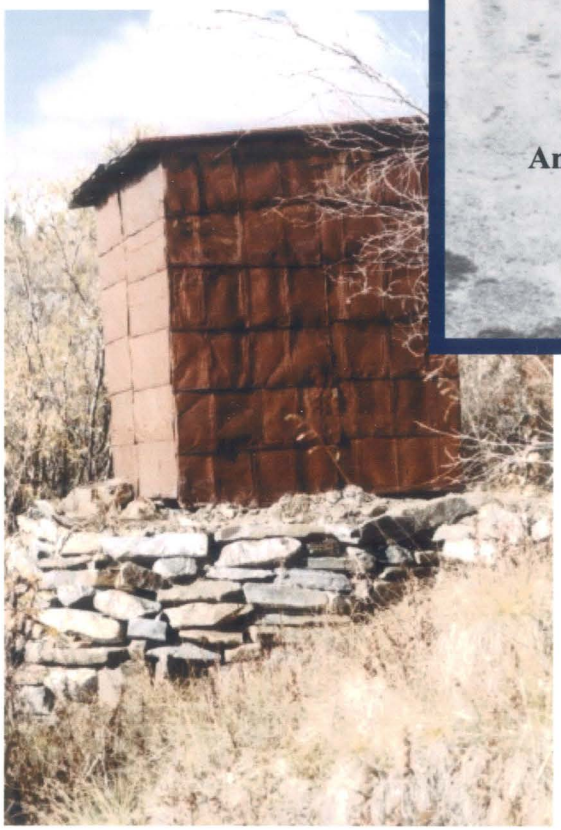
Historical Review

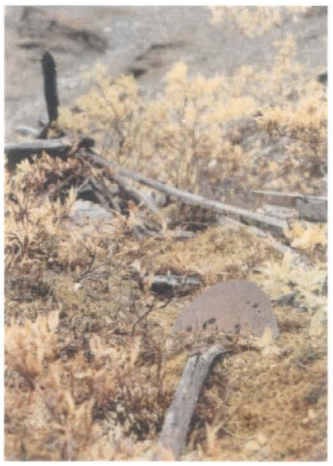
Of
Selected Mining Sites
In The Silver Trail Region

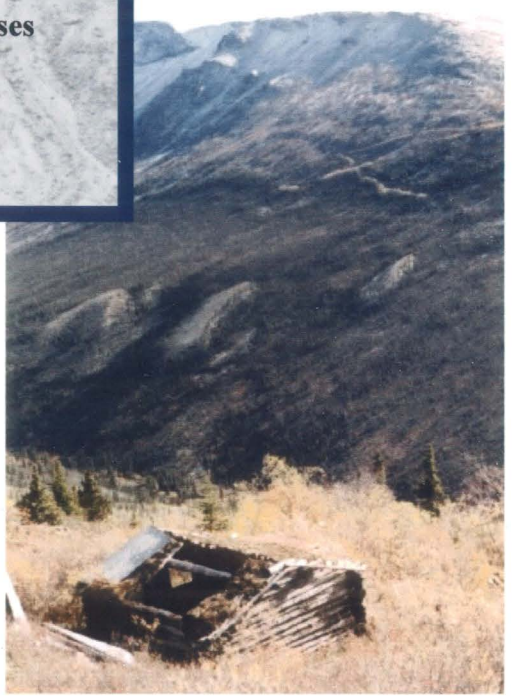
Prepared for
Waste Management Program
Indian and Northern Affairs Canada

By
The Silver Trail Association
Mayo, Yukon
And McQuesten Lake Enterprises

March 2004







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Executive summary

In 1999 the department of Indian and Northern Affairs Canada, Waste Management Program, conducted a baseline assessment of 96 mine sites in the Keno Valley / Dublin Gulch area.

The Federal government is responsible for the assessment and remediation of these sites prior to and post Devolution Transfer Agreement. Because mining has a considerable historic significance in the region, the Silver Trail Association wanted to be involved in the assessment process for preservation of historical landmarks and potential tourism opportunities.

Ten sites were chosen to evaluate. A local company, McQuesten Lake Enterprises, was contracted for the assessment and writing of the report. A field assessment was done, with a perspective to environmental, historical and safety conditions.

The Yukon Heritage Branch was contacted for their input to the evaluation process, their response was positive to this form of evaluation being done before any remediation is to be carried out and dialogue between YTG Heritage Branch and the Federal Government will continue throughout the process.

Of the ten sites visited three were identified as having historical value and tourism opportunities to the region due to their location and the structures on the site.

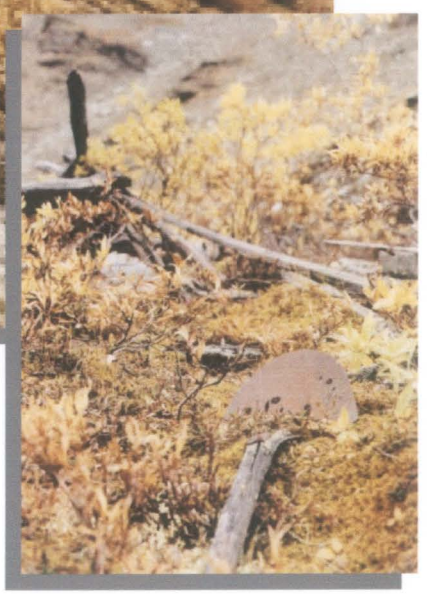
This report addresses some of the needs to be considered before a site is designated for remediation, and supplies some recommendations as to action at these sites along with a rough cost estimate to implement the recommendations.

The cost estimates put forward by this report are to be used for guideline purposes only and do not subject the Silver Trail Association or McQuesten Lake ENT. to these prices at a future date.

Land Use Permits

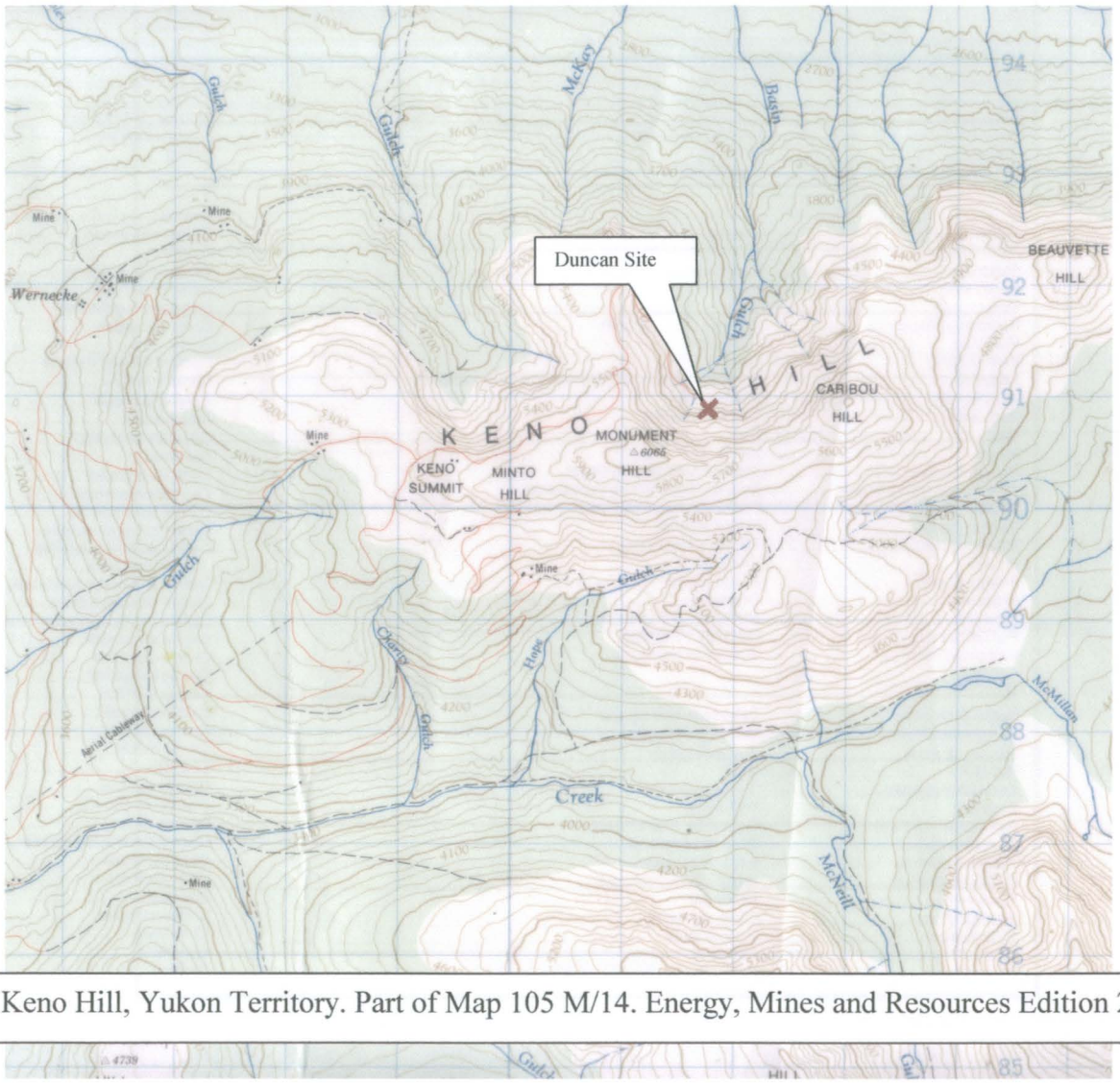
At the time of writing the report Mayo Land Use stated that, on an existing cat trail the Highways Act supersedes the land use process. If one needed to establish a new road to a site then one would follow the current land use screening process.

Duncan Site # 43



Location and Site access

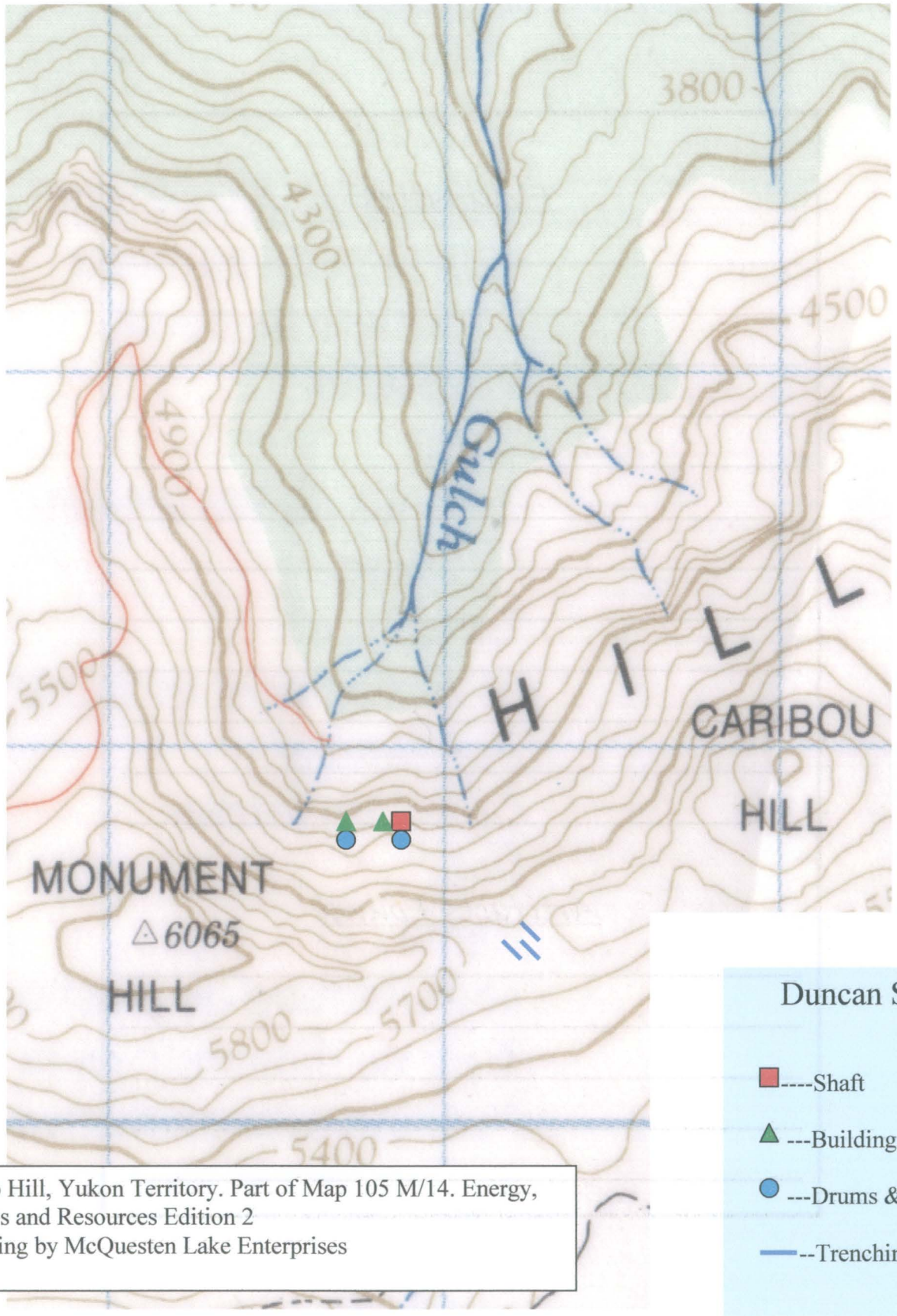
Following an old cat trail up Hope Gulch can access the Duncan Site. This trail will bring you within one kilometre of the site. From the trail the terrain is relatively flat to the edge of the cirque overlooking the top end of Silver Basin Gulch. It is possible to drive a four wheel drive vehicle to this point by following old skid trails and then driving in the bottom of the trench workings which end at the cirques edge. The Duncan shaft is located 250 meters down slope of the cirque rim, with the collapsed building and debris being another 30 meters down slope. Access to the site is by foot down a talus slope, making access precarious and great care must be taken as the slope is unstable and prone to sliding in many spots. The sites UTM co-ordinates 7 090 770m N 492 200m E (Latitude: 63* 56' 36" N, Longitude: 135* 08' 32" W) as referenced from Federal Environmental Baseline Assessment, Minfile# 105M 003.



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
drawing by McQuesten Lake Enterprises

Field Notes

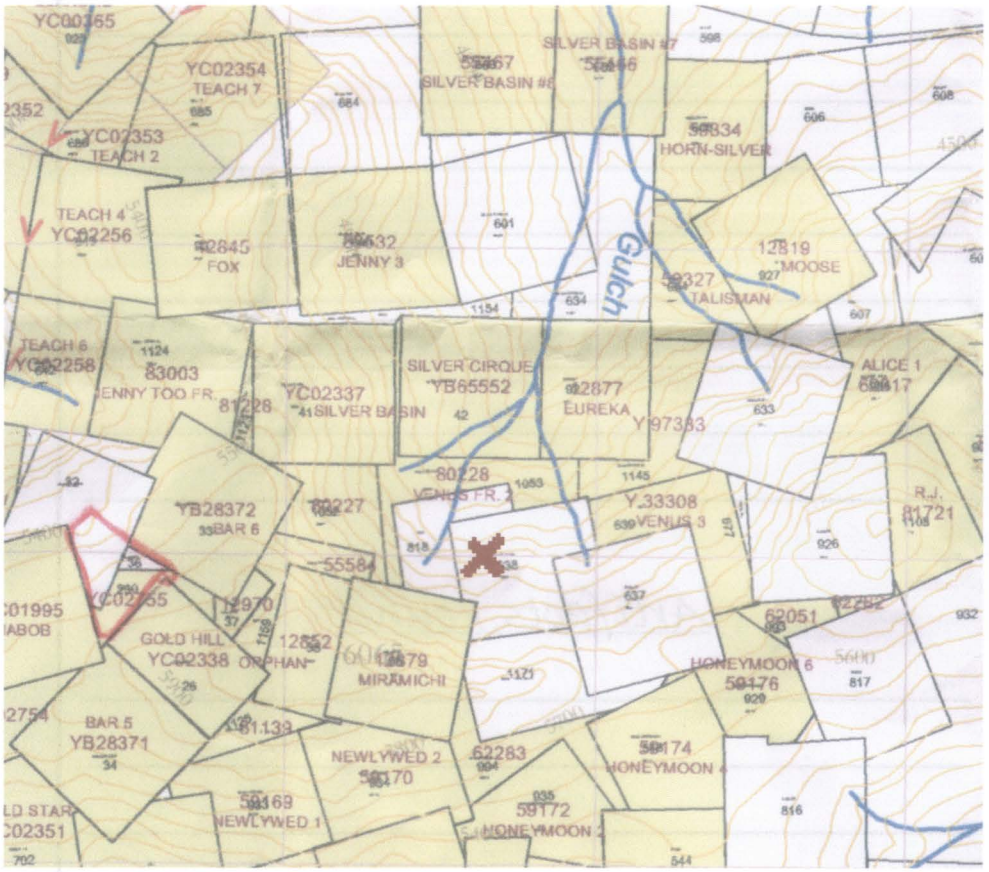
Artifacts Found

Historical background

Between 1919 and 1923 a 14-meter shaft and 12 meter of drifting was done within the shaft. There was approximately 11.8 tons of ore shipped during this time, with an average grade of 23,147-g/t silver and 22% lead. Between 1946 and 1962 and in 1989 the bulldozer trenches were excavated south of the cirque rim. Information drawn from Minfile 105 m 003

Current site tenure/ownership

When writing this report the ground on which Duncan site is situated, is open. The main Duncan claim 55441 was held in good standing until 2002/ 04/ 26 by Southern Reo Resourses Ltd.



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Field Notes

Artifacts Found

The review of existing studies, confirmation and/ or update of current physical conditions

The site has deteriorated since the last inspection was done, the building that served as a residence has collapsed further, with some of the material sloughing down the hillside.

The shaft condition has not changed considerably; it is approximately four by four with wooden cribbing in a state of decay. The shaft has collapsed to within four feet of the surface topography, the last four feet are filled with wood, debris, and some metal refuse.

Verification of environmental issues as identified in previous studies

There was no major environmental issues delineated in the previous studies, in our inspection of the site we also did not find any environmental concerns other than the physical state of the site that would need cleaning. There were no chemicals, fuel or electrical items found.

Field Notes

Artifacts Found

Public safety considerations

The shaft is a major public safety issue. The photos below show a fair amount of metal debris, wire, cable and exposed nails in the lumber. There is always the possibility that someone could be hurt during investigation of the site.

Field Notes

Artifacts Found

Photos: above, The trenches at the top of the cirque would not warrant filling in.

Field Notes

Artifacts Found

Recommendations for actions at sites from environmental and historical perspectives

From an environmental perspective we feel that the material at this site could be removed, the wooden debris could be placed in the shaft and then burnt. All metal debris could be stock piled for removal, either by the labours tack of skidding it up the hill with a winch line or placed into a sling net for long line removal with a helicopter.

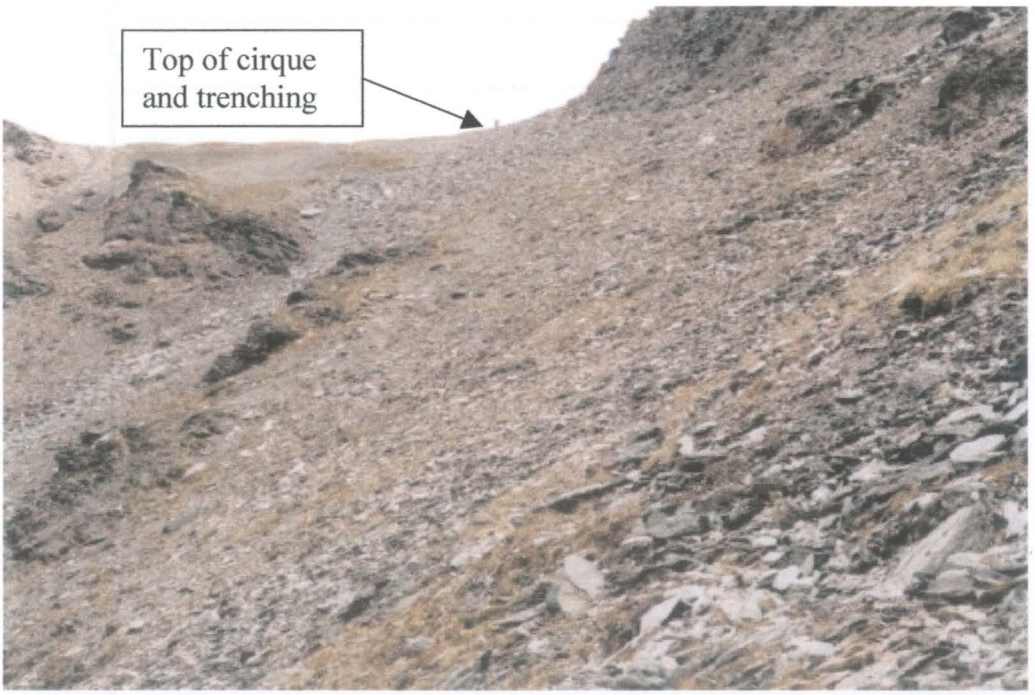


Photo: Steep incline from the site to the top of the cirque

Historically, were sure there are salvageable artefacts at this site, these could be sorted and removed as the initial clean up is taking place, as most of these artefacts will be small they can be removed at the end of each day or collected and dropped off up hill with the helicopter.

Once all debris is burnt and waste cable and metal removed, we feel that what remains of the shaft could be hand filled with the local rock.

Due to the location it would not be recommended that this site be added to the trail network.

Field Notes

Artifacts Found

Cost estimates to implement recommendations for Duncan Site

We estimate three 12-hour days work for two labours to burn, sort, and hand fill the shaft.

Transportation to and from site,
150 km round trip X three days at .48 per km----------$216.00
Total man-hours to complete clean up –64 hours----------$1280.00
Two helicopter hours to sling material at $1200.00 per hour----------$2400.00
Ten percent contingency ----------$389.60
Ten percent administration fee----------$389.60

Total--------$4675.20

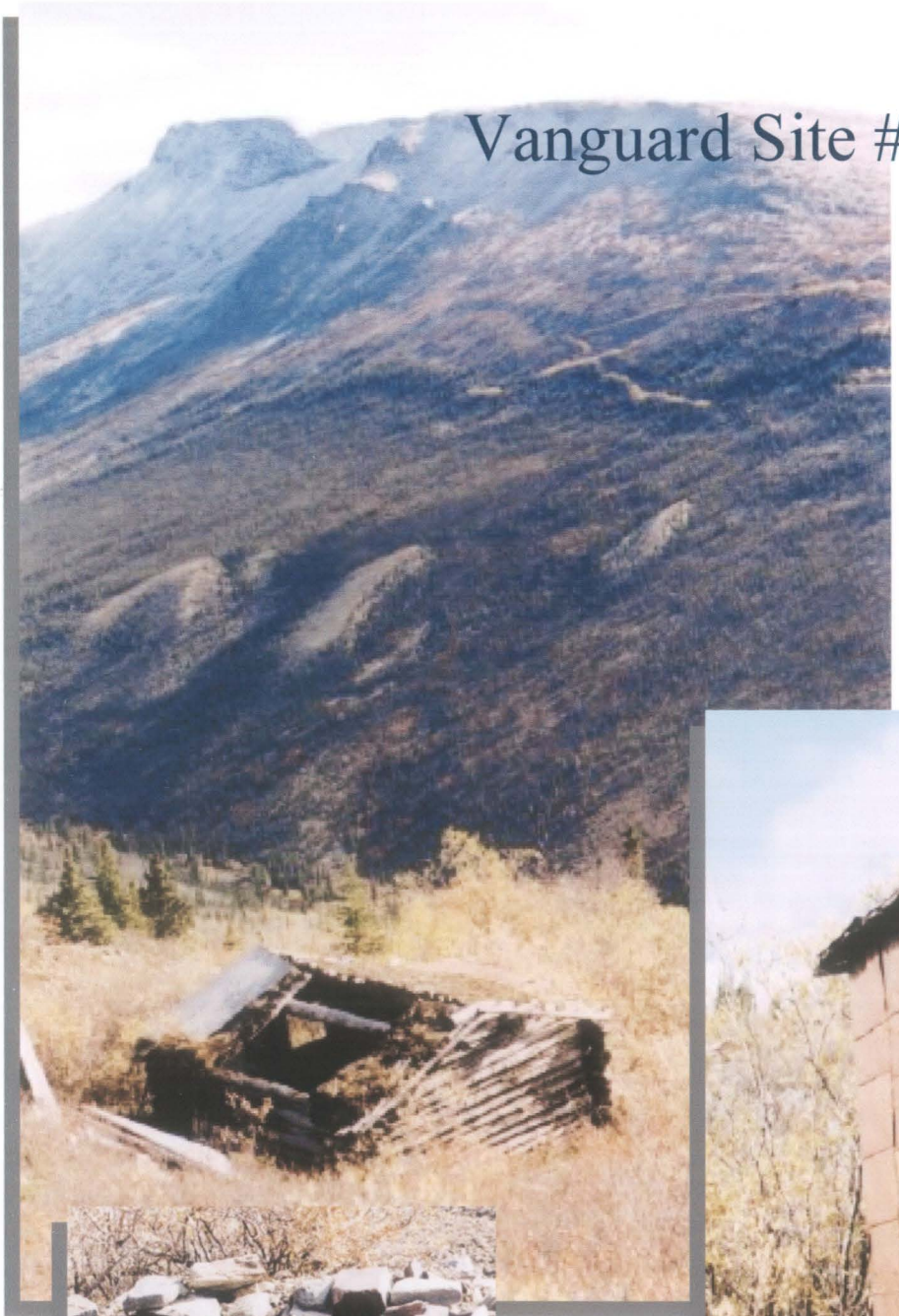
G.S.T.------$327.26

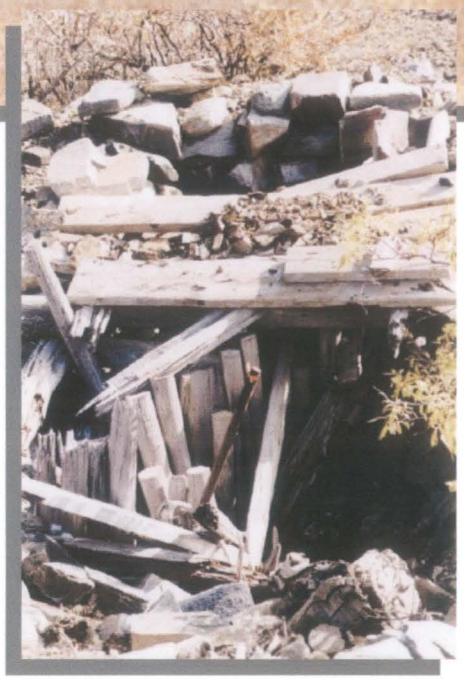
Grand total-----$5002.46

Field Notes

Artifacts Found

Vanguard Site # 49



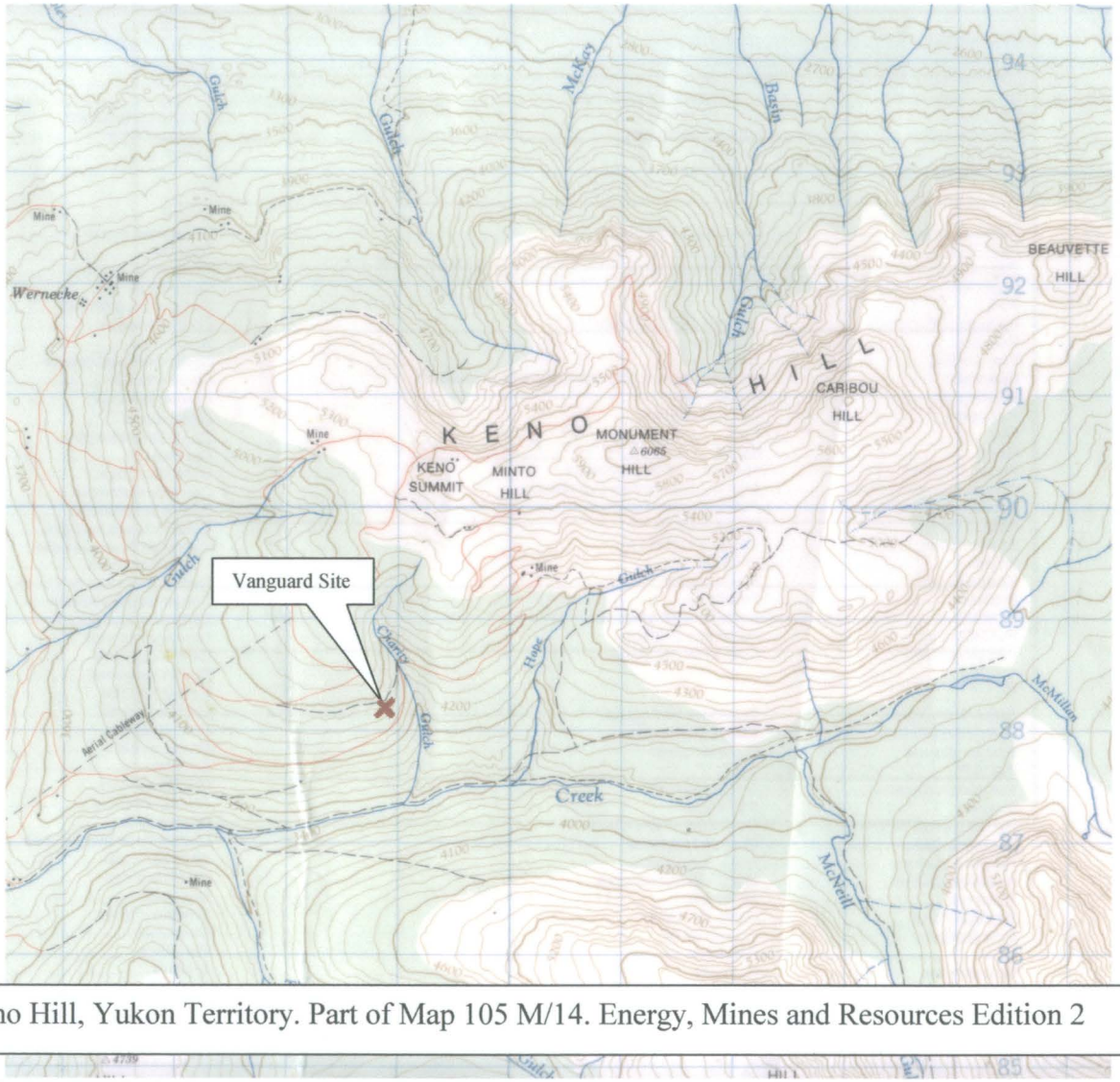


Location and Site access

Vanguard Site is located on the west side of Charity Gulch, on the southern slope of the draw. There is a 500-meter trail leaving the conjunction of the 700 road and Charity Gulch, which leads to the site. This short cat trail would need upgrading on the first 100 meter as it starts directly next to the creek bed, and goes up an incline of approximately 45 degrees, this incline has sloughed badly and is not acceptable for four wheel drive.

