

Navajo Abandoned Uranium Mine

Site Screen Report

This form is for use at the site of abandoned uranium mines (AUM) located on Navajo Nation lands. Applicable sites include all mine and mine features that have or have not undergone reclamation by the Navajo Abandoned Mine Lands Reclamation Program, including features, adits, pits and waste piles. Applicable sites also include all AUM sites listed in the USEPA CERCLIS database, all sites listed in the 2008 AUM GIS Report issued by USACOE and USEPA, all AUM sites on allotment lands associated with the Navajo Nation, and any and all AUM sites not listed in any database located on Navajo lands. Reconnaissance of any sites located on lands adjacent to Navajo lands that may be impacting Navajo lands will need to be coordinated with the authorities appropriate to those lands.

The purpose of the form is to ascertain the status and location of the identified AUM site, and record all immediate site information associated with the mine site. Decisions and recommendations on what additional steps are needed will be provided on a separate document.

Mine Name: Charles Keith
Mine ID: 225

Navajo AUM North Central Region

Prepared by:

Weston Solutions, Inc.

Contract: W91238-06-F-0083

20074.063.039.0020

April 2012

Part I Site Identification, Location and Status

Site Names and ID numbers as applicable

Mine ID: 225

Map ID: NC15

CERCLIS: NNN000909255

Navajo Abandoned Mine Land Reclamation Program: NA-0214

Local name / Aliases: Oljeto Mesa West; Keith Mine - A; Oljeto

Chapter and local area: Oljato

County: San Juan

State: UT

Lat/Long: 37.0417696325 N / -110.308362886 W

Nearby road and highway: Oljato Road **Local Post Office:** Oljato, AZ

Surface Land Status: check one or more and provide ownership and contact information below

Tribal Trust Land	<input checked="" type="checkbox"/>	Public lands	<input type="checkbox"/>
Private	<input type="checkbox"/>	Tribal Fee Land	<input type="checkbox"/>
Bureau of Land Mgmt	<input type="checkbox"/>	Allotment	<input type="checkbox"/>
State	<input type="checkbox"/>	Fee land	<input type="checkbox"/>

Subsurface Mineral Rights:

No information on subsurface mineral rights ownership was found in the EPA/AUM Database.

Claim and operator information:

Historical documents identified the operator of the mine in 1950 as Charles Keith, and from 1954 to 1955 as Shasta Copper and Uranium Company. No additional historical ownership / lease information was identified in the EPA / AUM database.

Number of residential structures within 200 feet of mine: None

Part II Summary of Radiological Readings

Mine ID: 225

Highest gamma radiation measurement: 729,692 counts per minute (cpm)

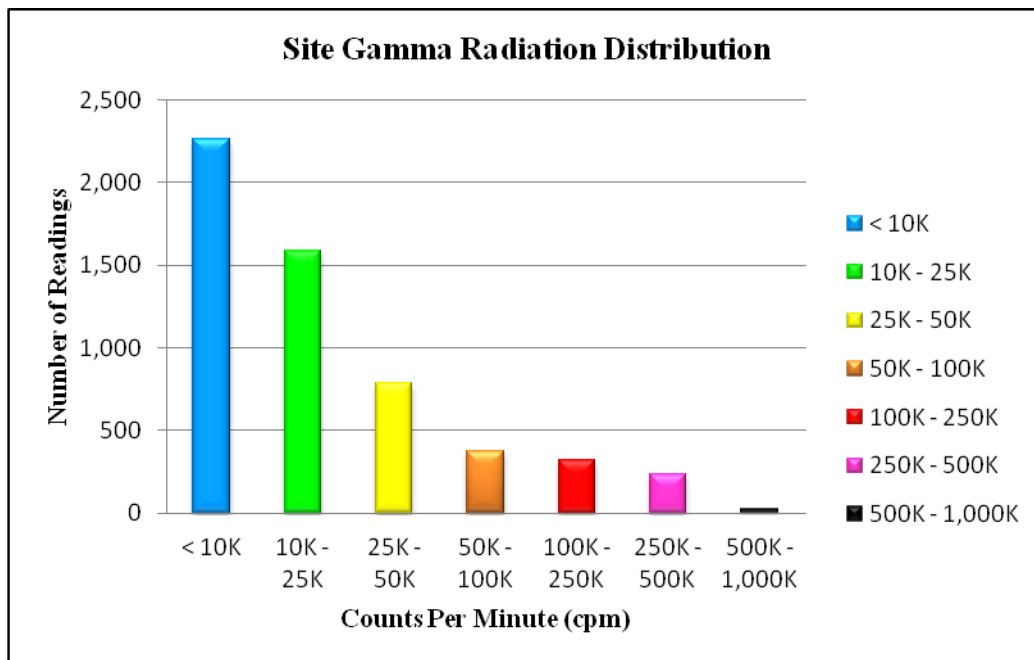
Background Average: 7,189 cpm **Two Times Background:** 14,378 cpm

