Abandoned Uranium Mine Site Assessment for the Blue Star Site (NM0129)

FINAL REPORT

Prepared For:

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February 23, 2010

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1.0 INTRODUCTION

INTERA Incorporated (INTERA) has prepared this Abandoned Uranium Mine (AUM) Site Assessment Report for the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) in compliance with the Professional Service Agreement dated November 2, 2009. INTERA visited the Blue Star Mine Site (AUM Site), MMD ID: NM0129, on January 28, 2010.

1.1 PREVIOUSLY KNOWN INFORMATION ABOUT THE SITE

The AUM Site was mined in 1955 and is located in the Bishop Cap Mining District. Uranium at the AUM Site reportedly occurs in an epithermal vein in association with fluorite, barite, calcite, pyrite, and galena hosted by the Silurian Fusselman Dolomite. This AUM Site produced a total of 14 pounds of U_3O_8 ore at an average production grade of 0.06 percent according to McLemore and Chenoweth (1989). However, Anderson (1980) reports that there is no record of uranium production at the Blue Star Mine. The AUM Site did produce about 12 tons of fluorite, some of which is moderately radioactive according to sources cited in the Anderson report (McLemore and Chenoweth, 1989, Anderson, 1980).

The Anderson report describes two adits, several trenches, and drilling activity at this AUM Site. The drilling activity reportedly occurred during 1969 and 1970. No radiation readings were taken during the Anderson survey at this site due to the lack of a scintillometer (Anderson, 1980).

1.2 SITE LOCATION AND DIRECTIONS

The Blue Star Mine Site is located on Bureau of Land Management (BLM) land in the northwest quarter of Section 25, Township 24 South, Range 3 East. This AUM Site is located in Doña Ana County and is approximately 5 miles southwest of the town of Mesquite in the southern Organ Mountains/northern Franklin Mountains (please see Figure 1).

To reach the AUM Site from Albuquerque, drive approximately 240 miles south on Interstate 25 until it merges with Interstate 10. Continue south on Interstate 10 another 9.4 miles, then take Exit 155 and turn left, crossing the freeway. Continue northeast on County Road B19 for 2.7 miles. County Road B19 will turn into High Valley Road when you enter the town of Vado. Continue along High Valley Road for 0.3 miles. It will take a sharp turn to the left and become Santana Road. Follow Santana Road as it becomes a dirt road. Continue on Santana Road for 1.5 miles. After 1.5 miles, turn left onto an unnamed dirt road heading north. Drive along this road and turn right after 0.4 miles. This road will take you into a mountain valley. Drive until the valley forks, about 1.5 miles. The site is in the right hand (eastern) valley, on the west slope of the central ridge. This route is passable unless it has rained or snowed recently. If rain or snow is a concern, exit Interstate 10 at Exit 151, about 3.75 miles north of Exit 155. Turn left, cross the freeway, and continue east on County Road B059 for about 3.5 miles, passing a large gravel pit on your right. After 3.5 miles, turn right on a dirt road and head south for another 2.5 miles. Then, turn left onto a road leading into a mountain valley. Drive until the valley forks, about 1.1 miles. The site is in the right hand (eastern) valley, on the west slope of the central ridge. Although this route is longer, the roads are more solid and fairly well maintained.

1.3 SITE GEOLOGY

The AUM Site is located along the Blue Star Fault, a secondary extensional feature in the southern Organ/northern Franklin mountains, which formed in response to late Tertiary rifting. Uraniferous fluorite-barite-galena veins along the fault zone may have been deposited by hydrothermal fluids related to the underlying Organ batholith, a prominent mid-Tertiary plutonic feature that intruded along the eastern boundary of the Rio Grande rift during the early stages of extension (Seager, 1981). Prospecting at the AUM Site was primarily from these veins where they transect and replace the Silurian-age Fusselman Dolomite, seen locally as massive, medium- to dark gray-weathering, very cherty, coarse-grained limestone (Seager, 1981). The main prospected vein trends E-W and dips 55° north (Anderson, 1980). It is 100 ft long and 15 ft thick at the surface, but thins to less than 4feet at a depth of 45 ft (Anderson, 1980).

1.4 SITE HYDROGEOLOGY

The AUM Site is located on a ridge between two valleys. These valleys drain into the Rio Grande, which is about 8 miles to the southwest.

The AUM Site is located on the southeastern edge of the Mesilla Basin in the Lower Rio Grande Basin. The groundwater in the Mesilla Basin is located in the Santa Fe Group basin-fill sediments and Rio Grande alluvium (Terracon, 1999). Groundwater in the vicinity of the AUM Site flows to the west-southwest, towards the Rio Grande Valley.

1.5 REGIONAL TOPOGRAPHY AND TERRAIN

The AUM Site can be found on the Bishop Cap Quadrangle 7.5 minute United States Geological Survey topographic map at an elevation of approximately 4600-5000 feet above mean sea level (please see Figure 2). The Site is due northeast of and below Bishop Cap, a prominent peak over 5400 feet high. Bishop Cap and the Blue Star Site are considered part of the northern Franklin Mountains and consist of tilted Paleozoic sediments (Julyan, 2006). The topography in this area is comprised of small, steep-sided mountains and alluvial fans. Figure 3 shows an aerial photograph of the terrain surrounding the AUM Site.

2.0 MINE FEATURES

The mine features described below are based on the features provided to INTERA by MMD in the GIS Data Dictionary (MMD, 2009). INTERA marked the locations of the AUM Site features using a Trimble Global Positioning System (GPS) and entered details about the features into the GPS using the MMD data dictionary. The AUM Site consists of five adits, nine cuts, thirteen piles, three pits, one shaft, and two roads. Please see the Photo Log in Appendix A for photos, Table 1 for a list of all AUM Site features, and Figures 4a and 4b for the locations of the AUM Site features.

2.1 MINE SHAFTS, ADITS, AND DECLINES

Five adits and a shaft were found at the Blue Star site. These ranged from at least 50 feet deep (Adit-1) to 3 feet deep (Adit-3). Extensive mineralization was seen at the entrances of these adits, but no anomalous radiation was detected. Adit-1 and Adit-2 appeared to be similar to adits described in the Anderson report based on their estimated depth and trend. One shaft was also found (Shaft-1); it is approximately 8 feet deep.

2.2 MINING AND EXPLORATION PITS AND OPEN CUTS

Nine open cuts and three pits were found on site. Eight of the nine cuts were on an east facing hillslope, above and to the north of the adits. These open cuts and pits may be the prospects marked on the Bishop Cap 7.5 minute United States Geological Survey topographic map. However, the highest cut on the hillside (Cutply-4) was much larger (about 50 feet high, 50 feet wide, over 100 feet long) and had been dug into the hillside.

2.3 WASTE AND ORE PILES AND DISTURBANCES

Thirteen waste piles were found on site. Each pile was immediately adjacent to an adit, open cut, shaft, or pit. Some waste piles near the drainage below the site may have been used for erosion control. No other disturbances were found.

2.4 MINING RELATED BUILDINGS AND FOUNDATIONS

No mining related buildings and foundations were evident at the AUM Site.

