

The mineral resources are reported at a cut-off grade to reflect the “reasonable prospects” for economic extraction. SRK considers that portions of the Kitsault molybdenum deposit are amenable for open pit extraction, and has not considered underground mining methods for deeper portions of the deposit.

The “reasonable prospects for economic extraction” requirement was tested by designing a series of conceptual pit shells using the Lerchs-Grossman optimizing algorithm. These parameters were selected by SRK to represent an “optimistic” expectation reflecting the intent that the resource should comprise material that is potentially economically mineable. The reader is cautioned that the results from the pit optimization are used solely for the purpose of reporting mineral resources that have “reasonable prospects” for economic extraction by an open pit. After review of several scenarios considering different metal prices, design criteria and operating costs assumptions, SRK assumed a molybdenum price of US\$20.00/lb; a metallurgical recovery of 89% and slope angles of 40° in all areas. These parameters were selected by SRK to represent an “optimistic” expectation reflecting the intent that the resource should comprise material that is potentially economically mineable in the future.

This memo briefly summarizes the data and parameters used by Avanti to estimate the mineral resources of the Kitsault Project, using updated information from their 2008 drilling results. Key information is summarized to provide qualification for the formulation of a press release on these resources.

Data

The final Kitsault database was received from Avanti on March 11, 2009 and comprises data from both historic exploration programs and the 2008 program recently conducted by Avanti. The 2008 drilling has been audited and validated by SRK in accordance with the “CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines,” and has been used to assess the quality of the historic drilling data using comparative statistics. A summary of the data provided is given in Table 2. SRK reviewed and verified a portion of the 2008 database and considers it appropriate for resource estimation.

An assay QA/QC program was implemented by Avanti for the 2008 drilling program, including re-assays, insertion of standard reference materials (SRM) and blanks, coarse duplicate assays and systematic re-assays sent to external laboratories. SRK has reviewed the results of this program, and considers that the QA/QC program meets or exceeds industry standards and confirms that these data are appropriate for use in resource estimation.

Table 2: Summary of Data Provided by Avanti Mining, Inc. for the Kitsault Molybdenum Deposit, British Columbia, Canada, March 11, 2009

Operator	Drilling Period	No. of Holes	Meters Drilled
Kennecott	1960-1969	99	18,372.53
Climax	1974-1982	41	9,278.52
Avanti	2008	33	10,130.76
Total		173	37,781.81

Down-hole survey information is available for all boreholes measured at variable intervals.

Coordinate System

All drilling data as well as the topography and lithology wireframes have been provided digitally to SRK using the UTM coordinate system. Resource modeling and subsequent pit optimization work has been conducted in UTM coordinate space.

Topography and Lithology Wireframes

A topography wireframe DTM surface was provided by Avanti based on a survey conducted in 1992. A new Lidar survey was conducted during the 2008 field season, but the data is still being processed and was not available at the time of the current resource estimate. SRK conducted visual comparisons between the 2008 drillhole collars and the provided topography, and there is good agreement between the two. Mining was conducted at Kitsault during the 1970's and 1980's, and the 1992 topographic surface reasonably reflects the post mining surface observed at site. SRK considers that the topography provided digitally by Avanti is accurate and appropriate for use in resource estimation.

Avanti staff have constructed 3-D wireframe models for the three dominant lithologies (hornfels, granodiorite and diorite) based on drillhole log information. These solids were used only to assign density in the block model, and were not utilized in the grade estimation process.

Density

Specific gravity determinations were made using the wax seal method and drill core from the 2008 Avanti drilling. SRK conducted measurements on 13 Quartz monzonite samples, one Diorite sample, and 21 Hornfels samples. RDI Metallurgical Testing (RDI) measured specific gravity on 55 Quartz monzonite samples, 25 Diorite samples, and 18 Hornfels samples. Based on these measurements, specific gravity was assigned by rock type in the model. Assignments were as follows:

- Hornfels: 2.70t/m³,
- Diorite: 2.66t/m³, and
- Quartz Monzonite: 2.63t/m³.

Evaluation of Outlier Grades

Histograms and probability plots of the distribution of modeled elements were reviewed in order to identify the existence of anomalous outlier grades in the composite database. In addition, a decile analyses of the data was also conducted in order to quantify the distribution of contained metal with respect to the sample density.

