



Department of Energy  
Office of Legacy Management

November 30, 2009

OLM-SRS-2009-174

Mr. Dick White, Vice President  
Exploration Colorado/Utah Operations  
Energy Fuels Resources  
P.O. Box 888  
Nucla, CO 81424

Subject: Credit for Reclamation Performed in Lieu of Royalties

Dear Mr. White:

The U.S. Department of Energy (DOE) and its contractor have monitored the reclamation work scope performed by Energy Fuels Resources (EFR), in lieu of annual royalty payments for the 2009-2010 lease year, and have concluded that the work was completed in a satisfactory manner. In accordance with DOE's letter dated June 15, 2009, EFR is hereby credited with annual royalty payments in the aggregate amount of \$23,100 to be distributed and credited to EFR's four lease tracts as indicated: C-SR-16A (\$4,400); C-CM-24 (\$6,500); C-G-26 (\$5,800); and C-G-27 (\$6,400). DOE greatly appreciates EFR's efforts in addressing these issues and we trust that this arrangement was beneficial for both parties.

If you have questions concerning this matter, please contact me at (720) 377-9683.

Sincerely,

*Steven R. Schiesswohl*  
for Steven R. Schiesswohl  
Realty Officer

cc: Project File (E. Cotter)

2597 B 3/4 Road, Grand Junction, CO 81503	<input type="checkbox"/>	3600 Collins Ferry Road, Morgantown, WV 26505
1000 Independence Ave., S.W., Washington, DC 20585	<input type="checkbox"/>	11025 Dover St., Suite 1000, Westminster, CO 80021
10995 Hamilton-Cleves Highway, Harrison, OH 45030	<input type="checkbox"/>	955 Mound Road, Miamisburg, OH 45342
232 Energy Way, N. Las Vegas, NV 89030	<input type="checkbox"/>	

REPLY TO: Westminster, CO Office

ULP 020.07(B)

Contains Privileged Information

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May not be checked out or copied without approval from Ed Cotter or Marilyn Kastens

## **DOE Uranium Leasing Program**

### **Energy Fuels Resources — Work Scope for Reclamation in-lieu-of Royalty**

#### **Background**

During the fall of 2008, the U.S. Department of Energy Office of Legacy Management (DOE) redefined and realigned the boundaries of its uranium lease tracts to incorporate lands located inside its withdrawal boundaries that were valid claims at the time of the withdrawals but have since become invalid. As a result of those boundary redefinition/realignment activities, many of the current lease tracts now contain mining-related features that are associated with abandoned uranium mine sites located on those claims. By incorporating these lands into its lease tracts, DOE accepted the reclamation liability associated with those mining-related features.

#### **Current Status**

On January 6, 2009, DOE notified its leaseholders of the aforementioned mining-related features located on their respective lease tracts. Specifically, Energy Fuels Resources was notified of various features located on Lease Tracts C-G-26 and C-G-27. In that letter and during subsequent discussions, Energy Fuels Resources was offered two options. The first option was to incorporate one or more of the specific features into its respective lease operations, thereby accepting the reclamation liability associated with those features incorporated. For those features that were not accepted under the first option, Energy Fuels Resources was given the option to fully reclaim the features in-lieu-of some portion of its annual royalty payments. That work scope, along with some additional work scope that was subsequently identified on Lease Tract **C-SR-16A**, is outlined below.

#### **Work Scope**

##### **C-SR-16A**

The subsidence located at the Golden Rod mine site needs to be addressed. This subsidence shall be dug out and then refilled with available surface soil materials and reseeded with an approved seed mixture (less than 0.1 acres).

The small subsidence located in the Golden Rod No.3 group of mines needs to be addressed. This subsidence shall be dug out and then refilled with available surface soil materials and reseeded with an approved seed mixture.

A series of surface pits and trenches located on the former Golden Rod, Keystone and Santa Maria claims need to be addresses. These pits and trenches shall be backfilled with available mine-waste-rock materials, covered with other available surface soil materials, pocked if needed, and reseeded with an approved seed mixture (approximately 5 acres).

##### C-G-26:

The abandoned mine site located on the former Maverick No. 6 claim needs to be addressed. The portal shall be permanently closed with large boulders and rocks and then backfilled with available mine-waste-rock materials. The mine-waste-rock dump shall be recontoured to blend in with the natural topography of the area. The area shall then be covered with other available surface soil materials, pocked if needed, and reseeded with an approved seed mixture (approximately 0.2 acres).

The abandoned mine site located on the former Radium No. 5 claim needs to be addressed. The portal shall be permanently closed with large boulders and rocks and then backfilled with available mine-waste-rock and other available surface soil materials. The posts/timbers within the vertical shaft shall be burned in place. The shaft shall also be backfilled with available materials. The mine-waste-rock dump shall be recontoured, as appropriate, to blend in with the natural topography of the area. The area shall then be covered with available surface soil materials, pocked if needed, and reseeded with an approved seed mixture (less than 0.1 acres).

The BLM subsidence, located on the southwest end of the former Arrowhead No. 33 claim, needs to be addressed. This subsidence shall be dug out and then refilled with available surface soil materials and reseeded with an approved seed mixture (less than 0.1 acres). The drainage needs to be rerouted to the east of the subsidence area.

A small cased vent located on the former Blue Ribbon No. 11 claim needs to be addressed. The vent casing shall be removed or terminated below grade, and the subsidence shall be backfilled with available surface soil materials and reseeded with an approved seed mixture.

A subsided shaft (water drop) located on the former Mineral Channel No. 14 claim needs to be addressed. The water pipe shall be terminated approximately 2 feet below grade and the subsidence shall be backfilled with available surface soil materials and reseeded with an approved seed mixture.

A subsided shaft located on the former Queen of the Hills claim needs to be addressed. This subsidence shall be backfilled with available surface soil materials and reseeded with an approved seed mixture.

An open, cased vent shaft located on the former Arrowhead No. 12 claim needs to be addressed. The vent casing shall be removed or terminated approximately 2 feet below grade. The vent shall be permanently closed with a polyurethane foam plug, and then be backfilled with available surface soil materials and reseeded with an approved seed mixture.

A subsided shaft located on the south end of the former Calamity No. 13 claim needs to be addressed. This subsidence shall be backfilled with available surface soil materials and reseeded with an approved seed mixture.

C-G-27:

The subsidence located at the New G-3 mine site needs to be addressed. This subsidence shall be dug out and then refilled with available surface soil materials and reseeded with an approved seed mixture (less than 0.1 acres).

An open drill hole located southwest of the G-2 shaft shall be permanently closed with polyurethane foam plugs and then covered with surface soil materials and reseeded with an approved seed mixture.

**Note:** This work shall be performed to the satisfaction of the DOE Realty Officer and/or his LMS Contractor representatives from S.M. Stoller Corporation, who shall provide project oversight of the reclamation field activities.

# Site Specific Storm Water Management Plan

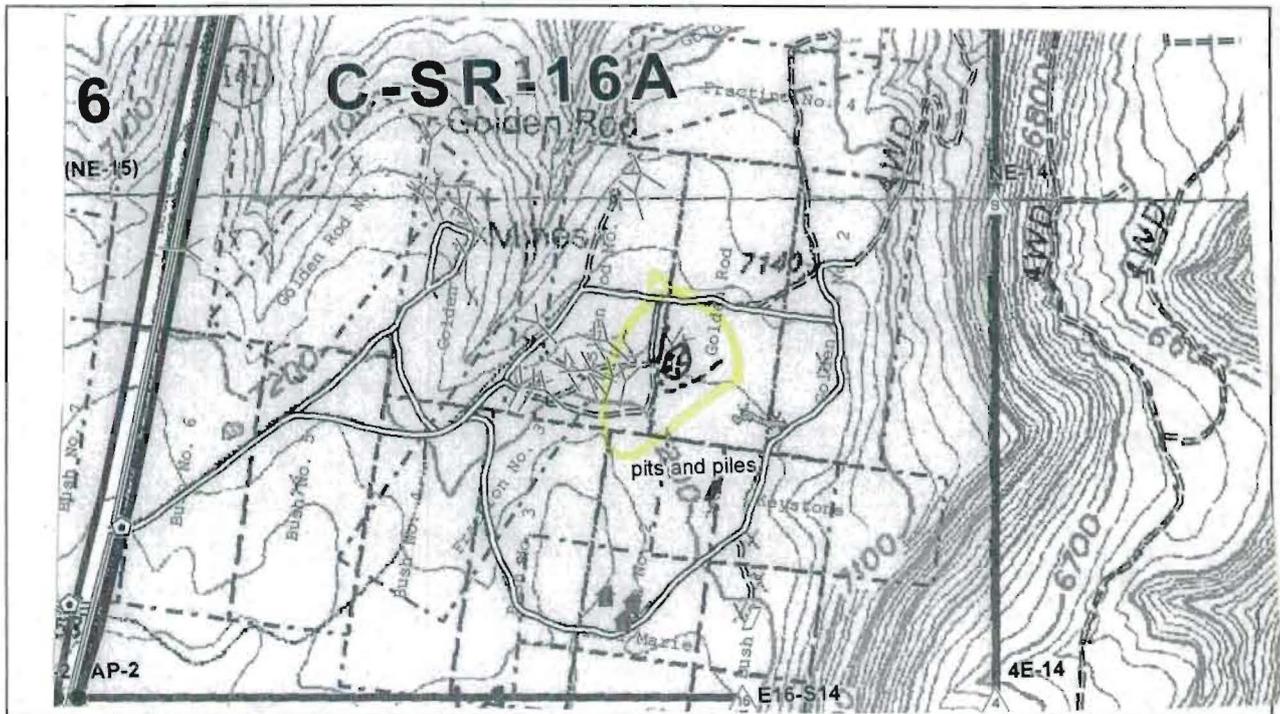
Lease Tract#: SR-16A Site: Slick Rock Work Area Area: Golden Rod Mine Site  
Work Scope: Digout and Backfill Subsidence

Construction activities will be managed to minimize the volume of storm water entering the disturbed portion of the work area, contain and control the volume of storm water which falls within that area, and minimize the potential for the migration of soil/sediments.

The following engineering control measures have been selected as being applicable to the specific work area disturbance:

- Option #1:** Storm diversion will be accomplished by the installation of ditches, berms, or contouring to minimize the potential for erosion of the portion of the work area.
- Option #2:** Storm water containment/control will be accomplished within the disturbed portion of the work area by construction of catchment basins, including "pocking" of the recontoured materials.
- Option #3:** Migration of soil/sediments will be minimized by the installation of silt fences/barricades utilizing fabric or straw bales.
- Option #4:** Soil stabilization will be accomplished by seeding the disturbed portion of the work area to establish a viable, diverse stand of grasses, shrubs and forbs.
- Option #5:** No action required.

