

# YUKON



ASSESSMENT REPORT

105D-02-2

BIG THING

*(arctic caribou)*

10

## Abandoned Mines Assessment



Indian and Northern  
Affairs Canada

Affaires indiennes  
et du Nord Canada

Canada

**ASSESSMENT REPORT**

**105D-02-2**

**BIG THING**

*10*

**PREPARED BY**

**DIAND TECHNICAL SERVICES**

**OCTOBER, 1993**

105D-02-2

BIG THING

LOCATION

Latitude: 60° 05'01"N

Longitude: 134° 41'01"W

The mine site is located 9km south of the village of Carcross between Montana Mountain and Sugarloaf Hill. The site is accessible by road from the South Klondike Highway at the south end of the Nares River bridge. The elevation of the site is between 1600-1700m above sea level.

Access to the Big Thing mine is still possible with two wheel drive vehicles although the use of four wheel drive vehicles is recommended.

Site maps showing the location of the site are attached as Appendix A to this report.

WORK HISTORY

July, 1905 - Staked as Caribou, Pride of Yukon, etc. claims by J.H. Conrad and transferred to Conrad Consolidated Mining Ltd. Development. Work included 137.2m of drifting on four levels plus a 707.1m crosscutting adit with several raises about 67m below the bottom of the shaft.

1910 - 1912 - 2290 tonnes of ore were mined by Conrad Consolidated Mining Ltd.

1915 - 1916 - A small amount of underground development was done under option by Alaska Corporation.

1936 - 1937 - Inca Mining Corporation Ltd. completed some surface trenching.

June, 1962 - The Peerless claims were staked on three sides of the original two claims.

July, 1965 - Arctic Mining & Exploration Ltd. optioned the three original leased claims from J. Phelps and J. Scott who had acquired them in 1942, added the adjoining Eagle claims, rehabilitated the old mine and started a new adit 6m below the lowest original level.

March, 1966 - The Peerless claims were transferred to Lion Nickel Mining Ltd. which extended the lower adit 229m in 1967 and drilled 33 holes (1617.3m) underground in 1968. National Malarctic Gold Mining Ltd. tied on the Jack claims.

1967 - 1969 - Construction of a 272 tonne mill started in June, 1967 for ore reserves of 231,336 tonnes. The mill operated between May - December, 1968 and March - October, 1969 and treated 50,751 tonnes. The name was changed to Arctic Gold & Silver Mining Ltd. in early 1968.

October, 1971 - The claims were transferred to Indian Mountain Metals Mining Ltd.  
 Fringe staking included Silver claims in March, 1974 by D. Waugh and Sherrill claims in June, 1975 by R. McConnell

1975 -1976 - Arctic Gold & Silver Mining Ltd. completed some underground rehabilitation and stockpiled a small tonnage of ore.

1978 - The original leases were transferred to Peso Silver Mining Ltd. which changed its name to Rex Silver Mining Ltd. in 1979.

1979 - 1983 - B.K. claims staked by D. Gleeson in 1979, AC and AU claims staked to the north by D. Branigan in 1980, and Ski-Doo claims staked to the northeast by Tally-Ho Exploration Ltd. in December, 1983.

1985 - 1990 - The leased claims were surrounded by Barb claims in May, 1985 by Boreal Engineering Services Ltd. for Feather Gold Resources Ltd. which performed hand trenching in 1986, conducted magnetometer surveys, soil sampling, and trenching in 1989 and 1990.

### CLAIMS STATUS

Status of mineral claims including claim names and numbers, claim expiry dates, and current owners in the vicinity of the Big Thing site have been noted as of 1992/05/15 as follows;

<u>CLAIM NAME/NUMBERS</u>	<u>EXPIRY DATE</u>	<u>OWNER</u>
Barb 1-34	3, May 1996.	Larry Barrett
Rat 1-12	15, December 1993	Feather Gold Resources Ltd.
Rat 13-29	15, March 1994	Feather Gold Resources Ltd.

The major commodities identified at this site are gold and silver. Minor commodities include lead, zinc, copper, and molybdenum.

### CURRENT SITE CONDITIONS

The Big Thing mine site is located between Sugarloaf Hill and Montana Mountain near the headwaters of Big Thing Creek on the Yukon Plateau of the Boundary Ranges (Coast Mountains). Site photographs showing current site conditions are attached as Appendix B to this report.

The site is above treeline and is covered with short grasses and alpine vegetation. The headwaters of Big Thing Creek is directly below the adit, a vertical distance of approximately 150m. A dam across this creek was constructed to store water used for the mining operation. This water was pumped from the reservoir to the mine site.

The mine site has a relatively long history of exploration and development, first commencing in 1905. Over the past 88 years the site has experienced activity at least 11 times. These major activities included underground development, trenching, milling,

magnetometer surveys, and soil sampling. Ownership also changed several times over this period.

