

# Draft Baseline Environmental Report United Keno Hill Mines Property





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Prepared by:



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**Prepared for** 

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# **1** Introduction

Alexco Resource Corp. (Alexco) was selected in 2005 as the preferred purchaser of the assets of United Keno Hills Mines Limited and UKH Minerals (UKHM). The property is currently under receivership, with PricewaterhouseCoopers Inc. as Interim Receiver, and the property is presently under a care and maintenance program administered by Yukon Government.

A condition of the Request for Offers and purchase of the assets of UKHM is for the selected purchaser to commission and undertake a Baseline Environmental Assessment of the property. Alexco contracted SRK Consulting Inc. to initiate site inspections in September 2005 and to finalize a Preliminary Baseline Environmental Assessment report in January 2007. This document forms that report; its purposes are to delineate the known environmental conditions of the property at the time of transfer, and to serve as a basis for the development of closure and reclamation plans. This Baseline Environmental Report is intended to be updated from time to time, as required and necessary.

# 2 Assessment Methods

## 2.1 Review of Documents

SRK conducted a review of key documents that describe the UKHM property and characterize individual mine components. The following documents were reviewed:

AMC (1996a). Report No. UKH/96/01– Site Characterization, by Access Mining Consultants Ltd., version 27/05/2004. This document provides baseline description of mines on the UKHM property, summarizes the regional setting and local environmental setting, and documents the historic mine development on the property. In addition, this report also contains summary data on waste rock and mine drainage geochemistry.

AMC (1996b). Report No. UKH/96/02– Closure Plan for Current Conditions, by Access Mining Consultants Ltd., version 7/25/2005. This report outlines priorities for site closure based on 1996 conditions. This report focuses on safety (preventing inadvertent human access), and recontouring wastes.

UKHM (1996). Report No. UKH/96/03– Mine Reopening - Operating Plan, August 15, 1996, by United Keno Hill Mines Limited, version 03/06/2004. This report focuses on environmental management practices the Corporation proposed to follow during operations. The document includes an assessment of the environmental impacts expected from mine reopening.

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PWGSC (2000). Keno Valley/Dublin Gulch Environmental Baseline Assessment, by Public Works and Government Services Canada, March 2000. Provides baseline descriptions of surface conditions encountered during a 2000 reconnaissance of quartz mining disturbances in the South McQuesten River watershed.

ACG et al. (2003). Operation and Maintenance of Environmental Control Facilities, Keno Hill, Yukon: Interim Technical Report, by Access Consulting Group / Nacho Nyak Dun Development Corporation / Ewing Transport - December 2003. Provides summary of site operational activities and special projects to date of the report; the primary activity at the site was carrying out water treatment and inspections at the various environmental control facilities located on the property.

ACG et al. (2005). Care and Maintenance of Keno Hill Mining Property, Keno Hill, Yukon: 2004-2005 Final Project Report, by Access Consulting Group / Nacho Nyak Dun Development Corporation / Ewing Transport - June 2005. Provides summary of site operational activities and special projects undertaken during the reporting period; the primary activity at the site was carrying out water treatment activities and facility maintenance.

The documents were supplied either by Alexco or by Mr. Dan Cornett of Access Consulting Group. SRK's Project Principal, Mr. Daryl Hockley, met with Mr. Cornett and was provided with copies of the above documents, regional maps showing site locations and mining claims, and electronic copies of spreadsheets containing water quality data. Mr. Cornett also explained his understanding of the site and the major environmental issues.

### 2.2 Field Inspections

#### 2.2.1 September 2005

Messrs. Hockley, Bruce Murphy, and Dylan MacGregor of SRK conducted a series of site inspections at the UKHM property from September 18-23, 2005. Mr. Peter Johnson of Alexco accompanied SRK for the duration of the site visit.

On September 19 and 20, 2005, Mr. Ken Nordin of Laberge Environmental Services joined SRK inspectors in visiting several sites. Mr. Nordin had been continuously involved in environmental monitoring at UKHM since before the cessation of mining in 1989, and he provided SRK with a concise introduction to the property, including a summary of development history and an introduction to the current water treatment systems and the water quality monitoring network.

SRK carried out visual inspection and documentation of current conditions at high priority areas, including large open pits, large waste rock dumps, accessible underground adits and shafts, active water treatment sites, tailings disposal areas, and buildings and facilities. Of the 81 sites in the vicinity of the UKHM claim package (with site numbers ranging from 1 to 81), that were catalogued in PWGSC (2000), 22 were inspected by SRK in September 2005. Inspections were carried out at

the site level, as defined in PWGSC (2000), and relationships between sites were considered where appropriate.

Excerpts from the above documents, primarily PWGSC (2000) and AMC (1996a), were reviewed prior to each site inspection. Inspectors noted any omissions from the earlier work, as well as any changes.

Copies of site plans from PWGSC (2000) were used as base maps for recording field notes. Site conditions were further documented through sketches, additional notes, and photographs.

In areas where greater areal coverage was necessary, maps were extracted from AMC (1996a) and used in the manner described. Plans and sections showing underground workings, along with surface topography and mine-related features, were also extracted from AMC (1996a) and used to guide assessment at selected sites. In particular, cross-sections of underground workings were reviewed to identify regions which might be expected to show subsidence, and to show where surface excavations are situated over large voids.

Inspections were carried out on foot, by vehicle, and by observing site facilities remotely (e.g. across valleys). Major areas of focus included physical stability of major mine waste facilities, excavations, and structures; water treatment plants; and geochemical characteristics of wastes. Limited sampling of tailings and exposed waste rock was carried out for contact testing. No other samples were collected. Visual inspections included qualitative assessments of subsidence of known crown pillars, stability of open pits and underground openings, water treatment systems and settling ponds, waste dumps, and buildings and mine structures. Any ponded water in pits was noted, along with any surface drainage present and the downstream pathway of surface flow.

#### 2.2.2 August and September 2006

Mr. Dylan MacGregor of SRK conducted a series of follow-up site inspections at the UKHM property from August 11 through August 25, 2006 and on September 14 and 15, 2006. Mr. Corey Fernets of Access Consulting Group accompanied SRK for the duration of the site visits, with the exception of site inspections carried out on September 15, 2006. Site inspections in 2006 were carried out in the manner described above for September 2005.

All PWGSC sites within the UKHM claim package (as defined by those claims subject to the Subsidiary Agreement between Elsa Reclamation and Development Company and Alexco Resource Corp., and Her Majesty the Queen in Right of Canada and Government of Yukon) that were not inspected in 2005 were visited and inspected in 2006. As noted above, the more-extensively developed sites were targeted in 2005, and it follows that the 2006 inspections reviewed sites that were generally more remote and less developed. A total of 38 sites were visited in 2006, with 23 found to be within the UKHM package and 15 found to be outside of the UKHM package.

In order to ascertain whether sites near the margins of the UKHM claim package fell inside or outside the boundary, all sites initially mapped as falling within one claim length of the boundary

(based on coordinates provided in PWGSC 2000) were visited and the positions were recorded by hand-held GPS. The positional accuracy reported by the hand-held GPS generally ranged from 6 to 9 meters, and any sites falling within 8 metres of the surveyed claim boundary were considered to lie within the UKHM claim block. Where portions of sites fell within the UKHM claim block, the site was considered to be within the claim block.

In addition to carrying out site inspections, two focussed investigations were undertaken in August 2006.

- The first consisted of mapping the extent of the surface tailings deposited west of Dam 3 as a result of a dam breach that occurred in 1976 by visual inspection of shallow (0.3 m) soils around the margins of the visible deposit. Shallow soils were examined using a hand lens and classified as 'containing tailings' or as 'not containing tailings' on the basis of visible sulphide grain abundance, with soil texture also considered. The 'containing tailings' perimeter was subsequently tracked by hand-held GPS to assist in mapping the spill deposit.
- The second consisted of an initial targeted investigation to assess whether ore haulage in open trucks over the history of operations had resulted in elevated concentrations of ore-related metals in surface soils adjacent to mine roads. The methods for the initial investigation were developed after consulting studies of fugitive dust contamination at both the Red Dog mine in Alaska and the Anvil Range mine in Yukon. The methods used in the initial evaluation of haulage route contamination at UKHM are summarized as follows.
  - Four transects were established at suitable locations (three study stations (one on Calumet Drive, one on the Keno 700 road, and one on the Silver Trail Highway between Keno and Elsa) and on reference station (adjacent to the Silver Trail Highway approximately 1 km west of Silver King, which was considered to be outside the influence of ore transport activities). Transect locations are shown on Figure 1 in Appendix D.
  - At each station, five samples were collected along a transect perpendicular to the road, at location of approximately 5, 10, 25, 50 and 100 meters from the shoulder of the road.
  - Samples were analyzed for total metal content by aqua regia digestion followed by elemental determination by ICP-AES at ALS Chemex in North Vancouver.

## 2.3 Preparation of the Baseline Environmental Assessment

The results of SRK's site inspection are presented as a series of updates to the base maps taken from PWGSC (2000) and AMC (1996a). For sites where no existing maps were available, new site maps were created from aerial photographs flown in 2006. The intent is that the maps will provide a basis for future updates, as required, which reflect changes in conditions at each site. Annotations include remarks on physical stability of open pits, waste dumps, and mine structures; areas where chemical hazards were confirmed removed as part of care and maintenance; and upgrades to infrastructure that were completed prior to SRK's site inspections in 2005 and 2006. Section 3 below provides a list of the updated maps, which are included as Appendix A.

The current conditions at each site, as described on the updated maps, do not tell the whole story. There are a number of trends or patterns that become apparent only when two or more sites are considered together. In addition to assessing the current conditions, SRK has attempted to identify some trends and patterns that could in future become environmental liabilities. These are discussed briefly in Section 4 below.

## 2.4 Other Contributors

Much of the field work reported herein was assisted or carried out by others.

- Ken Nordin of Laberge Environmental Services accompanied SRK inspectors on site for three days during September 2005 and provided insightful background on the history of operations and practices at the site, with a particular focus on water quality monitoring and water treatment.
- Peter Johnson of Alexco Resource Corporation accompanied SRK inspectors on site for 6 days during September 2005 and contributed discussion, observations and site photographs.
- Corey Fernets of Access Consulting Group (ACG) accompanied the SRK inspector on site during August and September 2006 and contributed discussion, observations and site photographs.
- Joe Harrington of Green World Science carried out limited investigations into groundwater impacts from the Elsa Tailings, with assistance from ACG staff, and provided a summary of current thinking on the chemical characteristics of groundwater in the vicinity and downgradient of the Elsa Tailings.
- ACG played a significant role in the 2006 portion of BEA investigations and reporting. The following is a brief summary of ACG contributions.
  - ACG carried out hydrocarbon inspections at 23 sites within the UKHM claim package, in conjunction with SRK's 2006 inspections. ACG also reviewed existing information documenting areas of potential hydrocarbon contamination, and prepared an inventory of locations with potential for hydrocarbon contamination.
  - ACG carried out building contamination inspections at 23 sites within the UKHM claim package, in conjunction with SRK's 2006 inspections. ACG also reviewed existing information documenting areas of potential building contamination, and prepared an inventory of locations with potential for building contamination.
  - ACG prepared draft plans for those sites inspected but not mapped in 2005, and for all sites visited in 2006, with direction from SRK. ACG prepared the overall site map (Figure 1) and was responsible for accuracy of the boundaries of the UKHM package, and for final definition of site locations using GPS coordinates and CAD survey data.
  - ACG prepared a summary of third-party surface rights and mineral interests that overlap the UKHM claim package, as well as a list of mineral claims underlying the Valley Tailings Facility and a list of adits identified within the UKHM claim package.

• Alexco Resource Corporation provided overall site support for inspections in 2006, coordinated the acquisition of aerial photographs in September 2006, and is coordinating the preparation of a georeferenced orthophotograph of the site (in progress at time of printing).

# **3** Conditions at Individual Sites

Results of SRK's site inspections are included as Appendix A. Table 3.1 lists those sites located within the UKHM claim package. Sites documented in PWGSC (2000) within the vicinity of the UKHM claim package (Sites 1 through 81), but found to be located outside of the UKHM claim package, are listed in Table 3.2. The locations of all sites are shown in Figure 1; only select site locations greater than one claim length from the boundary of the UKHM package were verified by GPS.

PWGSC (2000) introduced a numbering scheme to identify individual sites or related groups of sites. This report is intended as an update to the site conditions summarized in PWGSC (2000), and the site numbering scheme has been preserved. The individual site updates in Appendix A do not supersede the site reports from PWGSC (2000), but rather record physical changes observed at inspected sites since 2000, as well as any notable features that were omitted.

Site Number* Name		Site Number*	Name	
1	1 Silver King		Black Cap	
2 Husky & Husky SW		26	Lucky Queen	
3	Elsa	27	Lake	
4	Dixie	28	Shamrock	
5	Coral & Wigwam	29	Highlander	
6	Bermingham	30	Cub & Bunny	
7	No Cash 500	31	Stone	
8	Betty	32	Keno 700	
9	Hector Calumet	36	Keno No. 9 System	
10	Dragon (UN) & Miller	37	Gold Hill No.2	
11 Galkeno 300		38	Fox	
12	Galkeno 900	40	Divide	
14	Bluebird	45	Silver Basin	
15	Tin Can	47	Monument & Ladue Fraction	
16 Rico 48		Apex		
17	Duncan Creek	59	Eagle	
18	Flame and Moth	63	Gerlitski	
19	Onek	71	Christal (Dorothy)	
20 Klondike Keno		76	Townsite	
21 Sadie Ladue (Wernecke)		77	Sadie Ladue 600	
22	Bellekeno	78	Elsa Village	
23	Kijo	79	Elsa Tailings	
24	Croesus No. 1	81	Mackeno	

Table 3.1	PWGSC (	(2000)	sites	located v	within	UKHM	claim	package
		/				-		

\*Site number refers to the number assigned in PWGSC (2000).

Site Number*	Name	Site Number*	Name
13	Fisher Creek	56	Wernecke (Railroad)
33	Main Fault & Nabob	57	Formo
34	Lake View	58	Paddy
35	Nabob No. 2	60	Fisher
39	Caribou (Segsworth) & Alice	61	Cream & Jean
41	Devon	62	Nord
42	Faith	64	Titan
43	Duncan	65	Shanghai
44**	Gold Queen	66	Moon
46	Nabob	68	Mt. Hinton
49 Vanguard		69	Avenue
50 Homestake		70	Yonu
51	Christine	72	Ironclad (Ankeno)
52 Mo		73	Gambler
53	Maybrun	75	Bema
54	Hogan	80	Wernecke Tailings
55	Runer		

#### Table 3.2 PWGSC (2000) Sites 1 through 81 not located within UKHM claim package

\*Site number refers to the number assigned in PWGSC (2000).

\*\*Site is not situated as described in PWGSC (2000), and could not be located in 2006

# 4 Other Observations and Investigation Results

### 4.1 Physical Stability

#### 4.1.1 Ground stability

All the open pit excavations will continue to unravel to some degree. Within the Bermingham, Calumet and Sime #6 Pits this instability is expected to be more significant, with some larger sections of the slope walls becoming unstable over time.

In most areas reviewed the waste rock dumps are seen to be currently stable, with no recent tension crack formation or toe heave. In the Bermingham, Galkeno 300, Hector Adit and Pit areas, long term dump stability requires further investigation. Critical to long term stability of the dumps is the prevailing surface run-off drainage pattern and the profiles of the upper dump surface and this should form part of a further investigation at all dump areas.

Stability in and around the underground excavations will continue to be a risk. A number of excavations/subsidence areas were noted that had not been observed during the previous audits.

Alexco began implementing prioritized stabilization of surface openings in 2006, according to generic backfill guidelines provided by SRK. At the Keno No.9 site (Appendix A, Site #36), the Shamrock 'J' headframe and related debris were removed, and the opening was backfilled to surface. At the Bellekeno site (Appendix A, Site #22), the Bellekeno 100 raise was backfilled, and a number of shafts, raises, and a collapsed stope in the Eureka area were backfilled. At the Sadie Ladue site (Appendix A, Site #21), a collapsed stope and the Ladue #2 shaft were backfilled.

#### 4.1.2 Ice-Blocked Portals

Portals at the Onek, Keno 700 and Keno Comstock 200 adits are partially blocked by ice, and have significant water outflows. A number of other portals are plugged by ice, with no observed water discharge. At the Onek adit, there have been several instances where water pressure built up behind the plug and led to a sudden blow-out which caused damage downstream. The Onek adit has recently been fitted with heat tracing to keep a water flowpath open. The other ice plugs with water behind them remain at risk of similar events.

### 4.2 Valley Tailings Facility Structures

The three dams at the Valley Tailings Facility (VTF) are founded on permafrost rich soils. The permafrost appears to be thawing and the soils consolidating, leading to settlement of the dams. Annual inspections are undertaken to determine maintenance requirements, if any, to keep the dam crests at the desired height and thereby to prevent overtopping.

There are two sets of diversion ditches in place as part of water management at the VTF. It is not clear whether they are built to any particular design flow.

The upper diversion system is in good condition, and is inspected regularly and maintained as required. The Lower Porcupine Diversion Ditch has not received regular inspection or maintenance, and is expected to be in poor condition. Uncontrolled releases of water from one or more of the ditches could result in significant increases in the water level behind Dam 3, possibly leading to a dam breach.

No additional work to assess dam stability was carried out in 2006. EBA Engineering Consultants (EBA) have conducted several geotechnical inspections of the Valley Tailings Facility since 1982, including the most recent inspection which was carried out in 2005. It is EBA's opinion, as summarized in Appendix B, that the tailings retention dams currently do not pose any hazard.

## 4.3 Water Quality

#### 4.3.1 Receiving Water Quality

Receiving waters that drain the UKHM property consist of the South McQuesten River and its tributaries, and Lightning Creek. Both systems contain elevated natural background concentrations of metals, particularly zinc, relative to guidelines such as CCME receiving water criteria. High natural background metals concentrations result in limited capacity of these receiving waters to assimilate incremental metal inputs from the UKHM property and remain below CCME criteria.

Zinc concentrations in the South McQuesten River upstream of Christal Creek have historically been slightly below the CCME criterion of 0.03 mg/L, with occasional excursions above this concentration. This location is upstream of all known mine drainage inputs, and reflects the elevated natural background concentrations in the region. For example, recent changes in the Cache Creek catchment appear to have resulted in increased chemical loading to the South McQuesten River upstream of Christal Creek. Below Christal Creek, zinc concentrations in the South McQuesten River River have regularly exceeded the CCME criterion to a point between Flat Creek and Haggart Creek.

Zinc concentrations in Lightning Creek above have been infrequently monitored, but appear to be well below the CCME criterion. At Keno City, Lightning Creek zinc concentrations are typically above 0.03 mg/L.

For several metals, the analytical methods used historically have had detection limits that are near or exceed the CCME criteria. These parameters include, but are not limited to, arsenic, cadmium, copper, lead, selenium and silver. It is not possible to identify trends for these parameters, based on historical data, and it is not currently possible to compare concentrations of these metals with CCME criteria.

#### 4.3.2 Site Water Quality

Several mine discharges currently have sufficiently poor water quality that treatment is required. Of these, Galkeno 300 has both the highest metal concentrations and the highest discharge, and consequently consumes the majority of the current water treatment budget. Metal concentrations at Galkeno 300 do not appear to be increasing, although there is significant annual variation. Discharge volumes appear to have stabilized, although annual variation is significant.

Other mine discharges appear to have metal concentrations that are within a stable range based on an initial review of historical monitoring data for the draft of this report in 2005. These include the treated discharges at Bellekeno, Galkeno 900, and Silver King, as well as untreated discharges at No Cash 500, Ruby 400, and Bermingham 200. No additional review of water quality data was carried out by SRK in 2006.

#### 4.3.3 Contaminant Attenuation

Discharge from the No Cash 500 adit enters the organics soils below the highway and disappears. Contaminants appear to be attenuated in the soils, such that little contamination is measurable downstream. These attenuation processes contribute to preventing the significant contaminant load from reaching receiving water. Similar contaminant attenuation effects were observed at Galkeno 300 before water treatment was initiated there, and are still occurring with the discharge of treated water at Galkeno 300 and at Silver King.

The attenuation processes are not well understood. In particular, it is not known whether they will continue indefinitely. It is also not known whether future changes in conditions could cause the attenuation processes to be reversed, leading to a release of the contaminants. However, these attenuation processes also offer opportunity for enhancement as a final closure measure, and there may be significant capacity for attenuation at select locations.

#### 4.4 Water Treatment Systems

The water treatment systems at Silver King, Galkeno 300, Galkeno 900, Bellekeno and the Elsa tailings are rudimentary lime addition systems only. They are likely very inefficient in terms of lime consumption, and they are subject to upsets that could result in releases of poor quality water. The historical variation in zinc concentrations in effluent from the Galkeno 300 system are one example of the latter.

All of the water treatment systems were designed and constructed as temporary measures. They have functioned well in that role, but they are not acceptable for long-term use. Individual components can be expected to either require high maintenance or fail completely. Components like outflow flumes can be expected to suffer damage in higher than average flows. There is a program currently underway to identify and implement improvements to these systems.

### 4.5 Public Access

Public access to many of the sites is completely unimpeded. In fact, for the Keno Hill sites, it could be argued that the tourism literature actually encourages public access. The unrestricted public access heightens the risk of accidents leading to death or serious injury.

The public safety hazards associated with the sites are numerous. A short but incomplete list would include pit walls, open shafts and stopes, open or incompletely blocked adits, buildings and steep waste rock slopes. There is a program currently underway to identify and remediate high priority risks; progress on this initiative in 2006 is noted in Section 4.1.

## 4.6 Historic Valley Tailings Spill

Historic release of tailings has resulted in a shallow deposit of tailings outside of the Valley Tailings Facility to the west. To assess the extent of tailings dispersion, field reconnaissance was carried out over an area extending approximately 300 m west of Dam 3, as shown in Figure 2.

The approximate area covered by spilled tailings is outlined in Figure 2. The tailings deposit appears to be up to a meter thick, judging from the topography of adjacent natural ground. The margins of the deposit are colonized by a variety of vegetation which forms a continuous organic layer at the surface. In these areas, the upper 0.3 m of soil consists of mottled light tan to orange tailings with abundant roots and occasional black staining along macropores formed by plant roots. The vegetated margins grade laterally from 100% vegetation coverage to fully exposed fine-to-medium tailings sand in the central portion of the deposit. The surface tailings in the central exposed area were orange in colour, with mottled tan and orange tailings at depth.