2.5 OTHER MINE FEATURES

A mine road (Rd-1) exists at the northern end of the site in association with Cutply-4. Another mine road (Rd-2) runs from the southern end of the site northward, along the drainage. This may be the drill road mentioned in the Anderson report.

A claim marker (Claim-1) consisting of a small cement pad inscribed with “BC-9 -908” was found onsite.

2.6 BOREHOLES

No boreholes were evident at the AUM Site.

2.7 RECLAMATION ACTIVITIES

No evidence of ongoing or past reclamation was found at or near the AUM Site.

3.0 ARCHEOLOGICAL SITES

No apparent archeological sites were identified at or near the AUM Site.

4.0 SITE GAMMA RADIATION READINGS

The background gamma radiation readings at the AUM Site were measured approximately 250 ft from the southern end of the site. The background gamma level was measured at 6 µR/hr (microroentgens per hour) at the ground surface and 6 µR/hr at 4 feet above the ground surface. Please see Table 2 for all of the gamma radiation readings taken at the AUM Site.

The gamma radiation readings at the AUM Site did not vary significantly above background levels except at Cutply-4, where a reading of 20 µR/hr at contact was recorded. However, this reading may be due to the presence of a shale layer rather than any uraniferous materials. Please see Table 2 for details.

5.0 CURRENT LAND USES

5.1 HUMAN ACTIVITY AND RECREATIONAL SITE USE

Tire tracks and footprints were found on the AUM Site. Bullet casings were also found near the site. The site is part of the Organ Mountains Recreation area, and Bishop Cap is a known hiking destination (Julyan, 2006).

5.2 NEARBY RESIDENTIAL, COMMERCIAL AND INDUSTRIAL STRUCTURES

There are no residential or commercial structures within a 1-mile radius of the AUM Site.

5.3 NEARBY DOMESTIC WELLS

A well designated LRG-13029 lies approximately 0.75 miles southwest of the AUM Site (See Figures 2 and 3).

5.4 EVIDENCE OF GRAZING OR AGRICULTURE

Cow prints and cow pies indicate that this area sees some ranching activity.

5.5 EVIDENCE OF WILDLIFE

Coyotes were heard while on site, and deer droppings were found.

6.0 VEGETATION

The Blue Star Site is located between an ecotone of Chihuahuan Desert Scrub and Desert Grassland. The scrubland site does not appear to be dominated by any particular shrub species, but is a diverse mix of many shrub species, including creosote and mesquite. The community of cacti is diverse and includes prickly pear cacti, ocotillo, hedgehog cacti, cholla, and several species of yucca and sotol. Snakeweed was also observed at the AUM Site. Grass species collected at the AUM Site included chihuahuan lovegrass and fluffgrass. There appears to be a

healthy mixture of grass species. Forbs collected at the AUM Site included globemallow and desertholly. No evidence of noxious weeds was observed onsite.

7.0 POTENTIAL OFFSITE IMPACTS

7.1 EROSION

A pile of waste rock (pileridge-1) is located inside the drainage and may have been constructed to protect the mine road (Rd-2) from erosion. However, rocks from this waste pile do not appear to be migrating further down the drainage.

7.2 ENVIRONMENTAL IMPACTS

There is no evidence of soil staining from chemicals potentially brought to the AUM Site, or from constituents present in the ore or waste rock. Gamma radiation levels at the AUM Site are not significantly above background level.

8.0 REFERENCES

Anderson, Orin J., 1980. Abandoned or Inactive Uranium Mines in New Mexico. New Mexico Bureau of Mines and Mineral Resources Open File Report 148.

Julyan, Robert, 2006. The Mountains of New Mexico. University of New Mexico Press.

McLemore, Virginia T. and William L. Chenoweth, 1989. Uranium Resources in New Mexico. New Mexico Bureau of Mines & Mineral Resources, Resource Map 18.

Seager, William R., 1981. Geology of Organ Mountains and southern San Andres Mountains, New Mexico Bureau of Mines and Mineral Resources Memoir 36.

Terracon, Zia Engineering & Environmental Consultants, Inc., John Shomaker & Associates, Inc., Livingston Associates, LLC, Inc., and Sites Southwest, 1999. The New Mexico Lower Rio Grande Regional Water Plan. Prepared for: The Lower Rio Grande Water Users Organization.

TABLES

Table 1
Site Features

Blue Star – NM0129
Abandoned Uranium Mine Assessments

Feature Name	On Site?	Type	Material	Depth or Length (ft)	Width or Diameter (ft)	Height (ft)	Open?	Closure Type	PhotoID	Associated Feature	Notes
Access-1	Yes	Access	Dirt Nonmaintained	--	--	--	--	--	--	--	--
Adit-1	Yes	--	--	0	5	7	Yes	None	27	Timber	tunnel into hillside
Adit-2	Yes	--	--	50	6	6	Yes	None	34	Timber	--
Adit-3	Yes	--	--	3	4	4	Yes	None	35	None	--
Adit-4	Yes	--	--	7	5	7	Yes	None	37	None	--
Adit-5	Yes	--	--	10	5	7	Yes	None	43	None	--
Claim-1	Yes	--	--	1	1	0	--	--	66,67	--	cement with inscribed text
CutLn-1	Yes	--	--	5	7	--	--	--	40,41	--	--
CutLn-2	Yes	--	--	5	5	--	--	--	46	--	--
CutLn-3	Yes	--	--	4	4	--	--	--	51	--	--
CutLn-4	Yes	--	--	3	5	--	--	--	54	--	--
CutLn-5	Yes	--	--	3	5	--	--	--	58	--	--
CutPly-1	Yes	--	--	5	10	--	--	--	6	--	--
CutPly-2	Yes	--	--	4	6	--	--	--	25	--	--
CutPly-3	Yes	--	--	5	6	--	--	--	42	--	--
cutply-4	Yes	--	--	0	0	--	--	--	59,60	--	--
Photo-4	Yes	--	--	--	--	--	--	--	4	--	--
Photo-5	Yes	--	--	--	--	--	--	--	5	--	--
Photo-6	Yes	--	--	--	--	--	--	--	61,62,63,64,65	--	panorama of site
PilePly-1	Yes	Waste	Rock	15	5	2	--	--	26	--	--
PilePly-2	Yes	Waste	Rock	20	15	1	--	--	29	--	--
PilePly-3	Yes	Waste	Rock	25	13	3	--	--	36	--	--
PilePly-4	Yes	Waste	Rock	20	10	1	--	--	38	--	--
PilePly-5	Yes	Waste	Rock	40	20	2	--	--	44	--	--
PilePly-6	Yes	Waste	Rock	15	10	1	--	--	50	--	--
PilePly-7	Yes	Waste	Rock	10	10	1	--	--	55	--	--
pileridge-1	Yes	--	--	--	--	2	--	--	31	--	--
pileridge-2	Yes	--	--	--	--	2	--	--	39	--	--
pileridge-3	Yes	--	--	--	--	1	--	--	45	--	--
pileridge-4	Yes	--	--	--	--	2	--	--	53	--	--