Review of the physical location of these samples show that they tend to occur in a somewhat random pattern throughout the mineralized area and their effects are often limited by the relatively dense drillhole distribution throughout the deposit. Ultimately, it was decided that the effects of these higher-grade intervals would be limited during block grade interpolation using an "outlier limitation." Outlier samples above a defined threshold are limited to a maximum distance of

influence of 20m during block grade interpolation. The various limitation thresholds and resulting effects are summarized in Table 3 below.

Table 3: Summary of Outlier Limitations.

Element	Grade Threshold	Comments
Molybdenum	0.40% Inside shell	Affects 27 comps inside and 11 outside prob shell. Overall 1.7% reduction in contained Mo metal in model.
Molybdenum	0.25% Outside shell	40 comps affected. Overall 3.7% reduction in WO3 in model.
WO3	450ppm	6 comps affected. -14.3% Cu metal in model.
Cu%	0.15%	22 comps affected. -12.0% Pb metal in model.
Pb%	0.50%	Outlier limit not required.
Fe%	n/a	12 comps affected. -9.2% Ag metal in model.
Ag g/t	100gpt	

*metal reduction calculated in measured and indicated class resources

SRK conducted independent statistical analysis using the raw assay data provided by Avanti, and is in general agreement with the threshold values determined by Avanti.

Compositing

In order to retain the original characteristics of the underlying data, a composite length was selected which reflects the average original sample length. The generation of longer composites results in some degree of smoothing which could mask certain features of the data. The mean sample length is 3.1m and 79% of the intervals are exactly 3m in length (actually the most common sample intervals is 10ft, or 3.05m in length). A standard 3m composite sample length was generated for statistical evaluation and for use in grade estimations in the block model.

Drillhole composites were generated in 3m downhole lengths for the full length of the hole. Several holes were randomly selected and the composited values were checked for accuracy, and no errors were found. SRK generated an independent composite database, and statistical comparisons with the Avanti composite database show close agreement.

Probability Shell

In the absence of a domain boundary or drillholes which sufficiently limit the lateral extent of the mineralization in the deposit, a probability shell has been generated which represents the area in which molybdenum mineralization is likely to occur. The inflection at a grade of 0.05%Mo occurs at the 40th percentile of the distribution and indicates a reasonable point to divide the distribution into less well mineralized and more strongly mineralized portions. Indicator values were assigned at this grade threshold (value of “1” assigned to composites >0.05%Mo and “0” to intervals <0.05%Mo) and an indicator variogram was generated from the indicator values. Ordinary kriging was used to estimate probability values in blocks. The results were compared to the original Mo% grades in drilling and it was decided that a 50% probability threshold formed a reasonable division of the data (i.e. there is a >50% chance that blocks within the shell will exceed 0.05% Mo).

Due to a lack of drilling at depth, the probability shell has been limited to a maximum depth of 250m. Composited drillhole samples and blocks in the model have been assigned unique code values representing inside and outside of the probability shell. These are then matched during composite retrieval for block grade interpolation.

Search orientation and ranges are based on a 0.05% Mo indicator variogram, with the variogram parameters provided in Table 4. Probabilities were estimated using ordinary kriging (OK) using search distances, search orientation and composite selection criteria as provided in Table 5.

Table 4: 0.05% Molybdenum Indicator Variogram Parameters – Molybdenum

Zone	Nugget	S1	S2	1 st Structure			2 nd Structure		
				Range (m)	AZ	Dip	Range (m)	AZ	Dip
All data	0.150	0.128	0.722	102	32	4	518	140	43
	Spherical			70	302	0	272	304	46
				35	212	86	128	42	8

Note: Indicator variograms conducted on 3m DH composite data

Table 5: Indicator Interpolation Parameters

Interpolation Domain	Search Ellipse Range (m)			# Composites			Other
	X	Y	Z	Min/block	Max/block	Max/hole	
In/out >0.05%Mo probability shell	300	300	300	13	24	6	6 DH/octant

Variogram Analysis

The degree of spatial variability in a mineral deposit depends on both the distance and direction between points of comparison. Typically, the variability between samples increases as the distance between samples also increases. If the degree of variability is related to the direction of comparison, then the deposit is said to exhibit anisotropic tendencies which can be summarized with the search ellipse. The semi-variogram is a common function used to measure the spatial variability within a deposit.

