



U.S. Department of the Interior
Bureau of Land Management

BLM GFO Abandoned Mine Lands

2025, 2026, and Animas Forks Update



BPMD CAG 2.17.2026



2025-Projects Accomplished:

Forest Queen Mine O&M (BPMD)

San Juan Chief Mine & Mill

Roy Pray Mine O&M

Terry Tunnel Reveg (BPMD)

Anaconda Mine

Forest Queen (BPMD)



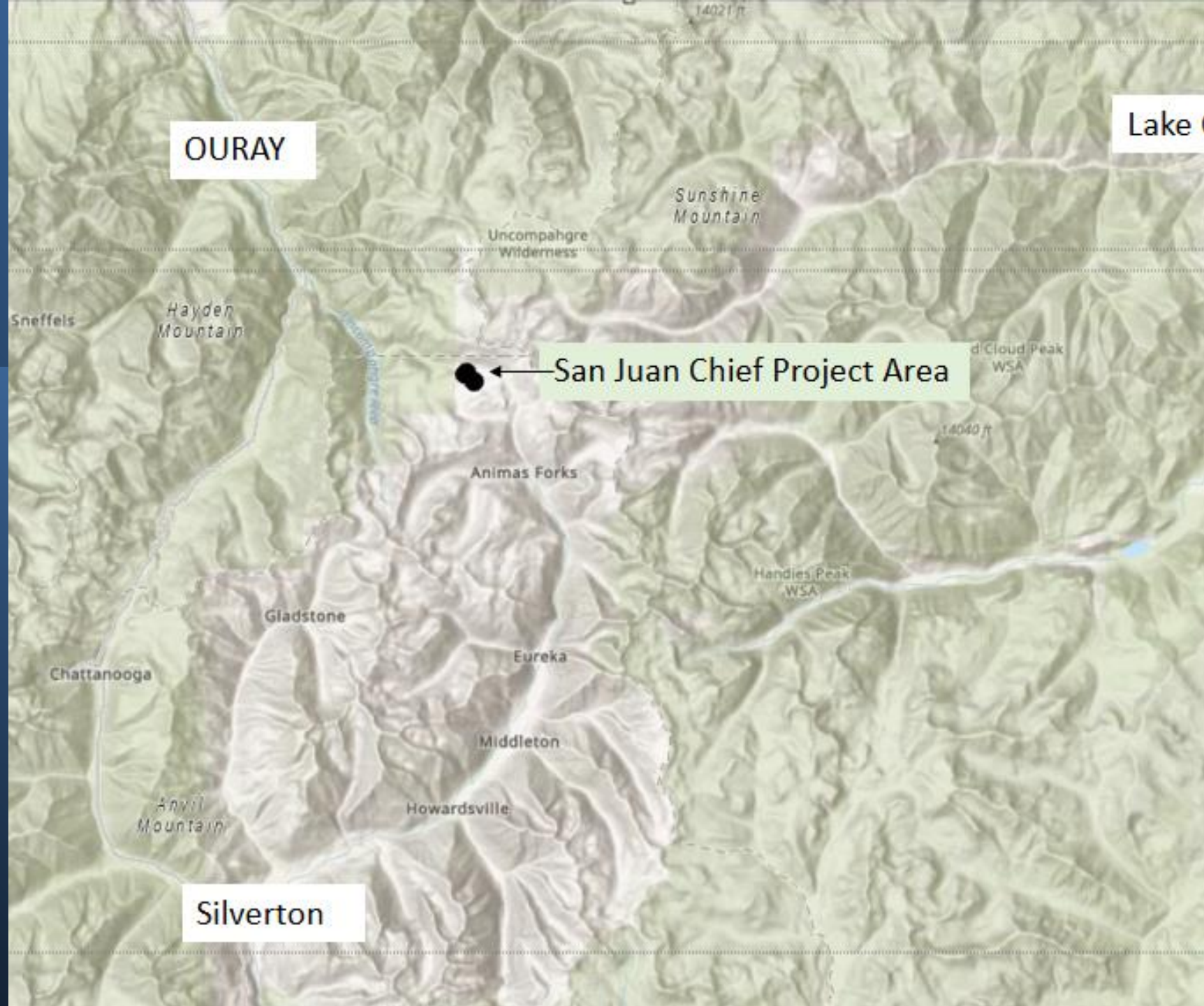
PROJECT LOCATION
SITE MAP
SCALE: NONE

Forest Queen

- Flow structure excavation/investigation
- Pipe install/replacement
- Reroute discharge



San Juan
Chief Mine
and Mill
(non-BPMD)



San Juan Chief- Overview



San Juan Chief Mine and Mill



- **Mill-borrow source used, WCA construction, waste isolation, create safe parking & access, flow controls installed, reveg**
- **Mine-flow controls installed, create safe parking & access, reveg**

Roy Pray Mine (non-BPMD)

