ASSESSMENT REPORT

105M-14-3

RUNER

PREPARED BY

DIAND TECHNICAL SERVICES

FEBRUARY, 1994

105M-14-3

RUNER

LOCATION

Latitude: 63° 55'02"N
Longitude: 135° 14'43"W

The site is located approximately 3km east of the old mining community of Keno. The site is located on the north side of Lightning Creek and upstream of the confluence with Thunder Gulch. The site is accessed by a trail branching off the road between Keno to Keno Summit. The elevation of the site is between 1000-1100m above sea level.

Location maps and airphotos showing the site are included as Appendix A of this report.

WORK HISTORY

A work history was compiled using information from the Department of Indian Affairs and Northern Development Yukon Minfile record 105M 016. This work history follows.

1920-1930 - An adit was driven approximately 30m and a few tonnes of hand cobbed ore was shipped.
September, 1946 - Restaked as Thunderbird, etc. claims by E.W. Runer who sank two shafts 7.6m and 12.1m deep.
October, 1950 - The claims were sold to Canadian Exploration Ltd. who completed trenching.
January, 1951 - The claims were transferred to Mt. Keno Mining Ltd.
1952-1953 - Amco Exploration Incorporated optioned the property and drove a 305m upper adit and a 91m lower adit from which 43.4 tonnes of ore was hand cobbed.
1954-1956 - J. Hogan leased the property from Mt. Keno and shipped more than 136 tonnes from the upper adit.
1958-1959 - Another lessee, J.B. O'Neill shipped 5.4 tonnes from the upper adit and drove a 45.7m adit above it which produced 6.4 tonnes of ore.
1964-1974 - The property was optioned by United Keno Hill Mines Ltd. and explored with geochemical sampling.
1975 - J.B. O'Neill leased the property again.
1975-1978 - Trenching was completed.
1979 - 15.7 tonnes of ore was shipped from a new vein about 30m east of the 1160m level.
1980 - 19.1 tonnes of ore was shipped from the same vein. Canada Tungsten Mining Corporation Ltd. acquired the property.
1981 - 6.4 tonnes of ore was shipped from the 1160m vein. The upper adit was

rehabilitated, 10 percussion holes (1524m) were drilled, and trenching was completed.

1982 - M. Swyzinski of Springmount Mining Ltd. leased the property and shipped about 73 tonnes of hand cobbed ore.

1983 - 35.4m drifting was completed in a new adit near the 1165m level.

1984 - One hole was drilled to 143.3m and 399.2m of hand cobbed ore was shipped to Cominco

1985 - 61.7 tonnes of ore was shipped to Cominco.

1986 - Springmount collared a new exploration adit on the Ironclad vein on the Thunderbird claim.

CLAIMS STATUS

Status of mineral claims including claim names and numbers, claim expiry dates, and current owners in the vicinity of the Runer site have been noted as of 1992/03/31 as follows;

CLAIM NAME/NUMBERS	EXPIRY DATE	OWNER
- CMC 1 - 41, 43 - 104	11, 30 September, 1992.	A.W. Hyde 60%, T. McCrory 20%, B. Preston 20%.
- NITE 6, 8 - 10	18 November, 1992.	B.A. Copper Mines Ltd./ B.A. Resources Ltd.
- BLUE	11 September, 1992.	Archer Cathro & Associates (1981) Ltd.

Major commodities identified at this site includes silver and lead. Zinc is identified as a minor commodity.

Geologic conditions at this site indicates that galena, tetrahedrite, and spalerite occur with pyrite in siderite gangue, within a transverse vein cutting quartzite that is displaced by many cross faults.

CURRENT SITE CONDITIONS

The Runer exploration site is located on the south facing slope of Keno Summit immediately upstream of the confluence of Lightning Creek and Thunder Gulch. The site is accessible by trails from Keno.

The site is on a steep slope covered by silt and gravel till overlying bedrock. Extensive stripping to expose the adits as well as trenching has been completed across this site. The site is dry and well drained. Willow, alder, black spruce, fireweed, and vetches are the predominant vegetation species in the area.

The only surface water in the area is Lightning Creek below the site. No surface water features were observed within the site.

Deep excavations have been completed to develop adit entrances and ventilation shafts. These excavations were stripped of overburden, which was placed downslope of the entrance, then the softer weathered rock was blasted or ripped, leaving very steep near vertical side slopes. All of this excavated rock was also placed downslope increasing the weight on the slope substantially. Adding to this the other areas of trenching and stripping has resulted in large piles of material having been placed at a number of locations on the slope. The extent of the disturbed area is approximately 150m wide and extends about 300m downslope. The vegetation has been removed from this entire area and is visible from a long distance. Tension cracks were observed on the piles of stockpiled waste material, indicating that some form of movement is occurring. These tension cracks indicate the slope may not be stable.