The investigation extended west beyond the limits of the contiguous mass of surface tailings, as shown in Figure 2. While the large volume of water released during the 1978 spill (11.8 million gallons released over approximately one hour, as recorded in court documents) likely dispersed tailings solids further downstream, the surface extent of the bulk of the tailings solids released during the 1978 spill appears to be constrained to the mapped area.

## 4.7 Elsa Tailings Groundwater

Groundwater is not expected to be a significant contaminant pathway on most of the UKHM property. However, it is understood from work done in 1995 by Access Consulting Group that there are groundwater pathways below the Elsa tailings. Based on preliminary investigations undertaken in 2006, Green World Science has concluded that the Elsa tailings are likely to be a source of contaminant loading. These initial conclusions are summarized in Appendix C.

## 4.8 Soil Contamination Along Ore Haul Roads

Other mines have found areas of soil contaminated by metals along ore and concentrate transportation routes. To assess the potential for area-wide contamination at the UKHM property, a

scoping-level assessment was carried out in August 2006 that included an evaluation of ore elements in soils adjacent to ore haul routes in three locations and adjacent to one reference location on the Silver Trail Highway west of the Silver King mine. A figure showing the sampling locations is included in a summary of the haul route contamination study prepared by ACG and included in Appendix D along with the complete analytical results.

Sampling locations were selected downhill from roads on side slopes with little topographic undulation. Studies examining the effect of dust deposition from ore and concentrate transport in lead- zinc mining districts in Yukon and Alaska have shown that lead concentrations are a reliable indicator of the degree of contamination, due to both elevated source lead concentrations and low lead mobility under surface conditions in the environment.

The lead concentrations along the sampling transect at each location are shown in Figure 3, along with concentrations of several other ore-related elements. Lead concentrations at the reference station show no pattern with distance from the road, and range between 16 and 51 mg/kg. The Silver Trail Highway location showed similar magnitude lead concentrations at all locations, with the highest concentrations in the samples closest to the road. In contrast, the Keno Hill and Calumet Drive transects showed elevated concentrations of lead and other elements adjacent to the roadways, with sharply lower lead concentrations at the 50 and 100 meter sampling stations.

These results suggest that there has been some dispersion of metals related to the use of mine roads. The 2006 investigation was intended only to evaluate whether a broader investigation is warranted, and the results suggest that further characterization of metal concentrations along mine roads is necessary to establish baseline conditions.

### 4.9 Hydrocarbon-Contaminated Soils

Areas of hydrocarbon contamination were also noted in the PWGSC (2000) report. Generally, it is most cost effective to delineate such contamination during remediation. However, in areas with significant hydrocarbon spills, typically around fuel storage tanks, the costs of remediation can be much higher than anticipated.

To better understand these liabilities at the UKHM site, the hydrocarbon contamination data and any available spill records were reviewed by ACG, and the results of this review are summarized in Appendix E. It appears that the Elsa Village site represents the highest single risk for extensive, unidentified contamination, based on the numerous hydrocarbon storage facilities located there and on the long history of this site as the ore processing center for the district.

## 4.10 Building Contamination

The PWGSC (2000) report identified buildings containing hazardous materials. Most of the transportable contaminants have since been removed. However, fixed contamination such as asbestos siding and lead paint has not been removed. To capture the locations of known and suspected asbestos siding and lead paint, an inventory was compiled by ACG, and the results of this

review are summarized in Appendix F. The Elsa Village site has by far the largest known amount of contaminated building materials, predominantly in the form of exterior cladding containing asbestos.

## 4.11 Third-Party Interests

A summary of third-party surface and subsurface interests is included in table form in Appendix G, along with a table listing the quartz claims underlying the Valley Tailings Facility and a table listing the known major adits within the UKHM claim package.

# 5 Recommendations

There are a number of areas where significant uncertainties remain in relation to having a comprehensive understanding of the environmental status of the UKHM claim package and of the existing liabilities and future risks. The following are recommendations for additional work to be considered to address these uncertainties.

## 5.1 Water Quality Data Review

The sampling programs that have been carried out at the site over the last several years provide a good basis for assessing water quality impacts and trends. A complete database has been compiled by ACG in the form of an EXCEL workbook. The workbook is well organized and appears to be comprehensive. In 2006, ACG updated the database to include data collected by other groups, including Environment Canada, and revised the database to correct errors and inconsistencies. The workbook should be subject to comprehensive third-party review, and the results should then be combined with flow monitoring data to generate an updated site-wide water and loading balance for the property and its receiving streams.

## 5.2 Additional Water Sampling and Flow Monitoring

The complete water quality database and loading balance should be examined to identify any important gaps that can be filled or significant trends that can be identified. Examples of possible objectives include seep surveys of source areas, confirmation of loading balances around the Mackeno tailings, investigations of trends along the No Cash, Silver King, Onek, Sadie Ladue/ Wernecke, and Keno 700 discharge paths, and collection of samples from the standard receiving water stations for low detection limit analyses. In 2006, ACG developed a list of 16 additional receiving water locations where quarterly water quality monitoring is proposed. Definitive sampling or flow monitoring programs should be planned only after the available data is comprehensively reviewed, as discussed in the preceding recommendation.

## 5.3 Valley Tailings Facility Groundwater

Groundwater is not expected to be a significant contaminant pathway on most of the UKHM property. However, it is understood from work done in 1995 by ACG that there are groundwater pathways below the Elsa tailings. In addition, there is a significant source of groundwater seepage through the Porcupine Diversion that surfaces into the lower tailings system. Further investigations to provide some bounds on the magnitude of those pathways should be carried out. Further investigations should include compilation and review of available stratigraphic data, review of Porcupine Creek and Porcupine Diversion flows, review of available groundwater quality data, and development of a preliminary groundwater loading balance. If the preliminary balance indicates that the groundwater pathways could be significant, say within the same order of magnitude as surface water pathways, it may be necessary to carry out additional field investigations, including drilling,

hydraulic testing, installation of monitoring wells, and collection and analysis of groundwater samples.

## 5.4 Permafrost

Permafrost has a significant effect on physical stability and contaminant pathways, and the presence of permafrost may constrain treatment and closure options. However, there appears to be no documentation on the extent of permafrost in the area. Results of previous drilling, excavation and construction programs should be reviewed to extract information on permafrost distribution. The information should be correlated with slope aspect and ground cover to identify factors that control permafrost distribution. Preliminary maps should then be generated to indicate areas where permafrost is likely to be present. Where the presence of permafrost could impact current conditions or limit closure options, site specific investigations can be initiated.

### 5.5 Minewater

To understand the potential for future changes in minewater discharge points, quantities and quality, such as occurred at the Galkeno 300 adit in 1997, it is essential to have a property-scale hydrogeological understanding in the form of a conceptual model. In developing this model, it will be crucial to understand the interconnectedness of the mine workings and the relationship of these workings to geological structures. However, the model need be conceptual only, i.e. no mathematical groundwater model is required. SRK has seen examples at other sites where development and validation of various hydrologic models becomes an end in itself; to avoid this, it is important to understand and define the problem in a conceptual manner before turning to sophisticated mathematical or geometric tools. Following the development of a rigorous conceptual model, the development of a geometric model of the mine workings may be useful. It is understood that such a model is being prepared to assist in future exploration, and this model should be extended to cover areas of environmental interest, such as the No Cash and Galkeno sites, and any man-made, surface or geologic structures that could influence minewater flow.

## 5.6 Physical Stability

#### 5.6.1 Crown Pillars and Underground Workings

A three-dimensional geometric model of the surface features and the underground workings would allow an improved assessment of risks of surface subsidence related to instability of the crown pillars and the underground workings. Such an assessment should be carried out once a three-dimensional model of the property has been assembled. If necessary, this assessment could be undertaken through a detailed review of appropriate long and cross sections.

#### 5.6.2 Valley Tailings Facility Structures

An annual geotechnical inspection of VTF dams and other water management structures should be carried out. These inspections should incorporate review of the Porcupine Diversion Ditch and

upper diversion ditches as required. Maintenance requirements identified in the course of inspection should be addressed.

#### 5.6.3 Waste Rock Dumps and Pit Walls

Evidence of instability at several open pits and waste rock dumps was noted during 2005 and 2006 inspections. These potentially unstable mine components should be incorporated into the site-wide risk ranking, and stability of individual components should be investigated further where warranted by the risk of failure.

## 5.7 Orthophotographs and Detailed Surface Topography

Acquisition of aerial photographs was undertaken on September 13 and 14, 2006. It is understood that the development of georeferenced orthophotographs and detailed surface topography is underway, but that these products have not been finalized at the time of production of this report due to industry-wide demand for these and other services. As such, the production of site-wide orthophoto and detailed topographic coverage remains a recommendation, with the expectation that these tools will be finalized in the near future. Consideration should be given to using orthophotographs as a base for future documentation of site conditions.

## 5.8 Dispersed Contaminants

Consideration should be given to additional reconnaissance-level characterization of existing metal concentrations in soils adjacent to former ore haul routes prior to putting these routes back into service. A similar level of investigation should be considered to evaluate the possible effects of dust dispersion from tailings, the possible effects of leaching of contaminants from roadways constructed of waste rock, and the levels of existing contamination in areas of former mine water discharge, such as the hillside below the Hector adit. Such investigations are not necessary for exploration to proceed, and need only be considered in advance of undertaking development that may change baseline contaminant concentrations in potentially impacted areas.

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This draft report, **"Draft Baseline Environmental Report, United Keno Hill Mines Property**", has been prepared by SRK Consulting (Canada) Inc.

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**Reviewed by** 

Daryl Hockley, P.Eng.

Figures





	Engineers and Scientists VANCOUVER	
		AL
Job No:	ALEX-06-ESP-05	Draft Baseline
Filename:	Figure 2- Tailings Spill.ppt	United Keno

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Jan. 2007

2006 aerial photograph obtained from Geodesy Remote Sensing Inc., Calgary, Alberta. Flown 13, 14 September 2006.



Appendix A Annotated Site Plans

Site #1 – Silver King



- Subsidence on the top of the dump is an old feature. - The dump has a protection berm around the crest.
- Some limited creep cracks and desiccation cracks are noted on the top of the dump.
- #3 The adit area is stable and the adit itself is sealed with welded screen and a black geofabric.
- #4 The Open Pit is stable, with limited unravelling of the slope walls. - No water is noted in the pit.
- access.
- #5 A rainwater gulley was noted on the north apex of the pit, allowing access of water into the pit. water, this probably seeps down into the underground excavations.
- bottom of the pit.
- subsidence or just trenching
- #9 Vent house building has a sheet of plywood over the raise.
- #10 Ventilation station with wiring for heater - 3 large blowers and heater
- #11 Lime addition system
  - lime slurry tank
  - mixer
  - peristaltic pump
- #13 Waste rock material light yellow staining common, dark orangey brown staining rare - looks like surface veneer of waste
- minor waste over edge of cliff into floodplain of Galena Creek
- #14 Transformer station (Active)
- #15 Unknown volume of sludge in sedimentation ponds - not known if sedimentation ponds are lined - no seepage observed at toe of waste rock pad
- stunted open black spruce forest.
- #17 Building 1A accessible to public, contains hazards not limited to trip & fall, and roof collapse.
- #19 Scouring of toe of waste dump by Galena Creek (Photo 4) - dark orangey brown staining noted adjacent to waste pile in Galena Creek
- #20 appears to be <400t in low grade pile: material may have been used for berms around settling ponds

SRK Consulting Engineers and Scientists VANCOUVER	ALEXCO	Silver King Site #1			
Job No: 1CA009.000	Baseline Environmental Report,	Date: Approved: Figu		Figure:	
Filename: Site 1_Silver King_20070131.ppt	United Keno Hill Mines Property	Jan. 2007	Approved.	1 9010.	1.1

#1 - Drainage channel eroded into face of dump - channel does not extend up face through dump crest. - The dump in general is stable, with no new tension cracks – no toe heave observed.

#2 - This dump is generally stable especially as the waste material appears to be of limited thickness. - Over time, the timber within the dump area may rot, resulting in some movement of material down the slope.

- Temporary barriers that were installed to prevent access have fallen down. There are no berms around the edge of the pit to prevent

- There are what looks to be recent flows of silt into the pit, but there is no free standing water in the pit. During periods of pooling of

#6 A small sinkhole has formed, but this is in the upper east area of the pit and is away from the rain gulley that goes down to the

#7 As a result of the extensive overgrowth in this area it was not possible to judge whether depression in this area was related to

#8 The timber support around this raise is proud of the ground surface with the hole sealed up with growing tress, timber and soil.

- lime slurry drips into mixing basin immediately above settling pond #12 Low Dam at portal directs adit discharge into collection pipe. Heavy sludge build up behind dam.

#16 Orange precipitate marks bed of flow below settling pond outfall; unclear whether this is sludge escaping (short residence time), or continued Fe oxidation. Quality of precipitate decreases with distance along stream. Flow forms gently inclined wetlands in

#18 Building 1C accessible to public, contains 3 generators/compressors, hydrocarbon staining on crushed gravel floor inside



Photo 1.1\_Silver\_King\_Portal shed



Photo 1.2\_Silver\_King\_ Inside compressor house



Photo 1.3\_Silver\_King\_Discharge from treatment ponds



Photo 1.4\_Silver\_King\_Toe of rock along Christal Creek



Photo 1.5\_Silver\_King\_Overview of treatment ponds



Photo 1.6\_!SK\_Overview of pit area looking NE



Photo 1.7\_Pt1\_SK\_Drainage channel erroded in dump



Photo 1.8\_Pt1\_SK\_Waste dump- berm area



Photo 1.9\_Pt2\_SK\_Overview of 75 adit



Photos 1.10\_Pt2\_SK\_Waste dump above Galena Creek- note timber



Photos 1.11\_Pt3\_SK\_75 adit access structure



Photos 1.12\_Pt3\_SK\_Detail inside 75 adit structure



Photos 1.13\_Pt4\_SK\_View of NE pit edge barriers



Photos 1.14\_Pt5\_SK\_Bottom of pit\_looking\_SE



Photos 1.15\_Pt5\_SK\_Runoff gulley



Photos 1.16\_Pt6\_SK\_Sinkhole in area of excavation on SE side of site

Site #2 – Husky & Husky SW


#1 - waste dump has tension cracks up to 15 cm wide
- in lowest bench, material contains rounded clasts (overburden?), but colour is greenish brown to greenish gray, with pale yellow to orange dark brown stains on clasts
- Tension cracks (12 m back from crest) parallels dump crest (Photo 2.3), then curves to intersect dump crest at NE end

- central part of zone of cracking has subsided by ~0.5 m

- could be permafrost in dump foundation

#2 actively failing till bank

seepage forms rivulets across entire face
slumped material is very soft, saturated;
encroaching on headframe structure (Photo 2.1)
slope is ~2V:15H

#3 Dozer trail with water seeping into it. Flow observed towards northwest, but flow diffuses into broad area of willows and grass

#4 Flow visually estimated at 1 l/s -Orange staining and precipitation along flow path

	Husky SW Site #2			
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure:	2.1



Photo 2.2\_Husky SW\_Down power pole and lines west of headframe



Photo 2.3\_Husky SW\_Tension crack 12 m from crest of waste dump



Photo 2.1\_Husky SW\_Failing till embankment encroaching on headframe



Site #3 – Elsa

## #1 - Subsidence through to Elsa underground workings

#2 - +50 adit confirmed collapsed; minor debris in the form of piping, rails, barrels, sheet roofing noted in front of collapsed adit.

- Collapsed raises appeared stable and are overgrown with moss and shrubs; difficult to locate and access due to dense underbrush.

- #3 Gravel level adit confirmed collapsed. Waste dump appears to be composed mainly of overburden, but steep slopes appear to be preventing revegetation, as only isolated colonization has occurred.
- #4 Only one shaft was located in this area. "Shed" noted in PWGSC (2000) was collapsed, and further investigation revealed that the debris was situated over an unstable shaft that appeared to be open. Ground subsidence was observed immediately adjacent to the shaft house debris on all sides. Access to the site is somewhat difficult due to dense alder growth, but the immediate vicinity is cleared and the collapsed shaft house presents an intrigue risk.
- #5 200 level adit confirmed gated and secure; timber portal supports remained intact. Timber loadout structure beginning to deteriorate; this structure is visible from Calumet Drive, and has ore cars sitting on rails that are also visible. The loadout structure and ore cars present an intrigue risk. - Minor rusty brown staining observed on waste rock surface of working area between adit and loadout.
- #6 400 level adit confirmed gated and secure; portal support remained intact. Adit was partially full of ice at time of inspection; observed drainage was clear and colourless, with small flow volume (visual estimate up to 5 L/min) and no staining along flow path.

## GENERAL COMMENTS:

- Most of the waste rock brought to surface from the Elsa Mine has been used for construction rock within the area of the townsite. Although this waste rock was not assessed in detail, orange staining along isolated seepage flowpaths and secondary salts beneath some overhangs suggest that the Elsa waste rock is a potential source of metals and acidity.

- Timber support structures throughout the townsite are deteriorating, with minor failures of retaining structures observed in 2005 and 2006.



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Filename:	Site3_ElsaMine_20070131.ppt	United Ken

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment"' Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting and Access Consulting Group, 2007

Site #4 – Dixie



#1 -Several barrels removed - only empty rusty barrels remain

#2 Potential for high flows in ditch to erode ditch wall and undercut building foundation (Photo 4.1)

#3 Previously noted hydrocarbons have been disturbed by recent ditching

New ditch

	Dixie Site #4			
Environmental Report				
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no Hill Mines Property	Jan. 2007			4.1



Photo\_4.1\_Dixie\_Recent ditchwork near building



Photo\_4.2\_Dixie\_Waste rock deposited below gully in dump face

Site #5 – Coral & Wigwam



#1 - Shaft #1 is open at surface, with no barrier to access. Timber cribbing is in good condition, and drift to southeast is clearly visible from top of shaft (Photo 1) and appears to be open. This feature represents a high

#2 -Stripping to southwest of Shaft #1 has formed a linear depression that appeared approximately parallel to the alignment of the drift, and that is free-draining downslope. No bedrock was observed in the depression.

-The base of the depression appeared to be topographically lower than the bottom of the shaft. A trickle of seepage was observed at the upper (southeast) end of the linear depression; this seepage infiltrated into the soil in the base of the depression and no surface flow was observed leaving the depression.

#3 - A 3m x 5m area of subsidence was observed approximately 4m east southeast of Shaft #1.

#4 -Shaft #2 is collapsed, with no evidence of original ground support. A 3m depression remains, with activelyravelling walls formed of waste rock at approximately angle of repose (Photo 2). The depression contains a wooden ladder and various pieces of wood and metal debris, and represents a minor intrigue risk.

	Coral	& Wigwam Site #5		
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure:	5.1



Photo.5.1\_Open timber-cribbed shaft, with drifting to SE



Photo.5.2\_Depression in waste rock at collar of collapsed Shaft #2

Site #6– Bermingham



ottom of the pit.	
were used. The faces look good i	in the southeast corner, but less so in
inite weaker rockmass conditions	, the slope in this area is unravelling
g into the pit - low flow rate obse creeping towards the pit. This will cycle. Some tension cracks are occ	rved. I continue to creep slowly with each curring.
defined by tension cracks. This ar rentially fail over the long term.	rea is currently showing no signs of
weak phyllite material. This mate	erial is expected to fail over the medium
ich is showing signs of re-activati ave slumped in the past	ion. This area will fail over the medium to
ng into the corner of the pit. The erial at the toe of the bench face.	flow is fairly low. This water disappears
l in the past; pools of water obser	ved on surface at time of inspection.
y berms along the dump crest toe of the dump ove borrow dump e is all over the place, sloped to bo	th the north and the northeast
ump/pit- does not run off to north np drains back towards the SW p rs on the dump top	it
water al around the pit is cracking and but the walls in the weaker mater	creeping (southeast wall). ial are expected to break back over the medium term.
ombination of weak and strong m	aterial
llite waste eed to assess the stability of the d	umns in more detail
<b>↓</b> + <sup>200</sup>	Meters
	Bermingham Site #6 Bermingham Pit
Environmental Report,	Date: Approved: Figure:

Jan. 2007

6.1



Photo 6.1\_Pt.1\_Bermingham\_Pit\_NE overview



Photo 6.2\_Pt.1\_Bermingham\_Pit\_SE overview



Photo 6.3\_Pt.1\_Bermingham\_Pit\_SW viewpoint- unravelling on SE wall



Photo 6.4\_Pt.2\_Bermingham\_Pit\_Detail- west corner



Photo 6.5\_Pt.2\_Bermingham\_Pit\_South corner- water



Photo 6.6\_Pt.2\_Bermingham\_Pit\_SW corner- good perimeter blasting



Photo 6.7\_Pt.3\_Bermingham Pit\_Detail of upper SE face



Photo 6.8\_Pt.3\_Bermingham\_Pit\_Creep- toppling crack detail



Photo 6.9\_Pt.3\_Bermingham\_Pit\_View of SE face



Photos 6.10\_Pt.4\_Bermingham\_Pit\_Fairly large failure delineated- dormant



Photos 6.11\_Pt.5\_Bermingham\_Pit\_Detail- east corner



Photos 6.12\_Pt.7\_Bermingham\_Pit\_Creek-SE corner



Photos 6.13\_Pt.7\_Bermingham\_Pit\_Small creek draining into pit



Photos 6.14\_Pt.9\_Bermingham\_Pit\_North view across dump area



Photos 6.15\_Pt.10\_Bermingham\_Pit\_SW dump area



Photos 6.16\_Pt.11\_ Bermingham\_SW\_Pit\_SE view



Photos 6.17\_Pt.11\_Bermingham\_SW\_Pit\_South wall detail



Photos 6.18\_Ruby\_Shaft\_ Raise hole and shaft buildings



Photos 6.19\_Ruby\_Shaft\_Collapsed excavation south of shaft



Photos 6.20\_Ruby\_Shaft\_Collapsed excavation south of shaft



Photos 6.21\_Ruby\_Shaft\_Collapsed front section of shaft house



Photos 6.22\_Ruby\_Shaft\_Detail- open raise hole

## #1 - Transformers removed

- #2 Kill zone between waste dump and roadway. No impacted vegetation observed below road.
- #3 Adit drainage pooling on surface and infiltrating into waste rock. No surface outflow from pond at time of inspection.
- #4 Drainage from adit pools in front of adit. Infiltration occurs at this location, and surface runoff occurs to southwest along old roadway. Abundant light orange precipitate and minor green algae observed in flow.
- #5- Adit drainage channelled along old overgrown trail. Reports to culvert crossing Calumet Drive; tracing flow downgradient indicated that this water probably ultimately reports to No Cash Creek. Flow infiltrates on slope below culvert, and does not report to No Cash Creek as surface flow.
- #6- Minor light orange to yellow to rusty brown staining observed along runoff pathways on traffic surfaces
- **#7-** Wooden structures beginning to deteriorate



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Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment" Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting 2006

#1 - Adit flow approximately the same volume as observed at Ruby 400. Flow trace downhill; entire volume infiltrated within 100 m. Topography suggests that this location is within the No Cash Creek surface catchment.



