



Memo to: H.Copland, F. Patch Government of Yukon Type II Mines

From: B. Thrall, R. McIntyre, Alexco Resource Corp.

cc: C. Fernets, P. Johnson, D. Cornett

Date: November 9, 2006

Subject: *Contract for Service for Site Investigation and Improvements United Keno Hill Mine site: Special Projects Update Memo*

On behalf of the Elsa Reclamation and Development Company Ltd., we are pleased to provide this memo as an outline of work undertaken on Special Projects at Keno Hill during the summer of 2006. In accordance with approved work plans for six special projects, work is currently in progress under a service contract between The Government of Yukon and Elsa Reclamation and Development Company Ltd. This summary report provides the progress on principally field components of those special projects as of October 31, 2006 as well as costs incurred to date. Approved work plans are appended to this document for ease of reference.

Project 1: Water Treatment Improvements Study

Historic operating data from the treatment sites has been compiled and analyzed for pH and zinc relationships. Alternative sludge management approaches for Galkeno 300 were summarized and proposed including disposal in a new lined facility within the Sime waste dump as well as within the Sime open pit. The study indicates that more soluble zinc is released untreated during the desludging campaigns than is contained in all of the treated solution, indicating a high priority to improve the desludging approach at Galkeno 300.

A power comparison study was completed on the economics of installing a transformer at Galkeno 300 versus continuing with generator power. Ongoing power outages due to generator shutdown create fluctuations in zinc concentrations and treatment performance at Galkeno 300. A reliable power source would improve the system performance. As well, zinc enters the pond untreated throughout the year during periods of generator shutdown for preventative maintenance periods.

A literature review and summary of alternative treatment options has been completed. At this point in the study the approach is not to complete additional bench scale treatability studies as these have already been completed and we do not believe there is value added to additional bench scale treatability studies. Instead actual field data as a result of changes to the Galkeno 300 system are being used to assess and propose recommendations for improvement to all of the systems.

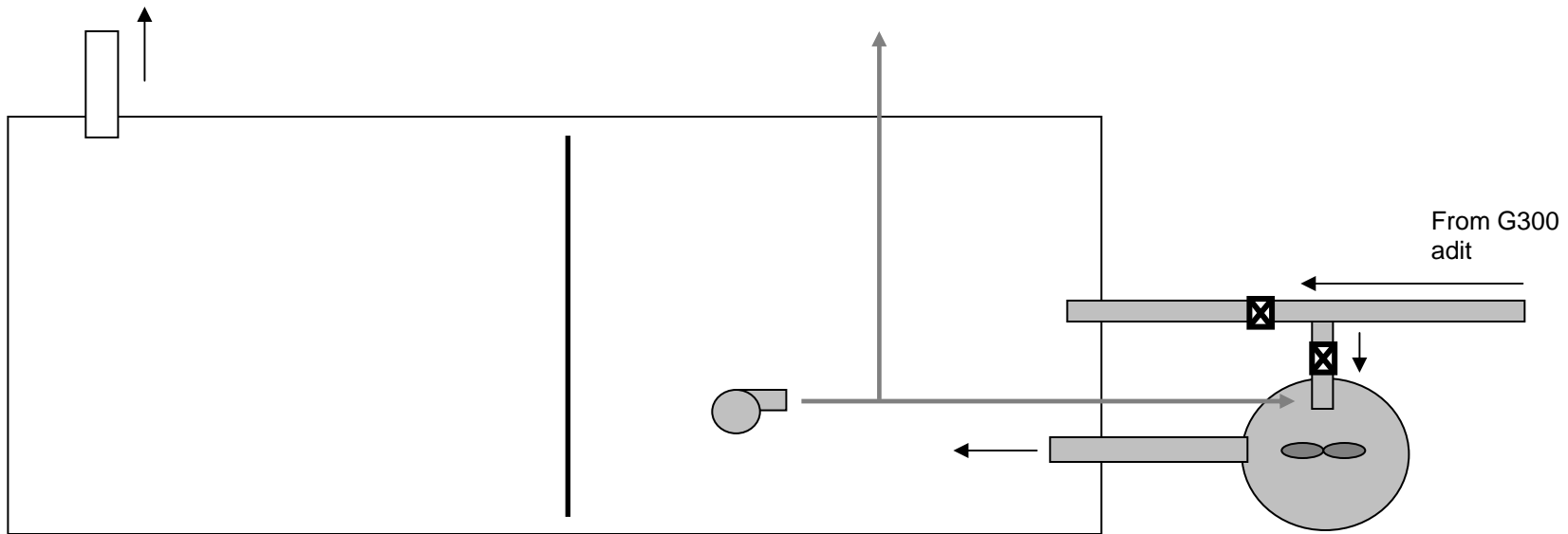
Project 2: Water Treatment Capital Improvements

Although certain improvements were made during the summer of 2006, this project was essentially put on hold until the results of the water treatment improvement study were known. ERDC has incurred approximately \$25,000 - \$30,000 in costs at the end of October in efforts to improve the performance of the Galkeno 300 system. This includes construction of a new sludge settling pond, installing a new mix tank and purchasing and installing a sludge recycle pump. Please see Figure 1 for a schematic depiction of the improvements to date and modification to the Galkeno 300 system. These efforts are essentially part of the improvement study as they provide actual field data on the effects of improved mixing and sludge recycling.



Photo 1: View of new Galkeno 300 mix tank.

Galkeno 300 Treatment Modifications to date
 Items in grey denote changes and additions to the treatment system



1. Sludge pump on floats approximately 12" above the bottom of pond, can be moved around to effectively recycle sludge
2. Tank buried to reduce elevation and allow adit water to directly flow into tank
3. Valves installed to bypass the mix tank if necessary
4. Piping sized to handle 300 gpm (8" line)
5. Solution enters the mix tank at the bottom and exits out the side
6. All existing systems left intact and operational and can be activated immediately if necessary
7. Sludge pump recycle piped to allow desludging directly into tanker on a routine basis

Figure 1: Schematic of Galkeno 300 water treatment improvements.

Project 3: Baseline Environmental Assessment

Documentation of Remaining Sites

SRK Consulting, with assistance from Access, was on site from August 16 to August 25, 2006, and documented 32 of the remaining sites, as listed below in Table 1 and indicated on Figure 2: Project Area Overview map, as well as reviewing two high priority sites including Bellekeno 600 (Eureka shafts), and the Lucky Queen adit. Sites included in these inspections were those known to be on UKHM claim blocks and those that were within one claim block of a known UKHM claim. These workings associated with these sites were located with a GPS unit in order to verify that the workings were either on or off UKHM claim blocks. One site, Gold Queen, could not be located based on the coordinates and description given in the Public Works document, and therefore could not be documented. The numbers referred to the table below were taken from Public Works & Government Services Canada Report: Keno Valley-Dublin Gulch Environmental Assessment, 2000.

Table 1: UKHM sites inspected in 2006.

Number	Name	Number	Name
8	Betty	38	Fox
14	Bluebird	39	Caribou (Segsworth) & Alice
15	Tin Can	40	Divide
16	Rico	43	Duncan
17	Duncan Creek	45	Silver Basin
20	Klondike-Keno	46	Nabob
23	Kijo	47	Monument & Ladue Fraction
24	Croesus No. 1	48	Apex
27	Lake	52	Mo
29	Highlander	53	Maybrun
30	Cub & Bunny	54	Hogan
31	Stone	59	Eagle
33	Main Fault & Nabob	63	Gerlitski
34	Lake View	69	Avenue
35	Nabob No. 2	71	Christal (Dorothy)
37	Gold Hill No. 2	73	Gambler

Note that two sites were visited, Runer and Vanguard, however they were determined to be off of UKHM claims at the time of our attendance, and therefore no thorough inspection or documentation was conducted.

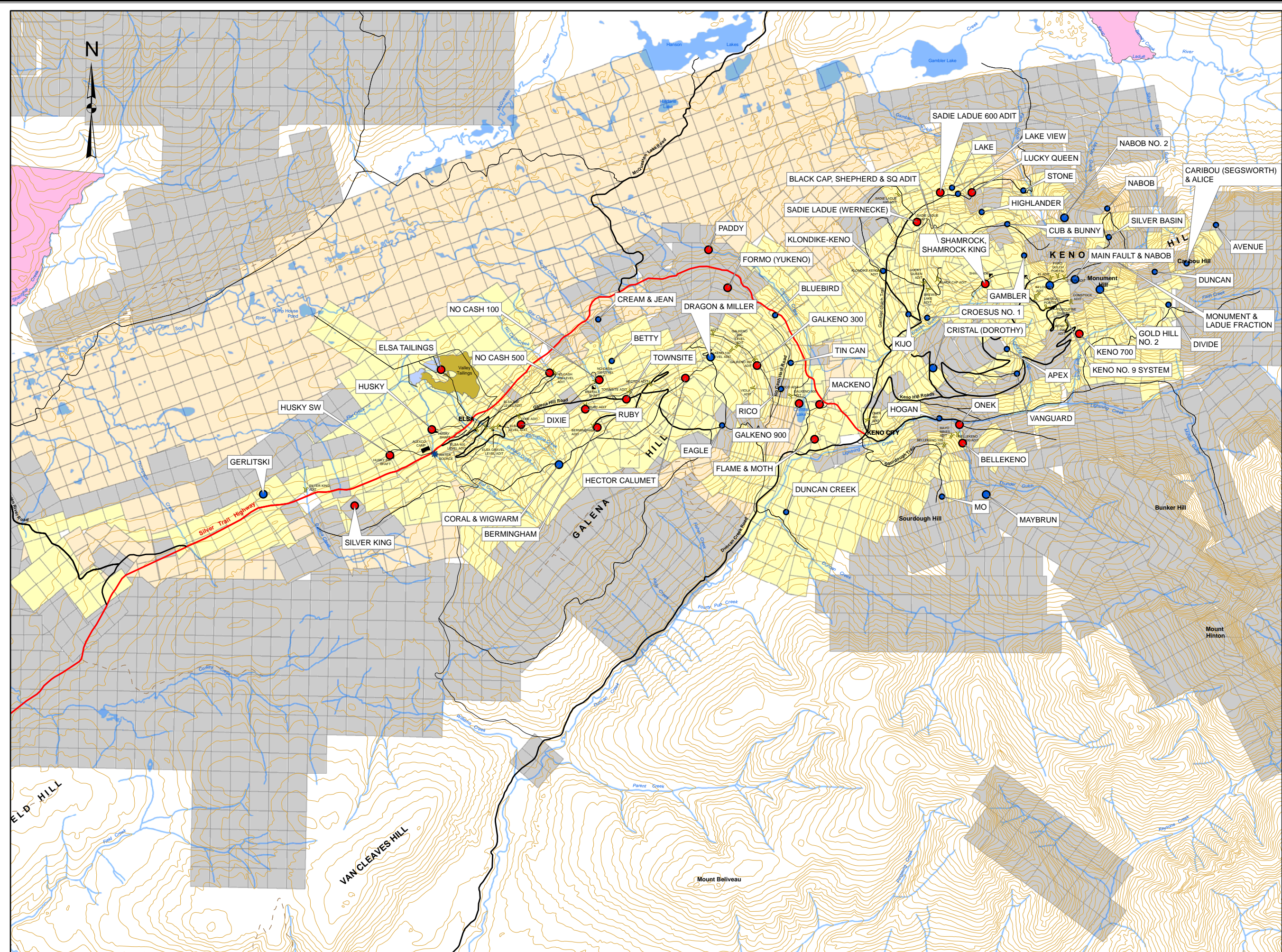
SRK Consulting completed the inspection and documentation of the four remaining sites on September 18, 2006, including the Keno No. 9, Cream & Jean, Dragon & Miller, and Coral & Wigwam sites, which concluded our documentation of all relevant sites.

Inspections were carried out on foot, by pickup truck, and by All-Terrain Vehicle. Major areas of focus included visual inspections of the current conditions at each site, including qualitative assessments of subsidence of known crown pillars, stability of open pits and underground openings, buildings and mine structures, waste dumps, and geochemical characteristics of wastes. Any ponded water in pits was noted, along with any surface drainage present and the downstream pathway of surface flow.

Results of these inspections were used to compile the UKHM Physical Hazards Risk Registry, Building Contamination Inventory, and the Hydrocarbon Contamination Inventory included in this progress report.



Photo 2: Assortment of buildings at Gambler site.