Table 1
Site Features

Blue Star – NM0129
Abandoned Uranium Mine Assessments

Feature Name	On Site?	Type	Material	Depth or Length (ft)	Width or Diameter (ft)	Height (ft)	Open?	Closure Type	PhotoID	Associated Feature	Notes
pileridge-5	Yes	--	--	--	--	1	--	--	57	--	--
Pit-1	Yes	Exploration	rock	1	--	--	--	--	7	--	prospect pit
Pit-2	Yes	Exploration	rock	1	--	--	--	--	20	--	prospect pit
Pit-3	Yes	Exploration	rock	3	--	--	--	--	22	--	prospect pit in drainage
Rd-1	Yes	Dirt	Dirt Nonmaintained	--	--	--	--	--	--	--	--
Rd-2	Yes	Dirt	Dirt Nonmaintained	--	--	--	--	--	--	--	--
Shaft-1	Yes	Vertical	--	8	7	--	Yes	Open	56	None	5x7

Notes:

-- No Information Available

Table 2
Gamma Radiation Survey Results

Blue Star-NM0129
Abandoned Uranium Mine Assessments

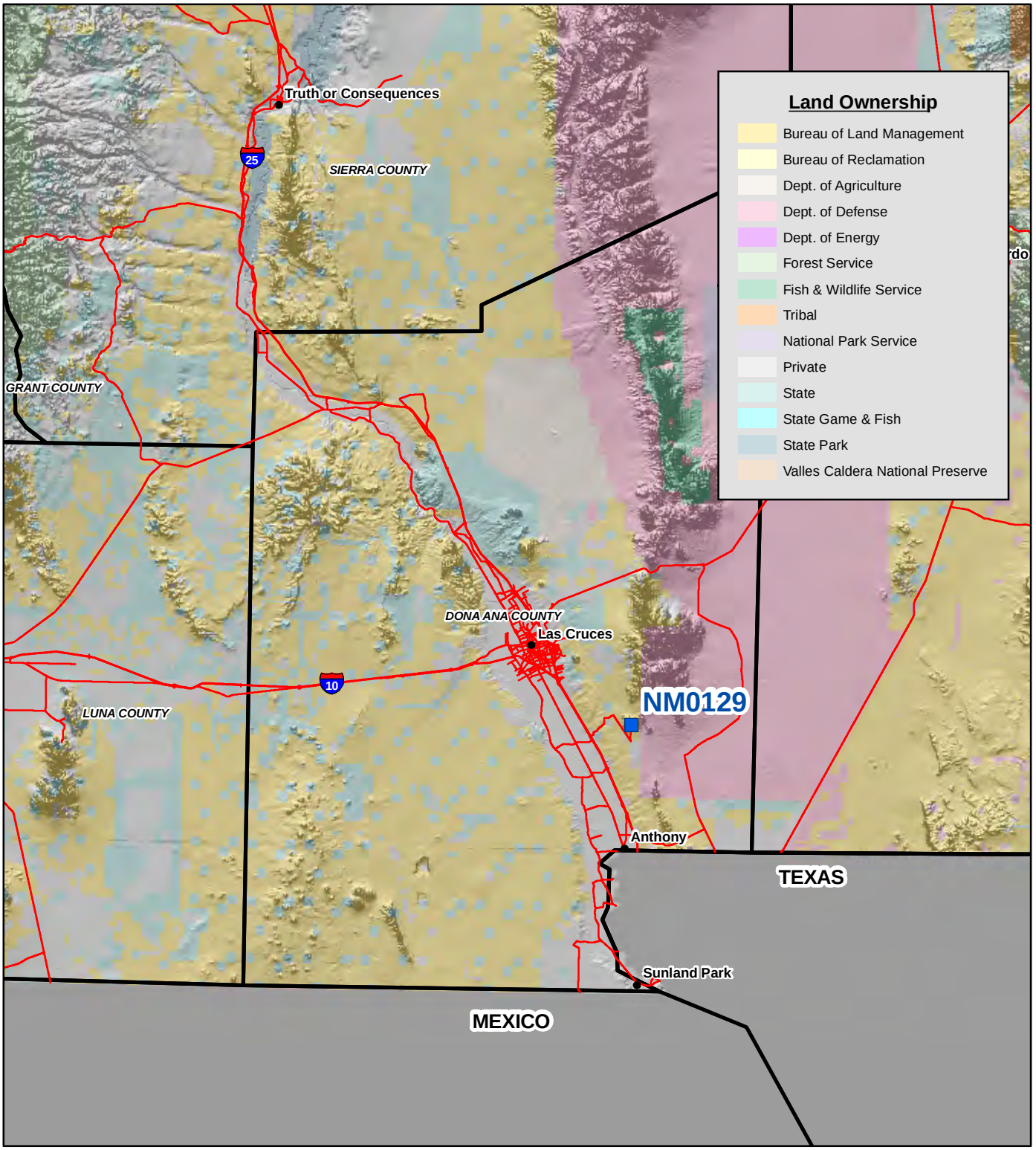
Reading ID	Associated Features	Reading at 0ft Above Ground (µR/hr)	Reading at 4ft Above Ground (µR/hr)
Rad-1		6	5
Rad-2	pit-1	3	3
Rad-3	pit-2	3	3
Rad-4	pit-3	3	4
Rad-5	pileply-1, cutply-2	4	3
Rad-6		8	6
Rad-7	pileply-2	4	4
Rad-8		3	4
Rad-9	adit-2	5	5
Rad-10	adit-3	3	3
Rad-11	pileply-3	5	4
Rad-12	adit-4	2	2
Rad-13		3	3
Rad-14	cutln-1	3	3
Rad-15	pileridge-2	3	3
Rad-16	cutply-3	4	3
Rad-17	adit-5	2	3
Rad-18	pileply-5	3	3
Rad-19	pileridge-3	3	3
Rad-20	cutln-2	3	3
Rad-21	pileply-6	3	4
Rad-22	cutln	3	3
Rad-23	pileridge-4	3	4
Rad-24		3	3
Rad-25	pileply-6,shaft-1	2	3
Rad-26	cutln-5,pileridge-5	3	4
Rad-27	cutply-4	20	16
Rad-28	cutply-4	6	7
RadBack-1		6	6

Notes:

All gamma readings at this Site were taken using a Ludlum 19 µR/Ratemeter.