Site Sketch:



Signature: [Handwritten Signature] Date: 5/18/09

# Site Specific Storm Water Management Plan

Lease Tract#: SR-16A Site: central Work Area: various pits & trenches  
Work Scope: backfill of pits/trenches w/ waste rock piles

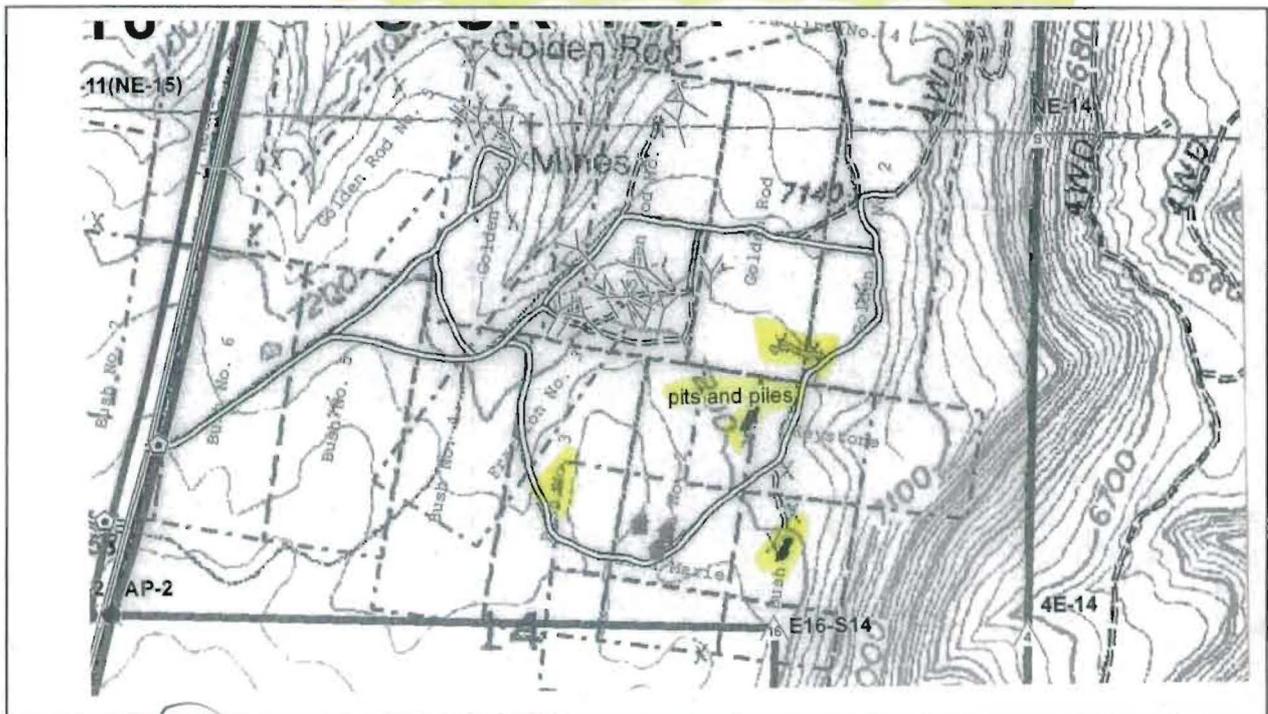
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- Option #4:** Soil stabilization will be accomplished by seeding the disturbed portion of the work area to establish a viable, diverse stand of grasses, shrubs and forbs.
- Option #5:** No action required.

Site Sketch:

**NOTE: Pits/trenches will be left as shallow catchment basins.**



Signature: [Handwritten Signature] Date: 5/18/09

**U.S. Department of Energy  
Office of Legacy Management  
National Environmental Policy Act – Environmental Checklist**

<b>Project/Activity Title</b> Reclamation Projects in Slick Rock Lease Tracts C-SR-16 and 16A	<b>NEPA ID Number</b> LM 14-09	<b>Date</b> July 27, 2009
<b>LM Site Name</b> Uranium Leasing Program, CO	<b>LM Site Program</b> Reuse and Property Management	
<b>Contractor NEPA Coordinator</b> Sandra Beranich	<b>Signature</b> <i>Sandra Beranich</i> 7-27-09	
<b>Contractor Task Manager</b> Ed Cotter	<b>Signature</b> <i>Ed Cotter</i> 7/27/09	
<b>DOE Project Manager</b> Steven Schiesswohl	<i>Steven Schiesswohl</i> 2009.07.27 16:01:10 -06'00'	

**A. Brief Project/Activity Description:**

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) proposes to reclaim subsidence features, surface pits and trenches, and a subsided shaft on DOE Lease Tracts C-SR-16 and 16A. Independent contractors associated with the lessees would complete the work, which would take approximately 2 ½ weeks. Six proposed projects each cover between 0.1 and 0.2 acres. A seventh project includes a series of surface pits and trenches that covers approximately 5 acres. The lease tracts are adjacent and cover a cumulative 2,376 acres. State Highway 141 is a boundary between the two lease tracts.

All subsidence features would be backfilled with available surface mine-waste rock and other available soil materials then graded to blend into adjacent areas. The surface pits and trenches would be similarly backfilled. After completion of reclamation, areas would be seeded

**B. Environmental Concerns:**

If the proposed action could affect human health and the environment, the "yes" column is checked, and an explanation of the degree, type, and magnitude of the physical, chemical, and radiological sources of impacts is given below. Additional description or explanation is provided on attached sheets as necessary.

Element	Yes	No	Element	Yes	No
Air emissions/air quality	X		Exposure/impacts to public or workers		X
Noise	X		Need for public awareness/involvement		X
Solid waste generation		X	Transportation/traffic control required		X
Mixed waste management		X	Access to/use of DOE property	X	X
Chemical storage on site		X	Visual resources impacted		X
Pesticide/herbicide use		X	Cultural/arch resources present		X
Toxic substances management		X	Wetland/floodplain impacted		X
Regulated quantities of petroleum used or stored on site		X	Protected species present: Federal, state, or Tribe listed		X
Radioactive materials/soils		X	Migratory birds breeding or nesting	X	
Surface (ground) disturbance	X		Wild/scenic rivers impacted		X
Surface water use/contamination		X	Prime/unique farmlands present		X
Surface water quality		X	Groundwater use/contamination	X	X
Groundwater quality affected		X	Other Considerations?		X

**C. Explanation and qualification of all 'yes' responses**

Air emissions/air quality: Use of heavy equipment would result in minor and temporary amounts of fugitive dust being present during the duration of the proposed actions.

Noise: Noise levels would be temporarily elevated during use of the heavy equipment.

Surface (ground) disturbance: Reclaiming the mines and associated features would result in minor surface disturbance. The long-term affect would be to remove health and safety concerns and to improve habitat conditions.

Migratory birds breeding or nesting: The work is scheduled to avoid breeding and nesting periods and is not anticipated to affect migratory birds.

**D. Recommendation:**

The proposed action to complete various reclamation activities related to past mining activities would be considered categorically excluded from further environmental evaluation under Title 10 *Code of Federal Regulations* Part 1021, Appendix B to Subpart D, B1.3(k), "Erosion control and soil stabilization measures (such as reseeded and revegetation)."

Meets Criteria  Does Not Meet Criteria  Unsure

**E. NEPA Determination**

I have reviewed the scope of actions proposed under Section A of this Environmental Checklist, and the information relevant to the potential for environmental impacts in Section B, and determined the following:

The proposed actions meet the criteria for categorical exclusion

The proposed actions do not meet the criteria for categorical exclusion; therefore, I recommend that the LM NEPA Planning Board (NPB) be convened based on my recommendation (see attached rationale) to complete:

- an Interim Action  an Environmental Assessment
- an Environmental Impact Statement  a Supplemental Analysis

  
\_\_\_\_\_  
LM NEPA Compliance Officer

8/24/09  
\_\_\_\_\_  
Date

**Distribution upon signature:**

- R. Bush, LM NEPA Compliance officer
- S. Schiesswohl, DOE Project Manager
- S. Beranich, Stoller NEPA Coordinator (e)
- E. Cotter, Stoller Task Manager (e)
- S. Osborn, Stoller Compliance Manager (e)
- rc-grand.junction

NEPA Number

RECEIVED

AUG 27 2009

**CONFIDENTIAL**Casefile  
Number SJ09040**CULTURAL RESOURCE ACTION MEMORANDUM**  
(CASEFILE DOCUMENT)

PROJECT NAME: Documentation of Historic Mine Features on U.S. Department of Energy Uranium Lease Tracts in Western Colorado: Phase 1, Slick Rock Area, San Miguel County (SJ09040).

INVENTORY DATE: August 19, 2009

CULTURAL CONTRACTOR: Alpine Archaeological Consultants, Inc.

LEGAL DESCRIPTION OF INVENTORY: T43-44N R18-19W

CULTURAL VALUES FOUND AND THEIR SIGNIFICANCE (National Register eligibility):

Not Eligible: 5SM1945, 5SM3692, 5SM6556-6570

IF: 5SM6571-6575

TRADITIONAL CULTURAL PROPERTIES, SACRED SITES, OR TRADITIONAL USE AREAS

IDENTIFIED: none known

ADDITIONAL WORK NEEDED:

FORMAL NATIVE AMERICAN CONSULTATION PURSUANT TO THE 1978 NATIVE AMERICAN

RELIGIOUS FREEDOM ACT:

NEEDED? YES: NO: X

WHY?

WITH WHOM? N/A

DATE CONSULTATIONS SENT OUT: Quarterly SOPA (30 day waiting period)

CONDITIONS OF APPROVAL TO PROTECT CULTURAL VALUES:

1. If subsurface cultural resources are unearthed during operations, activity in the vicinity of the cultural resource will cease and a BLM representative notified immediately. Pursuant to 43 CFR 10.4 the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
2. The operator is responsible for informing all persons associated with this project that they will be subject to prosecution for knowingly disturbing Native American Indian shrines, historic and prehistoric archaeology sites, or for collecting artifacts of any kind, including historic items and/or arrowheads and pottery fragments from Federal lands

3/14/2009  
Date\_\_\_\_\_  
Reviewing Archaeologist8/19/09  
Date\_\_\_\_\_  
Field Office Manager

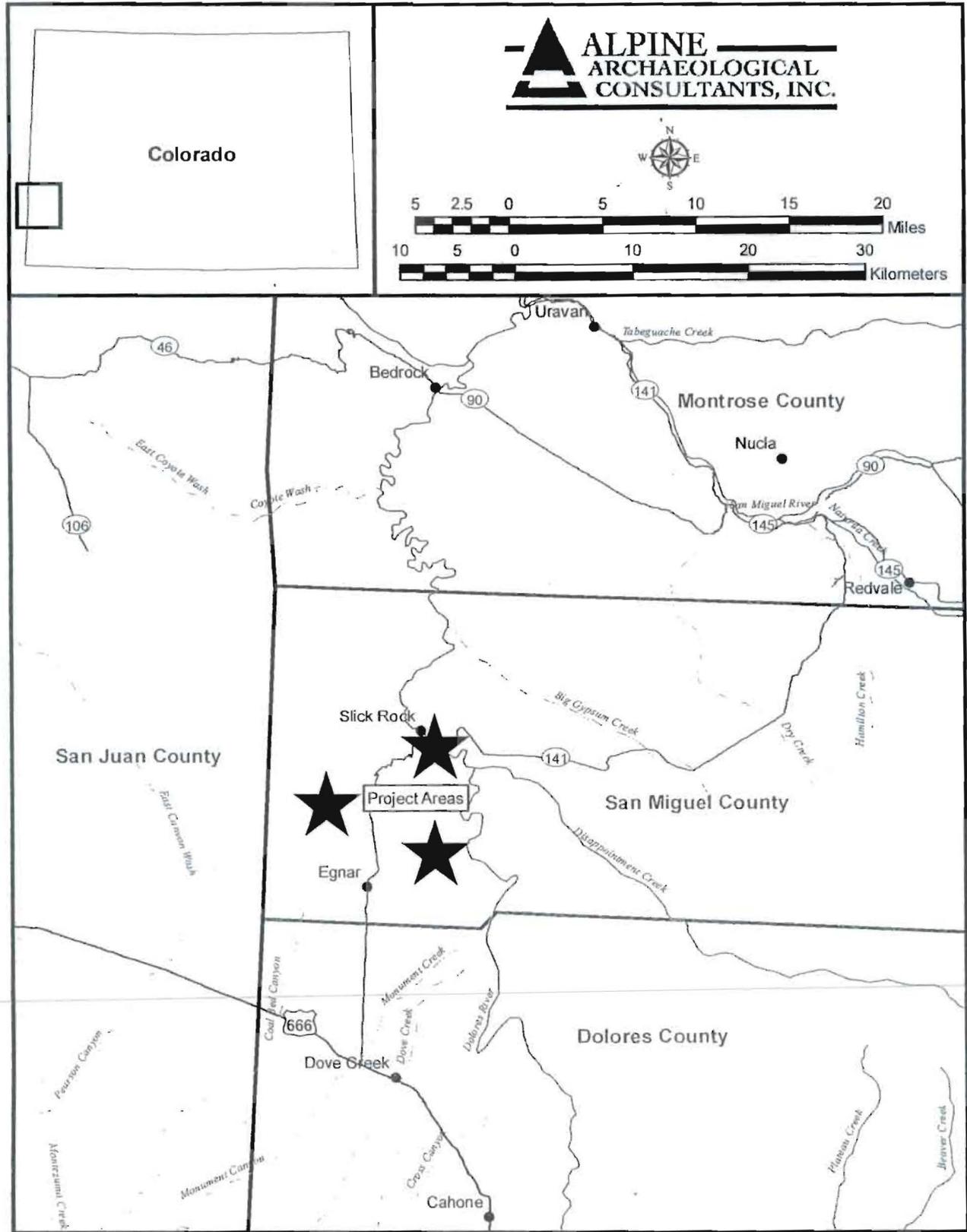


Figure 1. General location of Phase 1 project areas.

