

**Project Description  
In Support of a Class 'A' Land Use Permit  
for the  
BEAR PROJECT**

**Beaulieu River Area  
District of Mackenzie, N.W.T., Canada  
Latitude 62° 45' North by Longitude 112° 27' West  
NTS 85I/15 and 16**

- Report Prepared By –

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# 1 EXECUTIVE SUMMARY

This project description report on the Bear Project was prepared in support of a Class 'A' Land Use Permit that covers similar exploration activities previously permitted under Class 'A' Land Use Permit MV2008C0008 issued by the Mackenzie Valley Land and Water Board ('MVLWB'). The Bear property (the 'Property') is owned entirely by Silver Bear Mines Inc. (the 'Company' or 'SBM'). This project description was prepared by Silver Bear Mines Inc. with assistance from J. Douglas Blanchflower.

The Bear property is situated 110 kilometres northeast of the City of Yellowknife in the Beaulieu River area, District of Mackenzie, NWT. Its geographic location within NTS 85 I/15 and 16 is centred over 62° 45' North latitude by 112° 27' West longitude. The Property is comprised of 7 mineral leases covering an area of 3,263 hectares within UTM NAD 83, Zone 12, between 6973000 to 6978000 m North by 422000 to 429000 m East.

Silver Bear Mines Inc. and its predecessor companies, Solid Resources Ltd. and Silver Hart Mines, have carried out exploration work on the Property since 1983. This work has resulted in the identification of several mineral showings across the full breadth of the property, varying from possible diamondiferous intrusions in the west, to base metal showings hosted by basic volcanics and banded iron formations in the central part, and silver-bearing volcanogenic massive sulphide mineralization near its eastern boundary. During the last seven years exploration work has been intermittent due largely to depressed metal prices and an industry-wide recession for funding of mineral exploration projects.

All of the exploration activities to date have been conducted by SBM under Class "A" Land Use permits. Land Use Permit MV2008C0008 was approved on June 12, 2009, extended in May 2014, and expired on July 29, 2016. The project described for this new permit application requires the issuance of a new Class "A" Land Use Permit from the MVLWB. Proposed exploration field work would consist of camp reconstruction and definition diamond drilling of the M Zone with concurrent downhole geophysical surveying.

Year-round access from Yellowknife to the Property is possible by float- or ski-equipped fixed-wing aircraft, or helicopter. An all-weather road, known as Highway #4 or the 'Ingraham Trail', leads from Yellowknife to within 60 km of the Property. At its terminus near Tibbett Lake there is a clear-cut trail providing winter-only road access to within 1 km south of Kryon Lake, near the western side of the Property. Existing drill access roads then provide ready access to the camp site and the proposed 2017 drilling sites on Sunrise Lake.

The winter access road will require grooming and packing of snow with minimal watering where necessary to build a solid and safe route for heavy equipment traffic. It is estimated that less than 50 m<sup>3</sup> of water in a 24-hour period will be required for the road preparation from different water sources along the road route.

Elevations within the Property vary from 336 m at Sunrise Lake to 450 m AMSL on local rocky hills. The climate is characterized by short, long daylight summers with average temperatures ranging from +15° to +25° C, and long, dark winters with temperatures ranging between -25° to occasionally -50° C. Precipitation averages 269 mm with 33% falling as snow (1 to 2 m) during October through April. Prior to the 2014 forest fire the local boreal vegetation included small black spruce, stunted yellow birch, willow and tag alder.

The previous camp and much of the on-site drilling and heavy equipment were destroyed during a 2014 forest fire. In this Land Use Permit application are plans to reconstruct the field camp and storage facilities at the same site and in a similar configuration to the previous camp. The proposed reconstructed camp would occupy an area of less than 2 hectares; have a maximum overnight capacity of 20 persons; and consist of: six

bunkhouses, a kitchen with attached shower and dry facilities, a core logging and cutting building, a combined generator and repair shop, an outhouse, three Sea-Can containers for tool and equipment storage, and designated areas for fuel storage and transfer. Electricity would be supplied by diesel and gas generators. It is estimated that the camp will use 2 to 3 m<sup>3</sup> of potable water per day. The water will be drawn from Sunrise Lake using a submersible pump and piped via an insulated and heated waterline to the camp where it would be treated and stored in a tank housed in the shower/dry building.

During 2016 camp reconstruction food, construction personnel and fuel would be flown into camp via a float plane landing on Sunrise Lake. During the proposed winter drilling program the food, camp personnel and fuel for the initial operation of the camp would be flown into site via ski-equipped fixed-wing aircraft with the initial allotment of fuel being safely transported on sloops accompanying the drill rigs, drilling support equipment and other heavy equipment along the winter access road route.

The full winter drilling program from mid- to late January to April 2017 is largely dependent upon a reconstructed all-weather field camp to house the drilling personnel and normal winter freezing conditions along the access road route and at the Property. The program is designed to delineate the M Zone mineralization from the frozen surface of Sunrise Lake. This drill testing would confirm old drilling results, infill untested sections of buried mineralization, define the dimensions of the mineralization using a constrained grid pattern, and provide sufficient widely-spaced samples of the mineralization for later metallurgical testing. The drilling methods to be employed will comply with all applicable standards and regulations guided by the philosophy of minimizing impact to the environment in all activities.

The property is underlain by the Sunset Lake sub-area stratigraphy of the Late Archean-age Beaulieu River volcanic belt, part of the southern Yellowknife Supergroup. The M Zone is a silver-zinc-lead volcanic-hosted massive sulphide deposit with features of a volcanoclastic-hosted exhalite. Historic drilling has outlined three upper and lower massive sulphide bodies down to the 250 m level that trend 340° and plunge -65° northward. The lenses range up to 3 m thick in the upper zone and 15 m thick in the lower portion of the main zone. A lower silver-rich zone up to 2 m thick was intersected below the main zone.

It is estimated that 34 diamond drill holes, totalling 7,500 m, will be required to fully test the extent of the known M Zone mineralization. Given the time constraints of safe winter on-ice drilling and past drilling rates, two drilling rigs capable of completing NQ-size drill holes of less than 500 m in length and support equipment will be required to complete the first phase of drilling within the estimated 3-month period that includes the safe mobilization to and demobilization from the Property. Thus, initial drilling will include an estimated 24 of the 34 proposed holes, totalling 5,010 m of drilling, from an estimated 18 on-ice sites. Each drill site will measure about 18 by 18 metres to accommodate the drill rig, a sloop containing the drill rods, the pump shack that houses the water mixing/settling tank, drilling additives, fuel drums and spill kit, plus attendant transportation. Each of the proposed on-ice drill sites will be critically inspected upon completion of its drilling and removal of all equipment.

Skidded drill rigs and sloops with drilling materials would be hauled to the on-ice drill sites using a bulldozer and/or front-end loader while the drilling and geological personnel and lighter materials will be transported using a Nodwell, snow cat, or snowmobiles. All drill fluids will be biodegradable and non-toxic, and special care will be taken to ensure that all drilling fluids are handled in an environmentally safe manner. The returning drilling fluids will be piped to a settling tank where the solids will settle and the recovered fluid will be re-cycled. The settling and mixing tank is kept heated within the pump shack. It is estimated that the two

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proposed drilling rigs will use less than 40 m<sup>3</sup> of water per day drawn directly from Sunrise Lake using submersible pumps and temporary piping.

Down-hole IP resistivity geophysical surveying will be conducted during the drilling to detect any mineralization along strike and downdip of the drill holes. Representative samples will also be collected from the recovered drilling cores for later, off-site assaying and metallurgical testwork. These samples will be securely stored and then flown to Yellowknife in sealed plastic bags.

If the proposed 2017 winter drilling cannot be completed due to a lack of an all-weather camp, weather conditions or more immediate drilling is required for the M Zone, drill holes may have to be located on the eastern and/or western shores of Sunrise Lake during snow-free months. In which case, concerned government and community parties would be consulted; the required permissions and permitting would be acquired; and special care with constant monitoring would be taken during the use of access routes and the construction of a minimum number of drill sites. Rutting and gouging of access roads and drill sites would be prevented by corduroying and/or using dry routes.