µR/hr = microroentgens per hour

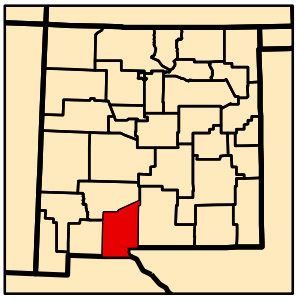
FIGURES



Map Source(s):
Ownership - BLM, 2007

0 7.5 15 30
Miles

NORTH



Legend

- AUM Location
- Road
- County Boundary

Figure 1
Site Location Map
NM0129-Blue Star
Abandoned Uranium Mine Assessment

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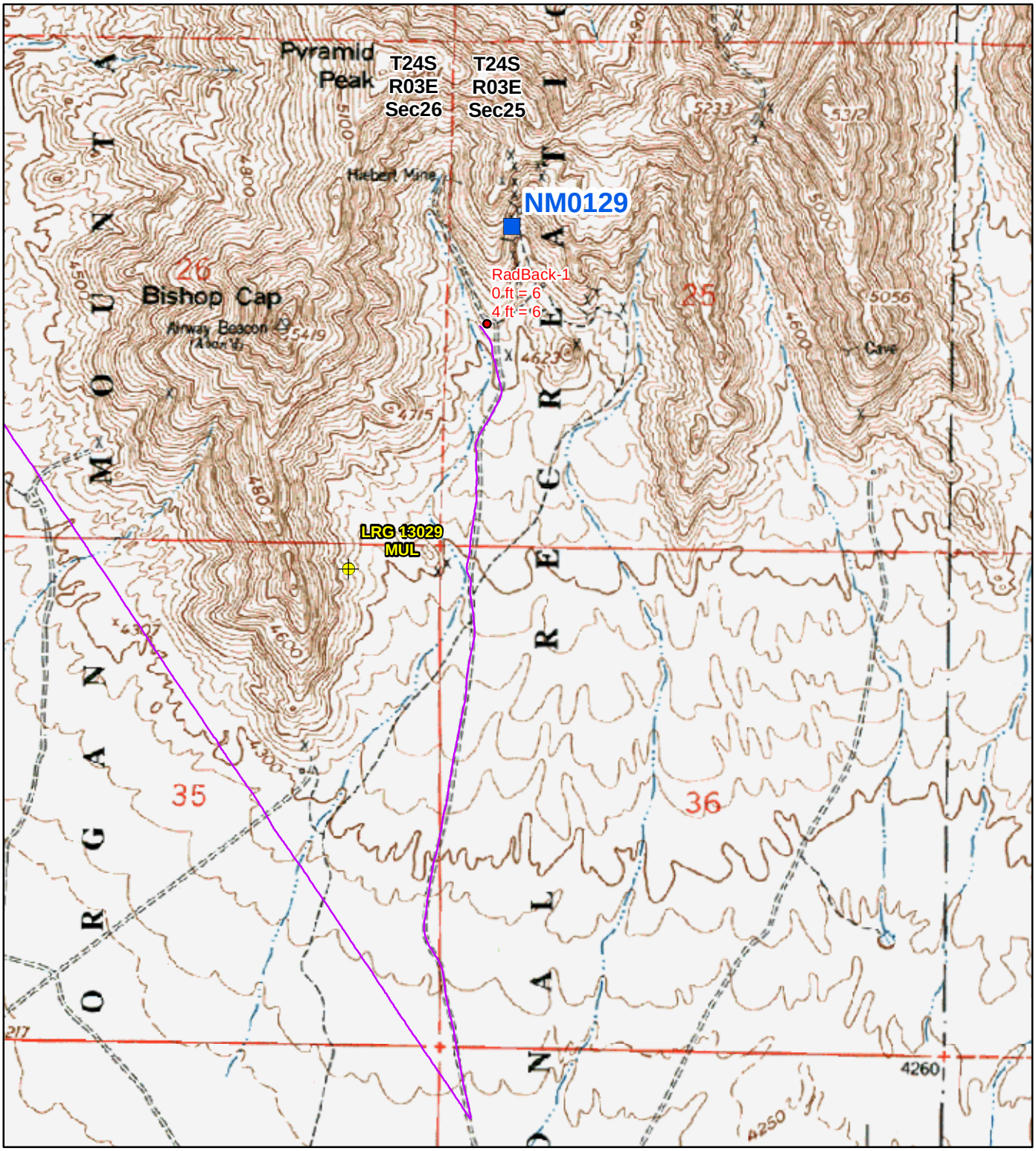

Map Source(s):
U.S. Geological Survey 7.5-Minute
Topographic Map
-Bishop Cap, 1955-1994

0 750 1,500 3,000
Feet

NORTH

Legend

- AUM Location
- Radiation Readings (µR/hr)
- Well Within 1 Mile of Site
- Access Route

Figure 2
Topographic Map
NM0129-Blue Star
Abandoned Uranium
Mine Assessment

INTERA

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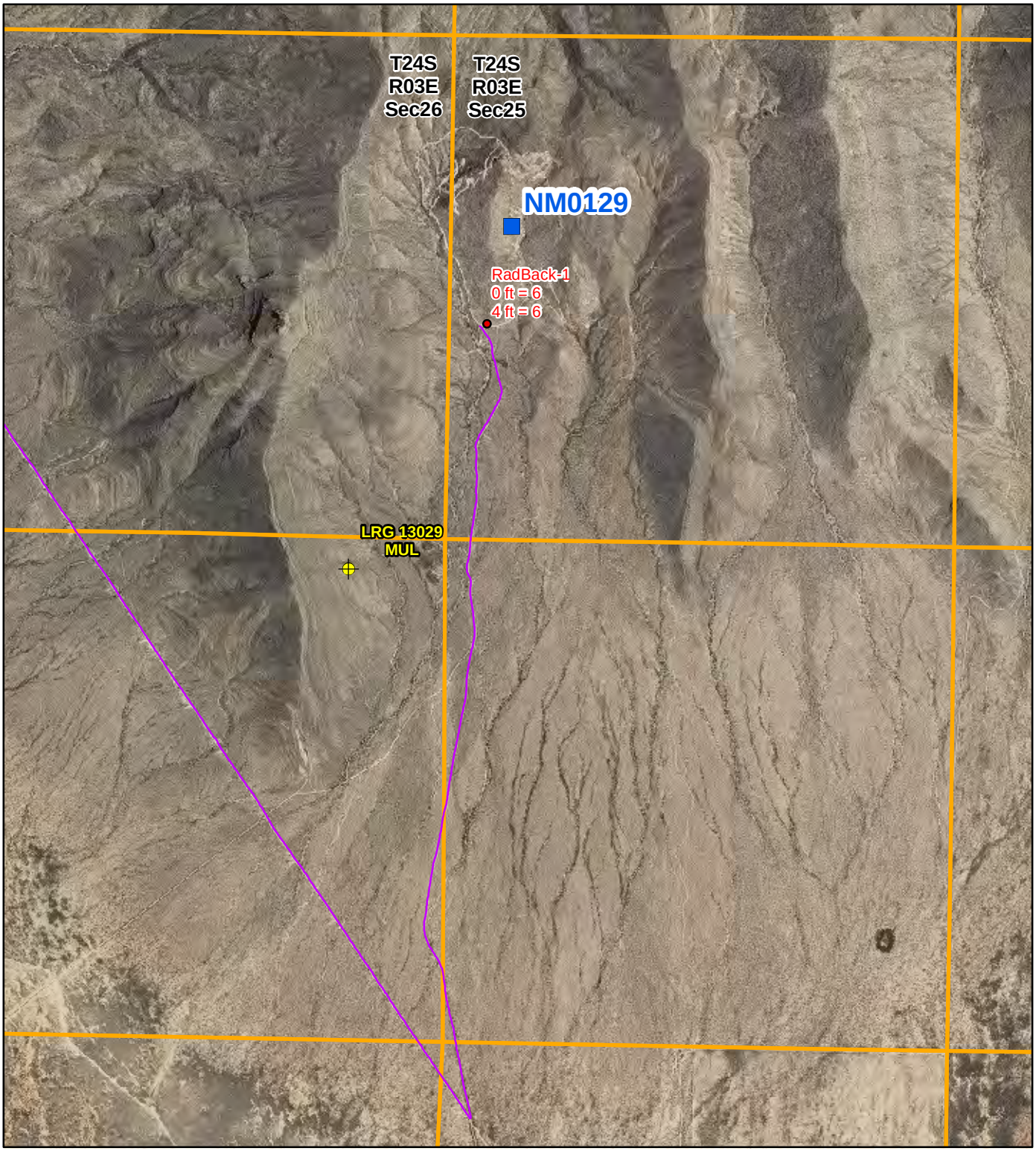