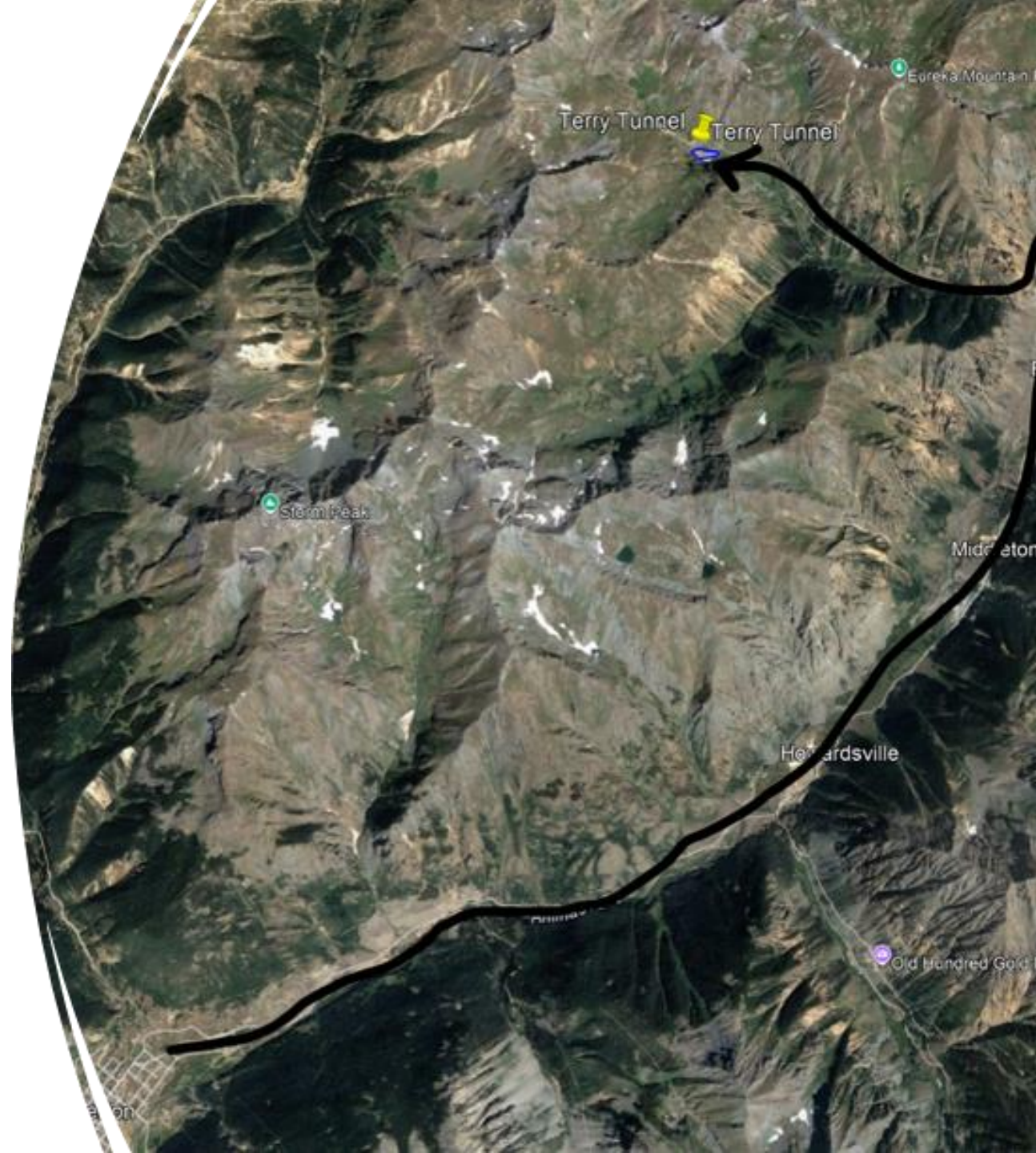


Roy Pray Mine

- Ditch & Pond Improvement
- Adit brow reconstruction
- Collapse & pipe investigation
- WCA for ditch & pond sludges



Terry Tunnel Reveg & Stabilization (BPMD)