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Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment"' Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

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Site #7 – No Cash



- #1 Pale yellowish and orangey dark brown staining isolated clasts
  Flow path (dry) marked by pale yellow stain
- #2 Blockage inside of adit is causing part of flow to direct away from culvert and flow over crest of dump
- #3 Square timber culvert is partially collapsed, and adjacent mine waste has been partially eroded, leading to reduced lateral support (Photo 7.1).
- #4 Area of orange staining on dump surface along current and former flowpaths of adit discharge

	No Cash - 500 #7			
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure:	7.1



Photo.5.1\_Open timber-cribbed shaft, with drifting to SE



Photo.5.2\_Depression in waste rock at collar of collapsed Shaft #2

#1 - Waste rock pile from No Cash 100 adit not previously noted. Contains remnants of trestle structure- no rails observed in place. Rail and other metal debris observed at toe.

Waste rock spills into adjacent valley that forms the upper end of the Sandy Creek drainage. No surface water observed in flow path adjacent to 100 adit waste dump at time of inspection (Sept. 2005).
Waste rock does not block flow path

- +2 100 level portal not secure. Timber support is failing, but access is not restricted, and structure remains a hazard. Access to workings may be possible.
- #3 Drainage observed along Star Creek channel at Calumet Drive visually estimated at 2 L/second. No surface flow in Star Creek channel was observed upstream of channel crossing at No Cash 100 site or at any location within the site. It is likely that this water enters the workings and reports to No Cash 500 adit.
- #3 Area of additional stripping, minor test pitting/ trenching observed



Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment" Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting 2006

Site #8 – Betty

#1 - Two 3 m x 3 m openings in muskeg, 1.5 m deep, with exposed mineral soil on margins. Waste rock pile adjacent to SW shaft approximately 0.5 m high x 5 m x 8m; composed of dark grey quartzite and minor quartzite breccia with siderite veining, with minor orange to dark rusty brown staining.

- Little vegetation growing on waste pile- 10% coverage.

- Size of openings may be due to be regressive thawing of permafrost. Standing water (0.3 m) present in both holes, and bottoms felt solid when probed with a stick.
- +2 Trench contains greenstone rubble, with water flowing through the rubble. Appears to collect water from flat swampy area to southeast and channel the water towards Sandy Creek.

- Trench is overgrown with willows and is difficult to identify.





SRK Consulting Engineers and Scientists VANCOUVER	ALEXCO		Betty Site #8		
Job No: ALEX-06-ESP-05	Baseline Environmental Report,	Date:	Approved:	Figure:	
Filename: Site8_Betty_20070131.ppt	United Keno Hill Mines Property	Jan. 2007	Apploved.	rigure.	8.1

Aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007 To Hector and Townsite mine areas - N -

Approximate limit of flat swampy area. Water appears to come from direction of Hector waste dump

Site #9 – Hector Calumet

## #1 This dump appears to be stable

- No tension cracks observed

- This is a high dump but the topography below the dump face is fairly flat

#2 Pit has intersected old workings

- Footwall side of the vein seems to be finer grained and weaker; at the intersection of the footwall and the vent raises, this material is unravelling extensively

- Subsidence is occurring in the material in the bottom of the pit
- There are a number of tension cracks around this pit, these do not fully delineate failures. These are not currently active but these areas are expected to continue unravelling.

- Large slabs coming off the bench faces

#3 This is a small excavation

- No water was noted in the bottom of the pit. - The western slope of the pit is unravelling substantially.

- #4 A new sinkhole has formed since the previous review. The dimensions are 4 m x 3 m and 2 to 3 m deep.
- #5 Upper sides are steep, these are slabbing and unravelling. This is expected to break back on the order of 10-15° - no water was noted at the bottom of the pit - no large failures are anticipated
- #6 Crack 4 m back from the pit crest - this is an early feature and is not currently active - the bottom of the pit has an open excavation to the underground
- **#7** Trenching and ore extraction along the previous crown pillar intersected a number of raises as indicated by large quantity of timber in the trenches.
- #8 No sign of shaft; crown pillar mined out. - All the water from top of hill is channelled by a vein exploration trench into main crown pillar mining trench. The majority of this water likely ends up underground.
- **#9** Possible raise to surface.
- #10 Old tension-cracks back from face

- on dump crest new some fairly recent tension cracks were observed, this dump appears to consist of a combination of fine and coarse material, which makes this dump less stable.

- the face is eroding and steepening up this is a higher risk dump
- the dump has a poor upper profile and pools of water are occurring on the top of the dump
- #11 All the water from the hill drains down and is channelled over the dump. Erosion is cutting a wide v-trench in the fine material on the dump face. This dump will become unstable over the longer term.



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Filename:	Site 9_Hector_Calumet_20070131.ppt	United Kend

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment") Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting 2006



Photo 9.1\_Pt2\_Calumet\_East\_wall\_NE\_View



Photo 9.2\_Pt2\_Calumet\_East\_Wall\_Tension\_Crack



Photo 9.3\_Pt3\_Calumet\_South\_Pit\_NE\_View



Photo 9.4\_Pt3\_Calumet\_South\_Pit\_SE\_View



Photo 9.5\_Pt4\_Calumet\_Sinkhole\_Formed\_Since\_Last\_Review



Photo 9.6\_Pt5\_Hector\_Pit\_Down Trenching\_to\_NW\_Wall



Photo 9.7\_Pt6\_Hector\_Pit\_Possible Surface\_Raise



Photo 9.8\_Pt6\_Hector\_Pit\_SE Sidewall



Photo 9.9\_Pt6\_Hector\_Underground\_Opening\_West Corner



Photos 9.10\_Pt7\_Overview\_of\_Trenching\_Crown\_Pillar\_NE\_View



Photos 9.11\_Pt\_2\_Calumet\_North\_East\_View



Photos 9.12\_Pt\_2\_Calumet\_SE\_Pit\_Bottom\_Subsidence

Site #10 – Dragon (UN) & Miller


Filename: Site10\_Dragon&Miller\_20070131.ppt

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Baseline Environmental Report, United Keno Hill Mines Property	Dragon (L <sup>Date:</sup> Jan. 2007	JN) and Mille	r Site #10 <sup>Figure:</sup> 10.1

Site #11 – Galkeno 300



#1 - Subsidence/Sinkhole, no timber was noted within the hole. This is a previously-unidentified hole, with 2 – 3m of fill over the area

#2 - The #35 Vein pits are stable with no tension cracks observed around the pit perimeter. - Some unravelling of the slope face is occurring, but this is to be expected. - No water observed at the bottom of either pits.

#3 - Dumps 1 - 7 show no indication of instability. - Only 40% of these dumps have berms on the crest. The roads do not have berms.

#4 - 50% of this dump has a berm along the dump crest. The dump is graded towards the road,

- Some water pools occur on the top of the dump.

- No tension cracks or deformation along the toe of the slope was noted. - This dump is considered to be stable.

#5 - This pit shows no signs of the development of large failures. - The pit walls show a high level of unravelling and this is expected to continue. - No water was observed in the bottom of the pit.

#6 - This pit is considered stable- no large tension cracks were noted. - Limited unravelling of the slopes is occurring and this is mainly on the NE side. - No water was noted in the pit bottom.

#7 - No berms were placed on the crest of this dump. - No tension cracks were observed on the top of the dump. - No significant displacement of the toe is noted, though minor displacement may have occurred. - Some localised zones of oversteepening in the dump. - This dump is considered to be stable.

#8 - Dump stability appears good, with no tension cracks or heave of the slope toe observed. - 80 % of the dump crests are guarded with a berm.

**#9** - The stability of this dump is considered to be fair. - The dump consists of a finer-grained, more mixed material. - East side of dump has been recontoured as part of improvements to the water treatment discharge. - A well developed erosion gulley was observed on this dump face.

#10 - The timbers in the collar of the adit have collapsed making access

	Galkeno 300 Site #11		#11
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>11.1</b>



Photo 11.1\_Pt1\_Sinkhole below (E) of Sime #4 pit



Photo 11.2\_Pt2\_#35 Vein Pit\_East Wall



Photo 11.3\_Pt2\_#35 Vein Pit\_South NE view



Photo 11.4\_Pt2\_#35 Vein Pit\_West wall



Photo 11.5\_Pt5\_Sime#6 Pit \_SW View along pit bottom



Photo 11.6\_Pt5\_Sime#6 Pit\_NE view



Photo 11.7\_Pt5\_Sime#6 Pit\_SE view further in pit



Photo 11.8\_Pt6\_Sime#4 Pit NE view



Photo 11.9\_Pt6\_Sime#4 Pit North slope view





Photo\_11.12\_ Mixer



Photo\_11.13\_Weir in adit



Photo\_11.14\_Adit shack



Photo\_11.15\_Discharge channel erosion



Photo\_11.16 Former discharge route



Photo\_11.17\_Discharge flow in braided channels over organic soils



Photo\_11.18\_Diffuser from S



Photo\_11.19\_Diffuser



Photo\_11.20\_Diffuser



Photo\_11.21\_Dump toe and refuse



Photo\_11.22\_Ponds



Photo\_11.23\_Ponds



Photos 11.10\_Pt6\_Sime#4 Pit South slope view



Photos 11.11\_Pt6\_Sime#4 Pit SW view

Site #12 – Galkeno 900



- #1 Discharge from pipe into unbraced corrugated sections (Photo3)
- #2 Corrugated sections are twisted and flow escapes over side (Photo 4) and under lower sections
- #3 Discharge path shows whitish precipitates, heavy iron-staining and permafrost thaw features (Photo 5)
- #4 Permafrost degradation and erosion along former discharge channel
- #5 Settling Pond #2 decommissioned and recontoured

$\overline{\mathbf{O}}$	Galk	eno 900 Site	#12	•
LEXCO				
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>12.1</b>	



Galkeno\_900\_from\_Onek\_Dump



Photo\_12.1.a\_ Ponds



Photo\_12.1.b\_ Ponds



Photo\_12.2\_ SE corner tension cracks



Photo\_12.3\_ Discharge pipe and flume



Photo\_12.4\_Damaged flume



Photo\_12.5\_Outflow area



Photo\_12.6\_Wetland treatment test area



Photo\_12.7\_Galkeno 900 adit



Photo\_12.8\_Lime tank and pump



Photo\_12.9\_Lime addition point

Site #14 – Bluebird

- #1 2 sheets of approximately 1.2 m by 1.2 m asbestos fibreboard in NE corner of cabin-fixed to wall as heat shield for wood stove.
- #2 Minor unvegetated oxidized greenstone and vein material.
- #3 3 m x 2 m x 2 m rock cut into base of outcrop with greenstone waste rock adjacent to east.



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Job No:	ALEX-06-ESP-05	Baseline En
Filename:	Site14_Bluebird_20070131.ppt	United Kend

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment"' Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting and Access Consulting Group, 2007

Site #15 – Tin Can

#1 - Shafts #1 and #2 described in PWGSC 2000 not located. - Two previously-unidentified shafts were located.

- Shaft #3: NAD 83 483470 E, 7088650 N. 1.7 m x 1.7 m collapsed timber-cribbed shaft, with subsidence around the shaft opening forming a 2 to 3 m deep 3 m x 5 m depression (Photo 15.-1). Area to east and southeast appears to have been groundsluiced (4 m x 30 m x up to 1 m deep)- presently covered by dense growth of alders.

- Shaft #4: NAD 83 483522 E, 7088649 N. 1.5 m x 1.5 m timber lined shaft, open to depth of 2.5 m, minor subsidence around shaft collar (up to 1 m, extending up to 2 m away from shaft collar). - Waste pile at Shaft #4 forms a flat 7 m wide bench across hillside at elevation of collar. Pile extends downslope for 6 m. Margins of exposed pile are composed of greenstone, with surface of central portion of pile extending from shaft to toe composed of orange-stained greenstone with purplish-black stained clasts and minor limonite. -Orange staining extends to depth of 0.3 m. Rinse pH of sample of near-surface fines was 6.2, with a rinse conductivity of 0.9 mS/cm. - Unoxidized greenstone observed below veneer of oxidized waste in shallow test pit.

#1 - Swampy area to southeast of shafts #3 and #4 is location of Shaft #1 and Shaft #2 described in PWGSC (2000). Vegetation consists of saturated moss and small shrubs, along with isolated black spruce and willows.



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Job No:	ALEX-06-ESP-05	Baseline Env
Filename:	Site15_TinCan_20070131.ppt	United Keno
	Job No: Filename:	Job No: ALEX-06-ESP-05 Filename: Site15_TinCan_20070131.ppt

2006 aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007



Photo 15-1\_TinCan\_Shaft 3



Photo 15-2\_TinCan\_Shaft 4



Photo 15-3\_TinCan\_Shaft 4



Photo 15-4\_TinCan\_Shaft 4 waste rock pile



Photo 15-5\_TinCan\_Oxidation in surface waste rock at Shaft 4



Photo 15-6\_TinCan\_Collapsed cabin west of Shaft 4

Site #16 – Rico

- #1 There appeared to be insufficient volume of waste rock for a 37 m adit. Waste may have been used as road material. - Linear subsidence above adit extends for ~30 m, up to 2.5 m deep with stable sides and complete revegetation.
- #2 Shaft waste pile 70% overgrown with moss, lichen, heather, and isolated birch.
- Composed of weathered quartzite breccia, siderite vein material,
- minor oxidized carbonaceous phyllite. Abundant black manganese oxide staining observed, lesser orange to dark rusty brown staining.
- Shaft remains open; water and debris observed at 4m depth. Timber support remained intact.



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Job No:	ALEX-06-ESP-05	Baseline En
Filename:	Site16_Rico_20070131.ppt	United Kend

2006 aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007

Site #17 – Duncan Creek



- At the time of inspection in 2006, no trenches were located. There are several cutlines in the area indicated on the aerial photograph, and there are areas where melting of permafrost along the cutlines has resulted in subsidence and the formation of linear depressions.

- Complete or nearly complete vegetative coverage was observed on all cutlines inspected in 2006.

#2 - Test pitting in gravel observed in this area. It is suspected that this disturbance is related to placer exploration.



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Job No: ALEX-06-ESP-05	Baseline Er
Filename: Site17_Duncan_20070131.ppt	United Ken

2006 aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007



Site #18 – Flame & Moth





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Job No:	ALEX-06-ESP-05	Baseline Er
Filename:	Site18_FlameMoth_20070131.ppt	United Ken

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment" Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

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Site #19 – Onek



- #1 Free dumps and traffic surfaces of oxidized dark orangey brown to black ore
- #2 Free dumps of oxidized dark orangey brown to black ore
  Approximately 40 dump loads, each 2 m x 4.5 m x 4.5 m
- #3 North & west areas have bermsSouth area high, no berms and very steep
- #4 East slope berm 30 m wide - Berms smaller
- #5 No berms along the crest of the waste dumps
- #6 -Minor hydrocarbon staining near buildings. Buildings in poor repair. One lead/ acid battery noted.

## General Notes:

- No large pit failures are expected
- No water in pit
- Dumps reviewed; berms noted on some dumps
- Berms are lacking on the south waste dumps

- The benches will continue to unravel with each subsequent freeze and thaw cycle and slowly break back.

-The pit edge does not have protective berms in many areas

	Onek Site #19 Onek Pit and Waste Dum		) Dumps
nvironmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: 19.1



Photo 19.1\_Blocky rockmass SE slope, west side



Photo 19.2\_View of NW slope face



Photo 19.3\_View of SE slope face



Photo 19.4\_View of SW Pit



Photo 19.5\_View to NE along pit bottom



Photo 19.6\_Ore stockpile on waste dump at SE end of pit

#1 Ice blockage in portal. Outflow is not in discharge pipe, but flows along base (Photo 19.9). Timber bracing in poor condition (Photo 19.10).

- N -

New heat trace in place to maintain open flowpath through ice (Photo 19.11).

- #2 Drainage from portal flows along ditch (Photos 19.7 and 19.8) and infiltrates about 10 m above culvert. Does not re-emerge downstream of road.
- #3 No changes to buildings, debris, or rock pad since PWGSC (2000).





40 meters

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment"' Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

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Collapsed rock extends about 5 m above portal

• exco	0	Dnek Site #19 nek 400 Porta	) al	
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure:	19.2


Photo 19.7\_Onek\_Adit\_1



Photo 19.8\_Onek\_Adit\_9 Discharge



Photo 19.9\_Onek\_Adit\_5



Photo 19.10\_Onek\_Adit\_2



Photo 19.11\_Onek\_Adit\_8



Photo 19.12\_Onek\_Adit\_3

Site #20 – Klondike Keno



- #1 Piping, wood, and metal debris spread across site
- #2 Contains zones of 90% quartz siderite waste, weathering maroon brown. More orange-stained clasts (<1%) in this area than in other waste at this site; orange staining mostly commonly occurs on carbonaceous phyllite.
- #3 Coordinates and elevation in PWGSC 2000 are not correct. - 2006 GPS position: NAD 83 UTM position 485597 E 7090841 N.
- #4 Upper adit not located. Reported to be 225 m from lower adit; however, map indicates approximately 20 m. - Location as shown on map at upper limit of collapse drift of lower portal; service pipe was noted in collapsed rubble and soil, but no timbers were observed.

<b>O</b> LEXCO	Klondike-Keno Site #20		e #20
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>20.1</b>

Site #21 – Sadie Ladue (Wernecke)



#1 Collapsed stope and Ladue #2 Shaft were backfilled in 2006

#2 Water flow continues to enter pit at this location (visual estimate of 0.5 L/second in Sept. 2005). Water infiltrates into pit bottom- no evidence of surface flow out of pit was observed. May enter underground workings below pit.

	Sadie Ladue Site #21		#21
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>21.1</b>

Site #22 – Bellekeno



- wood lumber crib lined with black plastic - plastic is compromised on west side, i.e. a spill would not be contained - containment has ponded water and algae inside to depth of 5 cm - appears to be drawn down to level of outlet pipe and valve

#2 Minor tension cracks along edge of pond and along crest of waste rock slope

#3 Lime addition system in Bellekeno 625 adit shack - lime slurry storage tank with single mixer - slurry drips into adit outflow in half-round 16" corrugated pipe - system is connected to grid power (Photos 22.1, 22.2, 22.3, 22.4)

#4 Upslope runoff drains into poorly graded ditch along south side of pond and may seep into

#5 Pond discharge via 16" corrugated pipe over edge of waste rock pile (Photos 22.9 and 22.9a)

#6 5 – 8 Seeps, no staining but some unhealthy vegetation (Photo 22.12)

#7 Active placer operation on Lightning Creek above and below confluence with Thunder Gulch

General Notes - September 20, 2005 - inflow to ponds ~5L/s (Photo 22.11) - outflow via discharge pipe ~ 0.4 L/s (Photo 22.9a) - remainder lost to seepage

LEXCO	Bellekeno Site #22 Bellekeno 600 area		22 rea
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>22.1</b>



Photo 22.1 Bellekeno main adit shack



Photo 22.2\_Bellekeno lime tank and pumps



Photo 22.3\_Bellekeno lime addition point



Photo 22.4\_Bellekeno lime addition detail



Photo 22.5a\_Bellekeno ponds



Photo 22.5b\_Bellekeno ponds



Photo 22.6\_Bellekeno ponds



Photo 22.7\_Bellekeno tension cracks on upstream crest



Photo 22.8\_Bellekeno tension cracks on downstream crest



Photo 22.9a\_Bellekeno discharge



Photo 22.9b\_Bellekeno discharge



Photos 22.10a\_Belleken ponds



Photos 22.10b\_Bellekeno ponds



Photos 22.11\_Bellekeno outflow from adit



Photos 22.12\_Bellekeno area at toe of dump where seeps emerge



Photos 22.13a\_Bellekeno dump toe in creek



Photos 22.13b\_Bellekeno dump toe in creek



Photos 22.13c\_Bellekeno dump toe in creek



Photos 22.13d\_Bellekeno dump toe in creek



Photos 22.13e\_Bellekenoe dump toe in creek



	Bellekeno Site #22 Site overview		22
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>22.2</b>



Photo 22.14\_200 Level Adit



Photo 22.15\_Shaft at 100 Level with collapsed structure



	Bellekeno Site #22 Eureka area			
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure:	22.3

Site #23 – Kijo

- *#1 Coordinates in PWGSC (2000) are not correct. NAD 83 UTM position 486195 E 7089814 N.*
- #2 Minor (10%) orange, black, and dark rusty brown clasts exposed on lower margin of pile- remainder is revegetated. Fines are light greyish brown.



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Job No:	ALEX-06-ESP-05	Baseline Er
Filename:	Site23_Kijo_20070131.ppt	United Ken

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment" Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

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Site #24 – Croesus No. 1



Site #25 – Black Cap



- Small operation with some poor blasting practices - East wall is benched on a 10 ft lifts; slope angle is low - The west wall was mined with no benches, very ragged appearance - The dip of ore body is at a low angle to the east. - The faces are unravelling substantially on the western entrance - Water pooling on the dump on the west side - Some tension cracks exist on the west dump; these appear dormant - Berms are placed on approximately 50% of the waste dumps

#1 - water coming out of adit - adit timber collapsed, access fairly easily - 5 – 10 l/minute - water runs down the ramp - check pooling on the photos #2 - Lucky Queen portal and garage have been completely dismantled and

materials have been removed by vandals (inspected August 2006). - Timber support and rock at portal are collapsing, but material removed by vandals has made it possible to enter the opening. - This is clearly a hazard, as the degree of vandalism shows that restrictions to access are minimal.