KENO HILL

Legend

- Site Inspected 2005
- Site Inspected 2006
- Adit
- Shaft (to surface - connection to underground not determined)
- Silver Trail
- Secondary Road
- Limited-use road
- Trail
- Watercourse
- United Keno Hill Mines Limited Quartz Claim
- Other Quartz Claim
- First Nation Settlement Land
- Waterbody
- Valley Tailings

Notes:
This map is for illustrative purposes only.
This is not a legal document.
National Topographic Data Base (NTDB) compiled by Natural Resources Canada at a scale of 1:50,000. Cadastral data compiled by Natural Resources Canada. Reproduced under license from © Her Majesty the Queen in Right of Canada, Department of Natural Resources Canada. All rights reserved. Quartz claim boundaries are current as of November 3, 2006. Data source: <http://geomatics.yukon.ca>. Ownership is current as of November 8, 2006. Digital claim status report obtained from the Mining Recorder website at <http://www.yukonminingrecorder.ca/>. Projection: UTM Zone 8 NAD83 NTS Sheet 105M/13 and 105M/14

Projection: UTM Zone 8 NAD83
Units: Meters
NTS Sheet 115 I/10 and 115 I/11

Figure 2

Project Area Overview



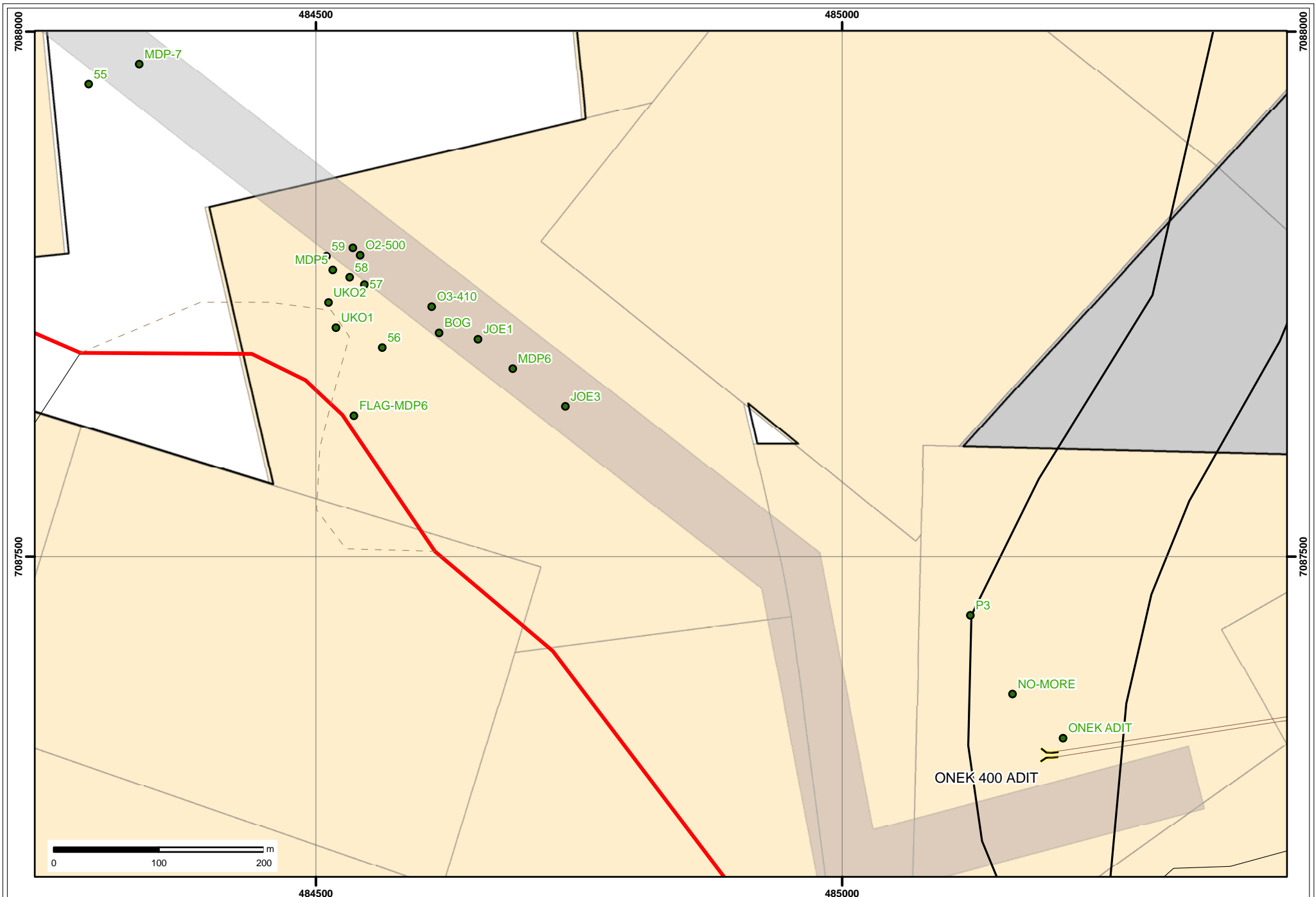
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Date: September 2006

Groundwater

Shallow groundwater samples have been taken using drive point piezometers and a transect established to determine zinc loadings down gradient of adit discharge locations. Specifically, shallow groundwater sampling and mapping has been completed down gradient of No Cash, Onek, Galkeno 300 and 900 and Valley Tailings. This data has been incorporated into a site wide groundwater database and sampling locations have been summarized on maps. This work is also useful in the closure planning special project.



Photo 3: Access employee installing drivepoint piezometer



Legend

- Town
- Adit
- GPS Point
- Drive-point piezometer
- Drive-point piezometer & soil

- Lysimeter
- Lysimeter & soil
- Surface water
- DansEdited
- Silver Trail

- Duncan Creek Road, Hanson Lake Road, South McQuesten River Road
- Keno Hill Roads, Galena Road
- Limited-use road
- Trail
- Watercourse

- Underground Workings
- Pit
- Valley Tailings
- Powerline Easement
- Waterbody

- United Keno Hill Mines
- Quartz Claim Boundary
- Quartz Claim
- Crown Grant

- Placer/Land Interest over United Keno Hill Mines Claims
- Land Disposition on United Keno Hill Mines Claim
- Placer Claims on United Keno Hill Mines Claims
- Fee Simple Title on United Keno Hill Mines ClaimS

- Other Mineral/Placer/ Land Interest
- Land Disposition
- Placer Claims and Leases
- Fee Simple Title
- Quartz Claim

Onek

FIGURE 3

UTM Zone 8 NAD83



Historic Elsa Tailings Spill

SRK Consulting, with assistance from Access, conducted a visual inspection of the extent of the Elsa Tailings down Flat Creek west of Dam #3. Inspection was carried out on foot along side of Flat Creek. A large area of dead vegetation accompanied by obvious visual evidence of tailings deposits were located west of Dam #3 for a couple of hundred metres. The condition of this area and the tailings deposits were documented by SRK Consulting and will be included in the Final Baseline Assessment Report.

A long stretch of Flat Creek was inspected beyond the extent of the above mentioned tailings deposit in an effort to visually observe evidence of tailings movement downstream. When evidence of tailings material was no longer observed, this position was located with a GPS unit and considered the visual extent of the tailings spill. Once again, these findings will be included in the Final Baseline Assessment Report.

Minewater

A 3-D model of the Galkeno/Hector underground system has been completed in Autocad. The model is conceptual in nature and is a 'best fit' of available survey data (i.e. no mathematical groundwater model will be required for purposes of the BEA). The model incorporates underground workings, veins and major faults into a visual Autocad 3D model. NovaGold geologist D. Brownlee spearheaded these efforts and produced a summary report on the findings of the model and the interconnections of the underground system for Galkeno and Hector.

**Galkeno 300 & 900
3D Model Looking Northerly**

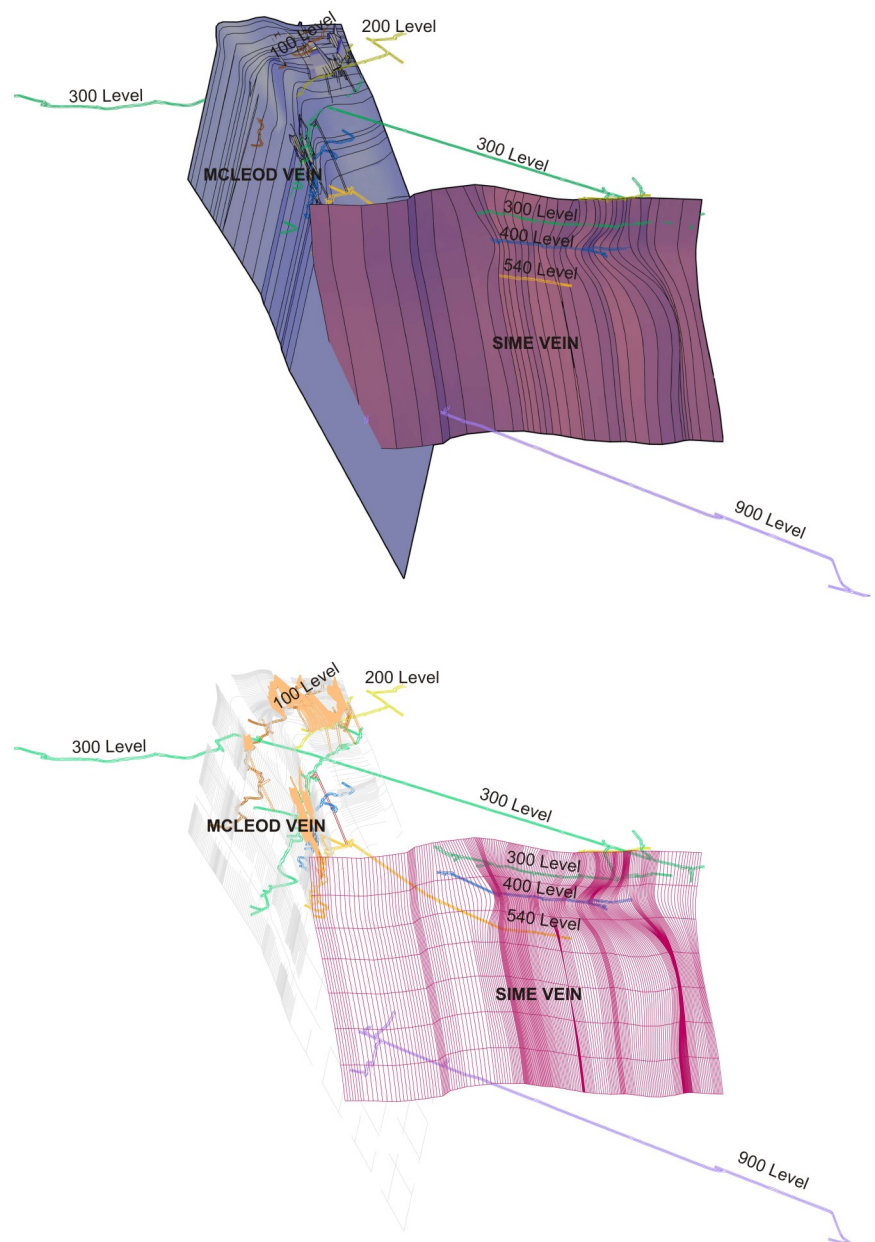


FIGURE 4

Soil Contamination along Haulage Routes

SRK, with assistance from Access, conducted a soil sampling survey of routes considered to be representative of haul route conditions, to determine metals content of soil. These transects were established to assist in a determination of the potential for area-wide contamination due to hauling high grade ore, and ore concentrates. A total of four transects were completed, with five sample stations established per transect. Sample sites selected were nominally 5, 10, 25, 50, and 100 meters from road edge, and soil was taken to a depth of 2cm from the 'F' soil horizon immediately below the litter layer. Note that the toe of the roadway material was considered the road edge, so the distance from the actual edge of the traveled portion of the roadway was varied somewhat from site to site.

The twenty soil samples collected were shipped to ALS Chemex in Vancouver for analysis. Transects completed consisted of:

- Transect 1: approximately 1 km west of Silver King adit, along Silver Trail Highway;
- Transect 2: east of Formo mine site, along Silver Trail Highway;
- Transect 3: south of Keno 700 mine site, along Keno ore haul route;
- Transect 4: west of Dixie mine site, along Calumet Drive mine haul road;

Initial lab results indicate highest metal concentrations (principally zinc, lead and manganese) on Transect 4, Calumet Drive near Dixie adit. Provisional laboratory results have been summarized in Table 2: UKHM Haulage Route Sampling Table; full reporting will be included in the Final Baseline Assessment Report.



