

# 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.*

## **Ruby No. 1 AUM Site**

### **Navajo AUM Eastern Region**

**Prepared by:**

**Weston Solutions, Inc.**

**Contract: W91238-06-F-0083**

**12767.063.496.1111**

**May 2009**

**Part I Site Identification, Location and Status**

**Site Names and ID numbers as applicable**

**Mine ID:** 321

**Map ID:** E34

**CERCLIS:** NNN 000 908 736

**NAMLRP:** NOT ASSIGNED

**New Mexico Mining and Mineral Division ID:** NM0067

**New Mexico Bureau of Geology and Mineral Resources:** NMMK-0145, -0146

**Local name / Aliases:** Section 21, Ruby No. 2, Ruby No. 1 and 2 decline, Ruby No. 2 orebody

**Chapter and local area:** Smith Lake Chapter

**Lat/Long:** 35.5194714259 N / -108.22297769 W

**Nearby road and highway:** BIA 491 (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 Tribal Trust 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:**

**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 6T 519 livestock well

**Observed 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.**

Marie Yapany has a residence located less than ¼ mile from the mine. She was employed there with some of her relatives in the late 1970s and early 1980s. She had acquired a steel shed, portable office, tarps and lumber from the former mine.

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

The Ruby No. 1 mine consists of a surface area of 25,964.31 square meters with approximately 226,319 square meters of underground workings. Western Nuclear Company operated two wells in the vicinity of the site. Homestake Mining Company of California may have had some involvement with the mine. Any other 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 site is currently unknown. It appears a thin layer of cover soil may have been placed over waste rock. A concrete slab is located at the eastern end of the site and one adit was observed along the southern boundary of the mine. A vent was located 800 feet south east from the Yapany residence and has been filled in with trash. Other vents are reported to be located in the vicinity of the mine property. No other mine features were observed during the site visit.

### **Part IV Summary of radiological readings**

#### **Background Locations**

#1 17,406 cpm

#2 17,123 cpm

**Mine site:** Ruby No. 1

- See Figures 1 and 2

#### **Nearby Structure Perimeter**

Gamma radiation measurements were collected from materials and buildings acquired from the mine that located at the Yapany property ranged from 11,000 to 14,000 cpm.

#### **Describe any other radiological measurements:**

A total of 2,579 gamma radiation measurements were collected from mine sites, ranging from 13,612 cpm to 102,826 cpm. The measurements are represented in Figures 1 and 2.

Gamma radiation measurements collected at the trash filled vent were approximately 27,000 cpm.

**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):** Ruby No. 1

**Chapter:** Smith Lake

**Decision Criteria**

**Is there an unreclaimed waste pile at the site?** No

**At what distance from the waste pile is the nearest residential structure located?** N/A

**At what distances from the waste pile are there potential drinking water sources?** N/A

**Is there a reclamation cap or sealed adit in place at the site?** Yes

**Is the cap/seal functionally intact?** Erosion of the cap was evident in the northern slope of the mine.

**Is the cap/seal sufficiently degraded to create a concern about releases?** No

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

**At what distance from the cap/seal is the nearest domestic drinking water source?** A livestock well (WR 16T 519) is located approximately 0.5 mile from the mine and is posted as non potable water. The nearest domestic well is located 1.3 miles from the mine.

**Summary of emergency response factors**

None

**Summary hazard ranking system factors**

None

**Summary of reclamation factors**

No known reclamation

**Part VII      Photos**



Photo 1. Ruby 1 Mine site, towards the west



Photo 2. Ruby 1 Mine site, concrete slab on eastern portion of the site



Photo 3. Ruby 1 Mine site, adit located on southern hillside



Photo 4. Ruby 1 Mine site, interior view of adit





**Part VIII      Contacts Reports and Information**

Name

Title or official role (if any)

Telephone number:

Information provided:

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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 Ruby mines