	Black Cap/Shepherd and Lucky Queen Adit- Site #25		d and Site #25
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: 25.1



Photo 25.1\_Black\_Cap\_Close-up\_of\_Adit\_Area



Photo 25.2\_Black\_Cap\_Collapsed\_Adit\_Water\_Flow



Photo 25.3\_Black\_Cap\_East\_Face\_View\_Along\_Benches



Photo 25.4\_Black\_Cap\_View\_into\_South\_Pit



Photo 25.5\_Black\_Cap\_Water on Upper West Dump



Photo 25.6\_Black\_Cap\_Weak Material\_West of Access



Photo 25.7\_Black\_Cap\_West Slope\_View



Photo 25.8\_Black\_Cap\_West\_Face\_Overall\_View



Photo 25.9\_Black\_Cap\_West\_Face\_View - Detail

Site #26 – Lucky Queen



Environmental Report,	Date:	Approved:	Figure:	
no Hill Mines Property	Jan. 2007		ຼັ 2	26.1



Photo 26.1\_Shaft house at Lucky Queen



Photo 26.2\_Open manway in shaft house at Lucky Queen



Photo 26.3\_Open manway in shaft house at Lucky Queen



Photo 26.4\_Hoist support strucutre in shaft house at Lucky Queen



Photo 26.5\_Trenches 2 and 3, and remnants of Shaft #2 at Lucky Queen



Photo 26.6\_Trench 3 with ponded water at Lucky Queen

Site #27 – Lake



#1 - Hanging wall to shaft has collapsed, and there appears to be an open void. Risk of inadvertent access was low at the time of inspection; however, wood structure that formed a roof over the opening was observed to be actively deteriorating, and may lead to the development of an open hole in the future. May be exacerbated

- Manway was secured at time of inspection by planking nailed over entry, as noted in PWGSC (2000).

#2 - Upper shaft forms stable open hole, with water at a depth of 3m. Warning flagging strung by PWGSC

27	WQ-	S02-	01/02	

	Lake Site #27		
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>27.1</b>



Photo 27.1\_Failed hanging wall immediately E of shaft



Photo 27.2\_Detail- failed hanging wall



Photo 27.3\_Subsidence immediately W of shaft

Site #28 – Shamrock


Site #29 – Highlander



#1 - Collapsed adit producing approximately 2 L/min at time of inspection. Water was clear and colourless, with no precipitates or staining observed.

- N -

#2 - Waste rock consists of graphitic phyllite with minimal greenstone material. Little to no vein material or

#3 - Waste rock consists of 70% greenstone with light orange staining, 30% graphitic phyllite and minor

#4 - Waste rock consists of greenstone, graphitic phyllite, and minor dark orange to purplish black vein material. Northern-most adit remains accessible as noted in PWGSC (2000); opening is roughly the size of a side window of a small car. Open space appears to be no greater than 2 m long.

LEXCO	Highlander Site #29		#29
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>29.1</b>

Site #30 – Cub & Bunny



- #2 Ponded water in trench upslope of Upper Faro Gulch Trail (0.5 m deep x 2 m wide x 7 m long). Water was clear, with grasses growing around edges of pond (Photo 30-5). Trickling flow observed from spill point onto trail, then flow infiltrated into surface of trail.
- #3 Trench #1 appears to collect and channel water during freshet; a 0.3 m deep incised channel (Photo 30-6) was observed in the base of the trench at the northwest end over a length of 10 m. This incised channel contains a 5 m long zone bearing intermittent orange staining on exposed phyllite surfaces. - Trench #1 is similar to the many other trenches shown. Revegetation of trench base and walls is occurring by willows, grasses, moss, and lichens (Photo 30-7). - Trench location is NAD 83 488824 E, 7092324 N
- #4 A collapsed adit into a shallow hillside was identified at this location. The site is marked by a broken wheelbarrow with an iron wheel, and several panels of galvanized sheet roofing material, and miscellaneous debris (Photo 30-8). The adit is not accessible.
- #5 Orange to dark brown to purplish stained vein material exposed in east wall of pit (Photo 30-9).
  - Solifluction is causing fine grained soils at south end of pit to flow into excavation (Photo 30-10).
  - Pit and dump appear stable.

- N -

- Pit location is NAD 83 488622 E, 7092047 N



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Job No:	ALEX-06-ESP-05	Baseline En
Filename:	Site30_Cub&Bunny_320070131.ppt	United Kend

Aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007



Photo 30.01\_Trenching adjacent to Upper Faro Gulch Trail



Photo 30.02\_Trenching at Bunny site



Photo 30.03\_Trenching at Bunny site



Photo 30.04\_Trenching at Bunny site



Photo 30.05\_Ponded water in trench above Upper Faro Gulch Trail



Photo 30.06\_Incised channel in Trench #1



Photo 30.07\_Revegetation in Trench #1



Photo 30.08\_Collapsed adit south of Cub Pit



Photo 30.09\_Vein material exposed in of Cub Pit



Photo 30.10\_Solifluction at south end of Cub Pit

Site #31 – Stone

- #1 Ceiling of building 31A has collapsed. Siding is white tarpaper shingles. Unidentified outhouse observed to east of building 31A.
- #2 Buildings 31C and 31D area collapsed- tarpaper, particle board, lumber, asbestos shingle siding (<1  $m^3$ ), other household debris remain.
- #3 Adit is blocked, but access to collapsed portal structure via a 0.5 m x 0.5 m opening is possible. Open space observed to extend for 2.5 to 3 m. - Dripping and trickling sounds coming from fill in front of adit. No surface flow

observed.

- Portal shed is collapsed.

- Surface subsidence extends from collapsed portal for ~5 m upslope. Area of collapse is revegetated and appears stable; no exposed mineral soil was observed.

#4 - Waste rock is mostly graphitic phyllite with minor greenstone or foliated gabbro. East side of waste rock pile has oxidized siderite waste over length of dump for a width of 3 m.

- Test pit, likely excavated during PWGSC investigations, has ~25 willow seedlings growing in it. Dump otherwise has minor revegetation- willows, fireweed, bearberry.



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Job No:	ALEX-06-ESP-05	Baseline E
Filename:	Site31_Stone_20070131.ppt	United Ken

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment" Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting and Access Consulting Group, 2007

Site #32 – Keno 700



#1 Waste dumps are actively failing and waste material is being dispersed down Hope Gulch. Waste that forms foundation of Garage is at risk of failure in the short term. Timber cribbing is deteriorating and releasing retained waste material.

Photo 32.2- Waste dump detail

- #2 16" corrugated outflow pipe has unwound at crest of slope. Significant gully below unwound section of
- #3 Intake point for underground culvert is outside of adit and could easily be blocked by ice
- #4 Adit has ice with flow emerging from underneath
- #5 Buildings are in various states of disrepair. It appears as though scavenging of lumber from building frames
- #6 Access road has blocked culvert at first gulch back

	<b>Ⅰ</b> −−−−+−	30 Meters	
O Exco	Ke	no 700 Site #	32
invironmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>32.1</b>



Photo 32.1\_Keno 700\_Overview showing eroding dumps and unstable building



Photo 32.2\_Keno 700\_Actively eroding dump faces



Photo 32.3\_Keno 700\_Keno\_700\_Adit discharge culvert showing progress of dump erosion

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Photo 32.4\_Keno\_700\_10 Adit



Photo 32.5\_Keno\_700\_11 Adit



Photo 32.6\_Keno\_700\_12 Adit

SRK Consulting January 2007



Photo 32.7\_Keno\_700\_13 Adit Discharge

Site #36 – Keno No. 9 System



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Job No:	ALEX-06-ESP-05	Baseline En
Filename:	Site36_Keno9_200_20070131.ppt	United Keno

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#1 - Areas of trenching and test-pitting near rim of Faro Gulch.

#2 - Area of several shallow hand shafts and hand trenches.

- #3 Two collapsed adits had small waste piles on slope below adit mouth. Waste rock is blocky light grey quartzite, greenstone, and carbonaceous phyllite. - Support timbers protruding from the collapsed rock at both adits; no accessibility to underground.
- Audible trickling noise of water coming from collapsed rock at upper adit; no surface flow observed.



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Job No: ALEX-06-ESP-05		Baseline Er
Filename: Site36_Keno9_200_	20070131.ppt	United Kend

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment" Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting and Access Consulting Group, 2007

Site #37 – Gold Hill No. 2



nvironmental Report,	Date:	Approved:	Figure:	
no Hill Mines Property	Jan. 2007		Ű	37.1

Gold Hill No. 2 Site #37

Discovery Shaft 1

Site #38 – Fox

#1 - Surface topography in this area prevents surface drainage from flowing to north into McKay Gulch. All surface drainage from the Site reports east to Silver Basin Gulch or west to Faro Gulch.



	SRK Consulting Engineers and Scientists VANCOUVER	A
Job No:	ALEX-06-ESP-05	Baseline Er
Filename:	Site38_Fox_20070131.ppt	United Kend

2006 aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007



Site #40 – Divide

- #1 Previously unidentified barrel, approximately 50% full of fluid- odour and texture suggests hydraulic oil. No staining observed on adjacent ground.
- #2 Building reported in PWGSC 2000 was observed to be laying on its side at the north end of Trench A-2.
- #3 Minor remnant pyrite observed in oxidized material in Trench B-5.
- #4 Barrel in Trench B-9, not in Trench B-10. Remains ~50-% full of fluid.
- #5 -Solifluction is causing trench infill; process observed at many trenches at this site. Minor revegetation is occurring where fines have accumulated. Trench is freedraining.



	SRK Consulting Engineers and Scientists VANCOUVER	A
Job No:	ALEX-06-ESP-05	Baseline Er
Filename:	Site40_Divide_20070131.ppt	United Ken

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment" Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting and Access Consulting Group, 2007

Site #45 – Silver Basin

- #1 Two hand shafts at base of small cliff have minor waste piles downslope. Waste pile for southeast shaft extends down shallow surface gully; material is vein quartz, quartz sericite schist, greenstone, carbonaceous phyllite and siderite vein material with purplish black staining.
- #2 Surface runoff from Silver Basin Gulch Trail channels down surface excavation. Oxidized vein material is exposed in the eroded channel.



2006 aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007

Site #47 – Monument & Ladue Fraction



Environmental Report,	Date:	Approved:	Figure:
no Hill Mines Property	Jan. 2007	, pprotoa.	47.1



Photo 47-1\_Collapsed Monument and Ladue Fraction adit



Photo 47-2\_Adit waste dump



Photo 47-3\_Evidence of acid weathering in waste pile

## Monument and Ladue Fraction - Site #47



Photo 47-4\_Trench #2



Photo 47-5\_Trench #3

Site #48– Apex



Site #59 – Eagle

- #1 Permanent pond at upper limit of trench (Photo 59-1). Water is dammed behind material pushed into trench to form roadway. Fill is low, broad, and appears stable. - Water trickles from pond spill point into trench below. Trench bottom has welldeveloped mini-wetland community of horsetails, willows and algal mats; extends entire length of trench (Photos 59-2, 59-3). - Sides of trench range from bare to partially-vegetated.
- #2 Dump composed of acid-generating waste- dark grey schist, quartz vein material and rare quartzite- with rinse pH of 2.6 from the <2mm fraction of a single sample. Light orange staining is common, with less frequent bleached regions (Photos 59-4, 59-5). Keno Hill Quartzite clasts in bleached areas have no stain near contact with underlying material, but have dark purplish brown staining on the tops of the clasts, away from contact with the substrate. Minor limonite observed.
  - Local surface runoff flowpaths are stained yellowish brown.
  - No revegetation occurring on this waste pile.
  - Flow lobes, minor crest cracking, and oversteepened toe on north side indicate active instability (Photo 59-6).
- #3 Flow lobes observed on downhill face of waste pile (Photo 59-7), over area approximately 15 m wide x 30 m long x 4 m high. Minor cracking at crest of pile indicates minor instability; minor erosion channel down dump face and sediment fan extending from toe indicates that waste is transported during runoff events (Photo 59-8). Dump toe is oversteepened. Minor revegetation of dump face- spruce seedlings up to 1 m, grasses, willows.
- #4 Abundant medium-grained pyrite observed in waste rock (Photos 59-9, 59-10). Staining varied from no staining to light orange to rusty black (Photo 59-11). Revegetation of waste rock piles is generally limited to isolated plants- overall coverage is poor.



	SRK Consulting Engineers and Scientists VANCOUVER	AL
Job No:	ALEX-06-ESP-05	Baseline En
Filename:	Site59_Eagle_20070131.ppt	United Keno

Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment"' Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information.

Revised: SRK Consulting and Access Consulting Group, 2007



Photo 59.01\_Pond at upper end of Eagle trench



Photo 59.02\_Revegetation of base of Eagle trench, looking E from pond



Photo 59.03\_Revegetation of Eagle trench base and walls, looking NW

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Photo 59.04\_Bleached waste rock



Photo 59.05\_Bleached waste rock and purplish-brown stained clast



Photo 59.06\_Flow lobe and oversteepened toe at base of waste pile, steep source zone

SRK Consulting January 2007


Photo 59.07\_Active waste pile slope



Photo 59.08\_Erosion gully and sediment deposited at base of gully



Photo 59.09\_Pyrite in Keno Hill Quartzite from waste pile



Photo 59.10\_Pyrite and staining on rock from waste pile



Photo 59.11\_Yellowish and orange staining on surface of waste pile

Site #63 – Gerlitski

#1 - Waste rock pile at northwest end of Trench #1 has widespread staining (yellowish, yellowish-brown, and rusty orange to rusty brown), as well as areas that appear to be leached (Photos 63-1, 63-3). Abundant medium- to coarse-grained pyrite (up to 5% locally) noted as massive pods and veinlets, as well as disseminated in waste rock.
- Grain relief within clasts and fresh, untarnished appearance of pyrite suggests galvanic protection of pyrite and selective weathering of other sulphides.

- An area of heavily stressed vegetation (2 m wide) was noted north of waste rock pile toe (Photo 63-3).

- Two flow lobes were observed, and an unvegetated flow deposit of waste rock extended to north from toe of pile (Photo 63-4). Small headwall in source region indicates that instability is ongoing (Photo 63-5). Dump height approximately 2 m.



2006 aerial photograph used as base map. See PWGSC (2000) for additional baseline information. Revised: SRK Consulting and Access Consulting Group, 2007



Photo 63-1\_Fresh pyrite surrounded by leached area and staining



Photo 63-2\_Fresh pyrite in vein material



Photo 63-3\_Stressed vegetation at toe of waste pile

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Photo 63-4\_Flow of waste rock away from waste pile



Photo 63-5\_Source zone with active headwall

Site #71 – Christal (Dorothy)

71WQ-01-01 24W0-S01-01/02 Gulen #1 - Shaft #3: timber cribbed shaft, timbers rotting and beginning to collapse. Depth 12 sol 2 m, water in bottom of shaft. Located in excavation in colluvium, with 4 m headwall in quartzite. - Waste rock pile to west of shaft, 6 m x 10 m x 2 m, at angle of repose on slope below shaft. Composed of quartzite with minor black staining. Pile is 95% covered in moss and lichen, with willow and spruce colonizing the top and margins of pile. - Wood and metal debris in local area. #2 - Second shaft (1 m x 1.5 m x 2.5 m deep) identified 20 m NE of Shaft 3. Excavation (4 m x 4 m x 6 m) into colluvium on moderate slope to access solid bedrock, with timber-cribbed shaft in base of excavation. Shaft is caved at 2.5 m, with clear water in bottom. - Headwall of excavation is quartzite. Waste rock forms pile immediately downslope to west. 100% covered by moss, also recolonized by willows and spruce. Waste rock appears to be equal volume to the excavation- suggests little underground development at this location. - No staining or oxidation at depth in waste rock. Composition is quartzite, chloritic phyllite, minor siderite and quartz. Waste Dump Old Drill 110 Cover 11 Collapsed timber cabin, with 2 metal roofing and metal debris in surrounding area - N -200 Meters SRK Consulting Engineers and Scientists VANCOUVER Base map from "Keno Valley/Dublin Gulch Environmental Baseline Assessment"' Public Works and Government Services Canada, March 2000. See PWGSC (2000) for additional baseline information. ALEX-06-ESP-05 Job No: Revised: SRK Consulting and Access Consulting Group, 2007

Filename: Site71\_Christal\_20070131.ppt



Site #76 – Townsite



Site #77 – Sadie Ladue 600



	SRK Consulting Engineers and Scientists VANCOUVER	AL
Job No:	ALEX-06-ESP-05	Baseline En
Filename:	Site77_Sadie_Ladue_600_20070131.ppt	United Keno

Site #78 – Elsa Village



Site #79 – Elsa Tailings





A

- #1 Approx. location of sludge disposal cells (Photo 79.1) Tension cracks in berm at the NE corner.
- #2 Tailings extensively re-graded in this area (Photos 79.2, 79.3).
- #3 Vegetation kills above former tailings discharge points
- #4 Diversion ditch in tailings. No flow observed (Photo 79.4) Oxidized tailings in upper 20 cm (Photos 79.5, 79.6)
- #5 Tailings present much further upslope than indicated on PWGSC 2000 maps

	Elsa Tailings Site #79		
Environmental Report, no Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>79.2</b>



Photo 79.1\_24\_Elsa\_Tailings\_24 Sludge pond



Photo 79.2\_26a\_Elsa\_Tailings\_26a Re-worked upland tailings



Photo 79.3\_26b\_Elsa-Tailings\_26b Re-worked upland tailings



Photo 79.4\_27\_Elsa\_Tailings\_27 Ditch in upland tailings



Photo 79.5\_ 28\_Elsa\_Tailings\_28 Ditch close-up



Photo 79.6\_29\_Elsa\_Tailings\_29 Sample location



Revised: SRK Consulting 2006

- #1 Dam 1 recently re-surfaced (Photos 79.7, 79.8)
- #2 Upstream crest shows tension cracks

   10 m long at north end
  - 20 m long mid-span
  - 10 m long in south third
- #3 Downstream crest settling along middle and north thirds
- #4 Toe berm approx. 8 m wide; has ~ 25 cm undulation indicating settlement and small sinkhole at north end
- #5 Decant intake B a steel box with stop-log slots. Good condition
- #6 Dam 1 lime addition system (Photo 79.17)
  - lime slurry tank - mixer
  - lime slurry drips into mixing box at outlet of decant pipe
- *#7 Discharge over weir and via launder to channel incised in tailings (Photo 79.16)*
- #8 Area of escaped tailings above water level
- #9 10 m x 10 m buttress below site of former failure
- #10 Extensive tension (Photos 79.9, 79.10) cracking on upstream face approx. 200 m south of decant (Photo 79.14)
- #11 Treated water drains to Dam 3 pond. Unreacted lime present.
- #12 Dam 2 lime addition system
  lime slurry tank
  pump feeds lime slurry into decant outlet
- #13 Decant constructed from lumber and plywood. V-notch weir at outlet has leakage along toe. (Photos 79.11, 79.12, 79.13)
- #14 Emergency berm approx. 1 m high. Constructed before Dam 3 was built.
- #15 Tension cracks along upstream crest, over approx. 50 m
- #16 Lime spills upstream of decant may indicate that lime has been added here.
- #17 Decant structure is steel box with grooves for stop logs. Good condition (Photo 79.15)
- #18 Wet and soft area at toe

Filename: Site79\_Elsa.Tailings\_20070131.ppt

#19 North half of dam 3 appears to bulge our of alignment, but not tension cracks were observed

ALEXCO	Elsa Tailings Site #79		
Baseline Environmental Report, United Keno Hill Mines Property	Date: Jan. 2007	Approved:	Figure: <b>79.3</b>



Photo 79.07\_5\_Elsa\_Tailings\_5 Dam 1 looking SW



Photo 79.08\_6\_Elsa\_Tailings\_6 Dam 1 looking S



Photo 79.09\_11\_Elsa\_Tailings\_11 Dam 2 decant and outflow



Photo 79.10\_13\_Elsa\_Tailings\_13 decant outflow area



Photo 79.11\_14\_Elsa\_Tailings\_14 Dam 2 decant close-up 1



Photo 79.12\_15\_Elsa\_Tailings\_15 Dam 2 decant closeup 2



Photo 79.13\_16\_Elsa\_Tailings\_16 Dam 2 decant upstream end



Photo 79.14\_17\_Elsa\_Tailings\_17 Dam 2 tension cracks in upstream crest



Photo 79.15\_19\_Elsa\_Tailings\_19 Dam 3 discharge point

SRK Consulting January 2007



Photo 79.16\_20a\_Elsa\_Tailings\_20a Dam 1 treatment system and spilled tailings



Photo 79.17\_20b\_Elsa\_Tailings\_20b Dam 1 treatment system and spilled tailings

Site #81 – Mackeno





Photo 81.01\_Tailings deposit along creek



Photo 81.02\_Tailings deposit along lakeshore



Photo 81.03a\_Christal Lake outflow from Galkeno 900



Photo 81.03b\_Christal Lake outflow from Galkeno 900



Photo 81.03c\_Christal Lake outflow from Galkeno 900



Photo 81.04\_Active erosion of tailings by Christal Lake outflow



Photo 81.05\_Fresh and weathered tailings in active erosion face, with weathered tailings surface in background



Photo 81.06\_Looking downstream at Christal Creek cutting into tailings



Photo 81.07\_Fresh tailings on bed of Christal Creek adjacent to in-situ tailings



Photo 81.08\_Orange staining in seepage from wethered tailings at edge of Christal Creek



Photo 81.09\_Fresh pyrite in sediment from bed of Christal Creek downstream of Mackeno



Photo 81.10\_Fresh pyrite in sediment on bed of Christal Creek downstream of Mackeno



Photo 81.11\_Orange staining and shiny surface particulate in standing water adjacent to Christal Creek



Photo 81.12\_Fresh pyrite in sediment on bed of Christal Creek downstream of Mackeno



Photo 81.13\_Black coatings on gravel in Christal Creek doiwnstream of Mackeno

Appendix B Update on 2006 Annual Inspection- Valley Tailings Facility: Letter from Richard Trimble, P.Eng., EBA Engineering Consultants Ltd., January 18, 2007 January 18, 2007

www.eba.ca

EBA File: W141

Access Consulting Group Ltd. Unit 3, 151 Industrial Road Whitehorse, YT Y1A 2V3

Attention: Mr. Rob McIntyre, RET President

## Subject: Update on 2006 Annual Inspection - Valley Tailings Facility Keno Hill Mine, Elsa, YT

This letter summarizes the status of annual geotechnical engineering inspection reports for the Valley Tailings Facility (VTF) at the Keno Hill mine near Elsa, YT.

Due to the early onset of winter, EBA Engineering Consultants Ltd. (EBA) was not able to complete an inspection of the tailings dams in 2006. However, an inspection was done in 2005, and numerous others have been completed by me over the years since 1982. It is our intention to conduct an inspection as early as practical in 2007, with your authorization and approval.

