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April 11, 2006

Mr. Kevin McDonnell
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Subject: Cost Estimate of Remaining Decommissioning and Reclamation Liabilities at Brewery Creek Mine as of December 31, 2005

Executive Summary

SteveJan Consultants Inc. (SJCI) has prepared an updated liability cost estimate for the Brewery Creek Mine located near the town of Dawson City in the Yukon Territory. The report was commissioned by the Department of Environment of the Yukon Government. The update is based on a site inspection by the author on September 12, 2005 and work completed to the end of 2005. This follows earlier liability estimates as of September and June of 2004 and September of 2003, all undertaken by SJCI.

The mine is owned by Alexco Resource Corporation, previously Viceroy Minerals Corporation. Mining operations at the site ceased in 2000 with gold recovery continuing until the end of 2001. Decommissioning and reclamation activities began in mid 2002. With the end of the summer of 2005 work period, significant progress has been achieved. A number of tasks remain for 2006 and 2007, with longer-term monitoring and maintenance of the site expected to last for a 15-year period to 2018.

The updated cost estimate as of December 31, 2005 is $1,988,675 versus $2,780,000 in September 2004. These represent a significant reduction from the September 2003 estimate of $5,000,000 (SJCI 2004a).

An outstanding closure liability estimate as of September 2004 prepared by SRK was $2,080,000 (SRK 2004).

A meeting was held between the parties on March 28, 2006 to compare the two reports and arrive at a concensus concerning current liability at the site. This report provides information that has been adjusted based on that meeting.

The following table outlines the liability estimates in the eight cost centers previously utilized in evaluating the decommissioning and reclamation liabilities at the site. A ninth cost center provides for mitigative contingencies.

Summary of Remaining Costs

Cost Center	December 2005 SJCI Liability Cost Estimate	September 2004 SJCI Liability Cost Estimate	SRK Liability Cost Estimate for September 2004
Mine Area Reclamation	$259,448	$227,842	$201,269
Site Facilities Removal and Reclamation	$212,885	$213,631	$219,515
Leach Pad Detoxification	$0	$0	$0
Manpower – 2006	$73,425	$79,650	$64,125
General Services & Administration (GS&A) – 2006	$110,400	$77,300	$44,626
Process Water Treatment	$12,500	$50,000	$0
Leach Pad Reclamation	$58,978	$53,332	$60,054
Post-Closure Monitoring	$547,250	$670,335	$562,773
Sub-total	1,117,408	1,371,820	1,152,362
Contingencies on above	$157,517	$304,465	$135,363 [4]
Mitigative Contingencies	$713,750	$1,102,750	$792,968
Total	**$1,988,675**	**$2,779,305**	**$2,080,693**

The three reports compared above include:

- December 2005 Liability Cost Estimate - the latest estimate based on a site inspection on September 12, 2005 and subsequent information, as presented in this report;
- September 2004 Liability Cost Estimate - the previous cost estimate report based on a site inspection on September 23, 2004; and
- SRK Liability Cost Estimate for September 2004 – cost estimate numbers from their September 2004 site inspection and resultant closure liability report (SRK 2004).

Overall, the estimate of site closure liability has dropped by $791,300 over the past 15 months (i.e. December 2005 versus September 2004). Most of the reduction is due to continued removal of site facilities, equipment and materials and reclamation of those areas, reduced manpower and General Services & Administration costs, and reduced costs and timeline for operating the BTC and due to one more year of post-closure monitoring and BTC operation having passed.

However, work remains in establishing sustainable vegetation over significant portions of the minesite especially those that have suffered erosion damage and die-back of vegetation due to droughts over the past few years since various seeding and fertilizing campaigns have been undertaken.

1. Introduction

Steve Januszewski of SteveJan Consultants Inc. (SJCI) has prepared this cost estimate based on acceptance of an SJCI Proposal dated August 30, 2005 to Ms. Heather Jirousek, Program Advisor-Water Resources, of the Environmental Programs Group, Department of Environment (DOE) of the Yukon Territorial Government (YTG). This revised cost estimate considers remaining decommissioning and reclamation liabilities at the Brewery Creek mine site as of December 31, 2005.

Section 2 provides an overview of the Background and Methodology utilized in the preparation of this report. Section 3 begins with a summary of the remaining liabilities and compares them to those identified as of a year earlier. It then lists remaining liability estimates for all mine areas. Section 4 presents the Conclusions and Recommendations.

2. Background & Methodology

2.1 Background

The Brewery Creek Mine is currently owned by Alexco Resource Corp (Alexco). The site was previously owned by Viceroy Minerals Corp (VMC).

SJCI has prepared several reports for YTG on issues relating to the decommissioning of the Brewery Creek Mine site commencing in late 2003. The work has included:

- A Liability Cost Estimate of the Brewery Creek Mine as of September 23, 2004 in a report dated Dec 17, 2004. The revised report included adjustments to the report following a meeting with Brewery Creek company staff and their consultant Daryl Hockley of SRK and the Yukon Government with their consultant Steve Januszewski of SJCI in which differences in the estimates prepared by SRK and SJCI were discussed and agreement reached on remaining tasks and their liabilities;
- A Liability Cost Estimate of the Brewery Creek Mine as of June 15, 2004 utilizing a September 2003 Liability Cost Estimate of the site by Steffen, Robertson and Kirsten (Canada) Inc. (SRK 2003) updated with observations from a tour of the site on the above date, supplemented by progress information from YTG. The report was issued by SJCI on July 16, 2004; and
- A Liability Cost Estimate for the Brewery Creek Mine as of September 2003. This date coincided with the date used by SRK on behalf of the proponent, Viceroy Minerals Corporation's (VMC) submission in November 2003. The estimate for YTG provided by SJCI included a provision for risk and a suggested Liability Reduction Schedule for the site for the years 2004-2018. The report was issued by SJCI on July 9, 2004.

