Abandoned Uranium Mine Site Assessment for the Section 9 Site (NM0079)

FINAL REPORT

Prepared For:

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May 28, 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 Section 9 Site (AUM Site), MMD ID: NM0079 on April 15, 2010.

1.1 PREVIOUSLY KNOWN INFORMATION ABOUT THE SITE

Anderson (1980) performed a detailed investigation of the AUM Site in 1980, finding large open pits, numerous piles, and one adit. Radiation in this adit was higher than the highest detection level on their scintillometer. The mine was active in late 1950, and had produced 57,085 tons of ore by 1958. It was last registered with the State Mine Inspector's Office in 1960, and was in operation until 1962 (Anderson, 1980).

1.2 SITE LOCATION AND DIRECTIONS

The AUM Site is on private land in the northern 2/3 of Section 9, Township 12 North, Range 9 West. Some piles spill onto federal (Bureau of Land Management) land to the north. The Site is located in Cibola County (formerly part of Valencia County), approximately 10 miles northeast of the town of Milan. The location of this Site was provided to INTERA by MMD.

To access the AUM Site from Albuquerque, drive west on Interstate 40 for 83 miles. Take Exit 79 towards San Mateo and turn right. Continue straight until you reach U. S. 66, less than a quarter mile. Turn left on U.S. 66 and drive 0.2 miles, then turn right onto New Mexico 605. Continue northeast on New Mexico 605 for 7.4 miles, then turn right onto a dirt road, passing through a locked gate. Drive east along this road for approximately 2 miles, after which the road makes a slight bend to the south and then curves north and ascends a mesa. After reaching the top of the mesa, continue north for another 0.9 miles to the southern edge of the AUM Site.

Note that permission from two private landowners is required in order to access and view the AUM Site. The access route from New Mexico 605 to the mesa is owned by one landowner, and the Site is owned by a different landowner.

1.3 SITE GEOLOGY

The AUM Site lies within the Grants uranium region. The topography of this region is characterized by mesas of Triassic, Jurassic, and Cretaceous sediments separated by broad valleys. The Site area is part of the Chaco Slope, the southern part of the San Juan Basin. Strata in the Chaco Slope dip gently to the north (McLemore, 2002).

The AUM Site is located within the Jurassic-age Todilto Formation, a sequence of carbonates and evaporites. This formation likely represents a salt lake environment intermittently connected to the ocean. The Todilto Formation is underlain by the Entrada Formation and overlain by the Summerville Formation (Hilpert, 1963). The Todilto consists of two members, the upper Tonque Arroyo Member and the lower Luciano Mesa Member. The Tonque Arroyo Member consists of gypsum and is absent from the Site area. The Luciano Mesa Member consists of a

thinly laminated, locally deformed lower layer and a massive, vuggy upper layer (Lucas and Anderson, 2000). Primary-type uranium minerals such as pitchblende are reported to occur in the Todilto Limestone as well as secondary minerals such as carnotite and tyuyamunite (McLaughlin, 1963).

Sand dunes are present in the northwestern and southern areas of the AUM Site.

1.4 SITE HYDROGEOLOGY

The surface runoff at the AUM Site discharges to San Mateo Creek, which drains into the Rio San Jose approximately 8 miles to the southwest. There is no nearby permanent surface water.

The AUM Site is located in the Bluewater Underground Water Basin. This basin falls between the San Juan Underground Water Basin to the north, the Middle Rio Grande Underground Water Basin to the south and east, and the Gallup Underground Water Basin to the west (Edwards and Kiely, 2004). Aquifers are found in alluvium near major drainages such as San Mateo Creek and throughout the Cretaceous, Jurassic, and Triassic strata in the region. Groundwater flows southward in alluvium and northeast in Mesozoic strata (Brod, 1979).

1.5 REGIONAL TOPOGRAPHY AND TERRAIN

The AUM Site is found on the Dos Lomas Quadrangle 7.5 minute United States Geological Survey topographic map at an elevation of approximately 7000 feet above mean sea level (see Figure 2). The AUM Site is located just west of La Jara Mesa, at the edge of a broad mesa capped by the Todilto Formation.

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. Twenty pits, nineteen piles, two pile ridges, three adits, two trash dumps, one piece of mining-related equipment, and two structures were found onsite. Please see the Photo Log in Appendix A for photos of the AUM Site features and Table 1 for a list of the AUM Site features. The AUM Site contains numerous features over a large region, therefore the Site has been broken into three areas: the Northwestern Area (see Figures 4a and 4b), the Northeastern Area (Figures 5a and 5b) and the Southern Area (Figures 6a and 6b). Note that the scale between Figure 4 (a, b), Figure 5 (a, b), and Figure 6 (a, b) is different.

2.1 MINE SHAFTS, ADITS, AND DECLINES

Three adits are located on the AUM Site. Adit-1 is located in the Northwestern Area of the Site. This adit was photographed by Anderson (1980) in 1980. Several feet of blow sand have accumulated in the adit since the Anderson visit (see Photo 24 in Appendix A, and photo (j) in the Anderson Report). Anderson (1980) also encountered very high gamma radiation readings (over 10,000 cps) about 20 ft inside the adit. However, the present survey found gamma radiation levels of 480 µR/hr at the entrance of the adit (radiation survey point Rad-15).

Adit-2 and Adit-3 are located in the Southern Area of the AUM Site. Adit-2 is very small and could be a collapse feature rather than an actual entrance to a tunnel (see Photo 74 in Appendix A). Adit-3 is considerably larger (see Photo 80 in Appendix A).

2.2 MINING AND EXPLORATION PITS AND OPEN CUTS

Twenty open pits were found at the AUM Site. Eight of these pits (Pit-1, Pit-2, Pit-3, Pit-4, Pit-5, Pit-6, Pit-7, and Pit-9) are located in the Northwestern Area of the Site (see Figures 4a and 4b). These pits tend to be linear (see Photo 13 in Appendix A), with the exception of Pit-9 (see Photo 27 in Appendix A). These pits form a rough north-south trend, with Pit-9 in the north and Pit-7 in the south. The highest gamma radiation measurement was at radiation survey point Rad-17 in Pit-9, with 4400 µR/hr at 0 ft above ground. Of the remaining seven pits, four had gamma radiation readings over 1000 µR/hr at 0 ft above ground. Adit-1 is located at the western end of Pit-7.

The Northeastern Area of the AUM Site contains seven pits (Pit-8, Pit-10, Pit-11, Pit-12, Pit-13, Pit-14, and Pit-15). Two of these pits (Pit-10 and Pit-11) are linear, oriented generally east-west (see Photo 34 in Appendix A). Two of the pits are C-shaped, one opening to the north (Pit-13; see Photo 43 in Appendix A) and one opening to the west (Pit-14; see Photo 51 in Appendix A). The final three pits (Pit-8, Pit-12, and Pit-15) are circular. Pit-15 is referred to as the "Eyeball Pit" in the Anderson Report. See Photos 54 and 55 in Appendix A for views of Pit-15. The maximum gamma radiation measurement was over 5000 µR/hr (off the scale of the scintillometer used in this survey) at radiation survey point Rad-19 in Pit-10.

The Southern Area of the AUM Site contains five pits (Pit-16, Pit-17, Pit-18, Pit-19, and Pit-20). These pits are located along the edge of the mesa and tend to be smaller than pits elsewhere on the Site (see Photo 64 in Appendix A). Two pits (Pit-18 and Pit-19) contained adits. The maximum gamma radiation measurement was 2800 µR/hr at radiation survey point Rad-49 at Adit-3 in Pit-19.

2.3 WASTE AND ORE PILES AND DISTURBANCES

Nineteen piles and two pile ridges were found at the AUM Site. These piles consisted of aeolian sand overburden, waste rock, or a combination of the two. Seven piles (PilePly-7, PilePly-1, PilePly-2, PilePly-3, PilePly-4, PilePly-5, and PilePly-6) are located in the Northwestern Area of the AUM Site, five piles (PilePly-8, PilePly-9, PilePly-10, PilePly-11, and PilePly-12) are located in the Northeastern Area of the Site, and seven piles (PilePly-13, PilePly-14, PilePly-15, PilePly-16, PilePly-17, PilePly-18, and PilePly-19) are located in the Southern Area of the AUM Site. In addition, the two pile ridges (PileRidge-1 and PileRidge-2) are located in the Southern Area of the AUM Site.

Overburden piles can be very large at the AUM Site. One overburden pile (PilePly-3) is over 1000 ft long and consists mostly of aeolian sand with a few scattered rocks (see Photo 11 in Appendix A).

Waste rock piles consist of Todilto Formation limestone, with occasional uranium mineralization resulting in higher gamma radiation readings compared to overburden piles. These features tend to be either low and broad (see Photo 58 in Appendix A) or a series of discrete, conical piles (see Photo 31 in Appendix A). The pile ridges onsite also consist of waste rock (see Photo 67 in

Appendix A). The maximum gamma radiation measured on pile at the AUM Site was 3400 µR/hr at 0 ft above ground at radiation survey point Rad-1 on PilePly-1.

2.4 MINING RELATED BUILDINGS AND FOUNDATIONS

Two mining-related structures were found at the AUM Site, both in the Southern Area. StrucPly-1 is a shed made from railroad ties (see Photo 75 in Appendix A). The interior of the structure contained an old mattress and other debris. StrucPly-2 is mostly buried in sand and contains two doors and a wood roof (see Photo 77 in Appendix A).

2.5 OTHER MINE FEATURES

Two trash dumps were found in pits onsite. DumpPt-1 consists of several 55 gallon drums (see Photo 7 in Appendix A). This dump is located in the Northwestern Area of the Site. DumpPt-2 consists of tires, metal, and glass (see Photo 84 in Appendix A). It is located in the Southern Area of the Site. One piece of mining equipment (Equip-1) was also found in the Northeastern Area of the Site (see Photo 26 in Appendix A). The piece of equipment is a water truck that is currently in use in a permitted exploration project. It is not related to legacy mining at the Site.

2.6 BOREHOLES

No boreholes were found at the AUM Site.

2.7 RECLAMATION ACTIVITIES

No apparent reclamation activities have taken place at the AUM Site.

3.0 ARCHEOLOGICAL SITES

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

4.0 SITE GAMMA RADIATION READINGS

One background gamma radiation reading was taken near the AUM Site, recording 8 µR/hr at 0 ft above ground and 9 µR/hr at 4 ft above ground. Please see Table 2 for all of the gamma radiation readings taken at the AUM Site and Figures 4a, 4b, 5a, 5b, 6a and 6b for the locations of the radiation readings.

The maximum gamma radiation reading for the AUM Site was over 5000 µR/hr at 0 ft above ground at radiation survey point Rad-19 in Pit-10 (see Photo 33 in Appendix A). Other notable radiation readings were taken at radiation survey point Rad-1 (3400 µR/hr at 0 ft above ground) on PilePly-1 and radiation survey point Rad-17 (4400 µR/hr at 0 ft above ground; see Photo 28 in Appendix A) in Pit-9.

5.0 CURRENT LAND USES

5.1 HUMAN ACTIVITY AND RECREATIONAL SITE USE

Barbed wire fences and cow prints indicate that the area is active ranchland. Trash dumps are present in some of the pits. The presence of new mining equipment indicates that the area is currently undergoing exploration.

5.2 NEARBY RESIDENTIAL, COMMERCIAL AND INDUSTRIAL STRUCTURES

No structures were sighted within a mile of the AUM Site.

5.3 NEARBY DOMESTIC WELLS

One domestic well (B-01340) is located about 0.2 miles southeast of the AUM Site. This well is 300 ft deep, but depth to water and installment date are not known. A non-domestic well (B-01341) is located about 700 ft miles east of the Site. Another non-domestic well (B-00778) is located about 0.4 miles to the southwest (NMOSE, 2008).