It was not possible to safely get to the adits, however it appeared from a distant inspection that the adits were sealed.

Some infrastructure has been installed and left behind since the last work was stopped at this site. Remaining material found at this site includes;

* 1 - 4.3x11.0m wood frame plywood and metal clad workshop containing;

  - old batteries,
  - metal ladders,
  - chains,
  - spool of cable,
  - 20-23 litre empty oil pails, and
  - drill rods.

* 1 - 2.4x4.9m wood frame plywood and metal clad storage shed containing,

  - miscellaneous tools,
  - clamps,
  - spool of electrical teck cable, and
  - 5-23 litre pails of hydraulic oil.

* approximately 320 empty 204 litre barrels stacked near the upper adit, with up to 36 empty barrels scattered below the top adit,
* 1 - 1.52m diameter x 4.57m empty tank near the upper adit,
* 1 - 1.83m diameter x 3.05m tank containing residual fuel remaining in the bottom of the tank,
* approximately 25 pieces of 50-100mm diameter pipe up to 6.10m long,
* 3 locked powder magazines (1 at the upper adit, 2 below the upper adit),

* 22 pieces of 100mm diameter pipe up to 6m long below the top adit,
* 1 ore car,
* 40 pieces of rail up to 6m long, and
* miscellaneous pieces of scrap metal.

Most of this material is concentrated in one location near the two remaining buildings. The large pile of barrels and the explosives magazines are located in a clearing downslope of the buildings.

The buildings are located very close to the top of the excavation for the top adit. This excavation is a near vertical face within 10m of the closest part of the building. A wire fence has been constructed near the edge of this escarpment, however there is no signage in place indicating any potential danger or safety hazard.

The large cache of empty barrels were marked to once contain JP4 jet fuel, hydraulic oil, methyl isobutyl carbonal, and diesel.

Photographs showing current site conditions are attached as Appendix B of this report.

RECOMMENDATIONS

Exploration activity at this site has resulted in extensive disturbance to the site. Recommendations for additional site investigations and site remediation are provided for below.

Exploration Area

Extensive trenching, stripping, and stockpiling of waste material on this relatively steep slope has caused considerable surface disturbance to the environment. All the vegetation has been removed from the area and the entire site is exposed to wind and water erosion. The material is coarse but contains a high silt content that is susceptible to erosion. Fortunately the site is relatively dry and no surface water features cross this area.

Stockpiling of the waste material in large stockpiles on the steep slope has added a large concentrated mass to the slope. Concentrating load on a slope can increase the risk of triggering instability. Tension cracks were observed in the fill at the time of inspection on 1993/07/23 indicating that movement of the fill was taking place. This movement could be in the form of uneven subsidence of the fill material or movement of the underlying slope. To establish more precisely if and what mechanism of movement is occurring will require a more detailed site assessment. The worst case situation that could occur would result in a massive slope failure downslope into and across Lightning Creek. This would result in the mass movement of soil and vegetation down the slope into Lightning Creek, temporarily blocking any creek flow. If this kind of failure is imminent, it will be very difficult, costly, and risky to even attempt stabilization. It is not considered feasible to

prevent any slope failure in this remote location, however steps should be taken to not worsen conditions. These steps include;

* not allowing any work or excavating on the slopes below the fill. For instance, placer mining allowed in the area could increase the risk of causing a failure by excavating material from the toe of the slope. This would also expose any workers in the path of this potential failure.

* not adding any more fill on the slope without assessing in more detail the potential for slope instability at this site.

* ensuring that surface water is directed away from this area.

It is also recommended that the site be posted to advise of any potential hazards.

Although the site has been significantly altered it would be extremely difficult and expensive to recontour the slope and revegetate this remote site.

It appears that the adits were sealed with heavy timber planking. Getting to these adits is very difficult and unsafe and it is recommended that these adits can be left without additional safety precautions at this time.

Site Buildings

The site buildings and material in and around them do not appear to be causing any environmental damage, however they are slowly deteriorating with time. The metal cladding is inhibiting deterioration. It is recommended that if a cleanup program is initiated that these buildings and remaining material be removed from the site. The few remaining hydrcarbon products found at the site should be removed as soon as possible to limit any chance of spilling. All fuel tanks should also be removed from the site.