Diesel and gasoline will be stored in 210-litre (45 gallon) sealed steel barrels at designated fuel sites within the camp or in the pump shack at each drill setup. Propane for camp kitchen use will be stored in 100-lb bottles. These fuel storage sites will be bermed and underlain with absorbent and impermeable material. A Spill Contingency Plan has been developed by Silver Bear Mines that describes fuel storage at the camp and drill sites, contingency measures employed to avoid spills, and how to respond to potential spill incidents.

Solid non-combustible waste (e.g. tin cans) and potentially hazardous waste (e.g. used motor oil) will be stored in separate sealed steel barrels and shipped to Yellowknife for safe waste disposal. Combustible materials will be incinerated on site and the ashes and residues stored in sealed steel barrels pending transport to Yellowknife for safe disposal. Grey water from the kitchen and shower will be directed to a permeable sump well away from any local drainage. An outhouse will be used for human waste. Any nearby burnt standing snags that pose a safety hazard will be cut down, bucked, and laid flat on the ground to rot. The unburnt remains of the old camp have been mostly cleaned up and piled for either future use, or for disposal during the demobilization. Silver Bear Mines Inc. has an approved Storage Authorization expiring on September 1, 2017.

On May 31, 2016 Silver Bear Mines began engagement by delivering an introductory email to six potentially affected parties, including: Akaitcho Screening Board, City of Yellowknife, North Slave Metis Alliance, Northwest Territory Metis Nation, Tlicho Government and Yellowknives Dene First Nation. The introductory email outlined the intention of the Company to resume exploration work on the Property and provided the parties with the opportunity to raise questions and provide recommendations on the proposed camp reconstruction and winter drill testing and geophysical surveying of the M Zone. Between June 1 and July 18 emailed comments from the six parties were received and any questions and recommendations on the proposed field work were considered and responded to by Silver Bear Mines Inc. Future engagement with the interested parties would include: regular progress reports documenting the exploration work; site visits; face to face consultation meetings to discuss the progress and results of the ongoing field work; and summary reports to document the project work and plans for any future exploration work. Since then Silver Bear Mines has received signed Engagement Summaries from five of the parties, signed Engagement Plans from three parties, and consenting comments from two other parties regarding the proposed Engagement Plan.

## 2 INTRODUCTION

This project description report on the Bear Project was prepared in support of a Class 'A' Land Use Permit that covers similar exploration activities previously permitted under Class 'A' Land Use Permit MV2008C0008 issued by the Mackenzie Valley Land and Water Board ('MVLWB'). The Bear property (the 'Property') is owned by Silver Bear Mines Inc. (the 'Company' or 'SBM') which operates in the Northwest Territories ('NWT'). This project description report was prepared by SBM with assistance from J. Douglas Blanchflower.

The Bear property hosts a buried, silver-bearing volcanic massive sulphide deposit, known as the 'M Zone', which is situated beneath the western shore of Sunrise Lake, near the eastern boundary of the Property. The Property is in good standing, comprised of 7 mineral leases, and is wholly-owned and operated by Silver Bear Mines Inc.

Silver Bear Mines Inc. is a private, non-reporting Canadian corporation headquartered in Sherwood Park, Alberta. Its directors and senior management have long professional experiences in all phases of the mineral exploration and the mining industry. Solid Resources Ltd. and Silver Hart Mines, the predecessor companies to SBM with the same senior management, carried out the early exploration work on the Property.

## 3 PROPOSED PROJECT

### 3.1 Project Location

The Bear property is situated 110 kilometres northeast of the City of Yellowknife in the Beaulieu River area, District of Mackenzie, N.W.T. (see Figure 1). Its geographic location within NTS 85 I/15 and 16 is centred over 62° 45' North latitude by 112° 27' West longitude. The seven mineral leases cover 3,263 hectares within UTM NAD 83, Zone 12, between 6973000 to 6978000 m North by 422000 to 429000 m East; from the Sleepy Dragon Complex - Kryon Lake area in the west to the Sunrise Lake and Beaulieu River in the east, a distance of about 7 km. (see Figure 1).

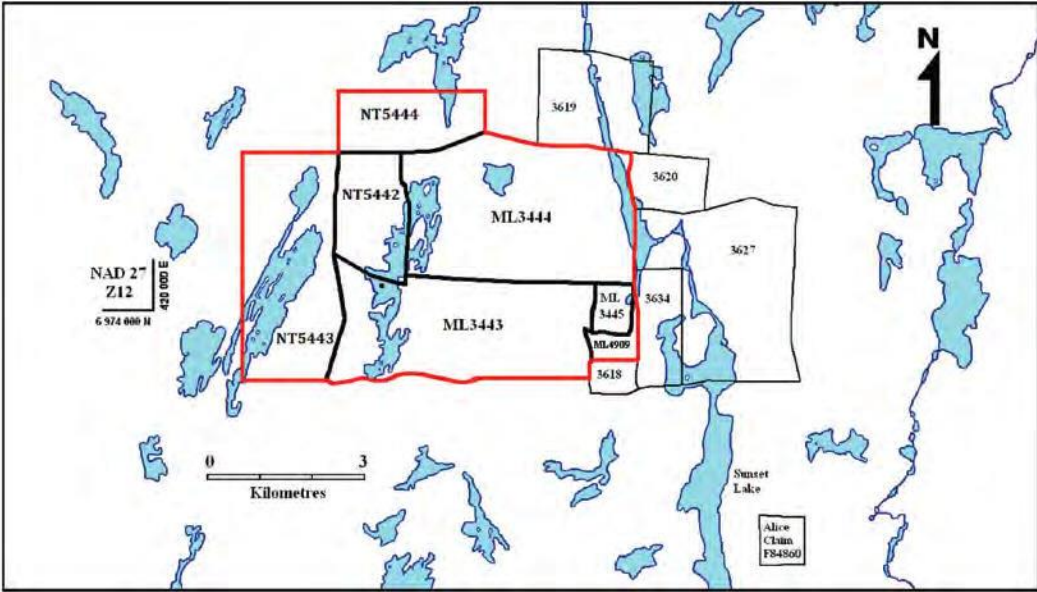
The claim boundaries for the Property are shown on Claim Sheet 85I/16 ('Sunset Lake') at the Mining Recorder's office in Yellowknife. The following Table 1 summarizes the pertinent mineral lease information.

**Table 1: Summary of Mineral Lease Data**

Type	Name	Number	Area (hectares)	NTS Sheet	Owner
Lease	ML 3443	3443	864.81	85I15	Silver Bear Mines Inc.
Lease	ML 3444	3444	1151.33	85I16	Silver Bear Mines Inc.
Lease	ML 3445	3445	95.51	85I16	Silver Bear Mines Inc.
Lease	ML4909	4909	47.35	85I16	Silver Bear Mines Inc.
Lease	ML5442	5442	296	85I15	Silver Bear Mines Inc.
Lease	ML5443	5443	566	85I15	Silver Bear Mines Inc.
Lease	ML5444	5444	242	85I15	Silver Bear Mines Inc.