This current report considers reclamation efforts undertaken by Alexco from the end of September 2004 to December 31, 2005. It provides a breakdown of remaining closure components based on the same headings as were used in the previous reports and the 2001 Decommissioning and Reclamation Plan by VMC, for ease of comparison.

This report is based on information available to the author at the time of its preparation. It has been produced for the Yukon Territorial Government by SteveJan Consultants Inc. SJCI accepts no liability for its use by any other party.

2.2 Methodology

The report provides a liability cost estimate update as of December 31, 2005 based significantly on a September 12, 2005 joint site inspection undertaken by the author and Mr. Daryl Hockley of SRK accompanied by Mr. Peter Johnson of Alexco. Mr. Hockley was on site to undertake an evaluation of current liabilities and to undertake a geotechnical inspection of the site, on behalf of Alexco.

Draft reports were prepared from the site inspection by SJCI (for YTG) and SRK (for Alexco) and were available for review by the other party. A meeting was held between the parties on March 28, 2006 to compare the two reports and arrive at a concensus concerning current liability at the site. This report provides information that incorporates changes agreed to at that meeting. SRK was to review their report, make adjustments and re-issue it.

In this report, the decommissioning and reclamation plan is broken down to nine sub-sections with individual tasks below them. The first eight include the various aspects of the site and components for consideration. The ninth area incorporates additional Mitigative Contingencies, and is discussed later in this section.

The nine areas include:

1. Mine Area Reclamation
2. Site Facilities Removal and Reclamation
3. Leach Pad Detoxification (considered complete)
4. Manpower-2006
5. General Services and Administration
6. Process Water Treatment
7. Leach Pad Reclamation
8. Post Closure Monitoring and Maintenance
9. Mitigative Contingencies

Considerations in preparing the updated liability cost estimate included:

- Information collected from the company to the end of 2005 included a year-end annual report and several additional studies issued after the 2005 summer season;
- Current status of the site based on a visual inspection conducted on Sept. 12, 2005;
- The SJCI liability cost estimate report as of September 2004;
- The liability cost report by SRK Consultants that provided a liability estimate as of September 2003. The general format of the cost tables and information in them was utilized again, as they were generally accepted by YTG in previous reviews of closure

liability by SJCI. Percent completion of individual items was adjusted, as required based on progress reclaiming the site over the past year;

- The report makes use of contractors' costs rather than in-house Alexco costs. Unit costs for equipment are based on previously agreed to unit costs provided in SRK's report with a 5% cost of living allowance adjustment for 2005 to unit costs used in the previous year's report. This follows a 3% increase in the previous 2004 report to incorporate the annual average rate increase in the 2003-2004 edition of "The Blue Book" by the B.C. Road Builders and Heavy Construction Association and authorized by the Government of British Columbia. The cost increases are reflective of cost of living allowance adjustments, but do not reflect recent price increases due to rising fuel prices. No factor was incorporated for recent fuel price increases;
- The report does not provide additional costs that would fall to YTG should Alexco become insolvent and the government take on the task of managing the site and continuing the reclamation and decommissioning work. A considerable sum of additional monies would be required, although this is outside the normal scope of evaluating closure liability costs for a mine. This aspect was discussed in an earlier report (SJCI 2004c);
- A discounted value for the remaining (future years) tasks required to complete the decommissioning and reclamation program was not provided;
- Detailed cost tables in Section 3 include only those components with work remaining to be done. Completed tasks are not shown;
- No credit is given for re-sale or salvage values of equipment and structures from the site, as is the norm in most mine closure liability cost estimates. The bulk of structures and equipment removal has already been completed and thus the value on assets remaining on the site is limited;
- The report incorporates a contingency for uncertainties in the costs to undertake and complete the tasks specified in this report;
- The report also includes a Mitigative Contingency estimate for additional remedial actions that may be required as they are considered "possible", based on discussions with YTG Energy Mines and Resources (EMR) and DOE staff and considering their role as the lead regulator agency overseeing the minesite;
- Other changes from previous cost estimates are described in specific subsections of this report in Section 3.

3. Decommissioning and Reclamation Liabilities

The summarized results of this report are provided in Table 1, below. The Table also includes a comparison to the SJCI and SRK reports assessing the site as of a year earlier as of September 2004.

Table 1
Summary of Remaining Costs

Cost Center	December 2005 SJCI Liability Cost Estimate [1]	September 2004 SJCI Liability Cost Estimate [2]	SRK Liability Cost Estimate for September 2004[3]
Mine Area Reclamation	$259,448	$227,842	$201,269
Site Facilities Removal and Reclamation	$212,885	$213,631	$219,515
Leach Pad Detoxification	$0	$0	$0
Manpower – 2006	$73,425	$79,650	$64,125
General Services & Administration (GS&A) – 2006	$110,400	$77,300	$44,626
Process Water Treatment	$12,500	$50,000	$0
Leach Pad Reclamation	$58,978	$53,332	$60,054
Post-Closure Monitoring	$547,250	$670,335	$562,773
Sub-total	1,117,408	1,371,820	1,152,362
Contingencies on above	$157,517	$304,465	$135,363 [4]
Mitigative Contingencies	$713,750	$1,102,750	$792,968
Total	**$1,988,675**	**$2,779,305**	**$2,080,693**

Notes:
1 Cost for each cost center includes a contingency factor, as shown in Table 2, below
2. SJCI, 2004b
3. SJCI, 2004c
4. SRK has no contingency factor included in their Mitigative Contingencies cost center

The remainder of this section outlines the cost estimates in the various areas of the mine decommissioning and reclamation plan as of December 31, 2005.

An estimation of the contingency factors for each of the cost centers is provided, as shown in the table below. All of the costs contain uncertainties due to the level of detail in this report. The contingency factor used was generally between 10 and 25% depending on the uncertainty of the cost estimates in the opinion of the author. No contingency was added for the Mitigative Contingency items.