Map Source(s):
U.S. Geological Survey 7.5-Minute
DOQQ County Mosaic
-Dona Ana County, 2009

0 750 1,500 3,000
Feet

NORTH

Legend

- AUM Location
- Radiation Readings (µR/hr)
- Well Within 1 Mile of Site
- Access Route
- Section Boundary

Figure 3
Aerial Photo
NM0129-Blue Star
Abandoned Uranium Mine Assessment

INTERA

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Map Source(s):
U.S. Gelogical Survey 7.5-Minute
DOQQ County Mosaic
-Dona Ana County, 2009

0 75 150 300
Feet

NORTH

Legend

- Radiation Readings (µR/hr)
- Adit
- Claim Marker
- Shaft Location
- Photo Location
- Access Route
- Mine Road
- Open Cut
- Pile Ridge
- Open Cut Boundary
- Pile Boundary
- Pit Boundary

Figure 4a
Site Map on Aerial Photo
NM0129-Blue Star
Abandoned Uranium
Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0129-Blue_Star\GIS\Map\Close_Up_Map_CP.mxd 02/04/2010

Rad-27
0 ft = 20
4 ft = 16

Rad-28
0 ft = 6
4 ft = 7

CutPly-4

Rad-26
0 ft = 3
4 ft = 4

CutLn-5

Rd-1

Rad-25
0 ft = 2
4 ft = 3

Photo-6

Shaft-1

pileridge-5

Rad-24
0 ft = 3
4 ft = 3

PilePly-7

Rad-23
0 ft = 3
4 ft = 4

CutLn-4

Claim-1

pileridge-4

CutLn-3

Rad-22
0 ft = 3
4 ft = 3

PilePly-6

Rad-20
0 ft = 3
4 ft = 3

pileridge-3

Rad-17
0 ft = 2
4 ft = 3

CutLn-2

Rad-19
0 ft = 3
4 ft = 3

Adit-5

CutPly-3

Rad-18
0 ft = 3
4 ft = 3

Rad-16
0 ft = 4
4 ft = 3

PilePly-5

CutLn-1

Rad-15
0 ft = 3
4 ft = 3

Rad-14
0 ft = 3
4 ft = 3

pileridge-2

Rad-13
0 ft = 3
4 ft = 3

Rad-12
0 ft = 2
4 ft = 2

Adit-4

Adit-3

Adit-2

Rad-9
0 ft = 5
4 ft = 5

PilePly-4

PilePly-3

Rad-10
0 ft = 3
4 ft = 3

Adit-1

Rad-11
0 ft = 5
4 ft = 4

Rad-6
0 ft = 8
4 ft = 6

Rad-8
0 ft = 3
4 ft = 4

PilePly-2

Rad-7
0 ft = 4
4 ft = 4

pileridge-1

Pit-3

CutPly-2

PilePly-1

Rad-4
0 ft = 3
4 ft = 4

Rad-5
0 ft = 4
4 ft = 3

Rad-3
0 ft = 3
4 ft = 3

Pit-1

Pit-2

Rad-2
0 ft = 3
4 ft = 3

Rd-2

Photo-4

Photo-5

Rad-1
0 ft = 6
4 ft = 5

CutPly-1

RadBack-1
0 ft = 6
4 ft = 6

Access-1

Map Source(s):
Onwership - BLM, 2007

0 75 150 300
Feet

NORTH

Legend

- Radiation Readings (µR/hr)
- Adit
- Claim Marker
- Shaft Location
- Photo Location
- Access Route
- Mine Road
- Open Cut
- Pile Ridge
- Open Cut Boundary
- Pile Boundary
- Pit Boundary

Surface Ownership

- Bureau of Land Management

Figure 4b
Site Map with
Surface Ownership
NM0129-Blue Star
Abandoned Uranium
Mine Assessment

INTERA

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0129-Blue_Star\GIS\Map\Close_Up_Map_Ownership_CP.mxd 02/04/2010

APPENDIX A

PHOTO LOG

Note: Gaps in the numbering sequence of the photos is the result of removing photos not suitable for the report. A full set of photos are provided in the electronic deliverable.

Photo 1-AUM Site vegetation.

Photo 4-Looking north-northeast at the AUM Site.

Photo 5-Looking north-northeast at the AUM Site. This perspective is similar to Photo A in the Anderson Report.

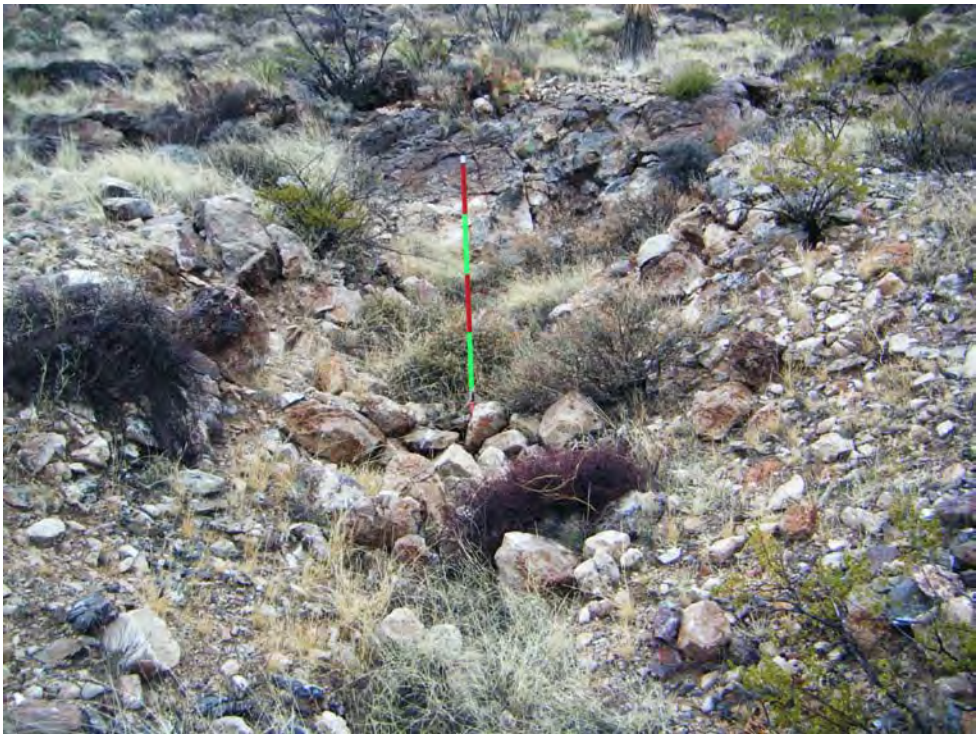

Photo 6-Looking west at Cutply-1.