The buildings are situated close to a very steep excavated slope. Although some protective fencing has been placed to stop entry, it is also recommended that the site be posted against entry to highlight the risk at this site. Fencing the entire unsafe area is not considered a practical solution.

Barrel and Explosives Storage Area

It is recommended that additional research be undertaken to confirm the contents of the three explosive magazines found on-site and to determine what degree of risk any remaining explosives pose. The explosive magazines are all locked and secured, however unless any remaining explosives are to be used locally in the near future it is recommended that they should be removed from this unprotected site. This should be considered a **HIGH** priority issue.

If a clean-up program is initiated all barrels should be removed from the site. This clean-up is considered a **LOW** priority.

It is possible to drive trucks and equipment to the site and all work could be completed using land based equipment.

SUMMARY

Extensive surface disturbance at this site has resulted in large amounts of fill placed near the mid-point of the slope which is now showing signs of instability. This area should be considered a **HIGH** risk area and work should not be allowed below this site.

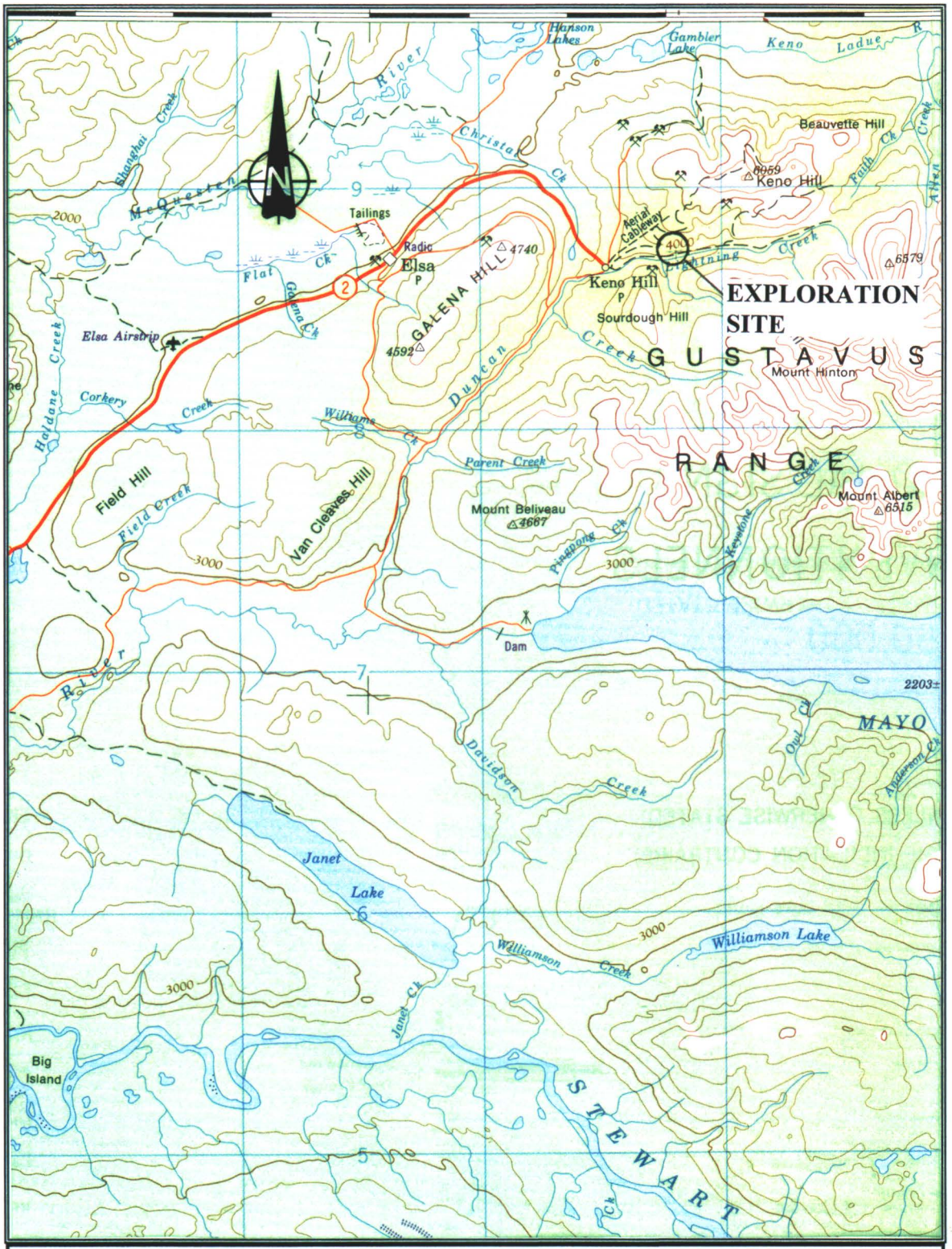
The buildings and metal waste are considered a **LOW** level of environmental liability. However these buildings are perched close to the edge of a vertical escarpment and the area should be considered a **HIGH** risk area for people to enter and the area should be posted clearly identifying the risk associated with this site.