Table 2 Contingencies included in Liability Cost Estimate by Cost Center

Cost Center	December 2005 Cost Estimate	Contingency Factors (%)	Contingency Factors ($)	Total Area Cost Estimate
Mine Area Reclamation	$216,206	20%	$43,241	$259,448
Site Facilities Removal & Reclamation	$177,404	20%	$35,481	$212,885
Leach Pad Detoxification	$0	N/A	0	$0
Manpower – 2006	$66,750	10%	$6,675	$73,425
General Services & Administration (GS&A) – 2006	$100,400	10%	$10,040	$110,440
Process Water Treatment	$10,000	25%	$2,500	$12,500
Leach Pad Reclamation	$49,148	20%	$9,830	$58,978
Post-Closure Monitoring	$497,500	10%	$49,750	$547,250
Mitigative Contingencies	$713,750	0%	$0	$713,750
Total	**$1,831,158**		**$157,517**	**$1,988,675**

A number of individual tasks may or may not have been completed as per the decommissioning and reclamation plan, as they were not observed by the author during the September 2005 site visit. A selection of items with uncertain status and their estimated status for this report is outlined below:

Table 3 Liability Cost Items of Uncertain Status

Description	Status Accepted for this Report	Report Section Reference	Comments
Results of annual geo-technical inspection	No issues of concern were found	3.1	
Improved instrumentation on Blue WRSA lysimeter	Not Completed	3.1	
Results of metal and salt uptake in vegetation study	No issues of concern were found	3.1	
Piping remaining (general and land application)	Not completed	3.2	
Decommissioning of 3 Sewage septic systems	2/3 completed	3.2	
Results of site contamination survey	No additional areas of concern were found	3.2	

3.1 Mine Area Reclamation

Minimal reclamation work appears to have been undertaken in 2005, after an aggressive summer season in 2004. Some minor work was undertaken in 2005 to reduce some surface erosion by redirecting surface runoffs, especially along the main haul road and secondary roads. However, in some cases this work has introduced additional areas requiring on-going monitoring and maintenance.

There appears to have been no maintenance revegetation work during the 2005 late summer/early fall season. This includes areas suggested for attention in the last cost estimate report by SJCI (2004a). Many areas appear to have had only one application of a seed/fertilizer mix. Due to dry weather in 2005 and no maintenance seeding or fertilizing, previous re-vegetation efforts have suffered significant dieback and in some cases this has led to weakened physical stability as evidenced by increased erosion gulleys and slides of materials into open pits. Refer to photo plates in Appendix A.

And from the SJCI report from 2004, still applies;
Significant work has been undertaken in reclaiming mine areas in 2004. However, a number of areas have not been completed, or have over-steepened slopes that require further re-grading. In addition, several areas require total area seeding and fertilizing, and a number of areas required maintenance seeding and fertilizing due to poor take to date. This is not uncommon, but must be considered by VMC as only one application of seed and fertilizer mix rarely restores an area to required standards. It is up to VMC to demonstrate self-sustaining vegetation, that will also stabilize surfaces against the effects of long-term erosion and that is consistent with surrounding areas, is in place.

A cost for mobilization and demobilization of several pieces of equipment will be required to complete the remaining work in this area. The equipment will consist of at least a bulldozer, haul truck, backhoe, front end loader, and seeding/fertilizing equipment. The equipment sizing utilized in this cost estimate report is several sizes smaller than the mine utilized during operation.

A metal and salt uptake study required by the Quartz License has been completed according to Brad Thrall (Thrall B, 2006). The studies were completed by Labarge last fall and the report is expected to be submitted with the 2005 Annual Report.

Remaining cost items under the Mine Area Reclamation area include:

- Mob & Demob of several pieces of equipment and operators for remaining work;
- Ultimate removal of remaining ½ of warehouse/maintenance shop building;
- Erosion repairs estimated at 5% of original reclaimed areas including Canadian, North Golden, Lucky, Upper & Lower Fosters, Pacific, Moosehead, 10% of Blue, South Golden, and 15% of Kokanee;
- Re-seed and fertilize most of the areas previously seeded, including 25% of Canadian, Lower Fosters, Moosehead, 50% of Blue Open Pit, North Golden, Lucky, Upper Fosters, Pacific, 75% of Blue WRSA, Kokanee, and entire 100% of Lower Fosters, and Moosehead;
- Install sediment control works at the outlet of the Pacific Open Pit;
- Complete work on decommissioning the haul road, and capping and establishing vegetation over the landfill area in the Moosehead Open Pit;
- Ultimate scarification, re-contouring and seeding of the perimeter roads including the mine access road; and
- Haul road slopes and side berms require minor (5%) re-sloping, and mechanized broadcast seeding and fertilizing (50% of area) and complete (100%) hand broadcast seeding of outlying areas

A provision has been provided for an additional year's worth of active reclamation work to be undertaken in 2007, after the specified work is undertaken in 2006. The 2007 work would consist of 25% of the erosion repair work and 100% of the total area covered with seed/fertilizer in 2006. This maintenance is required to affirm sustainable stability and vegetation in the mine areas.

Table 4 lists the individual components and an estimate of remaining work and costs by mine area.