5.4 EVIDENCE OF GRAZING OR AGRICULTURE

Barbed wire fences and cow prints indicate that the AUM Site is likely being grazed.

5.5 EVIDENCE OF WILDLIFE

Tracks and droppings from deer and rabbits are present.

6.0 VEGETATION

The AUM Site is located in the Coniferous and Mixed Woodland vegetation type and borders the Desert Grassland (Ecotone). Woody species at the site include Utah juniper, pinyon pine, fourwing saltbush and rubber rabbitbush. Snakeweed, narrowleaf yucca, and common sagewort were also present. Scapose bitterweed was present at the AUM Site along with grama grass, dropseed, and Indian ricegrass. Cryptogamic crust was present in areas. No noxious weeds were observed.

7.0 POTENTIAL OFFSITE IMPACTS

7.1 EROSION

A pile in the Northwestern Area of the AUM Site is eroding into a valley to the north (ErosPly-1, see Photo 29 in Appendix A).

7.2 ENVIRONMENTAL IMPACTS

There is no evidence of soil staining from chemicals potentially brought to the AUM Site.

8.0 REFERENCES

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McLemore, Virginia T., 2002. Navajo Lake State Park: New Mexico Geology, v. 24, no. 3, p. 91-96,103.

Mining and Minerals Division (MMD), 2009. Mine Feature Data Dictionary.

New Mexico Office of the State Engineer (NMOSE), 2008. Wells and Surface Diversions in New Mexico. WATERS_PODS_may08.shapfile. OSE Waters Database.

TABLES

Table 1
Site Features

Section 9-NM0079
Abandoned Uranium Mine Assessments

Feature Name	On Site?	Feature Type	Associated Feature	Material	Height or Depth (ft)	Width or Diameter (ft)	Length (ft)	Open	Collapsed	Closure Type	Associated Photo	Notes
Access-1	Yes	Access	--	Dirt	--	--	--	--	--	--	--	--
Access-2	Yes	Access	--	Dirt	--	--	--	--	--	--	--	--
Access-3	No	Access	--	Dirt	--	--	--	--	--	--	--	--
Adit-1	Yes	--	Timber	--	6	15	0	No	No	None	NM0079_023 NM0079_024	unknown length
Adit-2	Yes	--	None	--	3	8	20	Yes	No	Backfill	NM0079_074	--
Adit-3	Yes	--	None	--	5	8	0	No	No	None	NM0079_079 NM0079_080	unknown length
DumpPt-1	Yes	Historic	--	Trash	3	10	10	--	--	--	NM0079_007	55 gal drums
DumpPt-2	Yes	Historic	--	Trash	0	10	40	--	--	--	NM0079_084	--
Equip-1	Yes	water truck	--	--	--	--	--	--	--	--	NM0079_026	water truck
ErosPly-1	Yes	Water Eroded	--	--	25	45	75	--	--	--	NM0079_029	--
Fenc-1	Yes	Barbwire	--	Metal/Wood	4	--	--	--	--	--	--	Boundary between Section 9 and Section 4
PilePly-1	Yes	Waste	--	Rock	6	60	120	--	--	--	NM0079_001	--
PilePly-2	Yes	Waste	--	Rock	3	240	240	--	--	--	NM0079_002	--
PilePly-3	Yes	Waste	--	Soil	20	100	900	--	--	--	NM0079_011	--
PilePly-4	Yes	Waste	--	Rock	6	120	180	--	--	--	NM0079_016	--
PilePly-5	Yes	Waste	--	Soil	25	150	210	--	--	--	NM0079_017	--
PilePly-6	Yes	Waste	--	Rock	4	60	120	--	--	--	NM0079_020	--
PilePly-7	Yes	Waste	--	Rock	3	150	300	--	--	--	NM0079_030 NM0079_031	pile is eroding into canyon
PilePly-8	Yes	Waste	--	Rock	8	30	120	--	--	--	NM0079_039	--
PilePly-9	Yes	Waste	--	Rock	8	60	330	--	--	--	NM0079_046	--
PilePly-10	Yes	Waste	--	Soil	30	360	375	--	--	--	NM0079_053	material from eyeball pit
PilePly-11	Yes	Waste	--	Rock	4	150	750	--	--	--	NM0079_058 NM0079_059	--
PilePly-12	Yes	Waste	--	Rock	8	150	300	--	--	--	NM0079_060	--
PilePly-13	Yes	Waste	--	Rock	10	30	180	--	--	--	NM0079_065	--
PilePly-14	Yes	Waste	--	Rock	4	45	66	--	--	--	NM0079_068	--
PilePly-15	Yes	Waste	--	Rock	6	10	25	--	--	--	NM0079_069	--
PilePly-16	Yes	Waste	--	Soil	3	150	600	--	--	--	NM0079_070	--
PilePly-17	Yes	Waste	--	Rock	3	60	210	--	--	--	NM0079_071 NM0079_072	--
PilePly-18	Yes	Waste	--	Soil	20	105	450	--	--	--	NM0079_076	--
PilePly-19	Yes	Waste	--	Rock	4	60	360	--	--	--	NM0079_081	--
PileRidge-1	Yes	--	--	--	3	10	90	--	--	--	NM0079_061	--
PileRidge-2	Yes	--	--	--	4	10	60	--	--	--	NM0079_067	--
Pit-1	Yes	Mining	--	--	10	40	210	--	--	--	NM0079_003 NM0079_004 NM0079_005 NM0079_006	--
Pit-2	Yes	Mining	--	--	15	180	300	--	--	--	NM0079_008 NM0079_009 NM0079_010	--
Pit-3	Yes	Mining	--	--	15	25	180	--	--	--	NM0079_013 NM0079_014	--

Table 1
Site Features

Section 9-NM0079
Abandoned Uranium Mine Assessments

Feature Name	On Site?	Feature Type	Associated Feature	Material	Height or Depth (ft)	Width or Diameter (ft)	Length (ft)	Open	Collapsed	Closure Type	Associated Photo	Notes
Pit-4	Yes	Mining	--	--	10	30	120	--	--	--	NM0079_015	--
Pit-5	Yes	Mining	--	--	10	30	150	--	--	--	NM0079_018	--
Pit-6	Yes	Mining	--	--	10	45	75	--	--	--	NM0079_019	--
Pit-7	Yes	Mining	--	--	8	60	270	--	--	--	NM0079_021 NM0079_022	--
Pit-8	Yes	Mining	--	--	8	90	120	--	--	--	NM0079_025	--
Pit-9	Yes	Mining	--	--	20	150	270	--	--	--	NM0079_027	--
Pit-10	Yes	Mining	--	--	10	45	600	--	--	--	NM0079_032 NM0079_033 NM0079_034 NM0079_035 NM0079_036	--
Pit-11	Yes	Mining	--	--	10	50	300	--	--	--	NM0079_037 NM0079_038	--
Pit-12	Yes	Mining	--	--	8	30	60	--	--	--	NM0079_040	--
Pit-13	Yes	Mining	--	--	20	60	900	--	--	--	NM0079_041 NM0079_042 NM0079_043 NM0079_044 NM0079_045	--
Pit-14	Yes	Mining	--	--	20	90	450	--	--	--	NM0079_047 NM0079_048 NM0079_049 NM0079_050 NM0079_051 NM0079_052	--
Pit-15	Yes	Mining	--	--	40	250	250	--	--	--	NM0079_054 NM0079_055 NM0079_056 NM0079_057	eyeball pit
Pit-16	Yes	Mining	--	--	10	50	325	--	--	--	NM0079_062 NM0079_063 NM0079_064	--
Pit-17	Yes	Exploration	--	--	8	20	60	--	--	--	NM0079_066	--
Pit-18	Yes	Mining	--	--	10	30	90	--	--	--	NM0079_073	--
Pit-19	Yes	Mining	--	--	15	30	105	--	--	--	NM0079_078	--
Pit-20	Yes	Mining	--	--	4	120	150	--	--	--	NM0079_082 NM0079_083	--
StrucPly-1	Yes	Building	--	Wood	6	10	20	--	--	--	NM0079_075	shack with mattress
StrucPly-2	Yes	Shed	--	Wood	5	10	30	--	--	--	NM0079_077	underground shed

Notes:
-- designates no information
By convention, adits have height, width, and length but not depth.

Table 2
Gamma Radiation Survey Results

Section 9-NM0079
Abandoned Uranium Mine Assessments

Reading ID	0 ft (µR/hr)	4 ft (µR/hr)	Associated Photo	Asssociated Feature
Rad-1	3400	140	--	PilePly-1
Rad-2	2500	110	--	PilePly-2
Rad-3	350	120	--	PilePly-2
Rad-4	800	250	--	Pit-1
Rad-5	2000	460	--	Pit-2
Rad-6	110	25	--	PilePly-3
Rad-7	3300	180	--	Pit-3
Rad-8	270	90	--	Pit-4
Rad-9	420	150	--	PilePly-4
Rad-10	290	70	--	PilePly-5
Rad-11	2400	260	--	Pit-5
Rad-12	1200	130	--	Pit-6
Rad-13	900	270	--	PilePly-66
Rad-14	450	290	--	Pit-7
Rad-15	480	420	--	Adit-1
Rad-16	290	140	--	Pit-8
Rad-17	4400	500	NM0079_028	Pit-9
Rad-18	1400	120	--	PilePly-7
Rad-19	5000	1100	NM0079_032	Pit-10
Rad-20	800	400	--	Pit-10
Rad-21	700	180	--	Pit-11
Rad-22	460	150	--	PilePly-8
Rad-23	1000	230	--	Pit-12
Rad-24	800	150	--	Pit-13
Rad-25	1000	150	--	Pit-13
Rad-26	700	370	NM0079_044	Pit-13
Rad-27	1100	170	--	PilePly-9
Rad-28	950	180	--	Pit-14
Rad-29	1200	500	NM0079_049	Pit-14
Rad-30	600	40	--	PilePly-10
Rad-31	20	19	--	PilePly-10
Rad-32	600	230	--	Pit-15
Rad-33	1200	300	--	Pit-15
Rad-34	2800	280	--	PilePly-11
Rad-35	480	160	--	PilePly-12
Rad-36	2500	130	--	PileRidge-1
Rad-37	1700	260	--	Pit-16
Rad-38	800	34	--	PilePly-13
Rad-39	1200	250	--	Pit-17

