

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 81-11992
Exam Date: 07/26/2021

1. Current Owner:
TOM LARSON 1400 KHANABAD DR MISSOULA MT 59802
2. Accompanied by: Tom Larson
Phone No: 406-546-3448
Address: 3335 North Ave W. Missoula MT 59804
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
SPRING

Tributary
PAPOOSE CREEK

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap
2. Other water rights with the same point-of-diversion: NO Overlap

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

SPRING SW¼ SE¼ SW¼, Sec. 6, Twp 37N, Rge 14E, B.M. IDAHO County

Method of Determination: GPS; POD is a spring box and 1.5 inch delivery pipe, located at -114°45.090, 46°34.361.

PLACE OF USE: MINING

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
37N	14E	6												X					

Method of Determination: Field exam and Arcmap aerial imagery

3.
 - ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components.
 - ☒ Indicate weir size/pipe as applicable.
 - ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
 - ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
 - ☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
SPRING BOX					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GAL BUCKET						

2. Measurements: Three 5 gallon bucket tests were completed from a 1.5 inch delivery poly pipe from a spring box, with average of three resulting in a diversion rate of 5 gal / 22.9 sec x 60 sec/min = 13.1 gpm = **0.03 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5 GAL Bucket Test = (5 gal / 22.12 sec) x 60 sec/min = 13.56 gpm
 = (5 gal / 24.05sec) x 60 sec/min = 12.47 gpm
 = (5 gal / 22.53 sec) x 60 sec/min = 13.31 gpm
 Average of 3ea 5 GAL Bucket Tests = (13.56 gpm + 12.47 gpm + 13.31 gpm) / 3 = 13.11 gpm = 0.03 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A
2. Volume Calculations for Other Uses: MINING annual volume / Maximum Diversion Volume =
 2,000 gal per day use x 16 days per month operation x 7 month season of use = 224,000 gal per operating season
 & 224,000 gal / 325,850 gal per af = 0.69 af, which rounds to **0.7 af** considering department rounding standards.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 7/26/2021 with the permit holder, Tom Larson, showed spring water being used for mining purposes. At the POD, Mr. Larson's diverting works incorporated a spring box with 1.5 inch poly-pipe routed approximately 20 feet down a cut embankment to a historic mine shaft structure. Three 5 gallon bucket tests were completed from a 1.5 inch delivery poly pipe from a spring box, with average of three resulting in a diversion rate of 5 gal / 22.9 sec x 60 sec/min = 13.1 gpm = **0.03 cfs**, considering department rounding standards which is recommended for licensing purposes. The applicant stated it is a very dry year, and that the flow seemed lower than a typical year; observations of the cut bank showed very wet soils as a product of the spring seeping down-grade not being captured by the spring box. Much of the spring source water is not being captured by the applicant's diverting works, and the flow measurement completed at time of field exam reasonably remains constant most of the year with the exception of initial seasonal runoff earlier in the spring time.

The approved permit shows the spring tributary to Papoose Creek; during licensing review, it was found that the unnamed stream from which the spring source headwaters flows into the East Fork Papoose Creek. The clarified tributary was updated to reflect East Fork Papoose Creek. Papoose Creek has been renamed by the Nez Perce Indian Tribe and now has a local name of Imnamanan Creek, but the USGS designated name is used for licensing purposes. Due to the close proximity of the Granite Creek Complex wildfire burning just north of the applicant's mining claims, all mining equipment of value had been removed from the site at time of field exam, but operational photographs were provided by Mr. Yates.

During the exam, the mining POU was identified as an open graded area co-located with a historic mine shaft developed by the applicant's father. Mr. Larson and his geologist associate, Skip Yates, assert that spring water from the POD is captured into portable 1,000 gallon tanks for use in rock washing and exploratory drilling processes. The two each 1K tanks are filled at the beginning of each drilling activity period, and then refilled nightly for the next day's activities. Overflow from the two tanks is routed back into the original stream channel that runs through a culvert and down to the East Fork Papoose Creek. The permit approved a large POU which includes active mining claims within the Nez Perce-Clearwater National Forest and private land owned by Tom Larson. As the diversion of water and collection into portable water tanks that is then transported to off-site drilling locations, the POU recommended for licensing has been reduced to the active mining claim co-located with the POD. As the 2,000 gallons of storage is used daily, there is no storage beneficial use necessitated by the applicant's use of water for mining purposes.