It is also our opinion that the tailings retention dams at the Keno Hill mine are stable in their present condition and currently do not pose any hazard. Our inspections over the years have resulted in recommendations related to filling in permafrost thaw settlement depressions, re-grading the surface of the dams, adding toe berms to improve stability, and repairing/replacing decant culverts as appropriate. These recommendations have generally been completed, and noted on subsequent inspection reports.

We trust that you will find this report satisfactory for your purposes. If you have any questions, or require additional information, please contact the undersigned.

J. Richard Trimble, P.Eng. Senior Geotechnical Engineer, Project Director Yukon Region Direct Line: 867.668.2071 x22 rtrimble@eba.ca JRT/jrt PERMIT NUMBER PP003	Yours truly, EBA Engineering Consultants Ltd.	YUKON YUKON E BIKBARO TAILISUI UN TERRITORY	6 22/07
JRT/jrt Direct Line: 867.668.2071 x22 rtrimble@eba.ca JRT/jrt Direct Line: 867.668.2071 x22 JRT/jrt Direct Line: 867.668.2071 x22 Date Direct Line: 867.668.2071 x22 Date Direct Line: 867.668.2071 x22 Date Direct Line: 867.668.2071 x22 Direct Line: 867.668.2071	J. Richard Trimble, P.Eng. Senior Geotechnical Engineer, Project Vukon Region	Director	PERMIT TO PRACTICE
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Association of Professional Engineers of Yukon	JRT/jrt		Date <u>Jan 22 /07</u> PERMIT NUMBER PP003 Association of Professional Engineers of Yukon



Baseline Environmental Assessment of Valley Tailings Water Impacts Assessed as of July and August 2006: Memorandum prepared by Joseph Harrington, Green World Science, January 29, 2007

## Appendix C

Memorandum on Baseline Environmental Assessment of Valley Tailings Water Impacts Assessed as of July and August 2006. – Prepared by Joseph Harrington

Temporary drive point piezometers were installed and sampled at several locations to assess the level of contamination in shallow flows transmitted at the interface between the Valley Tailings and the subsurface soils. A trend of increasing contamination with gradient was observed in these flows by selecting the maximum level of total contaminants from each sampled area as shown in the photograph below:



The above data suggests that contaminants are accumulating at the interface beneath the Valley Tailings and are likely to pose a source of loading to Flat Creek and the South McQuesten.

It should be noted that the sample data for total levels of contaminants reported 1,000x higher levels, but in the author's judgment the reported levels likely reflected an improper conversion to PPM rather than PPB. For example, the analysis of the whole collected sample indicated 4,740 PPM lead, rather than as shown above at 4.74 PPM.

From the sample analyses available at this time the conclusion is supported that arsenic, lead and zinc are all mobile in the saturated tailings interface beneath and down gradient from the Valley Tailings, and the mass load of contaminants from the un-reclaimed Valley Tailings are a source of pollutant loading in the McQuesten River Valley.

Appendix D Soil Contamination Along Haulage Routes: Memorandum prepared by Corey Fernets, CET, Access Consulting Group, January 11, 2007


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<u>Memorandum</u>

To: File CC:

January 11, 2007

From: Corey Fernets, C.E.T., Access Consulting Group

## Re: Soil Contamination along Haulage Routes

The following is a descriptive summary of the extent of the soil sampling performed along historical ore haulage routes on Keno Hill, Galena Hill, and Sourdough Hill to date. Included are the laboratory results which can be used to assist in the assessment of area-wide metal contamination from historical use of the ore haul roads.

Thank you.

### 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 (see Figure 1). 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 the UKHM Haulage Route Sampling Table.



Soil sample location near Keno Hill.





# **UKHM Haulage Route Sampling**

LOCATION	Units		R	eference Si	te			Silver 7	Frail Highwa	ay Site			k	(eno Hill Sit	e			Calu	umet Drive	Site		
		REF-8	REF-13	REF-28	REF-53	<b>REF-103</b>	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	
Distance from roadedge (m)		8m	13m	28m	53m	103m	9m	14m	29m	54m	104m	9m	14m	29m	54m	104m	8m	13m	28m	53m	103m	Yukon CSR -
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	Industrial
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 (NICKEI)	ррт	14	8	4	11	3	15	15	15	0	500	25	10	23	19	12	11	1070	/	9	C 010	500
P (Phosphorous)	ррт	950	1410	870	800	540	890	990	730	000	590	1490	1420	2140	1810	1580	1100	1070	900	890	810	2000
FD (Leau)	0/	0.15	20	10	0.22	49	0.00	40	0.12	0.26	0.24	0.11	0.12	0.12	0.07	44	0.22	0.25	0.16	0.16	0.17	2000
S (Suprur)	70	0.13	0.2	0.2	0.22	0.12	0.09	0.10	0.12	0.20	0.24	0.11	18	0.13	0.07	0.1	0.23	0.23	0.10	0.10	0.17	300
Sc (Scandium)	ppm	1	<2	<2	<2	<2	1	1	1	<2	<2	1	-10	-1	<2	<2	13		<u></u>	<2	1	Nono
Sr (Strontium)	ppm	62	71	71	80	21	24	1	1	70	<1 Q3	18	15	42	20	21	34	37	1	54	62	None
Ti (Titanium)	v	02	-0.01	-0.01	-0.01	-0 01	0.01	40 0 01	0.01	-0.01	-0.01	0.01	-0.01	-0.01	20 20 01	2 1 1 1 م	0.01	-0 01	43 0 01	0.01	02	None
TI (Thallium)#	nnm	0.01 ح10	~10	~10	<0.01 ~10	<0.01 ~10	-10	0.01 10	10	~10.01	<0.01	-10	~10.01	<0.01 ~10	~10.01	~10.01	0.01 10	<0.01 ~10	0.01 10	-10 -10	0.01 10	2**
U (Uranium)	npm	<10 <10	<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	<u></u> 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

Appendix E Hydrocarbon Contaminated Soil: Memorandum prepared by Corey Fernets, CET, Access Consulting Group, January 11, 2007



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<u>Memorandum</u>

To: File

CC:

January 11, 2007

From: Corey Fernets, C.E.T., Access Consulting Group

## Re: Hydrocarbon Contaminated Soil

The following is a descriptive summary of the extent of the hydrocarbon contamination documentation to date. All known UKHM sites were inspected with specific attention paid to any evidence of hydrocarbon contamination of the soil, or any evidence that hydrocarbons were stored in the vicinity. The PWGSC Environmental Baseline Assessment was also reviewed in order to compile a comprehensive list of all suspect UKHM properties.

Although a thorough field survey was carried out on the Keno Hill Property, the potential remains for additional areas of contamination to exist on-site. Additional workings may be hidden in the dense bush areas or in locations that are not clearly visible either from the roadways or aerial views, and were never staked as claims or reported by locals in the vicinity. However, the field investigation and PWGSC documentation is thought to capture the majority of the sites known to be located on or near the Keno Hill Property.

Thank you.

### 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. Note that only UKHM sites with suspect contamination or evidence of previous hydrocarbon storage were included in the table.



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



## UKHM Claim Package Hydrocarbon Contamination Inventory - September 2006

Assigned Site No.	Site Name	Location	Hazard Identified By	Desription of Contamination	Samples Taken
					N 1
1	Silver King	Diesel fuel was likely stored near the 100 Level Adit.	PWGSC Baseline Assessment	No visible signs of contamination	None
			SRK 2005 Site Inspection	Hydrocarbon staining on crushed graver hoor	None
		Backfill pipe	PWGSC Baseline Assessment	Small and shallow stain from drilling lubricant or hydraulic oil;	None
2	Husky & Husky SW	Above ground storage tank located behind the boilerhouse	SRK 2005 Site Inspection	Soil staining evident around perimeter of 9400 litre tank; heavy staining at the valves; rock berm extends around the perimeter of the AST	None
		Two AST's located in the northeast corner inside the boilerhouse	PWGSC Baseline Assessment	Staining noted on the concrete floor on the exterior of the building and the rear addition; no staining was noted on the surrounding soils.	None
		One fuel drum laying on its side, leaking from bung.	PWGSC Baseline Assessment	Minor soil staining	None
		Small storage shed adjacent to west wall of boiler house.	PWGSC Baseline Assessment	Interior heavily stained with tar and rock drill oil; minor staining at the entrance.	None
		Three drums were located at the rear of the smaller storage shed.	PWGSC Baseline Assessment	Minor surficial staining surrounding the drums.	None
		One aboveground storage tank located on the northwest corner of the hoist house on Husky SW site	PWGSC Baseline Assessment	No visible signs of contamination	None
		Two 200L drums labelled as torque fluid at Husky SW site	PWGSC Baseline Assessment	Area around horizontal drum stained. (approx. 20m3)	None
		One fuel drum labelled as motor oil Chevron 200L at Husky SW site	PWGSC Baseline Assessment	Some staining around fuel drum (approx. area = 8m2) indicating that is has or is leaking	None
3	Elsa	Fuel Storage area at backfill site.	PWGSC Baseline Assessment	No visible signs of contamination	None
4	Dixie	Inside and along north wall of garage	SRK 2005 Site Inspection	Staining of soil present (approx. 10m2) appears to be from heavy machinery maintenance.	None
6	Bermingham & Ruby (Arctic & Mastiff)	Northwest corner of the receiving tank behind the garage on the Ruby site.	PWGSC Baseline Assessment	Some leakage has occurred and the soils surrounding the tank have been stained.	Yes
		Ruby Level 400 Adit	PWGSC Baseline Assessment	Interior of the adit stained with hydrocarbons.	None
7	No Cash	Exterior and interior of garage.	PWGSC Baseline Assessment	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
9	Hector Calumet	Three metal oil barrels present adjacent to the conveyor section of the facility, two empty and one full of oil & water.	PWGSC Baseline Assessment	A small stain (approx. 0.5m2) is present on the ground near the barrels.	None
11	Galkeno 300	Adjacent to the north wall of the quonset warehouse.	PWGSC Baseline Assessment	Staining (approx. 0.5m3) visible from inside between the concrete and the building frame.	None
		Adjacent to the west wall of the quonset warehouse.	PWGSC Baseline Assessment	Staining (approx. 0.6m3) visible from an above ground storage tank.	None
12	Galkeno 900	Storage Building	PWGSC Baseline Assessment	1m2 oil stain in the dirt	None
19	Onek	East of Building 19E	PWGSC Baseline Assessment	Oil staining present	None
		East of Building 19F	PWGSC Baseline Assessment	Oil staining present	None
		Last of buildings 19A and 19C and to the south of building 19D.	SRK 2005 Site Inspection	Seven stains were identified; approx area = 20m2	None
		North and south of Building 19G.	PWGSC Baseline Assessment	Five large waste oil stains were present; approx. area = 30m2	None
		Under POL shed at upper camp.	SRK 2005 Site Inspection	Extensive staining attributable to spillage from various hydrocarbon based liquids stored in the building; approx. area = 6m2	None
		Unlined sumps in garage.	PWGSC Baseline Assessment	Heavily stained.	Yes - no PCB's detected
20	Klondike-Keno	Three heating oil drums on wood platform at the southern area of site	ACG 2006 Site Inspection	No visible signs of contamination	None



## UKHM Claim Package Hydrocarbon Contamination Inventory - September 2006

Assigned Site No.	Site Name	Location	Hazard Identified By	Desription of Contamination	Samples Taken
21	Sadie Ladue	Roughly 10m east of Pit #1	PWGSC Baseline Assessment	A fuel or oil stain (< 5m2) was present which penetrated less than 5cm into the broken waste rock.	None
		Site for temporary storage of Jet B fuel in 1996	PWGSC Baseline Assessment	Possible contamination suspected	Yes
22	Bellekeno	2000L storage tank inside compressor house at 625 Level	PWGSC Baseline Assessment	A large area of stained soil (approx.125m2) was present on the floor, at the entrance, and behind compressor house.	None
		AST1 is a 20,000L single wall aboveground steel diesel tank behind the compressor house at the 625 Level.	PWGSC Baseline Assessment	No visible signs of contamination	None
		AST2 is a 2,000L single wall aboveground steel gasoline tank inside the compressor house at the 625 Level.	PWGSC Baseline Assessment	No visible signs of contamination	None
		AST3 is a 3,000L single wall aboveground, two compartment steel gasoline/diesel tank inside the compressor house at the 625 Level.	PWGSC Baseline Assessment	There is a zone of staining adjacent to the tank likely from spilling during fuel transfer.	None
		Between the dump shed, lunchroom, and adit building at 625 Level	PWGSC Baseline Assessment	Minor surface soil staining.	None
		Mobile fuel storage tank at the 200 Level	PWGSC Baseline Assessment	Surface soil staining (approx. 9m2) adjacent to tank.	None
		Centre of the upper dump pad at the 200 Level.	PWGSC Baseline Assessment	Minor surface staining was present.	None
		Васклії раб	PWGSC Baseline Assessment	(approx.7.2m3)	Yes
25	Black Cap, Shepherd & SQ Adit	Ten drums located at the east side of Waste Rock Pile WR- 01	PWGSC Baseline Assessment	Waste oil stain near the 10 drum pile. (approx. 0.2m3)	Yes
		Shop	PWGSC Baseline Assessment	A number of stains were present inside on both the wooden and the gravel floors, and one small stain present outside of bay	Yes
28	Shamrock	Generator building	PWGSC Baseline Assessment	Soil within the generator building was stained. (approx. area = 4m2)	None
		Main building site	PWGSC Baseline Assessment	Two small hydrocarbon stains present on east side. (approx. area <1m2)	None
32	Keno 700	Generator Shack and Oil storage building	PWGSC Baseline Assessment	Hydrocarbon staining on floor leading outside to the southeast.	Yes
		Mining office.	PWGSC Baseline Assessment	Hydrocarbon staining on wooden floor.	None
		Between the mining office and the boiler building	PWGSC Baseline Assessment	Large hydrocarbon stain on the slope.	Yes
		Fuel tank situated between ambulance shed and generator shack	PWGSC Baseline Assessment	No visible signs of contamination	None
		Fallen transformer site at 200 Level	PWGSC Baseline Assessment	Suspected contamination	Yes
		Below landfill site	PWGSC Baseline Assessment	Suspected contamination	Yes
		Garage floor	PWGSC Baseline Assessment	Suspected contamination	Yes
		Erosion channel	PWGSC Baseline Assessment	Suspected contamination	Yes
		Below engine drop/oil change platform	PWGSC Baseline Assessment	Suspected contamination	Yes
		Drainage channel to the northeast	PWGSC Baseline Assessment	Suspected contamination	Yes
	•	L L	Page 2 of 2	1	1



## UKHM Claim Package Hydrocarbon Contamination Inventory - September 2006

Assigned Site No.	Site Name	Location	Hazard Identified By	Desription of Contamination
29	Fox	Four 45 gallon drume found in Trench #1		No visible signs of contamination
40	Divide	Five empty drums present near wood frame building	ACG 2000 Site Inspection	No visible signs of contamination
10		One barrel in middle of "A" Zone trenches	ACG 2006 Site Inspection	Half full of fluid: no signs of soil contamination
		One barrel in trench B-9	ACG 2006 Site Inspection	Half full of fluid: no signs of soil contamination
73	Gambler	Thirteen empty 205 litre steel barrels were located on the waste rock below the lower adit.	ACG 2006 Site Inspection	No visible signs of contamination
76	Townsite Mine	Office/Workshop	PWGSC Baseline Assessment	Minor staining on floor.
78	Elsa Village	Fuel Storage Area #1: Sawmill area, north of Hwy #2.	PWGSC Baseline Assessment	No visible signs of contamination
		Fuel Storage Area #2: Diesel Service Station south of skating rink	PWGSC Baseline Assessment	Fuel staining noted on the down side of the bank and test pit immediately downgradient of the dispenser
		Fuel Storage Area #3: Oil Storage Tank near the rescue building on the northeast side	PWGSC Baseline Assessment	Fuel stains are present around the refueling shack
		Fuel Storage Area #4: Diesel and Stove Oil storage tanks across from fire hall	PWGSC Baseline Assessment	Small patch of stained soil bottom of diesel tank drain
		Fuel Storage Area #5: AST near main doors of main shop	PWGSC Baseline Assessment	Minor spillage noted around tank.
		Fuel Storage Area #6: Underground UST's at school.	PWGSC Baseline Assessment	Minor stains observed near gymnasium building.
		Fuel Storage Area #7: Gas & Diesel AST's on north side of flotation mill.	PWGSC Baseline Assessment	No obvious staining
		Fuel Storage Area #8: Generator AST located next to Northwestel hut.	PWGSC Baseline Assessment	No obvious staining
		Waste Oil Storage Area #1; bottom of hill below flotation mill	PWGSC Baseline Assessment	Approx. 500m3 of oil soaked gravel present. No conta berm present.
		Waste Oil Storage Area #2; behind storage shed across the road from Aurora Heights	PWGSC Baseline Assessment	Seven pails of waste oil present; one has overflowed concrete pad.
		Waste Oil Storage Area #3; Oil change pad across from #1 Bunkhouse	PWGSC Baseline Assessment	Waste oil may have been dumped on the ground und ramp.
		Out of service transformer storage near new bunkhouse.	PWGSC Baseline Assessment	No visible signs of contamination
		Out of service transformer storage on northwest side of road leading into the saw mill area.	PWGSC Baseline Assessment	No visible signs of contamination
		Flotation Mill/Crusher House	PWGSC Baseline Assessment	Concrete floor is heavily stained with spilled oil or fue
			PWGSC Baseline Assessment	Heavy oil staining (48m2) visible outside and immedia room with 50,000 litre readgent vessel and diesel po pumps; extends onto a vehicle turnaround area.
		Machine Shop	PWGSC Baseline Assessment	A number of small spills on the concrete floors near the
79	Elsa Tailings	Twenty empty barrels located in the "boneyard"	PWGSC Baseline Assessment	No visible signs of contamination
81	Mackeno	Immediately north of weigh scale foundation.	PWGSC Baseline Assessment	Six small surface stains with a total area of 1m3; not below 0.10m below grade.

	Samples Taken
	None
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valve.	none
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	None
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erneath the	None
	Yes
	Yes
	None
tely north of vered	None
e doors.	None
	None
oresent	None

Appendix F Building Contamination: Memorandum prepared by Corey Fernets, CET, Access Consulting Group, January 11, 2007



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<u>Memorandum</u>

To: File CC: January 11, 2007

From: Corey Fernets, C.E.T., Access Consulting Group

## **Re: Building Contamination**

The following is a descriptive summary of the extent of the building contamination documentation to date. All known UKHM sites were inspected with specific attention paid to any evidence of building contamination, which includes contaminants such as lead based paints or the presence of asbestos in or on site buildings. The PWGSC Environmental Baseline Assessment was also reviewed in order to compile a comprehensive list of all suspect UKHM properties.

Although a thorough field survey was carried out on the Keno Hill Property, the potential remains for additional areas of contamination to exist on-site. Additional buildings may be hidden in the dense bush areas or in locations that are not clearly visible either from the roadways or aerial views, and were never staked as claims or reported by locals in the vicinity. However, the field investigation and PWGSC documentation is thought to capture the majority of the sites known to be located on or near the Keno Hill Property.

Thank you.

### **Building Contamination**

Access Consulting observed and documented sites where asbestos or lead leaden 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 the following Building Contamination Inventory list which included Site Name, Contamination Location, Description of Contamination, and whether samples were taken. Note that only UKHM sites with suspect contamination were included in the table.



Possible building contamination at Main Fault & Nabob site.



# UKHM Claim Package Building Contamination Inventory - September 2006

Assigned Site No.	Site Name	Location	Hazard Identified By	Desription of Contamination Suspect	Samples Taken/Results	
4	O'h e an 16'h an	400 Louis OF frame Office flames have been		Delat	Nees	
1	Silver King	100 Level Shifters Office/Lunch Room	PWGSC Baseline Assessment	Paint Describe askastas autorias and interior siding wind and askastas	None	
2	Husky & Husky Svv		PWGSC Baseline Assessment	floor tile.	None	
		ATCO Trailer	PWGSC Baseline Assessment	Exterior is painted yellow and brown.	None	
3	Elsa	50 Level Shack	PWGSC Baseline Assessment	Blue paint	None	
		400 Level Portal	PWGSC Baseline Assessment	Insulated wood frame with asbestos siding.	None	
4	Dixie	Garage/Office	PWGSC Baseline Assessment	Asbestos board in the office area.	None	
			PWGSC Baseline Assessment	Floor tile	Yes - 1-10% chrysotile	
7	No Cash	100 Level Garage	PWGSC Baseline Assessment	Bay doors are painted	None	
		100 Level Lunchroom	PWGSC Baseline Assessment	Floor and partial wall sheathed with 2cm thick asbestos board.	None	
			PWGSC Baseline Assessment	Foundation consists of wood plank flooring on grade covered with asbestos.	None	
11	Galkeno 300	Residence (Building 11G)	PWGSC Baseline Assessment	Contains paint on interior	None	
12	Galkeno 900	Storage Building	PWGSC Baseline Assessment	1m2 oil stain in the dirt	None	
14	Bluebird	Cabin	ACG 2006 Site Inspection	Some paint on windows and doors.	None	
			ACG 2006 Site Inspection	Asbestos fibre board in northeast corner	None	
19	Onek	Building 19A	PWGSC Baseline Assessment	Weathered green paint exterior	None	
		Building 19B	PWGSC Baseline Assessment	Weathered green paint exterior	None	
		Building 19C	PWGSC Baseline Assessment	Weathered green paint exterior	None	
		Building 19D	PWGSC Baseline Assessment	Yellow painted exterior; painted interior walls	None	
		Building 19E	PWGSC Baseline Assessment	Asbestos tar paper on entire exterior of building	None	
		Buildings 19J to 19M	PWGSC Baseline Assessment	Portion of one building still has asbestos tarpaper cladding	None	
20	Klondike-Keno	Collapsed buildings	ACG 2006 Site Inspection	A number of collapsed buildings contain evidence of asbestos on them.	None	
		Drill shack	ACG 2006 Site Inspection	Asbestos lining on the walls	None	
22	Bellekeno	Powder magazine at 200 Level Adit	PWGSC Baseline Assessment	Interior walls lined with asbestos board.	None	
		Wash house at 200 Level Adit	PWGSC Baseline Assessment	Lined with asbestos paper on exterior.	None	
28	Shamrock	Main Site Building	PWGSC Baseline Assessment	Paint on interior walls	None	
31	Stone	Dry building	ACG 2006 Site Inspection	Exterior of building is painted white.	Yes - sample not yet run	
		Outhouse near middle adit	ACG 2006 Site Inspection	Possible asbestos on walls	Yes - sample not yet run	
		Building 31C	ACG 2006 Site Inspection	The roof and wall panel are likely constructed with an asbestos- containing material.	Yes - sample not yet run	
		Building 31D	ACG 2006 Site Inspection	Possible asbestos on walls	Yes - sample not yet run	
32	Keno 700	Mess Hall	PWGSC Baseline Assessment	Exterior asbestos-board insulation siding.	Yes - 60-80% chrysotile	
			PWGSC Baseline Assessment	Paint on exterior walls.	Yes - sample taken by Public Works but never analysed	
		Bunkhouse	PWGSC Baseline Assessment	Exterior asbestos-board insulation siding.	Yes - 60-80% chrysotile	
			PWGSC Baseline Assessment	Interior paint	None	
		Manager's accomodation bulding and storage sheds	PWGSC Baseline Assessment	Interior paint	None	
		Boiler Room and Water Supply Building	PWGSC Baseline Assessment	Insulation around boiler and lying in a pile on the floor	Yes - tested negative for asbestos.	





