

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 and pits. 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 lands not listed in any database located on Navajo lands. Reconnaissance of any sites located on lands adjacent to Navajo lands but that are or 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, to record all immediate site information associated with the mine site and to document the recommendation and/or decision on what additional steps, if any, are needed at the site.

Black Jack No. 2 AUM Site

Navajo AUM Eastern Region

Prepared by:

Weston Solutions, Inc.

Contract: W91238-06-F-0083

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Part I Site Identification, Location and Status

Site Names and ID numbers as applicable

Mine ID: 319

Map ID: E32

CERCLIS: NNN 000 908 700

NAMLRP: NOT ASSIGNED

New Mexico Mining and Mineral Division ID: NM0042

New Mexico Bureau of Geology and Mineral Resources: NNMK0016

Local name / Aliases: Black Jack #2, UNC

Chapter and local area: Smith Lake Chapter

Lat/Long: 35.532370817 N / -108.254358782 W

Nearby road and highway: BIA 1491 (Wolf Canyon Rd) BIA 49 **Local Post Office:** Thoreau, NM

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

- Tribal Trust Land**
- Tribal Fee Land**
- Allotment**
- Fee land**
- Public lands**
- Private**
- Bureau of Land Mgmt**
- State**

Ownership and contact information:

The mine site property is classified as Indian Allotment land

Part II Site Observations

Observed Structures: list number of and describe human habitation status of structures at the following distances from mine:

0 to 200 feet: None **200 feet to 0.25 mile:** None

Observed Public or commercial structure: list and describe all schools, clinics, Chapter Houses, places of business and any other structure used by members of the community at the following distances:

0 to 200 feet: None **200 feet to 0.25 mile:** None

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

None

Observed water sources: list the number and type of wells and surface water sources that are potentially used for human consumption at the following distances from the mine:

0 to 0.25 miles: None **0.25 miles to 4 miles:** DWR 16T 519 livestock well

Sensitive environments: note and describe 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: include information from interviews with Chapter officials and residents.

Homestake Mining Company of California may have some involvement with the mine.

Note information on mine ownership, period of operation, and type of mining operation.

The Black Jack No. 2 mine consists of a surface area of 55,538.51 square meters with approximately 114,893 square meters of underground workings. Lance Corp operated a well at the mine site. Any historical information pertaining to mining operations and historical ownership of the mine site appeared to be unclear.

Part III Type, number and reclamation status of mine features

Provide description and reclamation 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 reclamation caps.

Reclamation status of the mine sites are currently unknown. No visible signs of reclamation were observed. One large structure remains on site. An subsided area was fenced off and may be a former adit. No waste piles or other mine features were observed during the site visit. Evidence of flooding was observed at the site.

Part IV Summary of radiological readings**Background Locations**

#1 19,743 cpm

#2 20,412 cpm

#3 17,877 cpm

Mine site: Black Jack No. 2

- See Figures 1 and 2

Nearby Structure Perimeter – None**Describe any other radiological measurements:**

A total of 3,593 gamma radiation measurements were collected from the mine site, ranging from 11,731 cpm to 904,592 cpm. The measurements are represented in Figures 1 and 2.

Part V Site sketch of all mine features and readings, including locations of all structures, sources of drinking water and any other important features and radiological readings.

Presented in Figures 1 and 2

Part VI Response Action Summary

Site Name(s): Black Jack No. 2 **Chapter:** Smith Lake

Decision Criteria

Is there an unreclaimed waste pile at the site? Yes

At what distance from the waste pile is the nearest residential structure located?

At what distances from the waste pile are there potential drinking water sources?

A domestic well is located 1.3 miles to the south east. DWR well T16-509 is a livestock well located 0.5 miles to the east, however the well is posted as non-potable water. Drinking water for the residences in the area is piped in.

Is there a reclamation cap or sealed adit in place at the site? No indication of a cap. Possibly one or two sealed adits, one subsidence area was fenced off.

Is the cap/seal functionally intact? N/A

Is the cap/seal sufficiently degraded to create a concern about releases? N/A

At what distance from the cap/seal is the nearest domestic structure located? N/A

At what distance from the cap/seal is the nearest domestic drinking water source? N/A

Summary of emergency response factors

A domestic well is located 1.3 miles to the south east. DWR well T16-509 is a livestock well located 0.5 miles to the east, however the well is posted as non-potable water.

Summary hazard ranking system factors

None

Summary of reclamation factors

No known reclamation

Part VII Photos



Photo 2. Black Jack No.2 Mine site, small mounds of dirt, towards the southwest



Photo 5. Black Jack No.2 Mine site, fenced subsidence area and possible adit.



Photo 6. Black Jack No.2 Mine site, subsidence area.

