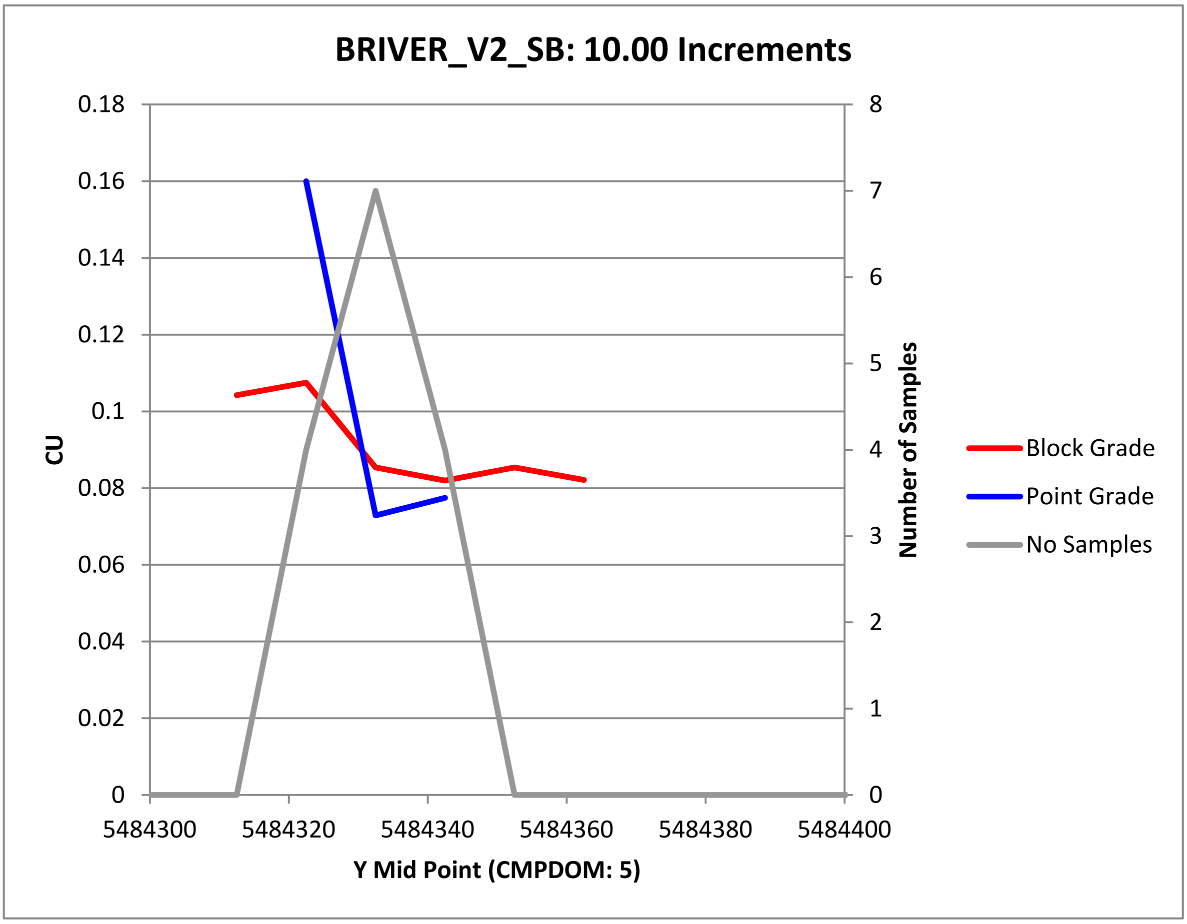

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
Z Mid Point (CMPDOM: 109)
Block Grade
Point Grade
No Samples
1.4
1.2
1
0.8
0.6
0.4
0.2
0
160
140
120
100
80
60
40
20
0
425
525
625
725
825