Describe any other radiological measurements:

A total of 5,630 gamma radiation measurements were collected from the mine site, ranging from 4,328 cpm to 729,692 cpm. Maximum levels of approximately 150,000 cpm were found in the vicinity of the waste rock and 725,000 cpm were found near the entrances to the adits. The measurements are represented in Figures 1 and 2.

Distribution Chart and Statistics:

Site Gamma Radiation Statistics	
Number of Readings	5,630
Minimum (cpm)	4,328
Maximum (cpm)	729,692
Mean (cpm)	43,194
Median (cpm)	13,295
Standard Deviation	82,305



Part III Status of Reclamation and Mine Waste

Mine ID: 225

The following information was obtained from the Navajo Abandoned Mine Land Reclamation Program (NAMLRP) Point Features Database:

NAMLRP Status of the mine site: Reclaimed: Yes Waste Pile onsite: Yes

NAMLRP Project Number: NA-0214

NAMLRP Mine features: 2 Portals

The following information was obtained from field observations collected during the 2011 site screening:

Provide description and status of all mine sites and features at site. Include all waste piles, adits, pits and other features, and indicate whether they are open, closed, covered, capped, buried or unreclaimed. Indicate approximate size, shape and extent, including description of any reclamation caps. Note condition of all caps.

Observed reclamation work and status:

Adits:

5 adits: Adit 1 was open; Adits 2,3,4 & 5 were walled, graffiti was observed adjacent to Adit 4

Waste Piles:

Scattered waste rock extends 200' to 300' below the site, mostly large boulders

Pits:

None Observed

Shafts:

None Observed

Other Debris and Mine Features:

None Observed

Part IV Site Observations and Environs

Observed Residential Structures (number and human habitation status of structures at the following distances from the mine site):

0 to 200 feet:

200 feet to 0.25 mile:

Observed Public or Commercial Structures (schools, clinics, Chapter Houses, places of business and any other structures used by members of the community at the following distances from the mine site):

0 to 200 feet: None observed

200 feet to 0.25 mile: 750 ft S - Town of Oljato

Levels measured around the perimeter(s) of the identified structure(s):

Onsite - Temporary rock shelter - 150,000 cpm; Town of Oljato - Background Levels

Observed Water Sources (number and type of wells and surface water sources that are potentially used for human consumption at the following distances from the mine site):

0 to 0.25 miles: 500 ft S - Water Tank (225)

0.25 miles to 4 miles: 0.75 mi SW - Reservoir (Oljato); 2.5 mi W - Pond (516); 2.5 mi SE - Water Tank (224); 3 mi W - Livestock Well (261)

Sensitive Environments (all sensitive environments located within visible range of the mine site, including: wetlands, endangered species, habitats and approximate locations of sites that may be under protection of the government of the Navajo Nation):

None observed

Known Site History (information from interviews with Chapter officials and residents and database review, includes: mine ownership, type of mining operation, period of operation, known amount of production, and any other information provided):

The Charles Keith mine claim consists of an area of 33,787 m². The mine was identified as being operational from 1954 to 1955. While operational, the mine had a total reported production volume of 59 tons. No additional historical ownership / lease information was identified in the EPA / AUM database.