# UKHM Claim Package Building Contamination Inventory - September 2006

Assigned Site No.	Site Name	Location	Hazard Identified By	Desription of Contamination Suspect	Samples Taken/Results
76	Townsite Mine	Office/Workshop	PWGSC Baseline Assessment	Possible that floor tiles contain 1-10% chrysotile as they are similar in appearance to the tile sampled at the Dixie site.	None
			PWGSC Baseline Assessment	White paint was applied to the interior, however, most of the paint had worn off.	
78	Elsa Village	Shack #2 beside the Sawmill	PWGSC Baseline Assessment	Exterior is clad with asbetos wallboard	None
	-	Wood Storage Building	PWGSC Baseline Assessment	Exterior is clad with asbetos wallboard	None
		Pink and white bunkhouse	PWGSC Baseline Assessment	Exterior is clad with asbetos wallboard	None
		Union Shop	PWGSC Baseline Assessment	Exterior is clad with asbetos wallboard	None
		Snack bar	PWGSC Baseline Assessment	Exterior cladding containing asbestos was found along the base of the building.	None
		Flotation Mill/Crusher House	PWGSC Baseline Assessment	Exterior walls are clad with approximately 1600m2 of asbestos shingles.	None
		No. 2 Garage	PWGSC Baseline Assessment	Three of the exterior walls and the ceiling are covered with an asbestos material.	None
		Light Vehicle Shop	PWGSC Baseline Assessment	Exterior walls are clad with an asbestos material.	None
		Yellow Exploration Building	PWGSC Baseline Assessment	Exterior walls clad in asbestos.	None
		Elsa Market	PWGSC Baseline Assessment	Asbestos tiles are suspected to be beneath the linoleum flooring.	None
		Fire Hall	PWGSC Baseline Assessment	Approximately 30m2 of asbestos sheet cladding exists beneath the metal siding.	None
		Building #34 (east of the Fire Hall)	PWGSC Baseline Assessment	Asbestos wallboard present underneath the metal siding.	None
		Administration Building	PWGSC Baseline Assessment	All four exterior walls are clad in asbestos wallboard	None
			PWGSC Baseline Assessment	Asbestos wallboard is painted yellow.	None
		Men's Staffhouse	PWGSC Baseline Assessment	Suspect asbestos tiles were observed on the roof and inside the kitchen (25m3) and bathroom (15m3). Exterior walls are clad in asbestos.	None.
		Apartment Building	PWGSC Baseline Assessment	Interior floors, exterior walls, and tar roof all contain suspect asbestos.	None
		Roman Catholic Church	PWGSC Baseline Assessment	Exterior walls are clad in asbestos and the floor is covered in asbestos tile.	None
		Flat Creek Residence #1	PWGSC Baseline Assessment	Residence has asbestos siding on the exterior walls.	None
79	Elsa Tailings	Transmission Building 79A	PWGSC Baseline Assessment	Door is painted green	None
		Transmission Building 79B	PWGSC Baseline Assessment	Building is painted entirely green.	None
81	Mackeno	Pumphouse	PWGSC Baseline Assessment	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.	None
		Debris noted on the surface of the site	PWGSC Baseline Assessment	Non-friable asbestos wallboard.	None

Appendix G Third Party Interests, Valley Tailings Claims, and UKHM Package Claims with Adits: Memorandum prepared by Corey Fernets, CET, Access Consulting Group, January 29, 2007



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<u>Memorandum</u>

January 29, 2007

To: File CC: From: Corey Fernets, C.E.T., Access Consulting Group

www.accessconsulting.ca

## <u>Re: Third Party Interests, Valley Tailings Claims, and UKHM Package</u> <u>Claims with Adits</u>

Tables 1 through 3 summarize third party placer interests, land disposition interests, and application interests as of January 29, 2007. These tables are included to identify third parties that are currently placer mining on UKHM package claims, or parties with mining claims which may develop into mining projects, as these activities could have an impact on Alexco's Subsidiary Agreement with YTG and the federal government.

Table 4 illustrates UKHM claims that are underlying the Valley Tailings area which are part of the UKHM Claim Package. Table 5 illustrates those UKHM claims, to the best of our knowledge, which contain adits. It is important to note that this list denotes claims with adits that are known to us. Although a thorough field survey was carried out to locate and identify the adits located on the UKHM Package Claims, the potential remains for additional adits to exist on-site. The investigation was focused on known historical sites where previous workings or mining had occurred. With any area which has seen decades of historic underground and surface mining, there are bound to be new features that are discovered as time goes on. Additional adits may be hidden in the dense bush areas or in locations that are not clearly visible either from the roadways or aerial views, and were never staked as claims or reported by locals in the vicinity. However, the field

investigation, UKHM Site Characterization Report, and PWGSC documentation is thought to capture the majority of the adits known to be located on or near the UKHM Package Claims.

These tables are not intended as a legal document, but illustrate other historic mining interests in the area as of January 29, 2007. Due to the fact that claim status can change on any day as claims can lapse and new claims can be staked, new mining interests can, and do, come along at various times, thereby baseline conditions can change due to activities of others who may have had, or have, environmental impacts directly contiguous to the UKHM Claim Package.

Thank you.

Uı	United Keno Hill Mines Mineral Claims			3rd Party Placer Interests						
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner			
82289	LITE FRACTION	United Keno Hill Mines Limited	P 16061	L 4	Placer	Active	Bardusan Placers Ltd.			
12965	LONE STAR	United Keno Hill Mines Limited	P 16061	L 4	Placer	Active	Bardusan Placers Ltd.			
55319	ELI	United Keno Hill Mines Limited	P 16061	L 4	Placer	Active	Bardusan Placers Ltd.			
56533	BES	United Keno Hill Mines Limited	P 16061	L 4	Placer	Active	Bardusan Placers Ltd.			
56534	SEGLE	United Keno Hill Mines Limited	P 16059	L 2	Placer	Active	Bardusan Placers Ltd.			
13032	GALENA FARM	United Keno Hill Mines Limited	P 16059	L 2	Placer	Active	Bardusan Placers Ltd.			
55480	CORA	United Keno Hill Mines Limited	P 42932	L 17	Placer	Active	Bardusan Placers Ltd.			
83133	Bunk	United Keno Hill Mines Limited	P 42932	L 17	Placer	Active	Bardusan Placers Ltd.			
82289	LITE FRACTION	United Keno Hill Mines Limited	P 16060	L 3	Placer	Active	Bardusan Placers Ltd.			
56534	SEGLE	United Keno Hill Mines Limited	P 16060	L 3	Placer	Active	Bardusan Placers Ltd.			
13032	GALENA FARM	United Keno Hill Mines Limited	P 16060	L 3	Placer	Active	Bardusan Placers Ltd.			
12965	LONE STAR	United Keno Hill Mines Limited	P 16060	L 3	Placer	Active	Bardusan Placers Ltd.			
56533	BES	United Keno Hill Mines Limited	P 16060	L 3	Placer	Active	Bardusan Placers Ltd.			
12838	TUNDRA	United Keno Hill Mines Limited	P 02188	L 10	Placer	Active	Bardusan Placers Ltd.			
55271	ROSEMARY	United Keno Hill Mines Limited	P 15951	T1	Placer	Active	Bardusan Placers Ltd.			
16087	EXTENSION	United Keno Hill Mines Limited	P 02185	L7	Placer	Active	Bardusan Placers Ltd.			
59419	ELI 2	United Keno Hill Mines Limited	P 02185	L7	Placer	Active	Bardusan Placers Ltd.			
12876	FISHER	United Keno Hill Mines Limited	P 02182	L 4	Placer	Active	Bardusan Placers Ltd.			
55022	RANDO	United Keno Hill Mines Limited	P 02182	L 4	Placer	Active	Bardusan Placers Ltd.			
12998	WALSH	United Keno Hill Mines Limited	P 02182	L 4	Placer	Active	Bardusan Placers Ltd.			
59419	ELI 2	United Keno Hill Mines Limited	P 02182	L 4	Placer	Active	Bardusan Placers Ltd.			
81227	Мо	United Keno Hill Mines Limited	P 42939	L 24	Placer	Active	Bardusan Placers Ltd.			
59795	BUCKO	United Keno Hill Mines Limited	P 42939	L 24	Placer	Active	Bardusan Placers Ltd.			
12876	FISHER	United Keno Hill Mines Limited	P 02179	L1	Placer	Active	Bardusan Placers Ltd.			
55022	RANDO	United Keno Hill Mines Limited	P 02179	L1	Placer	Active	Bardusan Placers Ltd.			
12965	LONE STAR	United Keno Hill Mines Limited	P 02179	L 1	Placer	Active	Bardusan Placers Ltd.			
55319	ELI	United Keno Hill Mines Limited	P 02179	L1	Placer	Active	Bardusan Placers Ltd.			
56533	BES	United Keno Hill Mines Limited	P 02179	L 1	Placer	Active	Bardusan Placers Ltd.			
55480	CORA	United Keno Hill Mines Limited	P 42933	L 18	Placer	Active	Bardusan Placers Ltd.			
59796	CHARITY	United Keno Hill Mines Limited	P 42933	L 18	Placer	Active	Bardusan Placers Ltd.			
83133	Bunk	United Keno Hill Mines Limited	P 02193	L 15	Placer	Active	Bardusan Placers Ltd.			
13109	WATCH	United Keno Hill Mines Limited	P 42938	L 23	Placer	Active	Bardusan Placers Ltd.			
81227	Мо	United Keno Hill Mines Limited	P 42938	L 23	Placer	Active	Bardusan Placers Ltd.			
59795	BUCKO	United Keno Hill Mines Limited	P 42938	L 23	Placer	Active	Bardusan Placers Ltd.			
81226	CATHY	United Keno Hill Mines Limited	P 42938	L 23	Placer	Active	Bardusan Placers Ltd.			
81223	ANDY	United Keno Hill Mines Limited	41579	CREEK CLAIM 12	Placer	Active	Bardusan Placers Ltd.			
55582	HECLA	United Keno Hill Mines Limited	P 42935	L 20	Placer	Active	Bardusan Placers Ltd.			
59764	MIKE	United Keno Hill Mines Limited	P 42935	L 20	Placer	Active	Bardusan Placers Ltd.			
59796	CHARITY	United Keno Hill Mines Limited	P 42935	L 20	Placer	Active	Bardusan Placers Ltd.			





Ui	United Keno Hill Mines Mineral Claims			3rd Party Placer Interests						
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner			
12876	FISHER	United Keno Hill Mines Limited	P 02181	L 3	Placer	Active	Bardusan Placers Ltd.			
55022	RANDO	United Keno Hill Mines Limited	P 02181	L3	Placer	Active	Bardusan Placers Ltd.			
55319	ELI	United Keno Hill Mines Limited	P 02181	L 3	Placer	Active	Bardusan Placers Ltd.			
12838	TUNDRA	United Keno Hill Mines Limited	P 02187	L 9	Placer	Active	Bardusan Placers Ltd.			
12838	TUNDRA	United Keno Hill Mines Limited	P 02189	L 11	Placer	Active	Bardusan Placers Ltd.			
16087	EXTENSION	United Keno Hill Mines Limited	P 02186	L 8	Placer	Active	Bardusan Placers Ltd.			
12876	FISHER	United Keno Hill Mines Limited	P 02180	L 2	Placer	Active	Bardusan Placers Ltd.			
55022	RANDO	United Keno Hill Mines Limited	P 02180	L 2	Placer	Active	Bardusan Placers Ltd.			
55319	ELI	United Keno Hill Mines Limited	P 02180	L 2	Placer	Active	Bardusan Placers Ltd.			
56533	BES	United Keno Hill Mines Limited	P 02180	L 2	Placer	Active	Bardusan Placers Ltd.			
81223	ANDY	United Keno Hill Mines Limited	41578	CREEK CLAIM 11	Placer	Active	Bardusan Placers Ltd.			
55582	HECLA	United Keno Hill Mines Limited	P 42937	L 22	Placer	Active	Bardusan Placers Ltd.			
13109	WATCH	United Keno Hill Mines Limited	P 42937	L 22	Placer	Active	Bardusan Placers Ltd.			
59795	BUCKO	United Keno Hill Mines Limited	P 42937	L 22	Placer	Active	Bardusan Placers Ltd.			
81226	CATHY	United Keno Hill Mines Limited	P 42937	L 22	Placer	Active	Bardusan Placers Ltd.			
56534	SEGLE	United Keno Hill Mines Limited	P 16058	L1	Placer	Active	Bardusan Placers Ltd.			
13032	GALENA FARM	United Keno Hill Mines Limited	P 16058	L1	Placer	Active	Bardusan Placers Ltd.			
59465	SUDDO 9	United Keno Hill Mines Limited	P 16058	L1	Placer	Active	Bardusan Placers Ltd.			
55582	HECLA	United Keno Hill Mines Limited	P 42936	L 21	Placer	Active	Bardusan Placers Ltd.			
59764	MIKE	United Keno Hill Mines Limited	P 42936	L 21	Placer	Active	Bardusan Placers Ltd.			
13109	WATCH	United Keno Hill Mines Limited	P 42936	L 21	Placer	Active	Bardusan Placers Ltd.			
81226	CATHY	United Keno Hill Mines Limited	P 42936	L 21	Placer	Active	Bardusan Placers Ltd.			
16087	EXTENSION	United Keno Hill Mines Limited	P 02183	L 5	Placer	Active	Bardusan Placers Ltd.			
59419	ELI 2	United Keno Hill Mines Limited	P 02183	L 5	Placer	Active	Bardusan Placers Ltd.			
83133	Bunk	United Keno Hill Mines Limited	P 02192	L 14	Placer	Active	Bardusan Placers Ltd.			
59343	BLUE FOX 2	United Keno Hill Mines Limited	P 16550	R 1	Placer	Active	Bardusan Placers Ltd.			
81227	Мо	United Keno Hill Mines Limited	P 16550	R 1	Placer	Active	Bardusan Placers Ltd.			
59764	MIKE	United Keno Hill Mines Limited	P 42934	L 19	Placer	Active	Bardusan Placers Ltd.			
55480	CORA	United Keno Hill Mines Limited	P 42934	L 19	Placer	Active	Bardusan Placers Ltd.			
59796	CHARITY	United Keno Hill Mines Limited	P 42934	L 19	Placer	Active	Bardusan Placers Ltd.			
59343	BLUE FOX 2	United Keno Hill Mines Limited	P 16551	R 2	Placer	Active	Bardusan Placers Ltd.			
16087	EXTENSION	United Keno Hill Mines Limited	P 02184	L 6	Placer	Active	Bardusan Placers Ltd.			
59419	ELI 2	United Keno Hill Mines Limited	P 02184	L 6	Placer	Active	Bardusan Placers Ltd.			
55480	CORA	United Keno Hill Mines Limited	P 42931	L 16	Placer	Active	Bardusan Placers Ltd.			
83133	Bunk	United Keno Hill Mines Limited	P 42931	L 16	Placer	Active	Bardusan Placers Ltd.			
12838	TUNDRA	United Keno Hill Mines Limited	P 02188	L 10	Placer	Active	Bardusan Placers Ltd.			
59469	DUNCAN 2	United Keno Hill Mines Limited	P 42646	BRUCES 1	Placer	Active	Duncan Creek Golddusters Ltd.			
56584	OVERTIME 14	United Keno Hill Mines Limited	P 42646	BRUCES 1	Placer	Active	Duncan Creek Golddusters Ltd.			
59470	DUNCAN 3	United Keno Hill Mines Limited	P 42578	ELAINE 4	Placer	Active	Duncan Creek Golddusters Ltd.			





Uı	United Keno Hill Mines Mineral Claims			3rd Party Placer Interests						
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner			
56586	OVERTIME 16	United Keno Hill Mines Limited	P 42578	ELAINE 4	Placer	Active	Duncan Creek Golddusters Ltd.			
59454	OVERTIME 18	United Keno Hill Mines Limited	P 42578	ELAINE 4	Placer	Active	Duncan Creek Golddusters Ltd.			
59470	DUNCAN 3	United Keno Hill Mines Limited	P 42577	ELAINE 3	Placer	Active	Duncan Creek Golddusters Ltd.			
59454	OVERTIME 18	United Keno Hill Mines Limited	P 42577	ELAINE 3	Placer	Active	Duncan Creek Golddusters Ltd.			
59469	DUNCAN 2	United Keno Hill Mines Limited	P 42579	ELAINE 5	Placer	Active	Duncan Creek Golddusters Ltd.			
59470	DUNCAN 3	United Keno Hill Mines Limited	P 42579	ELAINE 5	Placer	Active	Duncan Creek Golddusters Ltd.			
56586	OVERTIME 16	United Keno Hill Mines Limited	P 42579	ELAINE 5	Placer	Active	Duncan Creek Golddusters Ltd.			
59485	EDITH-CAVELL 8	United Keno Hill Mines Limited	P 42650	BRUCES 5	Placer	Active	Duncan Creek Golddusters Ltd.			
59670	EDITH-CAVELL 9	United Keno Hill Mines Limited	P 42650	BRUCES 5	Placer	Active	Duncan Creek Golddusters Ltd.			
59482	EDITH-CAVELL 5	United Keno Hill Mines Limited	P 42650	BRUCES 5	Placer	Active	Duncan Creek Golddusters Ltd.			
59483	EDITH-CAVELL 6	United Keno Hill Mines Limited	P 42650	BRUCES 5	Placer	Active	Duncan Creek Golddusters Ltd.			
56407	LOUIS 3	United Keno Hill Mines Limited	P 42650	BRUCES 5	Placer	Active	Duncan Creek Golddusters Ltd.			
59468	DUNCAN 1	United Keno Hill Mines Limited	P 42650	BRUCES 5	Placer	Active	Duncan Creek Golddusters Ltd.			
59456	OVERTIME 20	United Keno Hill Mines Limited	P 42915	NITE	Placer	Active	Duncan Creek Golddusters Ltd.			
56584	OVERTIME 14	United Keno Hill Mines Limited	P 42648	BRUCES 3	Placer	Active	Duncan Creek Golddusters Ltd.			
59483	EDITH-CAVELL 6	United Keno Hill Mines Limited	P 42648	BRUCES 3	Placer	Active	Duncan Creek Golddusters Ltd.			
56407	LOUIS 3	United Keno Hill Mines Limited	P 42648	BRUCES 3	Placer	Active	Duncan Creek Golddusters Ltd.			
59468	DUNCAN 1	United Keno Hill Mines Limited	P 42648	BRUCES 3	Placer	Active	Duncan Creek Golddusters Ltd.			
59469	DUNCAN 2	United Keno Hill Mines Limited	P 42647	BRUCES 2	Placer	Active	Duncan Creek Golddusters Ltd.			
56584	OVERTIME 14	United Keno Hill Mines Limited	P 42647	BRUCES 2	Placer	Active	Duncan Creek Golddusters Ltd.			
59483	EDITH-CAVELL 6	United Keno Hill Mines Limited	P 42647	BRUCES 2	Placer	Active	Duncan Creek Golddusters Ltd.			
59468	DUNCAN 1	United Keno Hill Mines Limited	P 42647	BRUCES 2	Placer	Active	Duncan Creek Golddusters Ltd.			
59385	INCA	United Keno Hill Mines Limited	P 42652	BRUCES 7	Placer	Active	Duncan Creek Golddusters Ltd.			
56405	LOUIS 1	United Keno Hill Mines Limited	P 42652	BRUCES 7	Placer	Active	Duncan Creek Golddusters Ltd.			
59485	EDITH-CAVELL 8	United Keno Hill Mines Limited	P 42652	BRUCES 7	Placer	Active	Duncan Creek Golddusters Ltd.			
YA39498	Bulldozer 1	United Keno Hill Mines Limited	P 42652	BRUCES 7	Placer	Active	Duncan Creek Golddusters Ltd.			
59456	OVERTIME 20	United Keno Hill Mines Limited	P 42575	ELAINE 1	Placer	Active	Duncan Creek Golddusters Ltd.			
59454	OVERTIME 18	United Keno Hill Mines Limited	P 42575	ELAINE 1	Placer	Active	Duncan Creek Golddusters Ltd.			
59483	EDITH-CAVELL 6	United Keno Hill Mines Limited	P 42649	BRUCES 4	Placer	Active	Duncan Creek Golddusters Ltd.			
56407	LOUIS 3	United Keno Hill Mines Limited	P 42649	BRUCES 4	Placer	Active	Duncan Creek Golddusters Ltd.			
59468	DUNCAN 1	United Keno Hill Mines Limited	P 42649	BRUCES 4	Placer	Active	Duncan Creek Golddusters Ltd.			
59456	OVERTIME 20	United Keno Hill Mines Limited	P 42470	ELAINE	Placer	Active	Duncan Creek Golddusters Ltd.			
56405	LOUIS 1	United Keno Hill Mines Limited	P 42651	BRUCES 6	Placer	Active	Duncan Creek Golddusters Ltd.			
59485	EDITH-CAVELL 8	United Keno Hill Mines Limited	P 42651	BRUCES 6	Placer	Active	Duncan Creek Golddusters Ltd.			
59670	EDITH-CAVELL 9	United Keno Hill Mines Limited	P 42651	BRUCES 6	Placer	Active	Duncan Creek Golddusters Ltd.			
59482	EDITH-CAVELL 5	United Keno Hill Mines Limited	P 42651	BRUCES 6	Placer	Active	Duncan Creek Golddusters Ltd.			
56407	LOUIS 3	United Keno Hill Mines Limited	P 42651	BRUCES 6	Placer	Active	Duncan Creek Golddusters Ltd.			
59454	OVERTIME 18	United Keno Hill Mines Limited	P 42576	ELAINE 2	Placer	Active	Duncan Creek Golddusters Ltd.			
59469	DUNCAN 2	United Keno Hill Mines Limited	P 42580	ELAINE 6	Placer	Active	Duncan Creek Golddusters Ltd.			