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).

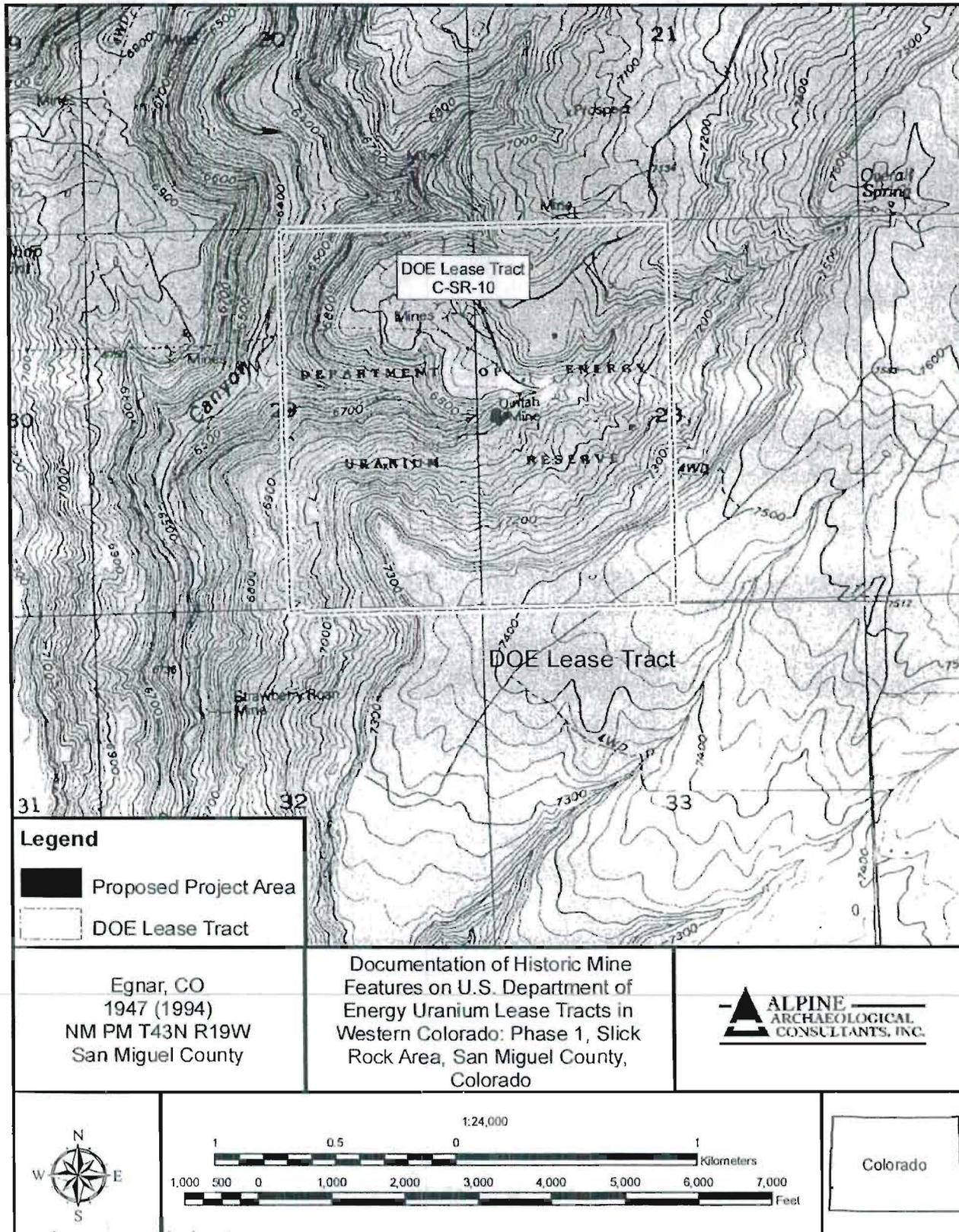


Figure 2. Location of Phase I project area.

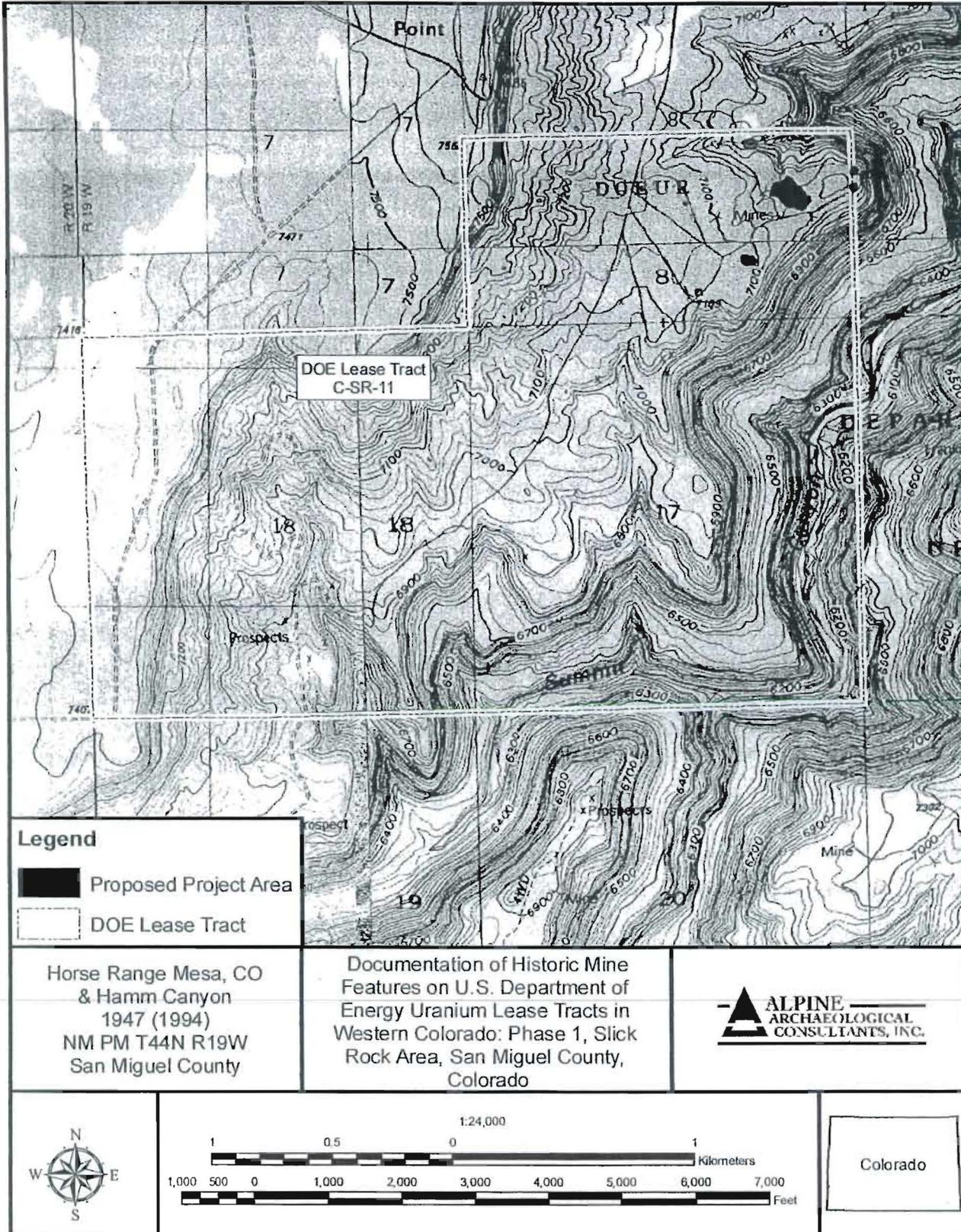


Figure 3. Location of Phase 1 project area.

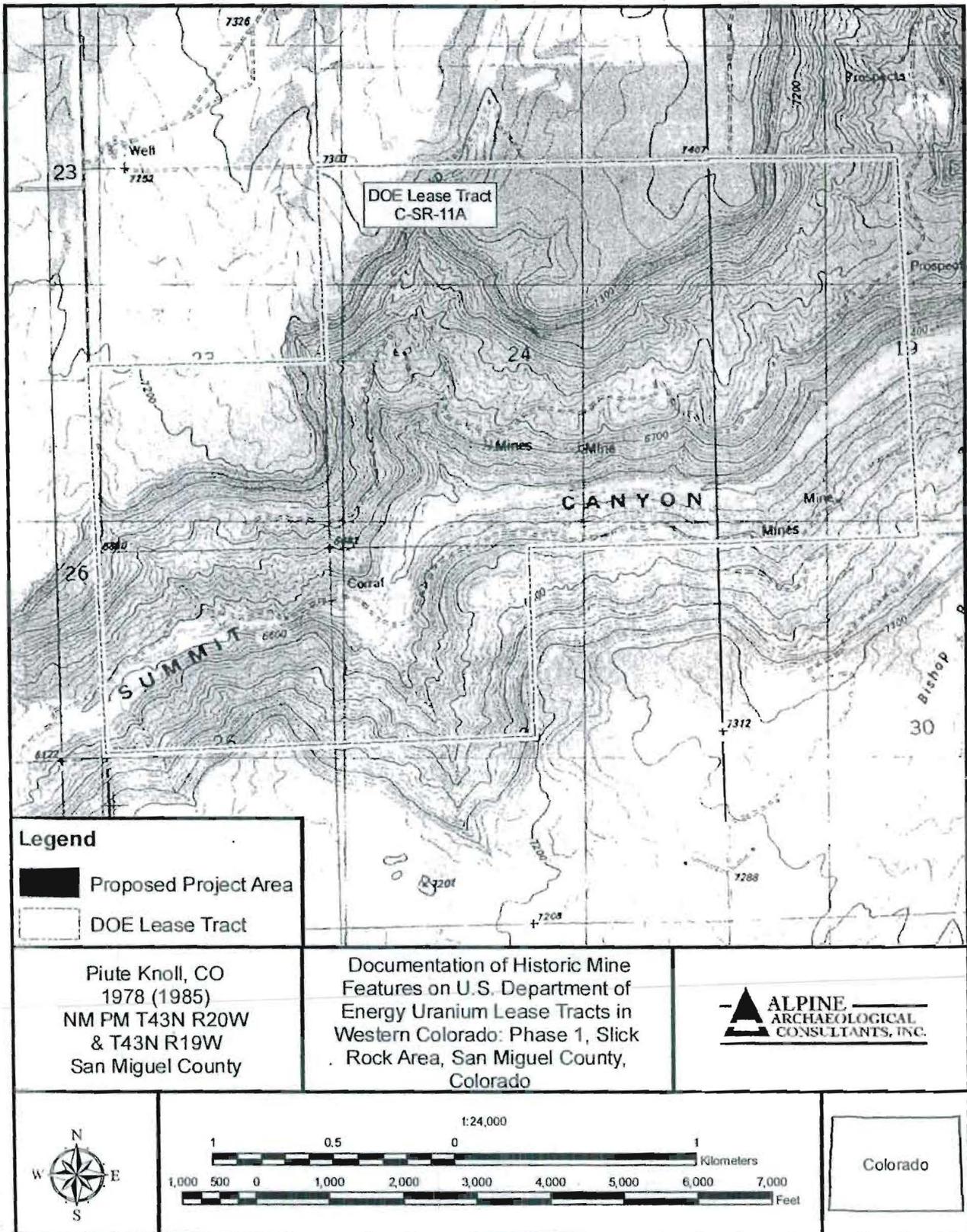


Figure 4. Location of Phase 1 project area.