We found a second access road to this site that leaves the Keno Sign Post road at approximately 5 kilometres from the start of the road in Keno. The upper access road is in relatively good condition and certainly accessible by two wheel drive to the upper tent frame workings at the Vanguard site. From this point the road drops sharply to the adit over a distance of 100 meters, and would need to be accessed by a small track loader for the removal of debris and metal drums. This upper approach to the site would be the preferred route, as it would cause less environmental disturbance to the surrounding terrain.

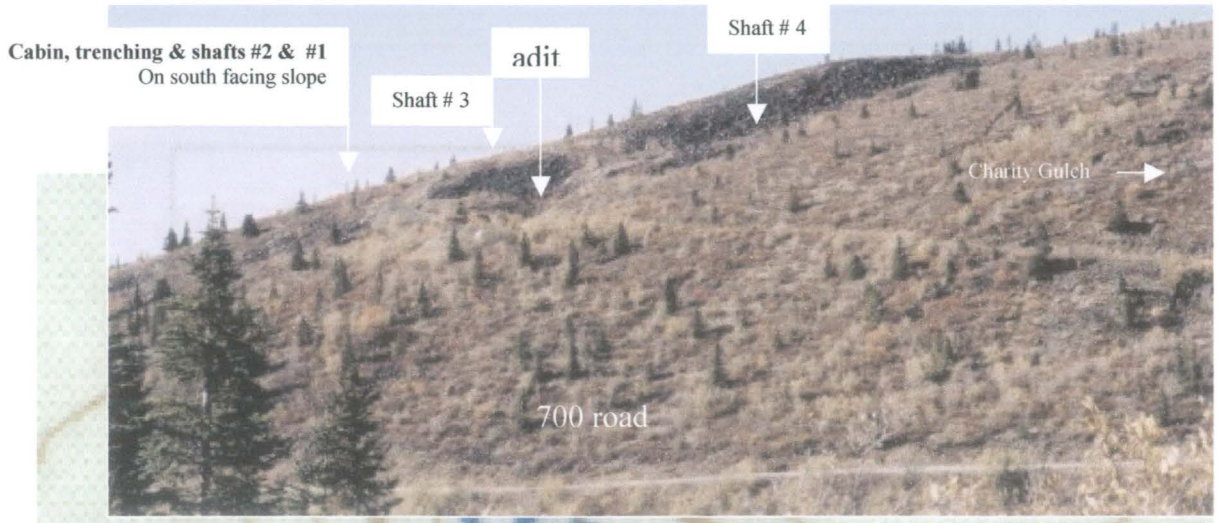
The approximate UTM co-ordinates are 7 088 250m N and 489 300m E (latitude: 63* 55' 22"N and Longitude: 135* 13' 05" W) as taken from Minfile # 105M 010 of the Federal Environmental Baseline Assessment Keno Valley / Dublin Gulch.

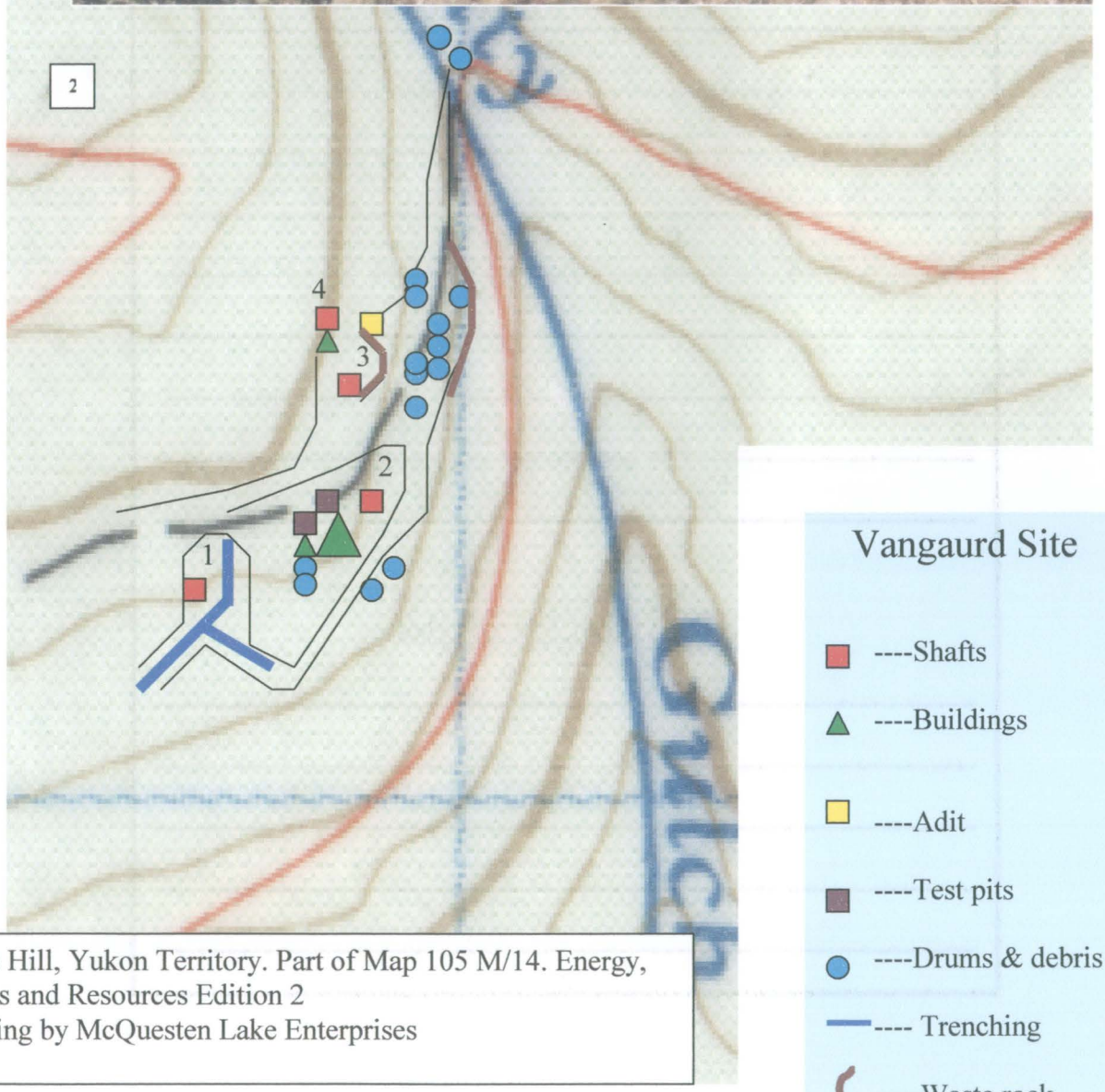


Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found





Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
drawing by McQuesten Lake Enterprises

Vangaurd Site

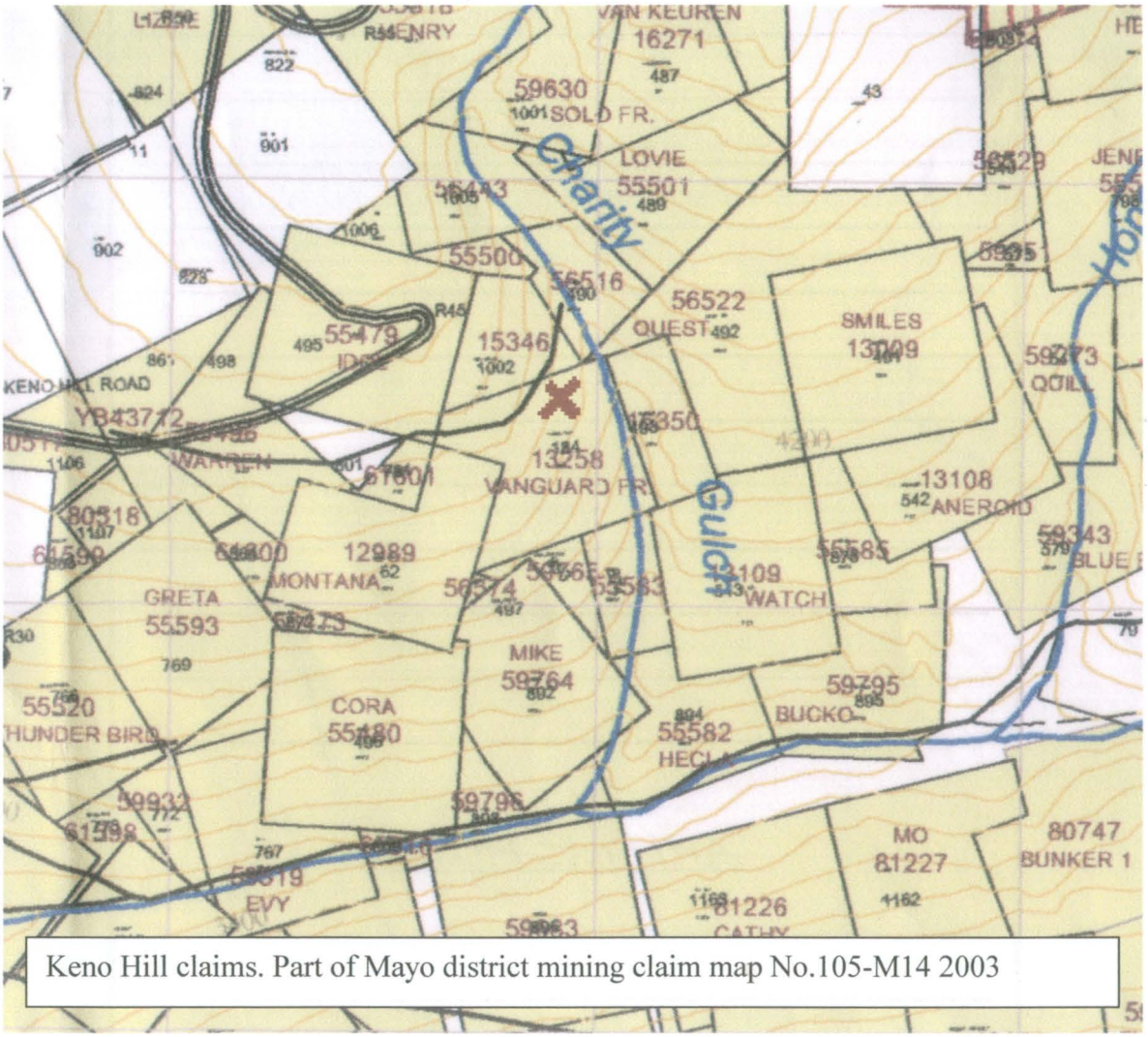
- ----Shafts
- ----Buildings
- ----Adit
- ----Test pits
- ----Drums & debris
- ---- Trenching
- ----Waste rock

Field Notes

Artifacts Found

Historical background

Between 1920 and 1949 a number of shafts were excavated and 11.6 tonnes of ore, grading 8160 g/t silver, and 65% lead was shipped in 1934. In 1948 and 1949 another 31.8 tons of ore grading 10285g/t silver, 51% lead was shipped from the site. In 1962 and 1963 another 91.4 meters of underground crosscutting was done. Minfile # 105 M 010



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Current site tenure/ownership

Springmount Operating Company Ltd currently owns the Vanguard workings. The workings are on the Vanguard fraction claim #13258, and are in good standing until 2023/09/13.

Field Notes

Artifacts Found

Cabin

There has been further deterioration to the building at this site. The log cabin roof has partially blown off since the last inspection. The cabin walls and ridge pole, although weathered are quite stable, the stringers supporting the remaining sod roof are a major hazard as they are rotting through

Due to the moisture the buildings main structure could and should be saved, by pulling down the hazardous sod roof and stabilizing the structure from the elements.

Photos:

Top left, overview of cabin

Top right, inside cabin

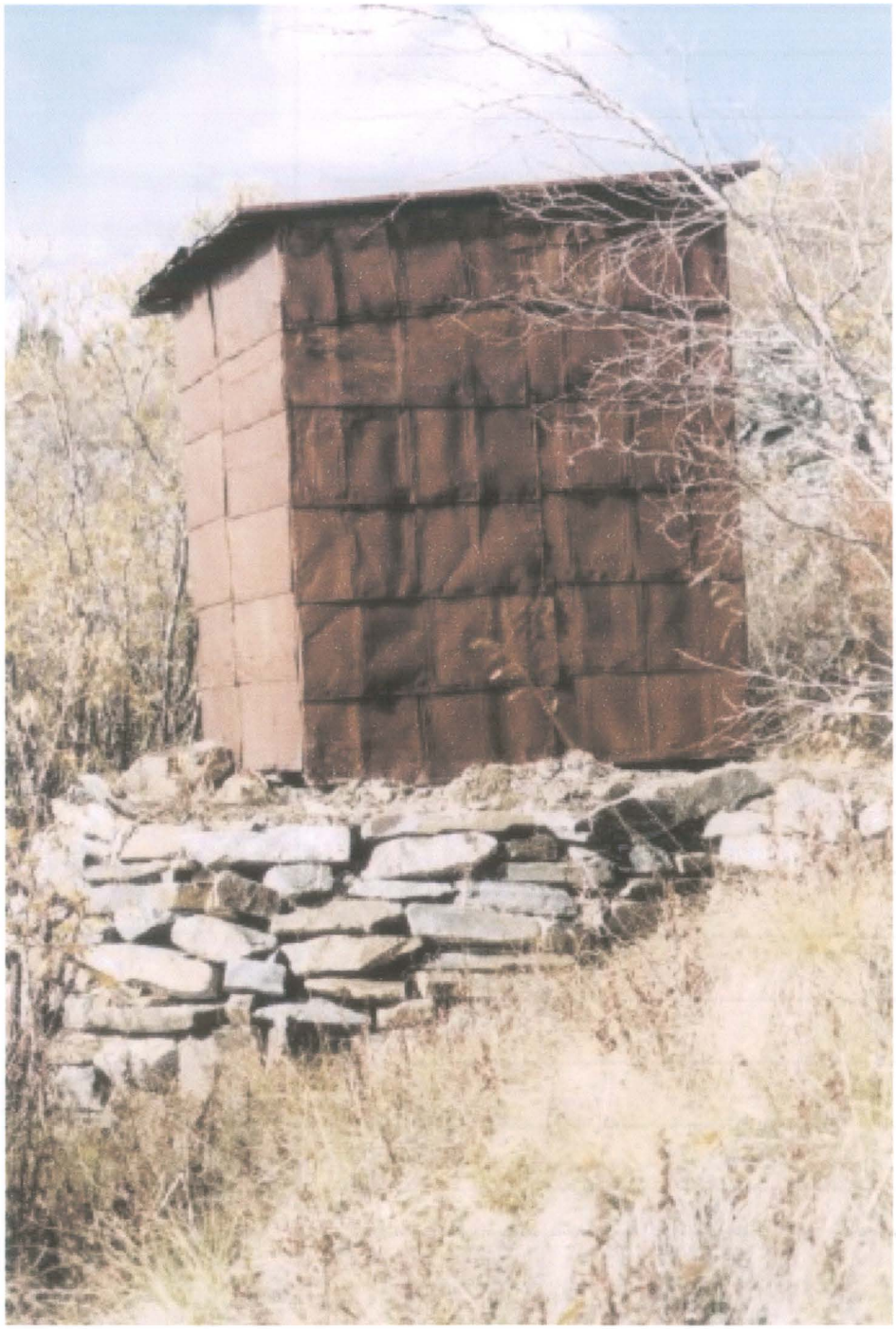
Left, south side of cabin & Entrance

Field Notes

Artifacts Found

Outhouse

The outhouse is in excellent condition, and a great example of some of the early Yukon ingenuity. The stone base rockwork has stood up well along with the tin siding made from the old five gallon pails.

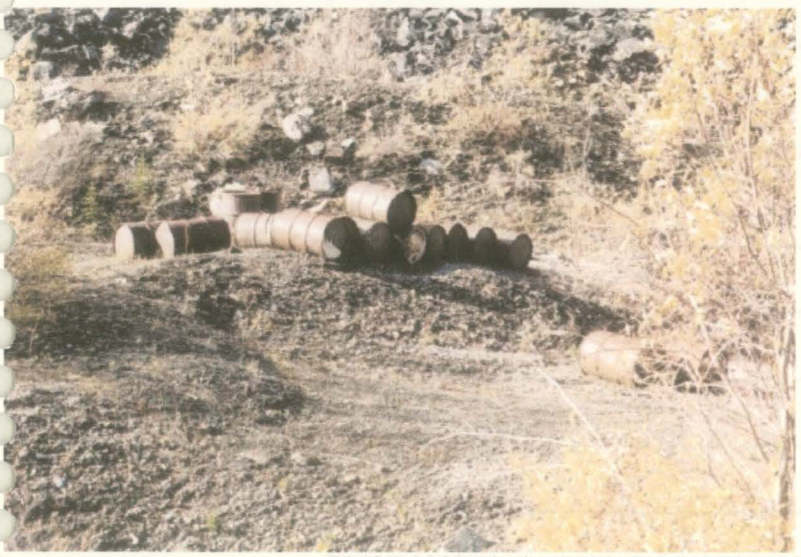


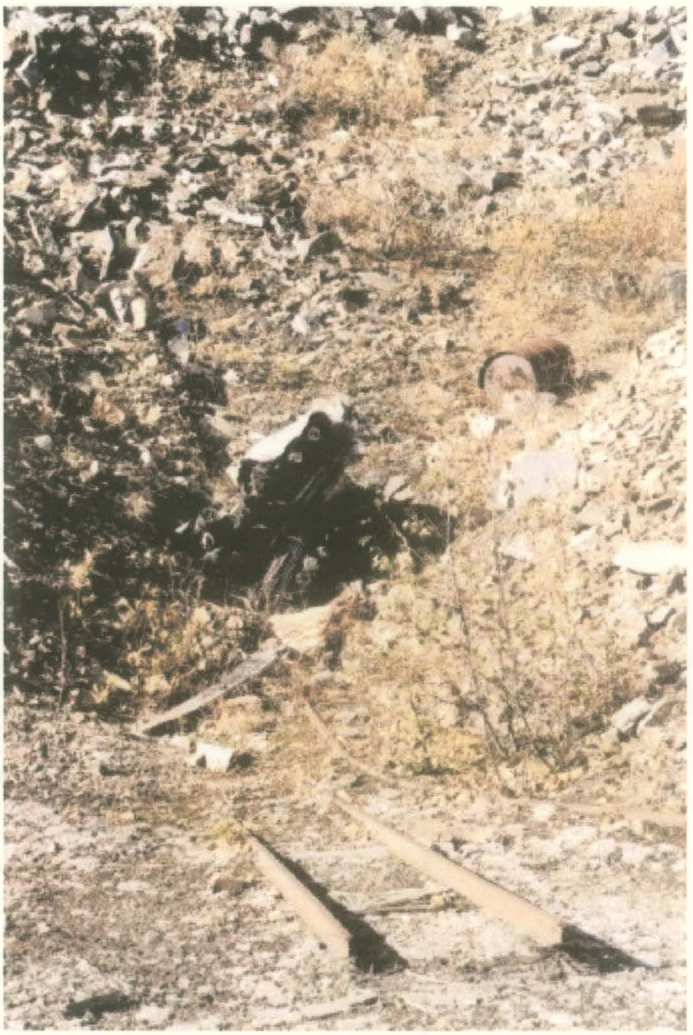
Field Notes

Artifacts Found

Adit

The Vanguard adit is in a state of collapse and has not changed since the last time of inspection, there are drums, steel rail and a mining car on the dumpsite as stated in previous reports. There is no discharge from the adit and with it being collapsed is inaccessible to the general public.





Photos
Above and bottom left, empty fuel drums and debris.

above right, Vanguard adit.

Field Notes

Artifacts Found

There are four shafts associated with this site; they are in various stages of collapse.

Number one shaft, left, has been collapsed by the trenching done on the East side of the cabin, there is cribbing exposed in the side hill cut done by the cat.

Number two shaft right, is located just north and up slope of the cabin, this shaft has collapsed leaving a one-meter depression.

Field Notes

Artifacts Found

Shaft three and four are located near the collapsed tent frame, which is above the adit. The tent frame is in the same state as when last inspected.

Shaft three, right, still has cribbing showing and is collapsed at six feet below the surface.

Shaft four, left is in extremely poor condition, and has deteriorated since the last inspection; The shaft depth is roughly 8ft from the surface.

The top edge of the shaft is very unstable, and dangerous.

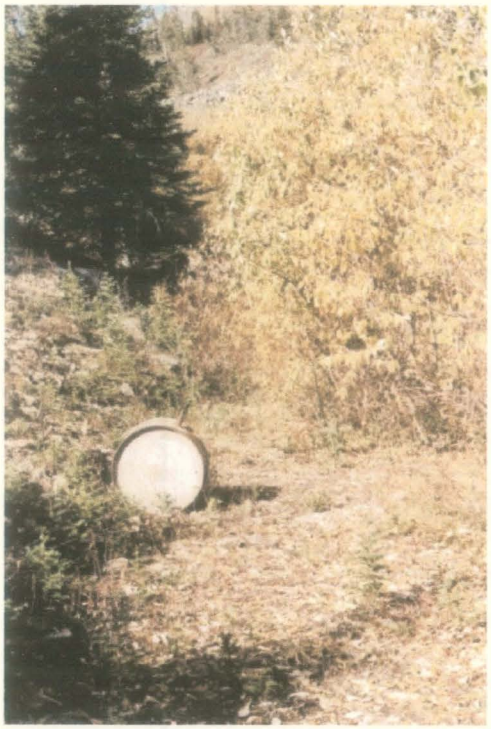
Field Notes

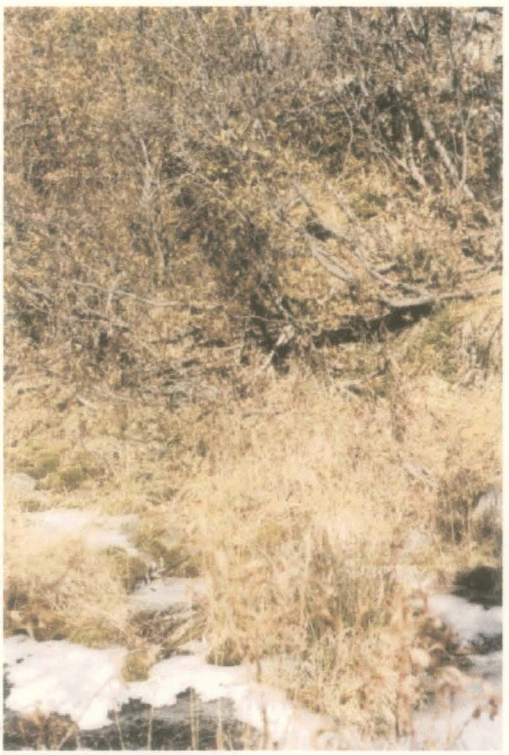
Artifacts Found

Verification of environmental issues as identified in previous studies

There were no environmental concerns identified in the previous study. In our inspection we also did not encounter any hazardous materials. The 53 forty- five-gallon drums did not contain any fuels or toxic material. Six of the drums did contain rock samples.

There was a lot of solid waste material scattered around the site drums, steel rail, pipe, and various wood and small metal debris. We also did not find any water discharge from any of the workings or trenching that had been done. The only potential for contamination would be during spring freshet, as melting water moves over the exposed waste rock piles and trench walls.