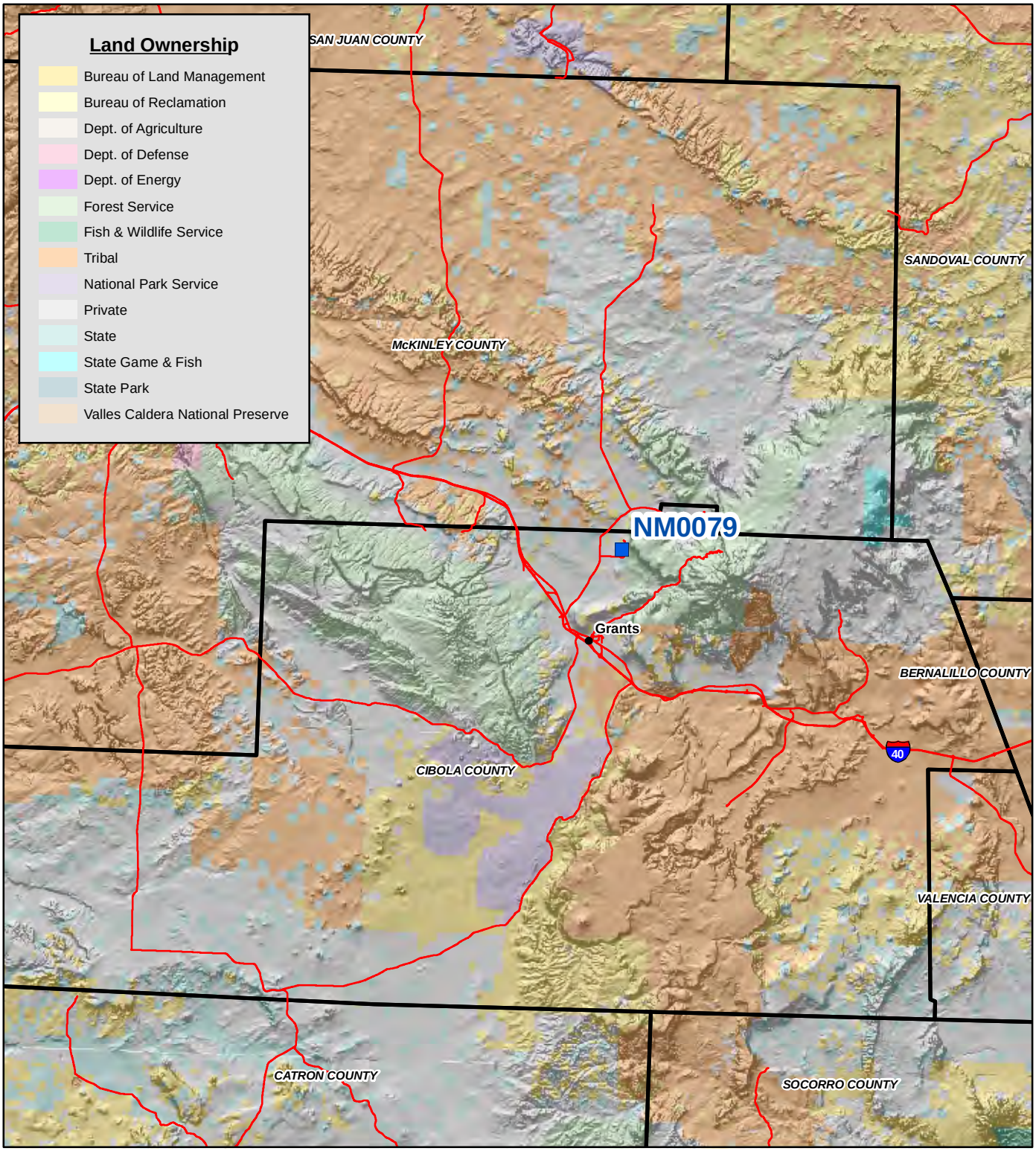
Table 2
Gamma Radiation Survey Results

Section 9-NM0079
Abandoned Uranium Mine Assessments

Reading ID	0 ft (µR/hr)	4 ft (µR/hr)	Associated Photo	Asssociated Feature
Rad-40	90	30	--	PileRidge-2
Rad-41	270	43	--	PilePly-14
Rad-42	700	140	--	PilePly-15
Rad-43	36	26	--	PilePly-16
Rad-44	1100	90	--	PilePly-17
Rad-45	2200	440	--	Pit-18
Rad-46	260	190	--	Adit-2
Rad-47	280	160	--	PilePly-18
Rad-48	240	60	--	Pit-19
Rad-49	2800	480	--	Adit-3
Rad-50	1400	130	--	PilePly-19
Rad-51	800	280	--	Pit-20
Rad-52	1500	390	--	Pit-20
Rad-53	9	8	--	--
RadBack-1	8	9	--	--

Notes:
All gamma readings at this site taken by Ludlum 192 µR/Ratemeter
µR/hr=microroetgens per hour
-- designates no information

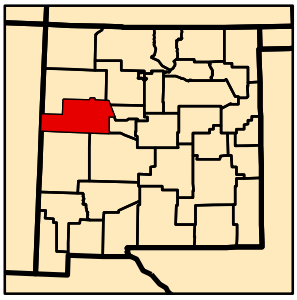
FIGURES



Map Source(s):
Ownership - BLM, 2008

0 7.5 15 30
Miles

NORTH

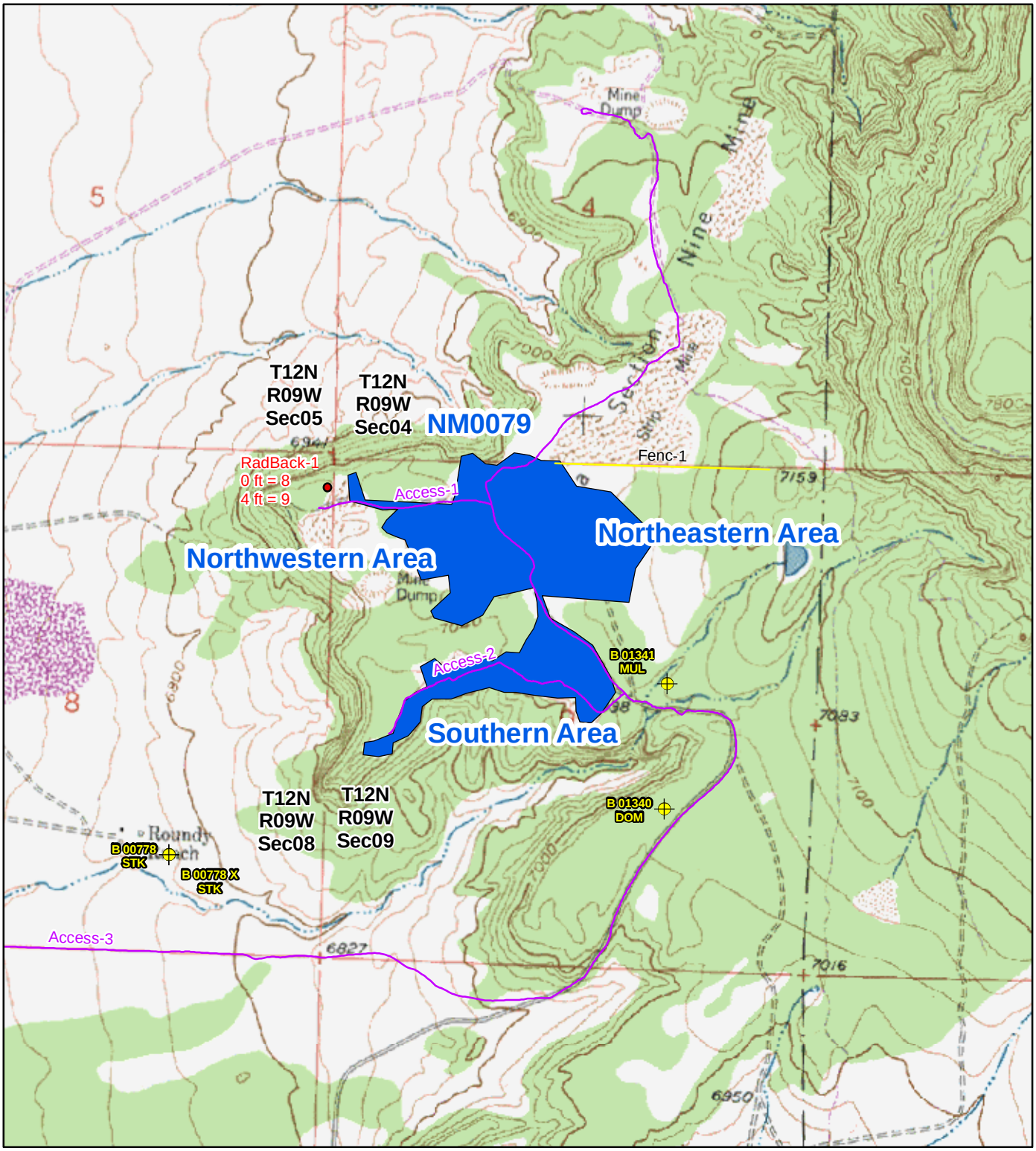


Legend

- AUM Location
- Road
- County Boundary

Figure 1
Site Location Map
NM0079-Section 9
Abandoned Uranium Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0079-Section9\GIS\Map\Site_Map_Section9_CP.mxd 04/21/2010



Map Source(s):
U.S. Geological Survey 7.5-Minute
Topographic Map
-Dos Lomas, 1980

0 750 1,500 3,000
Feet

NORTH

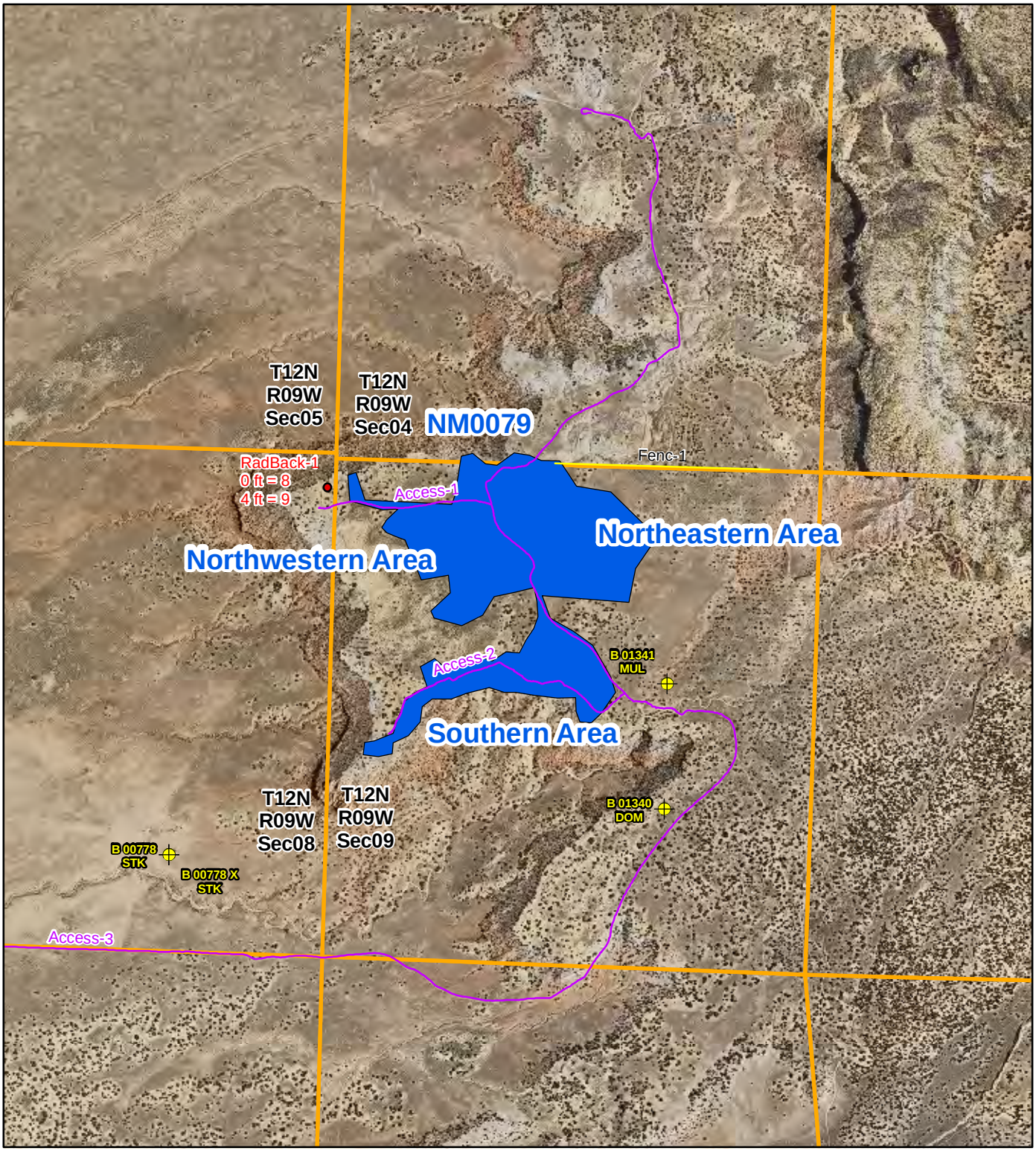
Legend

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

Figure 2
Topographic Map
NM0079-Section 9
Abandoned Uranium
Mine Assessment

INTERA

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0079-Section9\GIS\Map\Topo_Map_Section9_CP.mxd 04/21/2010