**CONFIDENTIAL**

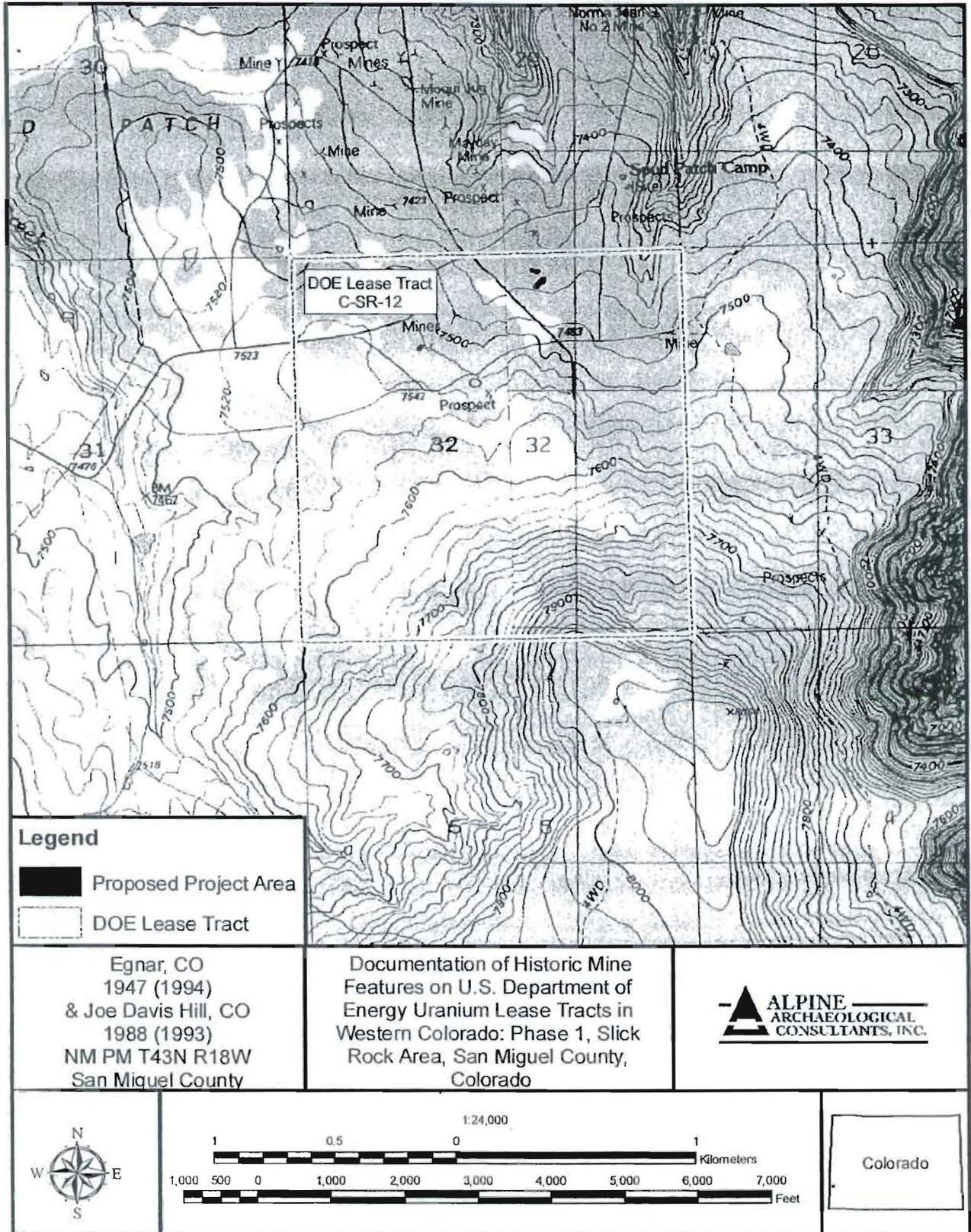


Figure 5. Location of Phase 1 project area.

**CONFIDENTIAL**

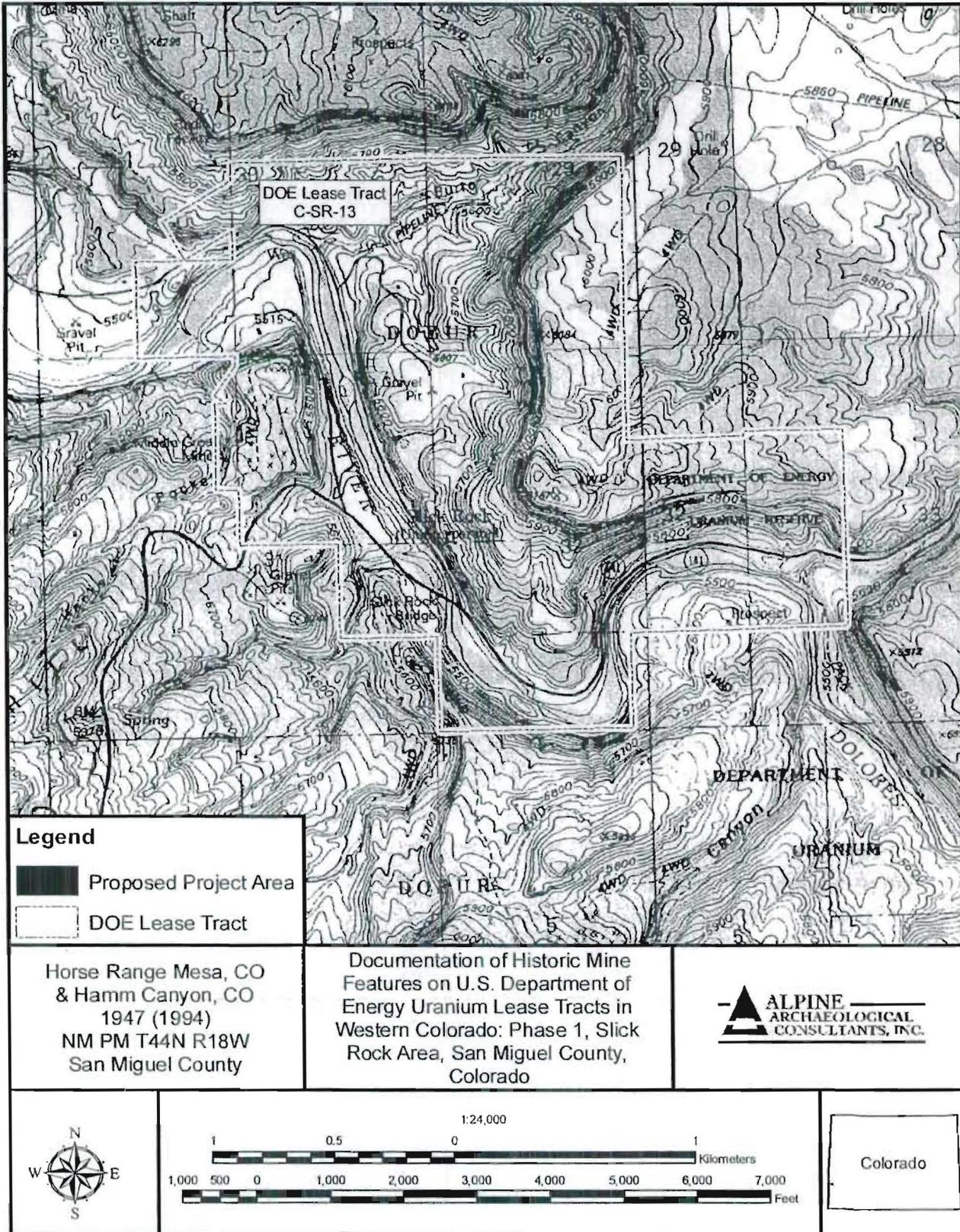


Figure 6. Location of Phase 1 project area.

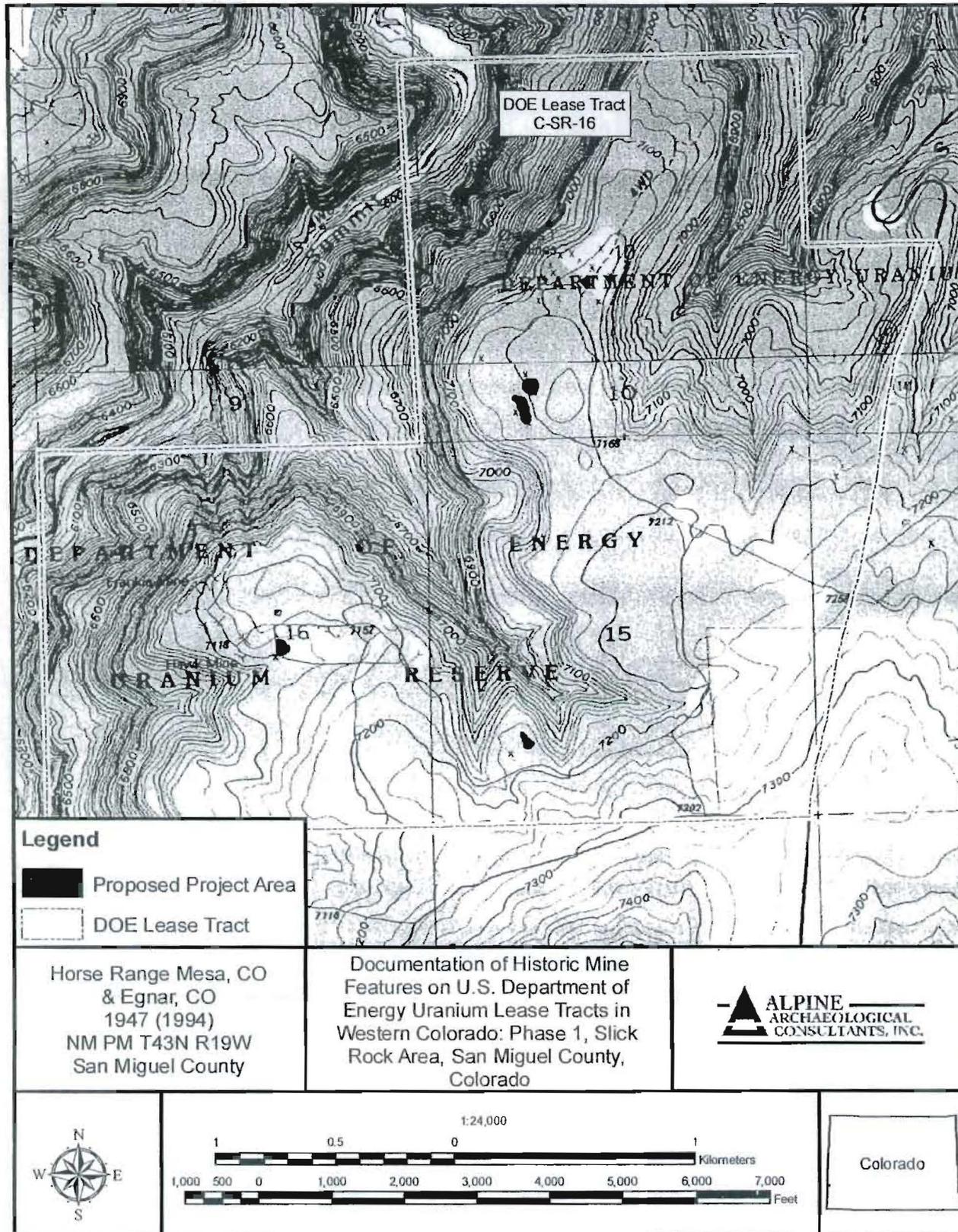


Figure 7. Location of Phase 1 project area.