Table 4 Mine Area Reclamation – Remaining Activities

Area and Individual Components (% Remaining as of Sep 03 [1])	**SRK Estimated Remaining Subtotals Sept 2003**	**Estimated % Remaining Sept. 12, 2005 (status Sep04, if different)**	**Estimated Remaining Cost as of Sept. 12, 2005**
Mobilization / Demobilization (Contractor Equipment)			$21,000
Mob/Demob for remaining work			$21,000
Canadian Open Pit	$5,153		$5,544
2005 erosion repairs (5%)		5%	$4,583
2005 seeding & fertilizing (25%)		25%	$961
Blue Open Pit	$2,753		$5,924
2005 erosion repairs (5%)		10% (was5%)	$4,889
2005 seeding & fertilizing (25%)		50%	$1,035
Blue WRSA	$20,386		$14,341
2005 erosion repairs (5%),		10% (was 5%)	$11,002
2005 seeding & fertilizing (25%)		75% (was 50%)	$3,339
ARD study (100%)		0%	$0
Kokanee Open Pit	$16,437		$15,086
2005 erosion repairs (15%),		15%	$9,778
2005 seeding & fertilizing (40%)		75% (was 40%)	$5,308
North Golden Open Pit	$30,286		$4,495
2005 erosion repairs (15%)		5%	$2,139
2005 seeding & fertilizing (40%)		50%	$2,356
South Golden Pit	$782		$1,682
2005 erosion repairs (5%)		10% (was 5%)	$1,392
2005 seeding & fertilizing (25%)		50% (was 25%)	$290
Lucky Open Pit	$29,217		$2,600
2005 erosion repairs (15%)		5%	$815
2005 seeding & fertilizing (25%)		50% (was 25%)	$1,785
Covered in Mitigative Contingencies:		50% (was 100%)	$0
-backfill sinkholes, stabilize slope in pit			
-Stabilize slump area in road-unload some additional material		100%	$0
Upper Fosters	$2,062		$2,604
2005 erosion repairs (5%)		5%	$1,833
2005 seeding & fertilizing (25%)		50% (was 25%)	$771
Lower Fosters	$4,193		$4,465
broadcast seed/fertilize (100%);		100%	$2,139
2005 erosion repairs (5%);		5%	$1,861
2005 reseeding (25%)		25%	$465
Pacific Open Pit & Silt Borrow Area	$11,986		$14,150
sediment control works-road swale & rip-rapped channel,		100%	$5,083
2005 erosion repairs (5%);		5%	$6,620
2005 seeding & fertilizing (25%)		50% (was 25%)	$2,447

Table 4 Mine Area Reclamation – Remaining Activities (continued)

Area and Individual Components (% Remaining as of Sep 03 [1])	**SRK Estimated Remaining Subtotals Sept 2003**	**Estimated % Remaining Sept. 12, 2005 (status Sep04, if different)**	**Estimated Remaining Cost as of Sept. 23, 2004**
Moosehead Open Pit	$36,743		$13,471
cap for landfill (100%);		25% (was 50%)	$1,313
overflow sediment control works (100%);		0% (was 20%)	-
Spread growth media with dozer (100%)		20%	$310
broadcast seed/fertilize (100%);		100%	$1,281
2005 erosion repairs (5%);		5%	$1,528
decom haul road (100%);		25% (was 50%)	$5,899
2005 seeding & fertilizing (25%)		25%	$3,140
Perimeter Roads (11 km; main & other roads)	$60,840		$60,840
Scarify & Re-contour (100%)			
Broadcast seed / fertilize16.5 ha (100%)			
(SRK estimate used)			
Re-Slope Haulroad Slopes & Side Berms (excl. Lucky area)	$60,371		$7,621
Backhoe over-steepened slopes (75%)		5% (was 10%)	$2,161
Broadcast seed / fertilize -mechanized (100%)		50% (was 100%)	$525
Broadcast seed / fertilize -hand (100%)		100%	$4,935
Main Haul Road	$232,345		$-
Remove Six Culverts (95%)		0% (was 5%)	-
Additional year of erosion repairs & seeding / fertilizing equal to that identified above [2]			$42,385
Erosion repairs;			$11,610
Seeding and Fertilizing			$30,775
Metal Uptake Studies	$10,000	0% (was 100%)	$0
Total	**$538,894**		**$216,206**

1 based on SRK 2003, Tables 5 & 6 and SJCI 2004c

2 Cost is equivalent to that provided in table for all individual areas for 1) erosion repairs and mntce to 25% of yr1 (2006) area, and 2) seeding and fertilizing of 100% of yr1 area.

3.2 Site Facilities Removal and Reclamation

Some of the remaining items include:

- Half of the main warehouse and shop building that continues to be used, as required;
- The Exploration office and core logging facility;
- Revegetation of the ADR plant and surrounding area;
- Laura Creek Pumphouse has been removed and the access road scarified. However, the area has not be revegetated and road culverts need to be removed;
- Some piping still remains including 10% of various surface piping and 100% of land application piping;
- The general site area requires removal of a number of culverts and ditching, re-grading/scarifying, capping with growth media, and revegetation;
- A quantity of reagents and scrap materials remain in the camp/laydown area adjacent to the mine site entrance;

- Land farming of the contaminated soils in several of the fuel/oil/equipment storage areas will likely be required. It may be possible to gather all the materials into the lined oil storage area and construct a bio-remediation/land farm cell.
- The sewage septic system for the remaining office/warehouse/ shop area is still available for use and will require decommissioning;
- Final cleanup of the materials in the Camp area boneyard is still required. Some materials were removed in 2005 including batteries, spent carbon to Idaho for reprocessing, mercury, assay lab cuppels and slag (buried in top of Cell 7 in heap as per permission from Chief Engineer of Mines), and miscellaneous small buildings, pipe, scrap steel, wire etc that was sold to local individuals and businesses (Thrall B, 2006). Refer to Photo Plate 9 in Appendix A showing the area as of September 2005 and some of the items in the area;
- A provision has been added equivalent to the estimated cost for the eventual removal of the effluent and heap treatment systems. This includes the existing treatment ponds, piping and pond contents. The treatment ponds remain effectively unaltered since operations. The second (Barren) process pond has been partially filled with a mixture of materials to enable it to operate as a Biological Treatment Cell (BTC). The costs for decommissioning the treatment and process ponds had previously been estimated at $75,000 (SJCI 2004b) but over the summers of 2004 and 2005 a number of the components have been removed. The current estimate is $50,000. Provision for this future cost should remain in place until the end of the 5 year period BTC treatment period proposed to last until 2008 when it is estimated the system will no longer be required and the facilities can be decommissioned and the area permanently reclaimed.