Photo 4: Soil sample location near Keno Hill.



Table 2: UKHM Haulage Route Sampling

LOCATION	Units	REF-8	REF-13	REF-28	REF-53	REF-103	HWY-9	HWY-14	HWY-29	HWY-54	HWY-104	KH-9	KH-14	KH-29	KH-54	KH-104	CD-8	CD-13	CD-28	CD-53	CD-103	Yukon CSR - Industrial
Sample Date		14-Sep-06	14-Sep-06	14-Sep-06	14-Sep-06	14-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	15-Sep-06	
Sampled by		DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	DM/CF	
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
ME-ICP41																						
Ag (Silver)	ppm	2	0.9	0.7	1	0.7	2	1.2	1.4	0.3	0.3	50.2	16.8	6	3.6	3.2	22.8	27.3	2.5	0.5	2.4	40
Al (Aluminum)	%	0.42	0.22	0.1	0.21	0.11	0.48	0.6	0.53	0.19	0.14	0.59	0.36	0.77	0.88	0.38	0.31	0.15	0.27	0.44	0.22	None
As (Arsenic)	ppm	39	12	11	9	7	53	41	40	12	7	141	36	11	10	2	67	73	15	8	11	100
B (Boron)#	ppm	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	2**
Ba (Barium)	ppm	120	100	60	100	60	90	110	90	80	100	60	100	320	250	200	90	60	110	270	150	2000
Be (Beryllium)	ppm	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8
Bi (Bismuth)	ppm	<2	<2	<2	<2	<2	<2	2	<2	<2	<2	3	<2	<2	<2	<2	<2	<2	<2	<2	<2	None
Ca (Calcium)	%	2.12	2.42	2.1	2.34	0.69	0.88	1.87	1.42	2.73	3.94	0.37	0.27	0.42	0.16	0.24	1.32	1.67	1.58	1.66	2.51	None
Cd (Cadmium)	ppm	4.8	4.2	1.4	0.8	0.5	1	0.9	1.2	0.9	0.9	14.2	9.9	4.3	1.7	1	24.8	32.5	3.7	1.3	2.7	500
Co (Cobalt)	ppm	5	3	2	3	1	5	6	5	3	2	10	6	11	5	3	4	2	5	5	2	300
Cr (Chromium)	ppm	7	4	2	3	1	9	10	9	3	2	8	5	4	5	4	6	3	4	5	3	700
Cu (Copper)	ppm	27	18	15	19	8	23	26	22	18	33	52	30	18	35	20	37	39	18	21	20	250
Fe (Iron)	%	1.01	0.51	0.24	0.44	0.22	1.45	1.44	1.42	0.4	0.27	2.39	1.35	0.69	0.73	0.7	1.24	0.78	0.59	0.7	0.42	None
Ga (Gallium)	ppm	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	None
Hg (Mercury)	ppm	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	150
K (Potassium)	%	0.07	0.12	0.1	0.05	0.06	0.06	0.07	0.05	0.02	0.02	0.05	0.07	0.09	0.07	0.1	0.07	0.08	0.05	0.03	0.05	None
La (Lanthanum)	ppm	<10	<10	<10	<10	<10	10	10	10	<10	<10	10	10	10	10	<10	<10	<10	<10	<10	<10	None
Mg (Magnesium)	%	0.45	0.4	0.47	0.52	0.12	0.26	0.36	0.32	0.35	0.32	0.27	0.16	0.1	0.07	0.1	0.25	0.25	0.21	0.26	0.32	None
Mn (Manganese)	ppm	664	561	514	921	77	187	439	189	177	219	1860	499	1755	250	565	1540	1455	839	719	289	None
Mo (Molybdenum)	ppm	<1	<1	<1	<1	<1	1	1	1	<1	<1	5	3	1	2	1	<1	<1	1	1	<1	40
Na (Sodium)	%	0.01	0.01	0.01	0.01	<0.01	0.01	0.01	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	None
Ni (Nickel)	ppm	14	8	4	11	3	15	15	15	6	11	25	15	23	19	12	11	7	7	9	5	500
P (Phosphorous)	ppm	950	1410	870	800	540	890	990	730	650	590	1490	1420	2140	1810	1580	1100	1070	900	890	810	None
Pb (Lead)	ppm	51	26	16	35	49	52	40	57	7	10	1560	501	226	59	44	359	631	162	24	77	2000
S (Sulphur)	%	0.15	0.2	0.2	0.22	0.12	0.09	0.16	0.12	0.26	0.24	0.11	0.12	0.13	0.07	0.1	0.23	0.25	0.16	0.16	0.17	500
Sb (Antimony)	ppm	<2	<2	<2	<2	<2	2	<2	<2	<2	<2	39	18	4	<2	<2	19	24	2	<2	<2	40
Sc (Scandium)	ppm	1	<1	<1	<1	<1	1	1	1	<1	<1	1	<1	<1	<1	<1	1	<1	1	<1	1	None
Sr (Strontium)	ppm	62	71	71	80	34	24	48	41	70	93	18	15	42	20	21	34	37	45	54	62	None
Ti (Titanium)	%	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.01	0.01	None
Tl (Thallium)#	ppm	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	2**
U (Uranium)	ppm	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	None
V (Vanadium)	ppm	12	6	3	5	3	16	17	15	5	5	12	7	6	10	11	11	4	7	11	6	200**
W (Tungsten)	ppm	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	None
Zn (Zinc)	ppm	287	258	142	111	65	99	114	103	79	32	1060	780	182	53	91	1885	1840	199	91	118	600

* REF - Samples taken approximately 1km west of Silver King site along Silver Trail Highway

* HWY - Samples taken east of Formo site along Silver Trail Highway

* KH - Samples taken on Keno 700 road, south of Keno 700 site.

* CD - Samples taken along Calumet Drive, west of Dixie site.

* CCME Guideline

**CSR Guideline applies to agricultural use only

#Guidelines below detection limit

Yellow highlight indicates result exceeds CSR criteria for industrial site

Hydrocarbon-Contaminated Soils

Access Consulting observed and documented areas where evidence of hydro-carbon contamination was visible while conducting the inspections of the remaining sites with SRK Consulting. Areas of concern were compiled and correlated with sites documented the previous year and with areas and storage facilities reported in the March 2000 Environmental Baseline Assessment performed by Public Works. This information was sorted into a Hydrocarbon Contamination Inventory list which included Site Name and Location, Description of Contamination, whether samples were taken, and a documented History of Spills if applicable.

Please see Table 3: UKHM Hydrocarbon Contamination Inventory table for an inventory of hydrocarbon contaminated soil; further discussion and context will be forthcoming in the Final Baseline Environmental Assessment Report.



Photo 5: Evidence of hydrocarbon contamination at Caribou (Segsworth) site (later research determined that this site was not on UKHM claim package).



Table 3: UKHM Hydrocarbon Contamination Inventory - Provisional Draft

Assigned Site No.	Site Name	Location	Desription of Contamination	Samples Taken	History of Spills	Mitigation Measures
1	Silver King	Diesel fuel was likely stored near the 100 Level Adit. Compressor building Backfill pipe	No visible signs of contamination Hydrocarbon staining on crushed gravel floor Small and shallow stain from drilling lubricant or hydraulic oil; <0.1m	None None None		
2	Husky & Husky SW	Above ground storage tank located behind the boilerhouse Two AST's located in the northeast corner inside the boilerhouse One fuel drum laying on its side, leaking from bung. Small storage shed adjacent to west wall of boiler house. Three drums were located at the rear of the smaller storage shed. One aboveground storage tank located on the northwest corner of the hoist house on Husky SW site Two 200L drums labelled as torque fluid at Husky SW site One fuel drum labelled as motor oil Chevron 200L at Husky SW site	Soil staining evident around perimeter of 9400 litre tank; heavy staining at the valves; rock berm extends around the perimeter of the AST Staining noted on the concrete floor on the exterior of the building and the rear addition; no staining was noted on the surrounding soils. Minor soil staining Interior heavily stained with tar and rock drill oil; minor staining at the entrance. Minor surficial staining surrounding the drums. No visible signs of contamination Area around horizontal drum stained. (approx. 20m3) Some staining around fuel drum (approx. area = 8m2) indicating that is has or is leaking	None None None None None None		
3	Elsa	Fuel Storage area at backfill site.	No visible signs of contamination	None		
4	Dixie	Inside and along north wall of garage	Staining of soil present (approx. 10m2) appears to be from heavy machinery maintenance.	None		
5	Coral & Wigwarm		No visible signs of contamination			
6	Bermingham & Ruby (Arctic & Mastiff)	Northwest corner of the receiving tank behind the garage on the Ruby site. Ruby Level 400 Adit	Some leakage has occurred and the soils surrounding the tank have been stained. Interior of the adit stained with hydrocarbons.	Yes None		
7	No Cash	Exterior and interior of garage.	Spills present on both the concrete floor and immediately outside of bay doors; associated with equipment inside the boiler room. Staining appears to be superficial.	None		
8	Betty		No visible signs of contamination	None		
9	Hector Calumet	Three metal oil barrels present adjacent to the conveyor section of the facility, two empty and one full of oil & water.	A small stain (approx. 0.5m2) is present on the ground near the barrels.	None		
10	Dragon & Miller		No visible signs of contamination	None		
11	Galkeno 300	Adjacent to the north wall of the quonset warehouse. Adjacent to the west wall of the quonset warehouse.	Staining (approx. 0.5m3) visible from inside between the concrete and the building frame. Staining (approx. 0.6m3) visible from an above ground storage tank.	None None		
12	Galkeno 900	Storage Building	1m2 oil stain in the dirt	None		
13	Fisher Creek		No visible signs of contamination	Not on claim		
14	Bluebird		No visible signs of contamination	None		
15	Tin Can		No visible signs of contamination	None		
16	Rico		No visible signs of contamination	None		
17	Duncan Creek		No visible signs of contamination	None		
18	Flame & Moth		No visible signs of contamination	None		
19	Onek	East of Building 19E East of Building 19F East of buildings 19A and 19C and to the south of building 19D. North and south of Building 19G. Under POL shed at upper camp. Unlined sumps in garage.	Oil staining present Oil staining present Seven stains were identified; approx area = 20m2 Five large waste oil stains were present; approx. area = 30m2 Extensive staining attributable to spillage from various hydrocarbon based liquids stored in the building; approx. area = 6m2 Heavily stained.	None None None None None Yes - no PCB's detected		
20	Klondike-Keno	Three heating oil drums on wood platform at the southern area of site	No visible signs of contamination	None		
21	Sadie Ladue	Roughly 10m east of Pit #1 Site for temporary storage of Jet B fuel in 1996	A fuel or oil stain (< 5m2) was present which penetrated less than 5cm into the broken waste rock. Possible contamination suspected	None Yes		