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Name Stanley Edison

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

Address PO Box 2946, Window Rock, AZ 86515

Information provided General Background and Contact/Access Information

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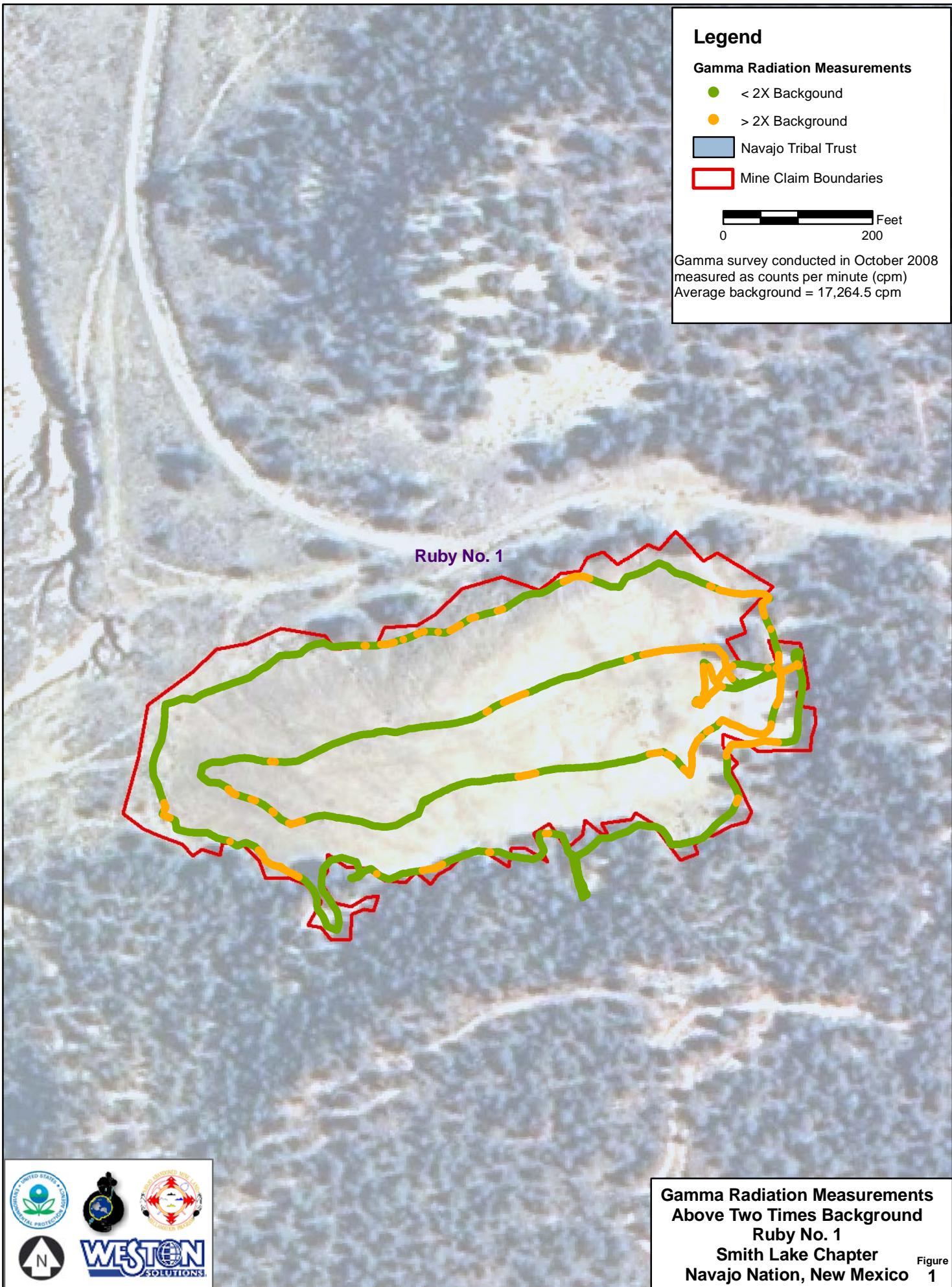
Name \_\_\_\_\_

Title or official role (if any) \_\_\_\_\_

Telephone number \_\_\_\_\_

Information provided \_\_\_\_\_

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**Legend**

**Gamma Radiation Measurements**

- < 2X Background
- > 2X Background
- Navajo Tribal Trust
- Mine Claim Boundaries