A breakdown of the components in this section is provided in Table 5.

Table 5 Site Facilities Removal and Reclamation – Remaining Activities

Area and Individual Components (% Remaining as of Sep 03 by SRK 2003, Table 7)	SRK Estimated Remaining Subtotals Sept 2003	Estimated % Remaining Sept. 12, 2005 (status Sept04, if different)	Estimated Remaining Cost as of Sept. 12, 2005
Warehouse/Maintenance Shop Building (100%)	$102,867	50%	$55,305
Exploration Office & Core Logging Facility (100%)	$9,372	100%	$9,841
ADR Plant Building (100%)	$121,348	1%(revegetation)	$985
Assay Lab Building (100%)	$41,545	0% (was <1%)	$0
Limo Silo (100%)	$18,430	0% (was <1%)	$0
ADR Plant Fresh Water Tank (100%)	$9,066	0% (was <1%)	$0
Laura Creek Pumphouse (100%) [1]	$14, 874	4%	$551
Surface Piping (100%)	$26,280	10%	$2,788
Removal of Land App. Piping	$4,800	100%	$5,250
General Site Re-grading / GM Placement/Runoff & Erosion Control	$59,626		$31,097
-site re-grading (100%)		25%	$1,733
-Haul & place soil cover (100%)		25%	$4,594
-Revegetation (100%) [2]		100%	$2,720
Culvert crossings-remove & re-slope (100%)		60%	$11,025
Runoff ditches (100%)		60%	$11,025
Removing Remaining Hydrocarbon Products	$7,000	33% (was 100%)	$2,450
Shipment of Remaining Reagents, Chemicals and Wastes (bulk chemicals are removed)	$10,500		$3,675
		33%	$3,675
Assay lab cuppels		0% (was 100%)	$0
Land Farming of Hydrocarbon Contaminated Soils (100%)	$7,120	100%	$7,476
			7,476
Close-out 3 Sewage Septic Systems	$3,250	33%	$1,134
Cleanup Site Boneyard (100%) [3]	$3,000	33% (was 100%)	$3,500
Close out Site Landfill (100%) [4]	$12,426	25% (was 100%)	$3,355
Site Contamination Survey (not included in SRK 2003)	$15,000	100%	$0
Process & Effluent Treatment System Ponds Rehabilitation (not included in SRK 2003)	$50,000	100%	$50,000
Total	**$696,829** [5]		**$177,404**

Notes:

1 Remaining work includes removal of overland electric cable ($250), culvert removal & ditching ($200) and revegetation of pump shack site ($100);

2 Adjusted revegetation cost from $1000/ha down to $500/ha. This is a more appropriate price for applying a seed and fertilizer mix using a broadcast seeder over generally flat terrain;

3 Main site boneyard is being used as the last storage yard prior to removal from site or disposal to site landfill. It has grown in the amount of material being stored and corresponding costs of removal to site landfill or off-site.

4 Remaining materials in the boneyard/camp area could be hauled to the municipal landfill in Dawson City. Alternately the landfill could be re-opened to accommodate remaining materials. However, this is not suggested due to the additional disturbance this work would involve to the site landfill and route to it for the heavy equipment and haulage equipment required.

5 Individual numbers do not add up to total at bottom as items that were no longer applicable in Sept 2005 were not provided cells with $0 value, for simplicity. Refer to SJCI report 2004a and 2004b for full details

3.3 Leach Pad Detoxification

No elements were considered remaining as of September 2005, as was the condition in September 2003 and 2004.

3.4 2006 Manpower

The author is not familiar with the details of Alexco's 2005 manpower levels at the mine site, so as to estimate 2006 requirements. It is understood that 3 people were on site for most of the summer. Based on this information and observations of manpower during the site visit of September 12, 2005, an estimate is provided in Table 6, below.

It was estimated that the equivalent to one technician level person will be overseeing the day to day work on site through the active summer season when the bulk of remaining mine area work should be completed. Additional tasks for this person include site security sweeps, water quality sampling, surveying, administering some final removal of assets and various waste/scrap materials from the site, etc. A site manager will likely spend an estimated 6 days per month (or 25% of full-time) over the course of the year for a variety of tasks that has not been charged out to specific tasks.

Manpower charges for 2007 should drop significantly if anticipated work for 2006 is undertaken.

Table 6 2006 Manpower Costs

Staff Member (based on SRK 2003, Table 9)	**Salary $/Annum**	**Time Requirement**	**2006 Cost**
Site Manager (B. Thrall)	$114,000	6 days/mo (25% of full-time)	28,500
Process Manager/Engineer	$84,000	-	
Mine Technician	$48,000	Full-time for 4 summer months	16,000
Mechanic	$60,000	-	-
Electrician	$60,000	-	
Equipment Operator	$60,000	Full-time for 4 summer months at 25% of time	5,000
Laborer	$36,000	-	
Subtotal			49,500
Salary Burden at 35%			17,250
Total			**66,750**

3.5 General Services and Administration - 2006

Site services have been significantly wound down. It is also anticipated that there will be minimal coverage required in 2006. No camp operations have been included.

The general services and administration cost center includes estimates of costs in 2006 outside are provided in Table 7. They include costs associated with tasks such not shown in the individual work areas such as the operation of the BTC (shown in Tables 9 & 10).