Table 3: UKHM Hydrocarbon Contamination Inventory - Provisional Draft

Assigned Site No.	Site Name	Location	Desription of Contamination	Samples Taken	History of Spills	Mitigation Measures
22	Bellekeno	2000L storage tank inside compressor house at 625 Level AST1 is a 20,000L single wall aboveground steel diesel tank behind the compressor house at the 625 Level. AST2 is a 2,000L single wall aboveground steel gasoline tank inside the compressor house at the 625 Level. AST3 is a 3,000L single wall aboveground, two compartment steel gasoline/diesel tank inside the compressor house at the 625 Level. . Between the dump shed, lunchroom, and adit building at 625 Level Mobile fuel storage tank at the 200 Level Centre of the upper dump pad at the 200 Level. Backfill pad	A large area of stained soil (approx.125m2) was present on the floor, at the entrance, and behind compressor house. No visible signs of contamination No visible signs of contamination There is a zone of staining adjacent to the tank likely from spilling during fuel transfer. Minor surface soil staining. Surface soil staining (approx. 9m2) adjacent to tank. Minor surface staining was present. Soil contamination observed from the drilling operation. (approx.7.2m3)	None None None None None None Yes		
23	Kijo		No visible signs of contamination	None		
24	Croesus No. 1		No visible signs of contamination	None		
25	Black Cap, Shepherd & SQ Adit	Ten drums located at the east side of Waste Rock Pile WR-01 Shop	Waste oil stain near the 10 drum pile. (approx. 0.2m3) A number of stains were present inside on both the wooden and the gravel floors, and one small stain present outside of bay doors	Yes Yes		
26	Lucky Queen		No visible signs of contamination	None		
27	Lake		No visible signs of contamination	Not on claim		
28	Shamrock	Generator building Main building site	Soil within the generator building was stained. (approx. area = 4m2) Two small hydrocarbon stains present on east side. (approx. area <1m2)	None None		
29	Highlander		No visible signs of contamination	None		
30	Cub & Bunny		No visible signs of contamination	None		
31	Stone		No visible signs of contamination			
32	Keno 700	Generator Shack and Oil storage building Mining office. Between the mining office and the boiler building Fuel tank situated between ambulance shed and generator shack Fallen transformer site at 200 Level Below landfill site Garage floor Erosion channel Below engine drop/oil change platform Drainage channel to the northeast	Hydrocarbon staining on floor leading outside to the southeast. Hydrocarbon staining on wooden floor. Large hydrocarbon stain on the slope. No visible signs of contamination Suspected contamination Suspected contamination Suspected contamination Suspected contamination Suspected contamination Suspected contamination	Yes None Yes None Yes Yes Yes Yes Yes		
33	Main Fault & Nabob	Solid waste dump near old house on the opposite side of Silver Basin Gulch Trail.	Fifteen batteries for miner's lamps that are leaching	None		
34	Lake View		No visible signs of contamination	Not on claim		Not on claim
35	Nabob No. 2		No visible signs of contamination	None		
36	Keno No. 9 System	Shamrock J18 Raise Building	Transformer on power pole suspected of containing PCB's based on age.	None		



Table 3: UKHM Hydrocarbon Contamination Inventory - Provisional Draft

Assigned Site No.	Site Name	Location	Desription of Contamination	Samples Taken	History of Spills	Mitigation Measures
37	Gold Hill No. 2	350m west of Monument Hill Summit via the Monument Hill Trail	No visible signs of contamination	None		
38	Fox	Four 45 gallon drums found in Trench #1	No visible signs of contamination	None		
39	Caribou (Segsworth) & Alice	Numerous 5 gallon Chevron pails located in and around trenchinc and adit.	Numerous hydrocarbon staining around blocked adit entrance.	Not on claim	Not on claim	
40	Divide	Six empty drums present near wood frame building.	No visible signs of contamination	None		
41	Devon		No visible signs of contamination	Not on claim	Not on claim	
42	Faith		No visible signs of contamination	Not on claim	Not on claim	
43	Duncan		No visible signs of contamination	Not on claim	Not on claim	
44	Gold Queen		No visible signs of contamination	None		
45	Silver Basin		No visible signs of contamination	Not on claim	Not on claim	
46	Nabob		No visible signs of contamination	Not on claim	Not on claim	
47	Monument & Ladue Fraction		No visible signs of contamination	None		
48	Apex		No visible signs of contamination	None		
49	Vanguard	Twenty 45 gallon drums outside of adit.	No visible signs of contamination	Not on claim	Not on claim	
50	Homestake		No visible signs of contamination	Not on claim	Not on claim	
51	Christine	One 45 gallon drum of jet fuel present about 20m west of Trench #1	No visible signs of contamination	Not on claim	Not on claim	
52	Mo		No visible signs of contamination	Not on claim	Not on claim	
53	Maybrun	Cabin	Staining present around cabin area.	Not on claim	Not on claim	
		Dozen empty 45 gallon drums	No visible signs of contamination	Not on claim	Not on claim	
54	Hogan		No visible signs of contamination	Not on claim	Not on claim	
55	Runer	Two 22,750L above ground storage tanks behind garage and storage shed.	No visible signs of contamination	Not on claim	Not on claim	
		Garage	Untimbered and 1/4 of the timbered section of the garage floor exhibited moderate to heavy hydrocarbon staining.	Not on claim	Not on claim	
		Adjacent to southwest corner of timber frame refueling structure.	Soil staining.	Not on claim	Not on claim	
		Storage shed located west of the garage	Soil staining evident outside doorway; no discolouration below 0.05cm depth.	Not on claim	Not on claim	
		Empty drum stack on top of slope approximately 125m west of garage	Small area of staining immediately south of drum stack.	Not on claim	Not on claim	
56	Wernecke Railroad		No visible signs of contamination	Not on claim	Not on claim	
57	Formo (Yukeno)		No visible signs of contamination	Not on claim	Not on claim	
58	Paddy		No visible signs of contamination	Not on claim	Not on claim	
59	Eagle		No visible signs of contamination	Not on claim	Not on claim	
60	Fisher		No visible signs of contamination	Not on claim	Not on claim	
61	Cream & Jean		No visible signs of contamination	Not on claim	Not on claim	
62	Nord		No visible signs of contamination	Not on claim	Not on claim	
63	Gerlitski		No visible signs of contamination	None		
64	Titan		No visible signs of contamination	Not on claim	Not on claim	
65	Shanghai	Twenty four empty 45 gallon drums located to the west of the waste rock pile.	No visible signs of contamination	Not on claim	Not on claim	
66	Moon	Fuel Cache #1: Twenty three empty fuel drums 13m east of Building 66A Fuel Cache #2: Ten empty fuel drums 20m south of Building 66C Solid waste dump	No visible signs of contamination No visible signs of contamination Contains batteries for vehicles which could be leaching acid.	Not on claim Not on claim Not on claim	Not on claim Not on claim Not on claim	
68	Mt. Hinton		No visible signs of contamination	Not on claim	Not on claim	
69	Avenue		No visible signs of contamination	Not on claim	Not on claim	
70	Yono		No visible signs of contamination	Not on claim	Not on claim	
71	Christal (Dorothy)	A number of empty 45 gallon drums were found discarded at the Christal Camp site.	No visible signs of contamination	None		
72	Ironclad (Ankeno)	A number of empty 45 gallon drums were located about 40m west of Adit 1.	No visible signs of contamination	Not on claim	Not on claim	
73	Gambler	Thirteen empty 205 litre steel barrels were located on the waste rock below the lower adit.	No visible signs of contamination	Not on claim	Not on claim	
75	Bema		No visible signs of contamination	Not on claim	Not on claim	
76	Townsite Mine	Office/Workshop	Minor staining on floor.	None		
77	Sadie Ladue 600 Adit		No visible signs of contamination	None		
78	Elsa Village	Fuel Storage Area #1: Sawmill area, north of Hwy #2.	No visible signs of contamination	None		

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Building Contamination

Access Consulting observed and documented sites where asbestos or lead laden materials were found while conducting the inspections of the remaining sites with SRK Consulting. Where possible, samples of potential asbestos containing materials were retained by Access Consulting in the event that lab analysis was necessary to confirm the presence of asbestos fibres. Sites with evidence of lead or asbestos bearing materials were compiled and correlated with sites documented the previous year and with areas reported in the March 2000 Environmental Baseline Assessment performed by Public Works. This information was sorted into a Building Contamination Inventory list which included Site Name, Contamination Location, Description of Contamination, and whether samples were taken.

Please see Table 4: UKHM Building Contamination Inventory table for an inventory of building contamination; further discussion and context will be forthcoming in the Final Baseline Environmental Assessment Report.



Photo 6: Possible building contamination at Main Fault & Nabob site.



Table 4: UKHM Building Contamination Inventory - Provisional Draft

Assigned Site No.	Site Name	Location	Description of Contamination Suspect	Samples Taken/Results	Mitigation Measures
1	Silver King	100 Level Shifters Office/Lunch Room	Paint	None	
2	Husky & Husky SW	Boiler House ATCO Trailer	Possible asbestos exterior and interior siding, vinyl and asbestos floor tile. Exterior is painted yellow and brown.	None None	
3	Elsa	50 Level Shack 400 Level Portal	Blue paint Insulated wood frame with asbestos siding.	None None	
4	Dixie	Garage/Office	Asbestos board in the office area. Floor tile	None Yes - 1-10% chrysotile	
5	Coral & Wigwam		No visible signs of contamination		
6	Birmingham & Ruby (Arctic & Mastiff)		No visible signs of contamination	None	
7	No Cash	100 Level Garage 100 Level Lunchroom	Bay doors are painted Floor and partial wall sheathed with 2cm thick asbestos board. Foundation consists of wood plank flooring on grade covered with asbestos.	None None None	
8	Betty		No visible signs of contamination	None	
9	Hector Calumet		No visible signs of contamination	None	
10	Dragon & Miller		No visible signs of contamination	None	
11	Galkeno 300	Residence (Building 11G)	Contains paint on interior	None	
12	Galkeno 900	Storage Building	1m2 oil stain in the dirt	None	
13	Fisher Creek		No visible signs of contamination	Not on claim	
14	Bluebird	Cabin	Some paint on windows and doors. Asbestos fibre board in northeast corner	None None	
15	Tin Can		No visible signs of contamination	None	
16	Rico		No visible signs of contamination	None	
17	Duncan Creek		No visible signs of contamination	None	
18	Flame & Moth		No visible signs of contamination	None	
19	Onek	Building 19A Building 19B Building 19C Building 19D Building 19E Buildings 19J to 19M	Weathered green paint exterior Weathered green paint exterior Weathered green paint exterior Yellow painted exterior; painted interior walls Asbestos tar paper on entire exterior of building Portion of one building still has asbestos tarpaper cladding	None None None None None None	
20	Klondike-Keno	Collapsed buildings Drill shack	A number of collapsed buildings contain evidence of asbestos on them. Asbestos lining on the walls	None None	
21	Sadie Ladue		No visible signs of contamination	None	
22	Bellekeno	Powder magazine at 200 Level Adit Wash house at 200 Level Adit	Interior walls lined with asbestos board. Lined with asbestos paper on exterior.	None None	
23	Kijo		No visible signs of contamination	None	
24	Croesus No. 1		No visible signs of contamination	None	
25	Black Cap, Shepherd & SQ Adit		No visible signs of contamination	Yes	
26	Lucky Queen		No visible signs of contamination	None	
27	Lake		No visible signs of contamination	Not on claim	
28	Shamrock	Main Site Building	Paint on interior walls	None	
29	Highlander		No visible signs of contamination	None	
30	Cub & Bunny		No visible signs of contamination	None	
31	Stone	Dry building Outhouse near middle adit Building 31C Building 31D	Exterior of building is painted white. Possible asbestos on walls The roof and wall panel are likely constructed with an asbestos-containing material. Possible asbestos on walls	Yes - sample not yet run Yes - sample not yet run Yes - sample not yet run Yes - sample not yet run	