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

0 750 1,500 3,000
Feet

NORTH

Legend

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

Figure 3
Aerial Photo
NM0079-Section 9
Abandoned Uranium
Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0079-Section9\GIS\Map\Aerial_Map_Section9_CP.mxd 04/21/2010

RadBack-1
0 ft = 8
4 ft = 9

PilePly-1

Rad-1
0 ft = 3400
4 ft = 140

Access-1

ErosPly-1

Rad-18
0 ft = 1400
4 ft = 120

PilePly-7

Pit-10

Photo-32

Rad-17
0 ft = 4400
4 ft = 500

Pit-9

Pit-11

PilePly-9

Access-3

Rad-27
0 ft = 1100
4 ft = 170

Rad-2
0 ft = 2500
4 ft = 110

Rad-5
0 ft = 2000
4 ft = 460

Pit-13

DumpPt-1

Pit-2

PilePly-2

Rad-26
0 ft = 700
4 ft = 370

Rad-4
0 ft = 800
4 ft = 250

Pit-1

Rad-3
0 ft = 350
4 ft = 120

Photo-12

Rad-6
0 ft = 110
4 ft = 25

Pit-3

PilePly-3

Rad-7
0 ft = 3300
4 ft = 180

Rad-11
0 ft = 2400
4 ft = 260

Pit-4

Pit-5

PilePly-4

Rad-12
0 ft = 1200
4 ft = 130

Rad-9
0 ft = 420
4 ft = 150

Rad-8
0 ft = 270
4 ft = 90

PilePly-5

Pit-6

Rad-10
0 ft = 290
4 ft = 70

Rad-14
0 ft = 450
4 ft = 290

Rad-15
0 ft = 480
4 ft = 420

PilePly-6

Adit-1

Pit-7

Rad-13
0 ft = 900
4 ft = 270

Legend

- Radiation Readings (µR/hr)
- Photo Location
- Adit
- Dump Location
- Access Route
- Pile Boundary
- Pit Boundary
- Erosion Boundary

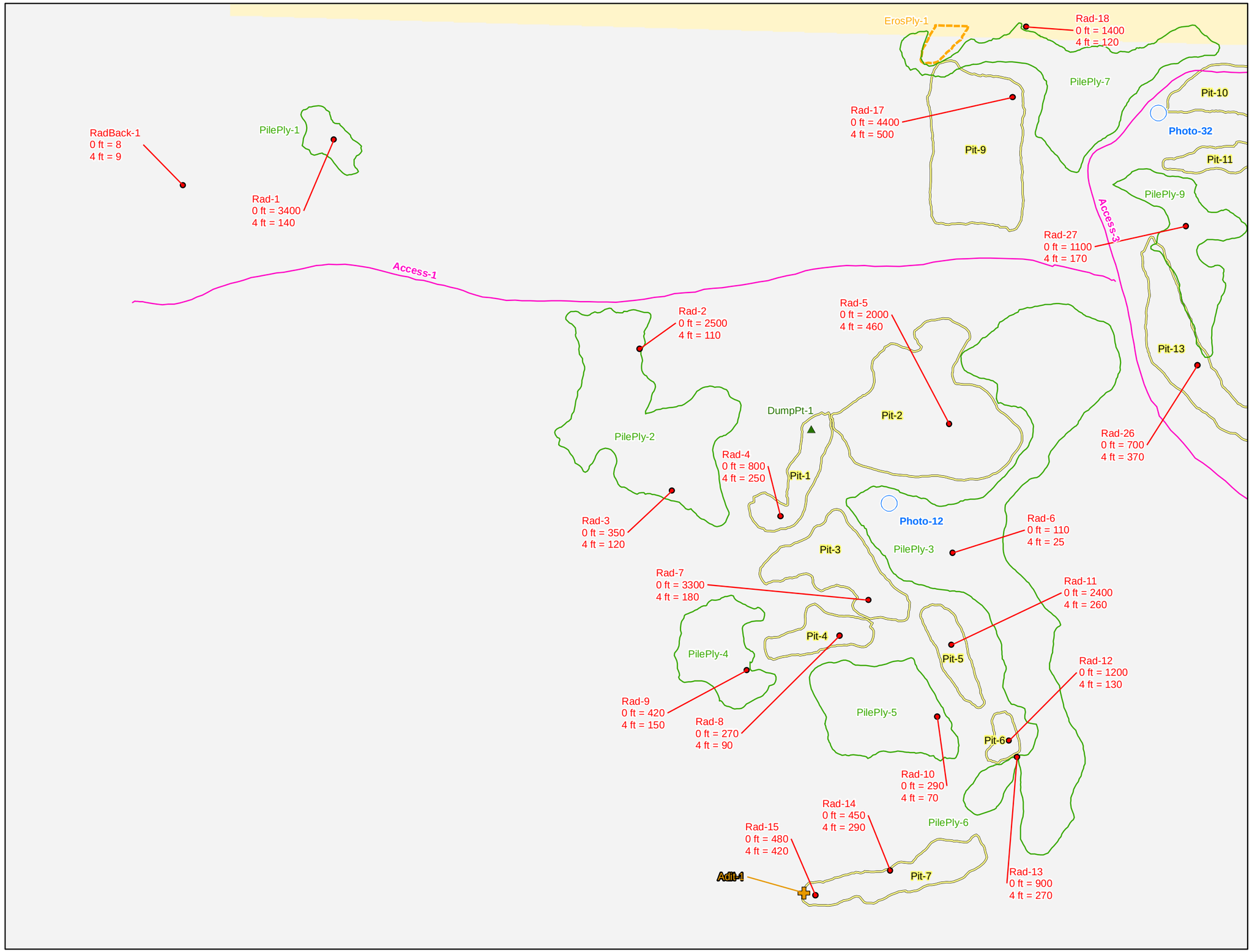
0 85 170 340
Feet

NORTH

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

Figure 4a
Site Map on
Aerial Photo
NM0079-Section 9
Northwestern Area
Abandoned Uranium
Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0079-Section9\GIS\Map\CloseupAerial_Map_Section9_CP_NW.mxd 04/21/2010



Legend

- Radiation Readings (µR/hr)
- Photo Location
- Adit
- Dump Location
- Access Route
- Pile Boundary
- Pit Boundary
- Erosion Boundary

Surface Ownership

- Bureau of Land Management
- Private

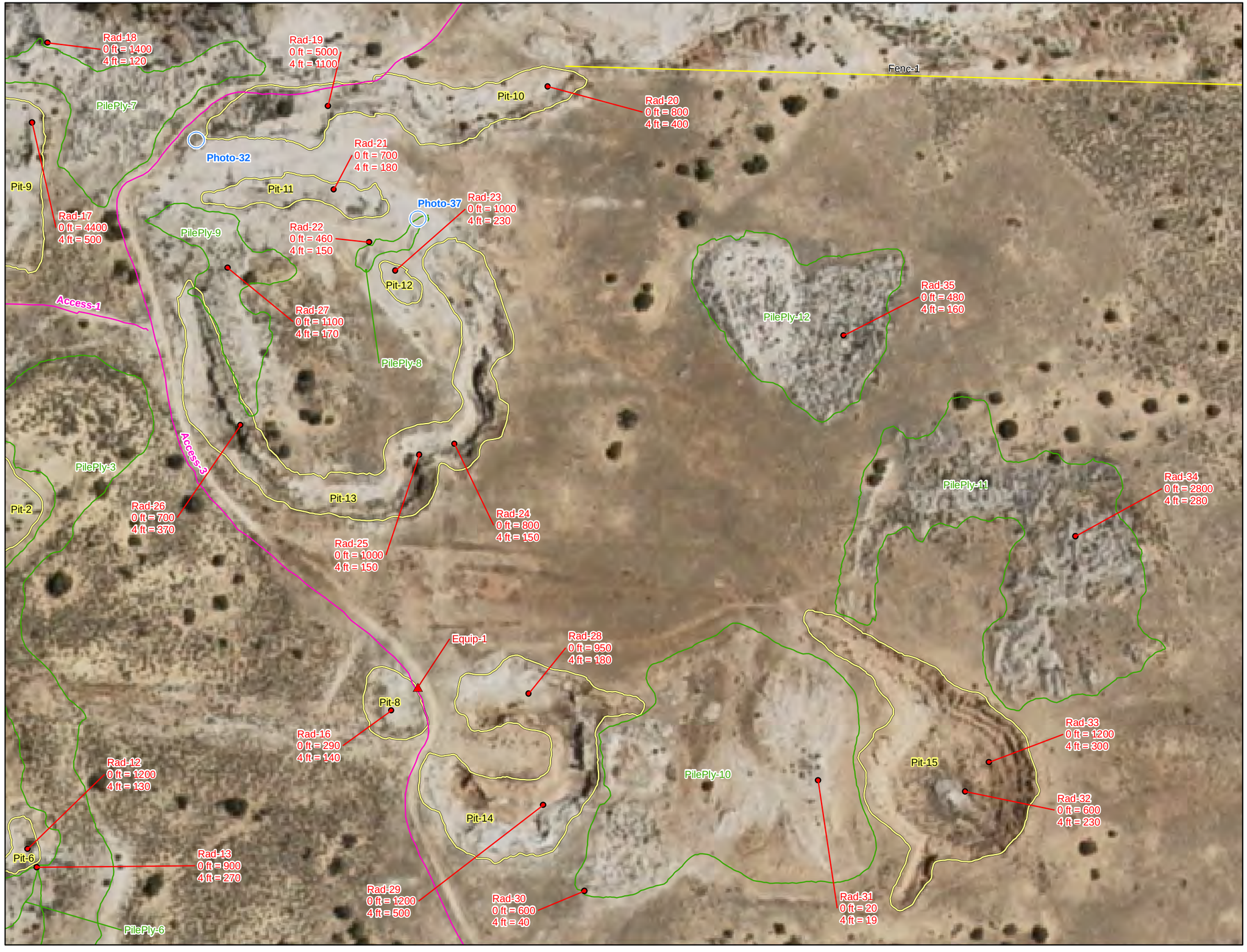
0 85 170 340

Feet

NORTH

Map Source(s):
Ownership - BLM, 2008

Figure 4b
Site Map with Surface Ownership
NM0079-Section 9
Northwestern Area
Abandoned Uranium Mine Assessment



Legend

- Radiation Readings (µR/hr)
- Photo Location
- Equipment Location
- Fence
- Access Route
- Pile Boundary
- Pit Boundary

0 75 150 300
Feet

NORTH

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

Figure 5a
Site Map on
Aerial Photo
NM0079-Section 9
Northeastern Area
Abandoned Uranium
Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0079-Section9\GIS\Map\CloseupAerial_Map_Section9_CP_NE.mxd 04/21/2010