Table 7 2006 General Services & Administration

Category (based on SRK 2003, Table 11)	**Area Total**	**Monthly Costs ($)**											
		Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Misc. operating supplies													
Insurance	8500	500	500	500	500	1000	1000	1000	1000	1000	1000	500	500
Freight	8000	500	500	500	500	500	500	1000	1000	1000	500	500	500
Propane	0	0	0	0	0	0	0	0	0	0	0	0	0
Water supply	1000	0	0	0	0	200	200	200	200	200	0	0	0
Access road maintenance	12000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
General site grounds	15000	500	500	500	500	2000	2000	2000	2000	2000	500	500	500
Waste disposal	2000	0	500	0	500	0	500	0	500	0	0	0	0
Light vehicle costs	9250	250	250	250	250	1500	1500	1500	1500	1500	250	250	250
Travel and lodging	11500	500	500	500	500	1500	1500	1500	1500	1500	1000	500	500
Sat. phone, 2way radios	3300	100	100	100	100	500	500	500	500	500	200	100	100
Office equipment lease/rent	1800	100	100	100	200	200	200	200	200	200	100	100	100
Building maintenance	4500	500	500	500	500	500	500	500	500	500	500	500	500
Safety supplies	900	0	0	0	200	200	100	100	100	100	100	0	0
Office supplies	800	0	0	0	100	200	100	100	100	100	100	0	0
Crew rotations & transportation	3500	0	0	0	500	500	500	500	500	500	500	0	0
Staff housing (in-town)	3600	0	0	0	0	300	600	600	600	600	300	0	0
Camp operations	0	0	0	0	0	0	0	0	00	0	0	0	0
Legal	12000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Electrical Power	2750	0	0	0	0	500	500	500	500	500	250	0	0
Total	**$100,400**												

3.6 Process and Effluent Water Treatment

In 2004, a biological treatment cell (BTC) system was installed in the heap process water treatment ponds. The first pond would act as a surge pond for incoming waters from the heap. The second pond would be reconfigured to operate as a BTC and the third pond would be used as a settling pond for final polishing prior to effluent discharge to the environment. The system has reportedly been operated. However, due to reduce loadings into the system and limited time in operation, the effectiveness of the removal has not been confirmed.

Land application was another method of heap effluent treatment which was utilized in recent years including a short period in the summer of 2004. In late 2004, it was decided no future land application would be anticipated with the BTC system in place, based on discussions between VMC and YTG.

The 2005 Annual Report for Brewery Creek includes monitoring data from the system.

Costs for preparation of a process water treatment system are provided in Table 8.

Table 8 Process Water Treatment *

Area and Individual Components (% Remaining based on SRK 2003, Table 12)	SRK Estimated Remaining Subtotals Sept 2003	Estimated % Remaining Sept. 12, 2005 (status Sept04, if different)	Estimated Remaining Cost as of Dec. 31, 2005
Water treatment / land application	$58,000	N/A	$0
BTC Construction	$235,000	0%	$0
BTC commissioning / de-bugging (not included in SRK 2004)	$0	20%	$10,000
System to separate heap seepage from runoff flows (included in Leach Pad Reclamation)		100%	$0
Total	**$293,000**		**$10,000**

* based on SJCI 2004c, Appendix A

Process and heap effluent treatment ponds are still in place. The cost for future removal and satisfactory reclamation of these facilities and their contents remains. The cost provision for this is covered in Section 3.2 - Site Facilities Removal and Reclamation.

The following considerations were included in preparing cost estimates for General Services and Administration (GS&A) and for BTC operation:

- Annual summer program of water treatment prior to discharge;
- No employees stay on site. Personnel will commute back and forth daily from nearby towns and hamlets;
- Half-time use of an operator/technician during the summer months;
- Use of a contract trades person for a number of tasks including electrical, plumbing, mechanical, etc. estimated to be 10% of full-time

Annual GS&A costs for the BTC system will be incurred until direct discharge becomes a permanent heap effluent discharge method. These costs are shown in Tables 9, below.

Table 9 General Services & Administration Until Direct Discharge of Heap Effluent

Category (based on SRK 2003, Table 11)	**Area Total**	**Monthly Costs ($)**											
		Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
General Service& Admin													
Misc. operating supplies	2500	0	0	0	0	250	500	500	500	500	250	0	0
Insurance	1000	0	0	0	0	200	200	200	200	200	0	0	0
Freight	600	0	0	0	0	500	500	500	500	500	0	0	0
Propane	300	0	0	0	0	500	250	250	250	250	0	0	0
Water supply	1500	0	0	0	0	250	250	250	250	250	0	0	0
BTC access road maintenance/winter snowmachine	3400	200	200	200	200	1000	0	5000	0	500	200	0	0
Light vehicle costs	3000	0	0	0	0	500	500	500	500	500	500	0	0
Electrical power	1400	0	0	0	200	200	200	200	200	200	200	0	0
Labour (incl Salary Burden)													
Operator/Technician/Sampler (50% 0f $5K/mo))	15,000	0	0	0	0	2500	2500	2500	2500	2500	2500	0	0
Contract Trades Person	6000	0	0	0	0	1000	1000	1000	1000	1000	1000	0	0
Total	**$34,700**												

Operating costs for heap effluent (process water) treatment through the BTC system are presented in Table 10.

Table 10 Process Water Treatment – Operating Costs

Category (based on SRK 2003 Table 12)	**Area Total**	**Monthly Costs**					
		Apr	**May**	**Jun**	**Jul**	**Aug**	**Sept**
Outside assays	$9,000	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Piping & fittings	$11,000	$2,000	$2,000	$2,000	$2,000	$2,000	$1,000
Reagents/ Chemicals	$1,500	$200	$500	$200	$200	$200	$200
Misc. maintenance supplies	$3,000	$500	$500	$500	$500	$500	$500
Misc. operating supplies	$4,250	$500	$750	$750	$750	$750	$750
Fuels / Lubes	$2,750	$250	$500	$500	$500	$500	$500
Pumping	$2,750	$250	$500	$500	$500	$500	$500
Total	**$34,250**						

However, utilization of the BTC for heap effluent treatment is considered a mitigative contingency measure, and thus costing is not provided in this section. Costs for it are provided in Section 3.9, Mitigative Contingencies.

3.7 Heap Leach Pad Reclamation

Work remains to complete the reclamation of the heap leach pad. Required tasks are outlined in Table 11, below.