Table 4: UKHM Building Contamination Inventory - Provisional Draft

Assigned Site No.	Site Name	Location	Description of Contamination Suspect	Samples Taken/Results	Mitigation Measures
32	Keno 700	Mess Hall Bunkhouse Manager's accomodation building and storage sheds Boiler Room and Water Supply Building	Exterior asbestos-board insulation siding. Paint on exterior walls. Exterior asbestos-board insulation siding. Interior paint Interior paint Insulation around boiler and lying in a pile on the floor	Yes - 60-80% chrysotile Yes - sample taken by Public Works but never analysed Yes - 60-80% chrysotile None None Yes - tested negative for asbestos.	
33	Main Fault & Nabob	House Solid wasste dump #2	Exterior walls contain traces of asbestos tar paper cladding. Approximately 20m3 of the waste is asbestos asphalt wall.	Yes - sample not yet run None	
34	Lake View		No visible signs of contamination	Not on claim	
35	Nabob No. 2		No visible signs of contamination	None	
36	Keno No. 9 System	Wood frame over Shamrock J18 raise	Interior of building is clad in gyoprock with asbestos coating.	None	
37	Gold Hill No. 2		No visible signs of contamination	None	
38	Fox		No visible signs of contamination	None	
39	Caribou (Segsworth) & Alice		No visible signs of contamination	Not on claim	
40	Divide		No visible signs of contamination	None	
41	Devon	Old frame cabin	Some asbestos tar paper cladding on the building and the ground.	Not on claim	
42	Faith		No visible signs of contamination	Not on claim	
43	Duncan		No visible signs of contamination	Not on claim	
44	Gold Queen		No visible signs of contamination	None	
45	Silver Basin		No visible signs of contamination	Not on claim	
46	Nabob		No visible signs of contamination	Not on claim	
47	Monument & Ladue Fraction		No visible signs of contamination	None	
48	Apex		No visible signs of contamination	None	
49	Vanguard		No visible signs of contamination	Not on claim	
50	Homestake		No visible signs of contamination	Not on claim	
51	Christine		No visible signs of contamination	Not on claim	
52	Mo		No visible signs of contamination	Not on claim	
53	Maybrun		No visible signs of contamination	Not on claim	
54	Hogan		No visible signs of contamination	Not on claim	
55	Runer		No visible signs of contamination	Not on claim	
56	Wernecke Railroad		No visible signs of contamination	Not on claim	
57	Formo (Yukeno)	Core Shack	Contains asbestos tar paper cladding	Not on claim	
58	Paddy	Storage Building	White painted exterior.	Not on claim	
59	Eagle		No visible signs of contamination	Not on claim	
60	Fisher		No visible signs of contamination	Not on claim	
61	Cream & Jean		No visible signs of contamination	Not on claim	
62	Nord		No visible signs of contamination	Not on claim	
63	Gerlitski		No visible signs of contamination	None	
64	Titan		No visible signs of contamination	Not on claim	
65	Shanghai	Solid waste dump	5m3 of asbestos tar paper	Not on claim	
66	Moon	Sleeping quarters Kitchen Solid waste dump	Roof is covered in asphalt asbestos roofing. Painted "Wide Load" sign above door. Contains asbestos covered hoses	Not on claim Not on claim Not on claim	
68	Mt. Hinton		No visible signs of contamination	Not on claim	
69	Avenue		No visible signs of contamination	Not on claim	
70	Yono		No visible signs of contamination	Not on claim	
71	Christal (Dorothy)		No visible signs of contamination	None	
72	Ironclad (Ankeno)		No visible signs of contamination	Not on claim	
73	Gambler		No visible signs of contamination	Not on claim	
75	Bema		No visible signs of contamination	Not on claim	

Table 4: UKHM Building Contamination Inventory - Provisional Draft

Assigned Site No.	Site Name	Location	Description of Contamination Suspect	Samples Taken/Results	Mitigation Measures
76	Townsite Mine	Office/Workshop	Possible that floor tiles contain 1-10% chrysotile as they are similar in appearance to the tile sampled at the Dixie site. White paint was applied to the interior, however, most of the paint had worn off.	None	
77	Sadie Ladue 600 Adit		No visible signs of contamination	None	
78	Elsa Village	Shack #2 beside the Sawmill Wood Storage Building Pink and white bunkhouse Union Shop Snack bar Flotation Mill/Crusher House No. 2 Garage Light Vehicle Shop Yellow Exploration Building Elsa Market Fire Hall Building #34 (east of the Fire Hall) Administration Building Men's Staffhouse Apartment Building Roman Catholic Church Flat Creek Residence #1	Exterior is clad with asbestos wallboard Exterior is clad with asbestos wallboard Exterior is clad with asbestos wallboard Exterior is clad with asbestos wallboard Exterior cladding containing asbestos was found along the base of the building. Exterior walls are clad with approximately 1600m2 of asbestos shingles. Three of the exterior walls and the ceiling are covered with an asbestos material. Exterior walls are clad with an asbestos material. Exterior walls clad in asbestos. Asbestos tiles are suspected to be beneath the linoleum flooring. Approximately 30m2 of asbestos sheet cladding exists beneath the metal siding. Asbestos wallboard present underneath the metal siding. All four exterior walls are clad in asbestos wallboard Asbestos wallboard is painted yellow. Suspect asbestos tiles were observed on the roof and inside the kitchen (25m3) and bathroom (15m3). Exterior walls are clad in asbestos. Interior floors, exterior walls, and tar roof all contain suspect asbestos. Exterior walls are clad in asbestos and the floor is covered in asbestos tile. Residence has asbestos siding on the exterior walls.	None None None None None None None None None None None None None None None None None None None	
79	Elsa Tailings	Transmission Building 79A Transmission Building 79B	Door is painted green Building is painted entirely green.	None None	
80	Wernecke Tailings		No visible signs of contamination	Not on claim	
81	Mackeno	Pumphouse Debris noted on the surface of the site	Asbestos-impregnated tar paper present on the building exterior and asbestos wallboard is present on the interior walls. Asbestos is considered non-friable in both of these forms. Non-friable asbestos wallboard.	None None	

Site Orthophotos

ERDC commissioned aerial photos from Aero Geometrics to undertake an aerial photography program at 1:10 1000 to be used for baseline environmental assessment, closure planning, as well as to be utilized for the surface exploration program. The property was flown for aerial photography in September 2006. Photos have been received and site orthos are being completed.

Project 4: Closure Planning

Water Quality Data Review and Sitewide Model

All of the historic water quality data for the site has been compiled into a single water quality database in Excel, and current sampling daily and monthly reports are being integrated into the database. The data contained in the workbook has been combined with flow monitoring data to generate an updated site-wide water and loading balance for the mine site and its receiving streams. The water quality database is currently being screened and assessed for data quality, and referencing all data with lab reference numbers for QA/QC where applicable. The loading balance has been partially completed and additional optimization of the loading balance is necessary.

A sample page of the database is provided below, which illustrates an example of the data to date.

Additional Water Sampling and Flow Monitoring

Flow monitoring has been initiated at all currently monitored receiving water stations required under the care and maintenance contract. Although flow monitoring was not required as part of the care and maintenance monitoring program, flows are necessary to update the sitewide loading balance and for closure planning purposes.

Shallow groundwater samples have been taken using drive point piezometers and a transect established to determine zinc loadings downgradient of adit discharge locations. Specifically, shallow groundwater sampling and mapping has been completed downgradient of No Cash, Onek, Galkeno 300 and 900 and Valley Tailings. This data has been incorporated into a sitewide groundwater database and sampling locations have been summarized on maps.

Table 7: Example sheet from the 2006 Water Quality Master Database

[illegible]

Soils Characterization

Alexco Resource Corp. has completed borehole drilling using a Becker Hammer drill at select UKHM locations in an effort to characterize soils and gravels and to determine permeability and location of potential gravel sources for use in final closure planning including sources of potential cover material and possible in-situ injection sites. Three borings were advanced around the tailings ponds. Hole #4 was located to the immediate northeast of the adit opening to Galkeno 900. A full summary report on the findings of the soils characterization will be included in the final report for this special project.



Photo 7: Hammer borehole rig at Valley Tailings

Assessment of Waste Rock Geochemistry

As part of the baseline environmental assessment conducted by Access Mining Consultants in 1996, R. McIntyre conducted a comprehensive waste rock dump and pit wall rock sampling program, shortly before UKHM encountered financial difficulties. Due to unfortunate corporate circumstances therefore, these samples were never sent to laboratory for analysis. Since that time, the sample pails have been stored in their original plastic 20 litre sample pails on pallets in a warehouse. Access revisited those samples this past summer and verified sample & container integrity, and re-documented the samples that were deemed intact, uncompromised & therefore suitable for analytical testing (some of the original pails had been opened & re-sampled by unknown parties, and therefore deemed compromised & were discarded). To further characterize and assess long term geochemical stability of various waste rock piles, these seventy-five x 20 litre pails will be shipped to Chemex Labs in Vancouver for static ABA testing using the Modified Sobek method, and Metals Leachate testing. Please see Table 5: Galena & Keno Hill Pit Walls & Waste Rock Dump Sample Inventory for a list of samples.



Photo 8: Detail view of waste rock pile at Eagle site.

Table 5: Galena & Keno Hill Pit Walls & Waste Rock Dump Sample Inventory - August, 2006

Mine/dump location	No. of 20 L Pails	Sample ID	Sample Description
DIXIE Adit dump			
	1	95UKHDD01	grey fine gr. mat'l, minor >3", 3" rusty bands every 12"
	2	95UKHDD02	brownish & grey fine gr. mat'l (broken schist, some fragments, grey qtzite)
	1	95UKHDD03	grey fine gr. mat'l, rusty bands (6") every 14", sample from 8' depth
BERMINGHAM pit wall			
	2	95UKHBP01	thin bedded qtzite, rusty weathering; North wall of pit
	2	95UKHBP02	thick bedded blocky, rusty weathering qtzite; manganese staining (?); above old brim. Shaft; N. wall pit
	2	95UKHBP03	thick bedded, blocky qtzite, buff weathering, some minor graphitic schist talus; N. wall pit
	2	95UKHBP04	rusty weathering, blocky qtzite, minor schist; 70%>4", 10%>8"
	1	95UKHBP05	buff weathering blocky qtzite, 70%>4"
	2	95UKHBP06	graphitic schist, platy talus on South pit wall, 1/2" x 8" pieces
	1	95UKHBP07	sericitic schist, platy to blocky talus on S. pit bench
BERMINGHAM pit dump			
	2	95UKHBD01	fine grained ore stockpile (1/2">x<3"), rusty weathering, 70% "soil" fraction mat'l
	2	95UKHBD02	fine grained ore stockpile (1/2">x<3"), rusty weathering, 70% "soil" fraction mat'l
	1	95UKHBD03	ore and colluvium (?) scraped from floor of ore stockpile area
	1	95UKHBD04	graphitic schist
	2	95UKHBD05	ore and colluvium (?) scraped from floor of ore stockpile area
	1	95UKHBD06	buff weathering, blocky qtzite
RUBY adit dump			
	2	95UKHRD01	grey - black fine grained qtzite rubble, iron stain banding (on only, 6" thick, dipping 45')
	2	95UKHRD02	grey - black fine grained qtzite rubble, weak iron stain banding (on only, 6" thick, dipping 45')
	2	95UKHRD03	grey - black fine grained qtzite rubble, iron stain banding (on only, 6" thick, dipping 45')
CALUMET 1-14 pit dump			
	2	95UKHCD01	buff weathering, altered (?) qtzite, rusty fractures
	2	95UKHCD02	buff weathering, blocky qtzite, rusty fracturing, possible some vein mat'l (15%)
HUSKY SW			
	1	95UKHWD01	very pyritic grey qtzite
CALUMET 1-15 pit wall			
	1	95UKHCP01	graphitic schist, platy talus (1/2" thick x 6-10" long)
	2	95UKHCP02	grey blocky qtzite, maroon fractures, >60%+4"
CALUMET 1-15 pit dump			
	2	95UKHCD04	grey blocky qtzite, maroon weathering on fractures
	2	95UKHCD03	ore stockpile scrapings mixed and some colluvium, minor buff weathering qtzite w/ rusty fractures
MILLER pit dump			
	2	95UKHMD01	greenish-grey fine grained qtzite, rusty weathering on fracture surfaces, some pyrite casts

Table 5: Galena & Keno Hill Pit Walls & Waste Rock Dump Sample Inventory - August, 2006

Mine/dump location	No. of 20 L Pails	Sample ID	Sample Description
HECTOR adit dump			
	2	95UKHHD01	grey qtzite rubble, mixed with debris; top of dump
	2	95UKHHD02	grey qtzite rubble, mixed with debris; top of dump
	1	95UKHHD03	green sercite schist rubble, woody debris & fines; toe of dump
SIME 6 pit wall			
	2	95UKHSP01	grey, platy graphitic schist; 1/4" thick x 4-10" long
	2	95UKHSP02	buff weathering, blocky qtzite, some rusty fracture surfaces
SIME 4 pit wall			
	1	95UKHSP03	thick bedded, grey massive qtzite, some pyrite casts, all surfaces iron stained
SIME 35 pit wall			
	2	95UKHSP04	very fine grained schist, some Fe stain
	2	95UKHSP05	
SIME 4 & 6 pits wall			
	1	95UKHSD01	clean buff qtzite, 4" blocks, minor oxidation on 50% of fracture surfaces
ONEK pit			
	1	95UKHOP02	mixed interbedded (graphitic schist) & qtzite, mostly + 4" chunks
ONEK pit dump			
	1	95UKHOD01	greenstone, blocky 3" x 7" pieces and chips
	1	95UKHOD02	buff weathered qtzite, rusty fractures
	2	95UKHOD03	grey platy graphitic schist, 1/2" x 7"
HUSKY shaft dump			
		95UKHYD01	dark grey, very pyritic qtzite, qtz stringers; 80%>3", 20%<3" + sand size fraction (major acidic seep at toe)
KENO 700 adit dump			
	1	95UKHKD01	grey qtzite, qtz bands
	1	95UKHKD02	green seritic schist
UN adit dump			
	2	95UKHUD01	mixture grey graphitic schist and buff weath. qtzite, 30" + 3" 70" <3"
TOWNSITE adit dump			
	1	95UKHTD01	buff weathering qtzite, 10% >3", mostly fine fraction, some oxidation
	2	95UKHTD02	grey qtzite with sercite schist, 10% > 3", mostly fine fraction
BELLEKENO adit dump			
	2	95UKHLD01	dark grey pyritic qtzite, qtz stringers abundant
SILVER KING pit dump			
	1	95UKHVD01	mixed grey and buff qtzite, minor schist, some sandsize particles
TOTAL # of SAMPLE SITES:	48		
TOTAL # of 20 L PAILS	75		

Project 5: Physical Hazard Reduction

Identification of priority hazards

A site-wide survey of adits and other facilities was completed in September 2006 as part of the Baseline Environmental Assessment. The hazards identified have been incorporated into a risk register that will allow rating the risks on a scale of Low, Medium and High. Approximately 150 risks have been registered to date.