The spatial evaluation of the data in this report has been conducted using a correlogram rather than the traditional variogram. The correlogram is normalized to the variance of the data and is less sensitive to outlier values, generally giving better results.

Variograms were generated using the commercial software package Sage 2001[®] developed by Isaacs & Co. Multidirectional variograms were generated for composited molybdenum sample data. Note that one variogram was produced from all of the data to be used both inside and outside the probability shell during grade interpolation. This approach is an attempt to retain some degree of continuity of grade across the boundary where it (locally) exists. The results are summarized in Table 6.

Table 6: Variogram Parameters for Molybdenum, Silver, Lead and WO₃***Molybdenum***

				1 st Structure			2 nd Structure		
Zone	Nugget	S1	S2	Range (m)	AZ	Dip	Range (m)	AZ	Dip
Inside shell	0.300	0.323	0.377	53	4	2	1164	310	0
	Spherical			33	274	1	275	218	84
				11	169	88	100	40	6
Outside shell	0.257	0.257	0.486	208	205	60	3693	179	83
	Spherical			37	106	5	400	178	-7
				12	14	29	115	88	0

Silver

				1 st Structure			2 nd Structure		
Zone	Nugget	S1	S2	Range (m)	AZ	Dip	Range (m)	AZ	Dip
All data	0.400	0.469	0.131	69	275	-34	1312	272	51
	Exponential practical range			38	360	8	456	88	38
				7	258	54	377	359	-2

Lead

				1 st Structure			2 nd Structure		
Zone	Nugget	S1	S2	Range (m)	AZ	Dip	Range (m)	AZ	Dip
All data	0.337	0.584	0.078	40	122	13	1575	175	74
	Exponential practical range			21	335	75	604	47	10
				4	214	8	308	135	-12

WO₃

				1 st Structure			2 nd Structure		
Zone	Nugget	S1	S2	Range (m)	AZ	Dip	Range (m)	AZ	Dip
All data	0.174	0.534	0.292	155	60	1	962	55	-68
	Exponential practical range			50	318	85	379	21	-16
				9	150	4	209	106	15

(Correlograms conducted on 3m DH composite data)

SRK conducted independent variogram analysis on the provided data set and was able to closely replicate the results provided by Avanti.

Kitsault Block Model

A block model was initialized in MineSight® with the dimensions are provided in Table 7. The selection of a nominal block size measuring 10m x 10m x 10m is considered appropriate with respect to the current drillhole spacing as well as the selective mining unit (SMU) size typical of an operation of this type and scale.

Table 7: Kitsault Block Model Specifications

Direction	Minimum	Maximum	Block size (m)	# Blocks
East	472,300	474,300	10	200
North	6,140,900	6,142,800	10	190
Elevation	-200	1000	10	120

Blocks in the model have been coded on a majority basis with the probability shell domain. During this stage, blocks along a domain boundary are coded if >50% of the block occurs within the boundaries of that domain.

The proportion of blocks which occur below the topographic surfaces are also calculated and stored within the model as individual percentage items. These values are utilized as a weighting factor in determining the in-situ resources for the deposit.

Grade Interpolation

The block model grades for molybdenum have been estimated using Ordinary Kriging (OK). The results of the OK estimation were compared with the Hermitian (Herco) polynomial change of support model (also referred to as the Discrete Gaussian correction). The Kitsault OK model has been generated with a relatively limited number of samples in order to match the change of support or Herco grade distribution. This approach reduces the amount of smoothing (averaging) in the model and, while there may be some uncertainty on a localized scale, this approach produces reliable estimations of the recoverable grade and tonnage for the overall deposit.

All grade estimations use length weighted composite drillhole sample data. Sample data is not mixed across the probability shell boundary and the variogram parameters listed in Table 6 are used both inside and outside the probability shell. The interpolation parameters are summarized by domain in the Table 8.

Table 8: Interpolation Parameters

Interpolation Domain	Search Ellipse Range (m)			# Composites			Other
	X	Y	Z	Min/ block	Max/ block	Max/ hole	
Mo% In >0.05%Mo probability shell	300	300	100	6	15	5	1 DH/quadrant
Mo% Out prob shell	300	300	100	6	20	5	1DH/quadrant
WO ₃ in/out shell	300	300	100	6	20	5	1DH/quadrant
Cu, Pb, Fe, Ag	300	300	100	6	20	5	1DH/quadrant

*Note probability shell used as hard boundary for Mo and WO₃ models only.