Property Location Map



Property Claim Map

SILVER BEAR MINES INC. Sherwood Park, Alberta	
<b>PROPERTY LOCATION and MINERAL LEASE MAP</b> <b>BEAR PROPERTY</b> Beaulieu River Area, District of Mackenzie, NWT	
Drawn By: JDB	Scale: As Shown
Date: July, 2016	Figure No. 1

Modified after Goodwin, 2011



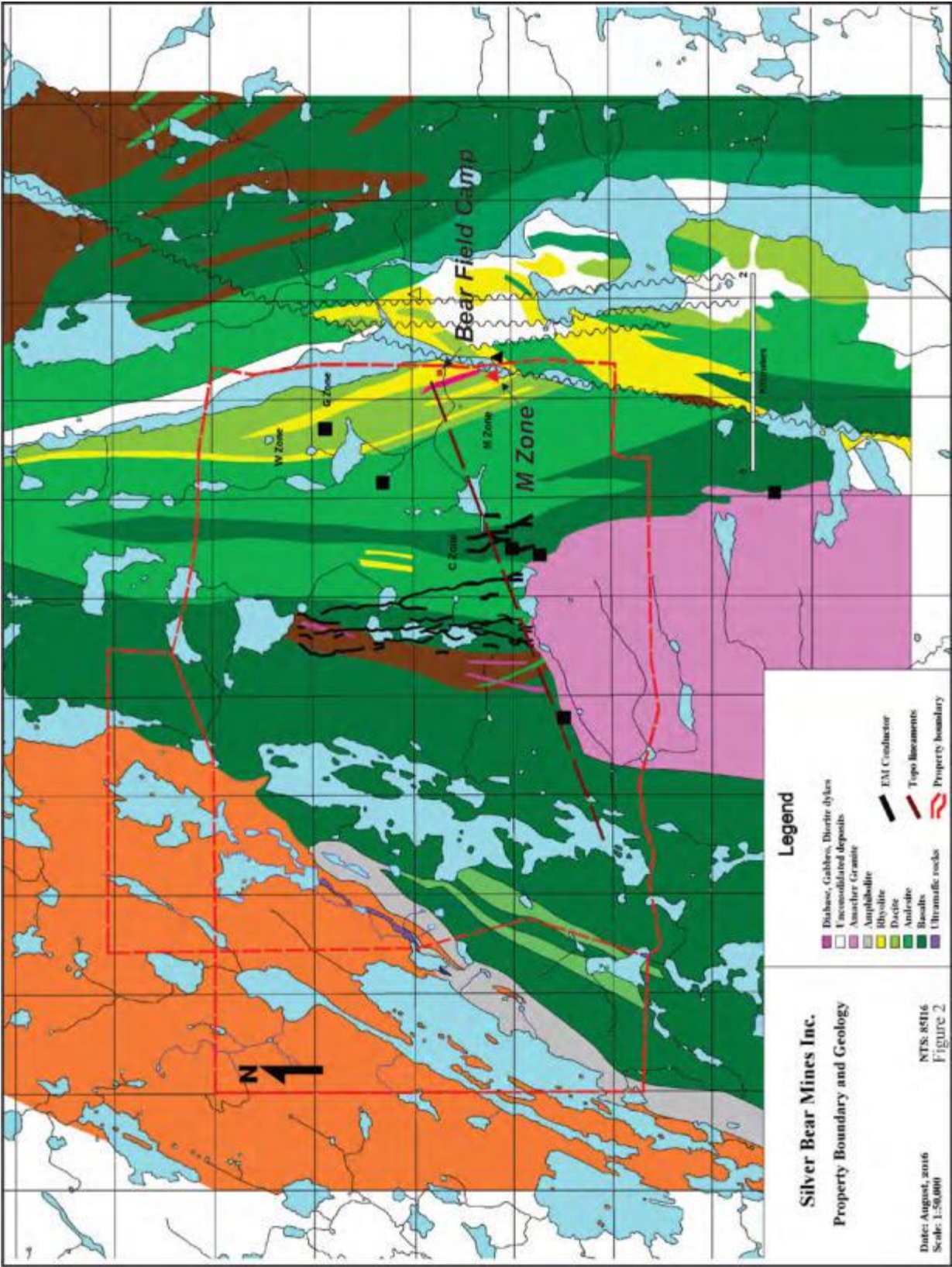
## 3.2 Project History

### 3.2.1 Exploration Work During 1983 to 2008

The early exploration history of the Property from 1983 to 2008 is summarized in the following Table 2.

**Table 2: Early Exploration History on the Bear Property (after Goodwin, 2011)**

Year	Claim	Owner	Target	Exploration Program	Targets
1983	Bear 1-3	Silver Hart		Staking, Prospecting	C Lake area
1984	Bear 1-3	Silver Hart	C Zone- gold	Geophysics, 25 ddh	Geology, geophysics
1986	Bear 1-3	Silver Hart Mines	M Zone	Reconnaissance mapping- discovery of M Zone	Geology, geophysics, ddh
1988	Bear 1-3	Silver Hart Mines	M Zone and vicinity	16 ddh (3,442m) on M Zone 1,446m in adjacent areas	Various geological and geophysical targets
1995/96	Bear 1-3	Solid Resources Ltd		Ownership change- D Zone mapped, sampled, geophysics, 2,286m of drilling	Various targets
1995	Bear 4-5 claims	Solid Resources Ltd.	Amacher Zone	Claims staked to cover zone of sulphides and BIF in outcrop.	
1996	Bear leases	Solid Resources Ltd.	M Zone	Additional drilling on M Zone	Test M Zone down plunge
1997	Bear leases	Solid Resources Ltd.	W Zone D Zone	Additional drilling	Geophysics and geology
1998	Bear claims and leases	Solid Resources Ltd.	Amacher Zone W Zone	5 ddh at north end Extend grid to south by 1.5 km geology, geophysics, sampling.	Geology, geophysics
1999	Bear claims and leases	Solid Resources Ltd.	Amacher Zone W Zone	5 ddh in south Amacher grid 1,372m of ddh	W Zone about 2 km north of M Zone.
2000	Bear Leases	Solid Resources Ltd.	C, M & W Zones	Additional 6630 m of drilling in various locations	
2001	Bear Leases	Solid Resources Ltd.	M & W Zones	Additional ddh- 1608 m UTEM survey Stream sampling	Geophysical, geological targets
2005	Bear claims and leases	Solid Resources Ltd.		Fugro Airborne survey- 602 line km over 41 sq. km.	
2006	Bear claims and leases	Solid Resources Ltd.	Airborne targets	VLF and Mag. , soil and rock sampling	Airborne conductors
2007/08	Bear claims and leases	Solid Resources Ltd.	Amacher Zone, C, D and M Zone	MMI-M (Mobile Metal Ion) geochemical surveys	Airborne, drill targets



Project Description for the Bear Project, District of Mackenzie, N.W.T.

### 3.2.1 Exploration Work During 2009 to 2016

Over the last seven years exploration work on the Property has been intermittent due largely to depressed metal prices and an industry-wide recession for funding of mineral exploration projects. The following Table 3 documents the exploration work carried out by SBM during this period. See accompanying Figure 2 for the location of the referenced mineral zones.

**Table 3: Recent Exploration History on the Bear Property**

<b>2009</b>	No work was carried out on the Property.
<b>2010</b>	From October 4 to 17 one director and three carpenters performed repairs on the kitchen, dry and bunk houses because the previous winter heavy snows had damaged the bunk house roofs.
<b>2011</b>	<p>During April 2 to May 15 fifteen personnel carried out field work on the Property. This exploration program included 58 line-km of line cutting at 200 and 400-metre line-spacing. Discovery International Geophysics Inc. conducted a SQUID EM survey which penetrated to 1 km in depth on two traverses.</p> <p>An induced polarization ('IP') resistivity survey was conducted over the cut survey grid at 400-metre line-spacing and all the intervening ground between the two SQUID EM survey lines. Four lines in the south were also surveyed. Preliminary results showed a very strong response over the M Zone, C Lake Zone and an unexplained conductor further to the west. Field work was discontinued due spring breakup. Discovery International Geophysics was contracted to carry out both an I P resistivity and moving- loop TEM survey on 35 line-km of cut grid lines.</p>
<b>2012</b>	No work was carried out Property due to insufficient exploration funds.
<b>2013</b>	<p>On April 6 one geologist, two line cutters and two cat operators mobilized to the Property. A total of 13 line-km were cut. The camp was organized and made ready for a drilling crew. The cat operators hauled a Sea-Can container into the campsite. The container was set adjacent to the generator shed to provide secure and environmentally-safe storage for field and drilling equipment. A new roof was installed on the core shack and the new dock was repaired. One diamond drill hole was completed to 491.96 m. and the core was logged and sampled. A major camp cleanup of used and worn out appliances, empty fuel drums and unused equipment was carried out, and the resulting garbage was flown out to Yellowknife for safe disposal. The field crew were demobilized on May 27.</p> <p>On Sept 7 and 8, a Geologist and assistant flew into the Property to close the camp for the winter.</p>
<b>2014</b>	During the Summer season a large forest fire completely destroyed the entire field camp and core storage facilities, plus a drilling rig, bulldozer, most of the drilling support equipment and various field vehicles that were stored on site. No work was conducted this year.
<b>2015</b>	<p>On June 22 a two-person crew assessed the damage to the burned-out camp and equipment. Photographs and measurements were recorded for camp reconstruction plans.</p> <p>On October 7 three field workers flew to the destroyed field camp to start cleaning up the burned debris. While there one bunk house and an outhouse was reconstructed for temporary lodging. All</p>

the metal roofs and walls of the destroyed buildings were dismantled and stacked for future use. The burned bulldozer was started and the camp site was bladed clean and levelled. Garbage was bagged and flown to Yellowknife for safe landfill disposal. The field crew demobilized on October 16.