The risk register that was previously submitted to Type II office for review has been included with this Progress Report as Table 6. In accordance with direction from YG Type II office, a workshop has been planned for later in November that will rate the individual hazards for priority remediation.

Hazard Reduction Options

SRK Consultants prepared a summary of remediation approach for significant hazards that were known including Shamrock J and other open holes on the Keno Hill and Sourdough Hill areas. These design criteria were used to remediate the Shamrock J vent raise and open holes and shafts on Sourdough Hill.

Hazard Reduction Implementation

The most significant site remediated during the 2006 season was the Shamrock J vent raise. This site contained a building that was partially collapsed over an open vent raise, and vehicle track evidence in the past had provided indication that this site represented the highest priority danger for personal injury. A fence to prevent access had been previously installed but evidence suggested that tourists and the public were still able to access the site and a significant risk remained. The Shamrock J site is within a published tourist destination. Based on the design criteria provided by SRK, the building was first removed and stacked next to the vent raise. Prior to building removal, the fence was dismantled and transported offsite and is stored in Elsa for future use.

Upon removal of the building, it was evident that the vent raise was collapsed with overburden material. A 325 excavator was used to assess if the vent raise was bridged with material. The excavator dug approximately 20 feet into the material and it continued to be competent and not bridged. The hole was then filled with local borrow material as per SRK specs. The top of the filled hole was capped with growth media and mounded to promote water runoff. The building material was burned and the remaining metal debris was loaded and transported to Elsa. A burn permit was secured prior to burning the remnant building.

Seven open holes and one trench immediately next to the road on Sourdough Hill were filled with material as per SRK specs. The open holes and shafts on Sourdough Hill were high on the priority list as tourists and local residents frequently travel this road and the holes and shafts were easily accessible.



Table 6: UKHM Physical Hazard Risk Register - Provisional Draft

Assigned Site No.	Site Name	Location Description	UTM Coordinates	Description of Physical Hazards	Consequence	Likelihood	Risk Rating		Mitigation Measures	Actions Complete
					Severity	Probability	Numerical	Descriptive		
1	Silver King	Straddles the Silver Trail Highway at Galena Creek, approximately 4km southwest of Elsa town site	473050E, 7085275N	Open Pit has no barriers to prevent access; temporary barriers have fallen down.	Moderate	Unlikely	30	Moderate	Erect more permanent barriers to limit access to the open pit.	
				Compressor building accessible to the public.	Low	Possible	10	Low	Ensure doors on compressor building are structurally sound and locked with an adequate mechanism.	
2	Husky & Husky SW	12km west of Keno City on Silver Trail Highway, past the first turnoff for the Elsa townsite, downhill via an access road for 0.5km.	474740E, 708677N	Power pole and power line west of headframe.					Power poles and lines need to be dismantled and disposed off.	
				Tension cracks near the crest of waste dump.	Minor	Possible	30	Moderate		
				Boiler House accessible.	Low	Possible	10	Low		
				Storage Shed accessible.	Low	Possible	10	Low	Ensure doors on Boiler House are structurally sound and locked with an adequate mechanism.	
				Workshop accessible.	Low	Possible	10	Low	Ensure doors on Storage Shed are structurally sound and locked with an adequate mechanism.	
				Shaft House and Headframe were accessibleat Husky SW.	Low	Possible	10	Low	Ensure doors on Workshop are structurally sound and locked with an adequate mechanism.	
				Hoist House accessible.	Moderate	Possible	100	Moderate	Ensure doors on Shaft House and Headframe are structurally sound and locked with an adequate mechanism.	
				ATCO Trailer accessible.	Moderate	Possible	100	Moderate	Ensure doors on Hoist House are structurally sound and locked with an adequate mechanism.	
3	Elsa	Located within the Elsa townsite on the north-facing slope of Galena Hill.	476000E, 7087000N	Powderhouse corner vent raise appears to be subsiding with a linear depression crossing Calumet Drive.	Low	Possible	10	Low	Ensure doors on ATCO Trailer are structurally sound and locked with an adequate mechanism.	
				Several buildings in various stages of repair may need to be either dismantled or entry adequately blocked to prevent entry.	Moderate	Likely	300	Moderate	Depression across Calumet Drive could be stope subsidence and should be mound filled as vehicles cross over this area on a regular basis.	
4	Dixie	3.6km along Calumet Drive from the junction with Wernecke Road.	477000E, 7087200N	Ditch running along side of Garage/Office building could be subject to erosion during peak flows, which could result in the structure collapsing; accessible.	Moderate	Likely	300	Moderate		
				Shaft is partially collapsed and filled with water to a depth of approximately 3m below ground level.	Minor	Almost certain	300	Moderate	Either ditch needs to be filled in and redirected or building should be moved or disassembled.	
				Two collapsed raises show evidence of subsidence.	Major	Possible	300	Moderate	Debris likely needs to be pulled out and shaft filled.	
5	Coral & Wigwam	Follow the Bermingham Road for 2.8km from the Hector Portal to a cat trail that leads northwest for 100m to site.	477900E, 7086250N	Two shafts present that are open and accessible.	Minor	Possible	30	Moderate	Depressions may need to be mound filled.	
					Major	Unlikely	90	Moderate		
6	Bermingham & Ruby (Arctic & Mastiff)	Near the summit of Galena Hill, approximately 1.5km southwest of Calumet town site via the gravel road from Calumet.	474740E, 708677N	Ruby shaft area has collapsed on skip; area in front of shaft has failed also; shaft house accessible.					Structure should be extracted and the shaft filled by mounding to account for future subsidence in and around shaft.	
				One of the dumps is open without any berming.	Critical	Possible	1000	Extreme		
				200 level Adit has collapsed somewhat but is still accessible.	Minor	Possible	30	Moderate	Entrance gated to vehicular traffic. Is berming necessary for foot traffic?	
				Explosives magazine and Detonator House accessible.	Moderate	Possible	100	Moderate	Shaft has somewhat collapsed in on itself. May need to dismantle portal and provide fill.	
				Water Shack accessible.	Low	Possible	10	Low	Ensure doors on both buildings are structurally sound and locked with an adequate mechanism.	
				Two residential buildings were considered unsafe, yet accessible.	Low	Possible	10	Low	Ensure doors on Water Shack are structurally sound and locked with an adequate mechanism.	
7	No Cash	Located on the mid-northwest slope of Galena Hill via a road leading from the Elsa-Calumet road.	477900E, 7086250N	Partially collapsed adit.	Moderate	Unlikely	30	Moderate	Possibly need to dismantle or restore buildings.	
				Garage accessible.	Moderate	Unlikely	30	Moderate		
				Shaft House accessible.	Low	Possible	100	Moderate	Either adit needs material fill in the present opening or the timbers can be dismantled and the adit filled.	
8	Betty	Old trailheads extend northeast from the No Cash mine towards the Betty mine site.	477230E, 7088058N	One shaft collapsed due to permafrost; retaining approximately 1ft of water.	Low	Possible	10	Low	Ensure doors on Garage are structurally sound and locked with an adequate mechanism.	
					Low	Unlikely	3	Low	Ensure doors on Shaft House are structurally sound and locked with an adequate mechanism.	
				Lunch Room accessible.	Low	Unlikely	3	Low	Ensure doors on Shaft House are structurally sound and locked with an adequate mechanism.	
9	Hector Calumet	Located on the northwest slope of Galena Hill, on the Calumet Road.	479251E, 7088632N		Major	Possible	300	Moderate	Ensure doors on Lunch Room are structurally sound and locked with an adequate mechanism.	
					Major	Possible	300	Moderate	Shaft could be cause for concern, however, location and low depth of shaft determined the risk to be minimal.	
				Underground opening present in west corner.	Major	Possible	300	Moderate	Opening in corner could be filled with excavator or covered over with a dozer.	
				Other concern would be berming the open pits and wall failure in some areas.	Major	Possible	300	Moderate		
				Sinkholes present in pit floor.	Major	Possible	300	Moderate	Sinkholes would likely need to be mound filled.	
				Shacks, bunk house, and water storage building all accessible.	Major	Possible	300	Moderate		
					Major	Possible	300	Moderate	Ensure doors on Lunch Room are structurally sound and locked with an adequate mechanism.	