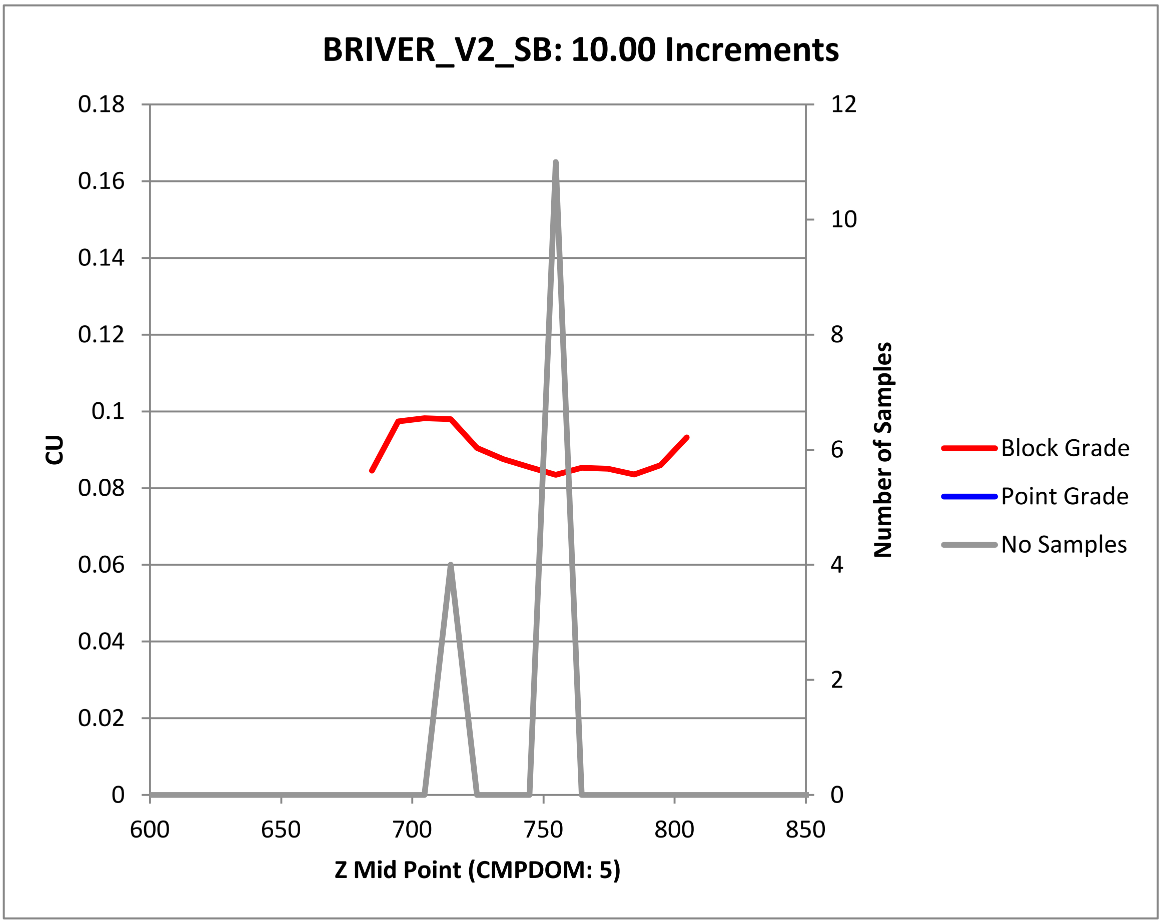

BRIVER_V2_SB: 10.00 Increments
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
CU
120
100
80
60
40
20
0
Number of Samples
616200
616300
616400
616500
616600
616700
616800
X Mid Point (CMPDOM: 110)
Block Grade
Point Grade
No Samples

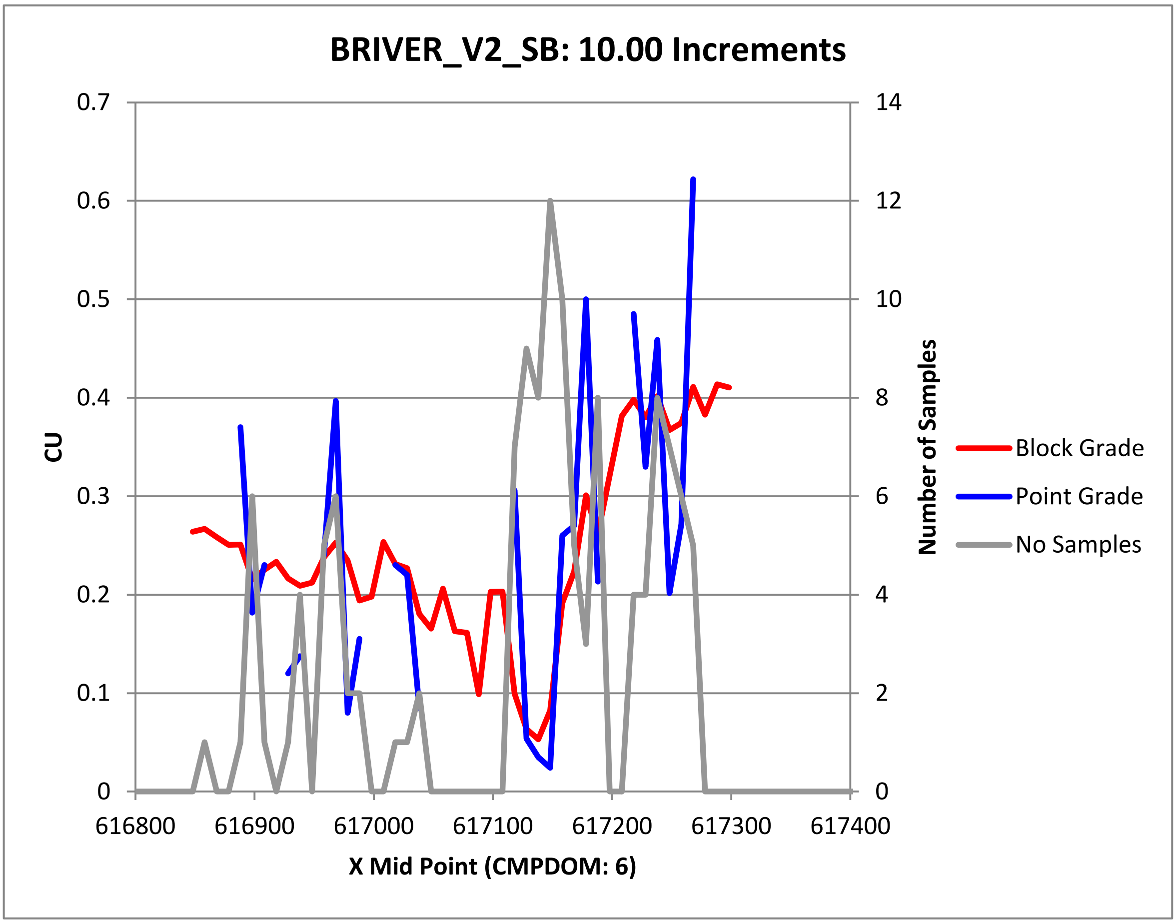

BRIVER_V2_SB: 10.00 Increments
CU
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
60
50
40
30
20
10
0
Number of Samples
5484500
5484550
5484600
5484650
5484700
5484750
5484800
Y Mid Point (CMPDOM: 110)
Block Grade
Point Grade
No Samples