**CONFIDENTIAL**

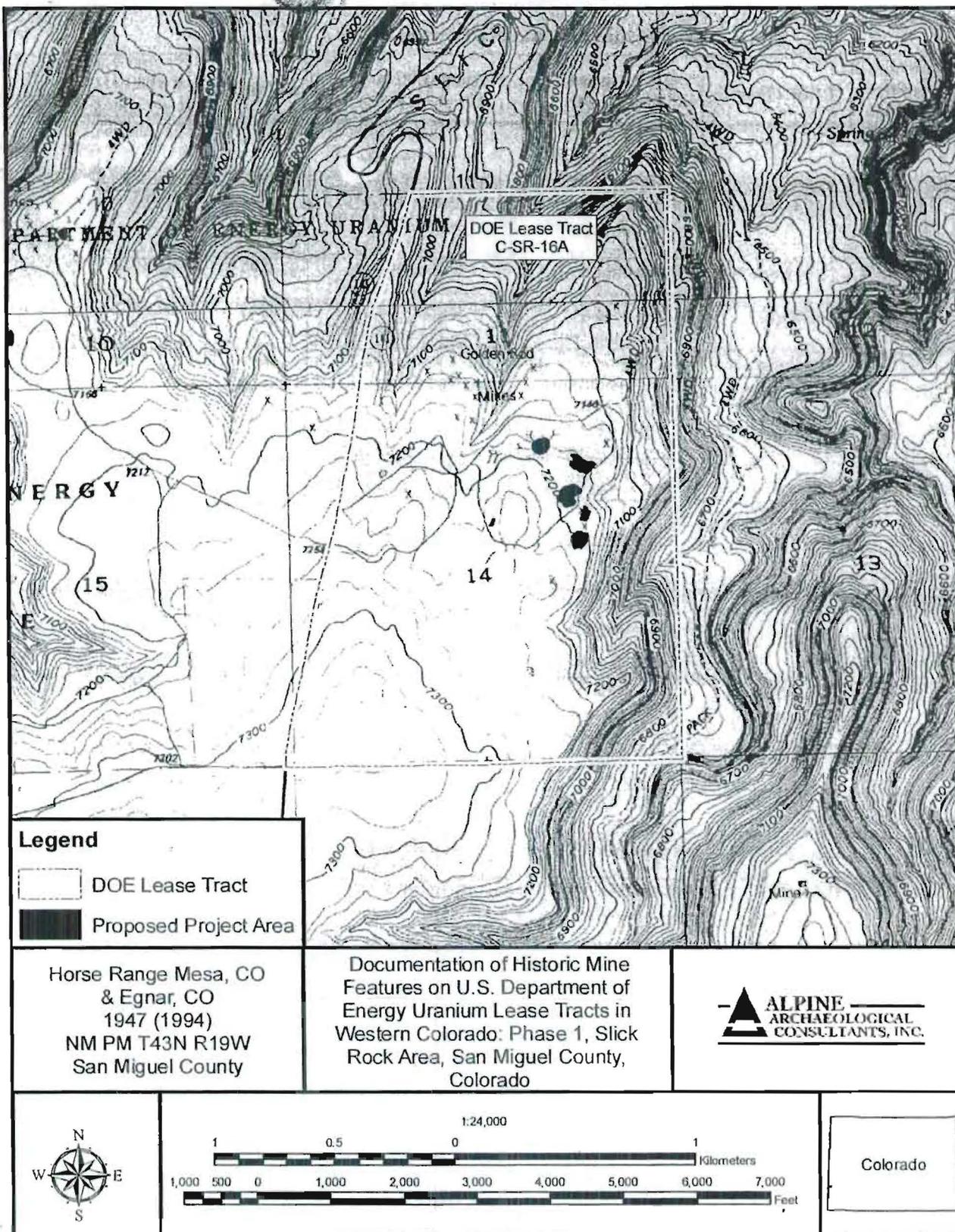


Figure 8. Location of Phase 1 project area.

**CONFIDENTIAL**

Table 1. Locations of Phase 1 Project Work.

Lease Tract No.	Project Area	Claim Name	Proposed Activities	Legal Location (New Mexico PM)	Acreage	Recorded Cultural Resources
CR 10	1	Uintah	Closure of six adits, recontouring of waste-rock dumps	T 43N, R 19W, Section 28, SW, NW	1.12	5SM6556
	2	Vinegaroon	Closure of one adit, recontouring of waste-rock dump	T 43N, R 19W, Section 29, NW, SE	0.04	5SM6557
	3	Ortmeyer	Backfilling of subsidence	T 43N, R 19W, Section 29, NE, NE	0.05	5SM6571
	4	Otero	Backfilling of subsided shaft	T 43N, R 19W, Section 28, SW, NW	0.13	5SM6558
CR 11	5	Blackbird and Radium No. 8	Backfilling of several large surface pits, trenches, and adits, recontouring of waste-rock dumps	T 43N, R 19W, Section 8, NE, SE	3.80	5SM6559
	6	Radium No. 8	Closure of two adits	T 43N, R 19W, Section 9, NW, SW	0.59	5SM6560
	7	San Miguel	Closure of subsidence	T 43N, R 19W, Section 8, NW, SE	0.29	5SM6561
	20	Ike No. 1	Closure of subsidence	T 43N, R 19W, Section 8, SW, SE	0.70	5SM6572
CR 11A	8	Lucky Strike	Closure of adit, dismantling of ore chute, recontouring of waste-rock dump	T 43N, R 19W, Section 19, SE, SW	0.08	5SM6562
CR 12	9	Sarvis Nos. 2 and 3	Closure of two adits, recontouring of waste-rock dumps	T 43N, R 18W, Section 32, NW, NE	0.64	5SM6563; 5SM6564
	10	Jupiter	Closure of subsided mine portal	T 43N, R 18W, Section 32, NE, NW	0.17	5SM6573
CR 13	11	Slick Rock Mill Site	Backfilling of subsidence	T 44N, R 18W, Section 30, SW, SE	0.10	5SM1945
	12	Ellison	Backfilling of subsidence	T 44N, R 18W, Section 31, NE, NE	0.29	5SM6574
CR 16	13	Charles T and Charles T Southwest	Backfilling of subsidences	T 43N, R 19W, Section 10, SW	3.09	5SM6565; 5SM6566
	14	I.V.	Backfilling of several small surface pits and trenches	T 43N, R 19W, Section 15, SW	0.72	5SM6567
	15	Hawk	Backfilling of subsidence	T 43N, R 19W, Section 16, SW, NE	0.84	5SM3692
	16	Old Ann	Backfilling of subsided shaft	T 43N, R 19W, Section 16, SW, NE	0.04	5SM6568
CR 16A	17	Golden Rod	Backfilling of subsidence	T 43N, R 19W, Section 14, NW, NE	1.17	
	18	Golden Rod No. 3	Backfilling of subsidence	T 43N, R 19W, Section 14, NW, NE	0.16	
	19	Golden Rod, Keystone, and Santa Maria	Backfilling of several surface pits and trenches	T 43N, R 19W, Section 14, NE	5.04	

CONFIDENTIAL

## Meeting/Teleconference Record

**Date:** 8/24/09

**To:** Ed Cotter

**From:** Marilyn Kastens

**Subject:** Cultural Clearance for Conducting Mine Reclamation on Uranium Lease Tracts in San Miguel County

Persons Present/Contacted:

Name	Company/Agency	Telephone Number/Extension
Vince MacMillan BLM Archaeologist	BLM, Dolores Public Lands Office	970-882-6832
Marilyn Kastens Cultural Resource Coordinator	SM Stoller Corp.	X6781

### Issue 1: Cultural Clearance for Abandoned Mine Land Reclamation—

DOE submitted the report, *Documentation of Historic Mine Features on U.S. Department of Energy Uranium Lease Tracts in Western Colorado: Phase 1, Slick Rock Area, San Miguel County, Colorado* to Vince MacMillan (BLM archaeologist) on July 22, 2009, requesting concurrence in DOE's determination of "No Effect" to historic properties. M. Kastens called V. MacMillan on 8/24/09 to get a verbal clearance, as DOE had not received a written concurrence. V. MacMillan stated that DOE was cleared to conduct the work and that BLM had made a determination of "No Adverse Effect." The determination of "No Adverse Effect" was made rather than "No Effect" because cultural sites that are *not* eligible to the NRHP would be adversely affected (When M. Kastens asked about Isolated Finds, V. MacMillan said that the determination would then be "No Effect" [he thought]). V. Macmillan pointed out that it would be best if DOE would avoid making a preliminary determination and not use the words "No Effect, No Adverse Effect, and Adverse Effect," because that determination is legally made by BLM or SHPO, not the agency proposing the action. V. MacMillan stated that Helen Mary Johnson (BLM Geologist) would be sending DOE the written concurrence and suggested that we call her if we have not yet received it.

### Issue 2: Tribal Consultation on Uranium Lease Tracts—

M. Kastens asked how BLM conducted tribal consultations and if DOE would need to notify the tribes when cultural resources were involved in a proposed activity. V. MacMillan stated that BLM has an annual meeting and consultation with tribes, wherein they discuss upcoming proposed activities, and tribes provide input. This is considered adequate consultation for most activities, especially those that have No Adverse Effect. If an activity would have an unavoidable adverse effect on tribe-sensitive features, BLM would conduct a project-specific consultation with all 23 tribes.

Because BLM is responsible for cultural resource management on ULP lease tracts, DOE does not need to conduct separate tribal consultations; BLM will conduct this.

### Follow Up Action Required:

M. Kastens needs to contact BLM archaeologists at the Montrose and Grand Junction offices to determine if their tribal consultation policies are similar to those of the Dolores Public Lands Office. If so, M. Kastens should revise the ULP Procedures Manual accordingly.

**Affect Scope/Schedule or Budget:** YES \_\_\_ NO X

**Explain:**

CC: ULS Project File (Ed Cotter)



Department of Energy  
Office of Legacy Management

July 22, 2009

OLM-SRS-2009-090

Mr. Vince MacMillan, Archaeologist  
Dolores Public Lands Office  
29211 Highway 184  
Dolores, CO 81323

Subject: Request for Concurrence in DOE's Determination of No Effect to Historic Properties on Uranium Lease Tracts, San Miguel County

Dear Mr. MacMillan:

The U.S. Department of Energy Office of Legacy Management (DOE) is proposing to reclaim and mitigate hazards at numerous abandoned mine sites on DOE's uranium lease tracts in San Miguel County. Whereas, DOE manages the mineral resources and mining operations on these lease tracts, the Bureau of Land Management manages the surface resources. The abandoned mine features, which include open portals, subsided vent shafts, and unreclaimed waste rock dumps, are located at 20 project sites on seven different lease tracts. The area of potential effect totals less than 20 acres. Table 1 in the enclosed reports, entitled *Documentation of Historic Mine Features on U.S. Department of Energy Uranium Lease Tracts in Western Colorado: Phase 1, Slick Rock Area, San Miguel County, Colorado*, lists the legal locations and acreages of the 20 project sites. Additionally, Appendix A of the report includes 1:24,000-scale maps showing cultural resource site locations. Proposed activities at each of the project sites are summarized in the "Results" section.

DOE has determined that none of the abandoned mine site features found within the potential area of effect are eligible for inclusion in the National Register of Historic Places. Please review the report, prepared by Alpine Archaeological Consultants, Inc., for DOE, and let us know if you concur in our determination of "No Effect" to historic properties.

If you have specific questions or comments, please contact my contractor staff, Ed Cotter, at (970) 248-6056 ([Ed.Cotter@lm.doe.gov](mailto:Ed.Cotter@lm.doe.gov)). If you have general questions about the uranium leasing program, please contact me at (720) 377-9683 ([Steve.Schiesswohl@lm.doe.gov](mailto:Steve.Schiesswohl@lm.doe.gov)).

Mr. Vince MacMillan

-2-

Thank you for your review and consideration of the enclosed report.

Sincerely,



2009.07.22

14:36:44 -06'00'

Steven R. Schiesswohl  
Realty Officer

Enclosures (2 copies)

cc w/o enclosures:

E. Cotter, Stoller (e)

M. Kastens, Stoller (e)

Project File (E. Cotter)

DOCUMENTATION OF HISTORIC MINE FEATURES ON  
U.S. DEPARTMENT OF ENERGY  
URANIUM LEASE TRACTS IN WESTERN COLORADO:  
PHASE 1, SLICK ROCK AREA, SAN MIGUEL COUNTY, COLORADO

by

Summer Moore-McMillan  
and  
Jeremy Omvig

Alpine Archaeological Consultants, Inc.  
P.O. Box 2075  
Montrose, Colorado 81402  
(970) 249-6761

Prepared for

S. M. Stoller Corporation  
2597 B  $\frac{3}{4}$  Road  
Grand Junction, CO 81503  
Contract GS-10F-00045, Purchase Order #0000004277

Under the provisions of  
Colorado BLM Cultural Resource Use Permit No. C-46920

BLM Project Authorization No. SJ09040

July 2009



**ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.**

Table 1. Locations of Phase 1 Project Work.