Rad-18
0 ft = 1400
4 ft = 120

Rad-19
0 ft = 5000
4 ft = 1100

Fenc-1

Pit-10

Rad-20
0 ft = 800
4 ft = 400

PilePly-7

Photo-32

Rad-21
0 ft = 700
4 ft = 180

Pit-9

Pit-11

Photo-37

Rad-23
0 ft = 1000
4 ft = 230

Rad-17
0 ft = 4400
4 ft = 500

PilePly-9

Rad-22
0 ft = 460
4 ft = 150

Pit-12

Access-1

Rad-27
0 ft = 1100
4 ft = 170

PilePly-12

Rad-35
0 ft = 480
4 ft = 160

PilePly-8

Access-3

PilePly-3

Pit-13

Rad-26
0 ft = 700
4 ft = 370

Rad-25
0 ft = 1000
4 ft = 150

Rad-24
0 ft = 800
4 ft = 150

PilePly-11

Rad-34
0 ft = 2800
4 ft = 280

Pit-2

Equip-1

Rad-28
0 ft = 950
4 ft = 180

Pit-8

Rad-16
0 ft = 290
4 ft = 140

Rad-33
0 ft = 1200
4 ft = 300

Pit-15

Rad-12
0 ft = 1200
4 ft = 130

PilePly-10

Rad-32
0 ft = 600
4 ft = 230

Pit-14

Pit-6

Rad-13
0 ft = 900
4 ft = 270

Rad-29
0 ft = 1200
4 ft = 500

Rad-30
0 ft = 600
4 ft = 40

Rad-31
0 ft = 20
4 ft = 19

PilePly-6

Legend

- Radiation Readings (µR/hr)
- Photo Location
- Equipment Location
- Fence
- Access Route
- Pile Boundary
- Pit Boundary

Surface Ownership

- Bureau of Land Management
- Private

0 75 150 300
Feet

NORTH

Map Source(s):
Ownership - BLM, 2008

Figure 5b
Site Map with Surface Ownership
NM0079-Section 9 Northeastern Area
Abandoned Uranium Mine Assessment

Legend

- Radiation Readings (µR/hr)
- Adit
- Dump Location
- Pile Ridge
- Access Route
- Pile Boundary
- Pit Boundary
- Structure Boundary

0 100 200 400
Feet

NORTH

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

Figure 6a
Site Map on
Aerial Photo
NM0079-Section 9
Southern Area
Abandoned Uranium
Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0079-Section9\GIS\Map\CloseupAerial_Map_Section9_CP_South.mxd 04/22/2010

Pit-7
Adit-1
Rad-15
0 ft = 480
4 ft = 420
Access-3
StrucPly-1
StrucPly-2
Adit-2
Rad-45
0 ft = 2200
4 ft = 440
Rad-46
0 ft = 260
4 ft = 190
Rad-53
0 ft = 9
4 ft = 8
pileridge-2
PilePly-14
Rad-41
0 ft = 270
4 ft = 43
Rad-40
0 ft = 90
4 ft = 30
Pit-17
PilePly-15
Rad-42
0 ft = 700
4 ft = 140
Access-2
PilePly-16
PilePly-17
Pit-18
PilePly-18
Rad-49
0 ft = 2800
4 ft = 480
Rad-44
0 ft = 1100
4 ft = 90
Rad-47
0 ft = 280
4 ft = 160
Adit-3
Rad-50
0 ft = 1400
4 ft = 130
Rad-48
0 ft = 240
4 ft = 60
Rad-52
0 ft = 1500
4 ft = 390
Pit-19
PilePly-19
Rad-51
0 ft = 800
4 ft = 280
Rad-43
0 ft = 36
4 ft = 26
Rad-39
0 ft = 1200
4 ft = 250
Pit-20
DumpPit-2
Rad-37
0 ft = 1700
4 ft = 260
Pit-16
Rad-38
0 ft = 800
4 ft = 34
pileridge-1
PilePly-13
Rad-36
0 ft = 2500
4 ft = 130

Legend

- Radiation Readings (µR/hr)
- Adit
- Dump Location
- Pile Ridge
- Access Route
- Pile Boundary
- Pit Boundary
- Structure Boundary

Surface Ownership

- Private

0 100 200 400
Feet

NORTH

Map Source(s):
Ownership - BLM, 2008

Figure 6b
Site Map with Surface Ownership
NM0079-Section 9 Southern Area
Abandoned Uranium Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0079-Section9\GIS\Map\CloseupOwnership_Map_Section9_CP_South.mxd 04/22/2010

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 is provided in the electronic deliverable.

Photo 1-Looking west at PilePly-1.

Photo 2-Looking west at PilePly-2.

Photo 3-Looking southwest at Pit-1.

Photo 4-Looking northwest in Pit-1.

Photo 5-Looking north in Pit-1.

Photo 6-Looking northeast in Pit-1.

Photo 7-Looking west at DumpPt-1.

Photo 8-Looking southwest at Pit-2.

Photo 9-Looking west in Pit-2.

Photo 10-Looking west at the western end of Pit-2.

Photo 11-Looking southwest at PilePly-3.

Photo 12-Site photo from the top of PilePly-3, looking north.

Photo 13-Looking west at Pit-3.

Photo 14-Looking south in Pit-3.

Photo 15-Looking west at Pit-4.

Photo 16-Looking northwest at PilePly-4.

Photo 17-Looking west at PilePly-5.

Photo 18-Looking northwest at Pit-5.

Photo 19-Looking southwest at Pit-6.

Photo 20-Looking west at PilePly-6.

Photo 21-Looking west at Pit-7.

Photo 22-Looking west in Pit-7, replicating Anderson photo (i).

Photo 23-Looking west into Adit-1.

Photo 24-Looking west at Adit-1 entrance, replicating Anderson photo (j). The adit has filled with several feet of blow sand since Anderson visited the Site.

Photo 25-Looking south at Pit-8.

Photo 26-Looking west at water truck (Equip-1).

Photo 27-Looking south at Pit-9.

Photo 28-Radiation survey point Rad-17 (4400 µR/hr at 0 ft above ground).

Photo 29-Looking south at gullying along the mesa edge (ErosPly-1).

Photo 30-Looking east at PilePly-7 spilling down the mesa face.

Photo 31-Looking east at PilePly-7.

Photo 32-Looking east at Pit-10, matching photo (a) in Anderson report.

Photo 33-Uranium mineralization at radiation survey point Rad-19 (gamma radiation off scale at >5000 µR/hr at contact).

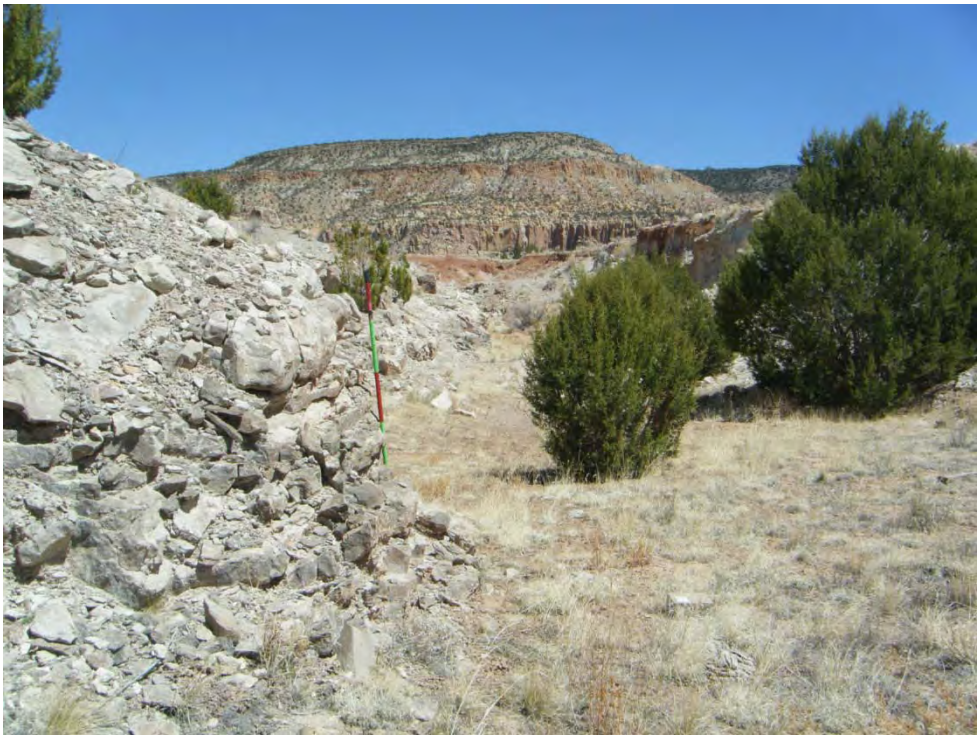


Photo 34-Looking east in Pit-10.

Photo 35-Looking east in Pit-10.

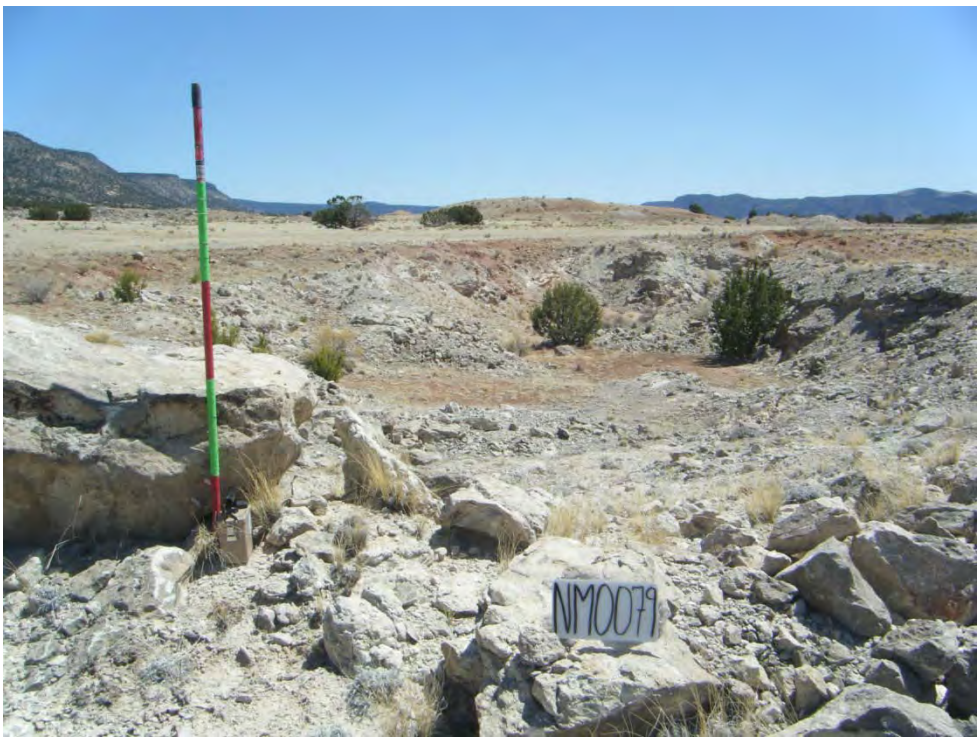


Photo 36-Site photo, looking southeast at Pit-10.

Photo 37-Looking west at Pit-11.

Photo 38-Looking southwest in Pit-11.

Photo 39-Looking northwest at PilePly-8.

Photo 40-Looking southeast at Pit-12.

Photo 41-Looking north along the eastern limb of Pit-13.

Photo 42-Looking east along the southern limb of Pit-13.

Photo 43-Looking west along the southern arm of Pit-13.

Photo 44-Looking east at intraformational fold in Pit-13, replicating photo (d) in the Anderson report.

Photo 45-Looking northwest at Pit-13, replicating Anderson photo (c).

Photo 46-Looking southeast at PilePly-9.

Photo 47-Looking east at the northern limb of Pit-14.

Photo 48-Looking east at the northern limb of Pit-14.

Photo 49-Secondary-type uranium mineralization at radiation survey point Rad-29 (1200 µR/hr at 0 ft above ground).

Photo 50-Looking east at southern limb of Pit-14.

Photo 51-Looking east over southern limb of Pit-14, replicating Anderson photo (g).

Photo 52-Looking east above northern limb above Pit-14, replicating Anderson photo (f).

Photo 53-Looking east at PilePly-10.