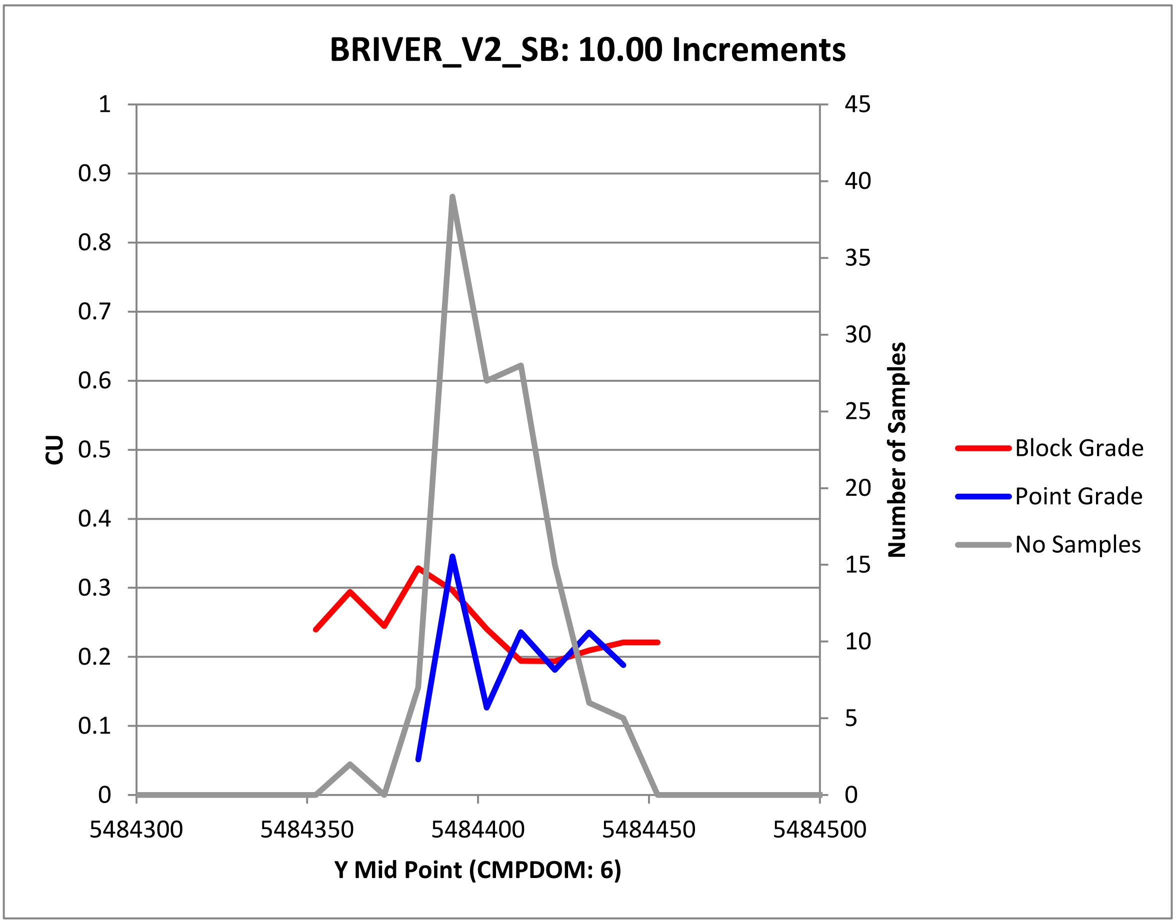

BRIVER_V2_SB: 10.00 Increments
CU
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
400
500
600
700
800
Z Mid Point (CMPDOM: 110)
Number of Samples
70
60
50
40
30
20
10
0
Block Grade
Point Grade
No Samples