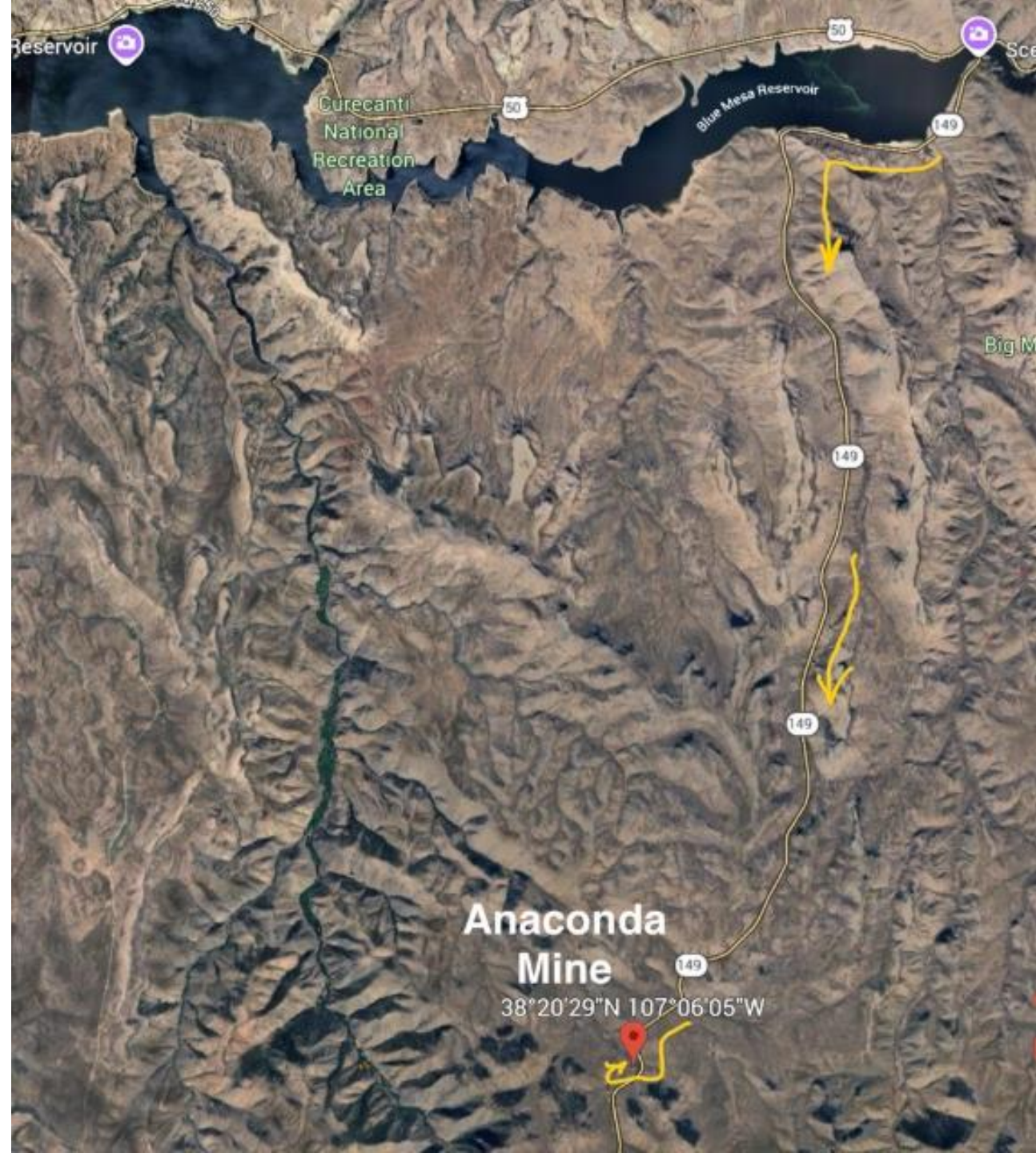


Terry Tunnel Reveg and Stabilization

- Used local borrow, amendments, hydroseed to reveg waste storage area
- Stabilized sides of waste storage area
- Installed gate to restrict motorized entry
- Established future access route