Photos: Empty fuel drums and pipe in and near the creek

Field Notes

Artifacts Found

Public Safety

This site is very easily accessed because of the upper road off the signpost road from Keno City.

The most glaring public safety consideration at this site would be the exposed shafts, which are well blended into the surrounding terrain. The edges of shaft number four are very unstable and would warrant backfilling as soon as possible.

The cabin with the partial sod roof still in place presents a danger to tourists who would most certainly explore the inside of the premises.

The third consideration at this site would be to do a limited amount of contouring of some of the trenching that has left large boulders and piles of loose rock balanced precariously on the edge of steep cut banks.

Recommendations for actions at sites from environmental and historical perspectives

We believe this is a site that has some significant historical value due to its easy accessibility and the type of structures that are still intact at the site.

For the main cabin, we feel that what remains of the sod roof should be removed and the whole roof then covered with the tin material that is already on the site. This at a minimum would stabilize the structure for further preservation at a later date.

The outhouse with its stonework should not be moved, it is in a stable state at this time. The site should be cleaned of all of the solid waste that is scattered around the adit and building.

The collapsed tent frame does not seem of any great historical significance, although if Heritage Dept. or the local community felt that it should be restored it would make an addition to the site as a display area.

It would be imperative that the safety issues were dealt with in regard to the shafts and the contouring of the more dangerous trench edges. With a couple of the shafts they could be filled in, in such a way as to leave their presence still visible above the ground. By backfilling them and then restoring some of the stonework that was done at the top of the shaft, one would eliminate any safety considerations while still leaving the historical perspective of the site intact.

Field Notes

Artifacts Found

Cost estimates to implement recommendations

Equipment to be used for reclamation

John Deere track loader with four way bucket, model 350, weight five ton, pads on track are street track low profile, meant for as little disruption to ground surface as possible. There is a detachable backhoe for this unit, with an approximate reach of sixteen feet

Cost per hour with fuel----- $65.00
Cost per hour without fuel- $55.00

International five-ton hyab with sixteen-foot flat deck, the hyab is capable of lifting three and one half ton.

Cost per hour with fuel------$60.00
Cost per hour without fuel-$50.00
Dodge three quarter ton pickup truck for crew transportation.

Cost –48 cents per kilometre

Cost estimate

Two labours at $20.00 per hour X10 hour days X 6 days----------$2400.00

Five-ton hyab for 20 hours X $60.00----------$1200.00

350 track loader for 40 hours X $65.00----------$2600.00

Transportation to a from site 150 km per day X 6 days----------$432.00

Rental of cutting torches $40.00per day X 2days----------$80.00

Ten percent administration fee----------$671.00

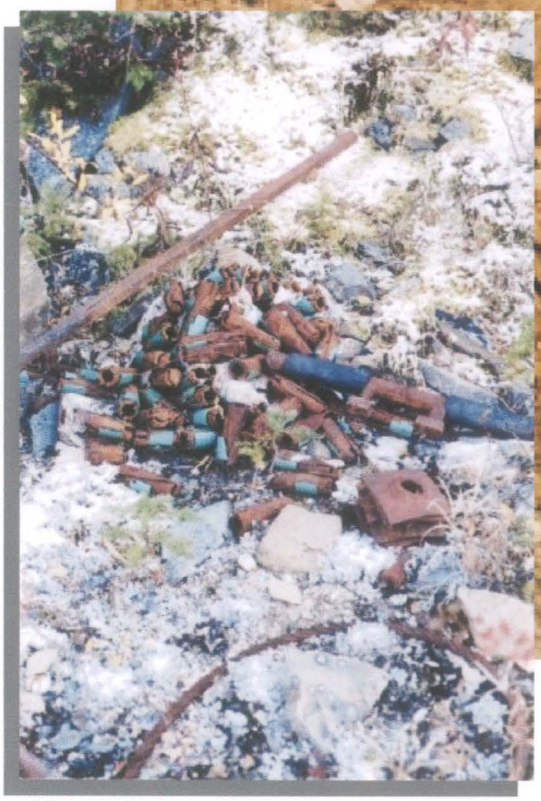
Ten percent contingence fund----------$671.00

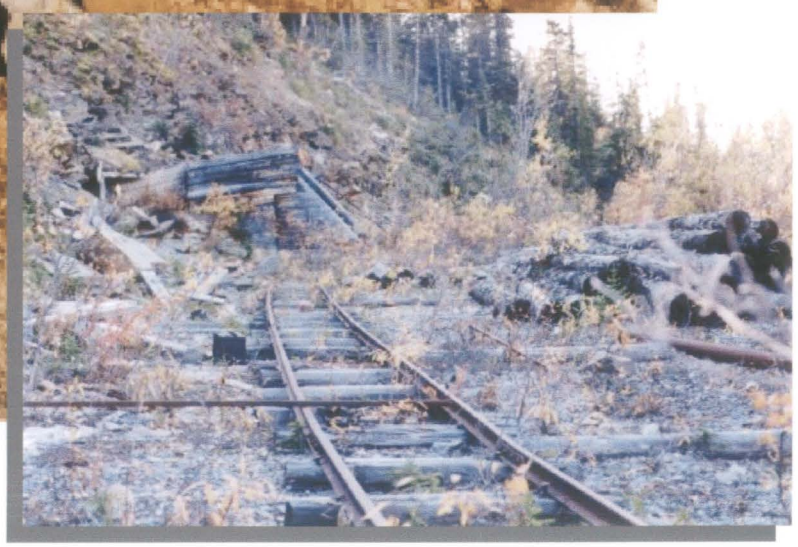
Total	$8054.00
G.S.T.	$563.78
Grand Total	$8617.78

Field Notes

Artifacts Found

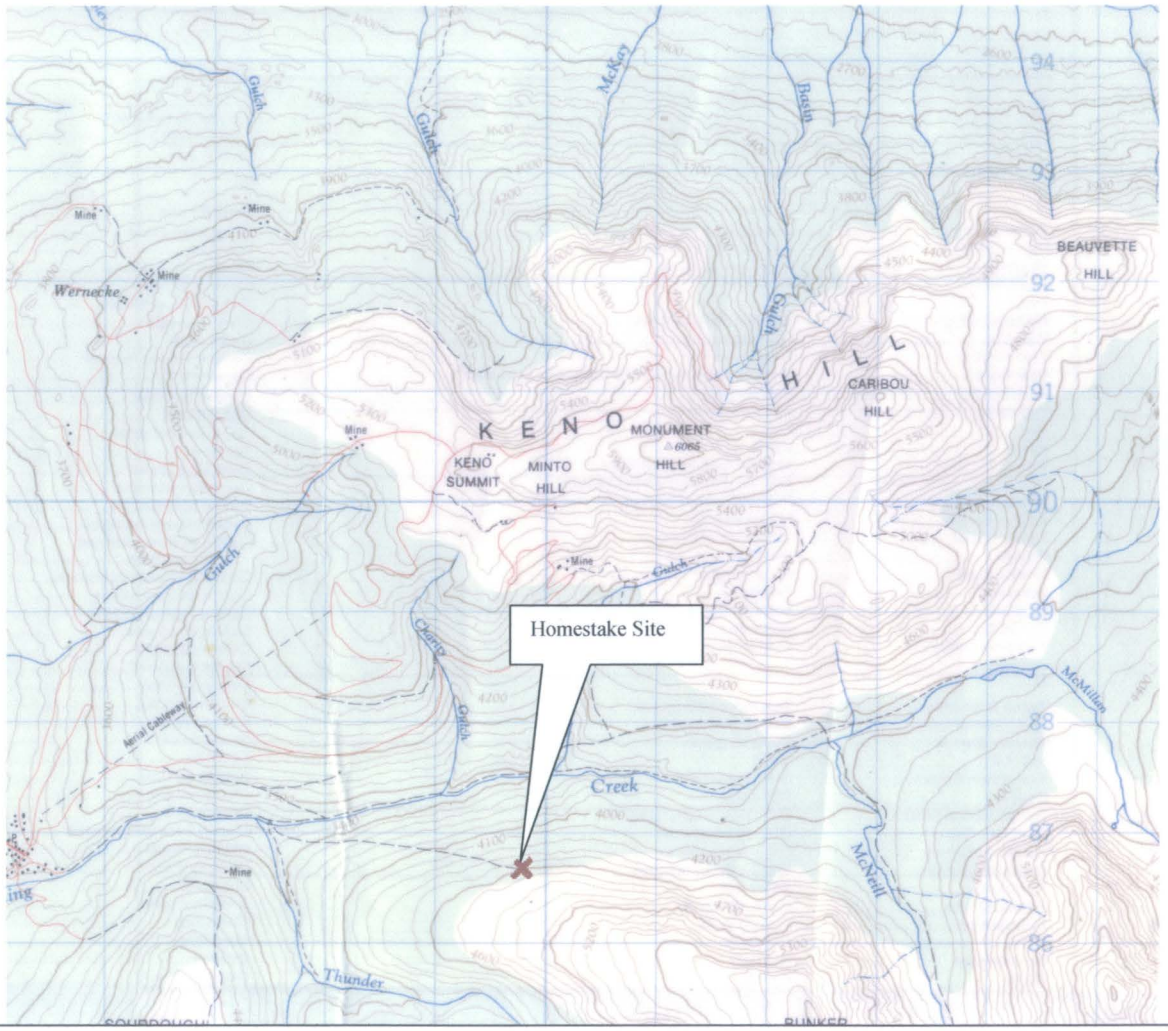
Homestake # 50





Location and Site access

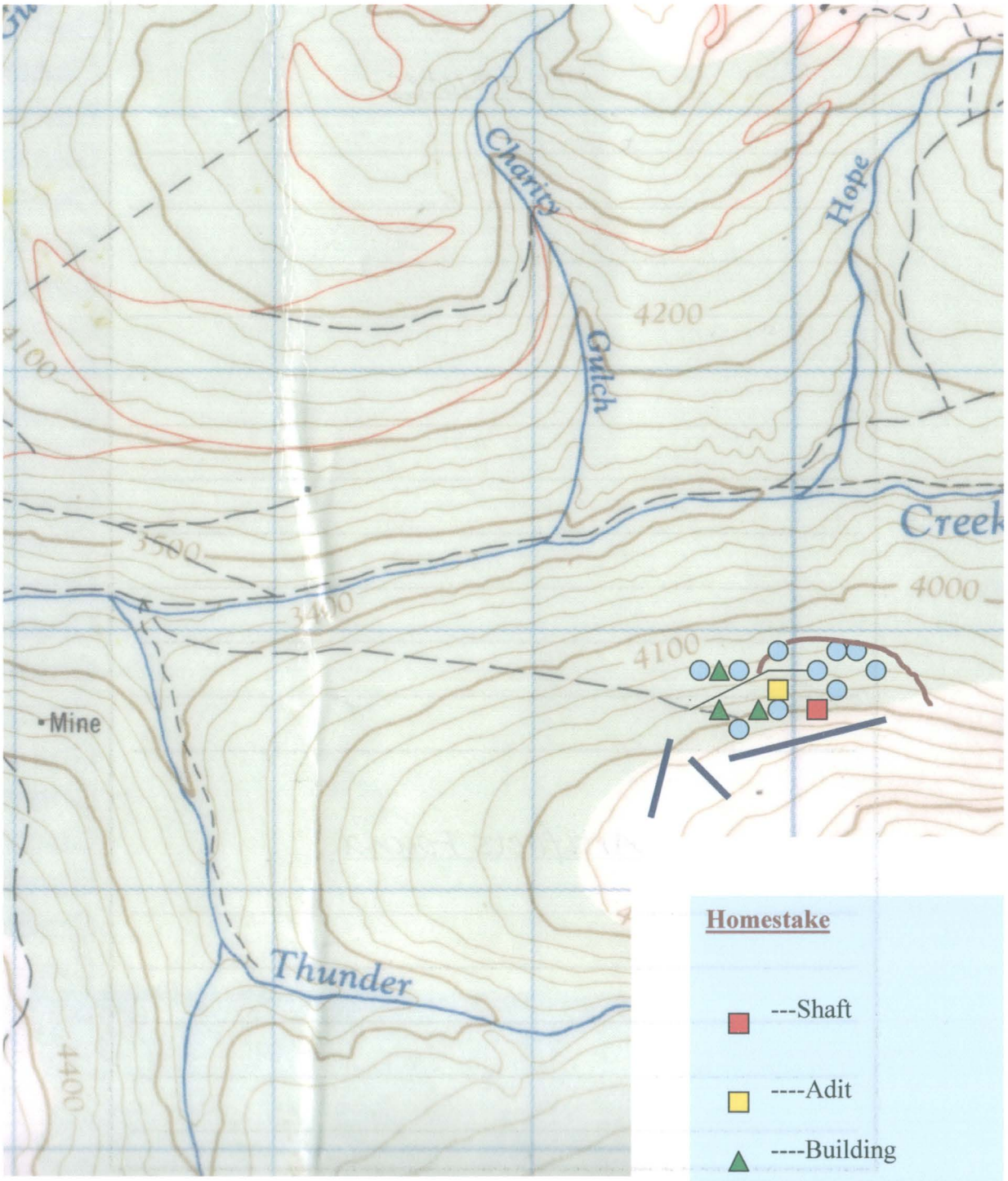
Homestake was developed on the north side of Bunker Hill at an elevation of 1300 meters. Access to the site is possible by foot by following a cat trail that branches off of the Lightening Creek road just past the bridge that crosses that creek. The start of the trail is approximately 300meters to the left past the bridge as you are entering the Thunder Gulch draw. The trail is approximately 2.5 km long with the Homestake site located at the end of the trail. The access trail is moderately over grown with alder and willow, with a two-foot wide path cut down the centre, this foot path was established for use by tourists and is part of the Keno Hill hiking trail system.



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found



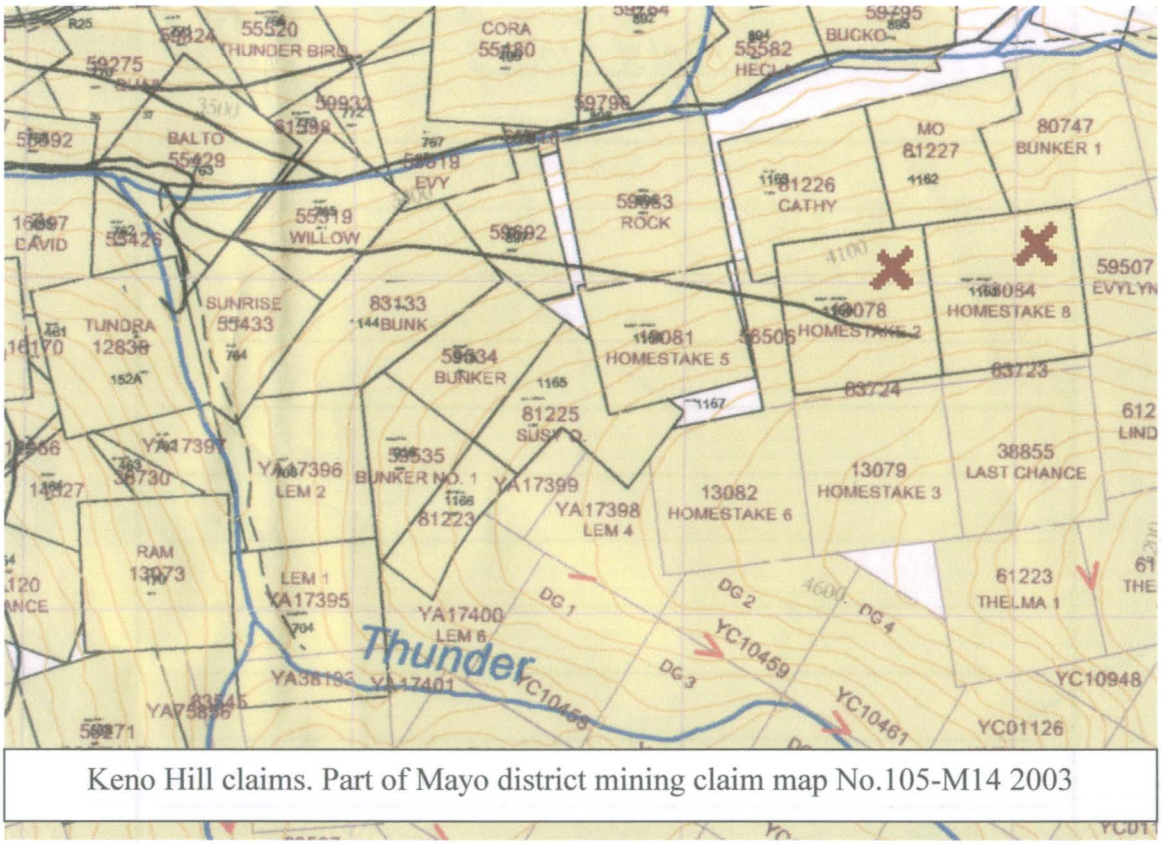
Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
Drawing by McQuesten Lake Enterprises

Field Notes

Artifacts Found

Current site tenure/ownership

Homestake 2 grant number 13078 and Homestake 8 grant number 13084 is registered to Eddie and Teresa Eng. Expiry date 2004/ 12/ 19.



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Historical background

Homestake was first established between 1928 and 1931 during which time a 26.8-meter shaft was excavated, from this 38.4m of underground was explored. Extensive bulldozer trenching was conducted from 1962 to 1964 and then again in 1966 to 1974. During the period between 1967 and 1979, 107m of drifting was completed on a single adit level. Minfile # 105M011

The review of existing studies, confirmation and/ or update of current physical conditions

The workings at the Homestake site consist of four trenches, one adit, two waste rock piles and a collapsed shaft. In the previous study it was felt the shaft had been destroyed by the trenching, but in this later inspection the shaft was found approximately 50 meters west of the building structures, it is at the head of trench #4 in conjunction with the cat trail that leads on to the collapsed tent frame.

Field Notes

Artifacts Found

Photo: above, collapsed shaft

Trench #4 is located directly upslope of the adit 100m. The south sloping wall of this trench shows some instability as large boulders have broken loose and settle in the trench bottom. The walls of trenches 1,2, and 3, which are south, and upslope of trench #4 seem to be stable. There is no debris in trenches 2, 3, and 4, but located at the south-western end of trench #1 is a collapsed tent frame with assorted metal debris and one 45-gallon drum.

Photos: trenching

Field Notes

Artifacts Found

The adit, below, is located down slope of the trenching on the north side of the property. The adit portal is in a state of collapse and some of the main timbers have broken above the entrance, at the time of our inspection the adit was accessible, as the interior door was broken open. There was also a steady discharge from the adit with a flow of approximately 0.7 litres per sec, roughly ten gallons a minute.

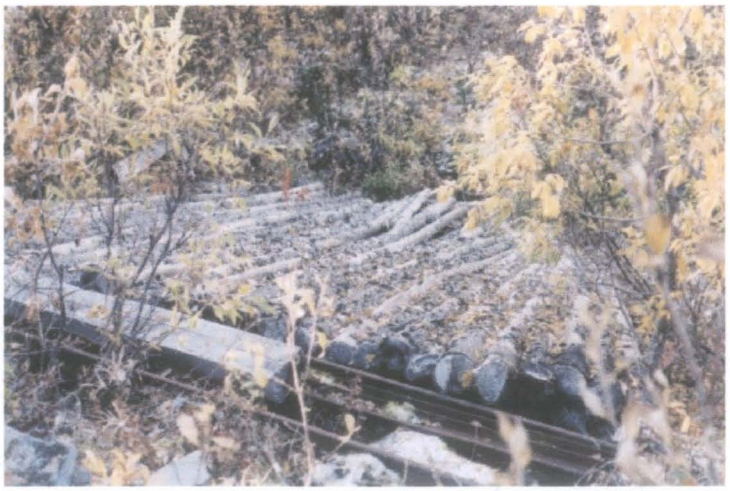


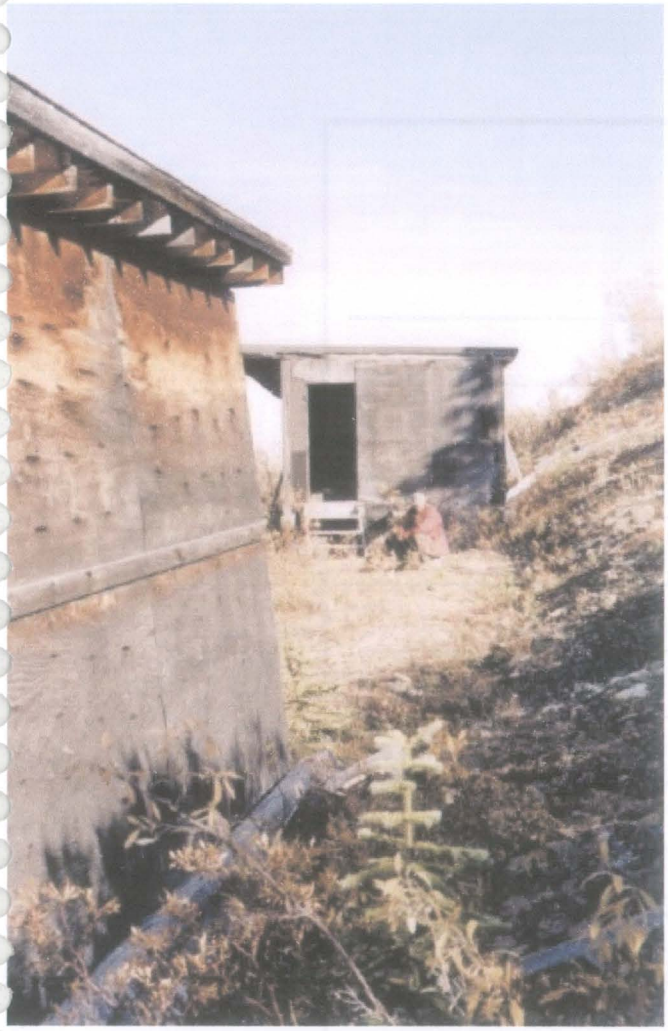
Photo: above, waste dump

There is a flat fifty by one hundred meter dump that extends to the east of the adit.

There is numerous amount of metal and wood debris scattered over the surface, approximately 300 feet small gauge rail, steel pipe, metal tent frame, rebar, drill steel and car batteries. The rail system is still intact along with a couple of old mining cars.

Field Notes

Artifacts Found



There are two frame buildings and one collapsed cabin, associated with this site. The two-frame building is situated at the end of the upper road that accesses the trench workings. The first building is a 2 X 8 frame trailer that is sheeted in with plywood; it is approximately 30 feet long by 12 feet wide. The building was probably used as sleeping quarters as there are four old metal bed frames inside along with more domestic debris.

The second building is approximately 75 meters east and is also of frame construction, the interior has one bed frame and a table.

Field Notes

Artifacts Found

On the lower road that accesses the adit we found a collapsed cabin, which is beyond salvation. This was probably the original building built when the site was established. There is a small barrel cache at this site of seven 45-gallon drums. The building had been roofed with heavy corrugated tin, which now is scattered over a small area; along with this is the standard debris; bed frame, wooden table, various piles of wire and tin cans. About 50 feet down slope from the cabin is a refuse dump.

Verification of environmental issues as identified in previous studies

As in the previous study we did not find any contaminants that were of an environmental concern, other than the batteries at the adit site and the concern that metals could possibly leach from the exposed mineralized material in the trenches.

Public safety considerations

The major pubic concern at this site is the accessibility to the adit, this hazard is highlighted by the fact that the trail to the site has been groomed for access by the public and is part of the Keno City hiking trail system.
The partially collapsed shaft at the head of #4 trench also poses a pubic safety concern, although it has sloughed in, there is still potential for further deterioration. We would recommend that both the shaft and the adit be permanently closed.

Field Notes

Artifacts Found

Recommendations for actions at sites from environmental and historical perspectives

From a historical perspective the only site on this property, which is of interest, is the original log frame structure located on the lower road to the adit. The building is beyond repair, but there is a high potential to recover old artifactes from the site during a clean up phase. Part of the structure could be left for historical identification.

The rest of the structures are of a modern frame construction, and do not exhibit any major historical significance. Although the trail to this site is part of the Keno City hiking trail, we do not recommend further tourist oriented development at this site due to the current staking and development activity in the area, and also of coarse there is little visible historical values to view.

Environmentally we recommend that the shaft and the open adit's access be secured so there is no danger to the general public. The dumpsite at the adit should be cleaned of all loose debris, and discarded electrical batteries. The two frame structures on the upper road landing could be left intact as they are in a relatively stable state, we suggest that the garbage and hard refuse be cleaned.

The log/frame structure on the lower road could be cleaned of all barrels and refuse. Dumpsites are an attraction to visitors though wildlife walking through the debris could step on shards of glass and rusty cans. We feel the dump sites should be cleaned and recover any artifactes for future display.

Field Notes

Artifacts Found

Cost estimates to implement recommendations

Equipment to be used for reclamation

John Deere track loader with four way bucket, model 350, weight five ton, pads on track are street track low profile, meant for as little disruption to ground surface as possible. There is a detachable backhoe for this unit, with an approximate reach of sixteen feet

Cost per hour with fuel----- $65.00
Cost per hour without fuel- $55.00

International five-ton hyab with sixteen-foot flat deck, the hyab is capable of lifting three and one half ton.

Cost per hour with fuel------$60.00
Cost per hour without fuel-$50.00

Dodge three quarter ton pickup truck for crew transportation.

Cost would be .48 cents per kilometre.

This would be the primary equipment and rates used for the clean up of sites, if heavier equipment is needed it will be acquired on a need to hire bases.
We estimate seven days to completely access the sit clean and remove all debris and safety issues, and delivers any salvageable artefacts to the appropriate departments.
The site cleanup will require two workers working 10-hour days.