Part V Response Action Summary

Summary of Evaluation Factors:

Accessibility:

Was the mine easily accessible to potential human activity?

Yes

Radiological Measurements:

Were any gamma radiation measurements collected at the mine greater than two times the site-specific background levels?

Yes

Waste Piles:

Were any unreclaimed waste piles observed at the mine with gamma radiation measurements greater than two times the site-specific background levels?

Yes

Structures:

Were any structures observed within 200 feet of the mine?

No

Potential Drinking Water Sources:

Were any potential drinking water sources observed within 4 miles of the mine?

Yes

Reclamation:

Was the mine reported to be previously reclaimed, or did the mine appear to be reclaimed?

Yes

Part VI Photos



Photo 1

Mine Site #225



Photo 2

Mine Site #225 - Adit



Photo 3

Mine Site #225 - Adit



Photo 4

Mine Site #225 - Shelter



Photo 5

Mine Site #225



Photo 6

Mine Site #225

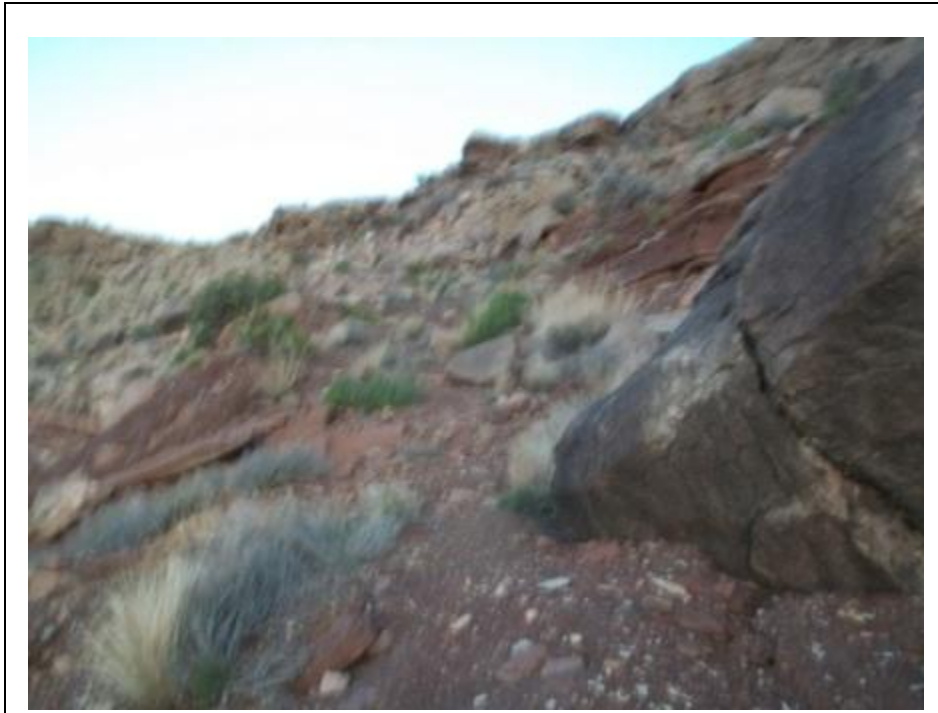


Photo 7

Mine Site #225

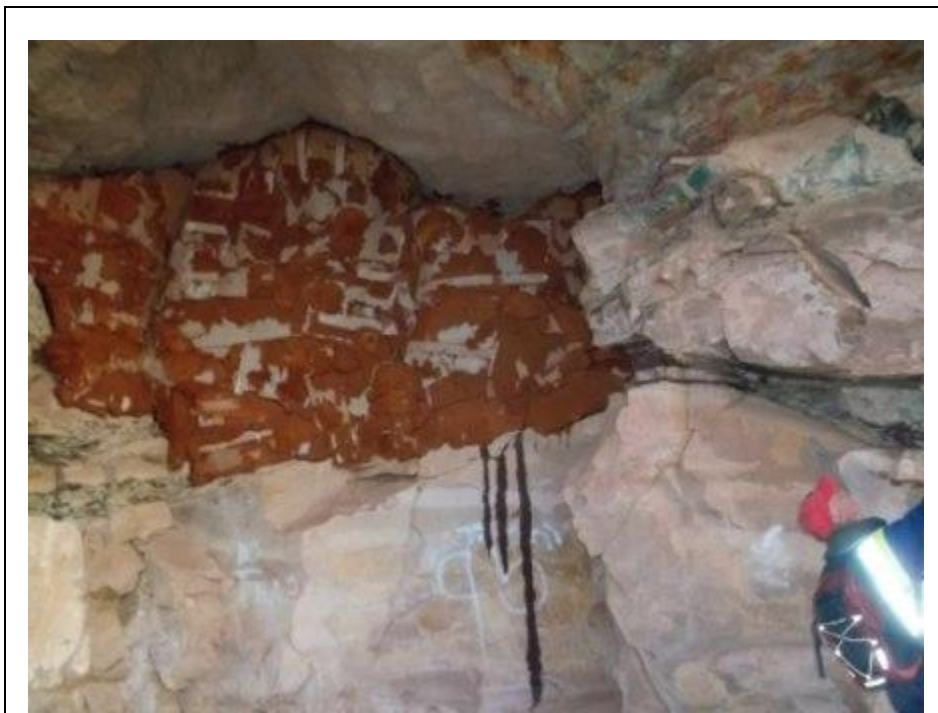


Photo 8

Mine Site #225 - Adit



Photo 9

Mine Site #180 - Adit



Photo 10

Mine Site #180 - Adit



Photo 11

Mine Site #180 - Adit

Part VII Contact Reports and Information

Name: Eugene Esplain

Title or official role (if any): Navajo EPA Superfund Program