- 2016** During early Spring four workers flew to the field camp to build an ice road and continue repairs to one bunk house. The ice road was required to transport camp building materials. Unfortunately, unseasonably warm weather precluded ice road construction and the crew demobilized on April 12.

### 3.3 Permit History

All recent exploration activities have been conducted by SBM under Class “A” Land Use Permit MV2008C0008 that was approved on June 12, 2009, extended in May 2014, and expired on July 29, 2016. Due to recent mineral industry conditions, the much of the exploration work planned during the 2008 to 2016 period was not completed.

A Land Use Permit MV2016C0022 (Permit), granted by the Mackenzie Valley Land and Water Board (MVLWB or the Board) in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA) was approved for a period of five years commencing November 3, 2016 and expiring November 2, 2021.

The Mackenzie Valley Land and Water Board (Board) met on October 28, 2021 and considered Silver Bear Mines Inc. (Silver Bear Mines)’s request to extend Land Use Permit (Permit) MV2016C0022 in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA) and was approved with an expiry date of November 2, 2023.

The Mackenzie Valley Land and Water Board (Board) met on November 30, 2023, and considered Silver Bear Mines Inc. application for a storage authorization for (Permit) MV2016C0022 for the Sunrise Lake Property (Project). The Board approved the Storage Authorization, effective December 7, 2023, and expiring on, December 6, 2024.

The project described for this new permit application requires the issuance of a new Class “A” Land Use Permit from the Mackenzie Valley Land and Water Board. The proposed exploration work would consist of camp reconstruction and definition diamond drill testing of the M Zone with concurrent downhole geophysical surveying.

Pending a shortened drilling period or extended drilling, drill holes may have to be located on land during snow-free months. In which case, concerned government and community parties would be consulted; required permissions and permitting would be acquired; and special care with constant monitoring would be taken while using access routes and during the construction of a minimum number of drill sites. Rutting and gouging of access roads and drill sites would be prevented by corduroying and/or using dry routes.

## 4 SITE DESCRIPTION

### 4.1 Accessibility

Year-round access from Yellowknife to the Property is by float- or ski-equipped aircraft, depending upon the season, or by helicopter. An all-weather road, known as Highway #4 or the ‘Ingraham Trail’, has been constructed from Yellowknife to within 60 km of the property. At its terminus near Tibbett Lake there is a clear-cut trail providing winter-only road access to within 1 km south of Kryon Lake near the western side of the Property (see Figure 3). Existing access roads within the property then provide ready access to the camp site and the proposed 2017 drilling sites on Sunrise Lake.

The winter access road will require grooming and packing of snow with minimal watering where necessary to build a solid and safe route for mobilizing heavy equipment. It is estimated that less than 50 m<sup>3</sup> of water in a 24-hour period will be required for the road preparation from different water sources along the road route.

Special care will be taken to prevent rutting and gouging of all roads, especially the winter access road and the existing roads within the Property. During the winter season a frozen hard road surface will be maintained. Should heavy equipment need to be moved or drilling conducted during snow-free conditions the underlying ground surface will be corduroyed with trees and, if at all possible, only dry road routes will be utilized. All access routes and drill sites, whether snow and ice covered or not, will be constantly monitored to ensure the protection of the ground surface and local flora.

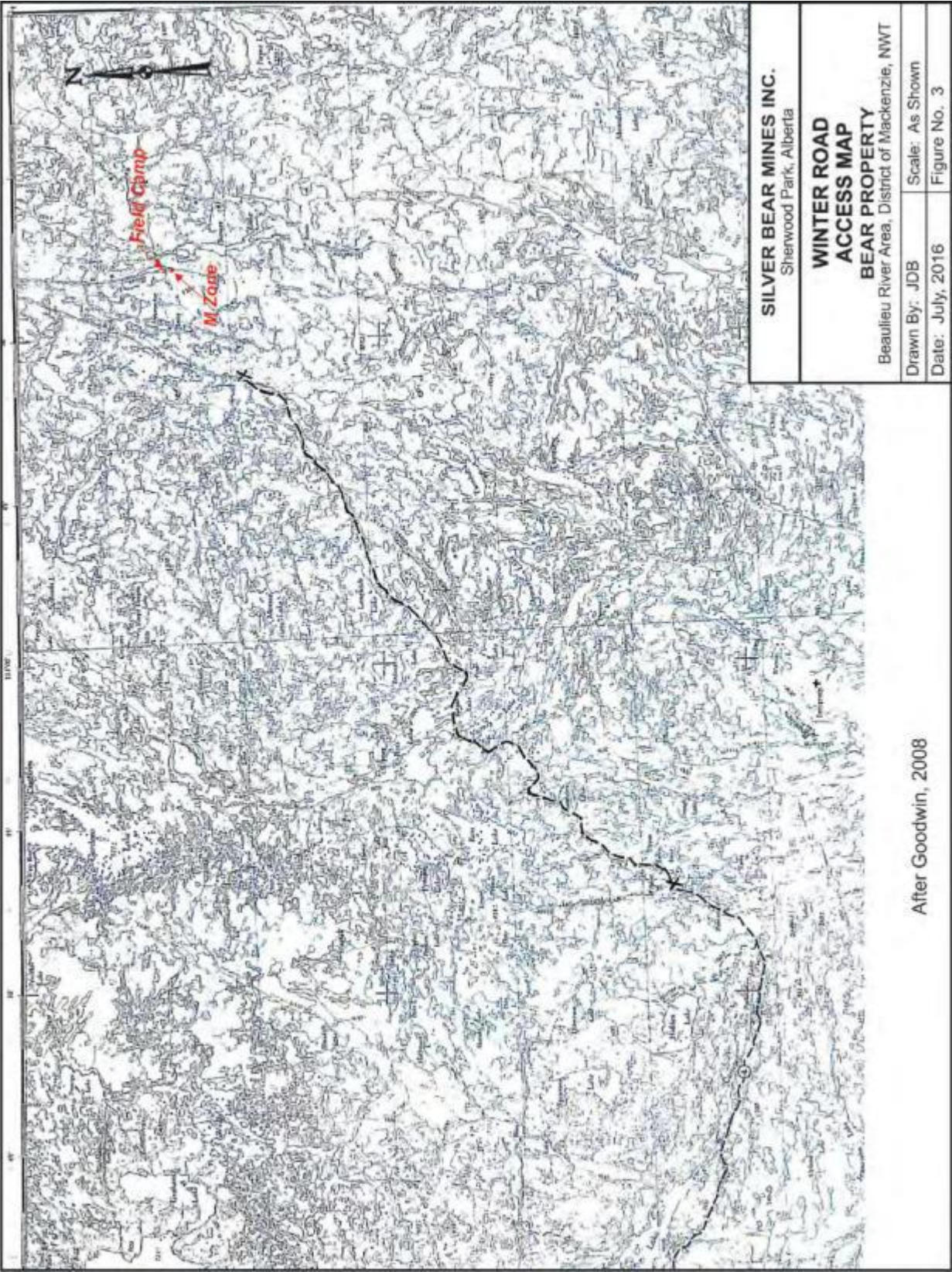
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Project Description for the Bear Project, District of Mackenzie, N.W.T.