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Assigned Site No.	Site Name	Location Description	UTM Coordinates	Description of Physical Hazards	Consequence	Likelihood	Risk Rating		Mitigation Measures	Actions Complete
					Severity	Probability	Numerical	Descriptive		
10	Dragon & Miller	Located on the north slope of Galena Hill along the Calumet Back Road.	481500E, 7088800E	Dragon Adit open but blocked by ice year round.	Major	Possible	300	Moderate		
11	Galkeno	Located on the northeast slope of Galena Hill via the Calumet Back road, approximately 3.9km from the Duncan Creek road.	482600E, 7088600N	Timbers in collar of 200 Level Adit have collapsed, but still accessible.	Major	Possible	300	Moderate	Timbers should be removed and adit filled.	
				Some parts of open pit missing berms.	Major	Possible	300	Moderate		
				Loading elevator very unstable; accessible.	Major	Possible	300	Moderate	Location easily accessible and inviting to the curious. Should be dismantled.	
12	Galkeno 900	Located at the eastern base of Galena Hill via an all-weather gravel road that branches off to the southwest from the Silver Trail Highway, approximately 0.6km.	483600E, 7087700N	Some tension cracks on slope north of set pond.	Major	Possible	300	Moderate	Continuous monitoring should be done of the tension on the north slope.	
13	Fisher Creek	Located on the lower southeast slope of Galena Hill, roughly 1km north of Duncan Creek Road.	481000E, 7083700N		Major	Possible	300	Moderate	Not on claim	
14	Bluebird	Northeast slope of Galena Hill, approximately 4km northwest from Keno City; 70m upslope.	482750E, 7089825N	Three shafts were located east of cabin, two with ladders. Shafts filled in but still relatively deep (approx. 1-2m). One small shaft located north of other shafts only 0.5m deep.	Major	Possible	300	Moderate	Shafts could be filled by hand. Low risk.	
				Log cabin accessible; in poor condition.	Major	Possible	300	Moderate		
15	Tin Can	250m uphill of Silver Trail Highway.	483743E, 7088748N	One partially caved shaft found further down slope; stil somewhat accessible however, not too deep (approx 2.5m)	Major	Possible	300	Moderate	Shaft could be cause for concern, however, location and low depth of shaft determined the risk to be minimal.	
16	Rico	Northwest slope of Galena Hill, 450m upslope of Galkeno 900 site via old dirt road that branches off Calumet Back road roughly 2.2km north of junction with Duncan Creek Road.	483300E, 7087700N	One open shaft above adit, collapsed inward approximately 4m in depth; water retained in bottom.	Major	Possible	300	Moderate	Shaft could be cause for concern, however, location and low depth of shaft determined the risk to be minimal.	
17	Duncan Creek	Just east of the confluence of Duncan Creek with Lightning Creek via an overgrown cat track that intersects with the Duncan Creek Track approximately 800m from the Duncan Creek Road.	483200E, 7084950N	Trenches present only, however, do not reach bedrock. May not be exploration trenches but cleared areas only.	Major	Possible	300	Moderate		
18	Flame & Moth	Directly southeast of Christal Lake on the north side of Duncan Creek Road.	483967E, 7086852N	Site consists of minor pits and trenching; no real hazards apparent.	Major	Possible	300	Moderate		
19	Onek	Located on the south slope of Keno Hill immdiately northeast of Keno City.	487406E, 7087196N	Open pits in the south end have no berms on them (location is vehicle accessible).	Major	Possible	300	Moderate	Locals use the pit area as a shooting range; thus the pit hazard is more eminent. Also suggests buildings in upper camp could be entered or used as targets, so removal might be in order.	
				Collapsed rock above lower portal; timbers of lower portal in poor shape.	Major	Possible	300	Moderate	Removal of rock and refurbishing of timbers may be in order as the portal cannot be allowed to plug with ice due to the close proximity of the Keno residents as a sudden release from the portal can cause serious damage and disruption.	
				Lone Star shaft inaccessible except for 5m deep hole within open pit.	Major	Possible	300	Moderate	Perhaps should be filled either by hand or with backhoe.	
20	Klondike-Keno	Northwest slope of Keno Hill, approximately 1.5km southwest of Wernecke town site.	484700E, 7090700N	Subsidence has occurred behind collapsed adit.	Major	Possible	300	Moderate	Moderate rating given because of close proximity to accessible roadway, would definitely catch the attention of the curious.	
				Drillers shack located north of adit roof structure on it's way to collapsing	Major	Possible	300	Moderate		
21	Sadie Ladue	Located on the northwest slope of Keno Hill at the Wernecke Camp.	486400E, 7092000N	Collapsed stope located between Shaft #2 and Pit #1; loose slabs in roof a hazard.	Major	Possible	300	Moderate	Collapsed stope should be filled with backhoe to prevent access.	
				A number of buildings in various states of repair are present on the site.	Major	Possible	300	Moderate	Note that most cause for concern from structures present on site should be lookout, as this structure is largely attractive to the curious and it's height makes it a significant liability in case of collapse. Access to structure should be eliminated.	
22	Bellekeno	South side of Sourdough Hill Road at the 100 level adit site 80m along a trail leading off of Sourdough Hill Road.	487126E, 7086385N	Open shaft along right side of road partially covered by collapsing frame	Major	Possible	300	Moderate	Shaft should be able to be filled with material without too much difficulty.	✓
				Further up road along right side, another open log-lined vent about 3m deep	Major	Possible	300	Moderate	Shaft should be able to be filled with material without too much difficulty.	✓
				Minor tension cracks along edge of pond and along crest of waste rock slope.	Major	Possible	300	Moderate		
				Eureka: 2 open shafts located west of cabin; one overgrown and one is fairly deep 1 large stope failure in the middle of road 1 large open vent raise	Major	Possible	300	Moderate	All of these openings (4 in total) should be filled with material, possibly mounded at the stope location to account for settling Trail along Sourdough Hill Drive should be either bermed or gated right at Sourdough Hill Road	✓
				Powder mag is in poor condition and accessible.	Major	Possible	300	Moderate	Building may have to be dismantled.	
				Wash house is in poor condition and accessible.	Major	Possible	300	Moderate	Building may have to be dismantled.	



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Assigned Site No.	Site Name	Location Description	UTM Coordinates	Description of Physical Hazards	Consequence	Likelihood	Risk Rating		Mitigation Measures	Actions Complete
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23	Kijo	Located on the mid-southwest slope of Keno Hill, roughly 500m north of Erickson Gulch via Blackcap Road which branches off Wernecke Road, 80m down the slope.	486200E, 7089600N	One collapsed portal south of the collapsed adit; entrance too small for accessibility.	Major	Possible	300	Moderate		
24	Croesus No. 1	Midway up the western slope of Keno Hill, extending roughly 350m along an azimuth of 5 degrees up the north side of Erickson Gulch from the creek via the Blackcap Road which branches off of Wernecke Road, 1.3km to the northwest.	486655E, 7089425N	One shallow caved in shaft found up the hill from the adits.	Major	Possible	300	Moderate	Shaft could be filled in by hand, but the location in the dense bush makes it's priority low.	
25	Black Cap, Shepherd & SQ Adit	Three sites located on the western slope of Keno Hill, roughly a kilometre north of Erickson Gulch, all within 450m of each other.	486950E, 7091675N	Black Cap Adit allegedly accessible.	Major	Possible	300	Moderate	Adit entrance could be sealed with rods and geotextile.	
				Lucky Queen Adit accessible through broken timbers.	Major	Possible	300	Moderate	Portal material likely needs to be removed and the adit sealed with material.	
				Open pits with no berming present.	Major	Possible	300	Moderate		
				Workshop accessible.	Major	Possible	300	Moderate	Ensure doors on Garage are structurally sound and locked with an adequate mechanism.	
26	Lucky Queen	Located on the northwest slope of Keno Hill, roughly 1.25km east and uphill of the Wernecke Camp.	487700E, 7092700N	Doors unlocked on Shaft #1 headframe.	Major	Possible	300	Moderate	Ensure doors on Shaft #1 headframe are structurally sound and locked with an adequate mechanism. Moderate rating given because of attractiveness to	
27	Lake	250m west of Gambler Gulch, midway down the northwestern slope of Keno Hill, via the Lower Faro Gulch Trail.	490150E, 7090640N	Large headframe present above shaft, access to descent ladder nailed shut, however, access can be gained from side of shaft as ground has collapsed. Shaft may be approximately 5m deep.	Major	Possible	300	Moderate	Not on claim	
28	Shamrock	Near the summit on the southwest side of Keno Hill; can be seen from Keno City	488018E, 7090536N	Headframe is collapsing into the shaft and ground subsidence is occurring on the east side of the shaft.	Major	Possible	300	Moderate	Headframe material should be extracted from the shaft, then an assessment as to whether the shaft needs a plug to be filled or not should be made.	
				Main Site Building accessible.	Major	Possible	300	Moderate		
				Generator Shed accessible.	Major	Possible	300	Moderate		
				200 Level Portal partially collapsed; access is possible but difficult.	Major	Possible	300	Moderate	Material may have to be removed from adit entrance and adit filled with material.	
29	Highlander	2km northwest of Keno Hill Summit on the south side of Gambler Gulch.	487900E, 7092100N	One caved in adit with a small opening that still allows accessibility..	Major	Possible	300	Moderate	Collapsed adit can be filled by hand if necessary. Site not in obvious location; may limit accessibility.	
				Ore processing building accessible.	Major	Possible	300	Moderate		
				Bunkhouse accessible.	Major	Possible	300	Moderate		
				Cabin accessible.	Major	Possible	300	Moderate		
30	Cub & Bunny	Northeast facing slope of Faro Gulch, 1.5km northwest of the Keno Summit.	488780E, 7092120N	Site consists of a trench and a pit; no real hazard concerns	Major	Possible	300	Moderate		
31	Stone	2.3km north of Keno Summit in Faro Gulch; south of Faro Gulch Trail.	488800E, 7092500N	One adit partially caved and difficult to access.	Major	Possible	300	Moderate	If necessary, partially collapsed adit can be filled by hand. Location makes priority low.	
				Dry Building accessible.	Major	Possible	300	Moderate		
32	Keno 700	Sites occur across a broad, relatively gentle slope above Hope Gulch southeast of the Keno Summit on Keno Hill via the Keno 700 Road.	490250E, 7089350N	Keno 200 Adit collapsed some approx. 3m deep; accessible from door at front.	Major	Possible	300	Moderate	Ensure doors on adit are structurally sound and locked with an adequate mechanism.	
				Comstock 150 Adit door sealed but has some damage.	Major	Possible	300	Moderate	Repair doors on adit and lock with an adequate mechanism.	
				Comstock 200 Adit door sealed but accessible from smaller door on west side.	Major	Possible	300	Moderate	Ensure doors on adit are structurally sound and locked with an adequate mechanism.	
				Garage building subjected to erosion at base from being positioned on waste rock pile.	Major	Possible	300	Moderate		
				Drill equipment shop was unstable, slipping into the erosion channel.	Major	Possible	300	Moderate		
				The mining/geologist office was unstable and slipping into the erosion channel.	Major	Possible	300	Moderate		
				All building on the site were accessible.	Major	Possible	300	Moderate		
33	Main Fault & Nabob	North face of Keno Hill, approximately 0.75km northwest of Monument Hill, adjacent to the Keno No.9 System via the Silver Basin Gulch Trail.	490150E, 7090640N	Old house & old outhouse accessible.	Major	Possible	300	Moderate		
34	Lake View	Located in the cirque at the headwaters of Faro Gulch on the north slope of Keno Hill.	489635E, 7091270N	Most of the site consists of a number of trenches that pose no real hazard. One building still standing on site in process of collapsing.	Major	Possible	300	Moderate	Not on claim	
35	Nabob No. 2	North side of Keno Hill, approximately 2km northwest of Mounument Hill summit via an unnamed trail the branches off Silver Basin Gulch Trail.	489900E, 7092100N	One shaft has workings collapsed into it; not accessible.	Major	Possible	300	Moderate		



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36	Keno No. 9 System	Located on the Keno Hill summit via the Keno Signpost road.	487300E, 7090200N	Faro Gulch Portal not inspected. Unsure of condition.	Major	Possible	300	Moderate	Portal is very attractive to the adventurous hiker.	
				Open pits on top of Keno Hill summit.	Major	Possible	300	Moderate	Considering the amount of traffic around the Signpost area, perhaps the larger pits should be bermed.	
				Two open holes are present just east of the Signpost.	Major	Almost certain	3000	Extreme	Considering the amount of traffic around the Signpost area, open holes need to be filled ASAP.	
37	Gold Hill No. 2	350m west of Monument Hill Summit via the Monument Hill Trail	490740E, 7090400N	One shaft collapsed to a depth of approximately 1ft.	Major	Possible	300	Moderate	Shaft can be filled in by hand if necessary.ent.	
				A number of trenches present, one with an eroding high wall that is in the process of slow collapse.	Major	Possible	300	Moderate	Wall would need to be shaved down, likely by Excavator or possibly dozer, however, site would be difficult to reach with either piece of equipm	
38	Fox	North side of Keno Hill, approximately 1.5km north-northwest of Monument Hill Summit via the Silver Basin Gulch Trail.	490650E, 7091600N	Site consists of two trencensed; no real hazards observed	Major	Possible	300	Moderate		
39	Caribou (Segsworth) & Alice	Approximately 250m southwest of Caribou Hill Summit and in the steeped wall cirque immediately west of Caribou Hill Summit.	492796E, 7091020N	Caved in adit still somewhat accessible through rip rap fill. Exposed portion of shaft accessible; ground possibly failing in front of shaft	Major	Possible	300	Moderate	Not on claim	
				Exposed portion of shaft accessible; ground possibly failing in front of shaft	Major	Possible	300	Moderate	Not on claim	
40	Divide	South side of Keno Hill, between Faith & Hope Gulches, approximately 1.5km southwest of Caribou Hill.	492249E, 7089995N	Just a series of trenches, no apparent hazards.	Major	Possible	300	Moderate		
41	Devon	Located on the south side of Keno Hill, approximately 1km north-northwest of the junction of Lightning Creek and McNeill Gulch.	493100E, 7088855N		Major	Possible	300	Moderate	Not on claim	
42	Faith	Located on the southeast side of Keno Hill, approximately 1km southeast of Caribou Hill summit, via a partially overgrown cat trail along the rigdeline between Beauvette Hill Trail and the Hope Gulch Trail.	493700E, 7089900N		Major	Possible	300	Moderate	Not on claim	
43	Duncan	Located near the top of Keno Hill, approximately 1km west-southwest of Caribou Hill Summit, just below the rim of the cirque.	492200E, 7090770N	Shaft caved in waist deep. Trenching evident on rim of cirque.	Major	Possible	300	Moderate	Not on claim	
44	Gold Queen	Site was not located.	491350E, 7091700N	A trench and an open adit was indicated in the public works report.	Major	Possible	300	Moderate	Low priority was given due to the fact that the site was not located, therefore, would likely not be majorly accessible to hikers.	
45	Silver Basin	North side of Keno Hill, approximately 1km north of the monument hill summit, via the Silver Basin Gulch Trail.	491000E, 7091450N	One collapsed adit and shaft on west facing slope of Gulch; not accessible.	Major	Possible	300	Moderate	Not on claim	
46	Nabob	North side of Keno Hill, approximately 1.6km north-northwest of Mounument Hill Summit.	491000E, 7092350N	Minor trenching only; no obvious hazards.	Major	Possible	300	Moderate	Not on claim	
47	Monument & Ladue Fraction	Northwest facing slope of Monument Hill summit, approximately 1.5km past the signpost via the Silver Basin Gulch Trail.	490900E, 7090900N	One collapsed adit located on east facing slope of Silver Basin Gulch just below summit of Monument Hill; not accessible. Trenching present on top of cirque.	Major	Possible	300	Moderate		
48	Apex	Located approximately 250m south of 4th switchback past the intersection of Signpost Road and Keno 700 Road.	488640E, 7088920N	One lined shaft located in Trench #3, a couple of meters deep. Possible subsidence immediately west of the hole.	Major	Possible	300	Moderate	Shaft can be filled in by hand if necessary.	
				Wood cabin accessible.	Major	Possible	300	Moderate		
49	Vanguard	Located on the south slope of Keno Hill on the west side of Charity Gulch via an old 500m trail from the Keno 700 road.	489300E, 7088250N		Major	Possible	300	Moderate	Not on claim	
50	Homestake	North side of Bunker Hill via an unnamed overgrown road 2.5km in length that branches off Lightning Creek Road near the junction of Thunder Gulch and Lighning Creek.	489750E, 7086600N		Major	Possible	300	Moderate	Not on claim	
51	Christine	Located on the peak of Bunker Hill, 7km east of Keno City.	492300E, 7085200N		Major	Possible	300	Moderate	Not on claim	
52	Mo	East slope of Sourdough Hill	487082E, 7085278N	Two open shafts, both collapsed about 10ft down	Major	Possible	300	Moderate	Not on claim	
53	Maybrun	South side of Thunder Gulch at the confluence of two creeks about 1.5km south of Lightning Creek	487914E, 7085643N	Open adit with portal structure collapsing slowly; two branches in adit, right likely accessible, left side caved in approximately 10m	Low	Possible	10	Low	Not on claim	
54	Hogan	South slope of Keno Hill no the north side of Lightning Creek Road.	486924E, 7087344N	Shallow shaft on east end of waste dump only 2ft deep.	Major	Possible	300	Moderate	Not on claim	
55	Runer	Located on the southwestern toe of Keno Hill, 3km east of Keno City via a gravel road branching off from the dirt road between the Signpost Road and Lightning Creek Road.	488150E, 7087550N		Major	Possible	300	Moderate	Not on claim	
56	Wernecke Railroad	Located on the northwest slope of Keno Hill, approximately 0.5km west of the Wernecke town site.	484700E, 7091700N		Major	Possible	300	Moderate	Not on claim	