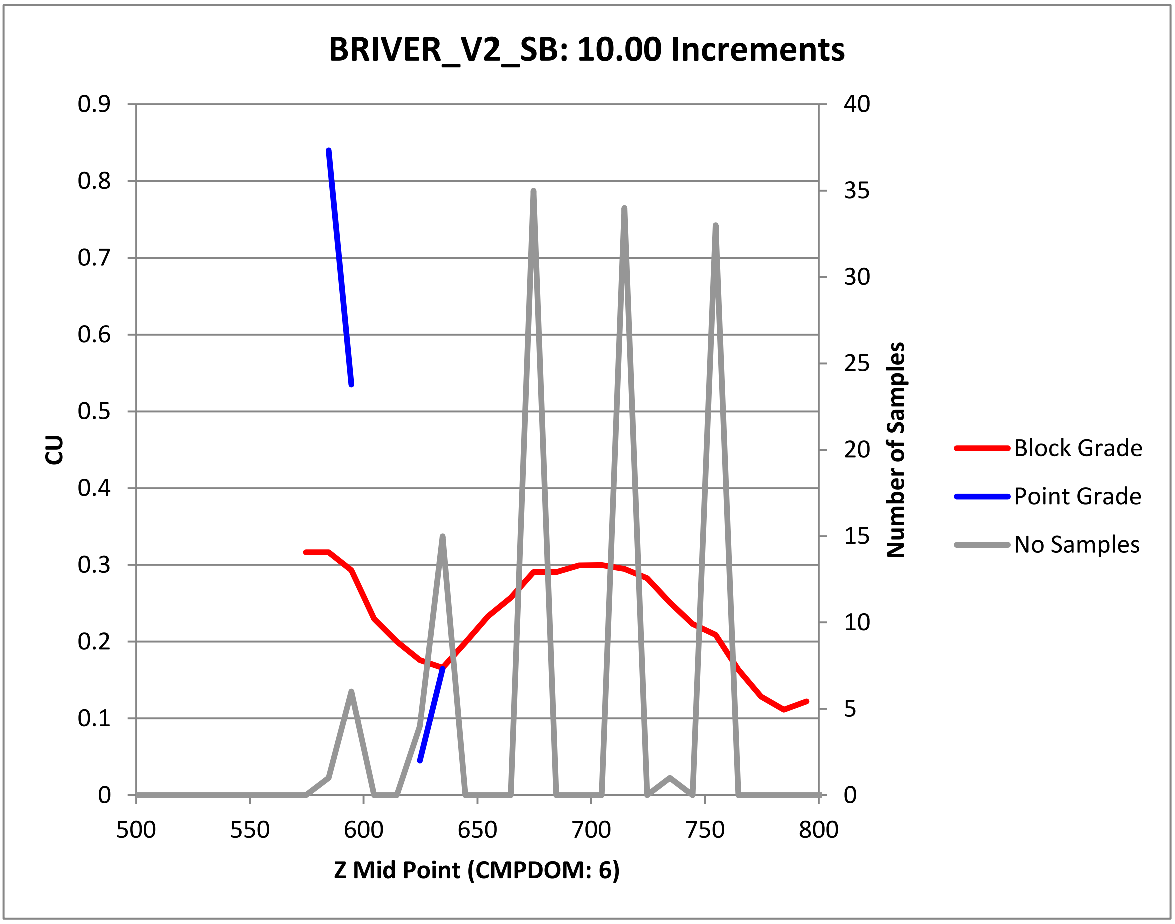

BRIVER_V2_SB: 10.00 Increments
CU
0.3
0.25
0.2
0.15
0.1
0.05
0
Number of Samples
3.5
3
2.5
2
1.5
1
0.5
0
617000
617050
617100
617150
617200
617250
617300
X Mid Point (CMPDOM: 5)
Block Grade
Point Grade
No Samples