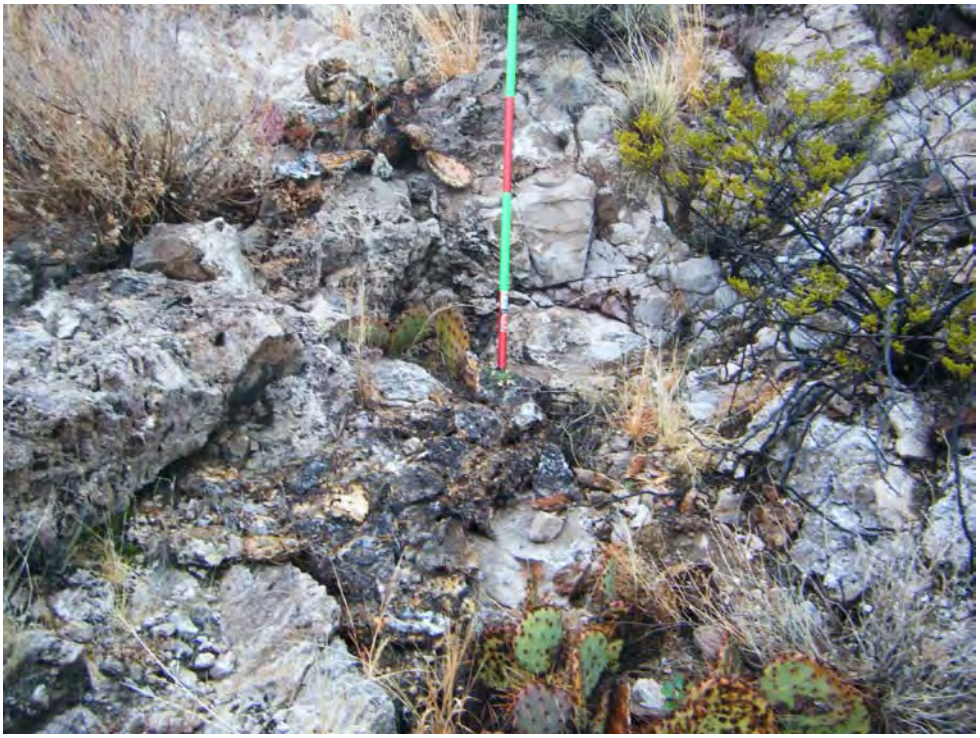

Photo 7-Looking west at Pit-1.

Photo 20-Looking west at Pit-2.

Photo 21-Deer droppings onsite.

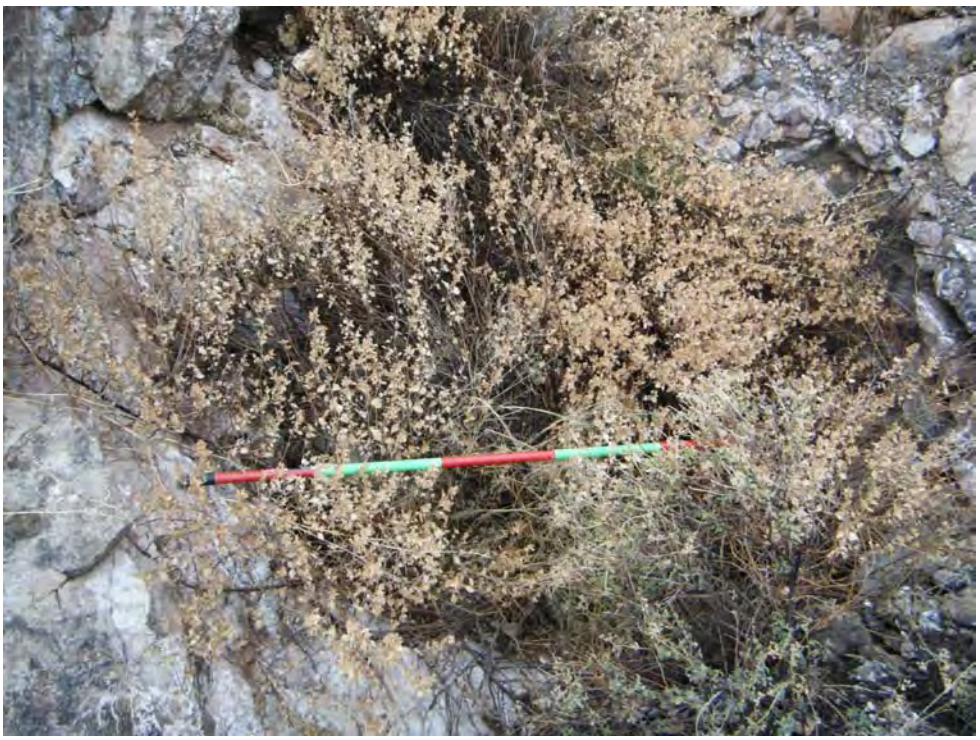

Photo 22-Looking north at Pit-3.

Photo 25-Looking west at Cutply-2.

Photo 26-Looking south at Pileply-1.

Photo 27-Looking west at Adit-1.

Photo 28-Closer view of Adit-1.