Silver Bear Mines Inc.

July 22, 2024





Project Description for the Bear Project, District of Mackenzie, N.W.T.



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## 4.2 Infrastructure

The previous camp buildings, core and equipment storage buildings and much of the on-site drilling and heavy equipment were destroyed during a 2014 forest fire. The following Photograph 1 shows the pre-2014 field camp and facilities looking northeastwardly.



**Photograph 1:** Pre-2014 Silver Bear Mines' field camp near Sunrise Lake

In this Land Use Permit application are plans to reconstruct the field camp and storage facilities at the same site and with a similar configuration as the previous camp.

The proposed reconstructed camp would occupy an area less than 2 hectares; have a maximum capacity of 20 persons overnight; and consist of: six bunkhouses, a kitchen with attached shower and dry facilities, a core logging and cutting building, a combined generator and repair shop, an outhouse, three Sea-Can containers for tool and equipment storage, and designated areas for fuel storage and transfer.



Photographs 2, 3 and 4 show the destroyed camp and storage facilities after the 2014 forest fire.



**Photograph 2:** View looking northeasterly showing the destroyed camp and core racks.



**Photograph 3:** View looking southeasterly at the destroyed kitchen building.





**Photograph 4:** View of the destroyed core racks and surrounding forest.

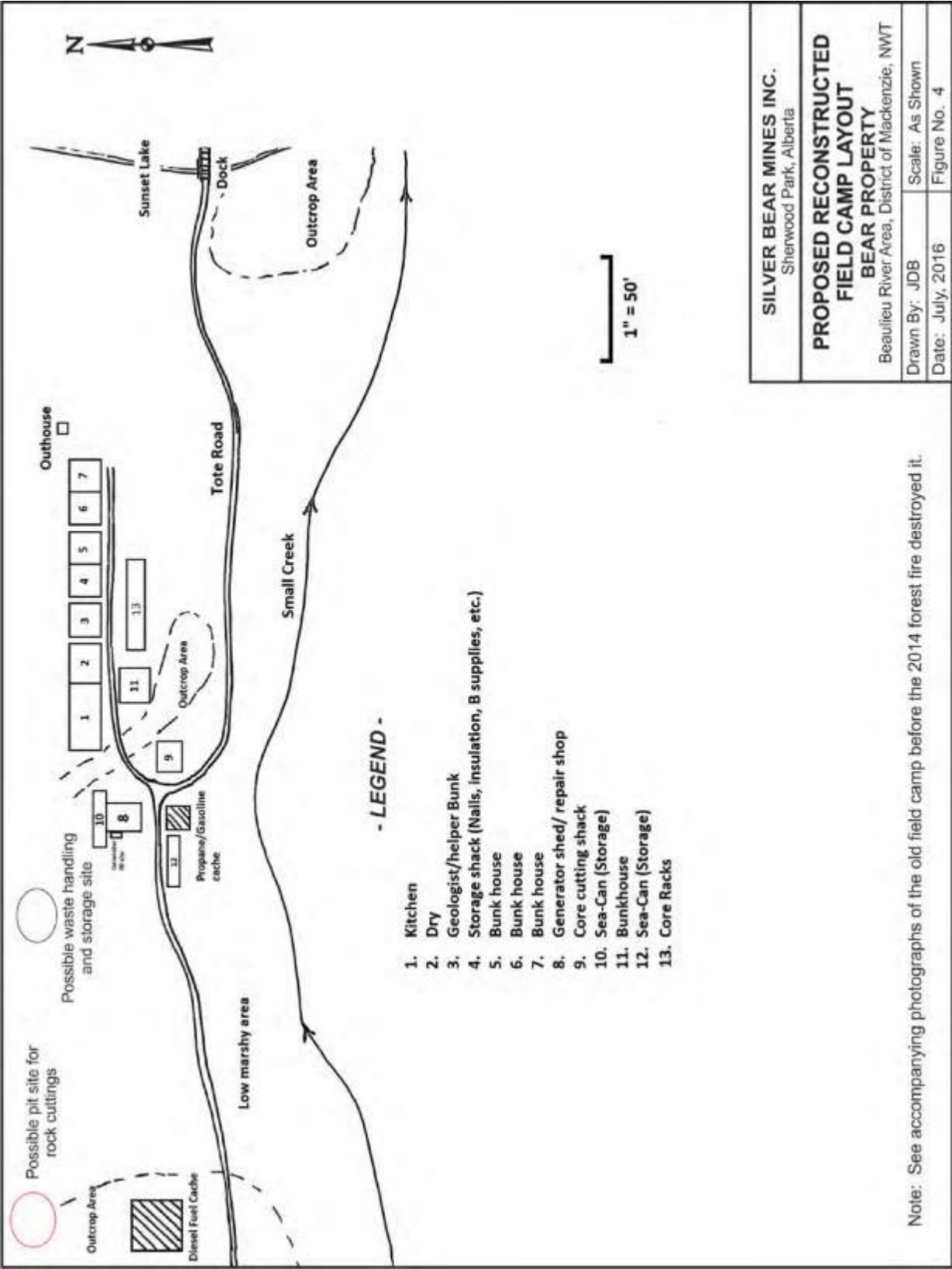
Electricity for the camp would be supplied by diesel and gas generators. Potable water would be extracted from Sunrise Lake, treated and stored in a hygienic large-capacity tank housed in the shower/dry building. It is estimated that the camp will use 2 to 3 m<sup>3</sup> of potable water per day. The water will be drawn from Sunrise Lake using a submersible pump and an insulated and heated waterline will convey the water to the camp (see Figure 4).

Food, construction personnel and fuel would be flown into camp via a float plane landing on Sunrise Lake during the camp reconstruction period. During the proposed winter drilling program the food, camp personnel and fuel for the initial operation of the camp would be flown into site via a ski-equipped plane with a half portion of the required fuel being safely transported on sloops accompanying the drill rigs, drilling support equipment and other heavy equipment along the winter access road route. In camp fuel storage would be in 205-litre (45 gallons) sealed steel barrels at designated fuel storage sites underlain with absorbent membrane.

The sites of the proposed core logging and cutting building and core storage racks are shown on accompanying Figure 4. Heat for the bunkhouses, kitchen and logging facilities would be provided by electric base-board heaters. There would also be a backup generator and oil-burning stove in the kitchen and dry.

### 4.3 Drilling Methods

The proposed winter drilling program during February to April 2025 is largely dependent upon the existence of an all-weather camp, and normal winter freezing conditions along the winter access road route and at the Property. If the early warm weather occurs in January and February 2025 the access road could not be prepared and the proposed diamond drilling from the frozen surface of Sunrise Lake would not proceed. Thus, the proposed drilling program would have to be delayed until the following year or more.



The diamond drilling program is designed to delineate the M Zone mineralization from the frozen surface of Sunrise Lake. Past drill holes have been collared on the eastern or western shores of the lake necessitating much longer drilling lengths. Delineation drilling is the process of obtaining adequate three-dimensional information so that the distribution of potentially economic mineralization can be modelled and a mineral resource can be estimated using statistical-based calculations. This type of drill testing is intended to confirm old drilling results, infill untested sections of buried mineralization, define the dimensions of the mineralization using a constrained grid pattern, and provide sufficient widely-spaced samples of the mineralization for metallurgical testing. The drilling methods to be employed will comply with all applicable standards and regulations guided by the philosophy of minimizing impact to the environment in all activities.