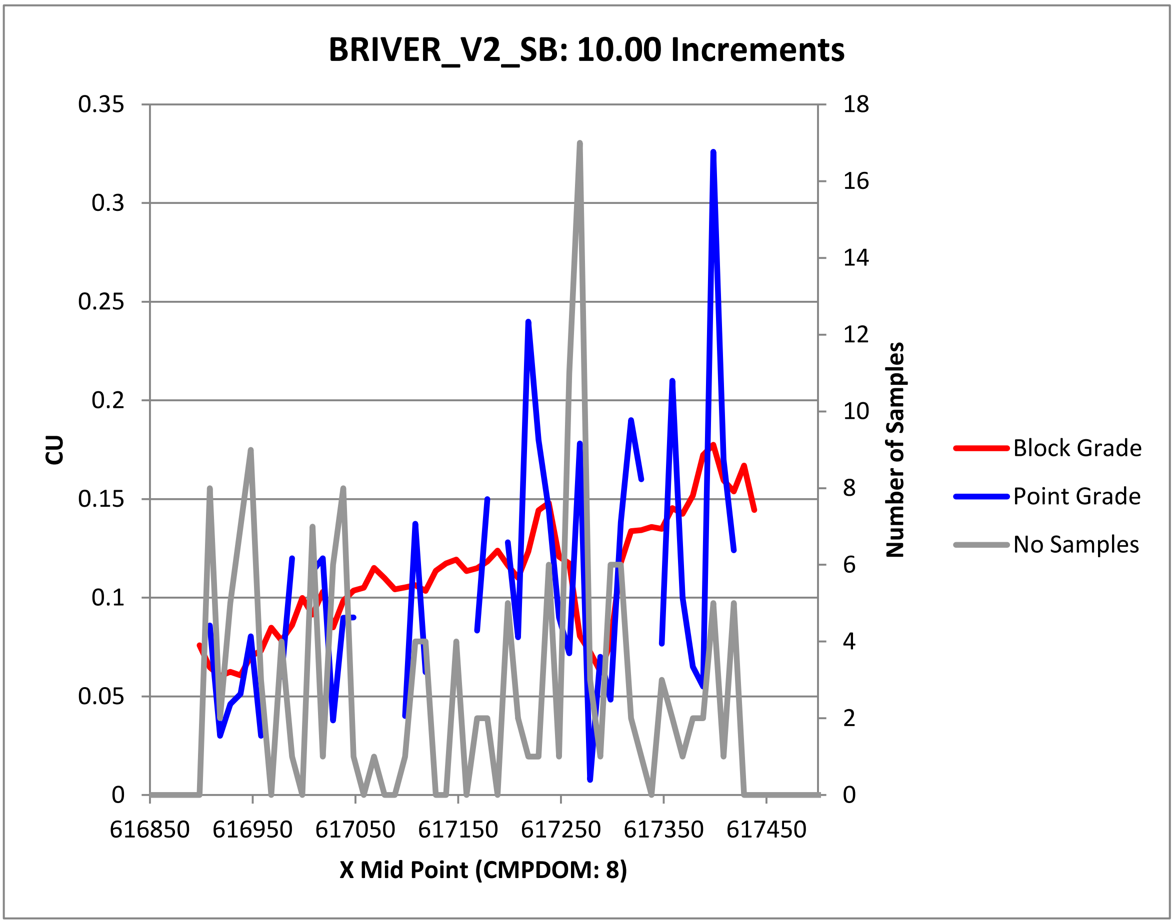

BRIVER_V2_SB: 10.00 Increments
CU
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Number of Samples
8
7
6
5
4
3
2
1
0
5484300
5484320
5484340
5484360
5484380
5484400
Y Mid Point (CMPDOM: 5)
Block Grade
Point Grade
No Samples

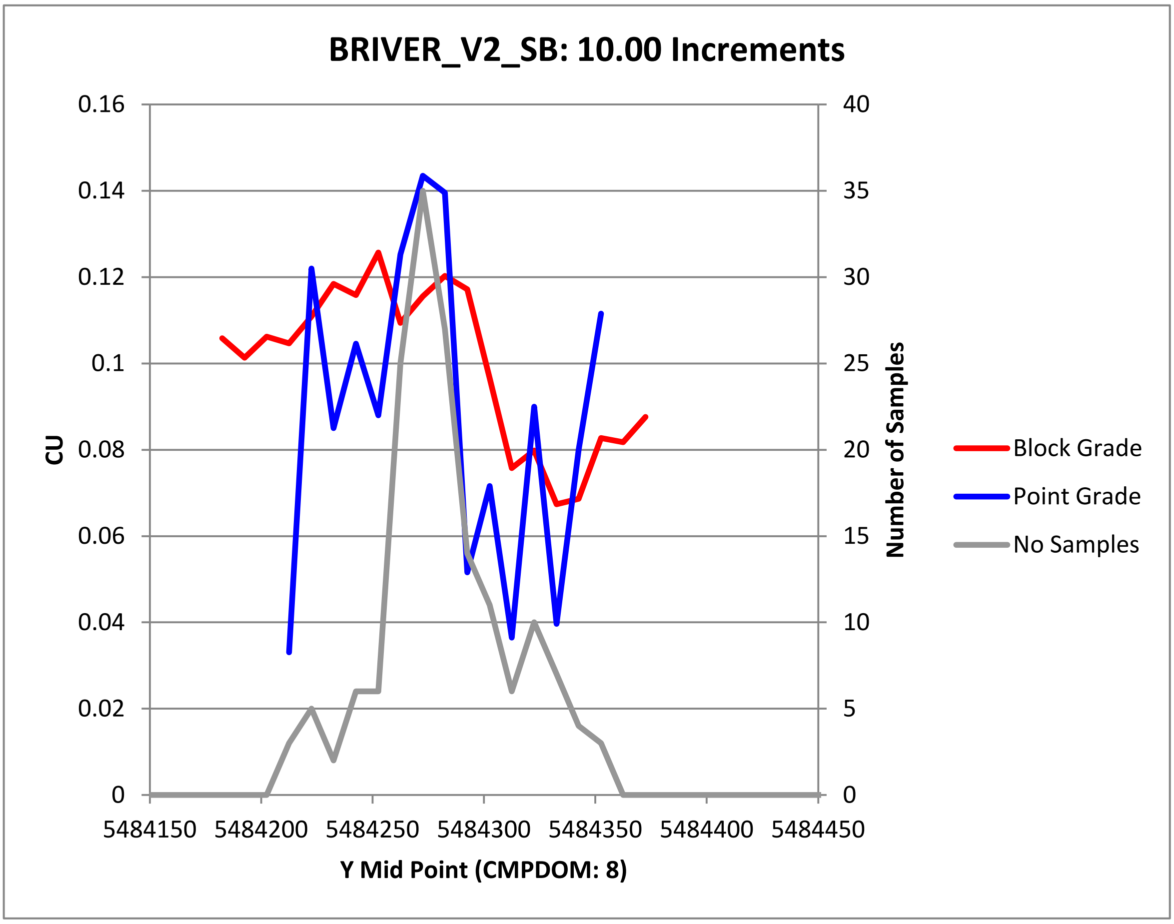

BRIVER_V2_SB: 10.00 Increments
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
CU
12
10
8
6
4
2
0
Number of Samples
600
650
700
750
800
850
Z Mid Point (CMPDOM: 5)
Block Grade
Point Grade
No Samples