Photo 54-Looking east at Pit-15, the “Eyeball Pit”.

Photo 55-Looking southeast at Pit-15, replicating Anderson photo (e).

Photo 56-Looking east at limestone knob in Pit-15.

Photo 57-Looking east at the east wall of Pit-15.

Photo 58-Looking east at PilePly-11.

Photo 59-Looking south at PilePly-11.

Photo 60-Looking northwest at PilePly-12.

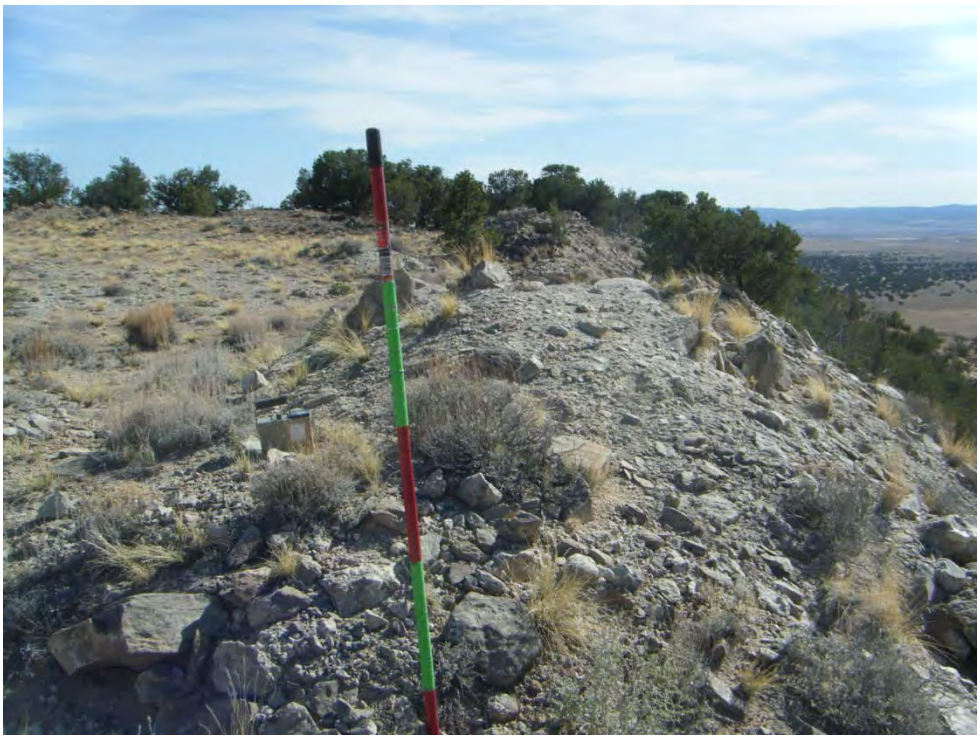


Photo 61-Looking west at PileRidge-1.

Photo 62-Looking north at Pit-16.

Photo 63-Looking southeast at an intraformational fold in Pit-16.

Photo 64-Looking east along northern arm of Pit-16.

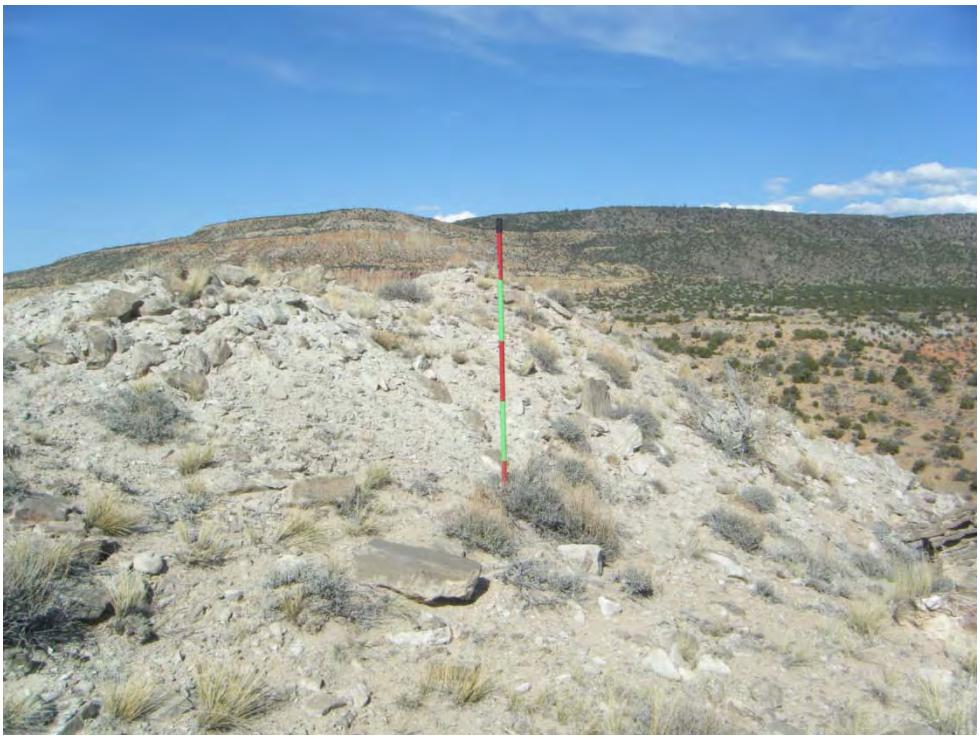


Photo 65-Looking east at PilePly-13.

Photo 66-Looking north at Pit-17.

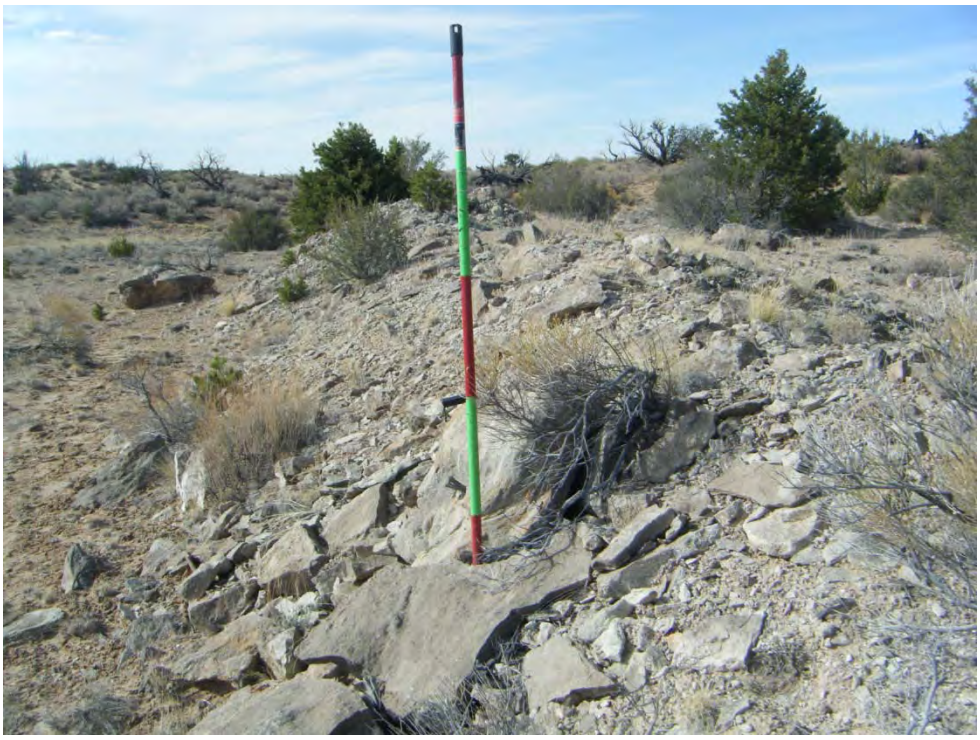


Photo 67-Looking north at PileRidge-2.

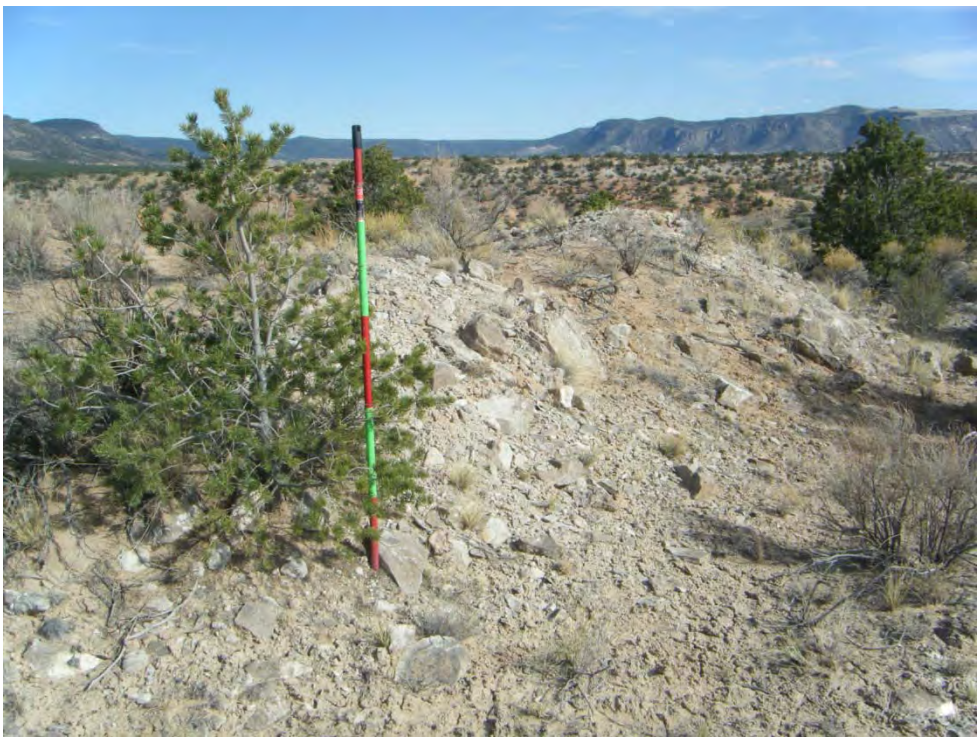


Photo 68-Looking southeast at PilePly-14.

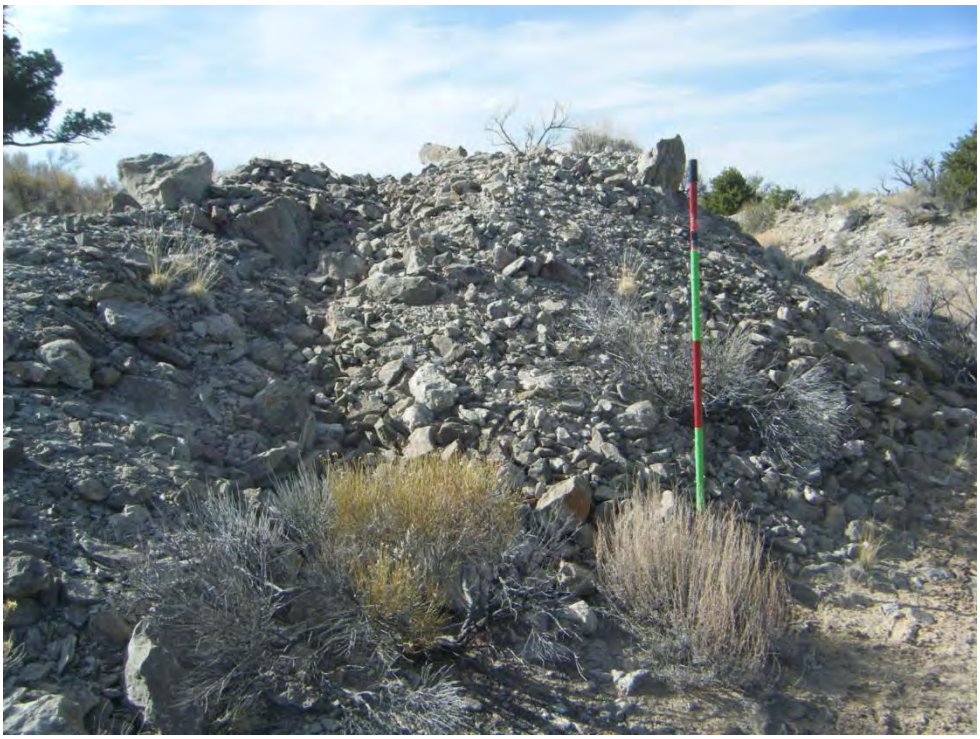


Photo 69-Looking north at PilePly-15.