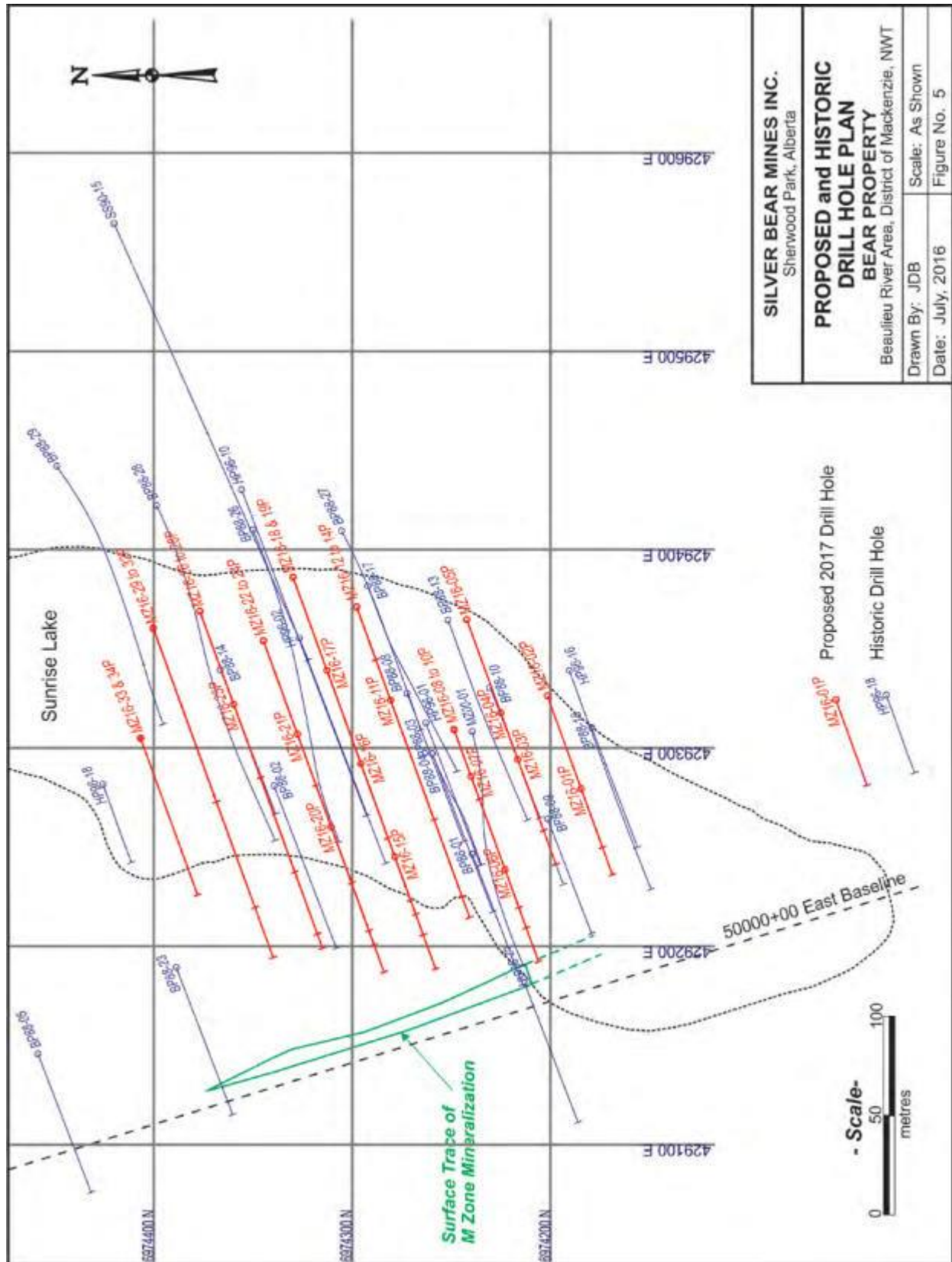
It is estimated that 34 diamond drill holes, totalling 7,500 m, will be required to fully test the extent of the known M Zone mineralization. Unfortunately, given the time constraints of safe winter drilling from a lake surface and past drilling rates, two drilling rigs and support equipment will be required to complete the initial drilling within the estimated 3-month drilling period that includes the safe mobilization to and demobilization from the Property. Thus, the initial proposed drilling will include 24 of the 34 proposed holes, an estimated 5,010 m of drilling, from a planned 18 on-ice sites. The difference between the number of drill holes and sites is because some sites may have two or three inclined holes collared from a common site. Also, the number of sites may change slightly if drilling difficulties are encountered. Figures 2 and 5 illustrate the location of the M Zone and the historic and proposed drill sites near and on Sunrise Lake respectively.

Skidded drill rigs and sloops carrying drilling materials will be hauled from the camp to the on-ice sites using a bulldozer and/or front-end loader while the drilling and geological personnel and lighter materials will be transported using a Nodwell snow cat and snowmobiles. Hand tools may be used for the necessary site preparation work, or if necessary a bulldozer or loader will be used to clear any heavy snow accumulations. All drill fluids will be biodegradable and non-toxic, and special care will be taken to ensure that all drilling fluids are handled in an environmentally safe manner. The returning drilling fluids will be piped to a settling tank where the fine solids will settle and the recovered fluid will be recycled. The settling and mixing tank is kept heated within the pump shack at each drill site. It is estimated that the two drilling rigs will use less than 40 m<sup>3</sup> of water per day drawn directly from Sunrise Lake using submersible pumps and temporary piping.

Each drill site will measure 18 by 18 metres to accommodate the drill rig; sloop containing the drill rods; the pump shack housing the water mixing/settling tank, drilling additives, fuel drums and spill kit; and the transportation for the drilling personnel. Figure 6 of this report is a sketch map of a typical drill site set-up.

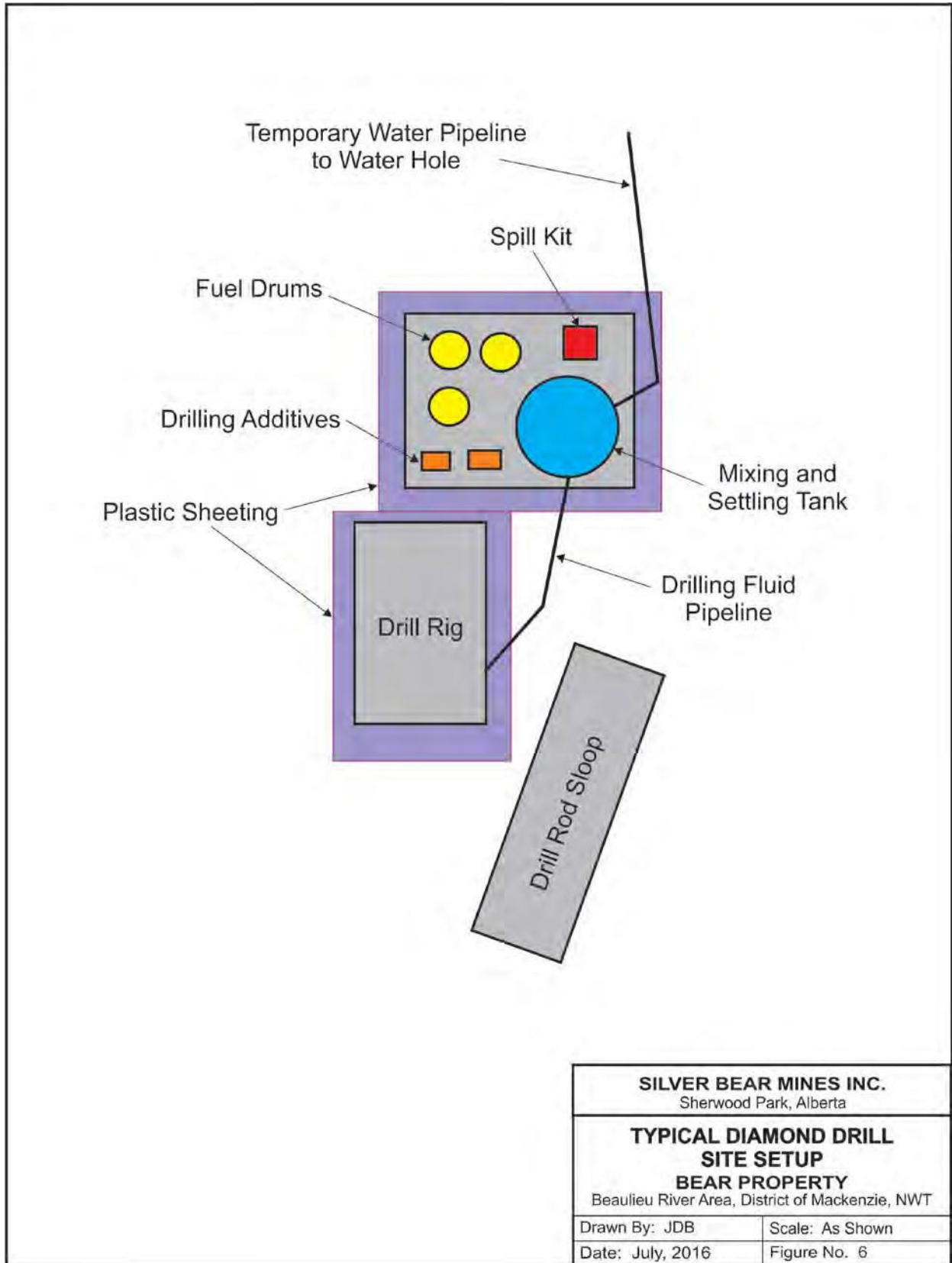
Several of the completed drill holes will be surveyed with down-hole IP resistivity to detect any mineralization along strike and down-dip of these drill holes. This geophysical surveying will be conducted periodically during the ongoing drilling. Drill core samples will be collected for assaying and for later, off-site metallurgical studies. The assay and metallurgical samples will be securely bagged and flown to Yellowknife.