Lease Tract No.	Project Area	Claim Name	Proposed Activities	Legal Location (New Mexico PM)	Acreeage	Recorded Cultural Resources
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	4	Otero	Backfilling of subsided shaft	T 43N, R 19W, Section 28, SW, NW	0.13	5SM6558
C-SR-11	5	Blackbird and Radium No. 8	Backfilling of several large surface pits, trenches, and adits, recontouring of waste-rock dumps	T 43N, R 19W, Section 8, NE, SE	3.80	5SM6559
	6	Radium No. 8	Closure of two adits	T 43N, R 19W, Section 9, NW, SW	0.59	5SM6560
	7	San Miguel	Closure of subsidence	T 43N, R 19W, Section 8, NW, SE	0.29	5SM6561
	20	Ike No. 1	Closure of subsidence	T 43N, R 19W, Section 8, SW, SE	0.70	5SM6572
C-SR-11A	8	Lucky Strike	Closure of adit, dismantling of ore chute, recontouring of waste-rock dump	T 43N, R 19W, Section 19, SE, SW	0.08	5SM6562
C-SR-12	9	Sarvis Nos. 2 and 3	Closure of two adits, recontouring of waste-rock dumps	T 43N, R 18W, Section 32, NW, NE	0.64	5SM6563; 5SM6564
	10	Jupiter	Closure of subsided mine portal	T 43N, R 18W, Section 32, NE, NW	0.17	5SM6573
C-SR-13	11	Slick Rock Mill Site	Backfilling of subsidence	T 44N, R 18W, Section 30, SW, SE	0.10	5SM1945
	12	Ellison	Backfilling of subsidence	T 44N, R 18W, Section 31, NE, NE	0.29	5SM6574
C-SR-16	13	Charles T and Charles T Southwest	Backfilling of subsidences	T 43N, R 19W, Section 10, SW	3.09	5SM6565; 5SM6566
	14	I.V.	Backfilling of several small surface pits and trenches	T 43N, R 19W, Section 15, SW	0.72	5SM6567
	15	Hawk	Backfilling of subsidence	T 43N, R 19W, Section 16, SW, NE	0.84	5SM3692
	16	Old Ann	Backfilling of subsided shaft	T 43N, R 19W, Section 16, SW, NE	0.04	5SM6568
C-SR-16A	17	Golden Rod	Backfilling of subsidence	T 43N, R 19W, Section 14, NW, NE	1.17	
	18	Golden Rod No. 3	Backfilling of subsidence	T 43N, R 19W, Section 14, NW, NE	0.16	
	19	Golden Rod, Keystone, and Santa Maria	Backfilling of several surface pits and trenches	T 43N, R 19W, Section 14, NE	5.04	

**Table 2. Previously Conducted Cultural Resource Inventories by Phase 1 Lease Tract.**

Lease Tract No.	Reference	Document ID	Project Description	Area Surveyed (Acres)
C-SR-10	Arrington 1979	DRA-7931	Power line	6.6
	Matlock 1980	DRA-8043	Drill holes	10.4
	Stump 1997	SMLM.R89	Stock ponds	0.2
C-SR-11	Ebel 1981	SMLM.NR12	Seismic lines	9.4
	Fuller 1996	SMLM.R56	Uranium lease tracts	52.3
	Simpson 2002a	SMLM.R94	Fire rehabilitation	2.2
	Simpson 2002b	SMLM.R100	Drill holes	1.3
	Brown 2004	SMLM.NR128	Drill holes	0.8
	Fuller 2005	SMLM.R177	Uranium lease tract	17.6
C-SR-11A	Scott 1976	SMLM.NR129	Power line	11.9
C-SR-12	Harden 1983	MC.FS.R92	Seismic lines	1.9
C-SR-13	Conner 1980	SMLM.R120	Mill site and pipeline	1.0
	Errickson and Ives 1983	MC.R.R43	Recreation area	22.6
	Hammack 1987	SME.R2	Mill tailings remediation	59.7
	Arrington 1987	SMLM.R10	Slick Rock pit	7.2
	Hammack 1990	SMLM.R33	Seismic lines	4.6
	Witkind 1991	SMLM.NR57	Placer mining	1.0
	Hammack and Hammack 1995	SMLM.R47	Uranium disposal site	4.0
	Hammack 1995	SMLM.R52	Waterline	9.5
	Brown 2002	SM.FS.NR24	Mine bat gates	0.1
	Brown 2005	SMLM.NR134	Power line	0.1
C-SR-16	Stump 1997	SMLM.R89	Stock ponds	1.0
C-SR-16A	Anonymous 1984	SMLM.R114	Fiber optic cable	12.3
	Sesler 1990	SMLM.R83	Seismic lines	3.2
	Stump 1997	SMLM.R89	Stock ponds	0.5

**Table 3. Cultural Resources Within the Phase 1 Lease Tracts Eligible or Potentially Eligible for Inclusion on the National Register of Historic Places.**

Lease Tract No.	Site No.	Site Type	NRHP Eligibility	Report Reference
C-SR-10	5SM2782	Prehistoric Camp	Officially Needs Data	Fuller and Dean 1996
C-SR-11	5SM1988	Historic Cabin	Officially Needs Data	Arrington 1988
	5SM2014	Prehistoric Rock Art	Officially Needs Data	Arrington 1988
C-SR-13	5SM633	Prehistoric Rockshelter and Historic Trail	Field Needs Data	None
	5SM2733	Historic Mining Camp	Officially Eligible	Hammock and Hammock 1995
	5SM3670	Historic Highway	Field Eligible	Dobson-Brown and Autabee 2002
C-SR-16	5SM3692	Historic Mine	Field Needs Data	Stump 1997
C-SR-16A	5SM3670	Historic Highway	Field Eligible	Dobson-Brown and Autabee 2002

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).

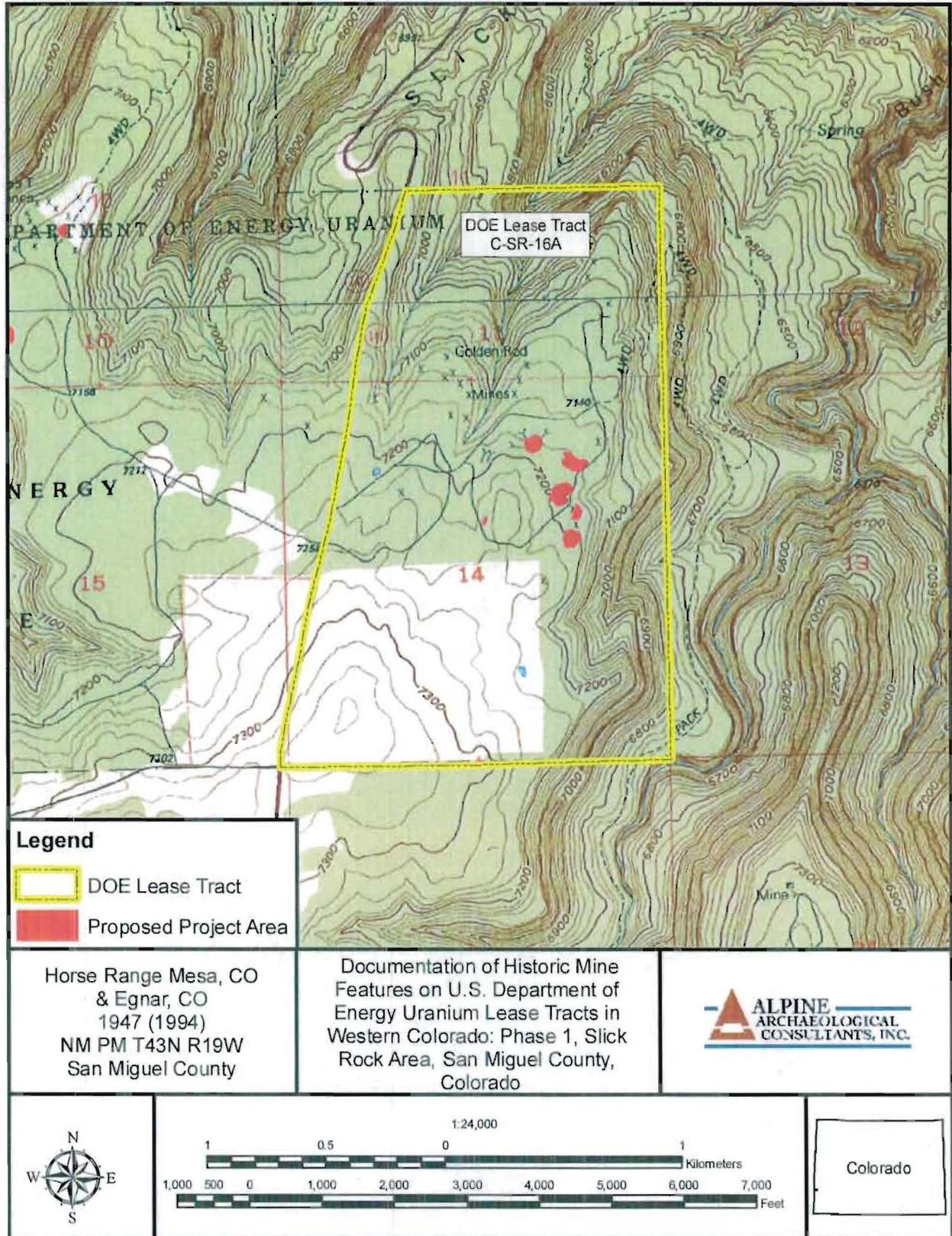


Figure 8. Location of Phase 1 project area.

### *Historical Background*

The Old Ann Mine was originally located on August 12, 1945, by Union Mines Development Corporation (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 197). Unfortunately, no other historical documentation relating to the mine was found at the San Miguel County Courthouse.

### *National Register Recommendations*

The Old Ann claim was located in the last year of Twitty's (2008) fourth period of significance, World War II (1941-1945), in 1945. However, based on a lack of historical documentation the period during which the mine was actually in operation is unclear, making it impossible to link mine operations with any of Twitty's (2008) periods of significance. Moreover, the physical integrity of the mine has been destroyed by reclamation. Alpine recommends the Old Ann Mine as not eligible for the NRHP.

### *Potential Project Impacts*

The subsided shaft at the Old Ann Mine will be backfilled with available surface soil materials and reseeded with an approved seed mixture.

### *Management Recommendations*

As Alpine recommends the reclaimed Old Ann Mine as ineligible for the NRHP, no further archaeological or historical work is recommended.

## **Lease Tract C-SR-16A**

### ***5SM6569 - The Golden Rod No. 3 Mine***

The Golden Rod No. 3 Mine is a 0.2-acre uranium mine near the east-facing rim of Bush Canyon. The mine is on an unpatented mining claim within the DOE Uranium Reserve, on land administered by the BLM-DFO. The elevation of the site is 7,240 ft. (2,207 m), in an area primarily vegetated by pinyon and juniper forest in association with sagebrush. Cultural remains at the site include one trench feature (see Appendix B-16).

Feature 1 is a trench measuring approximately 30 ft. north-south by 20 ft. east-west. The trench is 5 ft. deep and oriented at 200 degrees. DOE personnel identified the trench to the field crew as a discovery trench. It has steep bedrock walls, and its base has silted in. A waste-rock pile measuring roughly 40 ft. in diameter is situated 20 ft. to the southwest. No artifacts were observed within site boundaries.