Photo 70-Looking east at PilePly-16.

Photo 71-Looking southeast at PilePly-17.

Photo 72-Looking west at PilePly-17 spilling down the edge of the mesa.

Photo 73-Looking east at Pit-18.

Photo 74-Looking east at Adit-2.

Photo 75-Looking east at StrucPly-1.

Photo 76-Looking east at PilePly-18.

Photo 77-Looking south at StrucPly-2.

Photo 78-Looking north at Pit-19.

Photo 79-Looking into Adit-3.

Photo 80-Looking north at Adit-3.

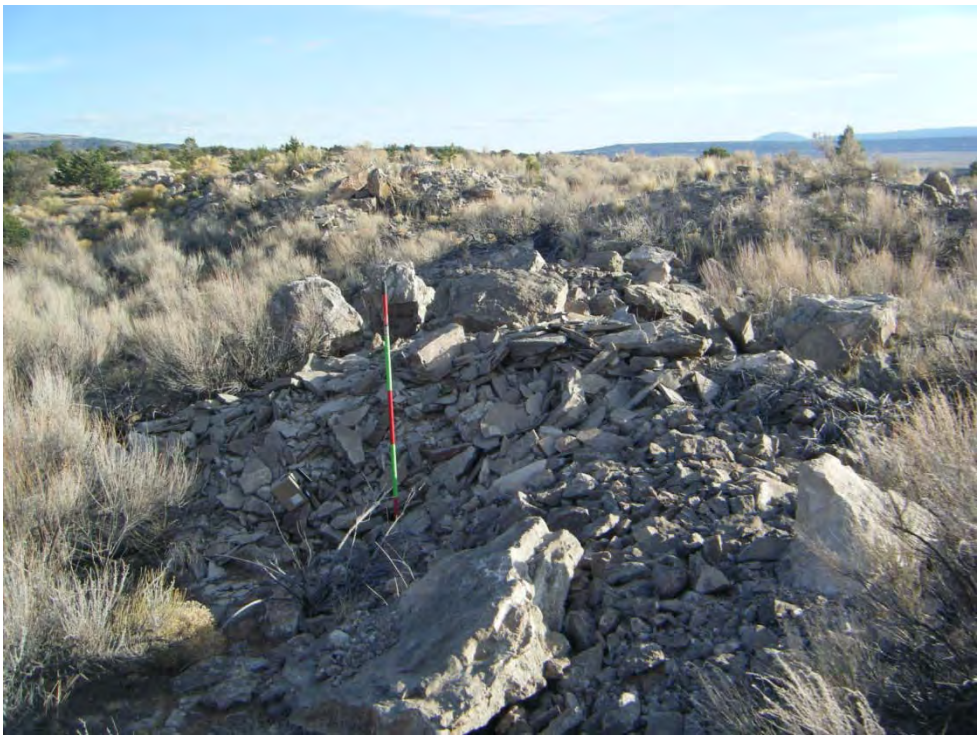


Photo 81-Looking south at PilePly-19.

Photo 82-Looking east at the southern limb of Pit-20.

Photo 83-Looking east at the northern limb of Pit-20.

Photo 84-Looking north at a trash dump (DumpPt-2).

APPENDIX B

FIELD NOTES

1 4/15/10 ACT Abandoned Uranium Mines

Site Name: NM0079, Section 9

Objective: Site Assessment

Personnel: Annelia Tinklenberg
Danny Bowman

Equipment: Rental truck, Trimbel GeoXM (SN: 4948447127, 2008 series), Ludium 192 (SN:234149), Fujifilm digital camera (No. 80839493), backup Garmin GPS, cell phone amplifier, field laptop

7:30 Leaving Albuquerque for site

900 At AUM site

Background Rad - 0m - 8 uR/h; 1m - 9 uR/h

PilePly-1 - 6' high, 60' wide, 120' long
Photo - 1 - looking west at Pile Ply-1
Rad - 1 - PilePly-1; 0m - 3400 uR/h; 1m - 140 uR/h

PilePly 2 - 3' high; 240' wide, 240' long
Photo - 2 - looking west at PilePly 2
Rad 2 - PilePly 2; 0m - 2500 uR/h; 1m - 110 uR/h

Rad 3 - PilePly 2; 0m - 350 uR/h; 1m - 120 uR/h

Pit 1 - 10' deep, 40' wide, 210' long
Photo 3 - looking southwest at Pit 1
Photo 4 - looking northwest in Pit 1
Photo 5 - looking north in Pit-1
Photo 6 - looking northeast at Pit-1
Rad 4 - Pit 1; 0m - 800 uR/h; 1m - 250 uR/h

Dump Pit-1 - 2 - 55 gallon metal drums in Pit-1
Photo 7 - looking west at Dump Pit-1

Pit-2 - 15' high, 180' wide, 300' long (also Photo 12)
Photo 8 - looking southwest down at Pit 2
Photo 9 - looking west in Pit 2
Photo 10 - looking west in Pit 2 at western end
Rad 5 - Pit 2; 0m - 2000 uR/h; 1m - 460 uR/h

PilePly 3 - 20' high, 100' wide, 900' long; soil overburden area
Photo 11 - looking southwest at PilePly 3
Rad 6 - PilePly 3; 0m - 110 uR/h; 1m - 25 uR/h

Photo 12 - Site name from top of PilePly 3, looking at Pit-2, looking north

Pit 3 - 15' deep, 25' wide, 180' long
Photo 13 - looking west at Pit 3
Photo 14 - looking south in Pit 3
Rad 7 - Pit 3; 0m - 3300 uR/h; 1m - 180 uR/h

Pit 4 - 10' deep, 30' wide, 120' long
Photo 15 - looking west a Pit-4
Rad 8 - Pit 4; 0m - 270 uR/h; 1m - 90 uR/h

PilePly 4 - 6' high, 120' wide, 180' long
Photo 16 - looking northwest at PilePly 4
Rad 9 - PilePly 4; 0m - 420 uR/h; 1m - 150 uR/h

PilePly 5 - 25' high, 150' wide, 210' long; soil overburden and waste rock
Photo 17 - looking west at PilePly 5;
Rad 10 - PilePly 5; 0m - 270 uR/h; 1m - 70 uR/h

Pit 5 - 10' deep, 30' wide, 160' long
Photo 18 - looking northwest at Pit 5
Rad 11 - Pit 5; 0m - 2400 uR/h; 1m - 260 uR/h

4/15/10 ALT Abandoned Uranium Mines

Pit 6 - 10' deep; 45' wide, 75' long; Partially filled with Pile Ply-6
Photo 19 - looking ~~W~~ ALT southwest at Pit 6
~~Photo~~ ALT
Rad 12 - Pit 6; 0m - 1200 uR/h; 1m - 130 uR/h

Pile Ply-6 - 4' high, 60' wide, 120' long
Photo 20 - looking west at Pile Ply 6
Rad 13 - Pile Ply 6; 0m - 900 uR/h; 1m - 210 uR/h

Pit 7 - 8' deep, 60' wide, 270' long; Adit-1 at western end
Photo 21 - looking west at Pit 7
Photo 22 - looking west in Pit 7
Rad 14 - Pit 7; 0m - 450 uR/h; 1m - 290 uR/h

Adit 1 - western end of Pit 7; 6' tall, 15' wide, unknown length
Photo - 23 looking west into adit-1
Photo 24 - looking west at adit-1 entrance; being filled by sand, sand dune encroaching from above
Rad 15 - Adit-1 entrance; 0m - 480 uR/h; 1m - 420 uR/h

Pit 8 - 8' deep, 90' wide, 120' long
Photo 25 looking south at Pit 8
Rad 16 - Pit 8; 0m - 290 uR/h; 1m - 140 uR/h

Equip-1 - water truck, next to Pit 8
Photo 26 - looking west at Equip-1

Pit 9 - 20' deep, 150' wide, 270' long

deeper pit inside main pit
Photo 27 - looking south at Pit 9
Rad 17 - Pit 9; 0m - 4400 uR/h; 1m - 500 uR/h
Photo 28 - Rad 17 reading

Erosply-1 - 25' deep, 45' wide, 75' long; backcutting erosion along mesa, eroding Pile Ply-7
Photo 29 - looking south at Erosply-1

4/15/10 ALT Abandoned Uranium Mines

Pile Ply-7 - ~~4~~ ALT 3' high, 150' wide, 300' long
Photo 30 - looking east at Pile Ply-7 spreading down mesa about 40'

Photo 31 - looking east at Pile Ply 7
Rad - 18 - Pile Ply -7; 0m - 1400 uR/h; 1m - 120 uR/h
Photo 32 - looking east at Pit-10, per Anderson Report
Pit-10 - 10' deep, 45' wide, 600' long
Rad 19 - Pit 10; 0m - over 5000 uR/h (max); 1m - 1100 uR/h
Photo ~~32~~ 33 ALT - Rad 19, rock mineralization
Rad 20 - Pit 10; 0m - 800 uR/h; 1m - 400 uR/h
~~Photo 34 ALT - looking west in Pit 10 ALT~~
Photo ~~34~~ 35 ALT - looking east in Pit-10
Photo ~~35~~ 36 ALT - looking east at Pit-10

Photo ~~36~~ 37 ALT - looking southeast, site name

Pit 11 - 10' deep, 50' wide, 300' long
Photo ~~37~~ 38 ALT - looking west at Pit 11
Photo ~~38~~ 39 ALT - looking southwest in Pit 11
Rad 21 - Pit 11; 0m - 700 uR/h; 1m - 180 uR/h

Pile Ply 8 - 8' high, 30' wide, 120' long
Photo ~~39~~ 40 ALT - looking northwest at Pile Ply 8
Rad 22 - Pile Ply ~~8~~; 0m - 460 uR/h; 1m - 150 uR/h

Pit 12 - 8' deep, 36' wide, 60' long
Photo ~~40~~ 41 ALT - looking southeast at Pit 12
Rad 23 - Pit 12; 0m - 1000 uR/h; 1m - 230 uR/h

Pit 13 - 20' deep, 60' wide, 900' long "⊃" shape ← N
Photo ~~41~~ 42 ALT - looking north along the eastern limb of Pit 13
Photo ~~42~~ 43 ALT - looking east along the southern limb of Pit 13
Photo ~~43~~ 44 ALT - looking west along the southern limb of Pit 13
Rad 24 - Pit 13; 0m - 800; 1m - 150 uR/h
Rad 25 - Pit 13; 0m - 1000 uR/h; 1m - 150 uR/h

Photo 44-ALT - looking east at intraformational fold in Pit 13 mentioned in the Anderson Report and in Photo d.

Rad - 26 - Photo 45, Pit 13; 0m - 700 uR/h; 1m - 370 uR/h

Photo 45-ALT - looking northwest at Pit 13, per Anderson Report Photo c.