The remaining infrastructure is confined to three areas, namely;

- mine adit and waste dump,
- mill foundations, and
- water reservoir area.

Some trenching above the adit was also completed.

A description of the remaining infrastructure follows.

#### Mine Adit and Waste Dump

An open mine adit, first developed in 1965, remains at the site. At the time of inspection on 1993/06/21 the entrance to the adit was filled with snow. Ice was slowly melting from the adit and water was flowing from the entrance. The entrance to the adit is accessible to the public.

Railway track once used by ore cars is still in place extending from inside the mine to the waste dump. Once outside the adit, the track extends in opposite directions, one going to the waste area, and the other going to the loadout. The track extending to the waste area is constructed on a wooden trestle for approximately 60-80m. This trestle was constructed using local timber, is old, decaying, and is starting to collapse. This structure is not safe and should be considered a hazard. The track extending to the loadout area is constructed on waste rock and is supported on a wooden retaining structure approximately 10m high. This retaining structure is old, decaying, and is also beginning to collapse from the weight of the retained backfill. This situation is expected to worsen with time and should be considered unsafe.

Metal waste consisting of mostly pipe and rail is scattered over the site and dumped over the waste pile. Approximately 100m of railway track is in place outside the adit.

#### Mill Foundations

Concrete foundations and floor slabs remain from a 272 tonne mill constructed in 1967. These foundations, from two separate buildings measuring 9.1x24.4m and 6.1x9.1m, are located directly to the east of the adit. Railway track is embedded in the floor slab closest to the adit. The concrete appears sound and in reasonably good condition.

A large tracked excavator is on-site. This excavator does not appear to be in working order and may have been abandoned.

### Water Reservoir Area

At one time, likely when the mill was in operation during 1968 and 1969, Big Thing Creek below the mine and mill site was dammed and a water storage reservoir was created. The water was likely pumped from a plywood pumphouse building measuring 3.0x3.0m on the north shore of the creek to the mine and mill site. The old pumphouse remains on the bank of Big Thing Creek, however no water pipe was found.

The dam across the creek appears to have been constructed using local granular fill and is between 2-3m high. An overflow pipe was installed within the top 0.5m of the dam. The dam has failed and the creek has re-established unconfined flow through the middle of the dam. The material from the centre of the dam appears to have been eroded and washed downstream. There is no evidence to suggest that this dam was deliberately removed during any shut down phase of the mine as the remaining opening does not appear to have been machine excavated. If this did occur, above normal siltation would have taken place in the creek below the dam until the embankment was eroded to its present condition.

### RECOMMENDATIONS

As noted above, since the site was first staked, at least 11 different work programs have been undertaken. This included development of a mill which operated for two years. This resulted in a large pile of waste rock placed downslope of the adit. Remains of the infrastructure is predominantly from the time when the mill operated in 1968 and 1969. Recommendations for each site component are presented below.

#### Mine Adit and Waste Dump

The mine adit is unsecured and open to the public. Because this site is accessible by road and close to populated areas (Whitehorse and Carcross), the open adit should be considered a safety hazard. The adit should be sealed to prevent the public from entering it. If the adit is left unsecured a potentially **HIGH** level of risk remains for an accident to occur.

The waste area has been developed by dumping the waste rock over the slope below the adit. This was developed by extending railway track from the adit to the edge of the slope and beyond with a trestle supporting the track. The trestle and loadout retaining structure were constructed with local untreated timber, are old, decaying, and unsafe. They should be posted as unsafe and dismantled as soon as possible.

The waste rock has been dumped and is sitting at its natural angle of repose. It is unlikely that this waste rock will cause any additional slope instability. Revegetation of this waste material as well as areas where trenching occurred is not practical as the material is dry and void of organics needed to support vegetative growth. Further disturbance of this material will disturb any natural revegetation that is taking place.

### Mill Foundations

The concrete mill foundations are not considered a serious environmental hazard and should be left in place. Attempting to remove them will be costly, create further disturbance, and require disposal to another area. Any loose metal waste on-site should be collected and removed from the site if a clean-up program is initiated.

Ownership of the excavator should be confirmed. Once ownership is verified the excavator should be removed from the site.

Work to clean-up the metal waste or removal of the excavator should be considered a **LOW** environmental priority.

### Water Retention Area

Flow in Big Thing Creek is no longer confined or contained and the remains of the original dam do not appear to have any continuing adverse affect on the creek. Work that would improve conditions at this site includes;

- backsloping the eroded face of the dam on the creek sides to a 3:1 (horizontal:vertical) slope,
- removing the remaining culvert from the dam fill, and
- dismantling and burning the wooden pumphouse building.