GPS coordinates were taken of the POU during the field exam, and Arcmap aerial imagery was used to create a circular POU shape during licensing review. The annual volume associated with mining use was derived through conversation with Mr. Larson and Mr. Yates and is broken down as follows: 2,000 gal per day use x 16 days per month operation x 7 month season of use = 224,000 gal per operating season & 224,000 gal / 325,850 gal per af = 0.69 af, which rounds to **0.7 af** considering department rounding standards and is recommended as the maximum diversion volume for licensing purposes.

Condition 106 was removed from the permit during licensing review. Condition 227 was added describing minimum stream flow associated with the Middle Fork Clearwater River. The use of water for mining by the applicant aligns with industrial use, and as such this permit is subordinated from the Papoose Creek MSF 81-11936 and Lochsa River MSF 81-7161 respectively. All other conditions on the permit shall be carried forward to the license. There are no overlap concerns for this water right.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
MINING	05/01 to 11/30	0.03 CFS	0.7 AF

Totals: 0.03 CFS 0.7 AF

2. Recommended Amendments

Change P.D. as reflected above Add P.D. as reflected above X None

Change P.U. as reflected above Add P.U. as reflected above X None

I. AUTHENTICATION

Luke Bates - Water Resource Agent

Field Examiner's Name

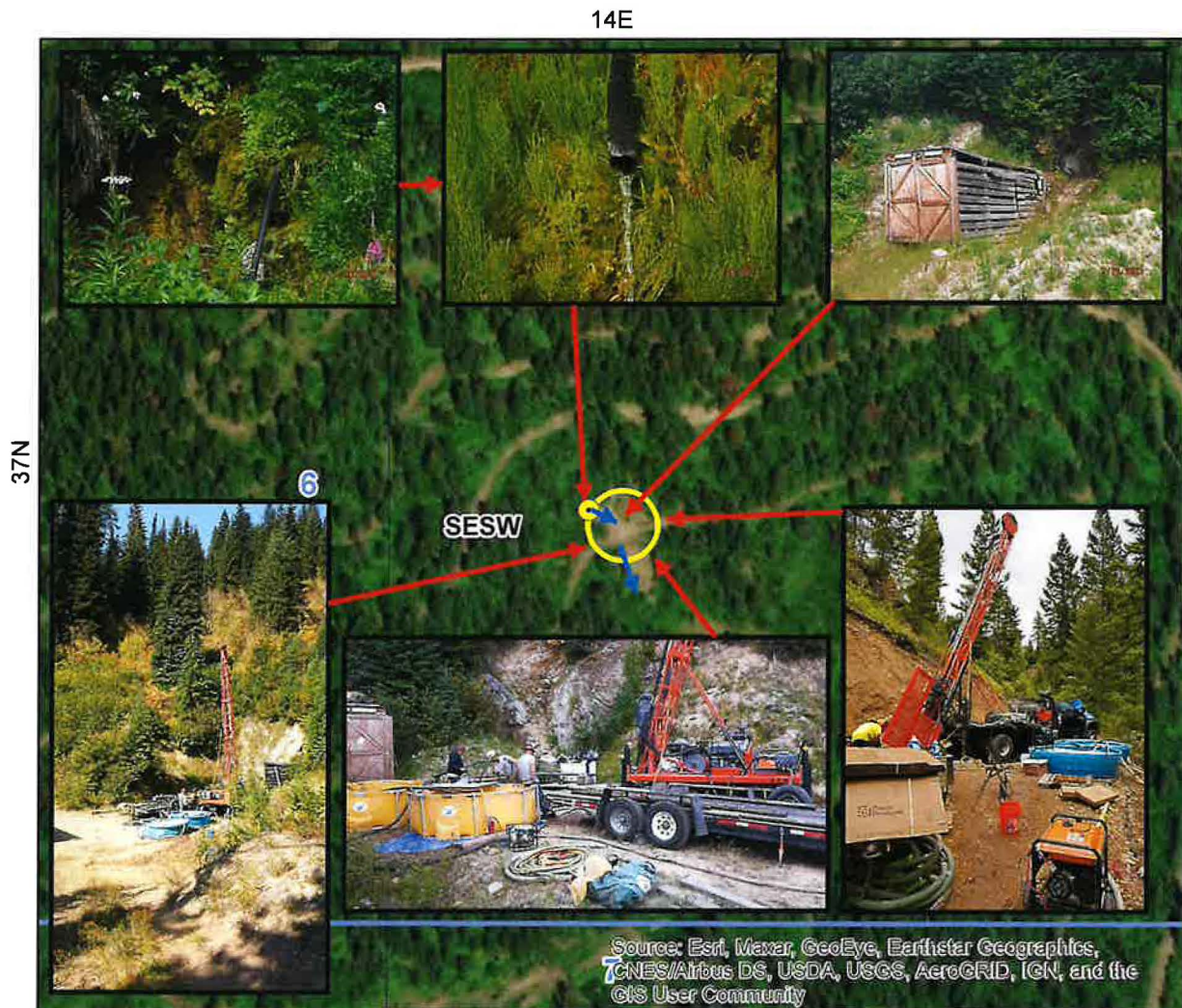
Date _____

Reviewer

Date _____

State of Idaho
Department of Water Resources
Attachment to Field Exam
81-11992

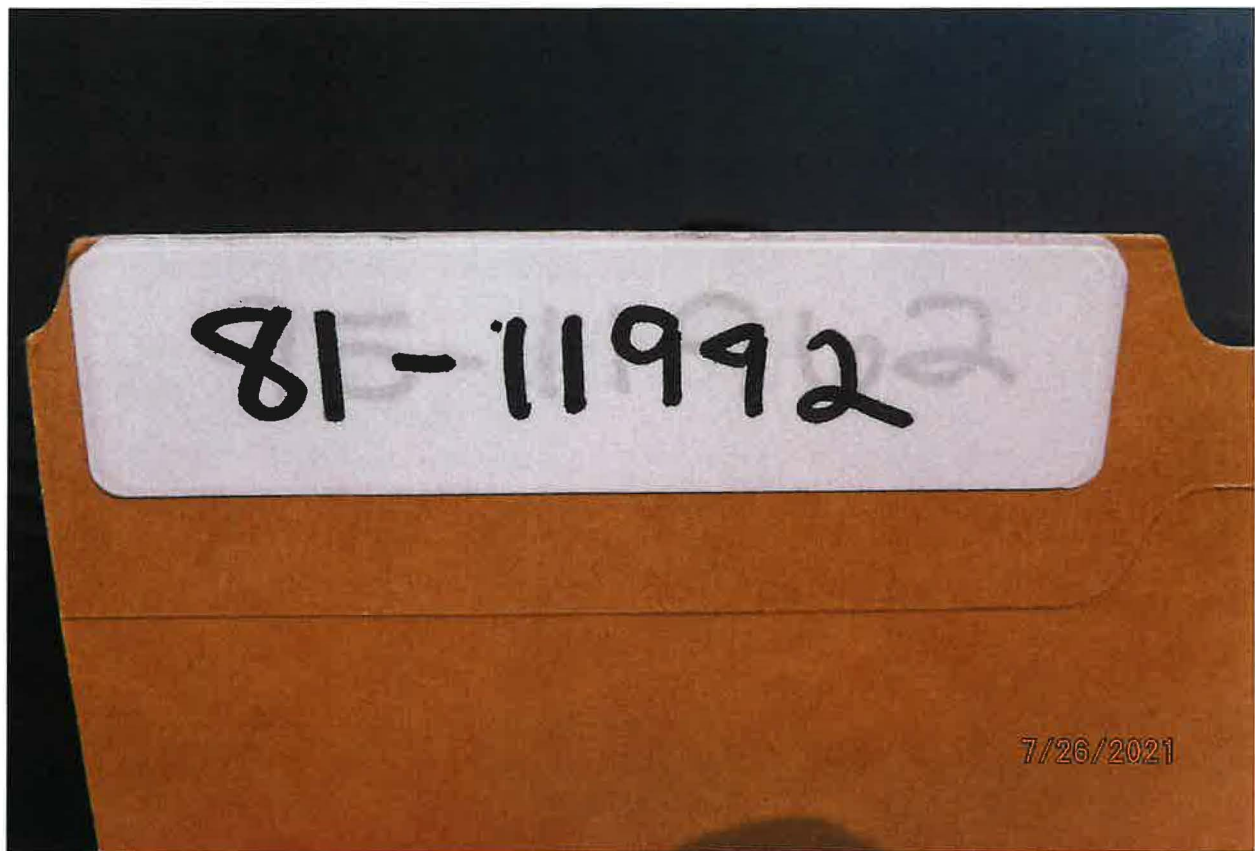
MINING system diagram.



- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.035 0.07 0.14 Miles





FIELD EXAM DATE 7/26/2021



POD – SPRING SOURCE WITH SPRING BOX AND 1.5 INCH POLY PIPE



POD – 1.5 INCH POLY PIPE ROUTED DOWN EMBANKMENT TO MINE AREA



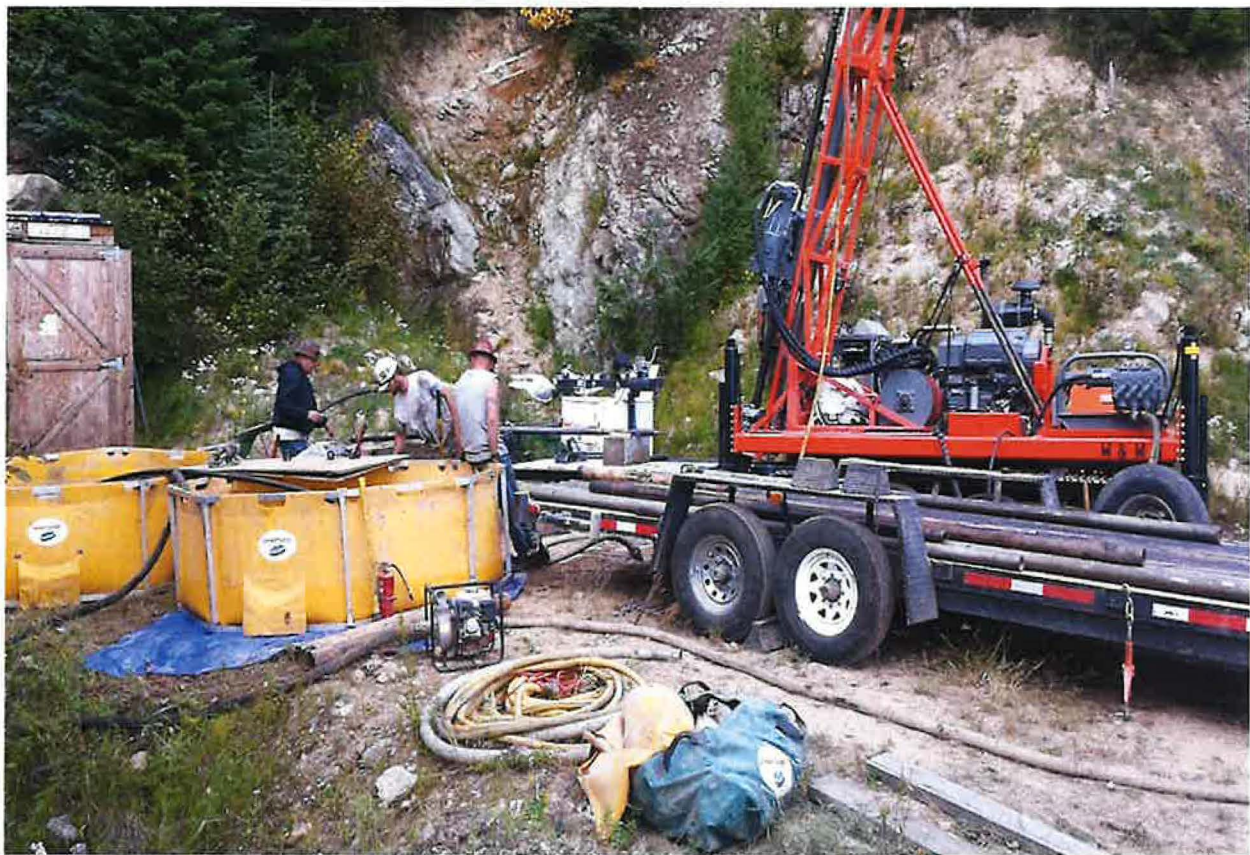
5 GALLON BUCKET FLOW MEASUREMENT