Sixteen hours work with hyab, two loads garbage to Keno dump----------$960.00
Ten hours mob and de-mob of equipment----------$600.00
Twenty hours with small loader----------$1300.00
Two labours for seven days----------$2800.00
Transportation to and from site, approximately 140 km round trip x 7 days---$490.00
Administration fee----------$771.00
Contingency -------- ----------$1000.00

Cost $7921.00
G.S.T.---------$554.47
TOTAL-------$8475.47

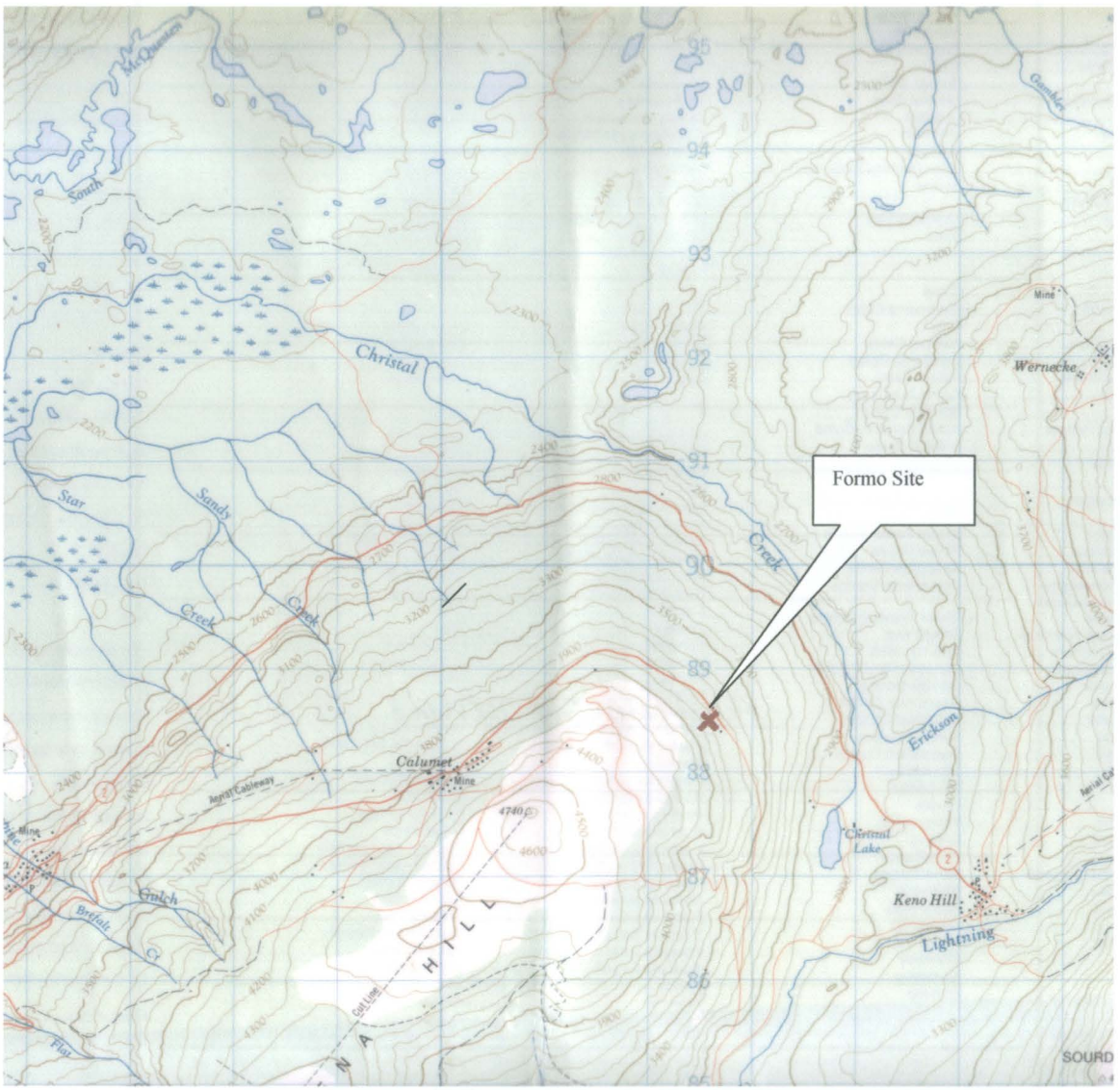
Field Notes

Artifacts Found

Formo Site #57

Location and Site access

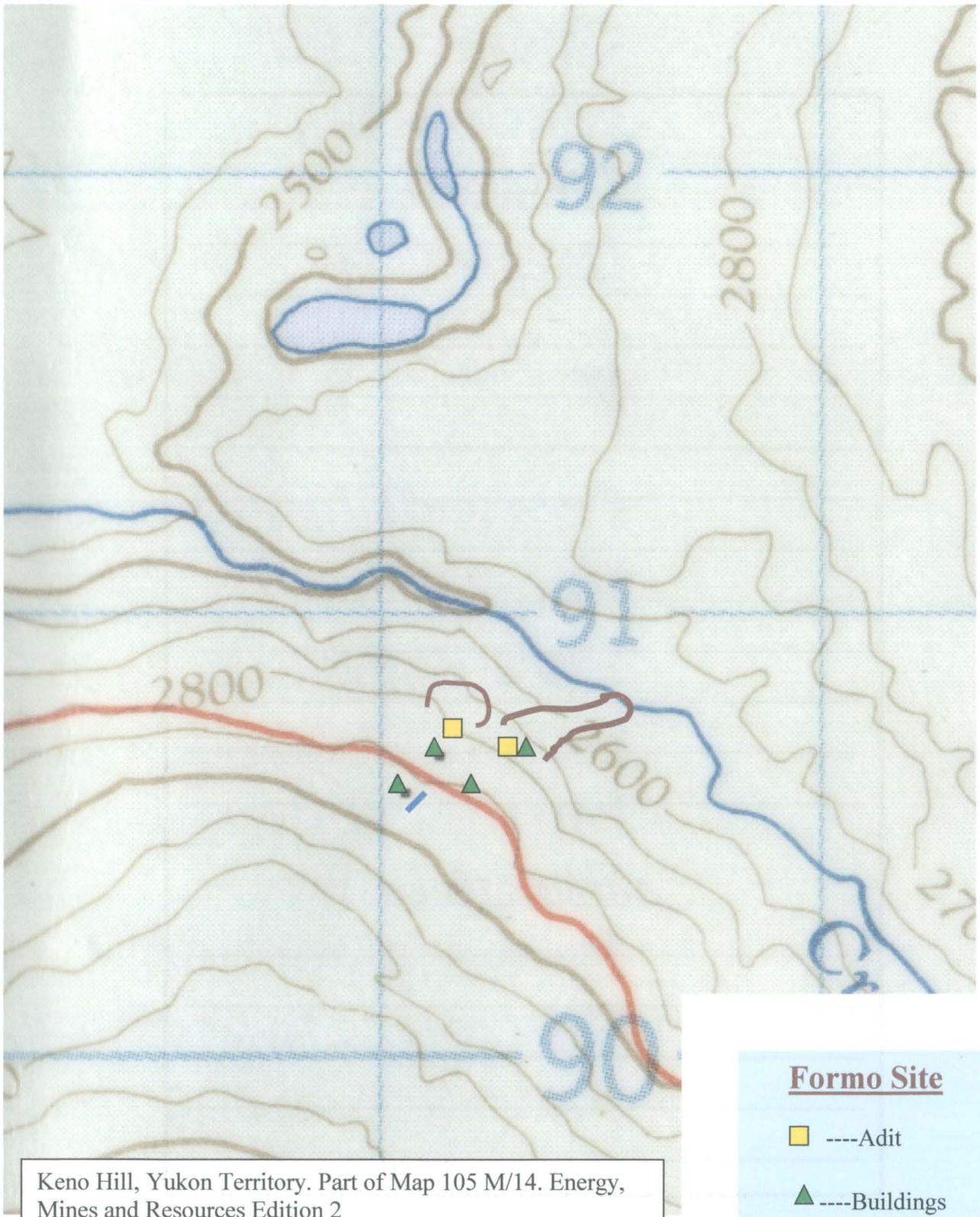
The Formo site is situated on both sides of the highway approximately 7 km east of Elsa. The upper workings are directly off of the main highway on the upper slope side. The lower working is accessed via an extremely over grown road off of the main highway. The adit are approximately 250 meters below the highway, the UTM co ordinates are given as 7090442.500m N by 481904.984m E.



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
Drawing by McQuesten Lake Enterprises

Field Notes

Artifacts Found

Historical background

The original workings were done in 1929 to 1931 and consisted of four short shafts, from which 36.3 tonnes of ore were taken and shipped for milling. Later in 1947 another 54.4 tons of ore were taken from the site. Then in 1952 and 53, 1219.2 m of drifting and crosscutting was done, along with minor raising and shelf sinking.
The workings were expanded in 1961, when 13.4 tons of ore were produced. In 1962,thirteen x-ray holes, at a depth of 205.1m were shot into the hillside. IN 1974 and 75, more exploration and trenching were done at the site. Then in 1980-81, the 2700 level adit was rehabilitated and the southerly extension was explored, from this work 71.7 tons of ore were shipped in 1983.
Minfile 105M018

Current site tenure/ownership

The Formo site is currently on active claims, which are owned by Southern Rio Recourses Ltd. These claims are in good standing until 2022.

The review of existing studies, confirmation and/ or update of current physical conditions

In the inspection of the Formo site we found only slight deterioration of the adit portals in comparison to the 1999 environmental baseline assessment.
The wooden frame core shack on the upper workings is made of heavy plank construction and is in stable situation. There is some fibreglass insulation in the walls that was covered with asbestos tarpaper.

Field Notes

Artifacts Found

Photo: core storage inside of the upper building

There are six 45-gallon drums along with some minor metal debris scattered in the bush around this building.

The trenching that was done at this site has re-vegetate well and does not warrant any disturbance, the trenches are contoured and are not out of character with the natural terrain in the area.
Trenching just above the highway is steep. Rain collects in the trenching and drains across the highway.

Field Notes

Artifacts Found

Below the highway by about 30 meters is a frame outhouse (cover page), the structure is in stable condition with a small amount of debris scattered around it, 3 forty-five gallon drums and some small pipe. The old cat road that connects the residence and adit workings is extremely over grown with alder.

We encountered two stockpiles of mine rail on the access road to the lower adit; the first pile had 30 pieces, the second 20 pieces of rail.

The cabin part way down is structurally sound (above photo)and built with heavy plank material approximately 20 X 25 feet square. The middle and lower adit's both have wooden enclosures built over them, these are both in a state of disrepair and do not stop access to the adit. The lower adit is in a very precarious state of collapse, the timbers have rotted and partially deteriorated.

Field Notes

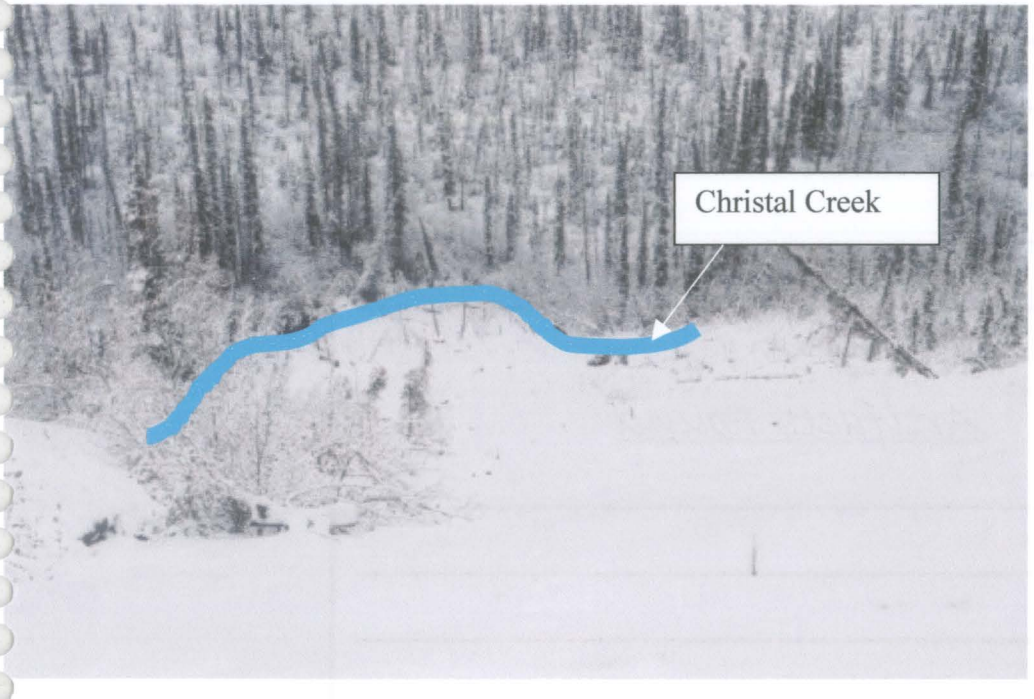
Artifacts Found

Verification of environmental issues as identified in previous studies

There were no contaminants of concern noted in any of the previous studies, although in the study they did note the asbestos tarpaper on the core shack.

We feel this does constitute a hazard to human health and warrants remediation. The other issue we feel that deserves attention is the dumpsite at the lower adit. This dumpsite is consistently sloughing down directly into Crystal Creek; it has invaded the creek bed and forced the creek to be diverted directly at the base of the dumpsite.

In reviewing the results of the waste rock sampling, the results indicate a high potential for hazard to the surrounding waters of Christal creek.



In the 1999 Environmental Baseline Assessment the results showed high levels of acid generating waste rock over the entire dumps surfaces.

Given the fact that the lower dump extends directly into the creek, the water drainage every spring or even when it rains heavily, causes the deterioration of the dump surface with the runoff being discharged into the creek. This can be visibly seen by the run off trenches that have been cut into the dump face. Over time the acid generating potential of the waste will cause sufficient acid drainage at this site to detrimentally impact Christal creek, and therefore remediation actions should be considered at this site.

Field Notes

Artifacts Found

Public safety considerations

Clean up and closure of the two adits on this site would be the primary consideration. Removal of the asbestos tarpaper at the upper core shack is also recommended.

Recommendations for actions at sites from environmental and historical perspectives

From a historical perspective we do not feel this site to be a major consideration for preservation. All the buildings are of frame ruff cut material of a modern vintage. The access to this site is in a very dangerous location in relation to the main highway, as it exits on a blind corner were there is very little site distance. Salvageable lumber should be removed for future exhibit displays. Drainage from the upper workings should be tested.

Environmentally the main issue at this site is the diversion of Christal Creek by the toe of the waste dump at the lower adit. At a minimum we would recommend the contouring of the dump surface so as to redirect the spring run off from further washing the exposed waste material into the creek. This could be accomplished at a minimal cost by back sloping the dump surface and allow the run off to exit on either corner of the dump. At these points the drainage is into natural vegetation and a stable non-waste hillside.

All the loose debris and asbestos tarpaper should be removed from the site along with the hard materials i.e.; rail, drums, and water tanks.

The upper core shack, outhouse and residence are still structurally sound at this time, and do not pose a major safety concern, the upper core shed is preserving core samples, and is important to maintain for its geological information. We would leave these three buildings intact at this time.

Field Notes

Artifacts Found

Cost estimates to implement recommendations

Given this sites location and the degree of overgrowth on the access roads to the adits we estimate there would be one days work for a D-7. The small debris could then be removed to a loading station on the edge of the highway by a small loader.
The D-7 could contour the dump surface at the lower site as part of the 10-hour day. As it would be more cost effective since it is on site anyway.

Cost: $95.00 per hour X 10 hours----------$950.00
Mob and de-mob of D-7----------$400.00

Two labours at $20.00 per hour for three days----------$1200.00

John Deere 350
Cost: $65.00 per hour X 20 hours----------$1300.00
Mob and demob----------$200.00

Use of hyab for total project clean-up 6 hours X $55.00----------$330.00

Mileage for travel 48 kilometres per day X 5 days at .48 per km.----------$115.20

Administration fee----------$200.00

Contingency ----------$1000.00

$5695.00
G.S.T.--------$398.65

Total----------$6093.65

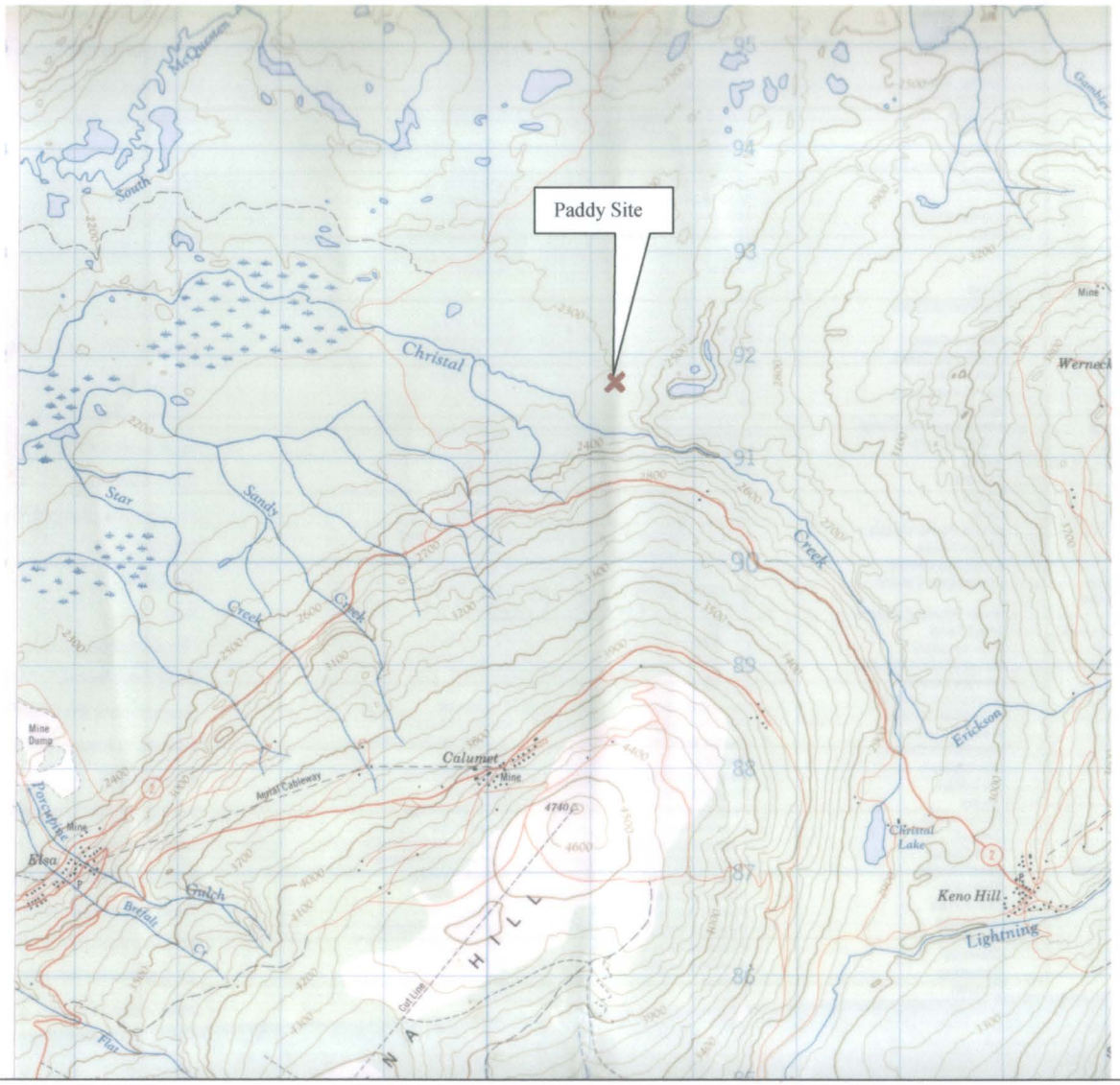
Field Notes

Artifacts Found

Paddy Site # 58

Location and Site access

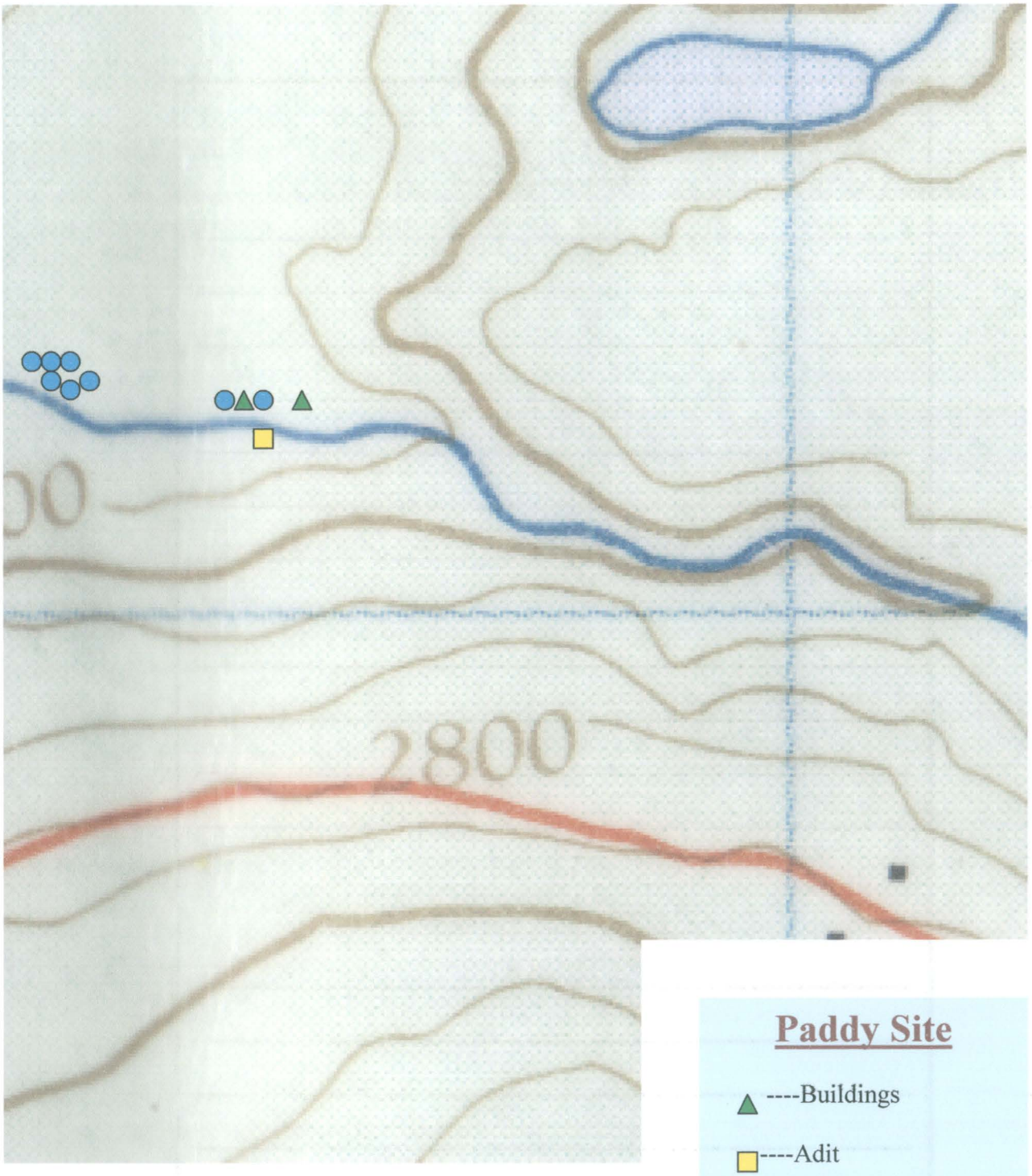
The Paddy site access is off of the Hansen McQuesten Lake road, which joins the Silver Trail Highway 5 km east of the village of Elsa. Access off of the Hansen lake road is approximately at the 3 km point, were the Highways dept. has a large gravel/ crush pit. The road loops around the crush pile and then enters a barrel storage area. At this point one road carries on straight, this going to the adit, while there is a second road that exits the storage area to the right and takes one to the upper workings and trenching. This upper road travels along the top of the canyon and ends just above the adit. The lower road crosses Crystal Creek at a washed out bridge and then follows the creek for approx. 2km before crossing Crystal Creek again just before the adit. This site can only be accessed as far as the barrel storage area; a trench has been placed across the lower road to the adit to restrict public access. The UTM co-ordinates are 7091342.832m N and 481450.112m E. as referenced from Minfile# 105M 020



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found



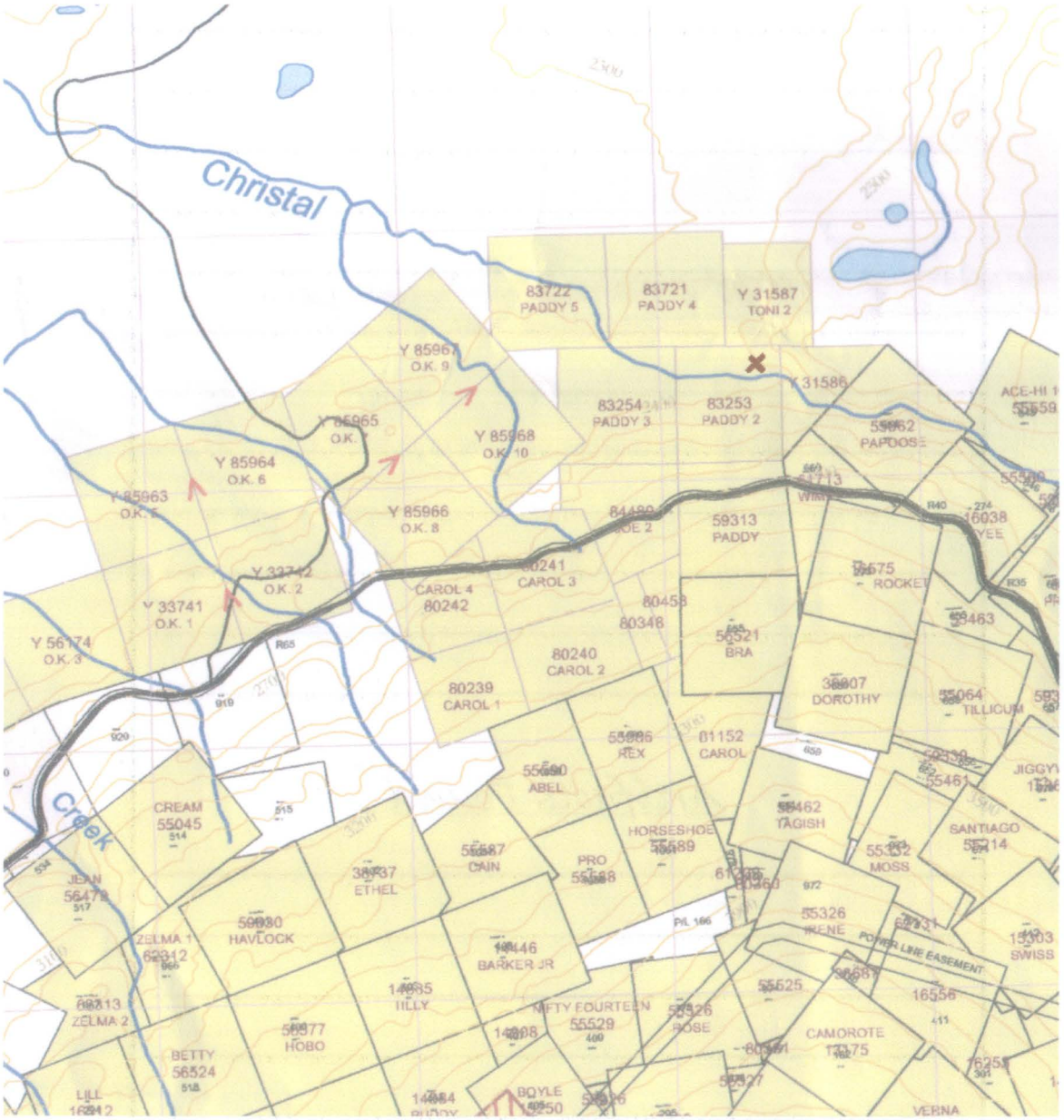
Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
drawing by McQuesten Lake Enterprises

Field Notes

Artifacts Found

Current site tenure/ownership

All of the current workings and materials are confined to two claims, the Paddy #2-83253 and the Paddy #3-83254. Both these claims are in good standing until 2005/02/01 and are currently held by Springmount Operating Company Ltd.



Field Notes

Artifacts Found

The review of existing studies, confirmation and/ or update of current physical conditions

In re-assessing this site we did not find any major changes since the last time it was inspected. All waste material and drums are as stated in the Yukon Min file report#105 M 20. The only changes we noted were the further deterioration of the adit portal, which has partially collapsed on one side and the storage shed was no longer locked. There was no material or contaminants inside of this shed other than some waste cardboard boxes.