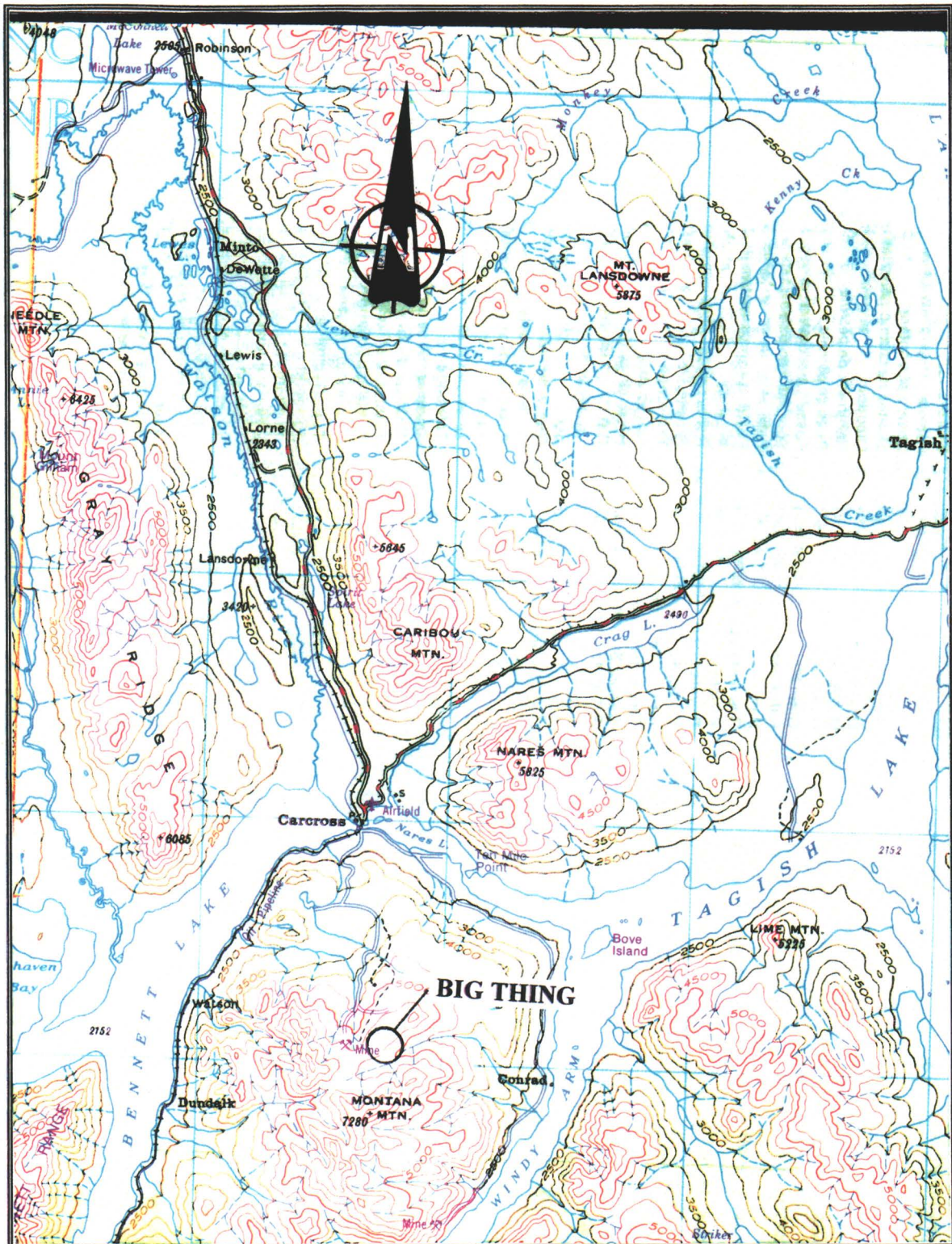
This work is considered to be a **LOW** environmental priority as the physical changes once made to the site no longer appear to be affecting the stream flow. It is unknown whether the past site work has affected the chemical nature of the water. To determine present water quality, samples should be taken, tested, and analyzed according to established protocols.

### Site Summary

Overall, this site is considered a **LOW** priority for clean-up of environmental hazards. However public safety of the open adit, decaying trestle, and collapsing loadout structure should be considered **HIGH** levels of risk if left unsecured and accessible.