Part VIII Contacts Reports and Information

Name: Alan Cox

Title or official role (if any) Project Manager for Homestake Mining Company of California

Telephone number: (505) 287-4456

Information provided: Indicated that Homestake Mine may have some involvement with the operation of Black Jack mines

Name

Title or official role (if any)

Telephone number:

Information provided

Name Stanley Edison

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

Address PO Box 2946, Window Rock, AZ 86515

Telephone number (928) 871-6861

Information provided General Background and Contact/Access Information

Name Ms George Padilla

Title or official role (if any) Regional Environmental Scientist, BIA, Navajo Nation

Telephone number (505) 863-8434

Address PO Box 1060, Gallup, NM 87305

Legend

Gamma Radiation Measurements

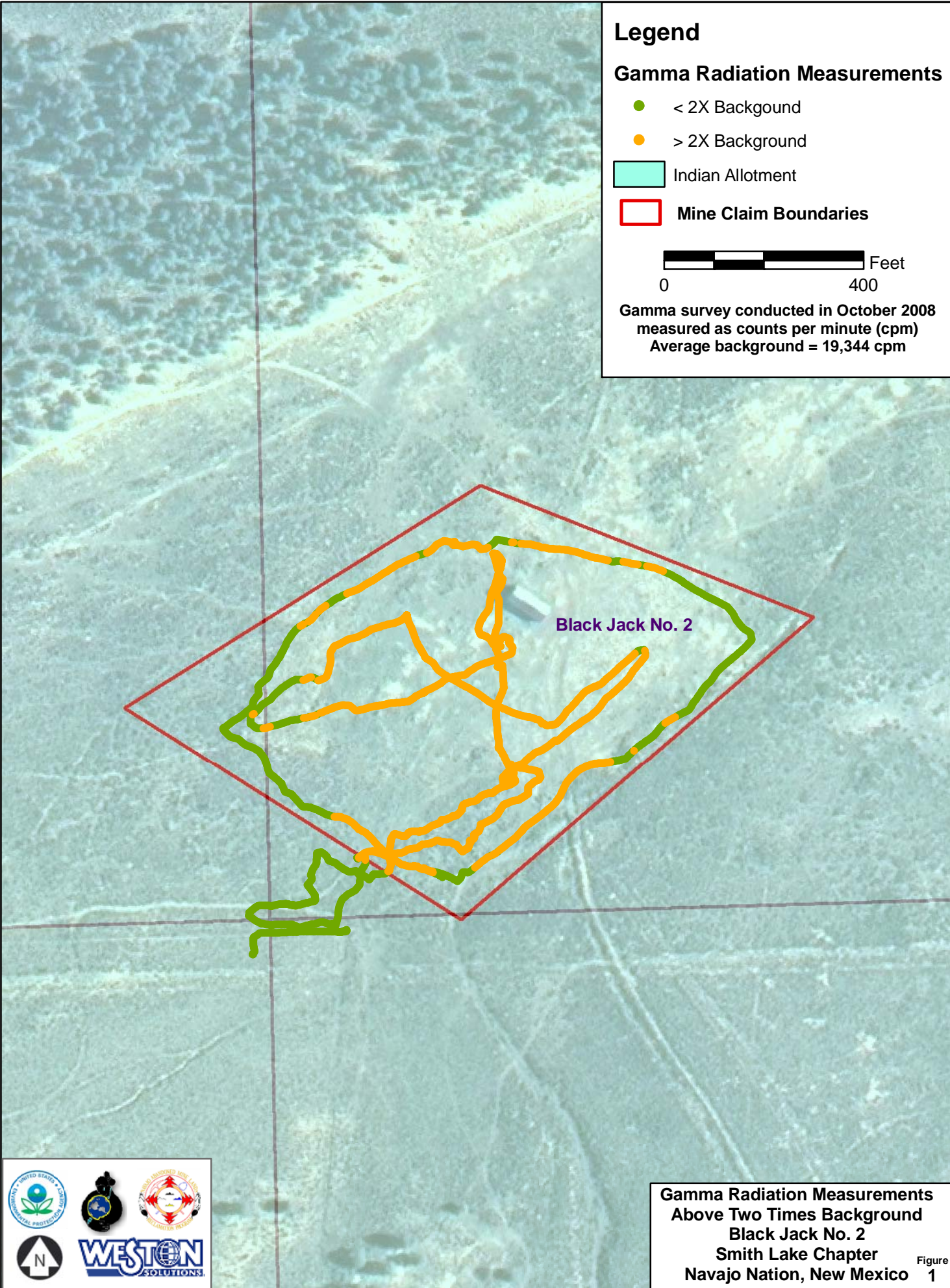
- < 2X Background
- > 2X Background

Indian Allotment

Mine Claim Boundaries



Gamma survey conducted in October 2008
measured as counts per minute (cpm)
Average background = 19,344 cpm