Ur	United Keno Hill Mines Mineral Claims			3rd Party Placer Interests					
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner		
59470	DUNCAN 3	United Keno Hill Mines Limited	P 42580	ELAINE 6	Placer	Active	Duncan Creek Golddusters Ltd.		
56586	OVERTIME 16	United Keno Hill Mines Limited	P 42580	ELAINE 6	Placer	Active	Duncan Creek Golddusters Ltd.		
59385	INCA	United Keno Hill Mines Limited	P 42655	BRUCES 10	Placer	Active	Duncan Creek Golddusters Ltd.		
56405	LOUIS 1	United Keno Hill Mines Limited	P 42655	BRUCES 10	Placer	Active	Duncan Creek Golddusters Ltd.		
56403	FRANCES 7	United Keno Hill Mines Limited	P 42655	BRUCES 10	Placer	Active	Duncan Creek Golddusters Ltd.		
YA39498	Bulldozer 1	United Keno Hill Mines Limited	P 42655	BRUCES 10	Placer	Active	Duncan Creek Golddusters Ltd.		
59385	INCA	United Keno Hill Mines Limited	P 42654	BRUCES 9	Placer	Active	Duncan Creek Golddusters Ltd.		
56405	LOUIS 1	United Keno Hill Mines Limited	P 42654	BRUCES 9	Placer	Active	Duncan Creek Golddusters Ltd.		
YA39498	Bulldozer 1	United Keno Hill Mines Limited	P 42654	BRUCES 9	Placer	Active	Duncan Creek Golddusters Ltd.		
59385	INCA	United Keno Hill Mines Limited	P 42653	BRUCES 8	Placer	Active	Duncan Creek Golddusters Ltd.		
56405	LOUIS 1	United Keno Hill Mines Limited	P 42653	BRUCES 8	Placer	Active	Duncan Creek Golddusters Ltd.		
YA39498	Bulldozer 1	United Keno Hill Mines Limited	P 42653	BRUCES 8	Placer	Active	Duncan Creek Golddusters Ltd.		
59316	BRISTOL	United Keno Hill Mines Limited	P 47924	WILL 9	Placer	Active	Frank Taylor		
55600	FRANCES 4	United Keno Hill Mines Limited	P 47924	WILL 9	Placer	Active	Frank Taylor		
56402	FRANCES 6	United Keno Hill Mines Limited	P 47924	WILL 9	Placer	Active	Frank Taylor		
56401	FRANCES 5	United Keno Hill Mines Limited	P 47917	WILL 2	Placer	Active	Frank Taylor		
56403	FRANCES 7	United Keno Hill Mines Limited	P 47917	WILL 2	Placer	Active	Frank Taylor		
59444	FALLS 8	United Keno Hill Mines Limited	P 47925	WILL 10	Placer	Active	Frank Taylor		
59316	BRISTOL	United Keno Hill Mines Limited	P 47925	WILL 10	Placer	Active	Frank Taylor		
55600	FRANCES 4	United Keno Hill Mines Limited	P 47925	WILL 10	Placer	Active	Frank Taylor		
59444	FALLS 8	United Keno Hill Mines Limited	P 47926	WILL 11	Placer	Active	Frank Taylor		
56404	FRANCES 8	United Keno Hill Mines Limited	P 47920	WILL 5	Placer	Active	Frank Taylor		
56401	FRANCES 5	United Keno Hill Mines Limited	P 47920	WILL 5	Placer	Active	Frank Taylor		
12915	SIWASH	United Keno Hill Mines Limited	P 47920	WILL 5	Placer	Active	Frank Taylor		
38643	FLAME	United Keno Hill Mines Limited	P 47920	WILL 5	Placer	Active	Frank Taylor		
59385	INCA	United Keno Hill Mines Limited	P 47916	WILL 1	Placer	Active	Frank Taylor		
56401	FRANCES 5	United Keno Hill Mines Limited	P 47916	WILL 1	Placer	Active	Frank Taylor		
56403	FRANCES 7	United Keno Hill Mines Limited	P 47916	WILL 1	Placer	Active	Frank Taylor		
YA39498	Bulldozer 1	United Keno Hill Mines Limited	P 47916	WILL 1	Placer	Active	Frank Taylor		
59456	OVERTIME 20	United Keno Hill Mines Limited	P 42914	COLOUR	Placer	Active	Frank Taylor		
56401	FRANCES 5	United Keno Hill Mines Limited	P 47921	WILL 6	Placer	Active	Frank Taylor		
38643	FLAME	United Keno Hill Mines Limited	P 47921	WILL 6	Placer	Active	Frank Taylor		
55600	FRANCES 4	United Keno Hill Mines Limited	P 47923	WILL 8	Placer	Active	Frank Taylor		
38643	FLAME	United Keno Hill Mines Limited	P 47923	WILL 8	Placer	Active	Frank Taylor		
56402	FRANCES 6	United Keno Hill Mines Limited	P 47923	WILL 8	Placer	Active	Frank Taylor		
55600	FRANCES 4	United Keno Hill Mines Limited	P 47922	WILL 7	Placer	Active	Frank Taylor		
38643	FLAME	United Keno Hill Mines Limited	P 47922	WILL 7	Placer	Active	Frank Taylor		
56402	FRANCES 6	United Keno Hill Mines Limited	P 47922	WILL 7	Placer	Active	Frank Taylor		
56404	FRANCES 8	United Keno Hill Mines Limited	P 47918	WILL 3	Placer	Active	Frank Taylor		





Ur	United Keno Hill Mines Mineral Claims			3rd Party Placer Interests						
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner			
56401	FRANCES 5	United Keno Hill Mines Limited	P 47918	WILL 3	Placer	Active	Frank Taylor			
12915	SIWASH	United Keno Hill Mines Limited	P 47918	WILL 3	Placer	Active	Frank Taylor			
56403	FRANCES 7	United Keno Hill Mines Limited	P 47918	WILL 3	Placer	Active	Frank Taylor			
56404	FRANCES 8	United Keno Hill Mines Limited	P 47919	WILL 4	Placer	Active	Frank Taylor			
56401	FRANCES 5	United Keno Hill Mines Limited	P 47919	WILL 4	Placer	Active	Frank Taylor			
12915	SIWASH	United Keno Hill Mines Limited	P 47919	WILL 4	Placer	Active	Frank Taylor			
38643	FLAME	United Keno Hill Mines Limited	P 47919	WILL 4	Placer	Active	Frank Taylor			
56403	FRANCES 7	United Keno Hill Mines Limited	P 47919	WILL 4	Placer	Active	Frank Taylor			
59445	FALLS 9	United Keno Hill Mines Limited	P 02006	SILVER STREAM	Placer	Active	Garland H. Achman			
56585	OVERTIME 15	United Keno Hill Mines Limited	P 02006	SILVER STREAM	Placer	Active	Garland H. Achman			
61725	FALLOT	United Keno Hill Mines Limited	P 02006	SILVER STREAM	Placer	Active	Garland H. Achman			
56583	OVERTIME 13	United Keno Hill Mines Limited	P 02006	SILVER STREAM	Placer	Active	Garland H. Achman			
59453	OVERTIME 17	United Keno Hill Mines Limited	P 02006	SILVER STREAM	Placer	Active	Garland H. Achman			
55599	FRANCES 3	United Keno Hill Mines Limited	P 16979	CRYSTAL CREEK	Discovery	Active	Jacob Beckley			
38642	MOTH	United Keno Hill Mines Limited	P 16979	CRYSTAL CREEK	Discovery	Active	Jacob Beckley			
56401	FRANCES 5	United Keno Hill Mines Limited	P 16979	CRYSTAL CREEK	Discovery	Active	Jacob Beckley			
55600	FRANCES 4	United Keno Hill Mines Limited	P 16979	CRYSTAL CREEK	Discovery	Active	Jacob Beckley			
38643	FLAME	United Keno Hill Mines Limited	P 16979	CRYSTAL CREEK	Discovery	Active	Jacob Beckley			
55599	FRANCES 3	United Keno Hill Mines Limited	P 16978	CRYSTAL CREEK P	Placer	Active	Jacob Beckley			
38642	MOTH	United Keno Hill Mines Limited	P 16978	CRYSTAL CREEK P	Placer	Active	Jacob Beckley			
56582	OVERTIME 2	United Keno Hill Mines Limited	P 16978	CRYSTAL CREEK P	Placer	Active	Jacob Beckley			
61725	FALLOT	United Keno Hill Mines Limited	P 15856	ANNABEL	Placer	Active	Joris Brinkerhoff			
59449	FALLS 13	United Keno Hill Mines Limited	P 15856	ANNABEL	Placer	Active	Joris Brinkerhoff			
59447	FALLS 11	United Keno Hill Mines Limited	P 15856	ANNABEL	Placer	Active	Joris Brinkerhoff			
59449	FALLS 13	United Keno Hill Mines Limited	P 02149	MORTGAGE 1	Placer	Active	Joris Brinkerhoff			
59447	FALLS 11	United Keno Hill Mines Limited	P 02149	MORTGAGE 1	Placer	Active	Joris Brinkerhoff			
59448	FALLS 12	United Keno Hill Mines Limited	P 02153	MORTGAGE 5	Placer	Active	Joris Brinkerhoff			
59450	FALLS 14	United Keno Hill Mines Limited	P 02153	MORTGAGE 5	Placer	Active	Joris Brinkerhoff			
59448	FALLS 12	United Keno Hill Mines Limited	P 02152	MORTGAGE 4	Placer	Active	Joris Brinkerhoff			
59449	FALLS 13	United Keno Hill Mines Limited	P 02152	MORTGAGE 4	Placer	Active	Joris Brinkerhoff			
59450	FALLS 14	United Keno Hill Mines Limited	P 02152	MORTGAGE 4	Placer	Active	Joris Brinkerhoff			
59445	FALLS 9	United Keno Hill Mines Limited	P 05339	TRY ONCE 2	Placer	Active	Joris Brinkerhoff			
56585	OVERTIME 15	United Keno Hill Mines Limited	P 05339	TRY ONCE 2	Placer	Active	Joris Brinkerhoff			
61725	FALLOT	United Keno Hill Mines Limited	P 05339	TRY ONCE 2	Placer	Active	Joris Brinkerhoff			
59447	FALLS 11	United Keno Hill Mines Limited	P 05339	TRY ONCE 2	Placer	Active	Joris Brinkerhoff			
59453	OVERTIME 17	United Keno Hill Mines Limited	P 05339	TRY ONCE 2	Placer	Active	Joris Brinkerhoff			
59448	FALLS 12	United Keno Hill Mines Limited	P 02154	MORTGAGE 6	Placer	Active	Joris Brinkerhoff			
59450	FALLS 14	United Keno Hill Mines Limited	P 02154	MORTGAGE 6	Placer	Active	Joris Brinkerhoff			
59448	FALLS 12	United Keno Hill Mines Limited	P 02151	MORTGAGE 3	Placer	Active	Joris Brinkerhoff			





United Keno Hill Mines Mineral Claims			3rd Party Placer Interests					
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner	
59449	FALLS 13	United Keno Hill Mines Limited	P 02151	MORTGAGE 3	Placer	Active	Joris Brinkerhoff	
59450	FALLS 14	United Keno Hill Mines Limited	P 02151	MORTGAGE 3	Placer	Active	Joris Brinkerhoff	
56585	OVERTIME 15	United Keno Hill Mines Limited	P 05154	TRY ONCE	Placer	Active	Joris Brinkerhoff	
61725	FALLOT	United Keno Hill Mines Limited	P 05154	TRY ONCE	Placer	Active	Joris Brinkerhoff	
59449	FALLS 13	United Keno Hill Mines Limited	P 05154	TRY ONCE	Placer	Active	Joris Brinkerhoff	
59447	FALLS 11	United Keno Hill Mines Limited	P 05154	TRY ONCE	Placer	Active	Joris Brinkerhoff	
59453	OVERTIME 17	United Keno Hill Mines Limited	P 05154	TRY ONCE	Placer	Active	Joris Brinkerhoff	
59448	FALLS 12	United Keno Hill Mines Limited	P 02150	MORTGAGE 2	Placer	Active	Joris Brinkerhoff	
59449	FALLS 13	United Keno Hill Mines Limited	P 02150	MORTGAGE 2	Placer	Active	Joris Brinkerhoff	
59450	FALLS 14	United Keno Hill Mines Limited	P 02150	MORTGAGE 2	Placer	Active	Joris Brinkerhoff	
59447	FALLS 11	United Keno Hill Mines Limited	P 02150	MORTGAGE 2	Placer	Active	Joris Brinkerhoff	
56585	OVERTIME 15	United Keno Hill Mines Limited	P 02147	CANYON 1	Placer	Active	Joris Brinkerhoff	
56583	OVERTIME 13	United Keno Hill Mines Limited	P 02147	CANYON 1	Placer	Active	Joris Brinkerhoff	
56586	OVERTIME 16	United Keno Hill Mines Limited	P 02147	CANYON 1	Placer	Active	Joris Brinkerhoff	
62837	MINK FRACTION	United Keno Hill Mines Limited	P 16796	CREEK CLAIM 8	Placer	Active	Kim Klippert	
62837	MINK FRACTION	United Keno Hill Mines Limited	P 16797	CREEK CLAIM 9	Placer	Active	Kim Klippert	
62198	KARL	United Keno Hill Mines Limited	P 16797	CREEK CLAIM 9	Placer	Active	Kim Klippert	
Y 97223	Snowdrift 16	United Keno Hill Mines Limited	P 47903	BUNNY 3	Placer	Active	Kim Klippert	
Y 97222	Snowdrift 15	United Keno Hill Mines Limited	P 47903	BUNNY 3	Placer	Active	Kim Klippert	
Y 87464	Snowdrift 3	United Keno Hill Mines Limited	P 47914	BUNNY 14	Placer	Active	Kim Klippert	
Y 87465	Snowdrift 4	United Keno Hill Mines Limited	P 47914	BUNNY 14	Placer	Active	Kim Klippert	
Y 87466	Snowdrift 5	United Keno Hill Mines Limited	P 47914	BUNNY 14	Placer	Active	Kim Klippert	
Y 87464	Snowdrift 3	United Keno Hill Mines Limited	P 47915	BUNNY 15	Placer	Active	Kim Klippert	
Y 87465	Snowdrift 4	United Keno Hill Mines Limited	P 47915	BUNNY 15	Placer	Active	Kim Klippert	
Y 87466	Snowdrift 5	United Keno Hill Mines Limited	P 47915	BUNNY 15	Placer	Active	Kim Klippert	
Y 87463	Snowdrift 2	United Keno Hill Mines Limited	P 47915	BUNNY 15	Placer	Active	Kim Klippert	
Y 97223	Snowdrift 16	United Keno Hill Mines Limited	P 47902	BUNNY 2	Placer	Active	Kim Klippert	
Y 97222	Snowdrift 15	United Keno Hill Mines Limited	P 47902	BUNNY 2	Placer	Active	Kim Klippert	
Y 97222	Snowdrift 15	United Keno Hill Mines Limited	P 47901	BUNNY 1	Placer	Active	Kim Klippert	
Y 97223	Snowdrift 16	United Keno Hill Mines Limited	P 47905	BUNNY 5	Placer	Active	Kim Klippert	
Y 97221	Snowdrift 14	United Keno Hill Mines Limited	P 47905	BUNNY 5	Placer	Active	Kim Klippert	
Y 97222	Snowdrift 15	United Keno Hill Mines Limited	P 47905	BUNNY 5	Placer	Active	Kim Klippert	
Y 87469	Snowdrift 8	United Keno Hill Mines Limited	P 47905	BUNNY 5	Placer	Active	Kim Klippert	
Y 87465	Snowdrift 4	United Keno Hill Mines Limited	P 47912	BUNNY 12	Placer	Active	Kim Klippert	
Y 87466	Snowdrift 5	United Keno Hill Mines Limited	P 47912	BUNNY 12	Placer	Active	Kim Klippert	
62837	MINK FRACTION	United Keno Hill Mines Limited	P 16795	CREEK CLAIM 7	Placer	Active	Kim Klippert	
62837	MINK FRACTION	United Keno Hill Mines Limited	P 16794	CREEK CLAIM 6	Placer	Active	Kim Klippert	
Y 97221	Snowdrift 14	United Keno Hill Mines Limited	P 47910	BUNNY 10	Placer	Active	Kim Klippert	
Y 87466	Snowdrift 5	United Keno Hill Mines Limited	P 47910	BUNNY 10	Placer	Active	Kim Klippert	





United Keno Hill Mines Mineral Claims			3rd Party Placer Interests					
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner	
Y 97220	Snowdrift 13	United Keno Hill Mines Limited	P 47910	BUNNY 10	Placer	Active	Kim Klippert	
Y 87465	Snowdrift 4	United Keno Hill Mines Limited	P 47913	BUNNY 13	Placer	Active	Kim Klippert	
Y 87466	Snowdrift 5	United Keno Hill Mines Limited	P 47913	BUNNY 13	Placer	Active	Kim Klippert	
Y 97223	Snowdrift 16	United Keno Hill Mines Limited	P 47908	BUNNY 8	Placer	Active	Kim Klippert	
Y 97221	Snowdrift 14	United Keno Hill Mines Limited	P 47908	BUNNY 8	Placer	Active	Kim Klippert	
Y 97221	Snowdrift 14	United Keno Hill Mines Limited	P 47909	BUNNY 9	Placer	Active	Kim Klippert	
Y 97220	Snowdrift 13	United Keno Hill Mines Limited	P 47909	BUNNY 9	Placer	Active	Kim Klippert	
Y 97223	Snowdrift 16	United Keno Hill Mines Limited	P 47907	BUNNY 7	Placer	Active	Kim Klippert	
Y 97221	Snowdrift 14	United Keno Hill Mines Limited	P 47907	BUNNY 7	Placer	Active	Kim Klippert	
62198	KARL	United Keno Hill Mines Limited	P 16798	CREEK CLAIM 10	Placer	Active	Kim Klippert	
62837	MINK FRACTION	United Keno Hill Mines Limited	P 16793	CREEK CLAIM 5	Placer	Active	Kim Klippert	
62199	RUBE	United Keno Hill Mines Limited	P 16799	CREEK CLAIM 11	Placer	Active	Kim Klippert	
62198	KARL	United Keno Hill Mines Limited	P 16799	CREEK CLAIM 11	Placer	Active	Kim Klippert	
Y 97223	Snowdrift 16	United Keno Hill Mines Limited	P 47904	BUNNY 4	Placer	Active	Kim Klippert	
Y 97222	Snowdrift 15	United Keno Hill Mines Limited	P 47904	BUNNY 4	Placer	Active	Kim Klippert	
Y 87469	Snowdrift 8	United Keno Hill Mines Limited	P 47904	BUNNY 4	Placer	Active	Kim Klippert	
Y 97223	Snowdrift 16	United Keno Hill Mines Limited	P 47906	BUNNY 6	Placer	Active	Kim Klippert	
Y 97221	Snowdrift 14	United Keno Hill Mines Limited	P 47906	BUNNY 6	Placer	Active	Kim Klippert	
Y 87466	Snowdrift 5	United Keno Hill Mines Limited	P 47911	BUNNY 11	Placer	Active	Kim Klippert	
Y 97220	Snowdrift 13	United Keno Hill Mines Limited	P 47911	BUNNY 11	Placer	Active	Kim Klippert	
13108	ANEROID	United Keno Hill Mines Limited	P 42542	ROY	Co-Discovery	Active	Lucien Roy	
59343	BLUE FOX 2	United Keno Hill Mines Limited	P 42542	ROY	Co-Discovery	Active	Lucien Roy	
59360	BLUE FOX 4	United Keno Hill Mines Limited	P 42542	ROY	Co-Discovery	Active	Lucien Roy	
55585	DIXIE	United Keno Hill Mines Limited	P 42542	ROY	Co-Discovery	Active	Lucien Roy	
59795	BUCKO	United Keno Hill Mines Limited	P 42542	ROY	Co-Discovery	Active	Lucien Roy	
13108	ANEROID	United Keno Hill Mines Limited	P 47799	CURTIS	Placer	Active	Lucien Roy	
59343	BLUE FOX 2	United Keno Hill Mines Limited	P 47799	CURTIS	Placer	Active	Lucien Roy	
59360	BLUE FOX 4	United Keno Hill Mines Limited	P 47799	CURTIS	Placer	Active	Lucien Roy	
59248	CAMEO	United Keno Hill Mines Limited	P 47954	CHINOOK	Discovery	Active	Mathias Bindig	
56504	TOPOLO	United Keno Hill Mines Limited	P 47954	CHINOOK	Discovery	Active	Mathias Bindig	
62247	ERICA	United Keno Hill Mines Limited	P 47954	CHINOOK	Discovery	Active	Mathias Bindig	
56505	TOM BOY	United Keno Hill Mines Limited	P 47954	CHINOOK	Discovery	Active	Mathias Bindig	
Y 69403	Galaxy	United Keno Hill Mines Limited	P 47954	CHINOOK	Discovery	Active	Mathias Bindig	
56584	OVERTIME 14	United Keno Hill Mines Limited	P 16020	NICKY	Placer	Active	Stephan Kohlendorfer	
56586	OVERTIME 16	United Keno Hill Mines Limited	P 16020	NICKY	Placer	Active	Stephan Kohlendorfer	
56584	OVERTIME 14	United Keno Hill Mines Limited	P 02024	HELEN	Placer	Active	Stephan Kohlendorfer	
56583	OVERTIME 13	United Keno Hill Mines Limited	P 02024	HELEN	Placer	Active	Stephan Kohlendorfer	
56586	OVERTIME 16	United Keno Hill Mines Limited	P 02024	HELEN	Placer	Active	Stephan Kohlendorfer	
56585	OVERTIME 15	United Keno Hill Mines Limited	P 02025	ALOIS	Placer	Active	Stephan Kohlendorfer	