**APPENDIX A**

**SITE LOCATION MAPS**



SITE NAME: **BIG THING**

SITE NUMBER: **105D-02-2**

MAP NUMBER: **105D**

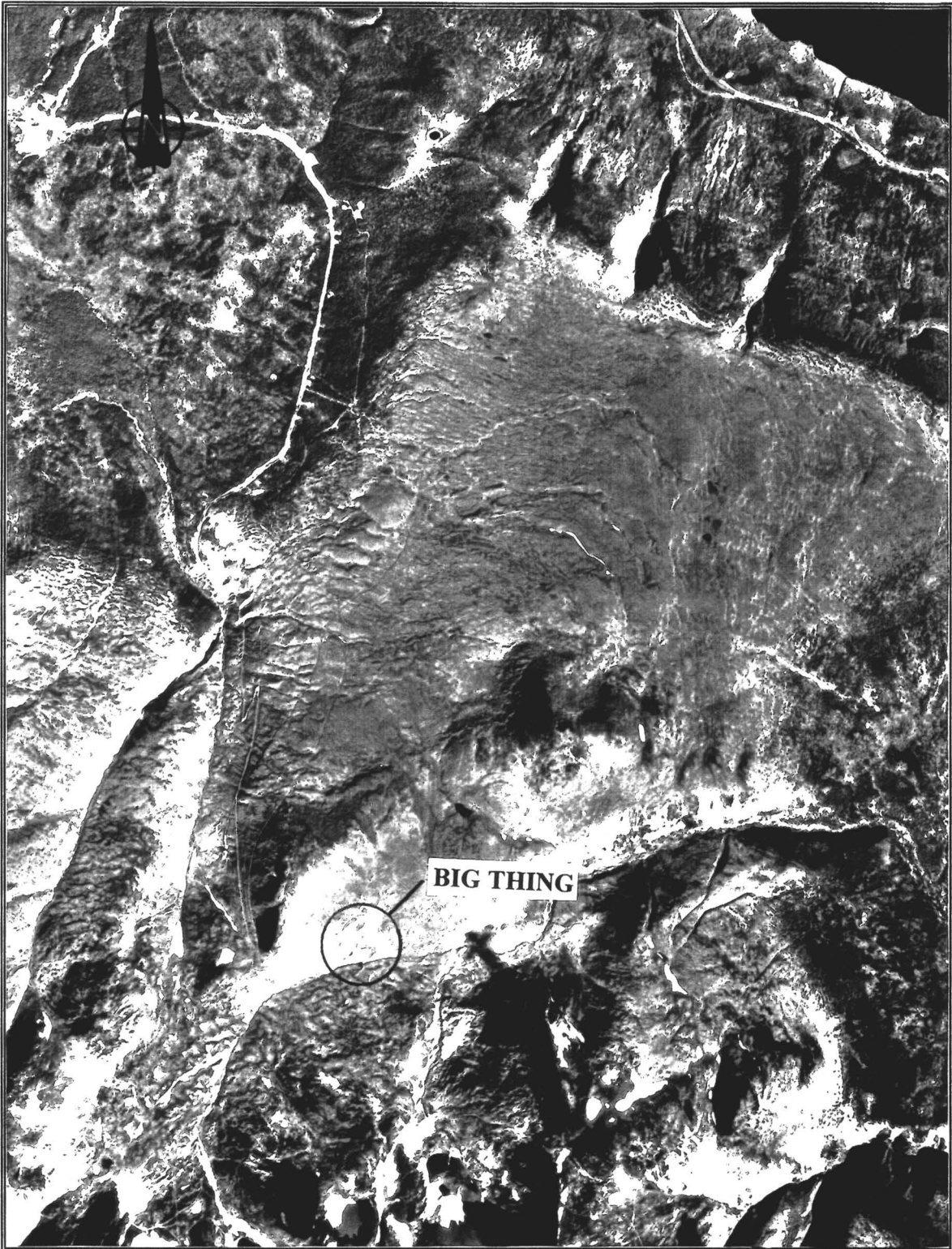
MAP NAME: **WHITEHORSE**

MAP SCALE: **1:250000**

SITE LOCATION:

LATITUDE: **60° 05' 01"**

LONGITUDE: **134° 41' 01"**



SITE NAME: **BIG THING**

SITE NUMBER: **105D-02-2**

AIRPHOTO NUMBER: **A27040-71**      YEAR: **1986**

AIRPHOTO SCALE: **1:40000**

SITE LOCATION:              LATITUDE: **60° 05'01"**

LONGITUDE: **134° 41'01"**

**APPENDIX B**

**SITE PHOTOGRAPHS**



1. ENTRANCE TO MINE ADIT



2. INSIDE MINE ADIT



**3. MILL FOUNDATIONS AND EXCAVATOR**



**4. MILL FOUNDATIONS**



5. TRACK TO LOADOUT AREA



6. TRACK TO WASTE DUMP



9. REMAINS OF DAM ACROSS BIG THING CREEK



10. PUMPHOUSE ON BANK OF BIG THING CREEK



**7. TRESTLE INTO WASTE DUMP**



**8. LOADOUT (LEFT) AND WASTE ROCK DUMP (RIGHT)**