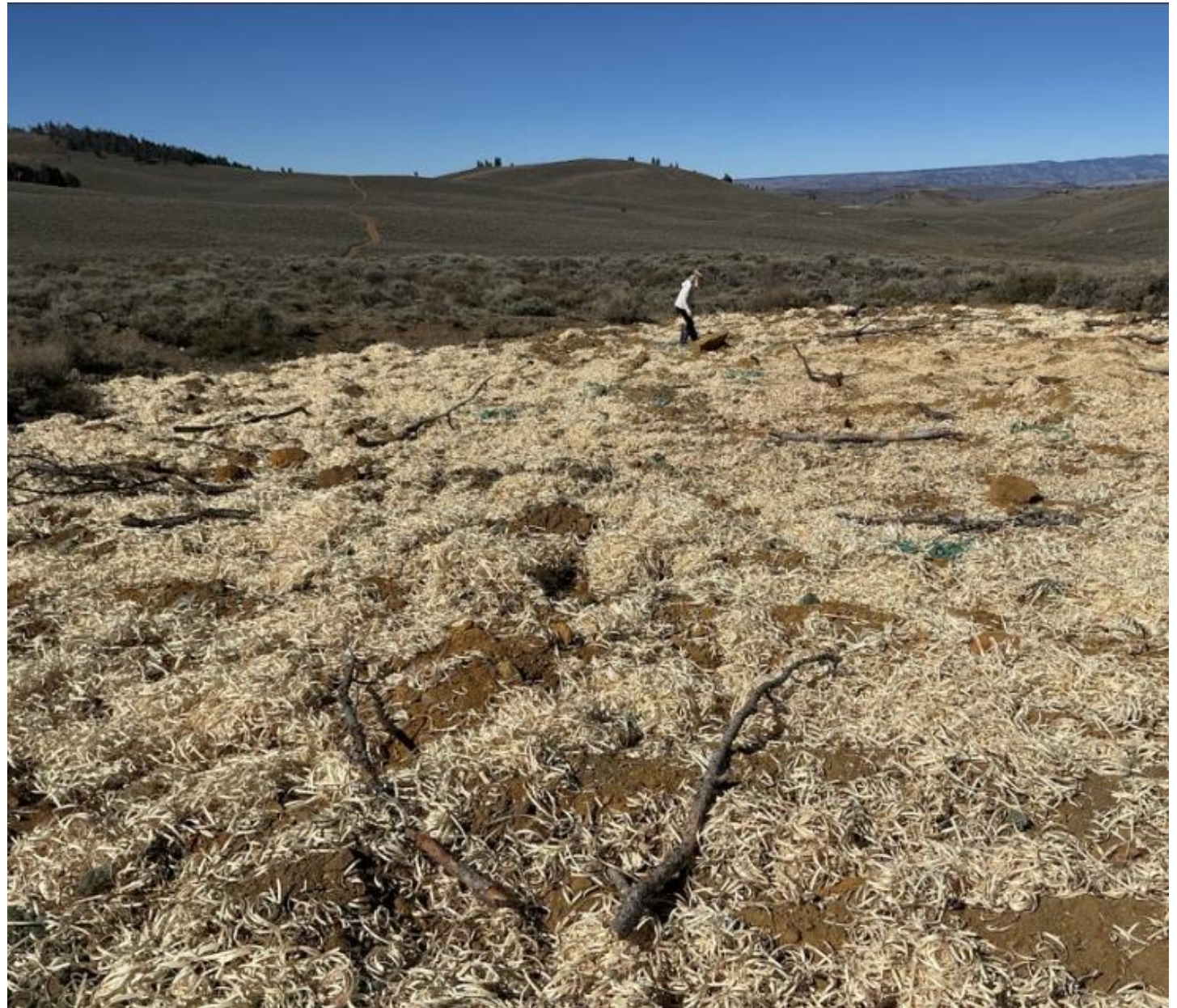


Anaconda Mine (non-BPMD)



Anaconda Mine (near Gunnison)

- Installed flow controls
- Reveg with amendments, native sagebrush seedlings & seed
- Installed rock barrier to restrict motorized access



2026 BLM AML Projects:

- American Tunnel O&M
- Watering Terry Tunnel Reveg in the event of dry periods
- Installing Pb signage at Animas Forks
- Jetting Forest Queen pipes
- Roy Pray O&M
- Prospect Gulch Reveg



Animas Forks Discussion

A Common Question:

Why hasn't cleanup happened before now?