The grades of all secondary elements (Cu, Pb, WO₃ and Ag) have been estimated using the inverse distance weighting (ID) estimation method. The probability shell was not used during the estimation of these elements.

Resource Classification

The mineral resources at the Kitsault deposit have been classified in accordance with the CIM definition standards for mineral resources and mineral reserves (December 2005). The classification parameters are defined in relation to the distance to sample data are intended to encompass zones of reasonably continuous mineralization.

During the grade estimation process, distance to closest composite, average distance and number of drillholes used to estimate the block were stored in the block model. Using these values as a basis, blocks were classified as follows:

- *Measured Mineral Resources* – Blocks with Mo% grades estimated using a minimum of three drillholes within an average distance of 35m;
- *Indicated Mineral Resources* – Blocks in the model estimated using a minimum of three drillholes which are at maximum average distance of 90m; and
- *Inferred Mineral Resources* – Blocks in the model not meeting the criteria for Indicated resources but are within a maximum distance of 150m from a drillhole.

This classification is based on detailed drillhole spacing analysis and assignment of confidence intervals, a discussion of which is beyond the scope of this memorandum. SRK has reviewed this analysis and is of the opinion that it forms a defensible basis for resource classification.

Block Model Validation

Various measures have been implemented by Avanti to validate the resulting resource block model. These measures include the following:

- Visual comparison of the composited drillhole data with the resource model blocks;
- Model checks for change of support (Discrete Gaussian or Hermitian Polynomial Change of Support method);
- Comparison of interpolation parameters (inverse distance and nearest neighbor); and
- Swath Plots (drift analysis).

SRK has reviewed the results of these comparisons, and is of the opinion that all comparisons show close agreement with the underlying OK model. SRK also conducted independent comparisons, which included generation of independent inverse distance and nearest neighbour models, using independent grade estimation parameters, as well as statistical comparisons between the OK block grades and the underlying composite data. SRK was able to closely reproduce both the tonnage and grades in the global OK model, and is of the opinion that both grade estimation and resource classification methodologies utilized by Avanti are in accordance with Canadian Securities Administrators' National Instrument 43-101.

Mineral Resource Sensitivity

In order to assess the impact of cut-off grade on contained metal, tonnage and grade were summarized within the 0.04% Mo resource pit above a series of molybdenum cut-offs (Tables 9 and 10). As can be observed from these sensitivities, the resource is relatively insensitive to cut-off grades in the 0.04 to 0.06% Mo range, which is likely the cut-off grade range of economic interest.

Table 9: Molybdenum Cut-off Grade Sensitivity Analysis within Resource Pit – Measured and Indicated Resources

Cut-off Grade (Mo%)	Quantity (Mt)	Mo Grade (%)	Contained Metal Mo (Mlbs)
0.02	315	0.072	501
0.025	292	0.076	490
0.03	257	0.083	468
0.035	234	0.088	452
0.04	207	0.094	430
0.045	197	0.097	420
0.05	189	0.099	412
0.055	183	0.100	405
0.06	178	0.102	398
0.065	170	0.103	388
0.07	163	0.105	377
0.075	151	0.108	357
0.08	134	0.111	329

Table 10: Molybdenum Cut-off Grade Sensitivity Analysis within Resource Pit – Inferred Resources

Cut-off Grade (Mo%)	Quantity (Mt)	Mo Grade (%)	Contained Metal Mo (Mlbs)
0.02	77	0.042	72
0.025	64	0.047	66
0.03	45	0.054	54
0.035	36	0.060	48
0.04	26	0.069	40
0.045	23	0.072	37
0.05	20	0.076	34
0.055	17	0.080	31
0.06	16	0.082	28
0.065	14	0.084	27
0.07	13	0.085	25
0.075	10	0.090	20
0.08	7	0.095	15

Discussion and Conclusions

Avanti has completed a significant volume of work during the 2008 field season, which included a 33 hole (10,131m) infill drilling program. This program was focused on both conversion of inferred to indicated resources as well as the confirmation of the historical drilling results. SRK has reviewed the results of this program, and is of the opinion that the assay results from the 2008 drilling compare closely with the assays from the historic drilling and are overall confirmatory. In addition, the 2008 program was successful in converting inferred resources to indicated and measured resources, and the current drillhole spacing within the Kitsault deposit appears sufficient to advance the project to prefeasibility level studies.