### *Historical Background*

Although the original Location Certificate could not be located for the Golden Rod No. 3 in the San Miguel County Courthouse, an Amended Location Certificate was filed for the Golden Rod No. 3 on March 29, 1915, by John Overall (San Miguel County Courthouse, County Clerk's Office, Book 122, Page 3). Overall, who was the owner of the claim at that time, filed the AOL every year for the Golden Rod claim between 1915 and 1935. In 1935 and 1936, the AOL documents were filed by Carl Barth (San Miguel County Courthouse, County Clerk's Office, Book 166, Page 457); between 1937 and 1939, the documents were filed by William A. Baehr (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 71).

Based on the AOL records, North Continent Mines appears to have assumed ownership of the Golden Rod No. 3 between 1939 and 1940, as this company filed the AOL for each year between 1940 and 1944 (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 351). In 1945 and 1946, Union Mines Development Company filed the AOL (San Miguel County Courthouse,

County Clerk's Office, Book 204, Page 156). In 1947 and 1948, Union Mines Development Company, listed as owner of the Golden Rod, filed a Notice in Lieu of Assessment of Work for the mine (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 325; Book 204, Page 375). Although no San Miguel County Courthouse documentation exists concerning mine operation after 1948, AEC records indicate that 323.98 tons of ore were recovered from the Golden Rod No. 3 claim in 1954. As Feature 1 was identified to the field crew as a discovery trench, it is unclear whether the source for the tonnage given was the feature recorded within site boundaries or an alternate adit or mine feature.

#### *National Register Recommendations*

Like the Golden Rod No. 1 claim, the Golden Rod No. 3 was located early in the history of mining in San Miguel County, during or before Twitty's (2008) second period of significance, the Radium and Vanadium Boom (1906-1922). AEC records indicate that the claim was producing a small tonnage of ore in 1954, which falls within Twitty's (2008) fifth period of significance, the Atomic era (1946-1963). Although work at the mine appears to have been active during these two periods, there is no evidence that this mine was an important producer of ore at any time. Furthermore, it has little physical integrity and its method of operation was very simple or is no longer evident. The mine is not very visible as a feature of the mining landscape, as it has no structures in association, its waste-rock pile is not very extensive, and it is located in a very remote area. Alpine considers the Golden Rod No. 3 Mine as not eligible for the NRHP.

#### *Potential Project Impacts*

A small subsidence located in the Golden Rod No. 3 group of mines will be dug out, refilled with available surface soil materials, and reseeded with an approved seed mixture.

#### *Management Recommendations*

As Alpine recommends the Golden Rod No. 3 Mine as ineligible for the NRHP, no further archaeological or historical work is recommended.

#### ***5SM6570 – The Golden Rod/Keystone/Santa Maria Mine Complex***

The Golden Rod/Keystone/Santa Maria Mine Complex (5SM6569) is an 11.9-acre uranium mine site on the east-facing rim of Bush Canyon. The mines are on an unpatented mining claim within the DOE Uranium Reserve, on land administered by the BLM-DFO. The elevation of the site is 7,200 ft. (2,195 m), in an area primarily vegetated by pinyon and juniper forest in association with sagebrush. Cultural remains at the mine site include 11 large pits and trenches, 14 waste-rock piles, and a small, scattered artifact assemblage containing a variety of structural, domestic, and industrial artifacts (see Appendix B-17). Dimensions of the various waste-rock piles at the site are provided in Table 10.

Feature 1 is a long, shallow open-cut mine surrounded by waste-rock piles in the northern portion of the site, near a cluster of features including Features 2 and 3. Feature 1 measures 155 ft. east-west and 10 ft. north-south. It is approximately 8 to 10 ft. deep and is oriented at 280 degrees. The mine was excavated or blasted into bedrock. Artifacts identified within Feature 1 include a wooden-framed screen door, a rusted oil or lubricant can, a 6-ft.-long piece of metal drywall frame, a large, crushed metal can, and an Old Milwaukee pull-tab beer can. Pull-tab cans were introduced in the early 1960s and used through the mid-1970s (Martells 1976). Based on the presence of the screen door and drywall frame, it seems likely that a structure once stood in the area, although no evidence of any building remains today.

**Table 10. Waste-Rock Pile Dimensions at the Golden Rod/Keystone/Santa Maria Mine.**

Waste-Rock Pile No.	North-South Dimensions (ft.)	East-West Dimensions (ft.)
1	85	360
2	35	40
3	15	20
4	20	80
5	20	20
6	65	75
7	55	180
8	130	260
9	95	175
10	50	45
11	160	200
12	70	70
13	65	45
14	195	110

Feature 2 is a small, irregularly shaped trench or open-cut mine 10 ft. northwest of Feature 1, on the southern side of Waste-rock Pile 1. This feature measures 20 ft. north-south by 35 ft. east-west and is approximately 8 ft. deep in most locations. It is oriented at 226 degrees. The walls of the trench are formed from both bedrock and loose rock and soil rubble. Two boulders within the rubble have dynamite holes, suggesting that it this feature may have been created by blasting. The bottom has silted in, creating a flat appearance. One artifact was identified within Feature 2, a pull-tab beer can with the letters "OLYMP\_".

Feature 3 is a shallow, irregularly shaped open-cut mine 20 ft. southwest of Feature 2, just north of Waste-rock Pile 4. This feature measures 25 ft. north-south by 35 ft. east-west, with a maximum depth of approximately 8 to 10 ft. It is oriented at 290 degrees. The sides of the pit are primarily formed by bedrock, although loose soil and rocks form the walls in some locations. The deepest portion of the pit is at the northern corner, where a hole was dynamited into bedrock. The remains of three dynamite holes can be seen in the rock at the side of the pit, where the rock cleaved along the line where the dynamite holes were drilled. No artifacts were observed in Feature 3.

Feature 4 is a shallow, irregularly shaped open-cut mine or trench within a cluster of features, also including Features 5 and 6, near the center of the site. This feature measures 160 ft. east-west by 35 ft. north-south and is a maximum of 7 ft. deep. The orientation of Feature 4 is 70 degrees. The pit was dug down or blasted down to bedrock and has subsequently silted in. At least five drill holes are present in the exposed bedrock. A single large tin can was observed in Feature 4.

Feature 5 is a small trench immediately adjacent to the northwestern corner of Feature 4. It measures 35 ft. east-west by 15 ft. north-south and is 9 ft. deep. The trench is oriented at 280 degrees. It appears to have been blasted out of bedrock using dynamite and is now silted in. Only one artifact was present within Feature 5, a crushed metal can.

Feature 6 is a large, irregularly shaped cavity measuring 120 ft. east-west and 60 ft. north-south, approximately 70 ft. southwest of Features 4 and 5. It is a maximum of 7 ft. deep. The cavity is oriented at 290 degrees. It appears to have been blasted out of bedrock, although the bottom has now filled in with soil. No artifacts were observed in Feature 6.

Feature 7 is a large, shallow pit with irregularly shaped sides and bottom. This feature is within a cluster of features at the southern end of the site that also includes Features 8, 9, and 10. Feature 7 measures 110 ft. north-south by 90 ft. east-west. This feature is surrounded by Waste-rock Piles 11, 12, and 13 and has a maximum depth of approximately 4 ft. Orientation of the feature is at 360 degrees. It appears that the miners blasted out a few areas of bedrock within a low area to create Feature 7. No artifacts were observed in Feature 7.

Feature 8 is a small, shallow pit with an essentially round shape, approximately 120 ft. northeast of Feature 7. The feature is oriented at 100 degrees and measures 35 ft. east-west by 20 ft. north-south. It is 4 or 5 ft. deep. The function of this pit is unknown. Two sanitary cans were observed in the immediate vicinity.

Feature 9 is a narrow, deep trench situated 70 ft. east of Feature 7 and 25 ft. south of Feature 8. Feature 9 measures 55 ft. north-south and 30 ft. east-west, by 8 ft. deep. Orientation of the trench is 224 degrees. The trench has been dynamited to bedrock, although its function is unknown. No artifacts were observed in Feature 9.

Feature 10 is a small, irregularly shaped pit 50 ft. northwest of Feature 8. It measures 20 ft. east-west by 10 ft. north-south, with a depth of 4 ft. The pit is oriented at 75 degrees. The function of the feature is unknown. It has sharply sloping sides and a silted-in bottom. No artifacts were observed in Feature 10.

Feature 11 is a shallow, irregularly shaped pit set apart from the other pits and trenches and surrounded by Waste-rock Pile 14. The pit is 60 ft. east-west and 50 ft. north-south, with a depth of 8 ft. It is oriented at 36 degrees. Its function is unknown, and no artifacts were observed in association.

#### *Historical Background*

The Golden Rod No. 1 claim, which comprises the northernmost features at the site—Features 1, 2, and 3—was the first one of the three to be located. Although the original Location Certificate could not be located for the Golden Rod in the San Miguel County Courthouse, an Amended Location Certificate was filed for the Golden Rod No. 1 on March 29, 1915, by John Overall (San Miguel County Courthouse, County Clerk's Office, Book 122, Page 3). Overall, who was the owner of the claim at that time, filed the AOL every year for the Golden Rod claim between 1915 and 1935. In 1935 and 1936, the AOL documents were filed by Carl Barth (San Miguel County Courthouse, County Clerk's Office, Book 166, Page 457); between 1937 and 1939, the documents were filed by William A. Baehr (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 71).

Based on the AOL records, North Continent Mines appears to have assumed ownership of the Golden Rod No. 1 between 1939 and 1940, as this company filed the AOL for each year between 1940 and 1944 (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 351). In 1945 and 1946, Union Mines Development Company filed the AOL (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 156). In 1947 and 1948, Union Mines Development Company, listed as owner of the Golden Rod, filed a Notice in Lieu of Assessment of Work for the mine (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 325; Book 204, Page 375). In 1948, AEC records have three separate tonnage listings for the Golden Rod No. 1. Fahrion and Sagril are listed as having recovered 351.42 tons of ore from the mine, and Jack Fahrion is given as having recovered 280.10 tons of ore. Although San Miguel County Courthouse records cease for the Golden Rod No. 1 after 1948, AEC records show that James Fahrion obtained 7.71 tons of ore from the mine in 1954.

In contrast to the Golden Rod No. 1, the Santa Maria and Keystone claims, which encompass the remainder of the mining features identified at the site, although discovered at different times followed a very similar trail of ownership. These mines were likely operated as one entity for most of their period of operation. The Santa Maria claim, which was originally filed as the Santa Marie, was discovered December 13, 1939, by W. W. Goforth and C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 124, Page 79). The Keystone claim was discovered August 26, 1941, by C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 174, Page 201). AOL documents were filed for both claims on June 29, 1943, by C. A. Snyder, who continued to file the AOL every year until 1948 (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 3; Book 204, Page 71; Book 204, Page 141; Book 204, Page 241; Book 204, Page 326).

In 1948, F. A. Sitton filed the AOL for both claims; for the Keystone claim, San Miguel County Courthouse records show that Sitton filed the AOL on behalf of C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 120, Page 447). AEC tonnage records show that, in 1948, 141.79 tons of ore from the Keystone claim were attributed to F. A. Sitton; in the same year, 74.96 tons of ore from the Keystone claim were also attributed to Robert A. Snyder. Although his relationship to the claims at this time is unclear, Robert A. Snyder filed the AOL for the claims in 1951 and 1952, and it can be assumed that he was a relative of C. A. Snyder. AEC records also indicate that 47.40 tons of ore were recovered from the Santa Maria in 1948, by an unidentified party. In 1949, the AOL for the Keystone claim was filed by F. A. Sitton on behalf of himself; that year, the Santa Maria AOL was filed by C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 120, Page 470).

C. A. Snyder appears to have passed away between 1949 and 1950, as in 1950, the AOL was filed by the estate of C. A. Snyder. In 1951 and, Robert A. Snyder, likely as heir to C. A. Snyder, filed the AOL (San Miguel County Courthouse, County Clerk's Office, Book 120, Page 552; Book 120, Page 609). In 1953, James J. Rychtarik filed the AOL for both claims (San Miguel County Courthouse, County Clerk's Office, Book 222, Page 8-80). In 1954, Rychtarik filed the AOL for the Santa Maria claim (San Miguel County Courthouse, County Clerk's Office, Book 222, Page 8-395), while the AOL for the Keystone claim was filed by C. S. Gillaspey (San Miguel County Courthouse, County Clerk's Office, Book 222, Page 8-462). In 1955, the AOL was filed by Robert S. Palmer for both claims (San Miguel County Courthouse, County Clerk's Office, Book 254, Page 145).