ANIMAS FORKS LAND STATUS



Legend

Surveyed_Claims

Patented, Acq_US

- Patented
- US
- Patented-Acquired US

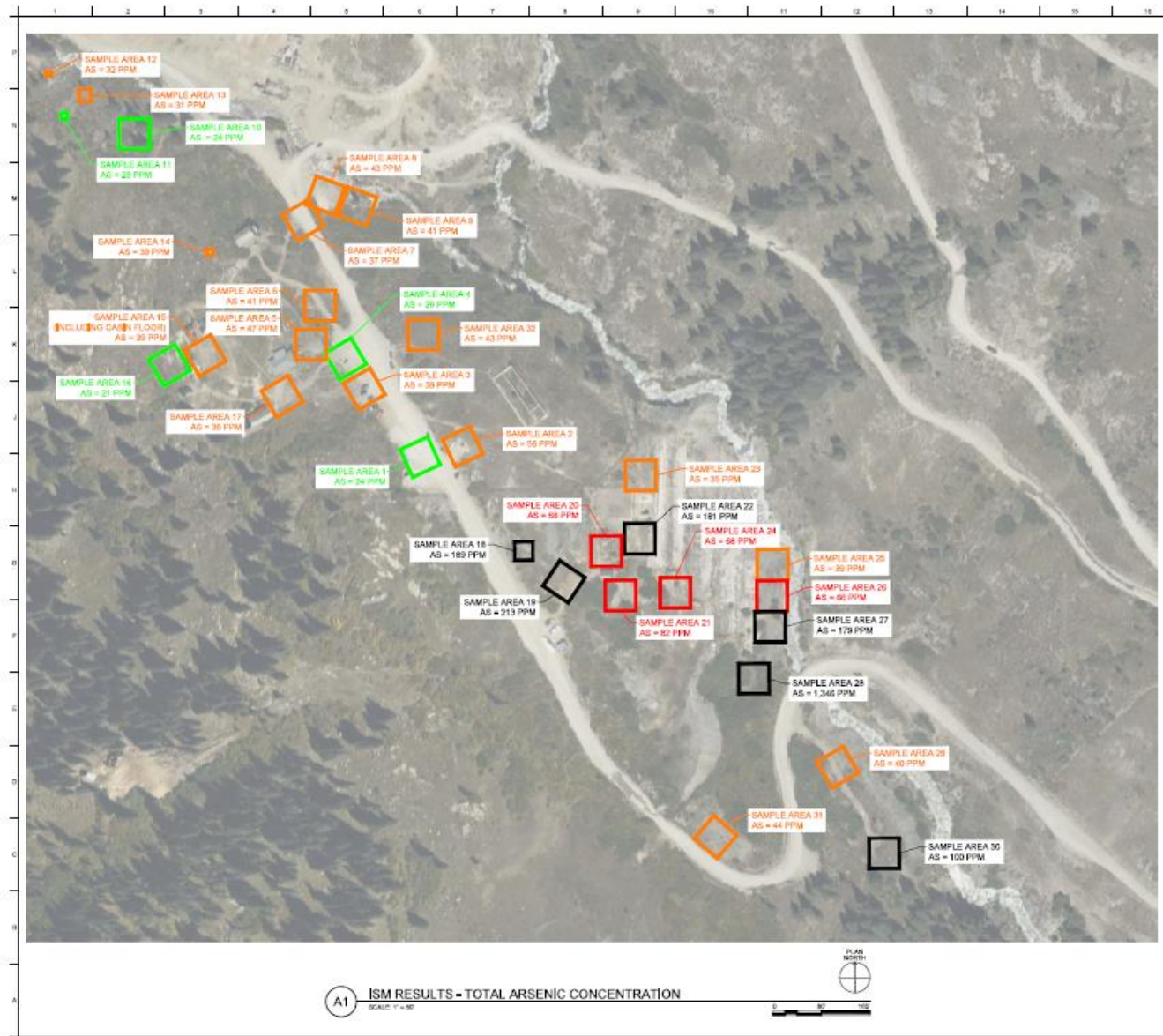
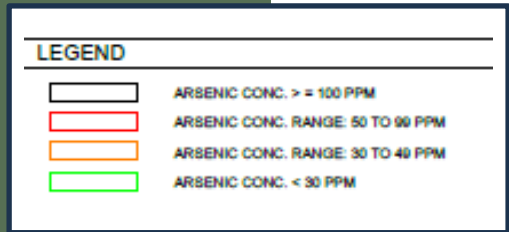
Animas Forks



Incremental Sampling Methodology (ISM) at Animas Forks in 2024

- **Incremental Sampling Method (ISM) was used to characterize surface soils (0–2 inches), focusing on <2-mm particles sieved through a #10 screen to target the fraction most relevant to recreational exposure.**
- **Sampling locations were selected based on XRF screening, prioritizing areas with the highest metal concentrations, while also collecting background/low-concentration samples for comparison.**
- **Each location consisted of a 30-point composite, with 32 total locations sampled; triplicate composites were collected per 50×50-ft quadrant (90 aliquots per location).**
- **Smaller disturbed areas (10×10 ft)—likely related to isolated spills or minor processing—were sampled similarly but within reduced boundaries due to limited affected soil.**

Animas Forks As ISM Results



GENERAL SHEET NOTES

- SAMPLES WERE TAKEN USING INCREMENTAL SAMPLING METHODOLOGY (ISM) BY ALPINE WATER RESOURCES IN OCTOBER OF 2024. EACH SAMPLE AREA VALUE FOR LEAD OR ARSENIC IS AN AVERAGE OF THREE 30-POINT SAMPLES SENT TO GREEN ANALYTICAL FOR TESTING. TOTAL METALS TESTING CONFORMED TO EPA METHOD 8230A. UNITS ARE MG / KG (PPM).
- SAMPLES WERE TAKEN FROM EXPOSED DUST GENERATING SURFACES, AT A DEPTH OF 0-2 INCHES.
- SAMPLE AREA LOCATIONS WERE TRANSLATED ON THIS SHEET USING A SINGLE POINT SHOT ON A GEODE DEVICE DURING THE SAMPLING EFFORTS AND POLYGONS WERE MANUALLY DRAWN IN POST USING FIELD NOTES. AREAS ARE GENERALLY 50' X 50' SQUARES MEASURED IN THE FIELD. AREAS 11, 12, 13, 14, AND 18 ARE OF A SMALLER SIZE, SURROUNDING A DISTINCT FEATURE.