Photos: above, side view of adit.

Right, front view of adit

Field Notes

Artifacts Found

The beaver dam is still in place just above the second of the two washed out bridge crossings.

The wooden cache, two mining cars and rail are still stockpiled below the adit workings, on the lower road.

Field Notes

Artifacts Found

Verification of environmental issues as identified in previous studies

We did not find any major environmental issues at this site, as stated in previous studies there were no solid waste dumps, fuel storage, electrical equipment, or milling and process infrastructure. We found no potential contaminates of concern other than the waste rock piles, these were sampled in the previous study and found to be of low potential for acid generation.

Photos: right, empty fuel drums. Left, storage shed

Public safety considerations

The major safety concern with this site is the open adit that is in a partial state of collapse. It is still accessible although half of the portal timbering has collapsed; this is an extremely dangerous concern and should be addressed as soon as possible.

Recommendations for actions at sites from environmental and historical perspectives

From a historical perspective we do not feel there to be any structures or artifactes worth noting though the storage shed could be salvaged and used for storage.

The major concern as stated earlier is the safety issue with the adit. In this case we feel that what's left of the adit portal could be burnt, and then back fill the open adit to seal it from access.
The steel rail and ore cars could be removed relatively easily following the lower road, the plywood structures could be burnt or removed if they are thought to be of some value to the community.

Field Notes

Artifacts Found

The forty-five gallon drums located at the first landing could be removed with little effort. We did not find any of the upper trenches to be a safety issue.

Cost estimates to implement recommendations

Equipment to be used for reclamation

John Deere track loader with four way bucket, model 350, weight five ton, pads on track are street track low profile, meant for as little disruption to ground surface as possible. There is a detachable backhoe for this unit, with an approximate reach of sixteen feet

Cost per hour with fuel----- $65.00
Cost per hour without fuel- $55.00

International five-ton hyab with sixteen-foot flat deck, the hyab is capable of lifting three and one half ton.

Cost per hour with fuel------$60.00
Cost per hour without fuel--$50.00

Dodge three quarter ton pickup truck for crew transportation.

Cost –48 cents per kilometre

Two labours for three 12-hour days----------$1440.00

350 track loader for 24 hours----------$1560.00

Five-ton hyab truck for 8 hours----------$480.00

10% administration fee----------$348.00

Contingency ----------$1000.00

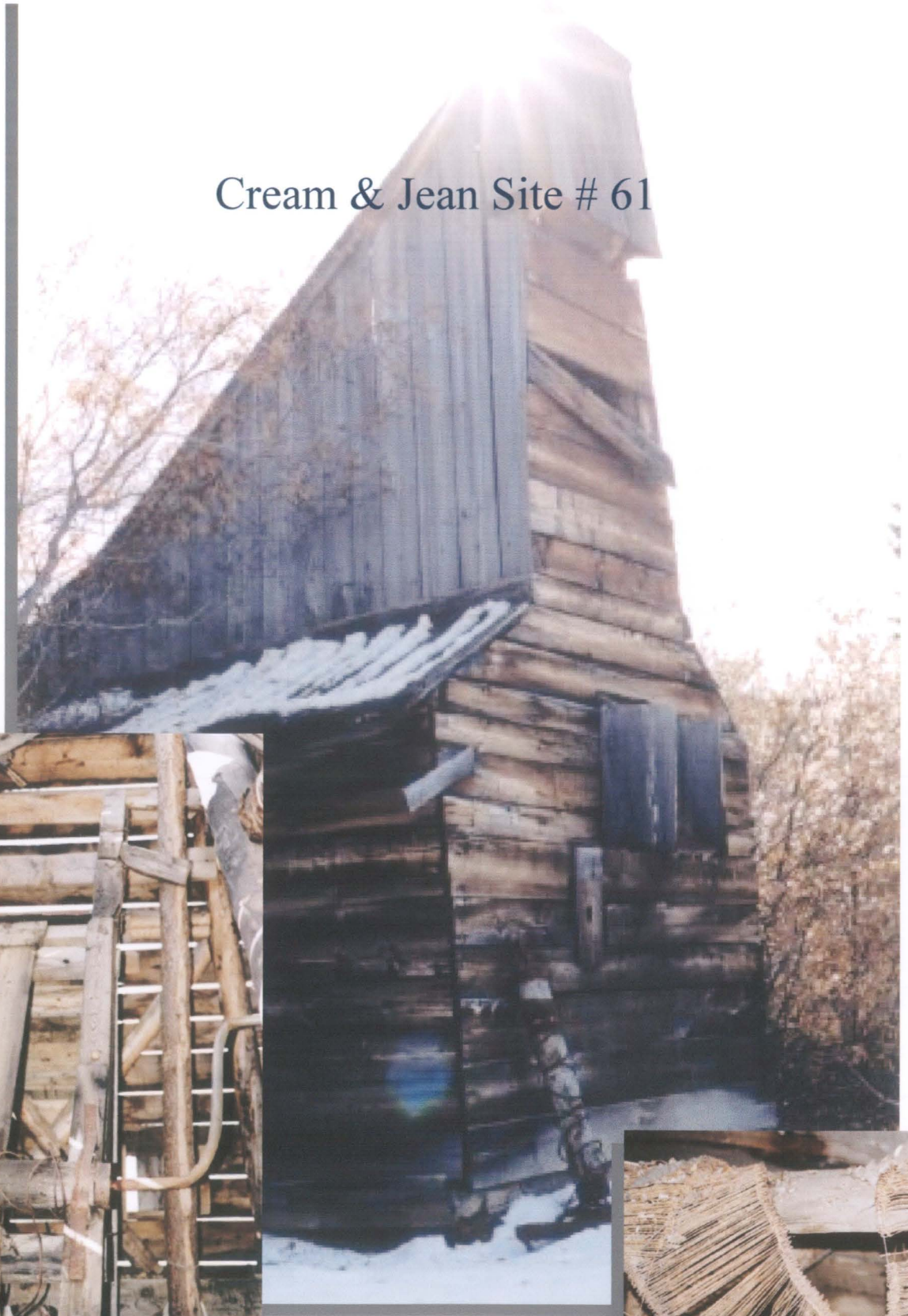
Total $4828.00
G.S.T. $337.96

Grand Total--------$5165.96

Field Notes

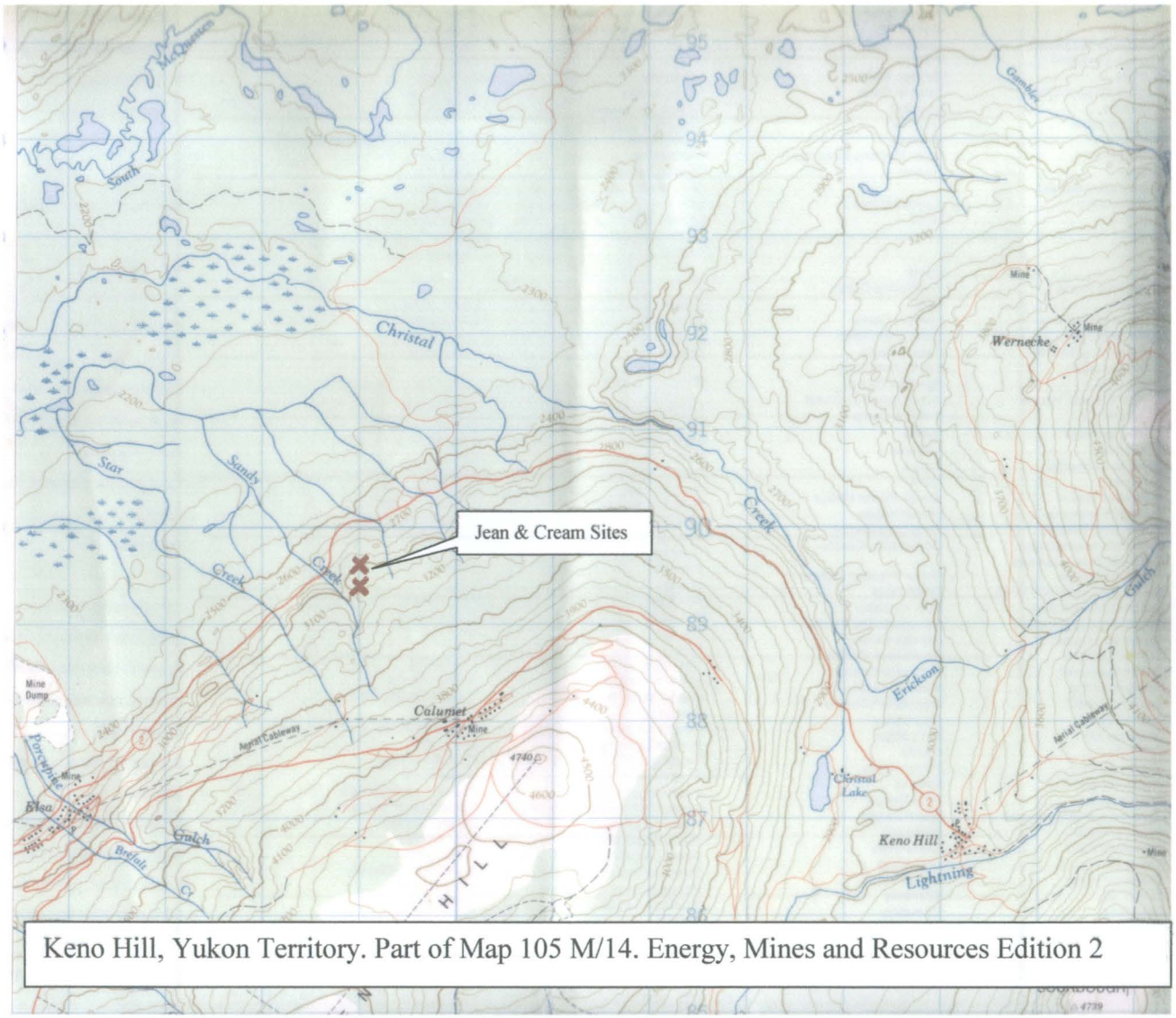
Artifacts Found

Cream & Jean Site # 61



Location and Site access

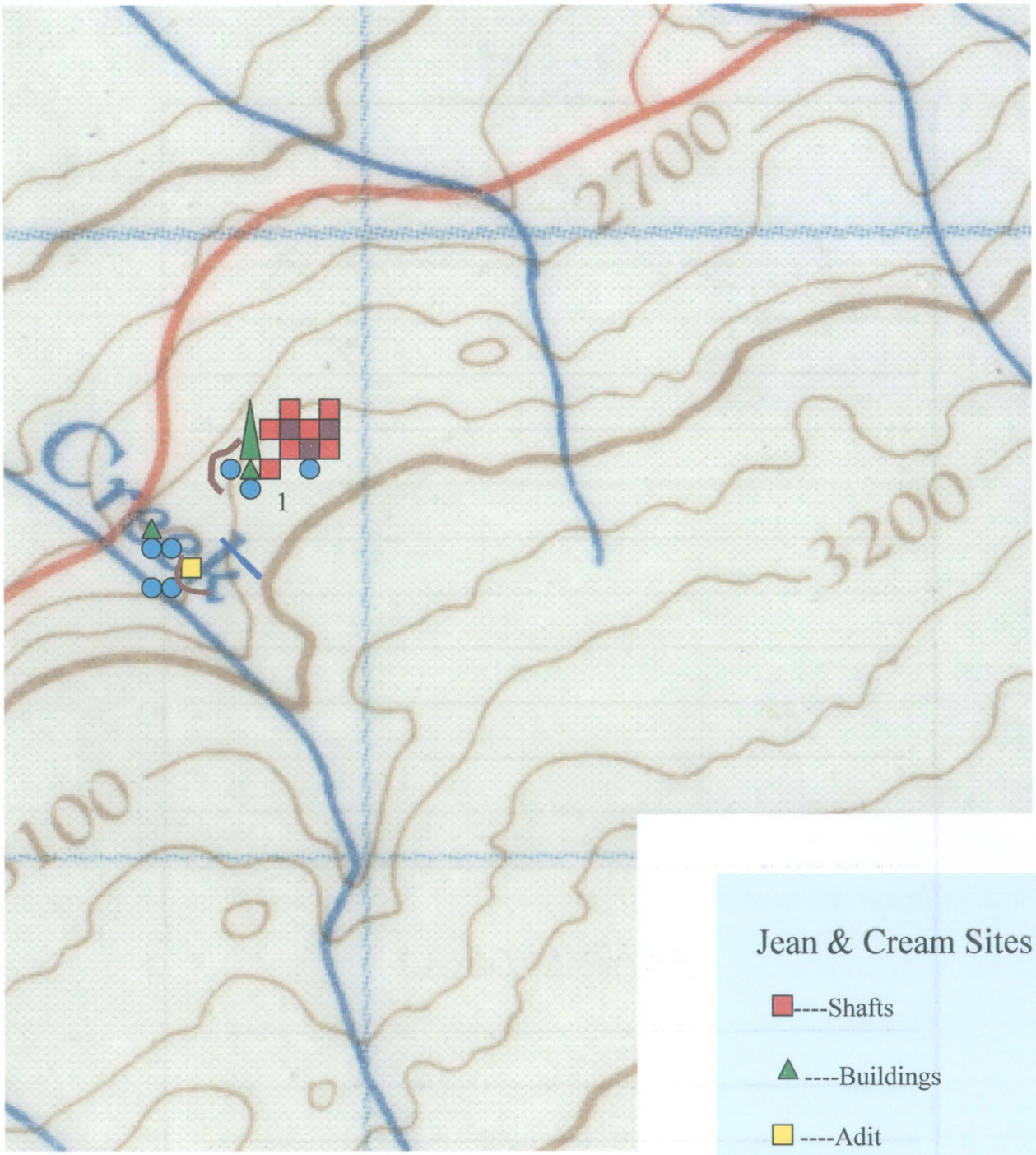
Access to the head frame may be reached by heading north from the highway just after crossing Sandy Creek. The site is located uphill of the main highway approximately 500 meters, travel is through open spruce. We did find an old cat trail that traversed the hillside going to the head frame and bunkhouse, but this was heavy vegetated with mature willow and saplings. From the Minfile 105M024 the location is given as 63degree 55'58. 4"N by 135o25'58. 4"W.



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
Drawing by McQuesten Lake Enterprises

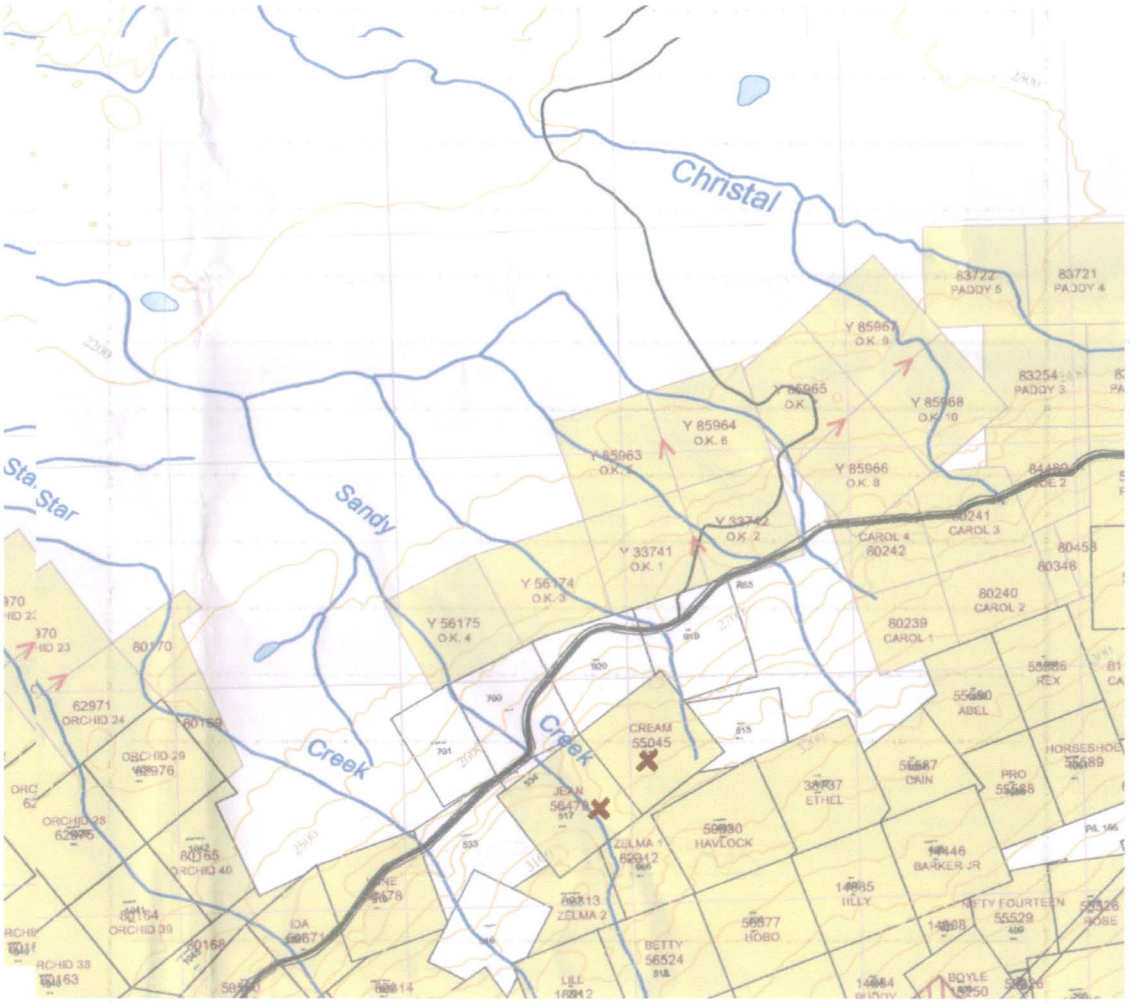
Field Notes

Artifacts Found

Current site tenure/ownership

The Cream and Jean are both currently in good standing and are held by a Milorad Perovic.

Note that the Cream head frame and the Jean adit location would be on the said claims, but there is some question if the location of the residence lies on the claims, there is no lease registered for the residence.



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Historical Background

The Cream incline shaft was sunk 32.3 meters in the 1925 t0 1949 period. Three sublevels totalling 29.3 meters were driven from the shaft. In 1951 this shaft produced 54.4 tons of hand-sorted ore. At least 12 shallow test pits dug to the northwest of the Cream shaft. A cluster of at least 6 shallow shafts and test pits were dug about 60 meters southeast of the Cream head frame.

Field Notes

Artifacts Found

The Jean adit was driven for 78.9 meters in 1955, and did not connect with the Cream workings. There is no production noted for the Jean workings and no evident ore on the dumpsite. (Minfile 105M024)

The residence was constructed approximately 80 meters downstream from the Jean adit. It is unknown the year is built. The structure is currently abandoned.

The review of existing studies, confirmation and/ or update of current physical conditions

The abandoned residence is located near the highway; the building is approximately 16ft x 24ft with a 4-foot roof overhang on one side. The trail from the main highway to the house is littered with debris i.e. car batteries an old car hood and various five gallon oil pails (empty).

At the cabin itself the debris changes more to household garbage and construction material, i.e.; ceiling tiles, bottles, squirrel infested mattresses, aluminium roofing, and fibreglass insulation.

The building itself is stable as the roofing is still intact keeping the interior dry. The building is constructed of frame 2 x 4 with plywood sheeting for the walls, while the floor is of 2 x 8 overlain with heavier plywood. The structure is built on a foundation of large logs that were cut locally from the water drainage.

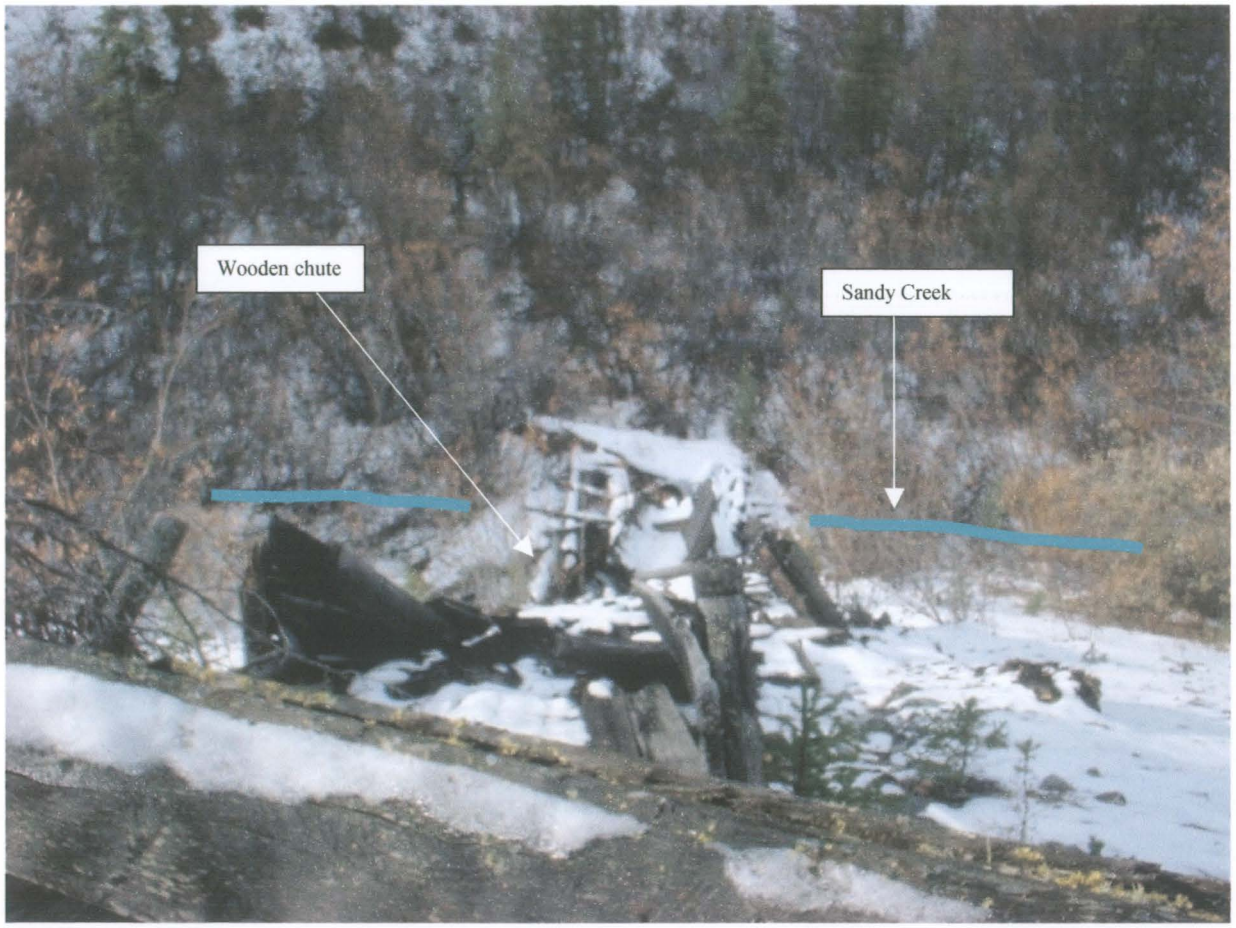
Up Sandy creek another 100 meters, is the Jean adit and dump. There is a small amount of piping in the creek, which was used to deliver water through gravity feed to the cabin site.
At the Jean dump there are two steel piles, the first is 35 pieces of small gauge rail, and the second is twenty lengths of 1" diameter water pipe. There are various other pieces of small steel scattered over the dump, including one hand winch.

Field Notes

Artifacts Found

This hand winch is located at the top of a wooden chute that goes down the side of the dump, presumably this was the way the building material needed for the development of the adit was brought to the site. There is the reminisce of the wooden cart at the bottom of the dump that was used to haul the material up and down the side of the dump, as the tote trail did not continue up to the adit entrance.

The Jean adit timbers have rotted and collapsed making the adit inaccessible; there was no major change since it was inspected in1996.



Up slope from the Jean adit we found the two shallow hand trenches that were indicated in the previous study, these do not pose any safety concerns due to their size.

Photo: Head frame

Field Notes

Artifacts Found

The head frame and bunkhouse are located approximately 160 meters east of the Jean adit. This small head frame is in excellent condition given the time it was built, most of the items used at that time are still at the site i.e.; bench, windless and bucket with spare bucket outside of head frame.

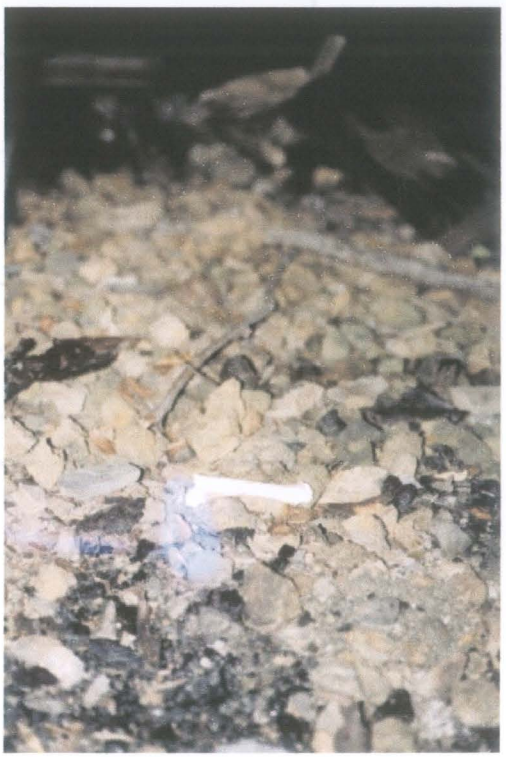
The structure is 4meters by six meters by eight meters high, and located in heavy scrub willow, which makes it difficult to see until you're in close proximity.

Photo: above, Windless for pulling ore out the shaft

The interior of the head frame is extremely well preserved

Photo: above. Shaft with trap door, ladder and bucket

Photo: right. Ore on a bench below the windless



Field Notes

Artifacts Found

The bunkhouse, below, is located 30 meters to the southeast of the head frame, in dense scrub forest and willow. It has totally collapsed and the condition of the visible surface wood is beyond salvage, however lumber underneath may still be in usable condition. Kitchen debris and building material is spread throughout the area.

North east of the head frame and spread out along the base of the hill is a series of shallow test pits, approximately 12 in all. Over one of these pits is a collapsed outhouse.

Up slope from the bunk house there is another series of timbered shafts, below, and more test pits, in this area we found a total of 11 more shafts, some extremely dangerous.

Field Notes

Artifacts Found

Verification of environmental issues as identified in previous studies

There were no liquid environmental hazards encountered on any of the sites as stated in a previous inspection, all drums that we found were empty. At the residence site however we did find a number of old car batteries along with a number of sheets of compressed asbestos paneling.

At the Jean adit there was no water discharge, though the fact that the dumpsite extends into the creek is of some concern.
At the head frame we also did not encounter any discharge to the environment.

