



A MEMBER OF ALEXCO RESOURCE GROUP

3 Calcite Business Centre, 151 Industrial Road, Whitehorse, Yukon Y1A 2V3

PHONE (867) 668-6463 FAX (867) 667-6680

www.accessconsulting.ca

mail@accessconsulting.ca

MEMORANDUM

TO: Elsa Reclamation and Development Company (ERDC) Keno Hill Mine

FROM: Kurt Neunherz, BIE (Applied) Access Consulting Group

DATE: March 31, 2009

RE: Physical Hazard Assessment

The UKHM property contains numerous human health and safety hazards which ERDC has been systematically addressing to reduce public health and safety risk around the Keno Hill Silver District. As part of the 2008 physical hazard assessment plan, heritage consultation was conducted in August of 2008 with Yukon Government Heritage, Keno City residents and First Nation of Nă Cho N'yak Dun (NNDFN). The heritage consultation included a site inspection of Keno 700 and the attached presentation given to the stakeholders of ERDC and the heritage consultation group.

A building hazardous waste assessment was completed in the fall of 2008 and laboratory samples confirmed asbestos contamination of material from selected buildings throughout the district. It identified a total of 211 buildings ranging in size throughout the Keno Hill Silver District. Hazardous waste including batteries, practically full drums with unknown material, asbestos, PCB lamp ballasts, lead paint and containers with unknown chemicals were identified in buildings throughout the district.

The physical hazard reduction plan (building demolition) was not completed in 2008 due to the uncertainty of the best way to handle the asbestos in order to protect the workers, the public and the environment. As such, the Keno 700 site demolition was not conducted due to identifying hazardous waste (asbestos) as a possible human health concern to the public and to workers. After several discussions with Yukon Workers Compensation Health and Safety Board (WCB) proper worker certification as well as an approved demolition plan is required prior to the physical hazard reduction plan continuing. After considerable research, an asbestos training program was identified that would provide the instruction required to protect the workers in this very specific and unique work environment. The outline of the course is attached. The employees that will be involved in this project are signed up for a WCB approved training program and a demolition plan is currently being developed and reviewed. This work will be conducted in 2009 as part of the physical hazard program.

Access Consulting Group

Kurt Neunherz, BIE (Applied)

From: Norman Richardson [mailto:nrichardson@pac-bc.com]
Sent: March 13, 2009 3:53 PM
To: Kurt Neunherz
Subject: RE: Asbestos High Risk Training

Hi Kurt,

Please see the attached course outline for you info and records. If you have any questions, please contact me at your convenience.

Very Kind Regards,

Norman Richardson, ASCT, CRSP, CHSC
Senior Project Manager

Pacific Environmental Consulting

Tel : 604.980.3577 Ext. 234 Fax : 604.980.2188 Cell : 604.315.4498

nrichardson@pacificenvironmentalbc.com www.pacificenvironmentalbc.com



The information transmitted is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of this information, including any action in reliance upon this information, by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and delete the material from any computer.

Background

- What is Asbestos?
- Uses of Asbestos in Buildings
- Asbestos-Related Diseases

Regulations, Risk Assessments, Asbestos Exposure Control Plan

- WorkSafeBC Regulations
- Asbestos Exposure Control Plan (AECPP)
- Risk Assessment

Worker Protection, Work Procedures and Checklists

- Respirators
- Respirator Fit Testing
- Respirator Fit Test Form
- Respirator Cleaning and Disinfecting
- Respirator Inspection Checklist
- Personal Protective Clothing
- Air Monitoring
- Low Risk Procedures
- Checklist for Repair and Minor Work
- Bulk Sample Collection
- Procedures for Moderate Risk (Type II) Work
- Checklist for Moderate Risk (Type II) Work
- Repair of Damaged Asbestos Containing Materials
- Procedures for High Risk work
- Procedures for Emergency Work
- Asbestos Waste Storage, Transport and Disposal
- Request for information procedures

Build a High Risk “Mock-up” (Practicum)

Keno Hill Silver District Heritage Resources

August 26th 2008 Stakeholders Meeting

Whitehorse, Yukon



ALEXCO



Keno Hill Silver District Heritage Resources

- First step was to develop a risk matrix to assess risks to public safety posed by individual mine sites;
- this risk matrix is used annually to develop a work plan with YG Type II Mines to remediate Physical Hazards on a site-by-site basis;