The heavy equipment mobilization and drilling work proposed in the Land Use Permit is scheduled for the winter season pending favourable weather conditions. However, diamond drilling with heavy equipment use may have to be conducted on shore during snow-free periods should the drill testing of the M Zone be delayed due to unforeseen circumstances. In such a case, all affected government and community parties would be consulted, permissions and permitting would be requested, and special care would be taken to minimize the impact on the local environment.



Project Description for the Bear Project, District of Mackenzie, N.W.T.





## 4.4 Equipment

The proposed camp reconstruction work and drilling program will require two skidded drill rigs capable of completing drill holes of less than 500 m in length plus the necessary auxiliary equipment to prepare the winter access road and move and support the drilling work, including bulldozers, front-end loader, excavator, grader, dump truck, air compressor, etc. Additional miscellaneous equipment will be required on-site to reconstruct the camp, store equipment and support the winter drilling program, such as: Sea-Can containers, quad motorcycles, pressure washer, snow cats, snowmobiles, trailers and snow sleds, diesel and gas generators, chain saws, etc. Table 4 of this report is a list of equipment already on-site which is either fire-damaged or useable, and that which has to be taken in to carry out the proposed work program.

**Table 4: Equipment List**

Type and Number	Proposed Use
<b>On-Site and Useable</b>	
One D6 Bulldozer w/ wide tracks	Equipment mob and drill site preparation
One Nodwell w/ crane and winch	Local drill support and personnel transport
One 550 John Deere Cat (partially burnt)	Needs on-site repair or demob
One Skidded Drill Shack (burnt)	Possibly repairable on site
One Open Rod Sloop (burnt)	Burnt but repairable for rod storage
One Covered Rod Sloop	Operational for rod storage
Two Skidded Drill Pump Shacks (one fire damaged)	Pumping and storing drilling media
One Tahoe 2700 PSI Pressure Washer	Fire damage cleanup
One Tahoe 3" Trash Pump	Camp grey water pumping
Three Yamaha Bravos Sleds	Drill materials and core transport
One Sea-Can containers	Tool and equipment storage
One Air Compressor	Camp and equipment repair
Two Chain Saws	Dangerous tree falling near camp
<b>To Be Mobilized From Yellowknife</b>	
One Snow Cat	Local drill support and personnel transport
One 2005 CAT 928 Loader	Equipment mob and drill site preparation
One Bulldozer (to be purchase)	Equipment mob and drill site preparation
One Hydraulic Excavator	Ice road preparation and road maintenance
One Grader	Ice road preparation and road maintenance
One Dump Truck	Ice road preparation and road maintenance
Four Ice Road Sloops	Transport of fuel and drilling equipment
Two Skidded Drill Shacks	Drill rig compartments
One Covered Rod Sloop	Operational for rod storage
One Skidded Drill Pump Shack	Pumping and storing drilling media
Two Settling Tanks	Drilling fluid recovery
Drill Rods and Casing	Drilling equipment
Various pumps, hoses, fittings	Components to repair burnt equipment
One 2015 Tundra sport 550F Skidoos	Local personnel transport
One 2015 CAN-AM Outlander L450 Quad	Going In for local transport
One Sea-Can Containers	Tool and equipment storage
One 60 Kw Stamford Generator (72 KVA Cummins engine)	Camp electrical supply
One TI7000 LXH Diesel Generator	Camp electrical supply
One TP8000 LXH Gas Generator	Drill core cutting electricity
One EP2500CX1 Honda Generator	Mobile electrical supply
One Down-hole IP Geophysical Instrument	Down-hole IP survey during drilling
Six Spill Kits	Mandatory spill remediation
First Aid Kit	On-site medical treatment
Propane - fired incinerator	Incinerate combustible garbage on site

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## 4.5 Fuel Storage and Transfer Sites

It is estimated that the winter drilling program will require approximately 400 barrels of diesel, 30 barrels of gasoline, 30 100-lb bottles of propane, 20 barrels of emergency aviation fuel, and 100 1-litre containers of engine oil. However, only a portion of this total fuel need be on site at any one time. Diesel and gasoline are to be stored in 210-litre (45 gallon) sealed steel barrels at designated sites within the camp site. Propane for camp kitchen use will be stored in 100-lb bottles. See Figure 4 for the designated diesel, gasoline and propane storage sites that will be bermed and underlain with absorbent, impermeable material.

A site-specific Spill Contingency Plan has been developed by Silver Bear Mines that describes fuel storage at the camp site and drill sites, and contingency measures employed to avoid spills and to respond to possible spill incidents (see Appendix 1).

## 4.6 Waste Management

Silver Bear Mines' Hazardous Waste Generator number is NTG000394. Solid non-combustible waste, such as glass, metal containers and scrap metal, will be segregated and stored at a designated waste site pending their transport to the City of Yellowknife landfill for recycling or disposal. Combustible materials will be incinerated on site and the ashes and residues will be collected and stored in sealed steel barrels pending their transport to Yellowknife for safe disposal at the KBL Environmental Ltd.'s hazardous waste disposal facilities. Potentially hazardous waste (i.e. used motor oil, grease, etc.) will be stored in sealed barrels at the diesel fuel cache site pending their later transport to Yellowknife for disposal at KBL Environmental Ltd.'s hazardous waste disposal facilities. Drill cuttings will be carefully transported from the on-ice drill sites for disposal in a lined pit near camp but well away from any water source. Grey water from the kitchen and shower will be directed to a permeable sump well away from any local drainage. An outhouse will be used for human waste. See attached Waste Management Plan for a detailed description of the handling, storage, transportation and disposal of anticipated potentially hazardous, mineral and non-mineral wastes.

It is not anticipated that any brush or trees will need to be cut during the proposed field work. However, should any nearby burnt and standing snags pose a safety hazard to camp personnel or buildings they will be cut down, bucked into sections and laid flat on the ground to rot.

## 4.7 Reclamation

The unburnt remains of the old camp have been mostly cleaned up and either piled for future use, such as the metal roofing and cladding material, or piled for disposal. Some of the lighter and smaller fire-damaged garbage has already been flown out to Yellowknife for safe disposal. The rest of the destroyed equipment will be loaded on sloops and removed from the campsite during demobilization in 2017. In the meantime, Silver Bear Mines Inc. has an approved Storage Authorization until September 1, 2017 (reference MV2008C0008).