PilePly 9 - 8' tall, 60' wide, 330' long

Photo 46-ALT - looking southeast at PilePly 9

Rad 27-ALT - PilePly 9 - 0m - 1100 uR/h; 1m - 170 uR/h

Pit 14 - 20' deep, 90' wide, 450' long "∩" shape ←N

Photo 47-ALT - looking at the northern limb of Pit-14, looking east

Photo 48-ALT - looking east at northern limb in Pit-14

Rad 28 - Pit 14; 0m - 950 uR/h; 1m - 180 uR/h

Rad 29 - Pit 14; 0m - 1200 uR/h; 1m - 500 uR/h

Photo 49-ALT - Rad 29 mineralization

Photo 50-ALT - looking east at southern limb of Pit-14

Photo 51-ALT - looking east above southern limb of Pit-14 per Anderson Photo g.

Photo 52-ALT - looking east above northern limb of Pit-14 per Anderson Photo f

PilePly 10 - 30' tall, 360' wide, 375' long; soil and rock

Photo 53-ALT - looking east at PilePly 10

Rad 30 - PilePly 10; 0m - 600 uR/h; 1m - 40 uR/h

Rad 31 - PilePly 10; 0m - 20 uR/h; 1m - 19 uR/h

Pit - 15 - "eyeball" pit, ' deep

Photo 54-ALT - looking east at Pit-15 from PilePly 10

Photo 55-ALT - looking southeast at Pit-15 per Anderson Photo e; 25' thick overburden

Photo 56-ALT - looking east at limestone knob in Pit 15

Photo 57-ALT - looking east at east wall of Pit 15

Rad 32 - limestone knob in Pit 15; 0m - 600 uR/h; 1m - 230 uR/h

Rad 33 - Pit 15; 0m - 1200 uR/h; 1m - 300 uR/h

PilePly 11 - 4' high; 150' wide, 750' Long

Photo 58-ALT - looking east at PilePly 11

Rad 34 - PilePly 11; 0m - 2800 uR/h; 1m - 280 uR/h

Photo 59-ALT - looking south at PilePly 11

PilePly 12 - 8' high, 150' wide, 300' long

Photo 60-ALT - looking northwest at PilePly 12

Rad 35 - PilePly 12; 0m - 480 uR/h; 1m - 160 uR/h

PileRidge 1 - 3' high, 10' wide, 90' long

Photo 61-ALT - looking west at PileRidge 1

Rad 36 - PileRidge 1; 0m - 2500 uR/h; 1m - 130 uR/h

Pit 16 - 10' deep, 50 wide, 325 long ←N

Photo 62-ALT - looking north at Pit 16

Photo 63-ALT - looking southeast at fold in Pit-16

Photo 64-ALT - looking east at Pit 16 along northern arm

Rad 37 - Pit 16; 0m - 1700 uR/h; 1m - 260 uR/h

PilePly 13 - 10' high, 30' wide, 180' long

Photo 65-ALT - looking east at PilePly 13

Rad 38 - PilePly 13; 0m - 800 uR/h; 1m - 34 uR/h

Access Rt-2 - from Pit 16 to Pit 17

Pit 17 - 8' deep, 20' wide, 60' long

Photo 66-ALT - looking north at Pit-17

Rad 39 - Pit 17; 0m - 1200 uR/h; 1m - 250 uR/h

Pile Ridge-2 - 4' high, 10' wide, 60' long

Photo 67-ALT - looking north at PileRidge 2

Rad 40 - PileRidge 2 - 0m - 90 uR/h; 1m - 30 uR/h

PilePly 14 - 4' high, 45' wide, 66' long

Photo 68-ALT - looking southeast at PilePly 14

Rad 41 - PilePly 14; 0m - 270 uR/h; 1m - 43 uR/h

7 4/15/10 AUT Abandoned Uranium Mines

PilePly15 - 6' tall, 10' wide, 25' long
Photo 69-AUT - PilePly15 looking north
Rad 42 - PilePly15; 0m - 700 uR/h; 1m - 140 uR/h

PilePly16 - 3' tall, 150' wide, 600' long; spreads down mesa edge; mostly soil
Photo 70-AUT - PilePly16 looking east
Rad 43 - PilePly16; 0m - 36 uR/h; 1m - 26 uR/h

PilePly17 - 3' tall, 60' wide, 210' long; spreads down mesa, waste rock
Photo 71-AUT - looking southeast at PilePly17
Photo 72-AUT - looking west along mesa edge of PilePly17
Rad 44 - PilePly17; 0m - 1100 uR/h; 1m - 90 uR/h

Pit18 - 10' deep, 30' wide, 90' long
Photo 73-AUT - looking east at Pit18
Rad 45 - Pit18; 0m - 2200 uR/h; 1m - 440 uR/h

Adit2 - 3' tall, 8' wide, 20' long; filling with sand
Photo 74-AUT - looking east at Adit2
Rad 46 - Adit2; 0m - 260 uR/h; 1m - 190 uR/h

StructPly1; 6' tall, 10' wide, 20' long; timber structure, old mattress inside
Photo 75-AUT - looking east at structPly1

PilePly18 - 20' tall, 105' wide, 450' long; sand with piles of waste rock throughout
Photo 76-AUT - PilePly18 looking east
Rad 47 - PilePly18 - 0m - 280 uR/h; 1m - 160 uR/h

StructPly2 - 5' tall (inside), 2' at entrance, filling in with sand; wood roof and door; 30' long, 10' wide - use: for storage, maybe explosives?
Photo 77-AUT - looking south at structPly2

Pit19 - 15' deep, 30' wide, 105' long; Adit3 at northern end
Photo 78-AUT - looking north at Pit19
Rad 48 - Pit19; 0m - 240 uR/h; 1m - 60 uR/h

4/15/10 AUT Abandoned Uranium Mines (8)

Adit3 - 5' tall, 8' wide, unknown length; trends north
Photo 79-AUT - looking into adit3
Photo 80-AUT - looking north at Adit3
Rad 49 - Adit3 - 0m - 2800 uR/h; 1m - 480 uR/h

PilePly19 - 4' tall, 60' wide, 360' long
Photo 81-AUT - looking south at PilePly19
Rad 50 - PilePly19 - 0m - 1400 uR/h; 1m - 130 uR/h

Pit20 - 4' deep, 120' wide, 150' long (O) shape
Photo 82-AUT - looking east at Pit20, southern limb
Photo 83-AUT - looking east at Pit20, northern limb
Rad 51 - Pit20; 0m - 800 uR/h; 1m - 280 uR/h

DumpPt-2 - in Pit20; tires, metal cans, wood, glass, metal car parts
Photo 84-AUT - looking north at DumpPt2

Rad 52 - Pit20; 0m - 1500 uR/h; 1m - 390 uR/h
Rad 53 - 0m - 9 uR/h; 1m - 8 uR/h

1900 Leaving AUM site

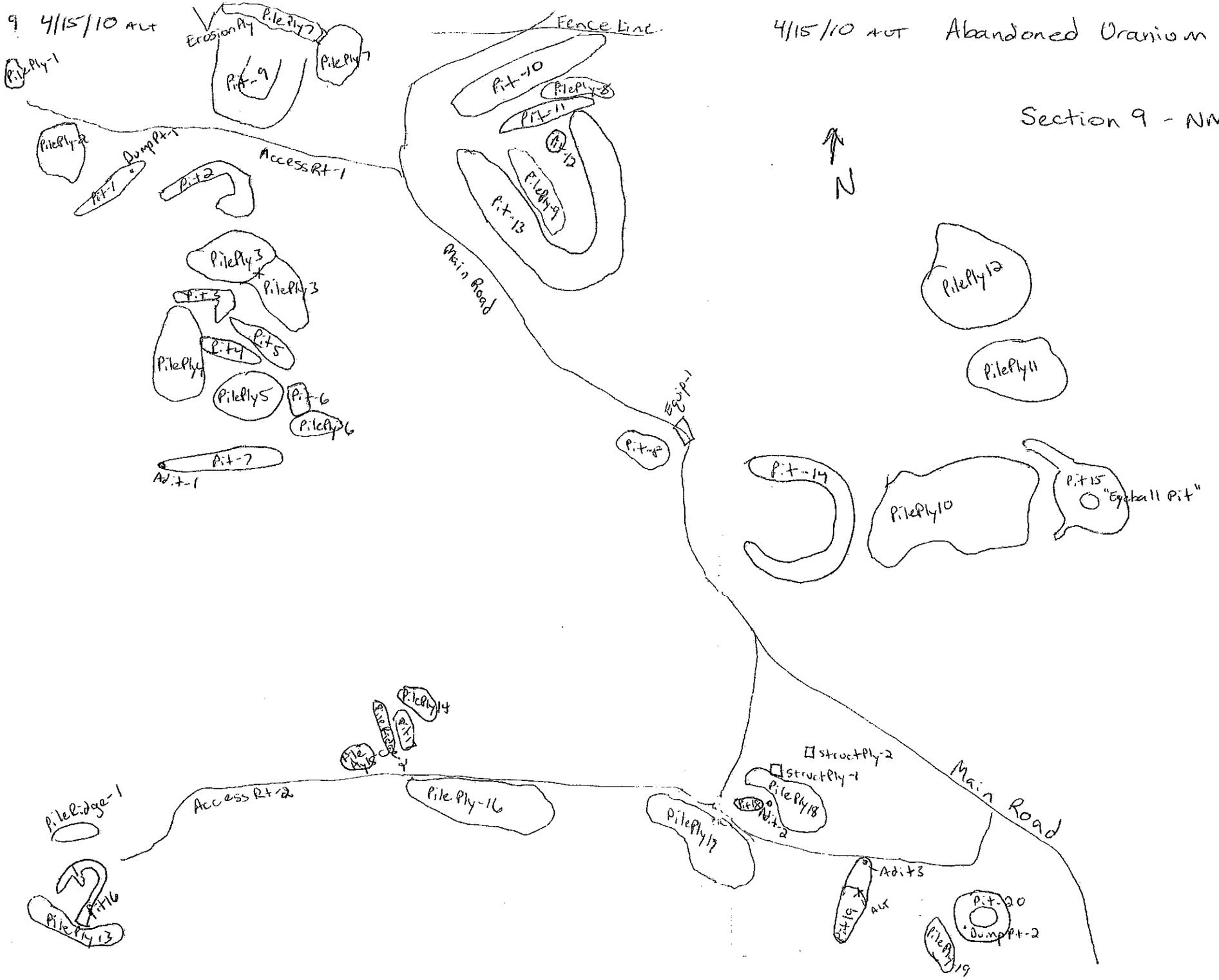
Soils: Tan-red sandy soils, rocky

Rocks: Tan-red sandstone (Entrada); Grey Todilto Limestone

Human Activities: Grazing; fences, cow prints, etc.
Past mining activities; roads, trash, etc
Current exploration; vehicle tracks, water truck, bags of sample (green)

Wildlife: Deer, rabbit tracks and droppings.

AUT


Section 9 - NM0079
N
Fence Line
Main Road
Access Rt-1
Access Rt-2
Dump Pt-1
Erosion Ply
Pile Ply-1
Pile Ply-2
Pile Ply-3
Pile Ply-4
Pile Ply-5
Pile Ply-6
Pile Ply-7
Pile Ply-8
Pile Ply-9
Pile Ply-10
Pile Ply-11
Pile Ply-12
Pile Ply-13
Pile Ply-14
Pile Ply-15
Pile Ply-16
Pile Ply-17
Pile Ply-18
Pile Ply-19
Pile Ridge-1
Pit-1
Pit-2
Pit-3
Pit-4
Pit-5
Pit-6
Pit-7
Pit-8
Pit-9
Pit-10
Pit-11
Pit-12
Pit-13
Pit-14
Pit-15 "Eyeball Pit"
Pit-16
Pit-18
Pit-19
Pit-20
Adit-1
Adit-2
Adit-3
Struct Ply-1
Struct Ply-2
Equip-1
Dump Pt-2
Alt