Keno Hill Physical Hazard Risk Register - 2008 Work Plan

Assigned Site No.	Site Name	Location Description	UTM Coordinates	Description of Existing Physical Hazards	Hazard Identified By	Consequence	Likelihood	Likelihood	
						Severity	Exposure	Probability	Descriptive
1	Silver King	Straddles the Silver Trail Highway at Galena Creek, approximately 4km southwest of Elsa town site	473050E, 7085275N	Open Pit has no barriers to prevent access; temporary barriers have fallen down.	SRK 2005 Site Inspection	Moderate	Remote	Unlikely	Moderate
3	Elsa	Located within the Elsa townsite on the north-facing slope of Galena Hill.	476000E, 7087000N	Powderhouse corner vent raise appears to be subsiding with a linear depression crossing Calumet Drive.	PWGSC Baseline Assessment	Moderate	Occasional	Possible	Moderate
				Adit has an ice plug	ACG Site Characterization	Low	Remote	Unlikely	Low
				Several buildings in various stages of repair may need to be either dismantled or entry adequately blocked to prevent entry.	PWGSC Baseline Assessment	Low	Remote	Unlikely	Low
4	Dixie	3.6km along Calumet Drive from the junction with Wernecke Road.	477000E, 7087200N	Ditch running along side of Garage/Office building could be subject to erosion during peak flows, which could result in the structure collapsing; accessible.	PWGSC Baseline Assessment	Low	Occasional	Possible	Low
	Birmingham & Ruby (Arctic & Mastiff)			200 Level Adit is blocked with timber cribbing.	PWGSC Baseline Assessment	Low	Remote	Rare	Low
				One of the dumps is open without any berming.	SRK 2005 Site Inspection	Moderate	Occasional	Possible	Moderate
				Ruby 400 Level adit accessible	ACG Site Characterization	Moderate	Occasional	Possible	Moderate
				Explosives magazine and Detonator House accessible.	PWGSC Baseline Assessment	Low	Occasional	Possible	Low
				Water Shack accessible.	PWGSC Baseline Assessment	Low	Occasional	Possible	Low
		Two residential buildings were considered unsafe, yet accessible.	PWGSC Baseline Assessment	Low	Occasional	Possible	Low		
10	Dragon & Miller (UN Adit; Miller separate workings)	Located on the north slope of Galena Hill along the Calumet Back Road.	481500E, 7088900E	UN Adit open but blocked by ice year round.	PWGSC Baseline Assessment	Moderate	Occasional	Possible	Moderate
11	Galkeno 200	Located on the northeast slope of Galena Hill via the Calumet Back road, approximately 3.9km from the Duncan Creek road.	482600E, 7088600N	100 Level Adit timbers have collapsed making access difficult, but still possible.	SRK 2005 Site Inspection	Moderate	Occasional	Possible	Moderate
				Unnamed Adit has collapsed.	ACG Site Characterization	Moderate	Occasional	Possible	Moderate
				Unnamed shaft is in accessible.	PWGSC Baseline Assessment	Moderate	Occasional	Possible	Moderate
				Macloed shaft is partially collapsed and inaccessible.	PWGSC Baseline Assessment	Moderate	Occasional	Possible	Moderate
		Subsidence/sinkhole uphill of the 300 adit.	SRK 2005 Site Inspection	Moderate	Remote	Rare	Low		
14	Bluebird	Northeast slope of Galena Hill, approximately 4km northwest from Keno City; 70m upslope from Silver Trail	482750E, 708925N	Three shafts were located east of cabin, two with ladders. Shafts filled in but still relatively deep (approx. 1-2m) One small shaft located north of other shafts only 0.5m deep.	ACG 2006 Site Inspection	Moderate	Remote	Unlikely	Moderate
				Log cabin accessible; in poor condition.	ACG 2006 Site Inspection	Low	Remote	Unlikely	Low
15	Tin Can	250m uphill of Silver Trail Highway.	483743E, 7088748N	One partially caved shaft found further down slope; still somewhat accessible however, not too deep (approx 2.5m)	ACG 2006 Site Inspection	Moderate	Remote	Unlikely	Moderate
16	Rico	Northwest slope of Galena Hill, 450m upslope of Galkeno 900 site via old dirt road that branches off Calumet Back road roughly 2.2km north of junction with Duncan Creek Road.	483300E, 7087700N	One open shaft above adit, collapsed inward approximately 4m in depth; water retained in bottom.	ACG 2006 Site Inspection	Moderate	Remote	Unlikely	Moderate
20	Klondike-Keno	Northwest slope of Keno Hill, approximately 1.5km southwest of Wernecke town site.	484700E, 7090700N	Subsidence has occurred behind collapsed adit.	ACG 2006 Site Inspection	Low	Occasional	Unlikely	Low
				Drillers shack located north of adit roof structure on it's way to collapsing	ACG 2006 Site Inspection	Low	Occasional	Unlikely	Low
	Sadie Ladue	Located on the northwest slope of Keno Hill at the Wernecke Camp.	486400E, 7092000N	A number of buildings in various states of repair are present on the site.	PWGSC Baseline Assessment	Low	Frequent	Possible	Low
23	Kijo	Located on the mid-southwest slope of Keno Hill, roughly 500m north of Erickson Gulch via Blackcap Road which branches off Wernecke Road, 80m down the slope.	486200E, 7089600N	One collapsed portal south of the collapsed adit; entrance to small for accessibility.	ACG 2006 Site Inspection	Low	Remote	Unlikely	Low