Public safety considerations

We did have a number of public safety concerns associated with this site, the primary one being the exposed shafts upslope of the collapsed bunkhouse, there is one in particular that is difficult to see until your very close to it. It is approximately 4x4 in diameter with a 5 to 6 foot drop to the water; this would be extremely difficult to get out of due to the vertical nature of the sides, if one were to fall in.

The head frame structure is in stable condition, even though a portion of the roof is dislodged and some of the boards are hanging into the structure. Our main immediate safety concern with this structure would be to secure the shaft door so that access would not be possible. At the time of our inspection in the fall, the temperature was cold enough to freeze the water in the shaft, thus reducing the danger if one were to fall into it. The water level was approximately three feet from the top of the shaft.

From the dumpsite in front of the shaft, a trail leads northeast along the base of the hill to the shallow test pits and two more shafts. The first shaft has a collapsed outhouse sitting over it and poses a serious safety concern, while the second shaft has collapsed it is still a danger to the pubic.

At the residence cabin near the highway the safety concern was the asbestos sheeting that was scattered behind the cabin. The stairs leading up to the porch on the cabin are unsafe.

Field Notes

Artifacts Found

Recommendations for actions at sites from historical perspectives

Head frame:

From a historical perspective it is strongly recommended by the Mayo Silver Trail Association that the wooden head frame be protected and restored. It is one of the only examples of a head frame demonstrating this kind of pioneer construction from the early 1920 in this area, and the fact that it is located adjacent to the main highway make it an ideal situation for further development to demonstrate our early heritage.

There is some structural damage to the buildings roof. This should be repaired as soon as possible.

It's also recommended that all small artifacts located at this site be documented and removed until proper exhibit display is established.

Collapsed bunkhouse:

Moving 30 meters southwest to the cook house/ bunkhouse we suggest that the collapsed building be inspected for artifacts of value. As this is being done it would be possible to salvage building material from the debris that could be used for the preservation of the head frame. The remaining material could be burned or removed to the local dumpsite in Elsa.

Jean adit:

At the Jean adit and dumpsite, would need closer inspection for additional artifacts other than the hand winch.

Field Notes

Artifacts Found

Residence:

This brings us to the last of the structures associated with this property, the small residence on Sandy creek. As this building is of a more modern nature, and built of plywood and frame material we felt the building itself was not of a historical nature.

Recommendations for actions at sites from environmental perspectives

Residence:

From an environmental perspective the residence itself does not pose a concern, but the material stored around the cabin does. The recommendation would be for a complete removable of all loose material around the site especially the asbestos panels and truck batteries. At this point there would be a greater need for land use to make a decision on this cabin.

The indecision in this study is weather this residence is truly a part of the Jean and Cream liability issue assumed through devolution by the Federal government. The residence is not on the Jean or Cream claim, it is not situated on any lease site, it was constructed many years after the Jean and Cream workings were done, and in our personal experience of living in the area, we have seen the building occupied for short periods by a number of different people that have had no connection with the Jean and Cream workings. In researching Jean and Cream (Minfile# 105M 024), under MINE SITE INFRASTRUCTURE there is no reference to the residence as a forth site being associated with the property.

We included an assessment of the site because of its relatively close proximity to the Jean adit and that it was drawn in on the previous assessment map, although there was no assessment done of the residence in that report.

Jean adit:

The Jean adit has completely collapsed though some timber remains at the entrance. At the time of our inspection there was no water discharge from anywhere on the dump. As previously stated our only concern would be what the dump itself may have on Sandy Creek, as it is entirely made up of waste rock which extends into the creeks water flow.
Our recommendation would be for test water samples to be taken above and below the Jean dump site, to determine if there is any negative environmental impact.

Bunkhouse and Head frame:

Both these sites are in a stable condition, with no water discharge occurring at ether site. The dump that the head frame is situated on is highly mineralized, and from previous studies shows a high sulphide sulphur content (over 12%), and has a neutralizing potential verses an acid producing potential of .02
It is recommended that the collapsed bunkhouse be cleaned up, while salvaging artefacts and material.
There seems to be no environmental concerns with the head frame.

Field Notes

Artifacts Found

Cost estimates to implement recommendation

We will deal with the head frame and bunkhouse as one unit; initially it will take the use of a D-7 cat to open the existing old cat trail from the main highway to the head frame/ bunkhouse site. This is due to the heavy nature of the buck-brush and alder that has grown up over the years.

Cost: $95.00 per hour X 10 hours----------$950.00
Mob and de-mob of D-7----------$400.00

$1350.00

Once access is established, work will progress on the clean up and salvaging of artifacts and material from the collapsed bunkhouse. This will entail the use of the small 350 John Deere loader and two labours. We estimate two days use of the loader to help lift walls and move salvageable material to head frame site, plus final cleaning of the site after burning of debris and three days work for two labours as the loader will not be used at all times.

Cost: $65.00 per hour X 20 hours----------$1300.00
Mob and demob----------$200.00
Two labours x 3 days ----------$1200.00

$2700.00

The remediation of the test pits and shafts that are directly north east of the head frame and follow along the base of the cliff, should only require a days work with the loader as they have relatively easy access frame the head frame site. The five test pits and the one shaft that is located south east of the head frame are more difficult to access as there is no cat trail leading to the area. The one shaft located in this area is extremely dangerous and should not be overlooked. We estimate a full day to also to pick a non-disruptive path to this site and fill in the shaft and pits. We anticipate the requirement of a land use permit to move from the head frame to this second group of test pits and shafts.

Cost: twenty hours with track loader to fill in all test pits and shafts----------$1300.00
Two days one labour----------$400.00

$1700.00

Field Notes

Artifacts Found

Jean Adit

The Jean adit could be cleaned by hand, with the debris and artifacts being moved down the dump face to the loader, for removal. The trail to the Jean adit any goes a far as the base of the dump. The adit itself could be further collapsed and cleaned by hand also. We estimate two days labour to remove rail and debris from the dump and further collapse the adit. The loader would be used approximately eight hours to haul the material to the hyab at the highway

Cost: $65.00 X8 hours----------$520.00
Two days labour X two labours ----------$800.00

$1,320.00

Residence

The clean up of the grounds around the residence located just off the highway would take one day with two labours, this would be the removal of all material not associated with the house. If the house were to be removed also it would be recommended that the asbestos and batteries be removed before demolition and burning. This would be an estimated three-day event until the site was completely clean and landscaped, with approximately 15 hours of loader work to push material together, burn and then landscape and remove all metal debris to the road.

Cost: Two labours 5days----------$2000.00
15 hours X $65.00 for loader----------$975.00

$2975.0
Use of hyab for total project clean-up 6 hours X $55.00----------$330.00
Mileage for travel 48 kilometres per day X 5 days at .48 per km.----------$115.20

Sub- total--$12,115.20

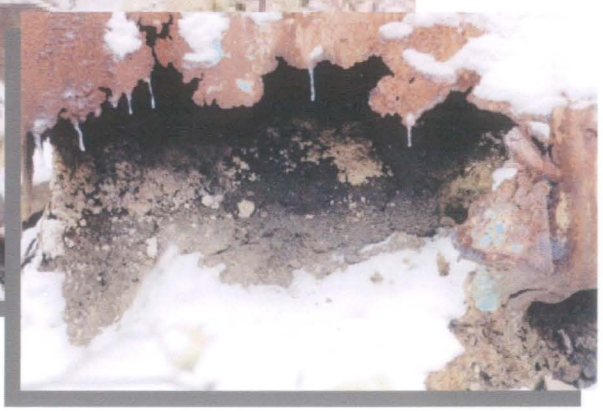
10% administration fee----------$1211.52
10% contingency ------ ----------$1211.52
7% G.S.T.----------$848.06

Total----$15,386.30

Field Notes

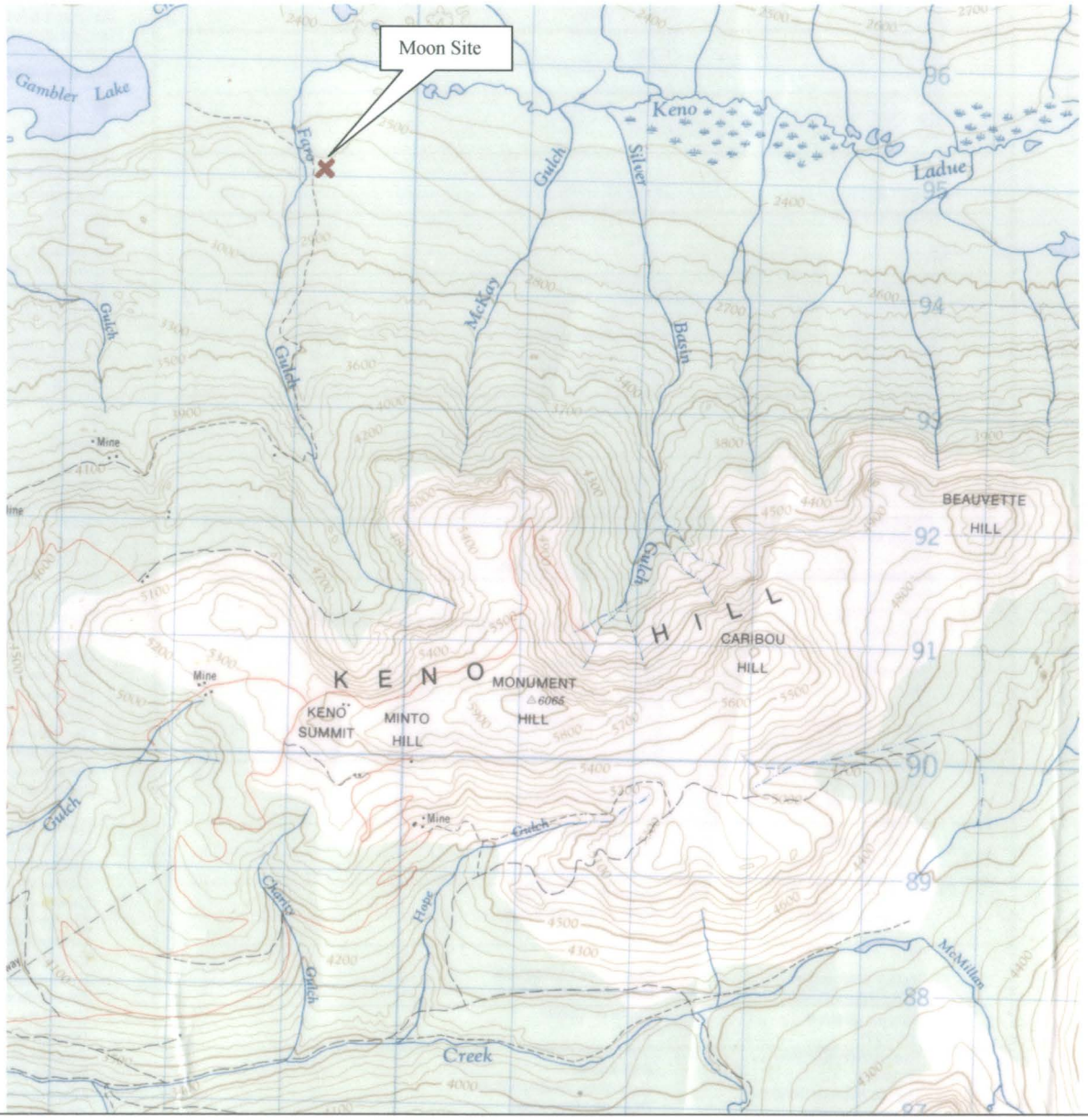
Artifacts Found

Moon Site #66



Location and Site access

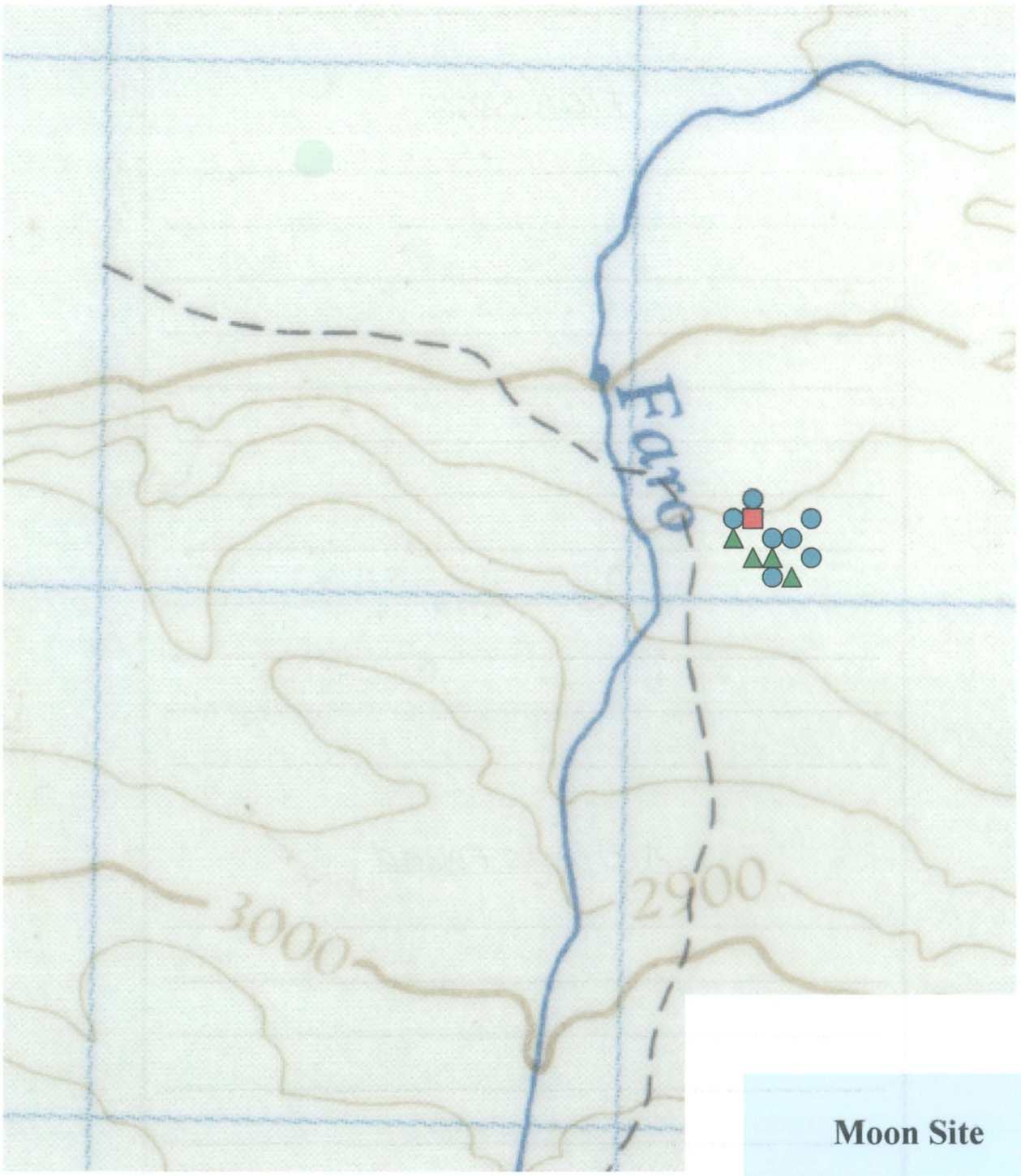
The Moon site is located at the base of the north side of Keno Hill, between Faro and Mckay Gulch. Access is by a trail that starts at the old Wernecke Campsite and extends approximately 15km following down Faro Gulch. The trail is heavily vegetated with alder and crosses Faro Gulch creek high up before following the creek down to the 2700-foot level, which is close to the valley bottom. The approximate UTM co-ordinates are 7 094 350m N by 489 200m E.



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
Drawing by McQuesten Lake Enterprises

Moon Site

-----Adit

-----Buildings

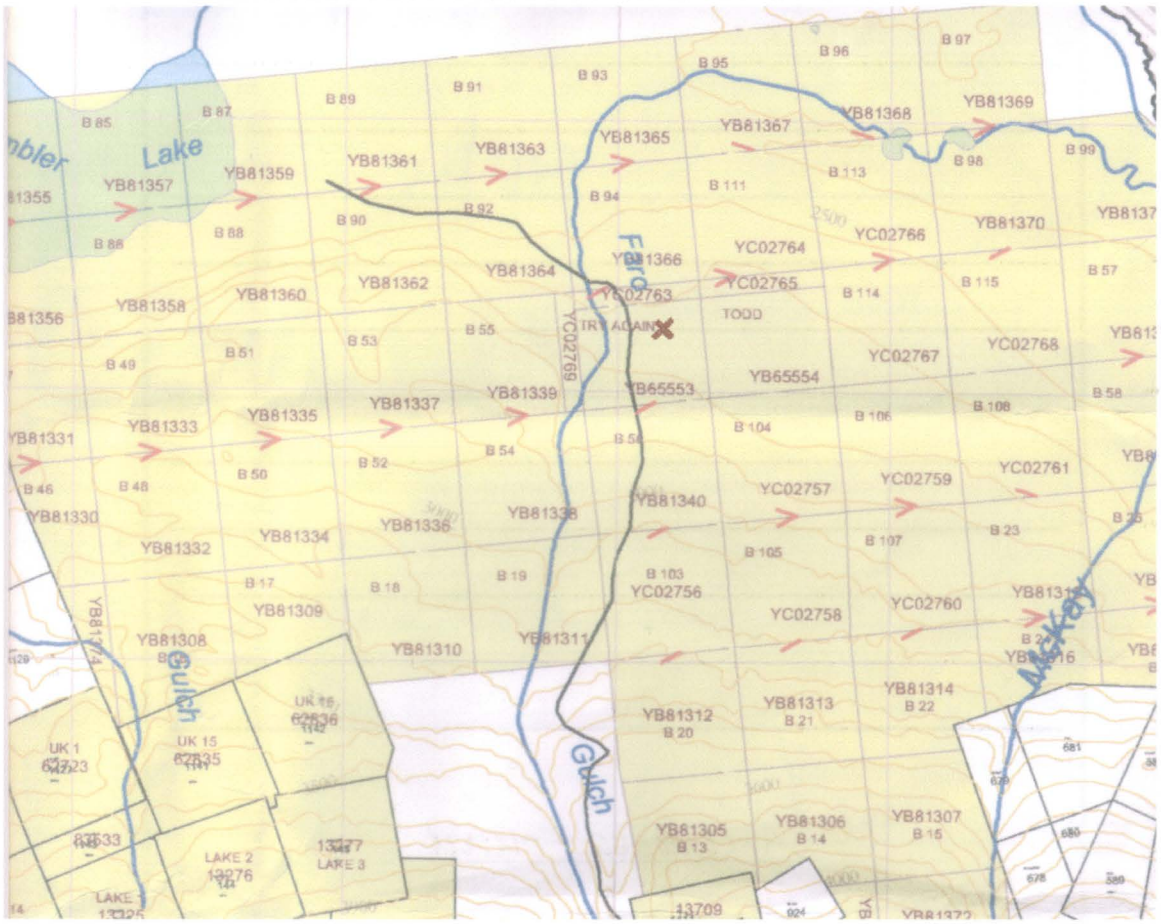
-----Drums and debris

Field Notes

Artifacts Found

Current site tenure/ownership

The Moon site is currently in good standing and primarily located on the Todd #1 and Try Again claims. Walter Malicky owns these claims a long time Yukon resident. The claims are due to expire on 2004/07/12.



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Historical background

A 30-meter adit and some hand trenching were undertaken in 1921. Further trenching was done between 1963 and 1993, with three drill holes be drilled in 1963.

Field Notes

Artifacts Found

The review of existing studies, confirmation and/ or update of current physical conditions

We did not find any major changes to the prior assessment of the 1999 Environmental Baseline Assessment.
The adit timbers have further deteriorated, although a small access hole exists into the adit under the collapsed timbers. At the time of our inspection there was a small pool of water built up at the adit entrance, it was frozen over with a couple of inches of ice, this could possibly indicate a small discharge from the adit, although in previous studies it was stated that no surface waters were encountered. There is waste rock pile located near the front of the adit, and on the waste rock pile is a number of heavily rusted drums that look like they were full of highly oxidized ore material. Near the adit entrance is an old truck box also carrying oxidized ore.

There is a heavy over grown road that connects the adit with the three frame structures that are located about 120 meters upslope of the adit.
There is a lot of heavy metal debris scattered along this trail to the buildings; powder magazine (empty) large water tank on steel skids, a large assortment of cat batteries, 100-feet of 3 inch bull hose, rubber tires, oil furnace and some burnt out electrical motors.

Field Notes

Artifacts Found

Photo: left, dense overgrowth with fuel drums and other debris on the trail between the adit and buildings.

Photo: Right and below batteries and empty fuel drums scattered throughout the site.

Field Notes

Artifacts Found

The first of the three buildings is a 12 X 28 foot trailer on a steel skid frame; all the buildings are in a state of collapse as with the roof on this one, which is caving in. About 30-meters west from the trailer is a 14 X16 tent frame that has been sheeted in with thin plywood; in the interior there is metal and glass debris.

The last of the buildings is a flat roofed 12 X18 wood shack, this was probably sleeping quarters, as there is some plywood bed frames inside along with general debris.

Field Notes

Artifacts Found

There were two stockpiles of drums encountered with a total of 36 drums on this site, there were also a number of lone drums scattered along the trail to the adit, which we included in this total. All fuel drums we found were empty.

Photo: above, fuel tank on skids

Right: truck box containing waste rock

Field Notes

Artifacts Found

Verification of environmental issues as identified in previous studies

The major environmental issue associated with this site would be the leaching of acids from all the cat batteries that have been discarded through out the area. We counted at least 15 batteries that were in groups of three and four, and this is not taking into the small solid waste dump above the adit, in which there was some more along with asbestos cover hosing.
A second point of concern would also include the potential contaminants that could leach from the waste rock pile or ore stockpile.

Public safety considerations

The main pubic concern at this site is the fact that the adit can still be accessed, although there is a slim chance that some one would try the potential still exists and warrants remediation.

Recommendations for actions at site from environmental and historical perspectives

From a historical perspective we do not feel this site to be of major significance, it is a long way from a highway infrastructure and the buildings and material at the site are of modern origin. From an environmental position this site defiantly warrants remediation due to the contaminants that are present.

Due to the steepness of some of the spots on the trail in and the thickness of the overgrowth on the road we would access the site with a D-7 cat and a small loader. The loader would carry in a welder and a set of cutting torches to facilitate the removal of some of the larger steel items.

The wood shell could be removed from the cook shack and burnt; this would allow the use of the metal trailer frame to be used as a sled to haul the remaining solid waste material out to the hyab for removal to the dump. Given the amount of material scattered around this site and that the area is heavily re-vegetated it will take at least a week to remove material and then one day to haul it to the nearest road.

On this site we would want to use an extra person to help the clean-up procedure. Because of the distance to the site it would be cost effective to set up a small camp for the duration of the remediation. The dumpsite and adit should be cleaned and then backfilled to insure that the safety issue is addressed. All solid debris should be removed.

Field Notes

Artifacts Found

Cost estimates to implement recommendations

Equipment to be used for reclamation

John Deere track loader with four way bucket, model 350, weight five ton, pads on track are street track low profile, meant for as little disruption to ground surface as possible.

There is a detachable backhoe for this unit, with an approximate reach of sixteen feet.

Cost per hour with fuel----- $65.00 Cost per hour without fuel---- $55.00

International five-ton hyab with sixteen-foot flat deck, the hyab is capable of lifting three and one half ton.

Cost per hour with fuel------$60.00 Cost per hour without fuel-----$50.00

Dodge three quarter ton pickup truck for crew transportation.

Cost would be .48 cents per kilometre.

D-7 cat ----------$95.00 per hour

D-7 cat for access and demob of waste material to highway.

Cost: $95.00 per hour X 30 hours----------$2850.00
Mob and de-mob of D-7----------$400.00

$3250.00

Cost: Hyab at $60.00 per hour X 8 hour----------$480.00

Cost: John Deere loader $65.00 per hour X 45 hours----------$2925.00

Three labours X seven days, 10 hours per day----------$4200.00

Administration fee ----------$200.00

Contingency fund----------$1500.00

Transportation fee at .50 per km X 250 km----------$125.00

G.S.T.----------$887.60

Total-----$13567.60

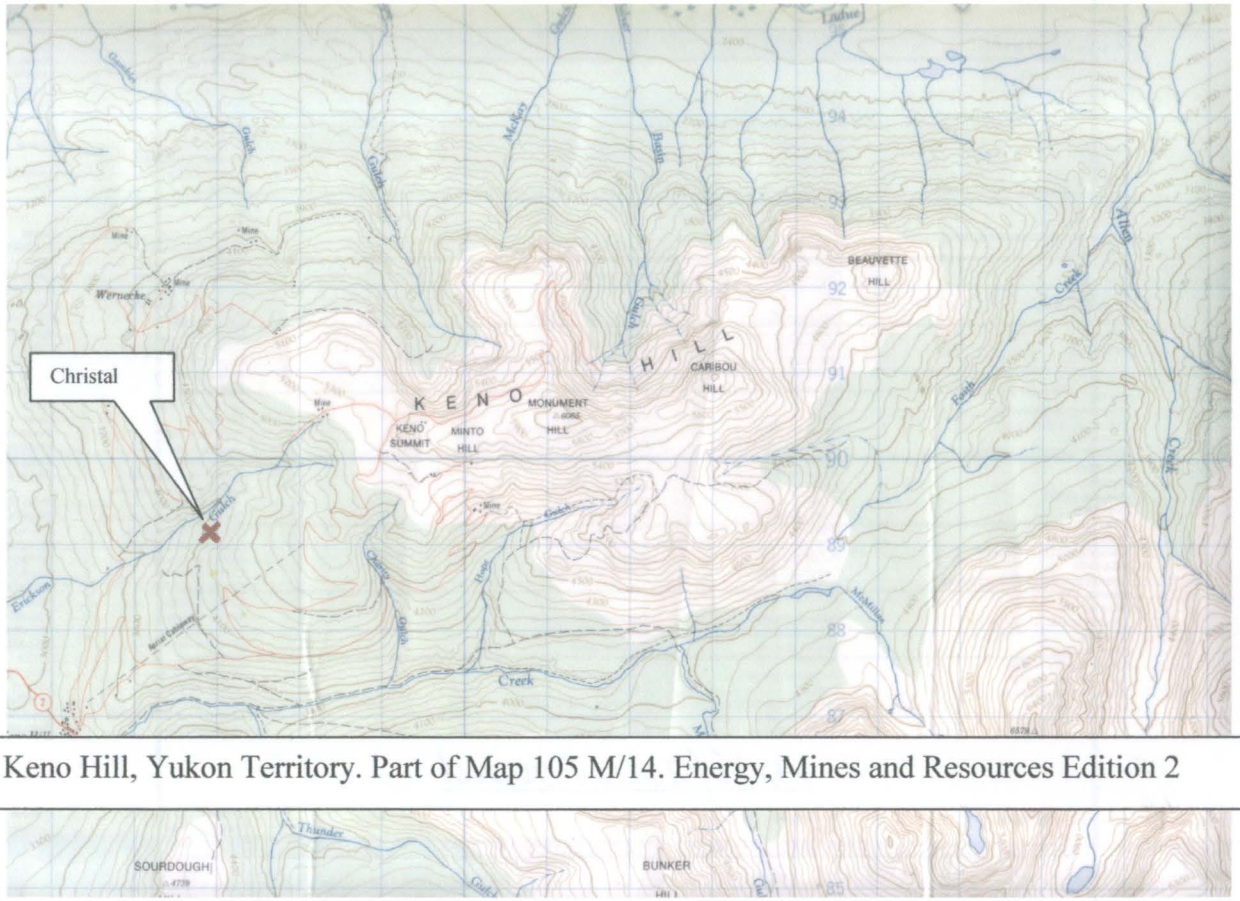
Field Notes

Artifacts Found

Christal Site # 71

Location and Site access

The Christal site is situated on the western side of Keno Hill. The main part of the site is located at the end of a cat trail that begins on the Seven Hundred road, approximately 2.5 kilometeres outside of Keno City. The original cat trail has been crossed by a second power line access road. If this trail is used to access the site it shortens the access distance by thirty percent, plus the power line trail is in better condition for vehicle travel. This power line access road also leaves the Keno seven hundred road, approximately one point five kilometers from Keno City.