United Keno Hill Mines Mineral Claims			3rd Party Placer Interests					
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner	
56584	OVERTIME 14	United Keno Hill Mines Limited	P 02025	ALOIS	Placer	Active	Stephan Kohlendorfer	
56583	OVERTIME 13	United Keno Hill Mines Limited	P 02025	ALOIS	Placer	Active	Stephan Kohlendorfer	
56586	OVERTIME 16	United Keno Hill Mines Limited	P 02025	ALOIS	Placer	Active	Stephan Kohlendorfer	
13073	RAM	United Keno Hill Mines Limited	3742	CREEK CLAIM 8	Placer	Active	Bardusan Placers Ltd.	
59456	OVERTIME 20	United Keno Hill Mines Limited	P 42662	LADIES 11	Placer	Expired	Bonnie Jane Brooks Taylor	
62199	RUBE	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
13073	RAM	United Keno Hill Mines Limited	3736	CREEK CLAIM 7	Placer	Active	Bardusan Placers Ltd.	
80347	FILL	United Keno Hill Mines Limited	P 47760	CLAN 2	Placer	Expired	Bob Keenan	
56573	MAYO	United Keno Hill Mines Limited	P 47760	CLAN 2	Placer	Expired	Bob Keenan	
59387	PUEBLO	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
55065	TIPTOP	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
38694	JESSIE	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
83012	CATHY FRACTION	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
59494	BOBBIE 10	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
59338	VALLEY	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
83011	ADAM FRACTION	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
56582	OVERTIME 2	United Keno Hill Mines Limited	IM00115	1 MILE	Prospecting Lease	Active	Brent Walden	
62284	CITY	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
59452	FALLS 16	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
59253	DENTON	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
13032	GALENA FARM	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
59465	SUDDO 9	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
59444	FALLS 8	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
59463	SUDDO 7	United Keno Hill Mines Limited	IM00114	1 MILE	Prospecting Lease	Active	Frank Taylor	
62271	DUCE	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
55549	ACE-HI 1	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
13027	TIN CAN	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
80357	HAP	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
13069	SILVER HOARD	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
13025	NABOB	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
38694	JESSIE	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
59338	VALLEY	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
55548	ACE-HI	United Keno Hill Mines Limited	IM00116	1 MILE	Prospecting Lease	Active	Kelly BENSON	
YB29728	ALLA 5	United Keno Hill Mines Limited	IM00122	2 MILES	Prospecting Lease	Active	Sean Ryles	
80370	K.P.O. 21	United Keno Hill Mines Limited	IM00122	2 MILES	Prospecting Lease	Active	Sean Ryles	
80372	K.P.O. 23	United Keno Hill Mines Limited	IM00122	2 MILES	Prospecting Lease	Active	Sean Ryles	
YB29729	ALLA 6	United Keno Hill Mines Limited	IM00122	2 MILES	Prospecting Lease	Active	Sean Ryles	
55518	BUCONJO 15	United Keno Hill Mines Limited	IM00122	2 MILES	Prospecting Lease	Active	Sean Ryles	
YB29728	ALLA 5	United Keno Hill Mines Limited	IM00124	2 MILES	Prospecting Lease	Active	Byron Klippert	





United Keno Hill Mines Mineral Claims			3rd Party Placer Interests					
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner	
Y 87471	Snowdrift 10	United Keno Hill Mines Limited	IM00124	2 MILES	Prospecting Lease	Active	Byron Klippert	
YB29727	ALLA 4	United Keno Hill Mines Limited	IM00124	2 MILES	Prospecting Lease	Active	Byron Klippert	
80376	K.P.O. 27	United Keno Hill Mines Limited	IM00124	2 MILES	Prospecting Lease	Active	Byron Klippert	
80374	K.P.O. 25	United Keno Hill Mines Limited	IM00124	2 MILES	Prospecting Lease	Active	Byron Klippert	
Y 87470	Snowdrift 9	United Keno Hill Mines Limited	IM00124	2 MILES	Prospecting Lease	Active	Byron Klippert	
14327	EUREKA	United Keno Hill Mines Limited	3733	CREEK CLAIM 4	Placer	Active	Bardusan Placers Ltd.	
38730	SILVER FR.	United Keno Hill Mines Limited	3733	CREEK CLAIM 4	Placer	Active	Bardusan Placers Ltd.	
83133	Bunk	United Keno Hill Mines Limited	3733	CREEK CLAIM 4	Placer	Active	Bardusan Placers Ltd.	
13073	RAM	United Keno Hill Mines Limited	3735	CREEK CLAIM 6	Placer	Active	Bardusan Placers Ltd.	
Y 87467	Snowdrift 6	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
YA01415	Snowdrift 20	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
YA01414	Snowdrift 19	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
Y 87464	Snowdrift 3	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
Y 87468	Snowdrift 7	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
Y 97219	Snowdrift 12	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
YA01412	Snowdrift 17	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
YA01413	Snowdrift 18	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
YA01416	Snowdrift 21	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
Y 87469	Snowdrift 8	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
Y 97220	Snowdrift 13	United Keno Hill Mines Limited	IM00097	2 MILES	Prospecting Lease	Active	Danny C. Klippert	
Y 87471	Snowdrift 10	United Keno Hill Mines Limited	IM00128	2 MILES	Prospecting Lease	Active	Stephron Resources	
YB29727	ALLA 4	United Keno Hill Mines Limited	IM00128	2 MILES	Prospecting Lease	Active	Stephron Resources	
80376	K.P.O. 27	United Keno Hill Mines Limited	IM00128	2 MILES	Prospecting Lease	Active	Stephron Resources	
Y 87470	Snowdrift 9	United Keno Hill Mines Limited	IM00128	2 MILES	Prospecting Lease	Active	Stephron Resources	
62153	CON	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
62152	BUCK	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
80370	K.P.O. 21	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
55517	BUCONJO 14	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
80372	K.P.O. 23	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
YB29729	ALLA 6	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
55515	BUCONJO 12	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
55516	BUCONJO 13	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
80368	K.P.O. 19	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
80369	K.P.O. 20	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
55518	BUCONJO 15	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
62271	DUCE	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
55550	ACE-HI 2	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
13069	SILVER HOARD	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
59161	TREASURE ISLAN	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	





United Keno Hill Mines Mineral Claims			3rd Party Placer Interests					
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner	
13025	NABOB	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
55552	ACE-HI 4	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
62270	KING	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
55553	ACE-HI 5	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
62281	TREY	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
55555	ACE-HI 6	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
55556	ACE-HI 7	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
59160	BLUE BIRD	United Keno Hill Mines Limited	IM00117	1 MILE	Prospecting Lease	Active	Gordon Potts	
Y 87471	Snowdrift 10	United Keno Hill Mines Limited	IM00126	2 MILES	Prospecting Lease	Active	Jerald Graham	
80376	K.P.O. 27	United Keno Hill Mines Limited	IM00126	2 MILES	Prospecting Lease	Active	Jerald Graham	
Y 87472	Snowdrift 11	United Keno Hill Mines Limited	IM00126	2 MILES	Prospecting Lease	Active	Jerald Graham	
80378	K.P.O. 29	United Keno Hill Mines Limited	IM00126	2 MILES	Prospecting Lease	Active	Jerald Graham	
Y 87462	Snowdrift 1	United Keno Hill Mines Limited	IM00126	2 MILES	Prospecting Lease	Active	Jerald Graham	
12838	TUNDRA	United Keno Hill Mines Limited	3731	CREEK CLAIM 2	Placer	Active	Bardusan Placers Ltd.	
38730	SILVER FR.	United Keno Hill Mines Limited	3732	CREEK CLAIM 3	Placer	Active	Bardusan Placers Ltd.	
12838	TUNDRA	United Keno Hill Mines Limited	3732	CREEK CLAIM 3	Placer	Active	Bardusan Placers Ltd.	
83133	Bunk	United Keno Hill Mines Limited	3732	CREEK CLAIM 3	Placer	Active	Bardusan Placers Ltd.	
YB29728	ALLA 5	United Keno Hill Mines Limited	IM00123	2 MILES	Prospecting Lease	Active	Stephanie Klippert	
YB29727	ALLA 4	United Keno Hill Mines Limited	IM00123	2 MILES	Prospecting Lease	Active	Stephanie Klippert	
80374	K.P.O. 25	United Keno Hill Mines Limited	IM00123	2 MILES	Prospecting Lease	Active	Stephanie Klippert	
80372	K.P.O. 23	United Keno Hill Mines Limited	IM00123	2 MILES	Prospecting Lease	Active	Stephanie Klippert	
YB29729	ALLA 6	United Keno Hill Mines Limited	IM00123	2 MILES	Prospecting Lease	Active	Stephanie Klippert	
Y 87470	Snowdrift 9	United Keno Hill Mines Limited	IM00123	2 MILES	Prospecting Lease	Active	Stephanie Klippert	
59717	LEO 7	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
15365	WASP	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
59856	LEO 16	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
59715	LEO 5	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
59718	LEO 8	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
15304	GREEN BACK	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
13454	BULL FROG	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
59716	LEO 6	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
15329	LITTLE FRACTION	United Keno Hill Mines Limited	IM00095	1 MILE	Prospecting Lease	Expired	Richard Reid	
80374	K.P.O. 25	United Keno Hill Mines Limited	IM00120	2 MILES	Prospecting Lease	Active	Cheryl Klippert	
YA01414	Snowdrift 19	United Keno Hill Mines Limited	IM00099	1 MILE	Prospecting Lease	Expired	James Genier	
YA01412	Snowdrift 17	United Keno Hill Mines Limited	IM00099	1 MILE	Prospecting Lease	Expired	James Genier	
80378	K.P.O. 29	United Keno Hill Mines Limited	IM00099	1 MILE	Prospecting Lease	Expired	James Genier	
YA01416	Snowdrift 21	United Keno Hill Mines Limited	IM00099	1 MILE	Prospecting Lease	Expired	James Genier	
13073	RAM	United Keno Hill Mines Limited	3734	CREEK CLAIM 5	Placer	Active	Bardusan Placers Ltd.	
14327	EUREKA	United Keno Hill Mines Limited	3734	CREEK CLAIM 5	Placer	Active	Bardusan Placers Ltd.	





United Keno Hill Mines Mineral Claims			3rd Party Placer Interests					
Grant Number	Claim Name	Owner	Grant Number	Claim Name	Claim Type	Status	Owner	
38730	SILVER FR.	United Keno Hill Mines Limited	3734	CREEK CLAIM 5	Placer	Active	Bardusan Placers Ltd.	
80359	FINAL	United Keno Hill Mines Limited	P 47759	CLAN 1	Placer	Expired	Scott A. McLeod	
80347	FILL	United Keno Hill Mines Limited	P 47759	CLAN 1	Placer	Expired	Scott A. McLeod	
56573	MAYO	United Keno Hill Mines Limited	P 47759	CLAN 1	Placer	Expired	Scott A. McLeod	
62367	DAWSON	United Keno Hill Mines Limited	P 47759	CLAN 1	Placer	Expired	Scott A. McLeod	
12838	TUNDRA	United Keno Hill Mines Limited	3730	CREEK CLAIM 1	Placer	Active	Bardusan Placers Ltd.	
12838	TUNDRA	United Keno Hill Mines Limited	3730	CREEK CLAIM 1	Placer	Active	Bardusan Placers Ltd.	
80374	K.P.O. 25	United Keno Hill Mines Limited	IM00124	2 MILES	Prospecting Lease	Active	Byron Klippert	
80374	K.P.O. 25	United Keno Hill Mines Limited	IM00120	2 MILES	Prospecting Lease	Active	Cheryl Klippert	
55517	BUCONJO 14	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	
YB29729	ALLA 6	United Keno Hill Mines Limited	IM00121	2 MILES	Prospecting Lease	Active	Kim Klippert	





United Keno Hill Mines Mineral Claims

3rd Party Land Disposition Interests						
on	Owner					
rth slope of Galena Hill	AMT Canada Inc.					
rth slope of Galena Hill	AMT Canada Inc.					
rth slope of Galena Hill	AMT Canada Inc.					
rth slope of Galena Hill	AMT Canada Inc.					
rth slope of Galena Hill	AMT Canada Inc.					
rth slope of Galena Hill	AMT Canada Inc.					
rth slope of Galena Hill	AMT Canada Inc.					

Grant Number	Claim Name	Claim Type	Owner	Disposition Number	Туре	Purpose	Status	Description	Owner
38720	HOBO	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
56525	HARRIET	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
15250	BOYLE	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
56503	V.O.	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
56502	A.A.	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
14884	BUDDY	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
59027	SISTER	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
56501	83	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
15249	BRIDGETTE	Quartz	United Keno Hill Mines Limited	105M14-002	Lease	Commercial	Active	On the north slope of Galena Hill	AMT Canada Inc.
16512	LILL	Quartz	United Keno Hill Mines Limited	105M14-011	Lease	Placer claims	Active	On Galena Hill between Transmission Line & Road	AMT Canada Inc.
62366	MOSSBACK	Quartz	United Keno Hill Mines Limited	105M14-011	Lease	Placer claims	Active	On Galena Hill between Transmission Line & Road	AMT Canada Inc.
16511	NO CASH	Quartz	United Keno Hill Mines Limited	105M14-011	Lease	Placer claims	Active	On Galena Hill between Transmission Line & Road	AMT Canada Inc.
16025	HAWKS NEST	Quartz	United Keno Hill Mines Limited	105M14-011	Lease	Placer claims	Active	On Galena Hill between Transmission Line & Road	AMT Canada Inc.
16568	MONOPOLY	Quartz	United Keno Hill Mines Limited	105M14-011	Lease	Placer claims	Active	On Galena Hill between Transmission Line & Road	AMT Canada Inc.
16026	EXTENSION	Quartz	United Keno Hill Mines Limited	105M14-011	Lease	Placer claims	Active	On Galena Hill between Transmission Line & Road	AMT Canada Inc.
80561	KANGAROO FR.	Quartz	United Keno Hill Mines Limited	105M14-010	Lease	Commercial	Active		AMT Canada Inc.
12871	WOLVERINE	Quartz	United Keno Hill Mines Limited	105M14-010	Lease	Commercial	Active		AMT Canada Inc.
55364	HELEN	Quartz	United Keno Hill Mines Limited	105M14-010	Lease	Commercial	Active		AMT Canada Inc.
59274	JUNE	Quartz	United Keno Hill Mines Limited	105M14-010	Lease	Commercial	Active		AMT Canada Inc.
12779	ROULETTE	Quartz	United Keno Hill Mines Limited	105M14-007	Lease	Commercial	Active	Near Faro Gulch	AMT Canada Inc.
12816	SOLO 2	Quartz	United Keno Hill Mines Limited	105M14-007	Lease	Commercial	Active	Near Faro Gulch	AMT Canada Inc.
59452	FALLS 16	Quartz	United Keno Hill Mines Limited	900164	Reservation	Institutional	Active	Keno City Firehall	Community Services Yukon Government
59253	DENTON	Quartz	United Keno Hill Mines Limited	900164	Reservation	Institutional	Active	Keno City Firehall	AMT Canada Inc.
15207	TICK	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
55312	MONTY	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
16524	JEAN	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
15374	NANCY	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
16558	PUNCH	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
16561	ARIZONA	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
16375	VENTURE	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
16569	MONTE CARLO	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
38819	ASTORIA	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
38831	BILLYS	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
16557	WESTON	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
16523	ELSA	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
59040	OXO	Quartz	United Keno Hill Mines Limited	105M13-009	Lease	Commercial	Active	Within the town site of Elsa	AMT Canada Inc.
15207	TICK	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
55312	MONTY	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
16554	IKWOGGY	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
16585	LUCKY	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
55543	HUSKY /	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
55029	PREMIER	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
16105	BEITY	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
55545	HUSKY 9	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
55544	HUSKY 8	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
16557	WESTON	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
55546	HUSKY 10	Quartz	United Keno Hill Mines Limited	1051/13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
55542	HUSKY 6	Quartz	United Keno Hill Mines Limited	105M13-002	Lease	Commercial	Active	In the town site of Elsa	AMT Canada Inc.
38642		Quartz	United Keno Hill Mines Limited	2005-0202	Lease	Commercial	Active	1 km west of Keno, off Duncan Ck Road	Richard Brost
56401	FRANCES 5	Quartz	United Keno Hill Mines Limited	2005-0202	Lease	Commercial	Active	1 km west of Keno, off Duncan Ck Road	Richard Brost
38643	FLAME	Quartz	United Keno Hill Mines Limited	2005-0202	Lease	Commercial	Active	1 km west of Keno, off Duncan Ck Road	KICNARD Brost
10003	FORCUPINE	Quartz	United Keno Hill Mines Limited	1051/13-001	Lease	Commercial	Active	Residence garages & service snops	ANT Canada Inc.
15207	HCK MONITY	Quartz	United Keno Hill Mines Limited	1051/13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.
55312	MONTY	Quartz	United Keno Hill Mines Limited	1051/13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.
16554	IKWOGGY	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.





	United Keno Hill Mines Mineral Claims				3rd Party Land Disposition Interests						
Grant Number	Claim Name	Claim Type	Owner	Disposition Number	Туре	Purpose	Status	Description	Owner		
16585	LUCKY	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
55540	HUSKY 4	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
55029	PREMIER	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
16569	MONTE CARLO	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
16105	BETTY	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
55544	HUSKY 8	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
38819	ASTORIA	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
16557	WESTON	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
56575	ACRE FR.	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
16523	ELSA	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		
55542	HUSKY 6	Quartz	United Keno Hill Mines Limited	105M13-001	Lease	Commercial	Active	Residence garages & service shops	AMT Canada Inc.		



United Keno Hill Mines Mineral Claims				3rd Party Land Application Interests						
Grant Number	Claim Name	Claim Type	Owner	Application Number	Туре	Purpose	Status	Description	Owner	
56505	TOM BOY	Quartz	United Keno Hill Mines Limi	2005-0046	LARC application	Rural residential	Active	Bindig	Matthias Bindig	





Grant Number	Claim Name	Owner
16105	BETTY	United Keno Hill Mines Limited
62298	MUD	United Keno Hill Mines Limited
62297	MUD	United Keno Hill Mines Limited
62299	MUD 2	United Keno Hill Mines Limited
62950	ORCHID 1	United Keno Hill Mines Limited
62962	ORCHID 15	United Keno Hill Mines Limited
62963	ORCHID 16	United Keno Hill Mines Limited
62972	ORCHID 25	United Keno Hill Mines Limited
62973	ORCHID 26	United Keno Hill Mines Limited
62952	ORCHID 3	United Keno Hill Mines Limited
80117	ORCHID 31	United Keno Hill Mines Limited
80162	ORCHID 37	United Keno Hill Mines Limited
62954	ORCHID 5	United Keno Hill Mines Limited





PWGCS Site No.	Site Name	Grant Number	Claim Name	Adit
1	Silver King	13454	BULL FROG	100 Level Adit
3	Elsa	16523	ELSA	Gravel Level Adit
		16553	PORCUPINE	+50 Level Adit
		16523	ELSA	100 Level Adit
		16523	ELSA	200 Level Adit
		16557	WESTON	400 Level Adit
4	Dixie	15323	KLONDIKE	200 Level Adit
6	Bermingham & Ruby (Arctic & Mastiff)	56591	EILEEN	Bermingham 200 Level Adit
		55048	BEE	Ruby 400 Level Adit
7	No Cash	16511	NO CASH	100 Level Adit
		62314	ZELMA 3	500 Level Adit
9	Hector Calumet	15249	BRIDGETTE	400 Level Adit
10	Dragon (UN) & Miller	55326	IRENE	Dragon (UN) Adit
11	Galkeno Mine	16556	KENO	100 Level Adit
		16556	KENO	200 Level Adit
		14898	RIO	300 Level Adit
		16556	KENO	Unamed adit
12	Galkeno 900	55065	TIPTOP	900 Level Adit
16	Rico	13452	RICO	Rico Adit
19	Onek	14002	UPTON	Onek 400 Level Adit
20	Klondike-Keno	13122	BLUE ROCK	Lower Adit
		13122	BLUE ROCK	Upper Adit
22	Bellekeno	16170	NOD FR.	100 Level Adit
		12838	TUNDRA	600 Level Adit
		12838	TUNDRA	600 Level Adit
		12838	TUNDRA	Mayo Mines Adit
23	Kijo	56419	KIJO	Upper Adit
		56419	KIJO	Middle Adit
		56419	KIJO	Lower Adit
24	Croesus No. 1	55420	CROESUS	Adit #1
		55420	CROESUS	Adit #2
		55420	CROESUS	Adit #3
		55420	CROESUS	Adit #4





PWGCS Site No.	Site Name	Grant Number	Claim Name	Adit
25	Black Cap, Shepherd & LQ Adit	59367	DE CHUCK	Lucky Queen Adit
		12869	BLACK CAP	Black Cap Adit
		12931	SHEPHERD	Sheperd Adit
27	Lake	14826	BELL YORK	Lower Adit
28	Shamrock	12800	RENO	200 Level Adit
		12800	RENO	200 Level Adit
		12800	RENO	200 Level Adit
29	Highlander	13072	HIGHLANDER	Main Adit
		13021	LUCKY QUEEN	Upper Adit #1
		13021	LUCKY QUEEN	Upper Adit #2
		13021	LUCKY QUEEN	Upper Adit #3
30	Cub & Bunny	14318	CUB	Upper Adit
31	Stone	13035	STONE	Upper Adit
		38723	VIOLA	Middle Adit
		13591	SCOT	Lower Adit
32	Keno 700, Porcupine, and Comstock	12785	PINOCHLE	200 Level Adit
		12871	WOLVERINE	700 Level Adit
		12875	PORCUPINE	Comstock 200 Level Adit
		12875	PORCUPINE	Porcupine Pit Portal
36	Keno No. 9 System	12784	KENO	5-2 Vein Adit
		12784	KENO	#4 Upper Adit
		12784	KENO	#4 Lower Adit
		12780	RICO	No. 3 Vein Adit
		12780	RICO	Faro Gulch Portal
		13169	ELSIE	Upper Adit above Gambler Site
		13169	ELSIE	Lower Adit above Gambler Site
47	Monument & Ladue Fraction	80227	VENUS FRAC. 1	Adit #1
76	Townsite Mine	16499	PLATA	Townsite Adit
77	Sadie Ladue 600 Adit	13622	TRAVICE	Sadie Ladue Adit
??	Viola Adit	13153	VIOLA	Viola Adit