Telephone number: (928) 871-7331

Address: PO Box 2946, Window Rock, AZ 86515

Information provided: Lead Regulatory Agency

Name: _____

Title or official role (if any): _____

Telephone number: _____

Address: _____

Information provided: _____

Name: _____

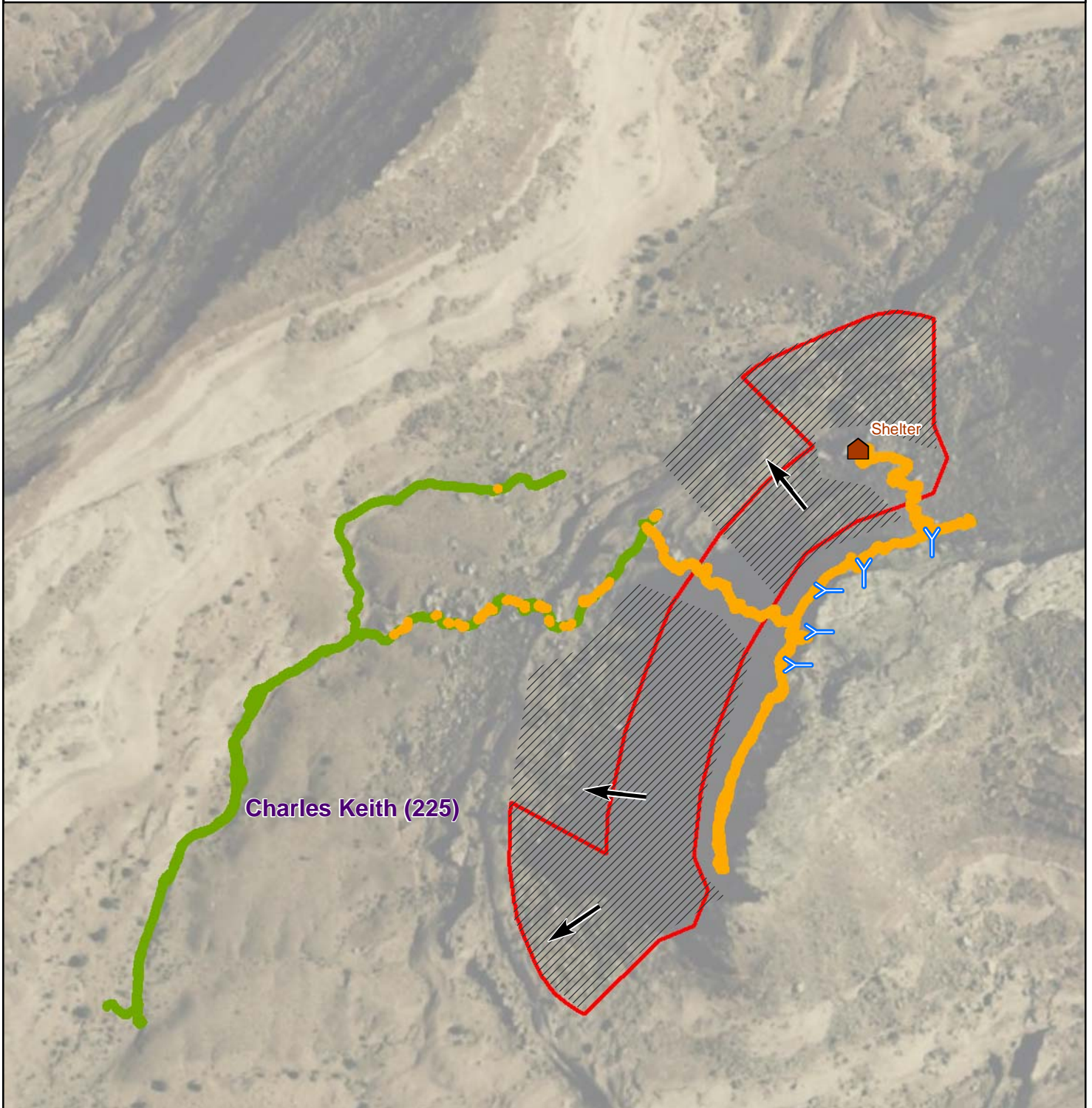
Title or official role (if any): _____

Telephone number: _____

Address: _____

Information provided: _____

**Figure 1 - Gamma Radiation Measurements, Above Two Times Background
Charles Keith (225)
Oljato Chapter, Navajo Nation**



Gamma Radiation Measurements

- < 2X Background
- > 2X Background

Measured as counts per minute (cpm)