Keno Hill Silver District Heritage Resources

Physical hazards workplan

- Alexco continues to focus on addressing most critical physical hazards for protection of public safety;
- work will progress in an orderly & safe manner and in accordance with our partners' goals;
- heritage issues is one of the driving forces in decision making;



Keno Hill Silver District Heritage Resources Meeting

Risk Management – clean up of high risk sites;



Shamrock J Raise Before



After

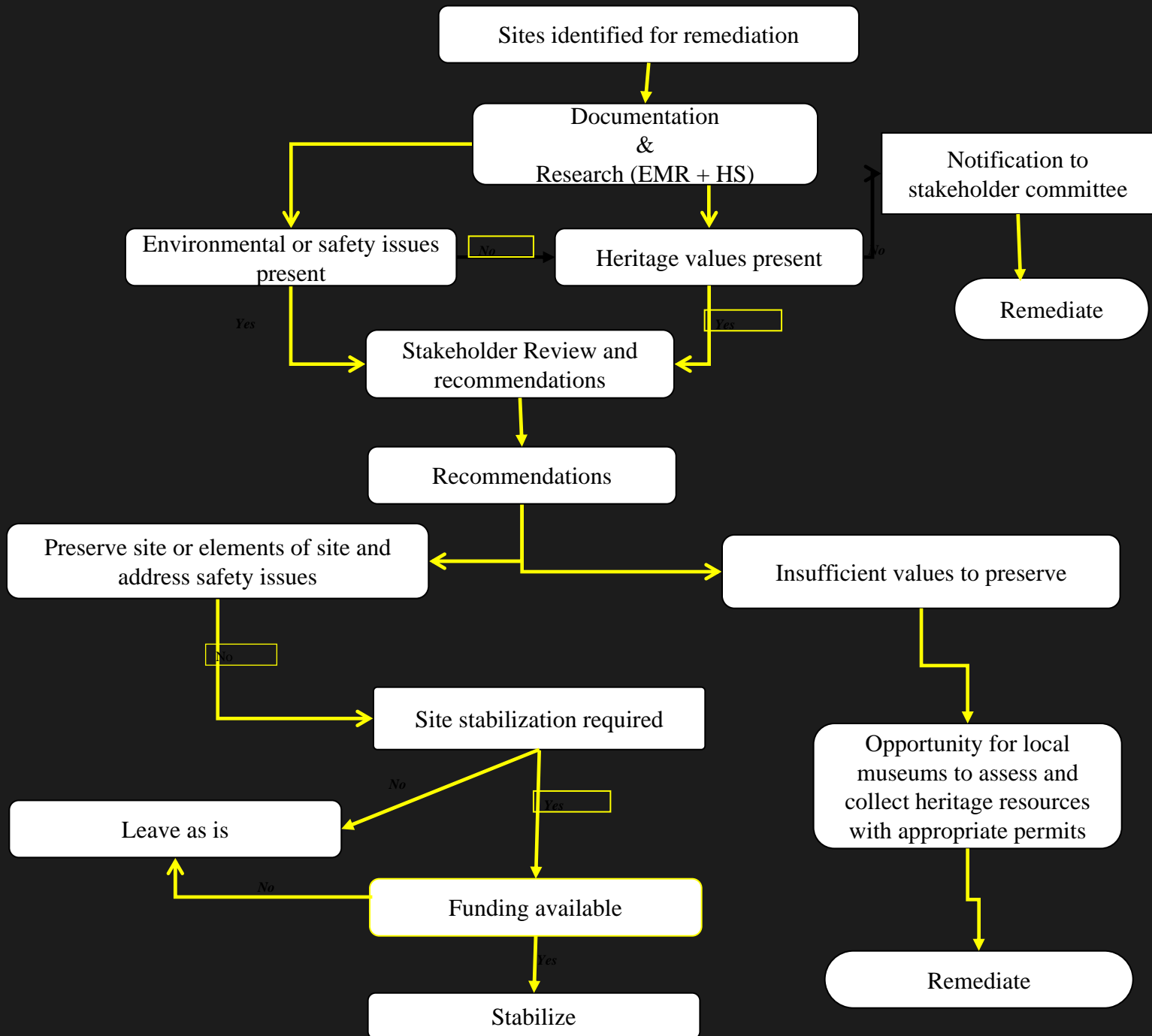
Keno Hill Silver District Heritage Resources

- Protocol has been developed to direct decision making for site remediation activities;
- Stakeholders will be provided opportunities for input.