The area of future heap leach cell Nos. 8-10 has been considered to have been amended with a layer of growth media, although this was not inspected during the site visit. In 2004, Alexco has stated the area requires revegetation due to poor success when it was done several years ago, as was reported in the previous liability cost estimate report (SJCI 2004a). Refer to a photo of the area provided as Plate 6 in Appendix A.

There is also a depression atop the heap which collects water and looks like a pond from the air. Refer to photo plate 5 in Appendix A. The depression should likely be re-contoured so as to make the water flow off the heap around the perimeter. Alternately a riprap lined channel could be constructed to keep the pond drained. A provision has been included for this work as one of the Mitigative Contingencies, covered in Section 3.9.

A significant erosion gully has also formed along the toe of the slope on the bench that surrounds the perimeter of the heap, along the south-west corner of the facility, immediately east of the overflow pipes that run into the process ponds. Refer to photo plate 8 in Appendix A. Repairs to this area will be undertaken as part of the leach pad dike breaching.

Table 11 Heap Leach Pad Reclamation – Remaining Items *

Area and Individual Components (% Remaining based on SRK 2003, Table 8)	SRK Estimated Remaining Subtotals Sept 2003	Estimated % Remaining Sept. 12, 2005 (status Sept04, if different)	Estimated Remaining Cost as of Sept. 12, 2005
Leach Pad Re-sloping and Drainage Ditches			
B'hoe work to put in ditches (100%)	$6,336	0%	$0
Breach leach pad dike mat'l (100%)	$12,610	100%	$13,241
Riprap/gravel in dike breach (100%)	$2,500	100%	$2,625
Leach Pad Revegetation (Cells 1-7)			
Broadcast seed and fertilizer (25%)	$6,056	25%	$6,359
Previously Planned Cells 8-10			
Dozer to re-contour surface (100%)	$17,927	0%	$0
Spread GM with dozer (100%)	$36,447	0%	$0
Broadcast seed & fertilizer (100%)	$6,912	100%	$7,258
2005 Reclamation Repairs			
Re-contour/drainage channel for pond on crest (included as Mitigative Contingency in Sec. 3.9)	N/A	100%	$0
Erosion repairs with dozer (10%)	$26,738	5%	$14,459
Broadcast seed & fertilizer (25%)	$4,958	25%	$5,206
Total	**$120,484**		**$49,148**

* based on SRK 2003 and SJCI 2004

3.8 Post Closure Monitoring and Maintenance

A post-closure monitoring and maintenance program to the end of the year 2018 is anticipated. Costing includes site manpower, sample preparation, sample shipping, analyses and support, as well as geotechnical and reclamation inspections. Details have been provided in previous reports.

Table 12 shows the costing for the various components of the program:

- The first column lists the tasks as outlined in the previous SJCI reports (SJCI, 2004a & 2004b) that are based on the SRK report of November 2003. SJCI has previously included an adjustment in the cost estimate based on the input of other contributors in the review of the VMC Monitoring Program. This has included an additional $30,000 for the basic monitoring program as provided by Mr. Gerry Whitley (Whitley, 2004) to YTG, and an estimate of $90,000 from O'Kane Consultants (O'Kane, 2004) for an improved monitoring program for the Blue Waste Rock Storage Dump cover;
- The second column shows the costs of the above elements;
- The third column provides an estimate of % of original work remaining to be done;
- The fourth column provides the revised cost for the remaining liability; and
- A 5% inflation factor has not been added, due to the long-term nature of costs, unlike most other tables in this report.

The Whitley cost estimate (Whitley, 2004) for the 15 year provided was $520,00 versus $490,000 in Table 13 of their report (SRK Nov2003). SJCI has previously accepted the Whitley estimate for use in prior liability cost estimates. The $30,000 difference between the SRK and Whitley estimates has been added to the proposed cost estimate, split evenly between the 15 years of the overall (post-closure) program.

Table 12 Post-Closure Monitoring and Maintenance

Area and Individual Components (% Remaining based on SRK 2003, Table 13)	**SRK Nov03/ SJCI *Estimated Remaining Subtotals Sept 2003**	**Estimated % Remaining Sept. 12, 2005 (status Sept04, if different)**	**Estimated Remaining Cost as of Dec. 31, 2005**
Environmental Monitoring (2005)	$49,500	33%	$0
Environmental Monitoring (2005-2018)	$440,500	90% (was 100%)	$393,500
Reclamation Maintenance (15 years, 2004-2008)	$20,000	60%	$12,000
Inspections/Reporting/Other (15 years, 2004-2018)	$75,000	86%	$54,000
Additional cost for env. monitoring as per Whitley costing (2004-2018)	$30,000	86% (was 93%)	$26,000
Blue WRSA Instrumentation & monitoring (2004-2008)-Mit. Cont	$0	100%	$0
Heap Geochem/Physical Stability & Monitoring (2004-2008)-not undertaken	$7,000	85% (was 100%)	$6000
Laura Creek AMP monit. requirements (2004-2008)	$10,000	60% (was 80%)	$6,000
TOTAL	**$632,000**		**$497,500**

* SJCI 2004b

3.9 Mitigative Contingencies

Mitigative Contingencies are required for items that are considered possible and may require mitigation, but are not included in the current plan. Two specific areas of concern are addressed in this report.

1. **Heap Effluent Treatment** - The BTC was constructed in 2004 and was reported to have operated in 2005. A provision has been retained in Section 3.6 for confirmation of performance of the system. This section provides monies for the operation of the BTC and general site services and administration related to this undertaking. A timeframe of 5 years of operation has previously been utilized, as a Mitigative Contingency. As of year-end 2005, 4 years remain of that timeline.

2. **Lucky Stabilization** - A portion of the slope adjacent to the access road may require stabilization and an area of instability on the top of the dump patched in 2005 may require additional work and therefore a provision has been set aside for possible work in this area.