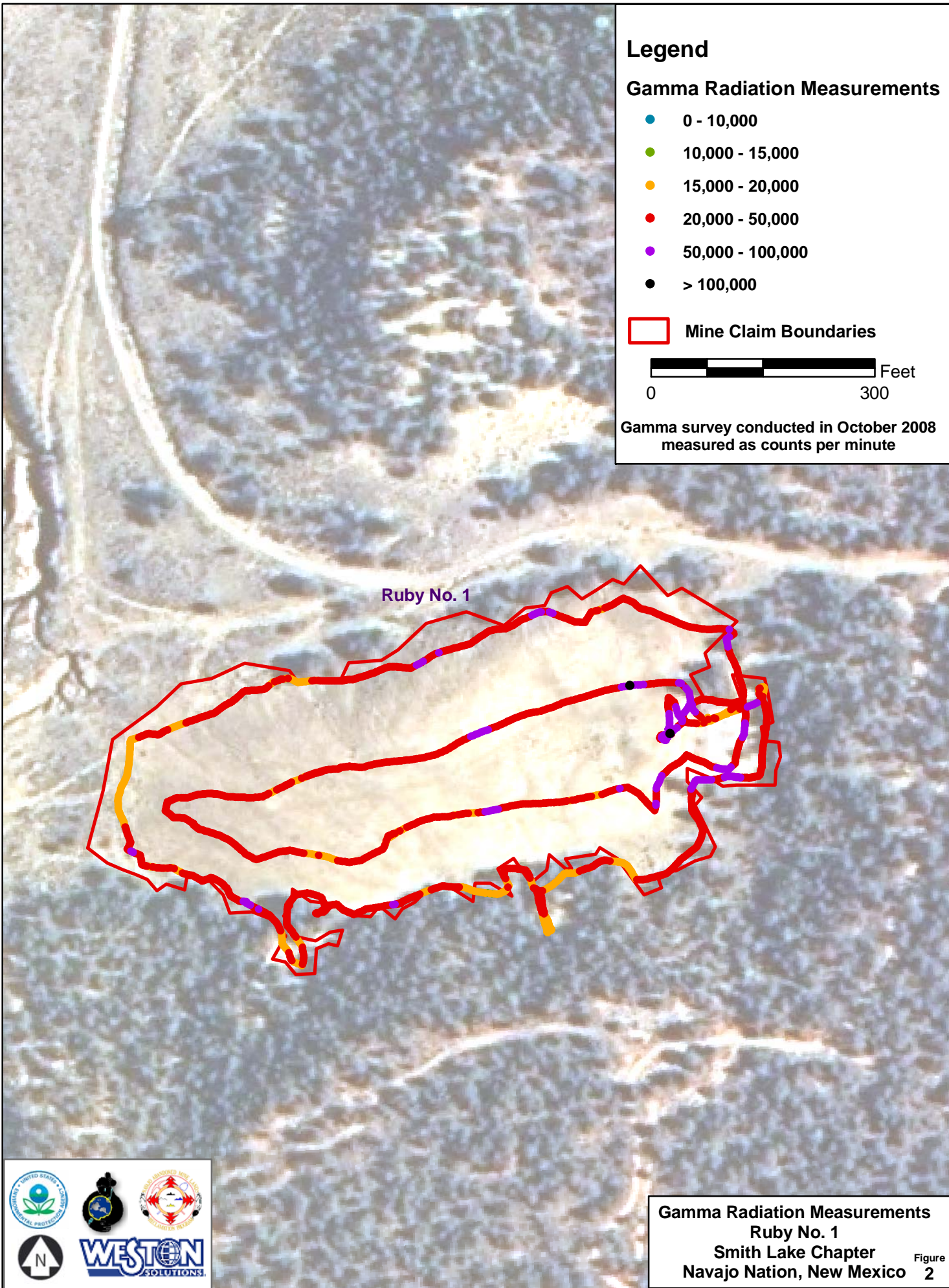
0  Feet  
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Gamma survey conducted in October 2008  
measured as counts per minute (cpm)  
Average background = 17,264.5 cpm

Ruby No. 1

**Gamma Radiation Measurements  
Above Two Times Background  
Ruby No. 1  
Smith Lake Chapter  
Navajo Nation, New Mexico**





**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

Ruby No. 1

**Gamma Radiation Measurements**  
**Ruby No. 1**  
**Smith Lake Chapter**  
**Navajo Nation, New Mexico**

Figure 2