LEGEND

- ARSENIC CONC. \geq 100 PPM
- ARSENIC CONC. RANGE: 50 TO 99 PPM
- ARSENIC CONC. RANGE: 30 TO 49 PPM
- ARSENIC CONC. $<$ 30 PPM

CONTEXTUAL ARSENIC CONCENTRATIONS

- ISM RECREATIONAL SCREENING LEVEL (MG/KG) -14 DAYS/YEAR, 28 YEARS (ADULT/CHILD)
 - SCREENING LEVEL = 30.6 PPM
- REPRESENTATIVE BACKGROUND CONCENTRATIONS OF METALS IN SOILS OF THE WESTERN US (MG/KG)
 - TYPICAL (AVERAGE) = 7 PPM
 - HIGH END (MAXIMUM) = 97 PPM



NORTHWARD
CURBSIDE PRODUCTION SERVICES

LBVD FEDERAL

DATE PLOTTED BY: [blank]
DRAWN BY: [blank]
CHECKED BY: [blank]
DATE: [blank]

PROJECT NO.: [blank]
PROJECT NAME: [blank]
SHEET NO.: [blank]

SCALE: 1" = 30'

PROJECT LOCATION: ANIMAS FORKS, SAN JUAN COUNTY, CO

CLIENT: NORTHWARD CURBSIDE PRODUCTION SERVICES (DANIEL J. B. BISH)

PROJECT NO.: [blank]

DATE: [blank]

PROJECT NAME: ANIMAS FORKS

ISM RESULTS - TOTAL ARSENIC CONCENTRATION

SHEET 10
EX-2

ISM RESULTS

Incremental Sampling Methodology (ISM) Results

Compared to BLM Screening Level

Table 3-1: The average, minimum and maximum total metals concentrations results from triplicate incremental sampling across the Animas Forks historic Townsite. The BLM recreational screening level and the average background levels typically found in the Western United States are listed for comparison. Metals with concentrations that were above BLM screening levels are highlighted in orange, and above the typical background levels are highlighted in pink.

Metal	Concentration (mg/kg)			BLM Recreational Screening level	Average Western US Background
	Average	Maximum	Minimum		
Aluminum	9,308	16,200	1,850	>1,000,000	5,800
Antimony	63.4	520	<2	782	0.62
Arsenic	110	1,570	20	30.6	7
Barium	284	2,540	33	390,000	670
Beryllium	0.74	1.41	<0.5	3,910	0.97
Cadmium	12.3	179	0.6	1,780	<1.0
Calcium	5,852	71,200	203		
Chromium	7.1	19.4	<1	>1,000,000	56
Cobalt	5.8	11.8	0.5	586	9
copper	386	2,770	29	78,200	27
Iron	34,500	72,800	6,120	>1,000,000,000	26,000
Lead	7,053	68,400	151	800	20
Magnesium	5,253	7,340	562		
Manganese	3,740	42,100	78	46,700	480
Mercury	3.04	52	0.02	271	0.065
Nickel	4.8	9	0.5	39,600	19
Potassium	1620	2680	0		
Selenium	3.39	12.2	<1	9,780	0.34
Silver	37.4	366	1.23	9,780	0.5
Sodium	<200	241	<200		
Thallium	<0.5	<125	<.5	19.6	9.8
Vanadium	19.4	32.5	5.64	9,850	88
Zinc	2,383	34,800	137	587,000	65

BLM Decision Making Reference Table

- SL=Screening Level
- RML=Recreational Management Level

Table 4-1 Reference Table: BLM Recreational Screening and Management Levels, and Representative Background Concentrations (mg/kg)

BLM AML Decision Making Manual

Chemical	BLM Recreational SL ¹	BLM Recreational RML ²	Representative Background ³	
			Typical (Average)	High End (Maximum)
Aluminum (Al)	>1,000,000	>1,000,000	5,800	100,000
Antimony (Sb)	782	2,350	0.62	2.6
Arsenic (As)	30.6	2,620	7	97
Barium (Ba)	390,000	>1,000,000	670	5,000
Beryllium (Be)	3,910	11,700	0.97	15
Cadmium (Ca)	1,780	5,350	< 1.0	11
Chromium (III) (Cr)	>1,000,000	>1,000,000	56	2,000
Cobalt (Co)	586	1,760	9	50
Copper (Cu)	78,200	235,000	27	300
Iron (Fe)	>1,000,000	>1,000,000	26,000	> 100,000
Lead (Pb)	800	2,400	20	700
Manganese (Mn)	46,700	140,000	480	5,000
Mercury (Hg) (elemental)	236	814	0.065	4.6
Molybdenum (Mo)	9,780	29,300	1.1	7
Nickel (Ni)	39,000	117,000	19	700
Selenium (Se)	9,780	29,300	0.34	4.3
Silver (Ag)	9,780	29,300	0.5	5
Thallium (Tl)	19.6	59	9.8	31
Uranium (U)	391	1,170	2.7	7.9
Vanadium (V)	9,850	29,600	88	500
Zinc (Zn)	587,000	>1,000,000	65	2,100