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57	Formo (Yukeno)	Mine site straddles the Silver Trail Highway approximately 7km east of Elsa.	481904E, 7090442N	Two adits were at one time sealed but are now somewhat accessible.	Major	Possible	300	Moderate	Not on claim	
				Core shack accessible.	Major	Possible	300	Moderate	Not on claim	
				Wood shack accessible.	Major	Possible	300	Moderate	Not on claim	
				Wood cabin accessible.	Major	Possible	300	Moderate	Not on claim	
				Multi-Bay outhouse accessible.	Major	Possible	300	Moderate	Not on claim	
58	Paddy	Located off of the Hansen-McQuesten Road on a gravel access road to the southwest which loops around to the barrel storage area, where two roads branch off, each reaching a different section of the site.	481450E, 7091342N	One partially collapsed adit just above Christal Creek.	Major	Possible	300	Moderate	Not on claim	
59	Eagle	East side of Galena Hill, through Hector-Calumet Mine on road that leads to Microwave Towers, 85m south from Jock Shaft	481900E, 7086900N	One collapsed shaft in the middle of some significant trenching; not accessible.	Major	Possible	300	Moderate	Not on claim	
60	Fisher	Located on the southeast slope of Galena Hill via a 2km walk along an overgrown road on the west side of Duncan Creek to Galkeno Road, 40m north of Duncan Creek Road.	481300E, 7084700N		Major	Possible	300	Moderate	Not on claim	
61	Cream & Jean	400m north of Silver Trail Highway along an overgrown road adjacent to Sandy Creek.	478853E, 7089483N	Cream shaft accessible however water and ice are present at a depth of 2m.	Major	Possible	300	Moderate	Not on claim	
62	Nord	Located on the northwest slope of Galena Hill near the junction of Silver Trail Highway and Hanson-McQuesten Lakes Road directly adjacent to the road.	479577E, 7090692N		Major	Possible	300	Moderate	Not on claim	
63	Gerlitski	North of a prominent knob on the south side of the McQuesten River Valley between Galena Creek and Thompson Creek, 0.5km north of Silver Trail Highway, 1.2km west of the turnoff to the Silver King site.	470800E, 7085550N	Site consists of only two trenches with waste rock piles; no apparent hazards.	Major	Possible	300	Moderate		
64	Titan	Lcoated on an unnamed creek that merges with the South McQuesten River 1km to the southwest, just 1km upstream of where Christal Creek and sthe South McQuesten River merge.	473300E, 7093150N		Major	Possible	300	Moderate	Not on claim	
65	Shanghai	Located approximately 4.5km east of the junction of Shanghai Creek and the McQuesten River on the north side of the river via a 6km road that connects the property with the South McQuesten Road at the airport.	467650E, 7088950N		Major	Possible	300	Moderate	Not on claim	
66	Moon	Located at the base of th north side of Keno Hill between Faro and McKay Gulch via an overgrown trail that branches off from the lower Faro Gulch Trail.	489200E, 7094050N		Major	Possible	300	Moderate	Not on claim	
68	Mt. Hinton	Lies on the northern face of Mount Hinton at the head of McNeil Gulch, approximately 11km east-southeast from Keno City.	495070E, 7083370N		Major	Possible	300	Moderate	Not on claim	
69	Avenue	10KM northeast of Keno City on a plateau midway between the Caribou Hill and Beauvette Hill Summits, at the edge of a slope that drops steeply to the north towards Keno Ladue Creek.	493594E, 7091072N	There is either an adit or a possible fall in the rocks located southeast of the Avenue site. The Avenue site itself is a series of trenches. No real hazard areas.	Major	Possible	300	Moderate	Not on claim	
70	Yono	on the southwest side of Bunker Hill in Thunder Gulch via the Thunder Gulch Trail a few hundred metres past Bellekeno.	489400E, 7085660N		Major	Possible	300	Moderate		
71	Christal (Dorothy)	Located on the western slope of Keno Hill south of Erickson Gulch via a foot trail departing Keno Road about 2.5km out of Keno City.	486780E, 7088540N	One timber lined shaft approximately 2.5m deep with approximately 6" of water.	Major	Possible	300	Moderate	Shaft could be filled in by hand. Low priority given though, due to the location of the shafts in the dense bush.	
				One shaft located north of first shaft, approx. 1m deep with approx. 0.5ft of water in it.	Major	Possible	300	Moderate	Shaft could be filled in by hand. Low priority given though, due to the location of the shafts in the dense bush.	
72	Ironclad (Ankeno)	Site lies above and below Keno 700 Road about 2.5km out of Keno City.	486970E, 7087700N		Major	Possible	300	Moderate	Not on claim	
73	Gambler	Located in the cirque at the headwaters of Faro Gulch on the north slope of Keno Hill.	489162E, 7091184N	One upper adit caved in about 8ft in depth with ground subsidence just east of the opening.	Major	Possible	300	Moderate	Not on claim	
				Two other adits are collapsed and inaccessible. Cabin & outhouse accessible.	Major	Possible	300	Moderate	Not on claim	
75	Bema	Located on the southwest slope of McMillan Gulch about 10km east of Keno City.	494960E, 7087360N		Major	Possible	300	Moderate	Not on claim	
76	Townsite Mine	6.2km along Calumet Drive from the junction of Wernecke Road .	479500E, 7087800N	Rock overhang has caved in at adit entrance and is considered a safety hazard.	Major	Possible	300	Moderate	Moderate rating given due to accessibility from Calumet Drive and attention given in PWGSC report.	
77	Sadie Ladue 600 Adit	6km north of Keno City via a 1km trail leading north from Wernecke Camp.	485950E, 7092700N	One adit present; allegedly still accessible.	Major	Possible	300	Moderate	Moderate rating given due to accessibility from Wernecke Camp.	



Table 6: UKHM Physical Hazard Risk Register - Provisional Draft

Assigned Site No.	Site Name	Location Description	UTM Coordinates	Description of Physical Hazards	Consequence	Likelihood	Risk Rating		Mitigation Measures	Actions Complete
					Severity	Probability	Numerical	Descriptive		
78	Elsa Village	Located on the south side of Silver Trail Highway, 11.5km west of Keno City.	476000E, 7087000N	Green shack accessible.	Major	Possible	300	Moderate		
				Shack #1 & 2 beside sawmill accessible.	Major	Possible	300	Moderate		
				Carpentry shop accessible.	Major	Possible	300	Moderate		
				No. 5 bunkhouse accessible.	Major	Possible	300	Moderate		
				Union shop building accessible; in poor condition.	Major	Possible	300	Moderate		
				Snack bar accessible through a back door.	Major	Possible	300	Moderate		
				Dining hall accessible.	Major	Possible	300	Moderate		
				Wooden walkways are in poor condition at Mill site.	Major	Possible	300	Moderate		
				Access available to the grizzly bay at Mill site.	Major	Possible	300	Moderate		
				Utilidor collapsing at mill site.	Major	Possible	300	Moderate		
				Retaining wall failing on south side of Mill site.	Major	Possible	300	Moderate		
				Light vehicle shop accessible.	Major	Possible	300	Moderate		
				Rescue building accessible.	Major	Possible	300	Moderate		
				Swimming pool building accessible.	Major	Possible	300	Moderate		
				Medical building accessible; contains medical equipment and personal medical files.	Major	Possible	300	Moderate	Although this is not a physical hazard, contents of the building can subject the company to large privacy exposure.	
				Heavy Equipment Warehouse accessible through unlocked door on the north side.	Major	Possible	300	Moderate		
				Mens staffhouse accessible.	Major	Possible	300	Moderate		
				Apartment building accessible.	Major	Possible	300	Moderate		
				Single car garage building accessible.	Major	Possible	300	Moderate		
				Church building in poor condition; accessible.	Major	Possible	300	Moderate		
79	Elsa Tailings	South McQuesten River Valley to the northwest of Galena Hill, near the head of Flat Creek via a gravel road located just west of Porcupine Creek.	475100E, 7088500N	No apparent hazards other than tension cracks on dam walls which is watched on a regular basis.	Major	Possible	300	Moderate		
80	Wernecke Tailings	Located in an unnamed lake on the northwest side of Keno Hill at the head of Ladue Creek.	484400E, 7095400N		Major	Possible	300	Moderate	Not on claim	
81	Mackeno	Located on the east and northeast shore of Christal Lake via a gravel road off the main highway approximately 2km northwest of Keno City, and enters the south portion of the millsite.	484083E, 7087675N	No apparent physical hazards.	Major	Possible	300	Moderate		



Photo 9: View of Shamrock J building partially collapsed over open vent raise.



Photo 10: Photo 8: View of Shamrock J vent shaft filled and mounded with building removed.

Project 6: Wire clean-up

Planning

A survey of the mine site for wire and assessment of priority areas was completed with Peter Johnson (ERDC) and Keith Hepner (McQuesten Enterprises) on August 17, 2006. This survey identified the priority areas that were left unfinished from the 2005 program as well as additional areas scheduled for completion.

Field Activities

Wire cleanup began on August 22nd and focused on the area around Lucky Queen. Following completion in the Lucky queen area, labor and equipment moved to the Wernecke area.

Culverts supporting the poles were removed as well as grounding rods. The wire was rolled onto spools using McQuesten Enterprise loader and wire roller. The rolls of wire were transported to the Elsa framing yard using a McQuesten hyab truck. Figure x shows a typical example of rolling wire after it has been removed from the poles.

Not as much progress was made in the wire cleanup project as planned. ERDC committed to using NND labor for this special project. In addition to this special project, a number of NND members were employed with the Alexco exploration program. Given all of the demand for local NND labor, not as much wire cleanup was completed due to a shortage of consistent labor available to complete the project.



Photo 11: Alexco employees in the course of wire-cleanup.