3. **Blue Waste Rock Storage Area (BWRSA) Enhanced Geo-chemical instrumentation and monitoring** - An enhanced system as proposed by OKC is included so as to provide improved monitoring information and performance validation of cover performance and groundwater chemistry. The cost estimate consisted of $50,000 for installation of the prescribed system and 4 years at $10,000 per year.

4. **BWRSA Seepage** - A Risk Provision of $397,5000 has been included as an additional mitigative contingency due to the uncertainty of the performance of the cover constructed over the Blue waste rock storage area, based on discussions with YTG. This amount was originally reported in the SJCI report of July 9, 2004. It is recommended that this provision remain in place until satisfactory performance can be demonstrated. This is based on a risk factor of 35% of the $1.074M estimated cost to implement a replacement cover over the dump as was costed by SRK (2003). A revised timeline for winding down the contingency is:

2005Q3	35%
2006Q3	25%
2007Q3	15%
2008Q3	5%
2009Q3	0%

5. **Perched pond atop Heap Leach Pad** – A pond has been discovered atop of the heap leach pad. Rapid water flow from this pond could cause erosion and vegetation loss. A number of additional problems may result. As its size and potential concerns have not yet been determined, a provision is proposed to cover possible mitigative measures considered necessary. This assessment will likely be undertaken in the fall of 2006 during the annual geo-technical inspection and site

assessment. A $10,000 contingency has been provided until the fate of this issue can be resolved.

Table 13 Mitigative Contingencies *

Area and Individual Components	SRK Estimated Remaining Subtotals Sept 2003	Estimated % Remaining Sept. 12, 2005	Estimated Remaining Cost as of Dec. 31, 2005
Heap BTC GS&A (3 years) @$34,700/a (from Table 9); PW treatment (3 years) @34,250/a (from Table 10)	$1,128,000	N/A [1]	$206,850 [2]
Lucky Dump stabilization (as per SRK)			$36,000
BWRSA enhanced geo-chem monitoring			$90,000
Risk Provision Component for BWRSA	$400,000	100%	$400,000
Perched Pond atop of Heap			$10,000
Total	**$1,844,000**		**$713,750**

Notes:
* based on SJCI 2004c, Appendix A
1 Not applicable due to change in components making up this element
2 from Tables 9 and 10 (Section 3.6)

4. Conclusions and Recommendations

4.1 Conclusions

The revised liability cost estimate for the Brewery Creek mine site as of December 31, 2005 is $1,988,675.

This number compares to $2,779,305 as of September 2004 and both are significantly lower than the $4,998,012 estimated by SJCI as of September 2003 (SJCI 2004b). It reflects the significant amount of work undertaken at the site by Alexco (and previous owner VMC) over the past two years, especially the summer of 2004.

The liability estimate includes a sum of $465,900 required by YTG for a mitigative contingency for possible remedial measures related to the Blue Waste Rock Storage Area. It also includes a provision for operation of the Biological Treatment Cell for a further 3 years. YTG has a lower risk tolerance as the regulatory agency responsible for the site, similar to that of other jurisdictions in Canada.

Compared to earlier projections, there was no decrease in the Mine Area Reclamation cost center as the recommended remedial work and scheduled maintenance work proposed for 2005 has not been completed.

Leach pad reclamation has not been completed, as had been anticipated in the earlier projection for the end of 2004 (SJCI 2004a) due to work being required with physical stabilization of the facility for the long-term.

With the Biological Treatment Cell now in place and operational, the possible future use of land application for heap effluent treatment was dropped as of September 2004.

4.2 Recommendations

It is recommended that Alexco:

- Renew efforts to meet the previous timeline of completing reclamation tasks as was seen in 2004 is required in 2006. It appears as though minimal work was undertaken in the area of mine area reclamation/revegetation in 2005. It is especially important to establish physical and chemical stability and sustainable vegetation for the long-term. Establishing sustainable vegetation may require several years of maintenance seeding and fertilizing;
- Complete remedial works such as land farming hydrocarbon contaminated soils and other tasks as indicated by recently completed site contamination and metal uptake studies; and
- Remove the remainder of the materials being stored in the Camp Area Boneyard.

And a number of recommendations from the 2004 SJCI Liability Cost Estimate report that still apply include:

- Detailed monitoring information and interpretation of results should be included in annual reports from the company. These should be reviewed for compliance to stated plans and permits. Monitoring data should also be assessed for possible trends;

- YTG monitor Alexco's progress in completing identified work tasks in the upcoming summer of 2006 construction season. Significant progress should be possible to complete a number of the remaining tasks. This includes site cleanup, submission of as-built information on BTC, re-grading of several mine areas and site revegetation of a large portion of the site including areas re-vegetated in previous years; and

- On an on-going basis, YTG regulatory staff should document information on the progress and satisfactory completion of each reclamation component as part of their inspection and report review efforts, so that this information can be incorporated into future site liability estimates.

SteveJan Consultants Inc.

Steve Januszewski, P. Eng.
Principal

References

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VMC 2003. Viceroy Mineral Corporation, Brewery Creek Mine Decommissioning and Reclamation Plan, Executive Summary, prepared by Viceroy Minerals Corporation, November 2003

Whitley, G., Estimation of Post-Closure Monitoring Costs for the Brewery Creek Mine (verbal communication on June 18, 2004, report pending)

APPENDIX A

Photos From Sept. 12, 2005 Site Inspection

Plate 1: Blue WRSA

Plate 2: Blue WRSA – lysimeter area, looking downslope

Plate 3: Golden Dump and South Pit

Plate 4: Moosehead Dump & Landfill Area

Plate 5: Heap & Process Ponds

Plate 6: Heap Cells 8-10, Argillite Stockpile Area

Plate 7: Effluent Treatment Ponds

Plate 8: Heap Toe-Erosion Gulley

Plate 9: Reagents and Materials in Camp Boneyard