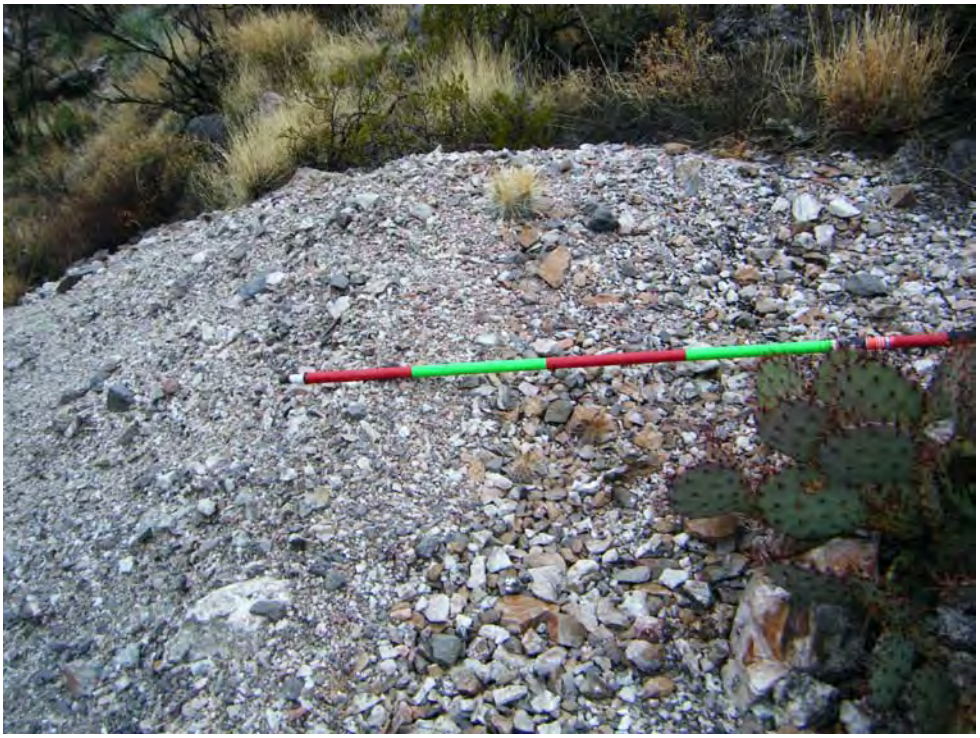

Photo 29-Looking south at Pileply-2. This pile is associated with Adit-1.

Photo 31-Looking north at Pileridge-1.

Photo 34-Looking west at Adit-2.

Photo 35-Looking west at Adit-3.

Photo 36-Looking south at Pileply-3.

Photo 37-Looking west into Adit-4.

Photo 38-Looking south at Pileply-4.

Photo 39-Looking downslope at Pileridge-2.

Photo 40-Looking downslope at Cutln-1.

Photo 41-Looking west at Cutln-1.

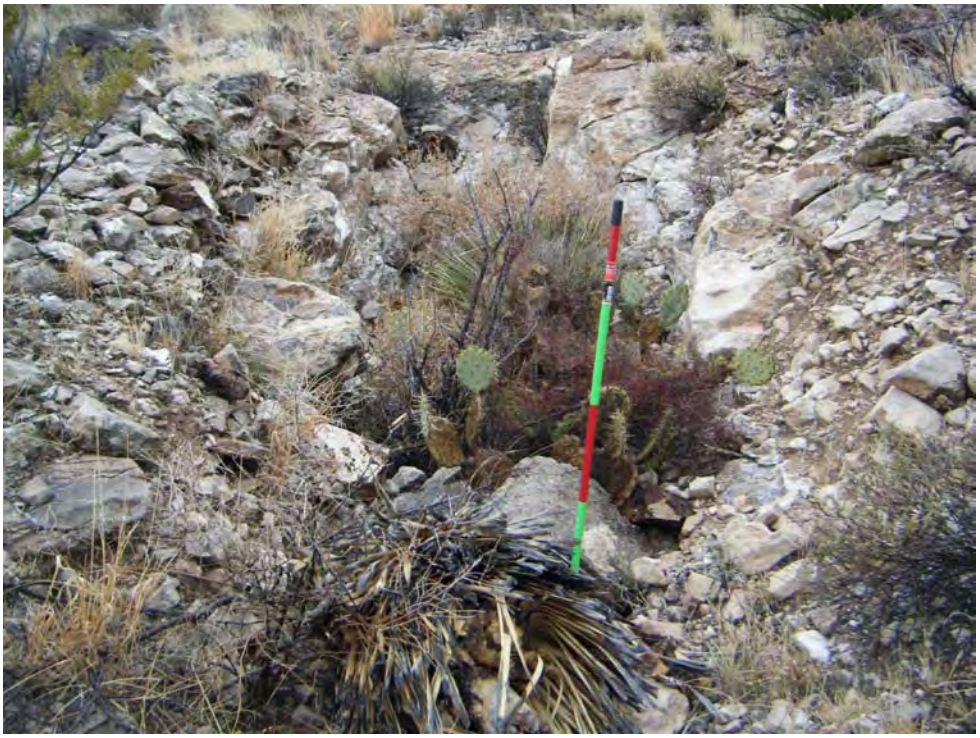

Photo 42-Looking west at Cutply-3.

Photo 43-Looking west at Adit-5.

Photo 44-Looking south at Pileply-5.

Photo 45-Looking west at Pileridge-3.

Photo 46-Looking west at Cutln-2.

Photo 50-Looking northwest at Pileply-6.

Photo 51-Looking west into Cutln-3.

Photo 53-Looking southwest at Pileridge-4.

Photo 54-Looking southwest at Cutln-4.

Photo 55-Looking northwest at Pileply-7.

Photo 56-Shaft-1.

Photo 57-Looking west at Pileridge-5.

Photo 58-Looking southwest at Cutln-5.

Photo 59-Looking north at Cutply-4.

Photo 60-Looking east at Cutply-4.

Photo 61-Panorama of AUM Site, looking south-southwest.

Photo 62-Panorama of AUM Site, looking west. The mountain in the background is Bishop Cap.

Photo 63-Panorama of the upper part of the AUM Site, looking west-northwest.

Photo 64-Looking up towards Cutply-4 to the north.

Photo 65-Looking eastward along Rd-1.

Photo 66-Claim-1.

Photo 67-Looking south down the drainage. The AUM Site is below the ridgeline on the right.

APPENDIX B

FIELD NOTES

1/28/10 ALT Abandoned Uranium Mines

Site Name: NM0129, ~~Napone~~ ALT Blue Star

Objective: Site Assessment

Personnel: ALT Annelia Tinklenberg, INTERA
Danny Bowman, INTERA

Equipment: Rental Truck, Trimbel GeoXM (SN: 4948447271, PN: 70970-00; IC: 1756A-614, 2008 series); Ludlum (SN: 234149, Model 192); Fuji film digital camera (No. 8U839493); backup Garmin GPS; cell phone amplifier; field laptop

720 Leave Las Cruces for site NM0129

800 At site.

Background gama - 0ft - 6 uR/hr, 4ft - 6 uR/hr

Photos 1-3 - Vegetation

Photo 4-5 - NM0129 site uphill, looking northeast
Replicating Anderson report

DistPly1 - Site Disturbance Boundary - not completed due to extent and terrain of the site

CutPly1 - Cut at ALT southernmost part of boundary, on east slope of ridge leading up to site
10' wide, 20' long, 5' deep

Photo 6 - looking west at cutPly1

Rad1 - CutPly1 - 0ft - 6 uR/hr, 4ft - 6 uR/hr

~~PitP~~ ALT Pit-1 - 5' wide, 10' long, 1-3' deep

Photo 7 - looking west at Pit-1
Rad 2 - Pit-1 - 0ft - 3 uR/hr, 4ft - 3 uR/hr

Photos 8-19 - Vegetation

Pit-2 - 8' wide, 10' long, 1-3' deep
Photo 20 - looking west at Pit-2
Photo 21 - Wildlife - scat
Rad 3 - Pit 2 - 0ft - 3 uR/hr, 4ft - 3 uR/hr