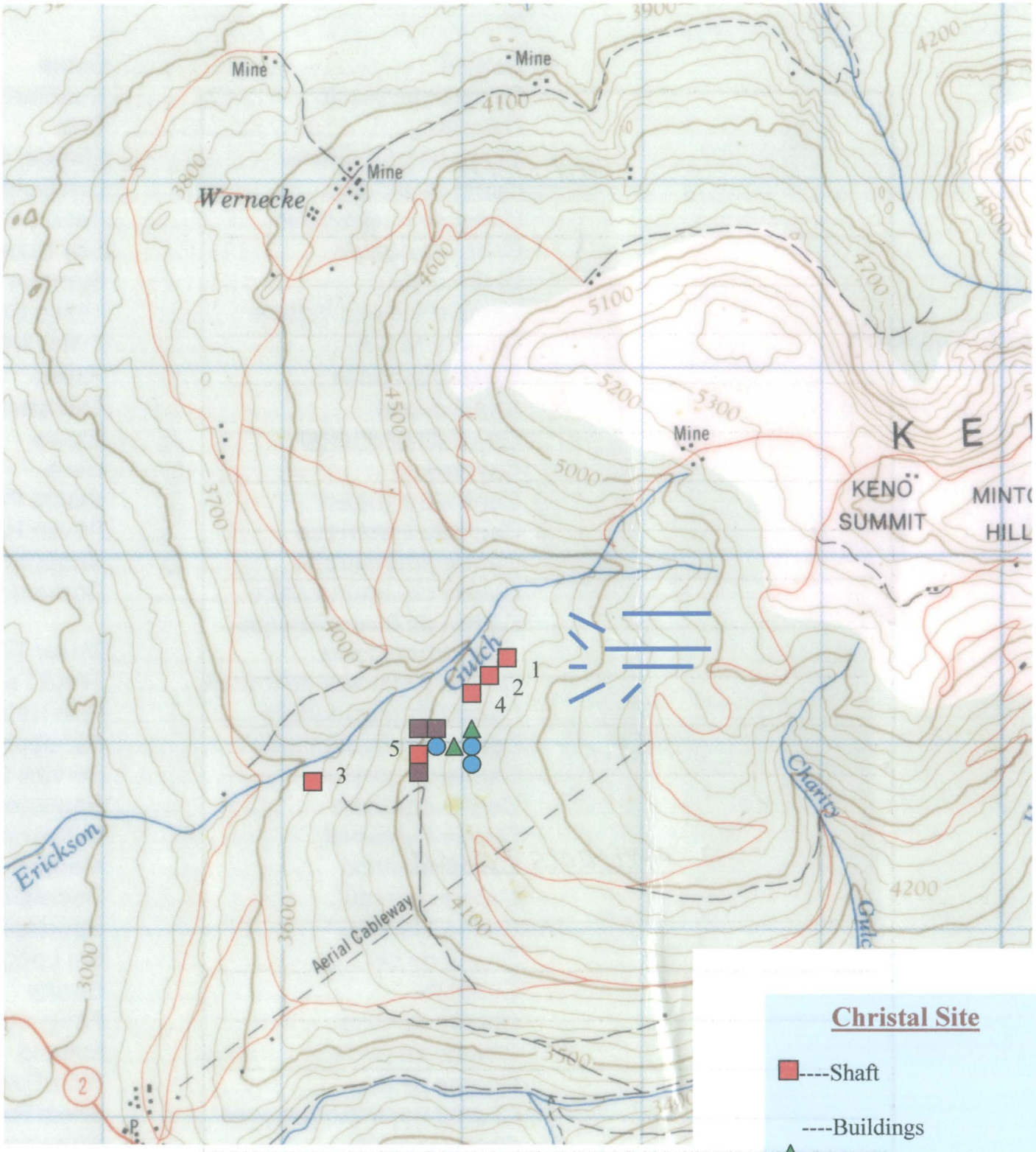


Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Once the Christal site is reached, the cat trail continues up the hill at a very steep grade, presumably this was the original access to the upper trenching that was done. It is easier to access the upper trenching by continuing on the Keno seven hundred road, and then taking the sign post road to the point were it meets with Ericson Gulch, from this point the vegetation is open and its only a short distance down hill to most of the recent trenching.

Field Notes

Artifacts Found



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
Drawing by McQuesten Lake Enterprises

Christal Site

----Shaft

----Buildings

----Drums & debris

--Trenching

----Test pits

Field Notes

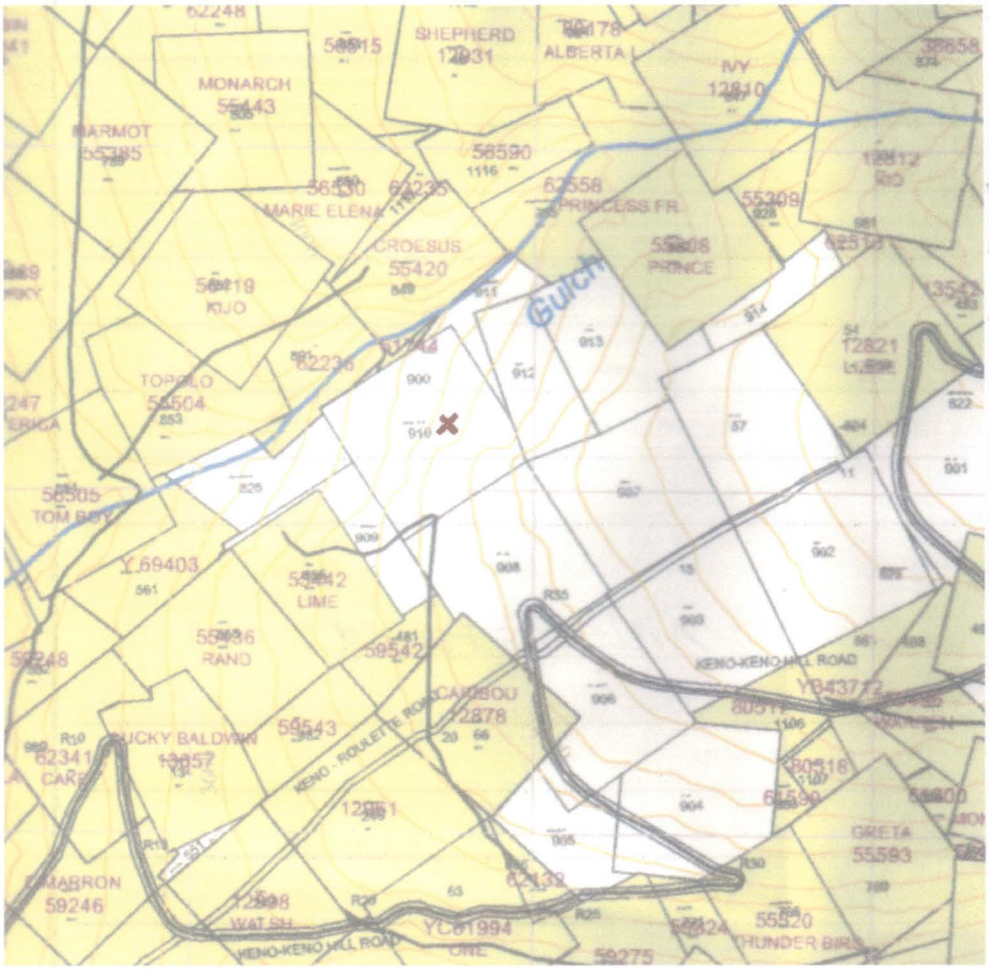
Artifacts Found

Historical background

The minfile#105M061reports the site was initially developed in 1940. At this time a 15 meter shaft was developed. In 1965 a number of trenches were developed on the property , these are evident but have become well vegetated at the site.

Current site / ownership

At the time of of investigation this site was not located on any existing active mining claims. The closest active claims are located below and down slope towards Christal Creek. These claims would be the Bunt, Caribou, and Lime owned by AMT Canada Inc., which is currently in a holding status with the Yukon Terr. Government.



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Field Notes

Artifacts Found

Review of existing studies and update on current physical condition

In review of the 1999 Enviromental Baseline Assessment, the condition of the Christal site has remained stable, with the only notable deterioration being to the collapsed shed over the main number one shaft.

There is a considerable amount of debris around Shaft # 1.

The shafts were hand dug on steep terrain.

After leaving the camp, the trail narrows and becomes a foot path beside the shafts.

To fill in the shafts and remove the debris from the site with equipment, a small side cut will need to be made following the foot path.

Field Notes

Artifacts Found

Shaft # 2, left

We found two additional shafts at the site which we numbered four and five.

Shaft # 4 below is located down slope about 30 meters from shaft number two. Shaft #4 is in direct line with shafts #1 and #2 and of the same aproximate demension, two meters by two meters with log cribbing which is badly deteriorated and was filled with water to approximately three feet from the top.

Shaft # 5 left, is approximately 100 meters north of the main storage shed and off the end of a shallow trench which is down slope of the shed.

Field Notes

Artifacts Found

We spent minimal time looking for shalf #3 as it was close to nightfall by the time we completed the main site inspection. It is supposed to be located one half kilometer south west of shaft one.

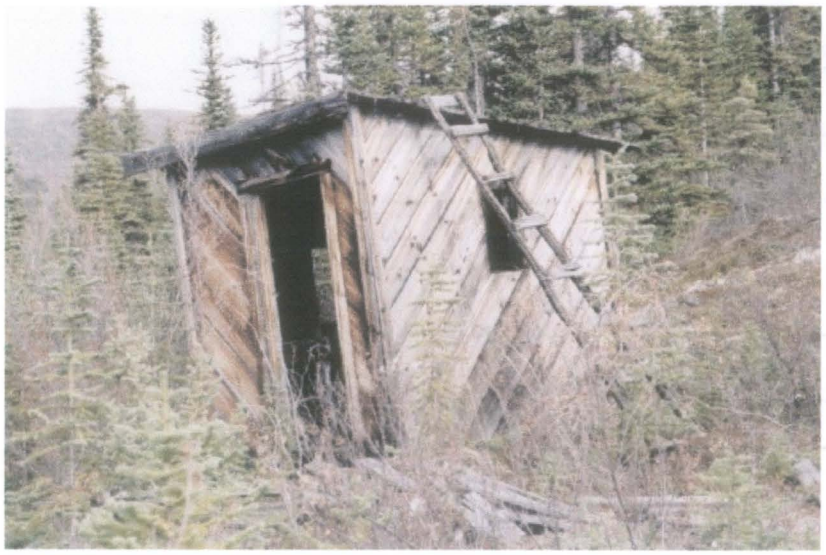
In the Min file report this shalf was not inspected, but if remediation for safety reasons is to be done, it would be prudent to spend the time to locate and evaluate this elusive shaft. As a note the location of this shaft would fall on the three active claims noted in the current site ownership section.

There were a number of small test pits associated with the trenching that was done below the storage shed, these were aproximately five to six feet in depth as shown on the right.

Recommendations for actions at site from environmental, historical and safety perspective

From an enviormental perspective, access to the Christal site could be done with minimal disturbance. The amount of vegetation and the condition of the road is such that it would allow small eqiupment, hauling a skid sled to tote the waste material out without a high degree of disturbance to the travelled area. There is only light buck brush on the center of the trail, with the wheel track paths still distinctly defined.

Any of the trenchs that were observed did not pose a safety concern or an environmental hazard, and we feel it would not be necessary to try and close these workings. They were primarly constructed of seven to eight foot deep trenchs with shallow, stable sides, on which vegetation had already established itself quite vigouriosly.



The only structure on the site in our determination was not of any major historical signifigance and could either be torn down or removed as one unit, if it is thought to be of some use.

Field Notes

Artifacts Found

What would need remedeation are the shafts. The shafts could be filled in leaving some of the exposed timber for documentation of the sites mining history. There are various small dump sites and debris found scattered near the main building shed. Broken glass bottles, exposed rusty nails, empty fuel drums, metal cable and tin cans that could be hazards not only to visitors but to wildlife. In our opinion the site should have at least minimal remedeation of the above list.

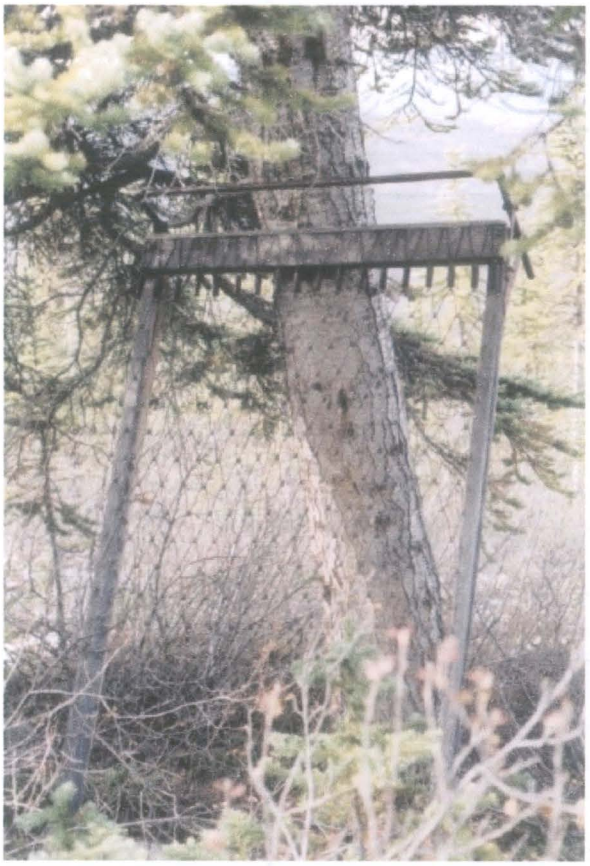
The shed, outhouse and benches could be left for historical documentation.

Photo left : Outhouse

Field Notes

Artifacts Found

There are some interesting artifacts at the site, artifacts include: windless, wooden ore bucket, hand made bed frames and bottles. It is recommended these items be stored for future exibit work.



Photos: hand made bed frames

Field Notes

Artifacts Found

Cost estimates to implement remediation

Equipment to be used for reclamation

John Deere track loader with four way bucket, model 350, weight five ton, pads on track are street track low profile, meant for as little disruption to ground surface as possible.

There is a detachable backhoe for this unit, with an approximate reach of sixteen feet.

Cost per hour with fuel----- $65.00 Cost per hour without fuel---- $55.00

International five-ton hyab with sixteen-foot flat deck, the hyab is capable of lifting three and one half ton.

Cost per hour with fuel------$60.00 Cost per hour without fuel-----$50.00

Dodge three quarter ton pickup truck for crew transportation.
Cost would be .48 cents per kilometre.

One day to access site and set up camp
10 hours for two labours----------$ 400.00

6 hours to move equipment to site----------$ 390.00

Three to five days to clean dump site, two people----------$2000.00
8 hours during these five days , moving bagged debre with loader----------$ 520.00

One days to fill in all shafts with small loader and one helper----------$ 850.00

One day to remove shack or burn shack and related refuse
Loader 10 hours one labour----------$ 850.00

One day to remove all artifacts and take to Mayo
6 hours for loader from site to hyab----------$ 390.00
6 hours to and from Mayo with hyab----------$ 360.00
12 hours one helper----------$ 240.00

One day to do final clean up and de-mob camp
6 hours loader----------$ 390.00
4 hours hyab----------$ 240.00
10 hours one helper----------$ 200.00

Total $6430.00

10% contingency ----- ----------$643.00

10% administration fee----------$643.00

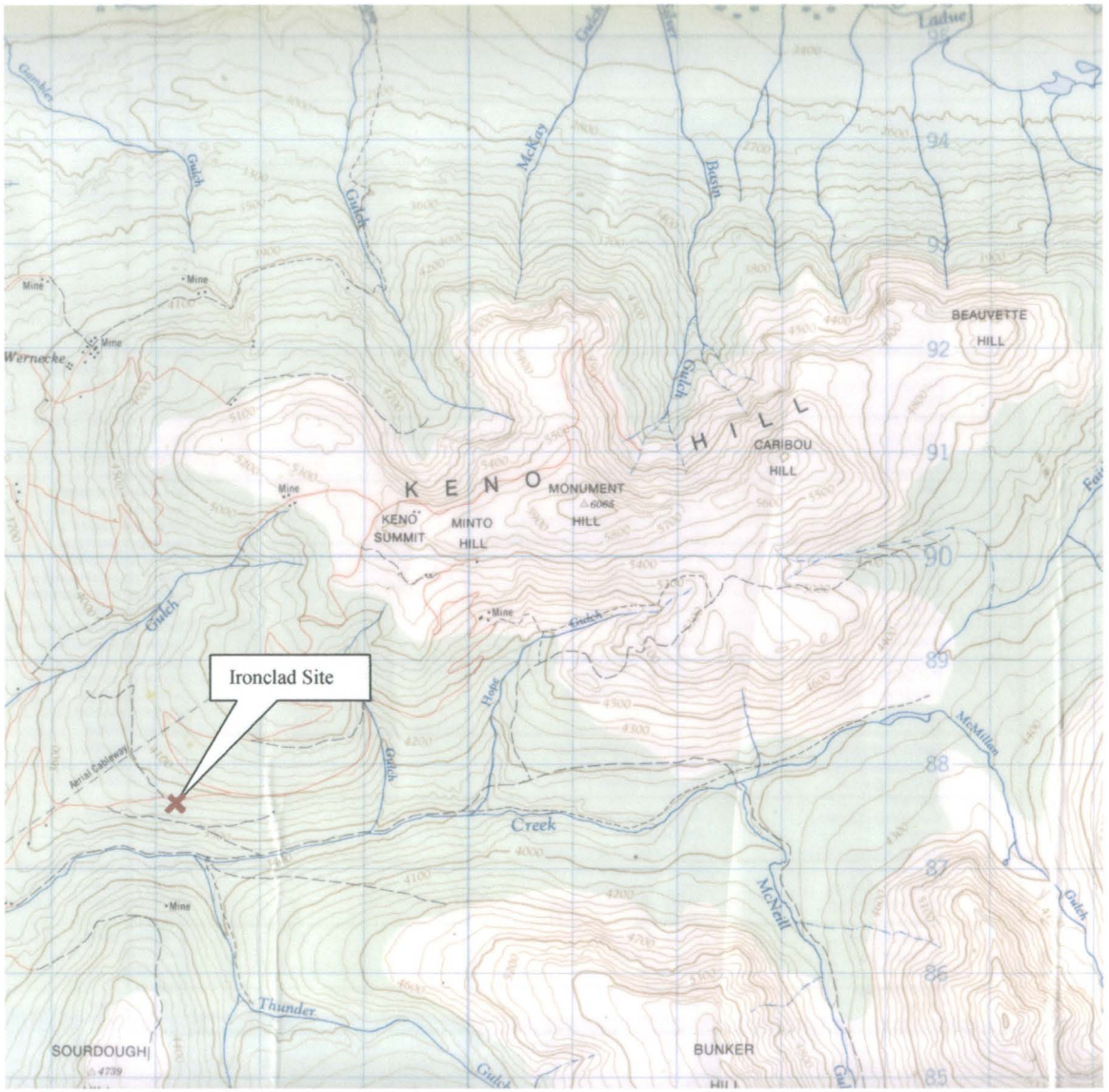
Sub total------$7716.00

G.S.T.--------$540.12
TOTAL-----$8256.12


Ironclad # 72

Location and Site access

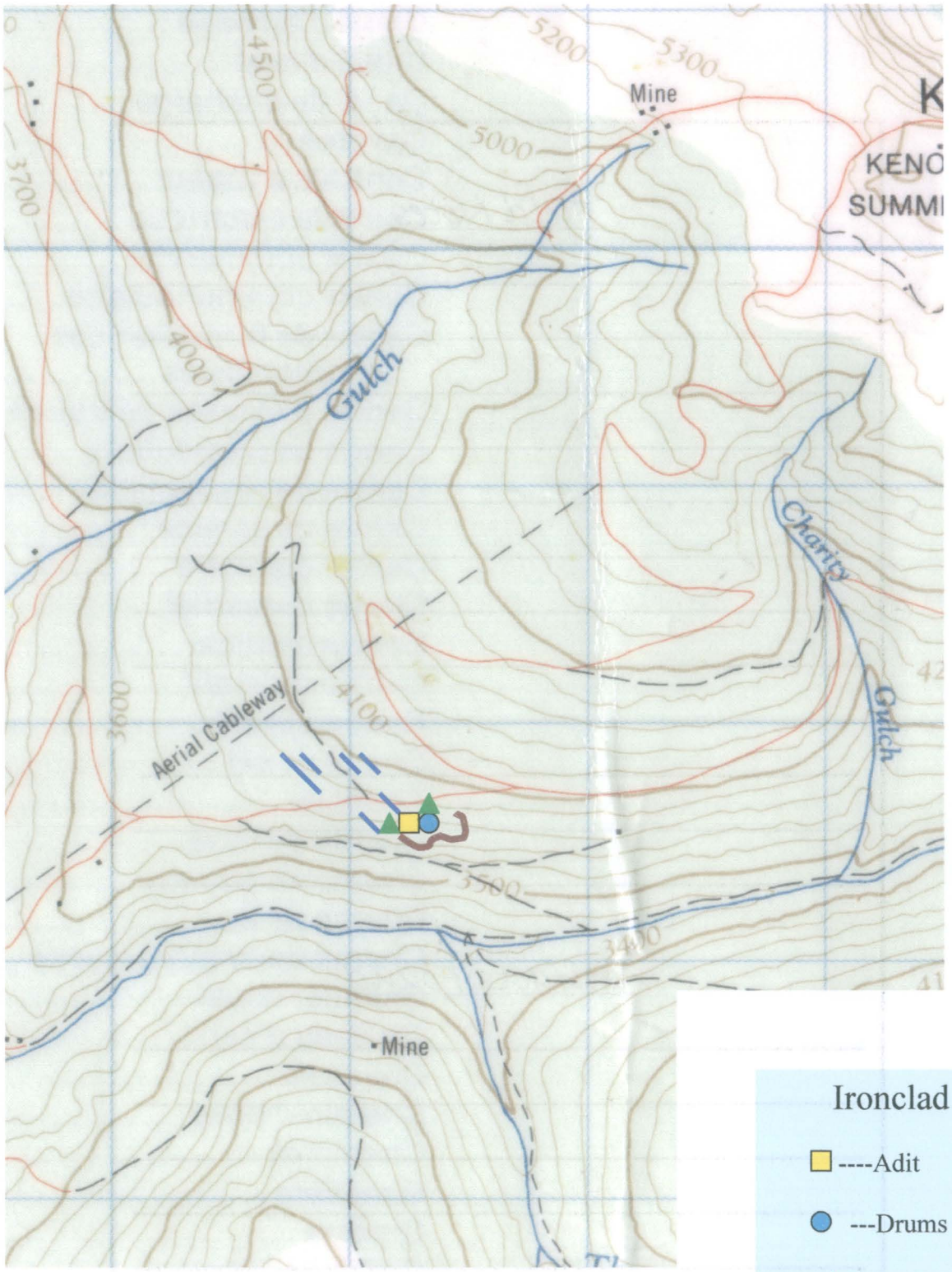
The Ironclad site is situated above and below the Keno 700 road about 2.5 km out of Keno City. Four trenches lie above the road and one trench just below. A single adit and dump lay approximately 70 meters down slope from the road. The approximate UTM co-ordinates for the site are 7087700m N by 486970m E. the elevation of the site is 1175m.
There is an access road from the Keno 700 road down to the adit dump, this road is only blocked by a small pile of gravel and could easily be removed.



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Field Notes

Artifacts Found



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
Drawing by McQuesten Lake Enterprises

Ironclad Site

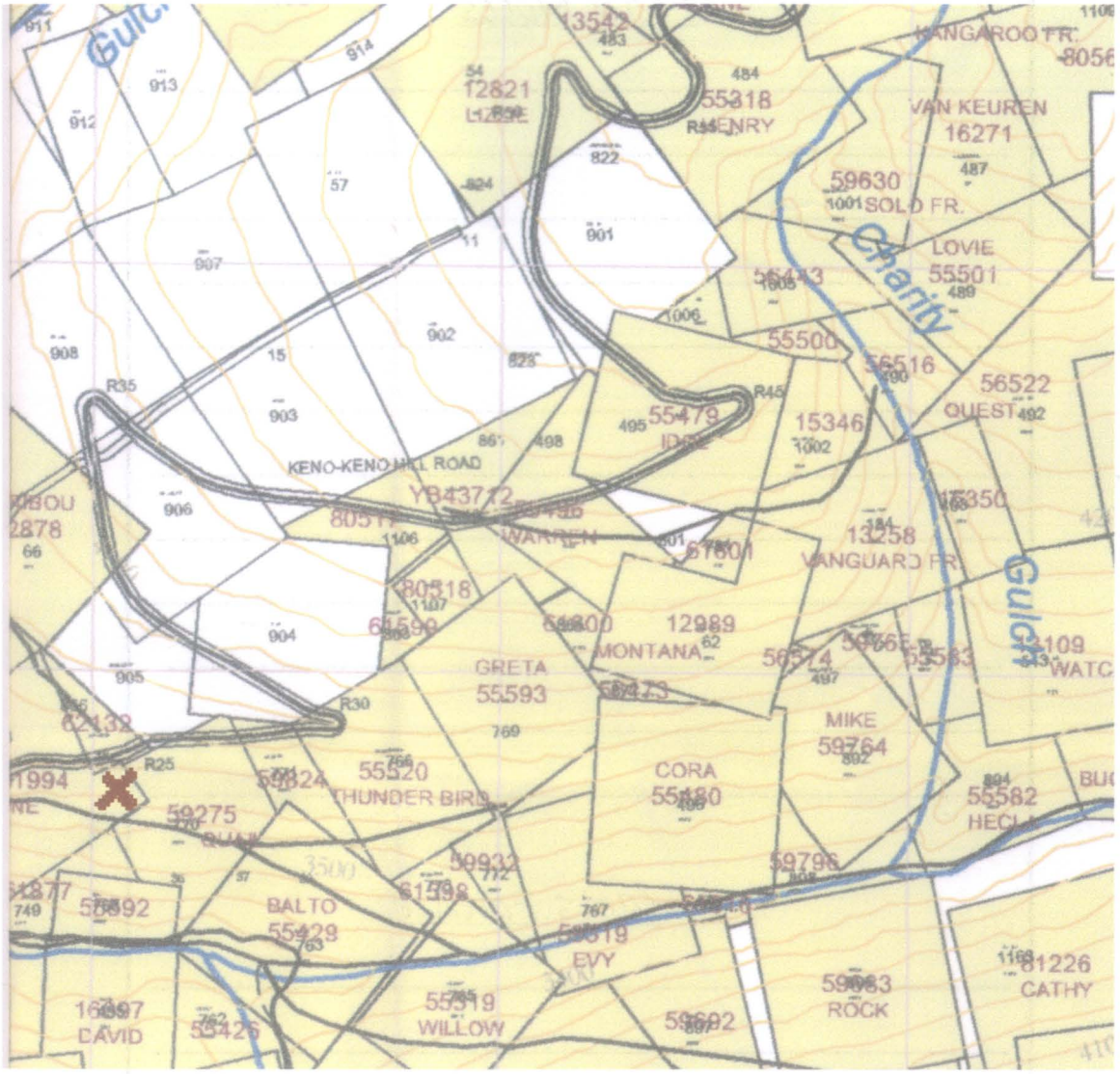
- ----Adit
- ---Drums & debris
- ----Buildings
- --Trenching
- ---waste dump

Field Notes

Artifacts Found

Historical background

According to the government Minfile a 4.6-meter shaft was developed on the Ironclad site in 1931 and then from 1952-54 one hundred and fifty-two meters of drifting took place.