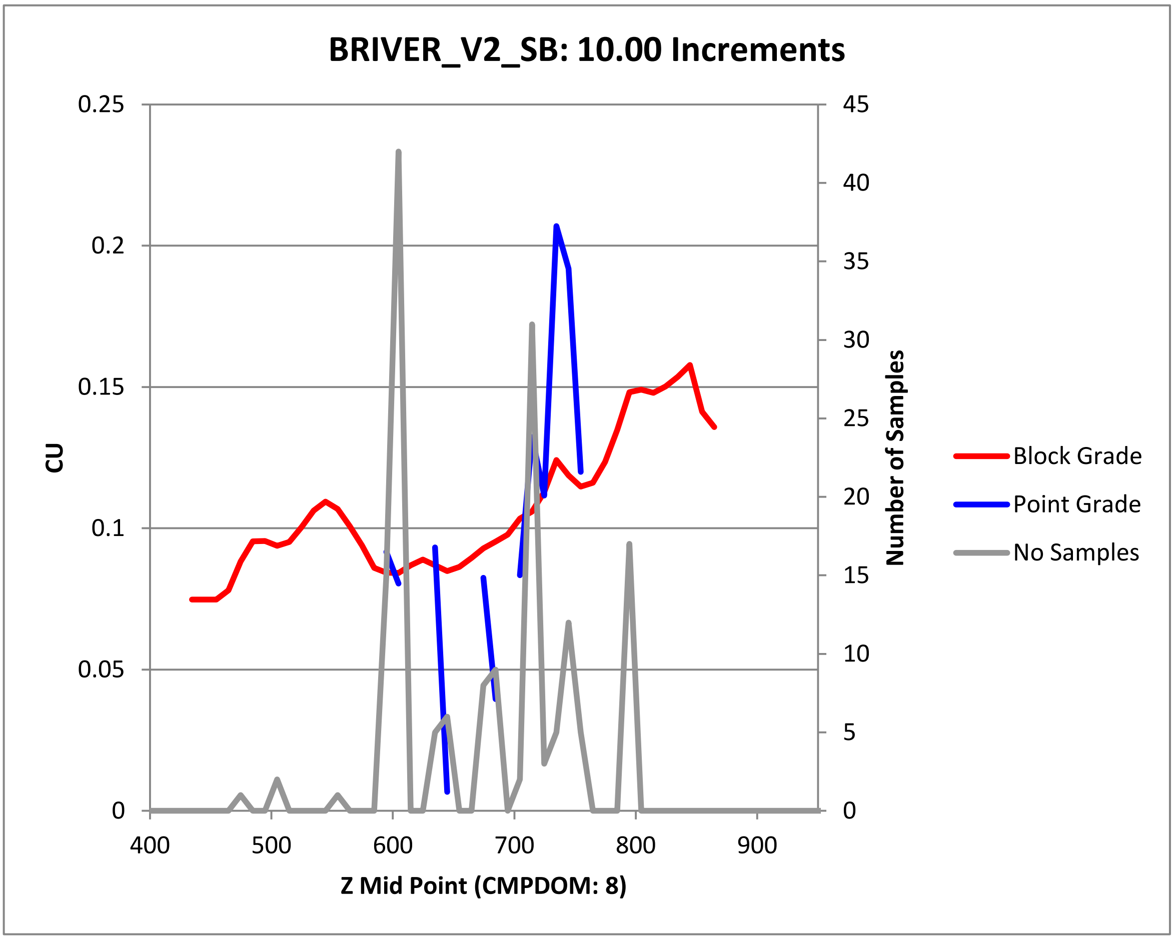

BRIVER_V2_SB: 10.00 Increments
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
CU
14
12
10
8
6
4
2
0
Number of Samples
616800
616900
617000
617100
617200
617300
617400
X Mid Point (CMPDOM: 6)
Block Grade
Point Grade
No Samples