Pit ~~4~~ ALT 3 - 8' wide, 8' long, 3' deep
Photo 22 - Pit 3, looking north

Rad4 - Pit3 - 0ft - 3 uR/hr, 4ft - 4 uR/hr

Photos 23-24 - Vegetation

CutPly-2 - 6' wide, 15' long, 5' deep
Photo 25 - cutply2, looking west

PilePly1 - associated with cutply 2
photo 26 - PilePly1 - white, calcite mineralization looking south
Rad 5 - PilePly1 - 0ft - 4 uR/hr, 4ft - 3 uR/hr

Adit 1 - aspect trends north
7' tall, 4' wide, 50' deep, curves to the east
cut leads into the adit - 20' long
Photo 27 - Adit 1 - looking north
Photo 28 - Adit 1
Rad 6 - Adit 1 entrance - 0ft - 8 μR/hr, 4ft - 6 μR/hr

PilePly 2 - associated with Adit 1 - 1' deep, 15' wide, 20' long
Photo 29 - PilePly 2 - looking west
Rad 7 - PilePly 2 - 0ft - 4 μR/hr, 4ft - 4 μR/hr

Photo 30 - Vegetation

PileRidge 1 - Below Adit 1 along road; 15' long, 10' wide, ~2' high
Photo 31 - looking northeast of PileRidge 1

Rad 8 - PileRidge 1 - 0ft - 3 μR/hr, 4ft - 4 μR/hr

Photo 32-33 - Vegetation - bush/tree, spins

Adit 2 - 6' tall, 6' wide, ~50' deep - trends north
Rad 9 - Entrance to Adit 2 - 0ft - 5 μR/hr, 4ft - 5 μR/hr

Photo 34 - Adit 2 looking north

Adit 3 - 4' tall, 4' wide, 3' deep, Above Adit 2
Photo 35 - looking north at Adit 2
Rad 10 - entrance to Adit 3 - 0ft - 3 μR/hr, 4ft - 3 μR/hr
ALT

PilePly 3 - associated with Adit 3 - 13' wide, 25' long, 3' high
Photo 36 - looking ALT northwest at PilePly 3
Rad 11 - PilePly 3 - 0ft - 5 μR/hr, 4ft - 4 μR/hr

Adit 4 - 7' tall, 5' wide, 7' deep; east of Adit 3, above Adit 2
Photo 37 - looking north into Adit 4
Rad 12 - Adit 4 entrance - 0ft - 2 μR/hr; 4ft - 2 μR/hr

PilePly 4 - associated with Adit 4 - 10' wide, 20' long, 1' high
Photo 38 - looking northwest at PilePly 4
Rad 13 - PilePly 4 - 0ft - 3 μR/hr; 4ft - 3 μR/hr

PileRidge 2 - east of Adit 4, west of CutIn 1
6' wide, 40' long, 2' high
Photo 39 - looking north at PileRidge 2

CutIn-1 - 7' wide, 5' deep, ~40' long
east of PileRidge 2
Photo 40 - looking north at CutIn-1
Rad 14 - CutIn-1 - 0ft - 3 μR/hr; 4ft - 3 μR/hr

Rad 15 - PileRidge 2 - 0ft - 3 μR/hr; 4ft - 3 μR/hr

CutPly 3 - 6' wide, 20' long, 5' deep
Photo 42 - looking north at CutPly 3 ALT
Rad 16 - CutPly 3 - 0ft - 4 μR/hr; 4ft - ~~μR/hr~~ - 3 μR/hr

41 1/28/10 ALT Abandoned Uranium Mines
1030

Adit 5 - 7' tall, 5' wide, 10' deep
Photo 43 - looking north at Adit 5
Rad 17 - Adit 5 entrance 0ft - 2 uR/hr; 4ft - 3 uR/hr

PilePly 5 - below Adit 5 - 20' wide, 40' long, 2' high
Photo 44 - looking northwest at PilePly 5
Rad 18 - PilePly 5 - 0ft - 3uR/hr; 4ft - 3uR/hr

PileRidge 3 - 4' wide, 25' long, 1' high
Photo 45 - looking north at PileRidge 3
Rad 19 - PileRidge 3 - 0ft - 3uR/hr; 4ft - 3uR/hr

CutIn 2 - 4' wide, 10' long, 5' deep
Photo 46 - looking north at cutIn 2
Rad 20 - CutIn 2 - 0ft - 3 uR/hr; 4ft - 3 uR/hr

Photo 47 - 49 - Vegetation

PilePly 6 - 10' wide, 15' long, 1' high
Photo 50 - looking east, northeast at PilePly 6
Rad 21 - PilePly 6 - 0ft - 3 uR/hr; 4ft - 4 uR/hr

CutIn 3 - 4' wide, 12' long, 4' deep
Photo 51 - looking north into CutIn 3
Rad 22 - CutIn 3 - 0ft - 3 uR/hr; 4ft - 3 uR/hr

Photo 52 - Vegetation, 1in tall cactus

PileRidge 4 - 10' wide, 35' long, 2' high
Photo 53 - looking northwest at PileRidg4
Rad 23 - PileRidge 4 - 0ft - 3 uR/hr; 4ft - 4 uR/hr

CutIn 4 - 5' wide, 30' long, 3' deep; northeast of PileRidge 4
Photo 54 - looking northwest at CutIn 4
Rad 24 - cutIn 4 - 0ft - 3uR/hr; 4ft - 3uR/hr

PilePly 7 - 10' wide, 10' long, 1' high; below shaft 1
Photo 55 - looking northeast at PilePly 7
Rad 25 - PilePly 7 and shaft 1 - 0ft - 2 uR/hr; 4ft - 3 uR/hr
Shaft 1 - 5' wide x 7' long, 8' deep
Photo 56 - shaft 1

PileRidge 5 - 1' high, 25' long, 6' wide
Photo 57 - looking north
Rad 26

CutIn 5 - 5' wide, 18' long, 3' deep
Photo 58

CutPly 4 - top of hill, lots of roads surrounding ~50' high cut, 50' wide/long; continues northwest and northeast 50-80ft on both sides.
Rad 27 - cut Ply 4 - 0ft - 20uR/hr; 4ft - 16uR/hr
~~Access Rd~~ ALT Shale-limestone contact
Photo 59 - looking north at cutPly 4
Leaving site - raining hard
Photo 60 - looking east at contact

Rad 28 - cut Ply 4 center - 0ft - 6 uR/hr; 4ft 7 uR/hr

Photos 61-65 - starting looking west, down drainage to looking ~~east~~ at ALT

Claim 1 - "BC-9 -908
Photo 66 - Claim 6 ALT-1

Photo 67 - looking west down drainage

~~Soil~~ ALT
1230 Back at truck, pack up to leave
Raining hard.

Soils: Rocky, gravelly thin. locally tan, red, and black depending on location.

Rocks: Most rock was gray limestone. Also localized white dolomite, white and translucent calcite and ~~fto~~ ALT fluorite, black galena. The minerals were produced from veins along the Blue Star fault. A layer of flakey shale was encountered at the top of the site at cutply-4.

Human Activities: Evidence of grazing from signs, cow prints, and cow pies. Extensive mining activity along the drainage and hills surrounding the site. Numerous mining roads throughout the area. Some evidence of recreational use; tire tracks and bullet casings.