ALEXCO





Keno Hill Silver District Heritage Resources

Proposal for remediation this year: Keno
700 site



ALEXCO



Keno 700 mine site

1958-1982





Managers residence

Steam line to Comstock
Keno & Porcupine mines

bunkhouses

Keno 700 adit

Mine dty

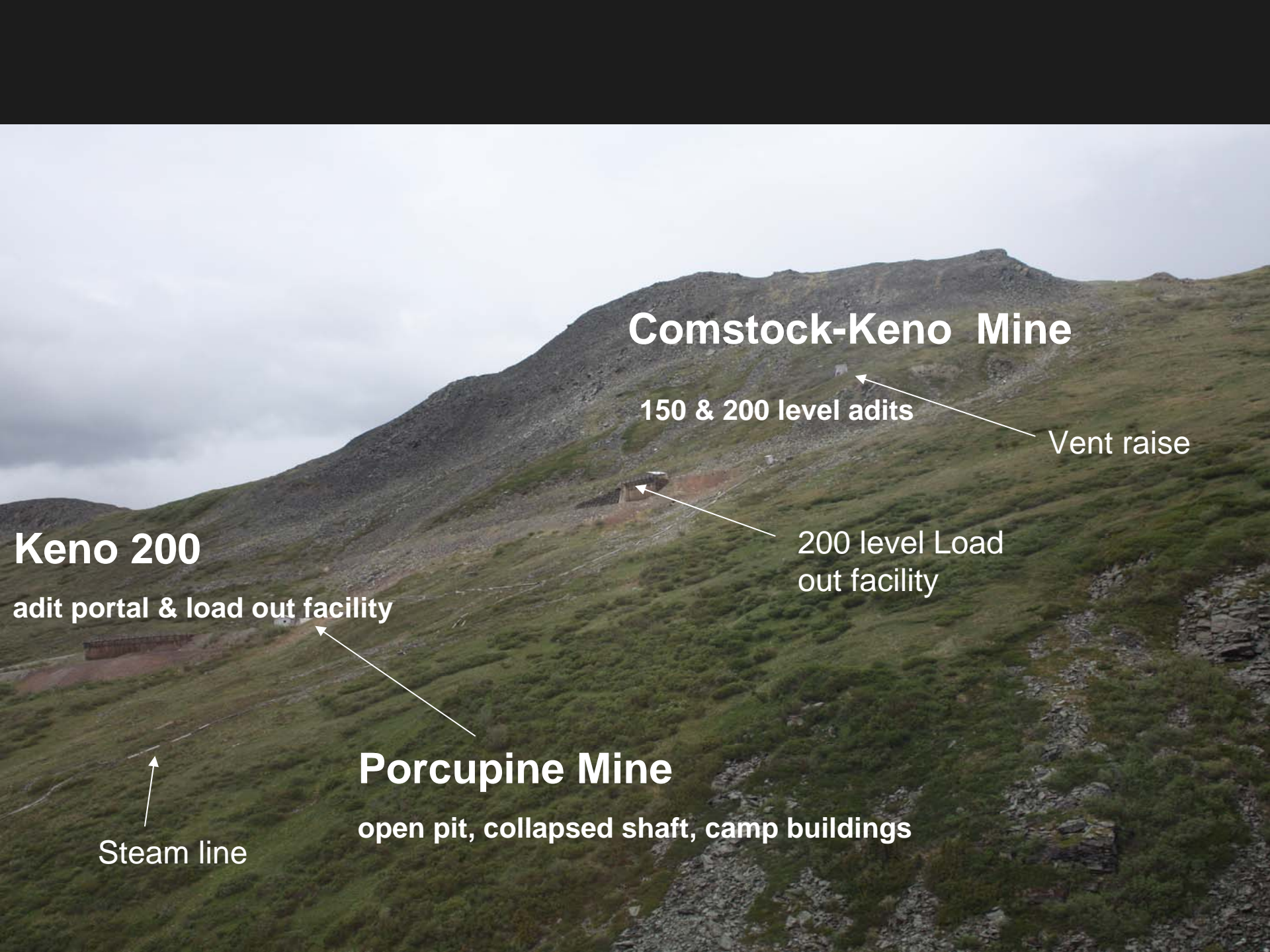
Shop/compressor/generator shed

Mess
hall/kitchen

Ore Loadout facility

Erosion scars from ice
plug failure

Steam boiler plant



Comstock-Keno Mine

150 & 200 level adits

Vent raise

200 level Load out facility

Keno 200

adit portal & load out facility

Porcupine Mine

open pit, collapsed shaft, camp buildings

Steam line

Keno Hill Silver District Heritage Resources



ALEXCO