Average background 7,189 cpm

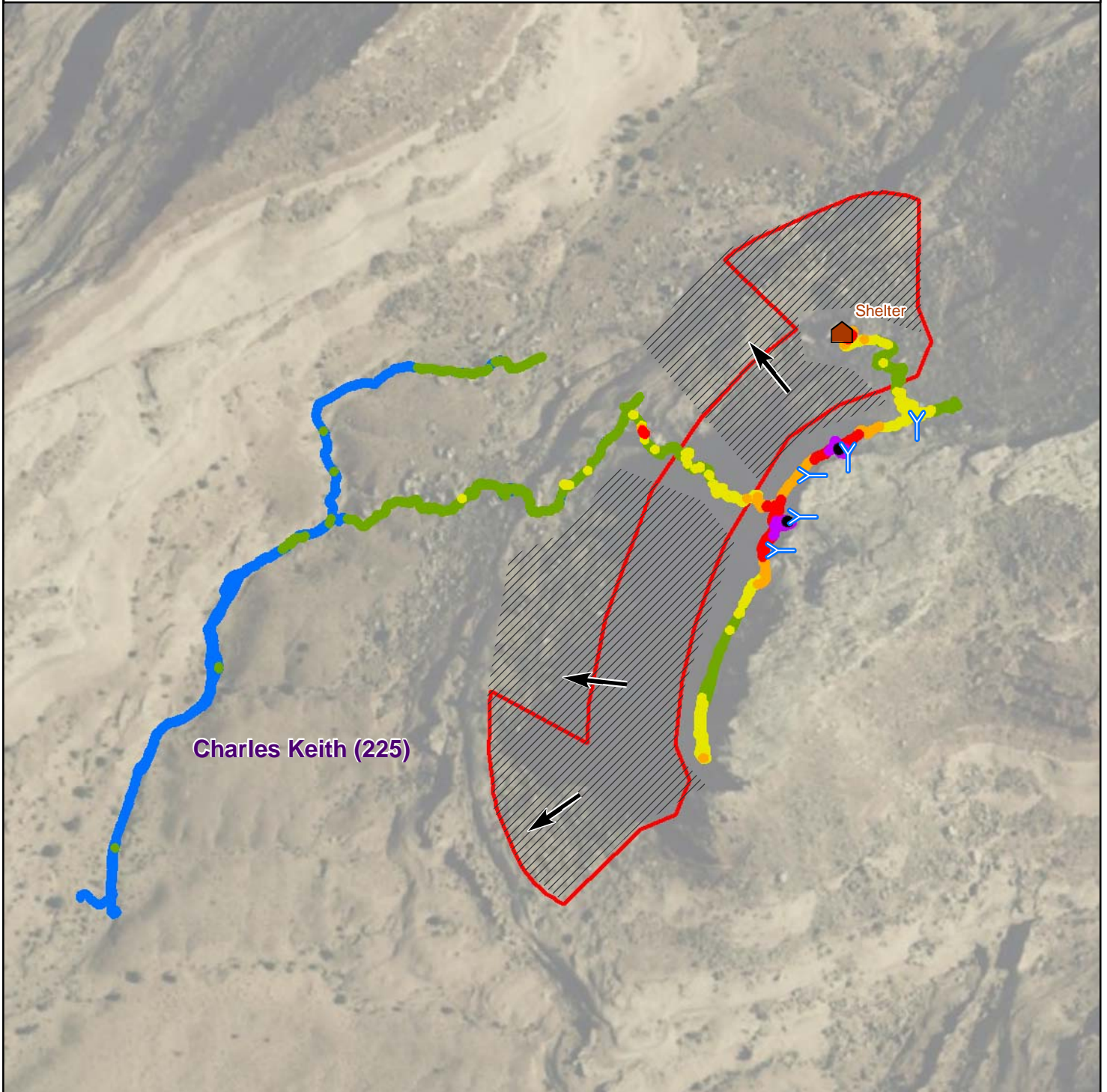
- Mine Site Boundary
- General Slope Direction
- Observed Reclamation Feature
- Observed Waste Rock
- Observed Structure
- Y Observed Adit







**Figure 2 - Gamma Radiation Measurements
Charles Keith (225)
Oljato Chapter, Navajo Nation**



Gamma Radiation Measurements

- 0 - 10,000 cpm
- 10,000 - 25,000 cpm
- 25,000 - 50,000 cpm
- 50,000 - 100,000 cpm
- 100,000 - 250,000 cpm
- 250,000 - 500,000 cpm
- 500,000 - 1,000,000 cpm

- ▭ Mine Site Boundary
- ➔ General Slope Direction
- ▨ Observed Reclamation Feature
- ▨ Observed Waste Rock
- 🏠 Observed Structure
- Observed Adit





Average background 7,189 cpm

Measured as counts per minute (cpm)