MINING POU – HISTORIC MINE SHAFT



POD CO-LOCATED WITH POU



MINING POU – 1,000 GAL STORAGE RESERVOIRS

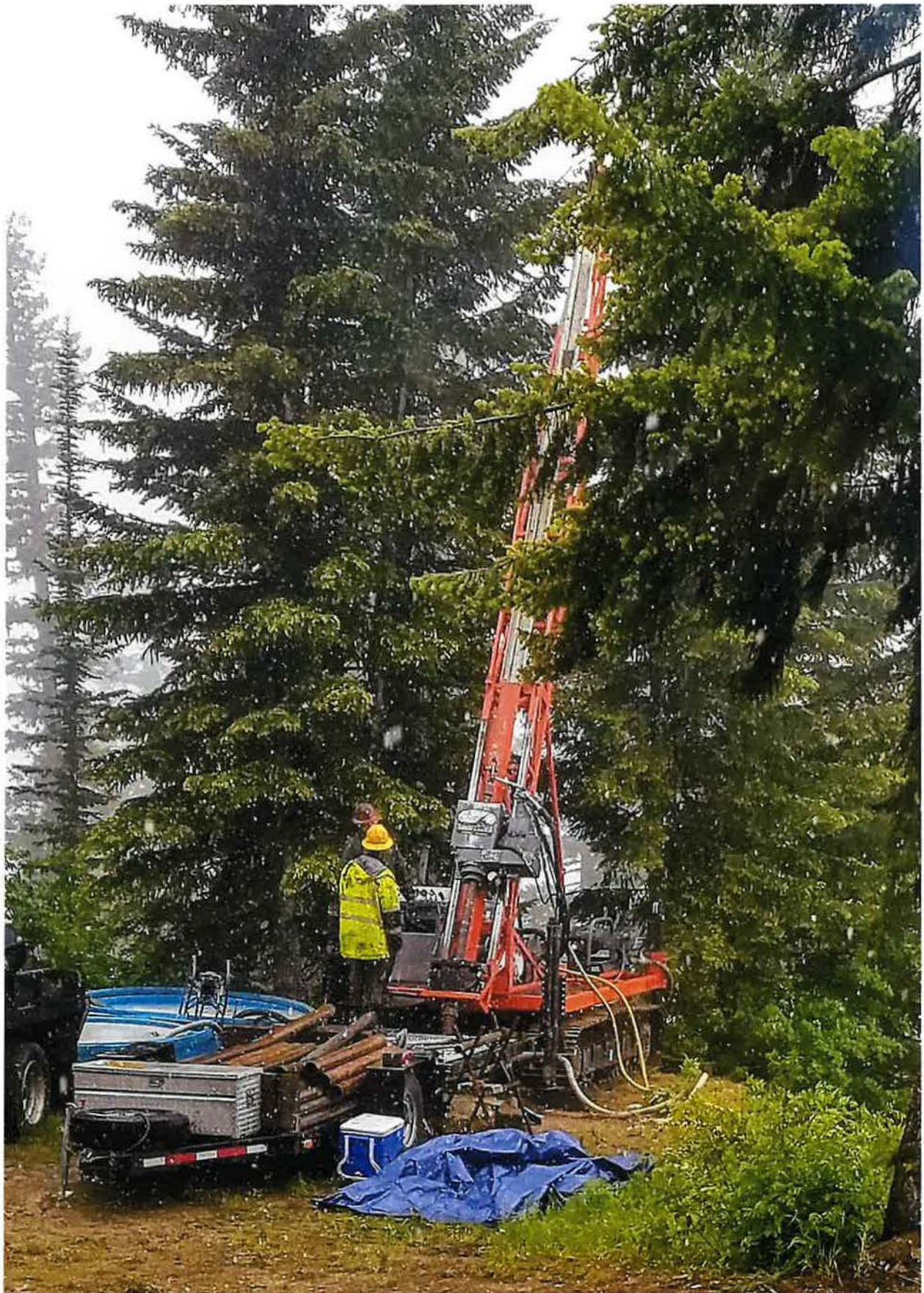


PORTABLE MINING EQUIPMENT – MOVED FROM CLAIM TO CLAIM EXPLORATORY DRILLING



MINING POU





MINING POU – PORTABLE EXPLORATOR DRILLING RIG WITH PORTABLE WATER STORAGE TANKS