There is very little reclamation to be done at on-ice drill sites during a winter drilling program. A log of reclamation work carried out during the program will be kept with the geological logs and sampling records to ensure that all necessary reclamation actions have been successfully completed. Typical reclamation protocol for on-ice drilling is as follows.

- removal of drill rods and casing from the hole;
- removal of all equipment, materials and safe disposal of waste from the site; and

- careful inspections of all drill sites by SBM personnel and drilling contractors verifying compliance with reclamation standards and, if warranted, further work on those sites that may require additional cleanup.

On-ice site cleanup must be exacting since upon Spring break-up the drill sites will disappear into the lake, along with any waste or fuel spills that may have gone undetected. Thus, a critical inspection of each site immediately upon completion of its drilling and removal of equipment is mandatory.

## 4.8 Exploration Schedule

Camp reconstruction work would be scheduled for late 2024 and the winter drilling activities described herein are scheduled to begin in mid to late January 2025 with the preparation of the winter access road. The on-ice drilling is scheduled to follow upon arrival of the drilling rigs and support equipment in February 2025, pending favourable winter weather conditions and regulatory approval. The initial drilling phase should end in April 2025 with the demobilization of the personnel by aircraft, and garbage, scrap metal and excess or damaged heavy equipment via the access road. The balance of the proposed 34-hole drilling program may be completed the following year using a similar schedule or delayed depending upon weather conditions and corporate funding at the time.

The Land Use Permit application is for a 5-year period with the option of a 2-year extension. This term is deemed necessary to fulfill the entire M Zone drill testing should there be years with poor weather conditions, exploration funding problems, or other unanticipated difficulties.

## 5 GEOLOGICAL SETTING and MINERALIZATION

The property is underlain by the Sunset Lake sub-area stratigraphy of the Late Archean-age Beaulieu River volcanic belt, part of the southern Yellowknife Supergroup (Lambert, 1988). The Beaulieu River volcanic rocks are deformed around a granitoid basement of the Sleepy Dragon Complex. Basement gneiss of the Sleepy Dragon complex were dated at 2.83 Ga and the age of the Amacher granite which intrudes the Bear property volcanics is nearly 2.65 Ga (Lambert, 1988). Main rock units of the Beaulieu River volcanic belt comprise dominantly tholeiitic basalt, pillow lavas and breccias and lesser amounts of calc-alkaline andesites, felsic lavas, domes and tufts. Local bimodal successions contain almost equal amounts of basalt and rhyolite. Amphibolite dykes and sills form profuse swarms in both the volcanic and adjacent granitoid basement (Lambert, 1988). See accompanying Figure 2 for the regional geology.

Tectonism included: 1) extension of sialic crust and emplacement of mafic dykes, 2) deformation of supracrustals by horizontal shortening and thrusting, 3) contemporaneous amphibolite grade metamorphism and folding, 4) granitic plutonism, 5) mild regional shortening and folding, 6) emplacement of Proterozoic dykes, and 7) wrench faulting (Lambert, 1988).

The M Zone is a silver-zinc-lead volcanic-hosted massive sulphide deposit with features of a volcanoclastic-hosted exhalite. Diamond drilling has outlined upper and lower massive sulphide bodies down to the 250 m level. Disseminated to massive sulphides occur predominantly within a narrow discontinuous rhyolitic tuff horizon. A significant amount of sulphide mineralization also occurs within flanking felsic sediments. Drilling has identified three sulphide lenses trending 340° and plunging -65° northward. Two lenses occur on the same horizon in the rhyolitic tuff unit, and the third lens lies along the contact between a graphitic argillite and carbonate exhalite at a lower stratigraphic position. The lenses range up to 3 m thick in the upper zone and



15 m thick in the lower portion of the main zone. A lower silver-rich zone up to 2 m thick was intersected below the main zone.

Detailed M Zone stratigraphy includes mafic tuff grading into a mixed felsic tuff and turbidite with well-graded sections indicating tops to the east. This section grades into graphitic argillite with pyritic laminae, then into semi-massive sulphide with abundant sphalerite, galena and minor chalcopyrite. A greenish pasty cap, up to 20 cm wide, consists of a mixture of sphalerite, stembergite, marcasite and galena. Slump structures occur locally (Robertshaw et al., 2005).

Based upon previous studies, the M Zone mineralization does not respond to electromagnetic surveying but IP surveys may successfully identify the unconnected sulphide mineralization. Thus, it is proposed that a limited down-hole IP survey be conducted during the drilling program to better detect mineralization along strike and down dip.

## **6 EXISTING ENVIRONMENT**

### **6.1 Physiography**

Elevations within the Property vary from 336 m at Sunrise Lake to higher nearby outcrop-underlain hills at 450 m A.M.S.L. There are intervening elongated lakes and muskeg swamps paralleling the rocky hills.

### **6.2 Climate**

The climate characterized by short, long daylight summers with average temperatures ranging from +15° to +25° C, and long, dark winters with temperatures ranging between -25° to -40° C; sometimes to -50° C. Precipitation averages 269 mm with 33% falling as snow (1 to 2 m) during the months of October through April. Prior to the 2014 forest fire the local boreal vegetation consisted of small black spruce, stunted yellow birch, willow and tag alder.

## **7 COMMUNITY ENGAGEMENT**

### **7.1 Historical Community Engagement**

Engagement on this project began on April 21, 2009 when Solid Resources Ltd., then owner of the Property and predecessor to Silver Bear Mines Inc., entered into an Exploration Agreement with the Yellowknives Dene First Nation. This agreement outlined the responsibilities of each party for the advancement of the Bear project and the protection of the Yellowknives Dene traditional lands and rights.

### **7.2 Current and Future Community Engagement**

Silver Bear Mines continued engagement with community groups from October, 2023 to July 22, 2024 with the delivery of an introductory email to six potentially affected parties, including:

- Akaitcho Screening Board
- LuteselKe First Nation
- North Slave Metis Alliance
- Northwest Territory Metis Nation
- Tlicho Government
- Yellowknives Dene First Nation

The introductory email outlined the intention of the Company to resume exploration work on the Property. The parties were given the opportunity to raise questions and provide recommendations on the proposed camp reconstruction and winter drilling and geophysical surveying of the M Zone.

Between October and February emailed comments from the six parties were received regarding the exploration work being proposed for the new Land Use Permit. All questions and recommendations on the proposed field work were considered and responded to by J. D. Blanchflower on behalf of Silver Bear Mines Inc. A summary of the recorded communications accompany this report as Appendix II.

Upon approval of the Land Use Permit and commencement of the proposed exploration work, it is recommended that Silver Bear Mines provide the interested parties with regular progress reports documenting the exploration work, and provide the opportunity to each of the parties, should they choose, to visit the project during the ongoing exploration work at the expense of the company. Given the winter conditions at the time of the proposed field work, the Company may also conduct face to face consultation meetings with the parties to discuss the progress and results of the field work.

Within 60 days of each field work season the Company should provide the parties with a report documenting the scope and costs of the complete exploration work; number, positions and person-days of indigenous personnel; value of goods and services purchased from the parties; and plans for any future exploration work.

## 8 REFERENCES

- Atkinson, D., 1991: Archean Polymetallic Volcanogenic Massive Sulphide Deposits within the Cameron and Beaulieu River Volcanic Belts. In: Geological Survey of Canada OF 2168, W.A. Padgham and D. Atkinson, eds., Mineral Deposits of the Slave Province, Northwest Territories. (Field Trip 13); pp 99-108.
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- Goodwin, J. R., 2011: Qualifying Report on the Bear Property, Beaulieu River Area, District of Mackenzie, NWT.
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- Robertshaw, Philip, Buhlmann, Eckhart, , Jankovic, S. B., 2005: Bear Property Report in Two Parts. Part 1: Geology & Exploration Prior to 2005. Part 2: Evaluation of a Resolve Airborne Geophysical Survey. March, 2005, Beaulieu River, Mackenzie, NWT.