**Gamma Radiation Measurements
Above Two Times Background
Black Jack No. 2
Smith Lake Chapter
Navajo Nation, New Mexico** Figure 1

Legend

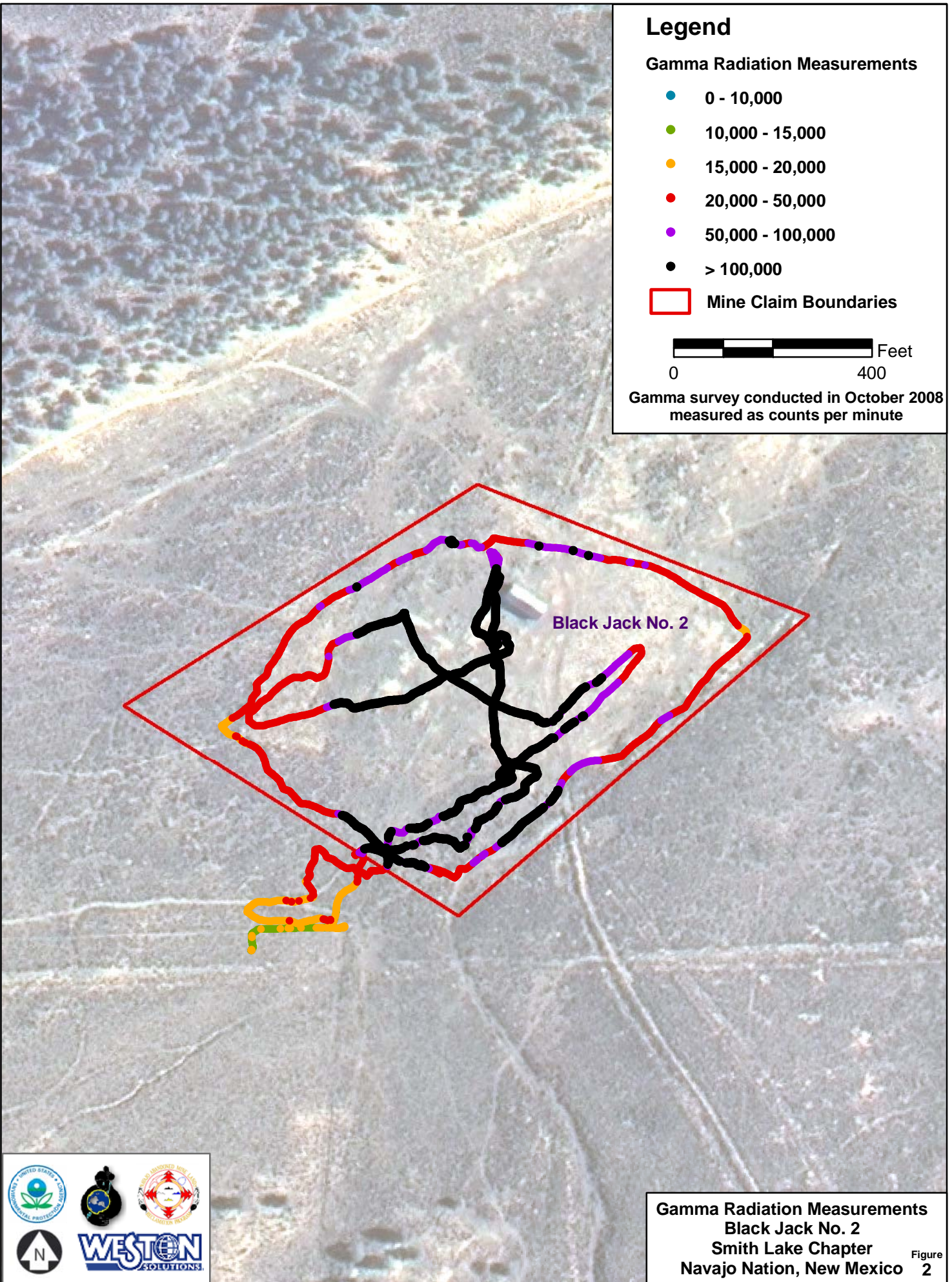
Gamma Radiation Measurements

- 0 - 10,000
- 10,000 - 15,000
- 15,000 - 20,000
- 20,000 - 50,000
- 50,000 - 100,000
- > 100,000

□ Mine Claim Boundaries



Gamma survey conducted in October 2008
measured as counts per minute



Gamma Radiation Measurements
Black Jack No. 2
Smith Lake Chapter
Navajo Nation, New Mexico

Figure 2