Cautionary Measures After Data Analysis and Risk Assessment

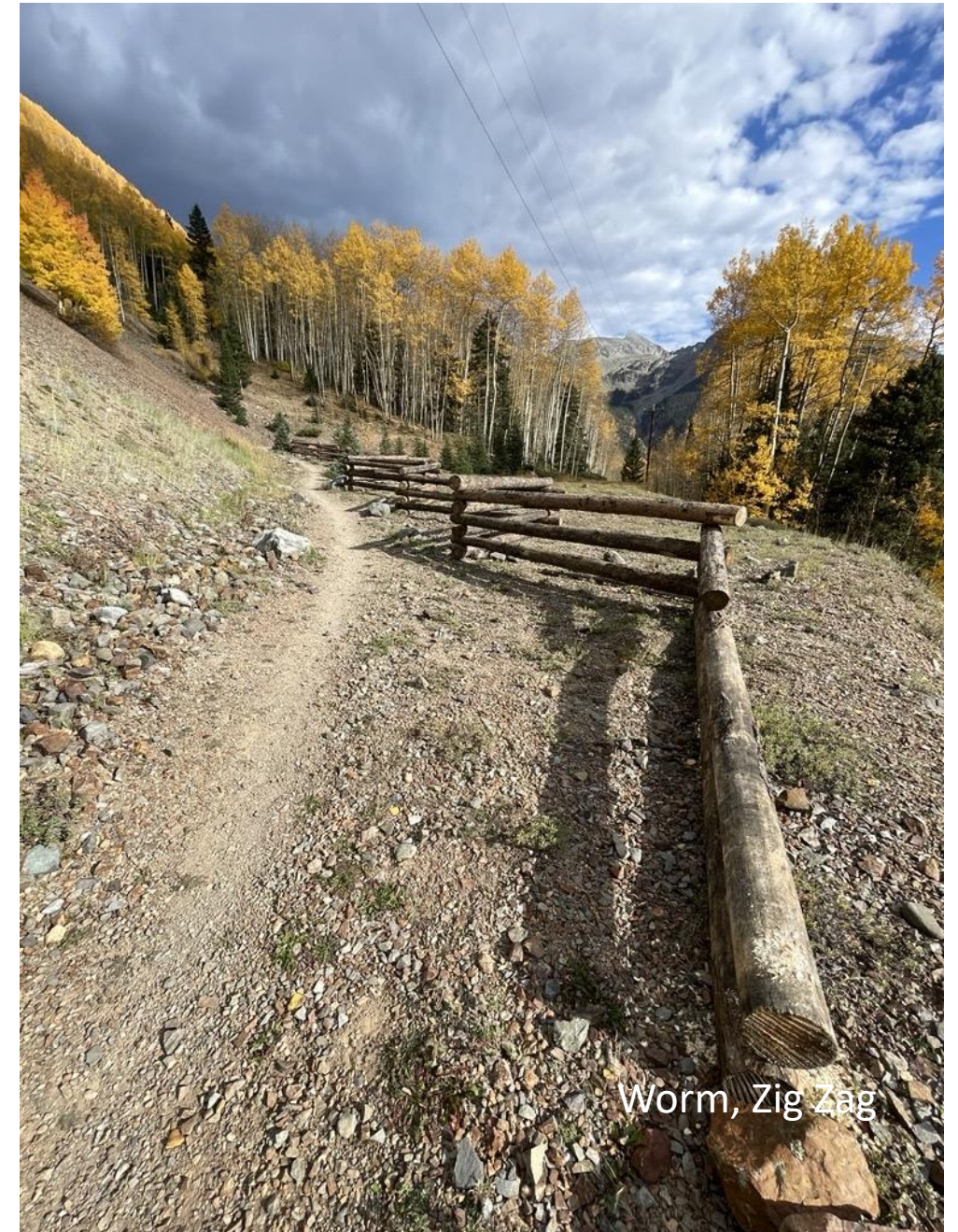
But before Clean
Up Process



Possible Interim Mitigation



Post & Rail



Worm, Zig Zag

**CLOSED TO
MOTORIZED USE**
December 16 - April 30

Carlson Hills
Annual Seasonal Closure



Plan ahead for the annual seasonal closure of motorized vehicles in the Carlson Hills area. The closure is in effect from December 16 to April 30. Motorized vehicles are prohibited from all trails in the area. This includes all-terrain vehicles, motorcycles, snowmobiles, and off-road vehicles. The closure is in place to protect the fragile ecosystem and to ensure the safety of all visitors. For more information, visit www.blm.gov.