Keno Hill claims. Part of Mayo district mining claim map No.105-M14 2003

Current site tenure/ownership

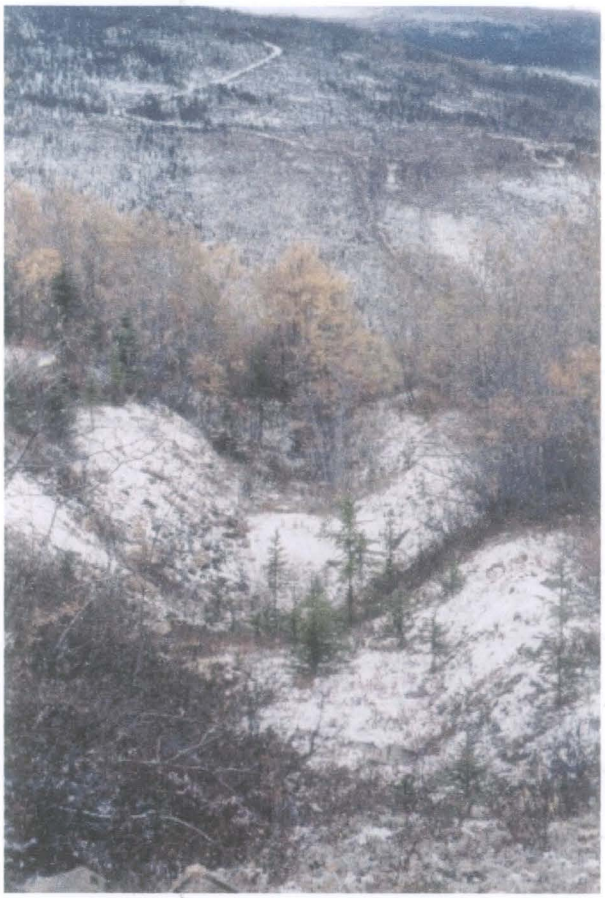
The Ironclad site is located on one claim # YC01994 and expiries in 2006/09/28, William Mann owns this claim.

Field Notes

Artifacts Found

The review of existing studies, confirmation and/ or update of current physical conditions

As stated in previous studies we found five trenches and two partial buildings associated with the Ironclad site.



Photos: Above trenching

Left, collapsed building

Field Notes

Artifacts Found

The Ironclad adit has totally collapsed and does not pose a major threat to the pubic.

There is an assortment of hard waste material on the dumpsite; stove- pipe, two old oil heaters, two sheets of plate steel, part of an air receiver tank, and some drill steel. The only evidence of electrical equipment, were two old cat batteries, which were laying on the trail down to the dump.

Field Notes

Artifacts Found

We found 16 forty-five gallon drums scattered along the dump and over its edge. All of these drums were empty. We found no evidence of contaminants other than the batteries on the Ironclad site. What is left of the two existing structures has not changed since the last inspection, and does not pose a major concern. These buildings have deteriorated, leaving scattered debris over the surface of the dump-site.

Below: waste dump

Below: drums and debris below waste dump

Field Notes

Artifacts Found

Verification of environmental issues as identified in previous studies

We did not find any environmental concerns, other than cleaning of the debris at this site. There was no surface water visible or any discharge from the collapsed adit. Spring run off would discharge into Lighting Creek.

Public safety considerations

We did not find any major public safety issues associated with this site other than the wooden debris that carries a few nails; we also did not find a refuse dump at this site.

Field Notes

Artifacts Found

Recommendations for actions at sites from environmental and historical perspectives

Recommendations for remediation at this site would only include the removal of loose debris scattered over the dumpsite. From a historical perspective /economical perspective this small site does offer potential for the local communities to develop the dump as a tourist exposé of an adit.

Why we suggest this site is its location and accessibility for the public, its not far from Keno City. The access and terrain are conducive to the safe development of an enclosed adit, and it is central to other sites, were artifactes are going to be removed for remediation purposes. Of coarse this would depend on the eventual status of the claim and owner, and we are only pointing this out as a potential possibility.

Cost estimates to implement recommendations

Equipment to be used for reclamation

John Deere track loader with four way bucket, model 350, weight five ton, pads on track are street track low profile, meant for as little disruption to ground surface as possible. There is a detachable backhoe for this unit, with an approximate reach of sixteen feet

Cost per hour with fuel----- $65.00
Cost per hour without fuel- $55.00

International five-ton hyab with sixteen-foot flat deck, the hyab is capable of lifting three and one half ton.

Cost per hour with fuel------$60.00
Cost per hour without fuel-$50.00

Dodge three quarter ton pickup truck for crew transportation.

Cost would be .48 cents per kilometre.

8 hours hyab flat deck x $60.00----------$480.00
12 hours 350 loader x $65.00----------$780.0
Two 12-hour days x 2 labours----------$960.00
Transportation to and from site 250km----------$120.00
Administration fee----------$234.00
Contingency fund 10%----------$250.00
G.S.T.----------$197.68

Total-------$3021.68

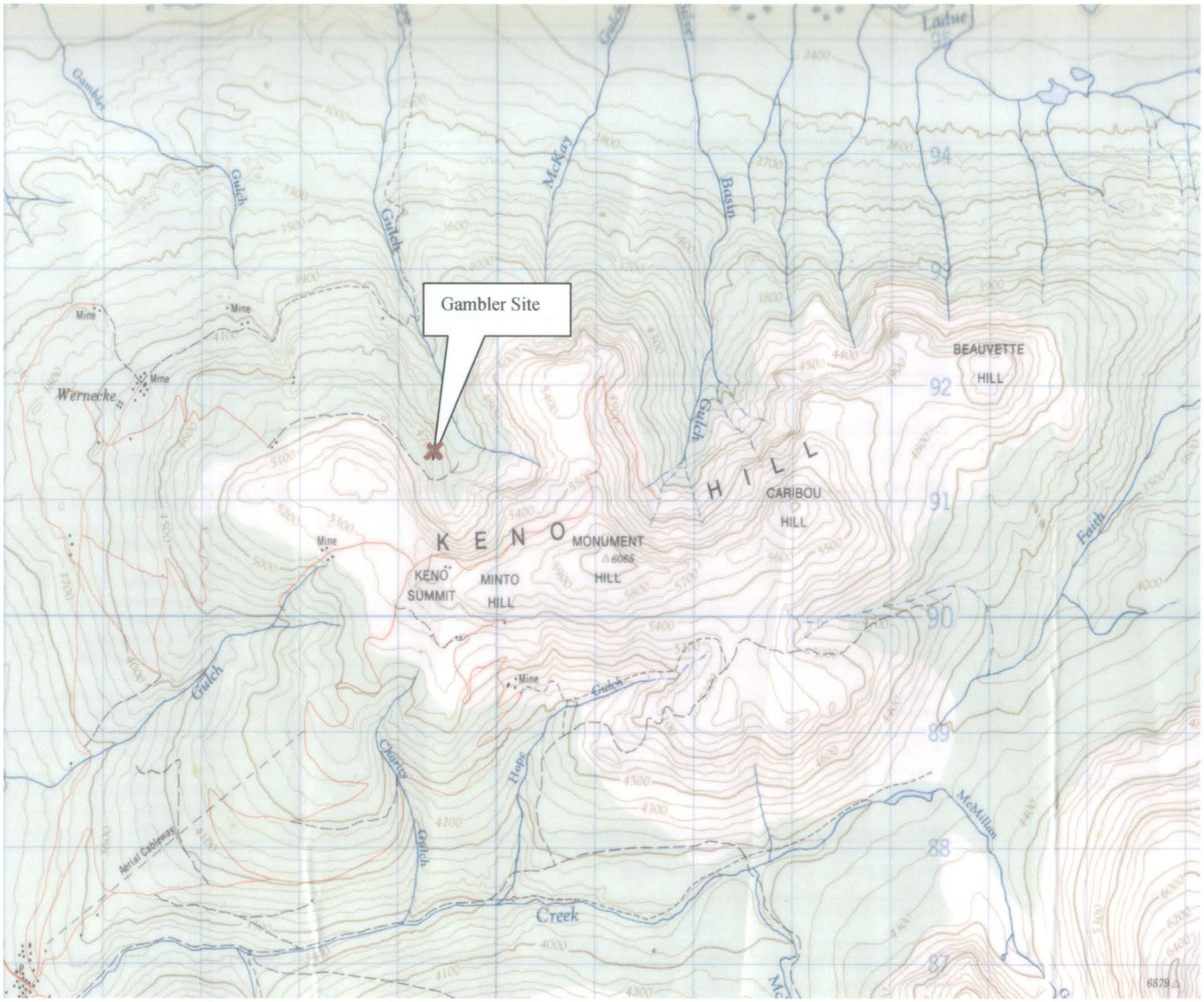
Field Notes

Artifacts Found

Gambler Site # 73

Location and Site access

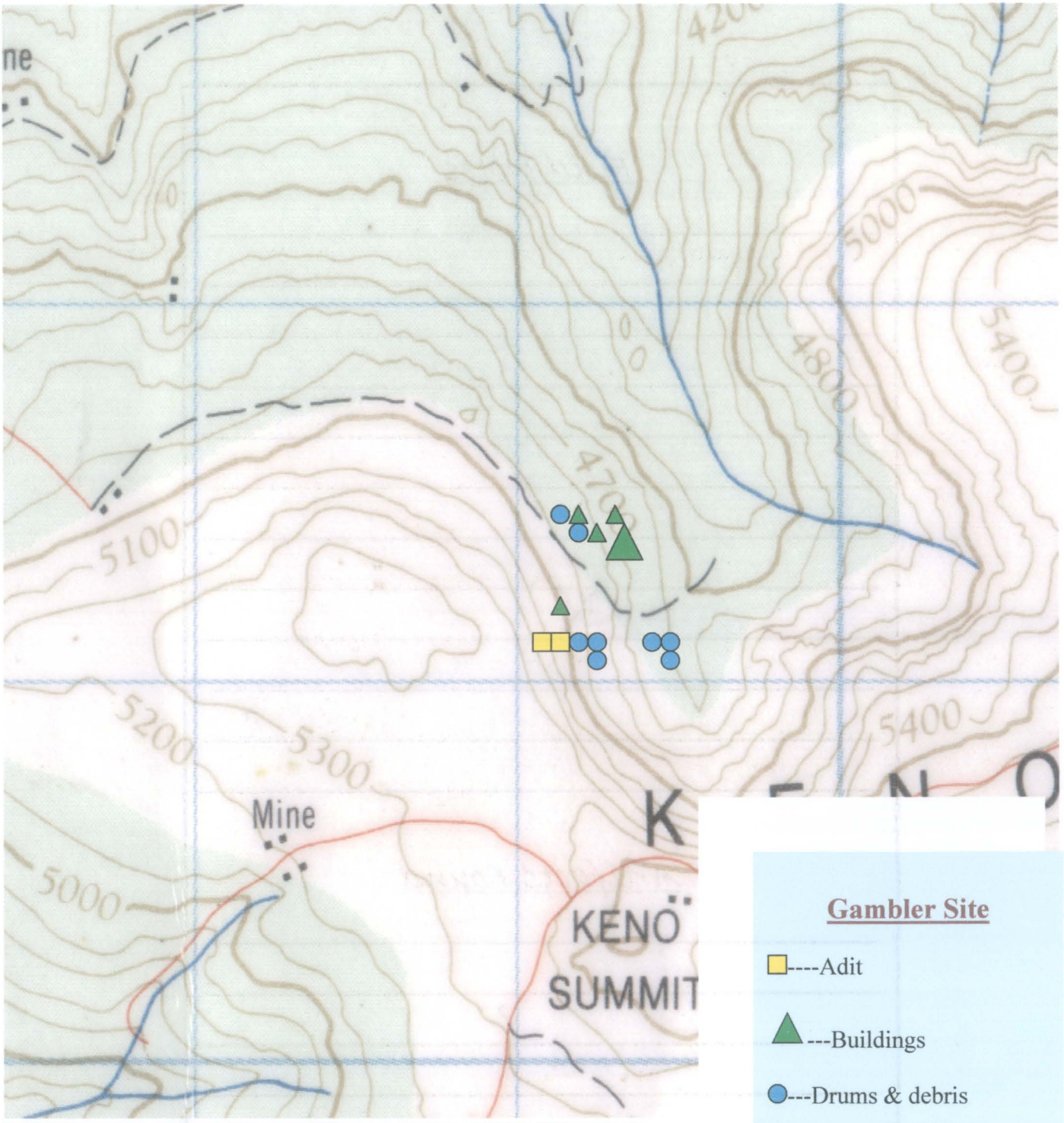
The Gambler site is situated on the northern slope of Keno Hill in Faro Gulch via the Faro Gulch trail. Existing mining roads are in fairly good condition for 4-wheel drive, although the last ½ km is extremely rough with deep ruts and boulders. The trail from that point would need to be upgraded for 4 wheels drive access.



Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2

Field Notes

Artifacts Found



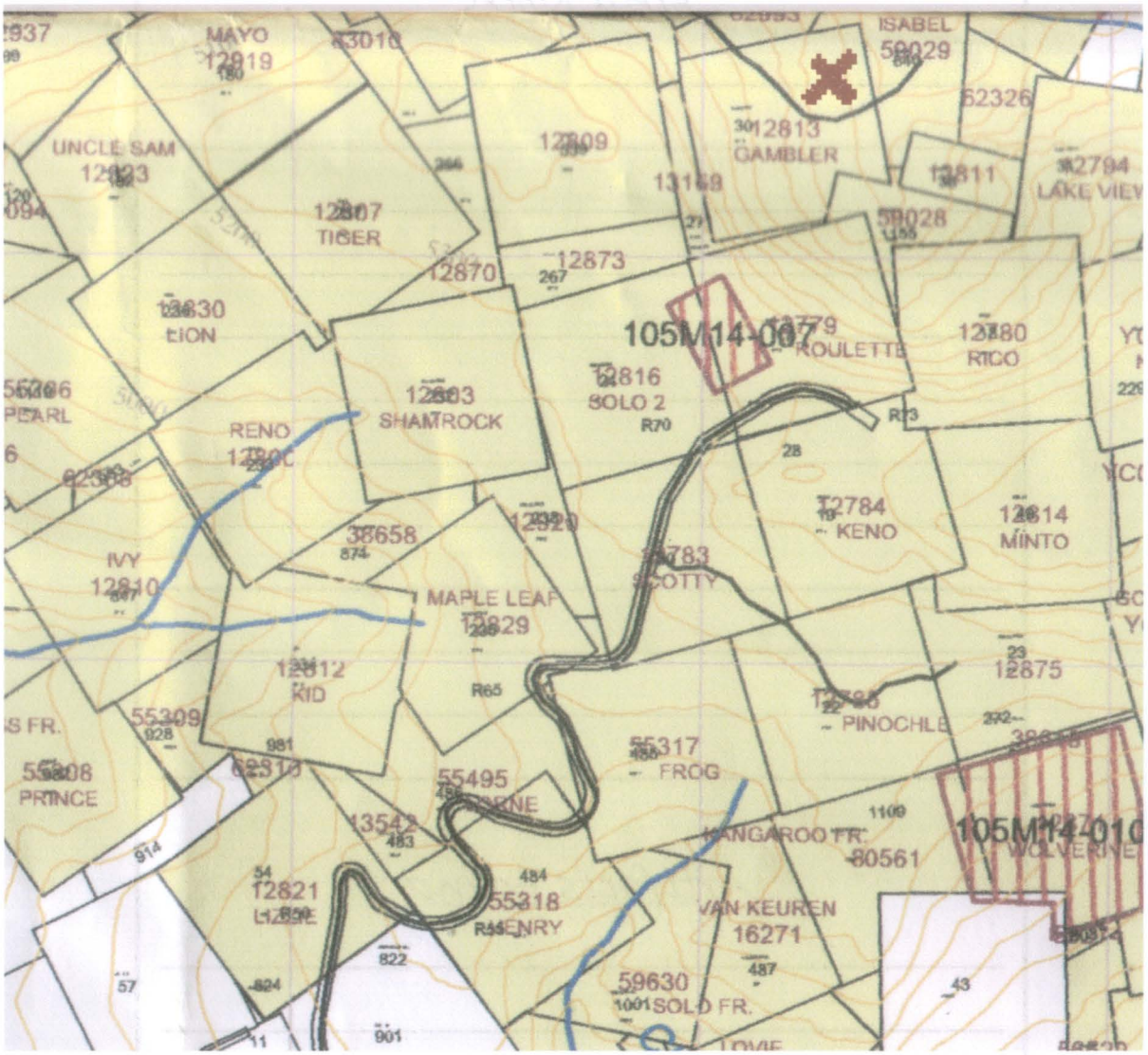
Keno Hill, Yukon Territory. Part of Map 105 M/14. Energy, Mines and Resources Edition 2
Drawing by McQuesten Lake Enterprises

Field Notes

Artifacts Found

Historical background

The site was initially established in 1921, with hand trenching and 120 feet of drifting. More trenching was done between 1963 and 1993 this time with heavy equipment. Taken from min file #105 M.



Current site tenure/ownership

The Gambler claim is currently held in good standing until 2006. The ownership of the claim belongs to Thorn bury Capital Corporation. This claim holds in our opinion the area were the five frame structures are located.
The lower trenching falls on the Isabel claims #3and #4. Ron and Helen Hallway, two local people in the Mayo area, currently hold these.

Field Notes

Artifacts Found

The review of existing studies, confirmation and/ or update of current physical conditions

The buildings have slightly deteriorated from the last inspection in 1999.
The main building is in relatively good condition considering it was built in the 1920's. The cabin is built from 2x4 on 2' centres with its roof-rafters on 2' centres with every second rafter a truss. The wall studs are in good condition, along with the roof-trusses, which are built with 1x6 rough lumber. The roof caps on down side slope of the roof are rotting, with approximately 25% of the roof sheeting in very poor condition.

The foundation is constructed of flat rock common to the site. Small logs were placed on the rock as a foundation, then 2x6 boards were laid as joists on 2'centres with 1x8 shiplap flooring on top. The floor is in fair condition, though moss is beginning to grow and rot is forming on some portions of the floorboards. One end of the main building was used for food preparation, and the cabinet, drawer, and sink structures are still in place.

Field Notes

Artifacts Found

The main building is holding its own with the elements for now. There did not seem to be any glaring dangers, though that is not to say there is no risk to entering the main building.

In the not to distant future if the building is not stabilized, the 1x8 planks will weaken further over the floor joists causing a high risk of someone breaking through the floor. Because there is no roofing material the weakening of the wall studs and the roofing boards will eventually cause this building to collapse as the other structures have done around it.

Restoration or stabilization of the building will vary depending on funding available, though the most immediate action would be to install tin on the roof and bracing, to prevent further deterioration to the structure. Assessment of the site by the Heritage branch will determine the extent of stabilization necessary for the preservation of the building

Field Notes

Artifacts Found

Near the main cabin the debris mainly consists of Items such as stovepipe, safety's for the roof, general refuse, rusty cans, bottles and several lengths of 1/12''pipe.

Collapsed structures expose rusty nails.

In our assessment there seems to be a fair amount of building material that could be recycled.

Lumber and other materials from the site could be salvaged and then stored for reuse in the stabilization of the existing buildings.

Field Notes

Artifacts Found

Behind the main cabin is a storage shed built of 2x4 frame, plywood floor and 1x6 boards

The shed roof has collapsed with nails exposed and one wall has buckled ready to fall away from the rest of the building. This structure poses public safety concerns.

The restoration of the shed would be extensive and costly.
Possible considerations would be to dismantle the building and reuse the lumber elsewhere.

Right: Shed entrance

Field Notes

Artifacts Found

Tent frame: Left This structure remains in good condition and does not warrant any safety concerns

At this time though stabilization through cross bracing would help to keep the structure in this state.

Photos: Below: tent frame. Right: outhouse

Field Notes

Artifacts Found

Above photo: Collapsed upper adit

Two adit's are found uphill and to the east of the buildings. Both adit's have collapsed and are not accessible. The upper adit seems in a stable condition with very little debris on the dump.

Photo: Overview of lower adit and dump

Field Notes

Artifacts Found

The second and lower adit; Adit has a rail and trestle extending from the collapsed portal; this rail ends at a wooden platform on the edge of the dumpsite, with some of the rail extending down the dump slope.

Field Notes

Artifacts Found

Photos: empty fuel drums and ore cars below the waste dump

There are 15 forty-five gallon drums scattered over the Gambler Site, principally down slope from the adit and upper workings. These drums were found to be empty and did not pose an environmental contaminant spillage concern.

There was also considerable amounts of other debris such as sixteen twenty foot pieces of two inch metal water pipe, one hundred feet of small gauge mining rail near the collapsed adit and various pieces of drill steel rail and debris in front of the lower adit

Field Notes

Artifacts Found

Photo: collapsed building, pipe and steel at the lower adit.

Verification of environmental issues as identified in previous studies

In our assessment of the site we found potential environmental concerns not documented in the previous report. Trenching in the lower workings extends into the headwaters of the creek. Previous waster sampling downstream from the trenching has not been consistent enough to determine if the disturbance done by the trenching is causing a negative impact to the water system.
The discharge water from the adit as noted in previous reports was frozen and glaciating down the hillside at the time of our inspection.

Public safety considerations

As with all old sites there is a certain safety concern, due to the array of garbage and collapsing buildings. At gambler the main building is holding its own with the elements for now, there did not seem to be any glaring dangers that are not to say there is no risk to entering the main building. In the not to distant future if the building is not assessed more thoroughly, and then worked on, the flooring material will weaken further over the floor joists causing a high risk of someone breaking through the floor. Because there is no roofing material the wall studs and the roofing boards will rot eventually causing this building to collapse as the other structures have done around it.

Field Notes

Artifacts Found

With the storage shed immediately adjacent to the main building, the roof has already collapsed leaving one of the walls hanging preciously towards the downhill side of the slope. This is some concern if smaller children walk along this path or take this route to explore the tent frame structure next to it.

A short twenty meters from the tent frame and down slope is were the outhouse is situated. This small structure is in good shape, with the only major concern being that, through disruption of the ground or actual physical movement of the outhouse, it now rests at a steep angle forward. This to some degree is a safety issue, if tourists are being directed to this area through the use of the hiking trail system.

The last of the structures in this vicinity is a sub-floor for another tent frame; this doesn't pose a great hazard other than possible stumbling over debris associated with it.

Recommendations for actions at sites from environmental and historical perspective

At a minimum the remediation for gambler site should consist of removal of all debris and special attenuation to be paid to areas were there is a safety concern, as this site is a destination for the general public at this time.
Work to the trail would consist of approximately four hours with a small cat to remove the boulders and fill in the ruts for 4-wheel drive access to the site. The trail to the adit and the lower workings would not be upgraded as removal of debris and waste would be hauled out to the main site with a small cat.

Field Notes

Artifacts Found

Cost estimates to implement recommendations

Equipment to be used for reclamation

John Deere track loader with four way bucket, model 350, weight five ton, pads on track are street track low profile, meant for as little disruption to ground surface as possible. There is a detachable backhoe for this unit, with an approximate reach of sixteen feet

Cost per hour with fuel----- $65.00
Cost per hour without fuel- $55.00

International five-ton hyab with sixteen-foot flat deck, the hyab is capable of lifting three and one half ton.

Cost per hour with fuel------$60.00
Cost per hour without fuel-$50.00

Dodge three quarter ton pickup truck for crew transportation.

Cost would be .48 cents per kilometre.

This would be the primary equipment and rates used for the clean up of sites, if heavier equipment is needed it will be acquired on a need to hire bases. Some quotes for jack smith of Mayo gives this equipment

D-7 cat---$95.00 per hour with fuel
Low boy tractor trailer--$85.00per hour with fuel

Estimate for Gambler site:

We estimate seven days to completely access the sit clean and remove all debris and deal with safety issues, plus deliver any salvageable artefacts to the appropriate departments. The site cleanup will require two workers working 10-hour days.

Four hours road upgrade to allow access by five ton truck----------$260.00

Sixteen hours work with hyab, two loads garbage to Keno dump----------$960.00
Ten hours mob and de-mob of equipment----------$600.00
Twenty hours with small loader----------$1300.00
Ten hours per day x $20.00 per hour =$200per day
Two labours for one day----------=$400.00 per day
Two labours for seven days----------$2800.00
Transportation to and from site, approximately 140 km round trip x 7 days---$490.00
Ten percent administration fee----------$771.00
Ten percent contingency ----------$848.00

Cost $8029.00
G.S.T.---------$562.03
TOTAL-------$8,591.03

Field Notes

Artifacts Found

Summary of Recommendations

- Prior to remediation we recommend GPS and mapping the sites for historical documentation.
- Historical information should be collected of the sites owners, (also for historical documentation).
- Buildings that are in stable condition and have historical value or points of interest should be preserved. Materials and lumber should be salvaged from buildings that are collapsing and pose safety issues, the materials then could be recycled onto buildings needing repair and for future exhibit use.
- We recommend the selected buildings be stabilized as soon as possible to prevent further deterioration or loss of the structure.
- Adits and shafts at most the sites are extremely dangerous and need to be filled and collapsed. However some of the timbers can be left to outline where the shafts and adit's existed.
- Artifacts have been removed from sites visited by the public even though there are laws that prohibit it. Unique artifacts found during remediation should be removed and stored within the local communities, for use in there museums, and local public restoration projects.
- Garbage sites are a treasure for collectors though we feel they can cause problems for wildlife. Animals can get tangled in wire or step on shards of glass and rusty cans. We feel the sites should be cleaned and salvage any artifacts.

References

Keno Valley/ Dublin Gulch Environmental Baseline Assessment
Prepared for Waste Management Program Indian and Northern Affairs Canada
By Environmental Services Public works and Government Services Canada
March 2000

Mayo Mining Recording Office