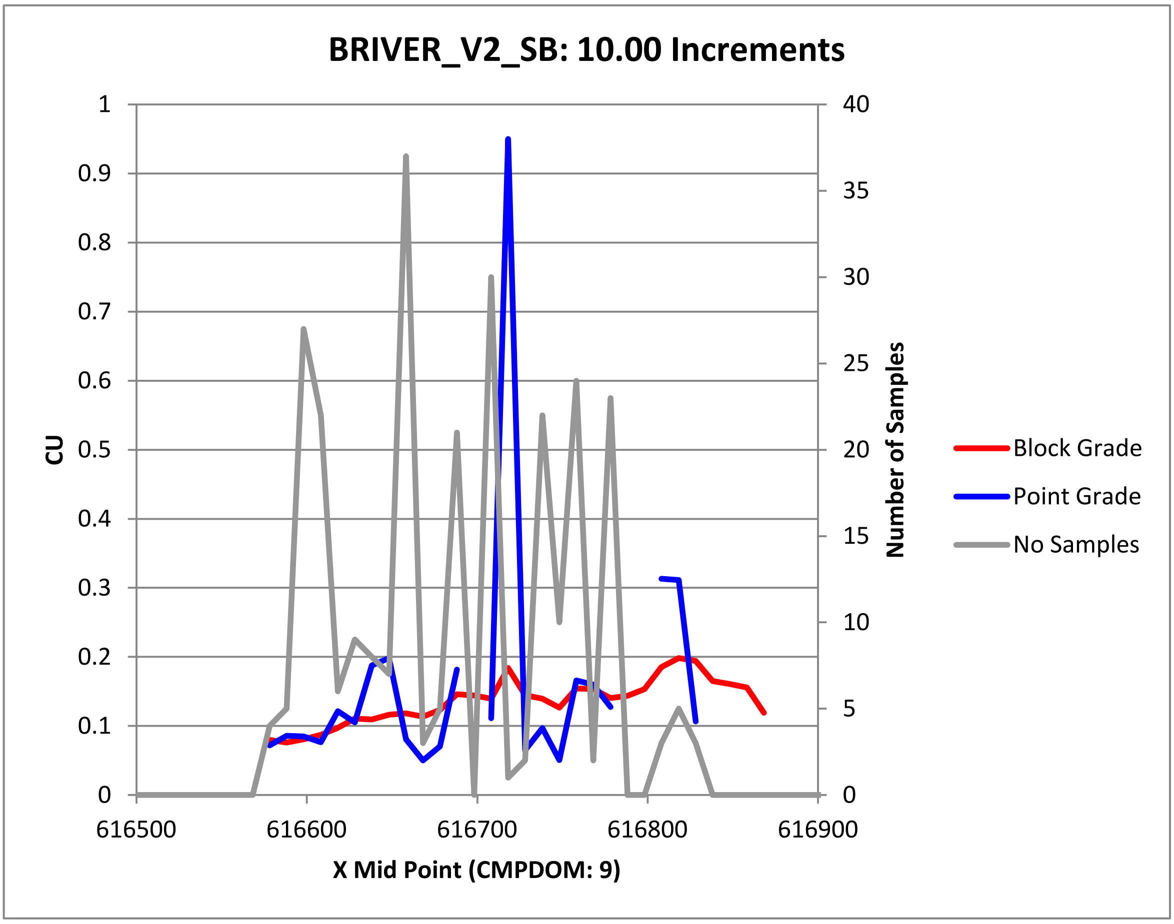

BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
Y Mid Point (CMPDOM: 6)
Block Grade
Point Grade
No Samples
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
45
40
35
30
25
20
15
10
5
0
5484300
5484350
5484400
5484450
5484500

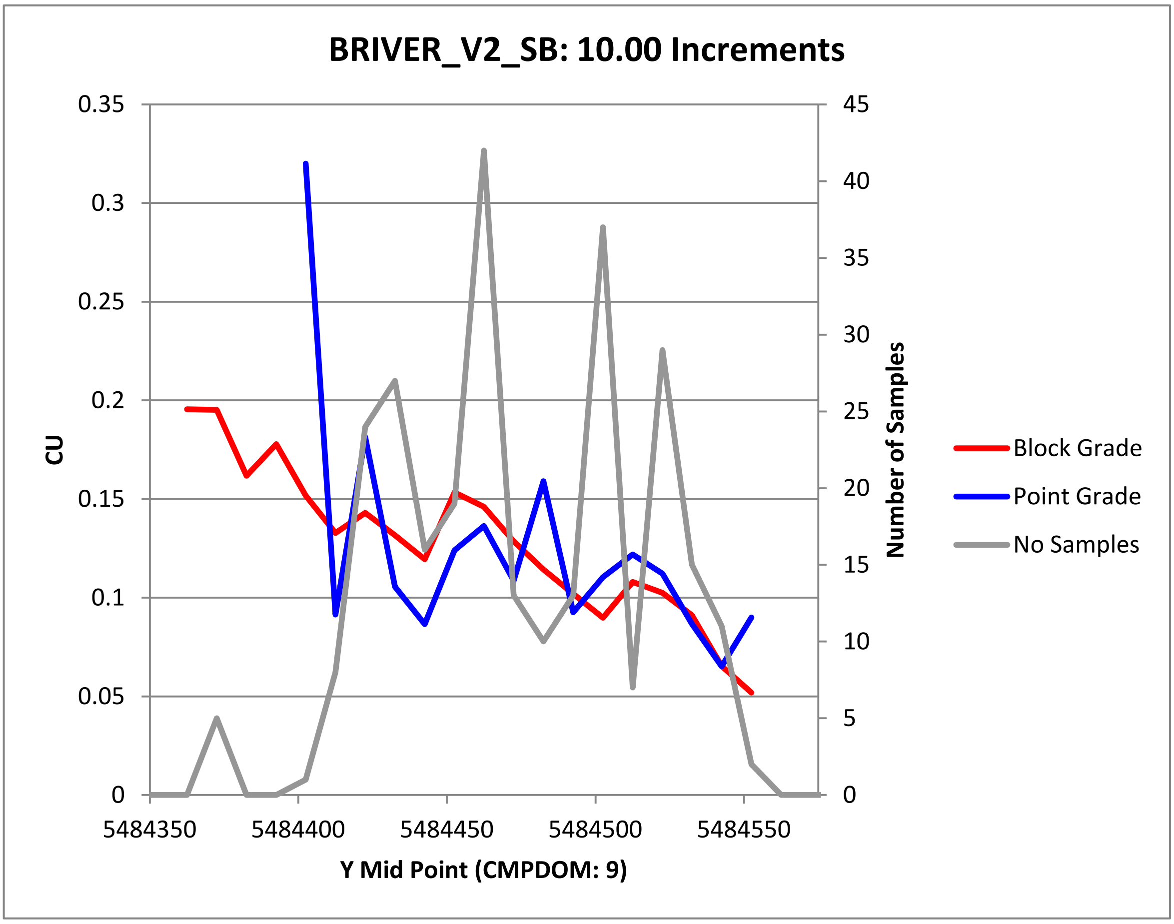

BRIVER_V2_SB: 10.00 Increments
CU
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
40
35
30
25
20
15
10
5
0
Number of Samples
500
550
600
650
700
750
800
Z Mid Point (CMPDOM: 6)
Block Grade
Point Grade
No Samples