**NO
Shooting**




**NO
DUMPING
ALLOWED**

Includes
Garbage - Vegetation
Yard Debris - Tree Limbs

For the nearest authorized disposal site,
contact your local waste authority.
HELP KEEP AMERICA CLEAN

**SAFETY
ZONE**

NO SHOOTING
Within 150 Yards of
Developed Area

Respect Life and Property

BLM Flower Field Office 375-627-0272

**ROUTE
CLOSED**

To Preserve Recreational and Economic Values
To Control the Spread of Invasive Species
To Improve Hunting and Recreation Opportunities

**No Vehicles
Past this Point**

Non-motorized Visitors are Welcome on Public
Lands with Legal Public Access

Please Observe Private Land Boundaries and
Fenced Signs

Respect the Landowner and the Land!

STOP

READ THIS

Use of the downhill flow trails involves the risk of injury. You are responsible for deciding what is safe, take responsibility for your safety and well-being.

- Do not attempt any of the trails or flow features unless you have sufficient ability and skill to do so safely. Always wear a helmet and use proper safety gear.
- A full-face helmet, protective equipment, and a full suspension bike are recommended.
- You need to inspect the equipment before, dismount and check riders should be a different trail.
- Wipe down your helmet in designated cleaning tool sections. Be aware of changing trail conditions. It is your responsibility to inspect features before use and throughout the day.
- Always inspect your equipment or have it checked by a qualified bike mechanic before riding.

You assume the risk of any injury that may occur while using the downhill flow trails.

**NATIONAL
CONSERVATION
LANDS**

**Please
Keep Out of
Fenced Area**

Por Favor
Manténgase Fuera
del Área De La Cerca

WARNING

Sandthrax Slot
TECHNICAL RATING 4

DO NOT PROCEED
without **ADVANCED-EXPERT**
canioneeering skills.

Many extreme rescues have occurred
from the Sandthrax Canyon Slot.

WARNING

**Spooky
Slot Canyon**
Extremely
Narrow

If you have trouble fitting your body
between these posts,
DO NOT PROCEED.
You may become STUCK and need rescue.

DANGER

**STREAM HAS
HIGH LEVELS OF
NITRATES**
DUE TO HISTORICAL UPSTREAM MINING



USE AT YOUR OWN RISK

Bureau of Land Management - Malibu Field Office
805-654-5100

DANGER

**Swimming
and Wading
Unsafe**

Rip Currents
Sneaker Waves
Sudden Drop-off
Forceful Waves

CAUTION



RADIATION AREA

CAUTION

**Entering
Burned Area**

POSSIBLE HAZARDS

CAUTION
EXPERT RIDERS ONLY

This trail is rated Extremely Difficult.

TRAIL HAZARDS MAY INCLUDE:

- Narrow and steep sections.
- Washed-out sections.
- Fallen trees.
- Large falling or loose rocks.

PLAN AHEAD and BE PREPARED:

- Bring plenty of water, all necessary tools, and overnight emergency supplies.
- Call your phone when you are out and when you plan to return.
- Know your limitations as well.

**HAZARDOUS MINES
CAN WILL KILL YOU**



**Don't give them the chance.
Stay out & stay alive.**

STATE OF COLORADO
1876

COLORADO
DEPARTMENT OF
NATURAL
RESOURCES

**Existing
Common
Hazard
Signage on
BLM**

**HEAT
WARNING**

HIKING NOT RECOMMENDED WHEN
TEMPERATURE IS 90°F (32°C) OR HOTTER

1 Plan Ahead
Hike early in the day when it is coolest.

2 Drink Water
Bring at least 2 liters of water per person. Bring salty snacks to replace electrolytes. Turn back before half of your water is gone.

3 Protect Yourself
The sun is intense and there is no shade on this trail. Wear sunscreen, a hat, and sunglasses. Limited or no cell service.

4 Rest Often
Do slowly and allow the slowest hiker to set the pace.

5 Protect Pets
Keep your pet cool when it's hot. Know the signs of heat stroke in dogs.



**NATIONAL
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Sloan Canyon National Conservation Area

DRAFT ANIMAS FORKS SIGN LANGUAGE:

**BUREAU OF LAND MANAGEMENT
ANIMAS FORKS
SOIL SAFETY NOTICE**



DANGER!



Soils in the Animas Forks area contain hazardous levels of metals, including LEAD (Pb) and ARSENIC (As), known carcinogens.

**STAY ON ESTABLISHED ROUTES
AVOID CREATING DUST
DUST FROM THIS SITE CAN TRANSPORT HOME WITH YOU.
WASH HANDS PRIOR TO EATING AND DRINKING**

Input from Various Stakeholders for Interim Mitigation



- Clear, blunt sign language
- Attempt to keep signage low to the ground so that visual impact is minimized
- Attempt to keep loud colors on signage at a minimum
- Brochure could explain data/hazard
- Magnesium Chloride or comparable dust control
 - Requires coordination with San Juan County Road Maintenance
- Gravel
- Appropriate fencing
- Jarosite (bench study)
- Specific language addressing most vulnerable visitors
- Make available Site Specific online messaging about the hazard



Questions?



Thank you, CAG!