The amount and type of explosives left on site should be verified as soon as possible. If these explosives are not to be used soon it is recommended that they be removed from the site using appropriate removal techniques. This should be considered a **HIGH** priority. All remaining hydrocarbon products should also be removed from the site as soon as possible even though remaining volumes are small and the risk to the environment, if a spill was to occur, is considered relatively **LOW**.

Physical disturbance to this site is extensive and significant infrastructure has been left behind. Clean-up of remaining buildings should be considered a **lower** priority than clean-up of the hydrocarbons, however the longer these facilities are left the more deterioration will occur.

APPENDIX A

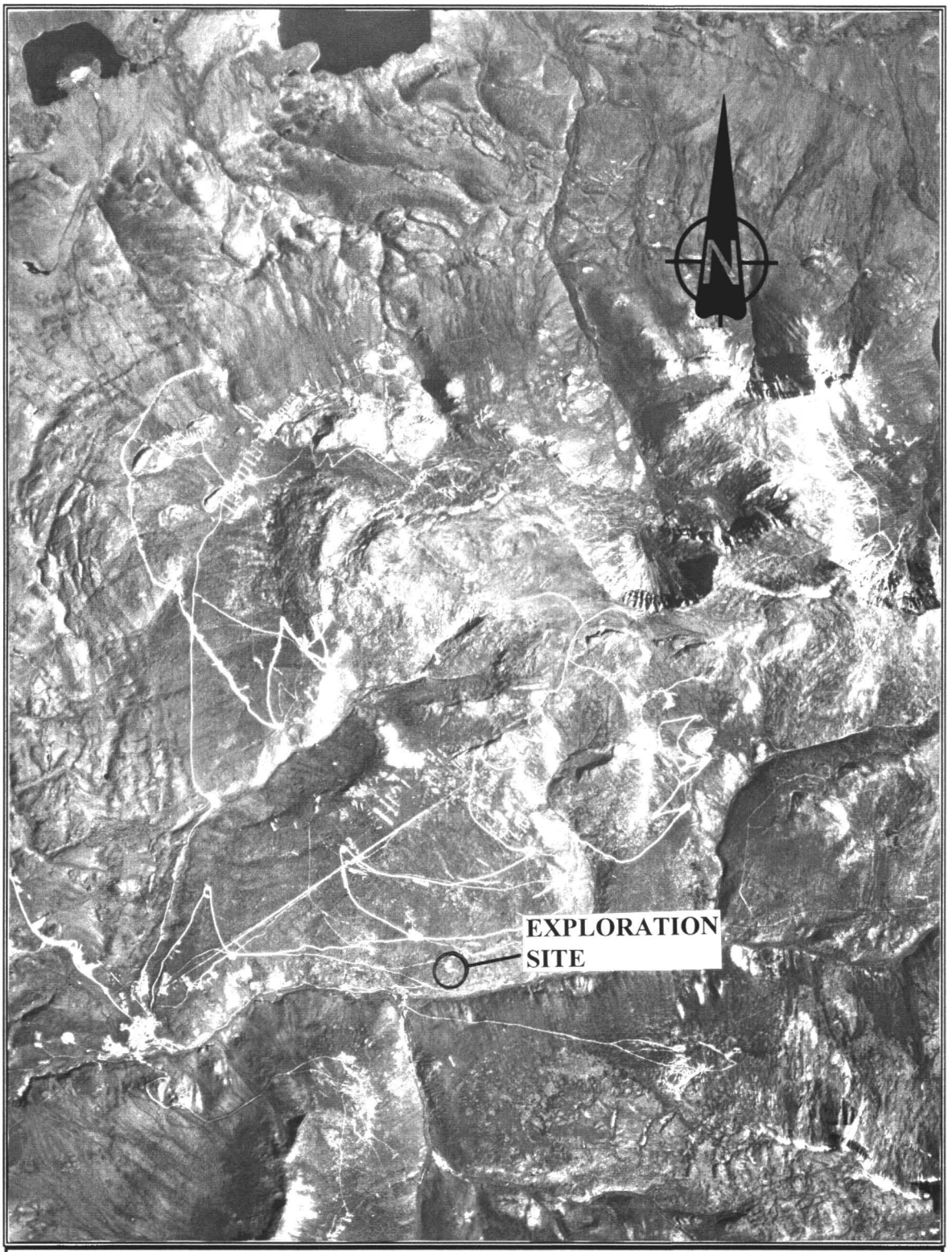
SITE LOCATION MAP
AND
AIR PHOTOGRAPH



SITE NAME: **RUNER** SITE NUMBER: **105M-14-3**

MAP NUMBER: **105M** MAP NAME: **MAYO** MAP SCALE: **1:250000**

SITE LOCATION: LATITUDE: **63° 55'02"** LONGITUDE: **135° 14'43"**



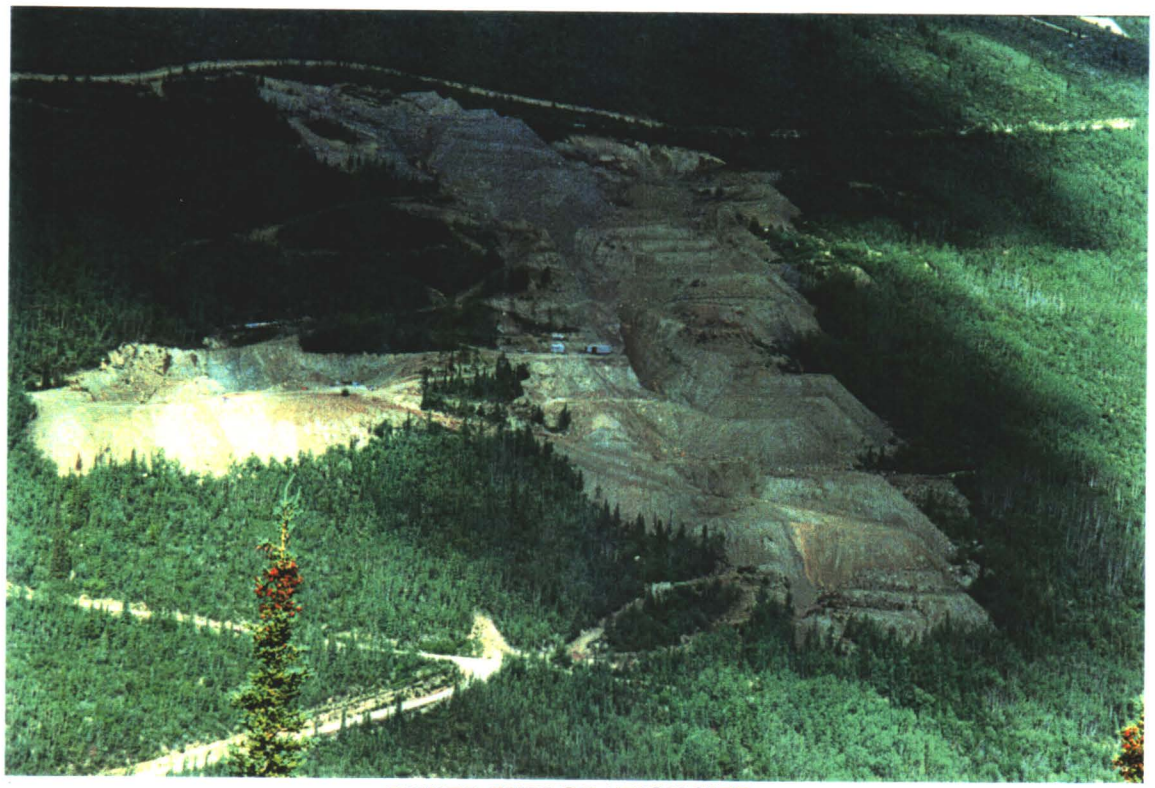
SITE NAME: **RUNER** SITE NUMBER: **105M-14-3**

AIRPHOTO NUMBER: **A19980-11** YEAR: **1968** AIRPHOTO SCALE: **1:56000**

SITE LOCATION: LATITUDE: **63° 55'02"** LONGITUDE: **135° 14'43"**

APPENDIX B

SITE PHOTOGRAPHS



RUNER EXPLORATION SITE

LOWER ADIT

UPPER ADIT

RAIL AND OTHER METAL WASTE

BUILDINGS AND FUEL TANKS

BUILDING INTERIOR

ORE CAR, BARRELS, PIPE, ETC.

EXPLOSIVES MAGAZINE

EXPLOSIVES MAGAZINES, BARRELS, ETC.