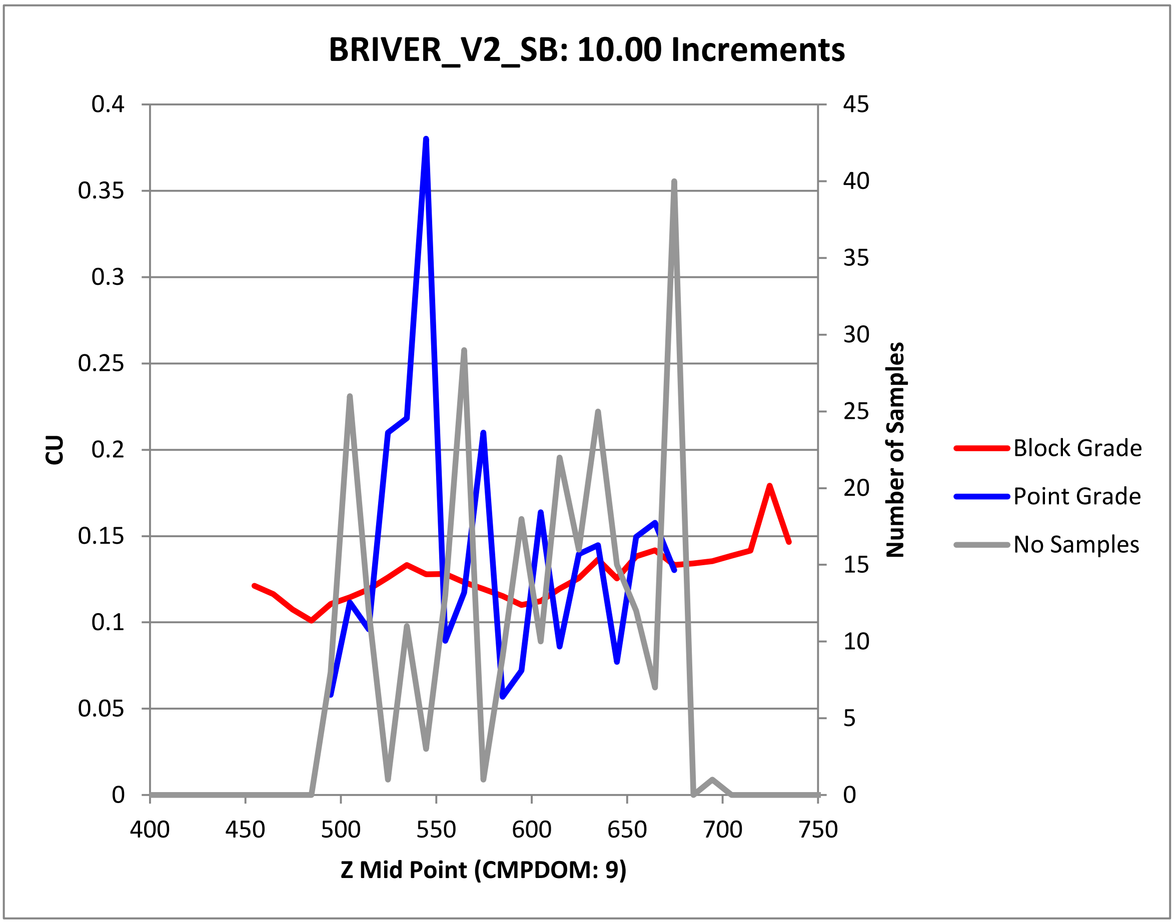

BRIVER_V2_SB: 10.00 Increments
CU
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
18
16
14
12
10
8
6
4
2
0
Number of Samples
616850
616950
617050
617150
617250
617350
617450
X Mid Point (CMPDOM: 8)
Block Grade
Point Grade
No Samples


BRIVER_V2_SB: 10.00 Increments
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
CU
40
35
30
25
20
15
10
5
0
Number of Samples
5484150
5484200
5484250
5484300
5484350
5484400
5484450
Y Mid Point (CMPDOM: 8)
Block Grade
Point Grade
No Samples


BRIVER_V2_SB: 10.00 Increments
0.25
0.2
0.15
0.1
0.05
0
CU
45
40
35
30
25
20
15
10
5
0
Number of Samples
400
500
600
700
800
900
Z Mid Point (CMPDOM: 8)
Block Grade
Point Grade
No Samples


BRIVER_V2_SB: 10.00 Increments
CU
Number of Samples
X Mid Point (CMPDOM: 9)
Block Grade
Point Grade
No Samples
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
40
35
30
25
20
15
10
5
0
616500
616600
616700
616800
616900


BRIVER_V2_SB: 10.00 Increments
CU
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Number of Samples
45
40
35
30
25
20
15
10
5
0
5484350
5484400
5484450
5484500
5484550
Y Mid Point (CMPDOM: 9)
Block Grade
Point Grade
No Samples


BRIVER_V2_SB: 10.00 Increments
CU
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Number of Samples
45
40
35
30
25
20
15
10
5
0
400
450
500
550
600
650
700
750
Z Mid Point (CMPDOM: 9)
Block Grade
Point Grade
No Samples