Beginning in 1956, Uranium Metals, Inc., became involved in the Keystone and Santa Maria claims, filing the AOL for the Keystone every year between 1956 and 1964 and for the Santa Maria every year between 1956 and 1962 (San Miguel County Courthouse, County Clerk's Office, Book 267A, Page 272; Book 275, Page 14; Book 275, Page 161; Book 287, Page 275; Book 295, Page 96; Book 295, Page 235; Book 302, Page 48; Book 310, Page 7). In 1962, Uranium Metals was identified as the lessee on the AOL document, suggesting that the company had been leasing these claims throughout the period (San Miguel County Courthouse, County Clerk's Office, Book 295, Page 235). The AOL for the Santa Maria was filed Robert S. Palmer in 1963 (San Miguel County Courthouse, County Clerk's Office, Book 302, Page 281). In 1964, Climax Uranium Company began filing the AOL for the Santa Maria, which it continued to do through 1971 (San Miguel County Courthouse, County Clerk's Office, Book 302, Page 493; Book 310, Page 196; Book 310, Page 503; Book 321, Page 148; Book 321, Page 437; Book 321, Page 501; Book 321, Page 813; Book 321, Page 942).

In 1965, Ruben Snyder filed the AOL for the Keystone claim (San Miguel County Courthouse, County Clerk's Office, Book 310, Page 321). In 1966, AOL documents record that one half-interest in the claim was held by Edwin C. Hall and the other by Climax Uranium Company (San Miguel County Courthouse, County Clerk's Office, Book 310, Page 498; Book 310, Page 321). Between the years 1966 and 1971, based on AOL records it appears that Climax Uranium maintained a half-interest in the claim, while an ownership consortium consisting of Edwin C. Hall, Bruce B. Hall, Grant Fredrickson, and Warren E. Wright controlled the other half. The half owned

by Climax Uranium was evidently transferred to Atlas Corporation sometime before 1973 (San Miguel County Courthouse, County Clerk's Office, Book 345, Page 617). With few exceptions, Atlas Corporation and the ownership consortium referred to above appear to have controlled the Keystone claim until the claim was evidently let lapse after 1997 (San Miguel County Courthouse, County Clerk's Office, Book 350, Page 121; Book 350, Page 757; Book 354, Page 13; Book 354, Page 26; Book 360, Page 298; Book 360, Page 361; Book 361, Page 835; Book 367, Page 99; Book 373, Page 188; Book 373, Page 253; Book 381, Page 697; Book 382, Page 127; Book 388, Page 572; Book 388, Page 149; Book 395, Page 98; Book 395, Page 139; Book 400, Page 803; Book 406, Page 324; Book 412, Page 285; Book 422, Page 161; Book 429, Page 906; Book 438, Page 544; Book 445, Page 560; Book 456, Page 263; Book 470, Page 180; Book 481, Page 915; Book 497, Page 366; Book 516, Page 577; Book 534, Page 21; Book 550, Page 639; Book 565, Page 772; Book 577, Page 915). Recorded ore production for the Keystone claim prior to 1971 totaled 437 tons, including 1,691 lbs. of uranium and 16,952 lbs. of vanadium (Nelson-Moore et al. 1978).

The Santa Maria claim appears also to have come under the control of Atlas Corporation in 1973 (San Miguel County Courthouse, County Clerk's Office, Book 345, Page 617). Atlas Corporation or Atlas Minerals filed the AOL every year between 1973 and 1982 (San Miguel County Courthouse, County Clerk's Office, Book 345, Page 617; Book 345, Page 617; Book 350, Page 121; Book 354, Page 13; Book 360, Page 298; Book 366, Page 835; Book 373, Page 253; Book 381, Page 697; Book 388, Page 572; Book 395, Page 117; Book 400, Page 801). Between 1983 and 1986, Robert A. Snyder filed the AOL every year (San Miguel County Courthouse, County Clerk's Office, Book 406, Page 326; Book 413, Page 295; Book 421, Page 6; Book 429, Page 263). Between 1987 and 1991, Glenn and Diana Kindred appear to have owned the claim together, with one or both of them filing the AOL every year (San Miguel County Courthouse, County Clerk's Office, Book 437, Page 121; Book 445, Page 217; Book 455, Page 183; Book 469, Page 750; Book 481, Page 71). After 1991, the claim appears to have been let lapse. Recorded ore production for the Santa Maria claim prior to 1971 totaled 47 tons, including 157 lbs. of uranium and 2,587 lbs. of vanadium (Nelson-Moore et al. 1978).

#### *National Register Recommendations*

The Golden Rod/Keystone/Santa Maria Mine has a complex history that has lasted from the discovery of the Golden Rod Lode during or prior to Twitty's (2008) second period of significance, the Radium and Vanadium Boom (1906-1922), through and even after the sixth period of significance, the Last Boom (1974-1980). The production records available from the mine date to 1948, which falls near the beginning of Twitty's (2008) fifth period of significance, the Atomic era (1946-1963). However, production from the mine during this year was not great, suggesting that this mine may not have played a particularly important role in Atomic-era uranium and vanadium production. It has little physical integrity and its method of operation was very simple or is no longer evident. The mine is not very visible as a feature of the mining landscape, as it has no structures in association, its waste-rock pile is not very extensive, and it is located in a very remote area. Alpine considers the Golden Rod/Keystone/Santa Maria Mine as not eligible for the NRHP.

#### *Potential Project Impacts*

The surface pits and trenches located on the former Golden Rod, Keystone, and Santa Maria claims need to be backfilled with available mine waste-rock materials, covered with other available surface soil materials, pocked if needed, and reseeded with an approved seed mixture.

#### *Management Recommendations*

As Alpine recommends the reclaimed Golden Rod/Keystone/Santa Maria Mine as ineligible for the NRHP, no further archaeological or historical work is recommended.

### Isolated Finds

Five isolated finds were recorded during project work, which all consisted of areas with reclaimed mine features that have since subsided. These isolated finds are summarized in Table 11. In each case, besides the subsidence or subsidences, no other cultural remains were present to justify recordation of a site. Isolated finds were recorded on the Ortmeier, the Ike No. 1, the Jupiter, the Ellison, and the Golden Rod claims. The subsidence at the Jupiter claim (5SM6573) had a small artifact scatter nearby, consisting of sanitary cans, a bucket lid, and a pipefitting—however, as none of these artifacts are diagnostic, and due to reclamation their context is completely destroyed, the area was recorded as an isolated find rather than a site. Isolated finds, by definition, are considered insignificant cultural resources; these resources are all recommended as ineligible for NRHP nomination and require no further work.

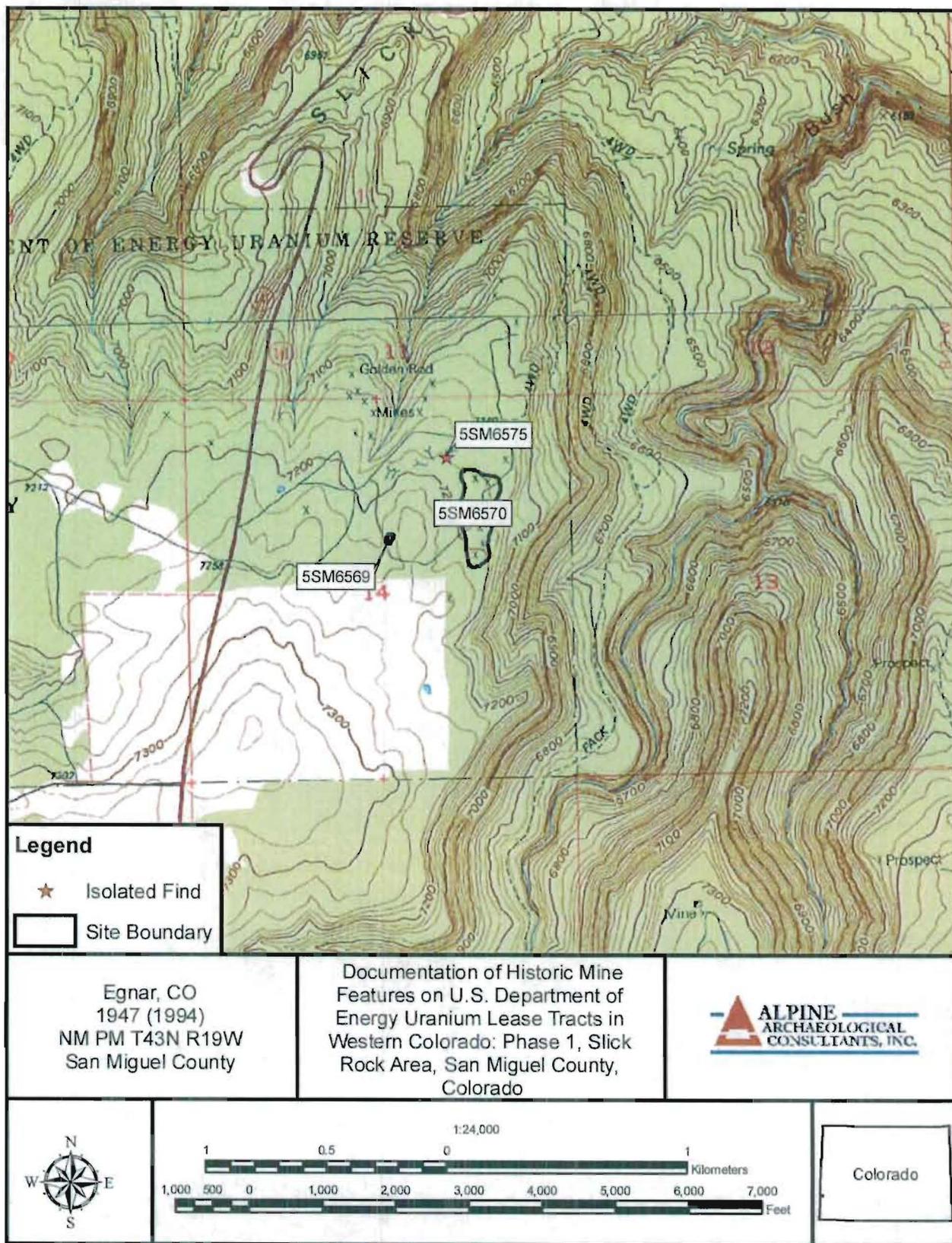
Table 11. Isolated Finds.

Isolate No.	Lease Tract	Mining Claim	Subsidence Dimensions	Subsidence Depth	Artifacts
5SM6571	C-SR-10	Ortmeier	70 ft. by 61 ft.	20 ft.	None
5SM6572	C-SR-10	Ike No. 1	12 ft. by 4 ft.	1-2 ft.	1 piece of strap metal
5SM6573	C-SR-12	Jupiter	Subsidence 1: 6 ft. by 6 ft.; Subsidence 2: 15 ft. by 10 ft.	Subsidence 1: 25-30 ft.; Subsidence 2: 5 ft.	20 sanitary cans; metal lid to 5-gallon lubricant bucket; 2-in.-diameter screw-top metal pipe fitting
5SM6574	C-SR-13	Ellison	5 ft. wide and 4 ft. high	20+ ft.	None
5SM6575	C-SR-16A	Golden Rod	7 ft. by 4 ft.	20 ft.	None

### SUMMARY AND RECOMMENDATIONS

The historic mine features documentation on seven DOE uranium lease tracts resulted in the examination of 19.04 acres, all of which are on DOE Uranium Reserve lands administered by the BLM-DFO. Fifteen cultural resource sites were recorded during the inventory, all of which were evaluated as not eligible for inclusion on the National Register of Historic Places. No further archaeological or historical work is recommended at these sites. Five isolated finds were also recorded, which by definition are ineligible. The results of the project were as expected. Mine features proposed for reclamation or subsidence in-fill were recorded as cultural resource sites or isolated finds, depending on the nature of the resources within the area slated for disturbance.

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).

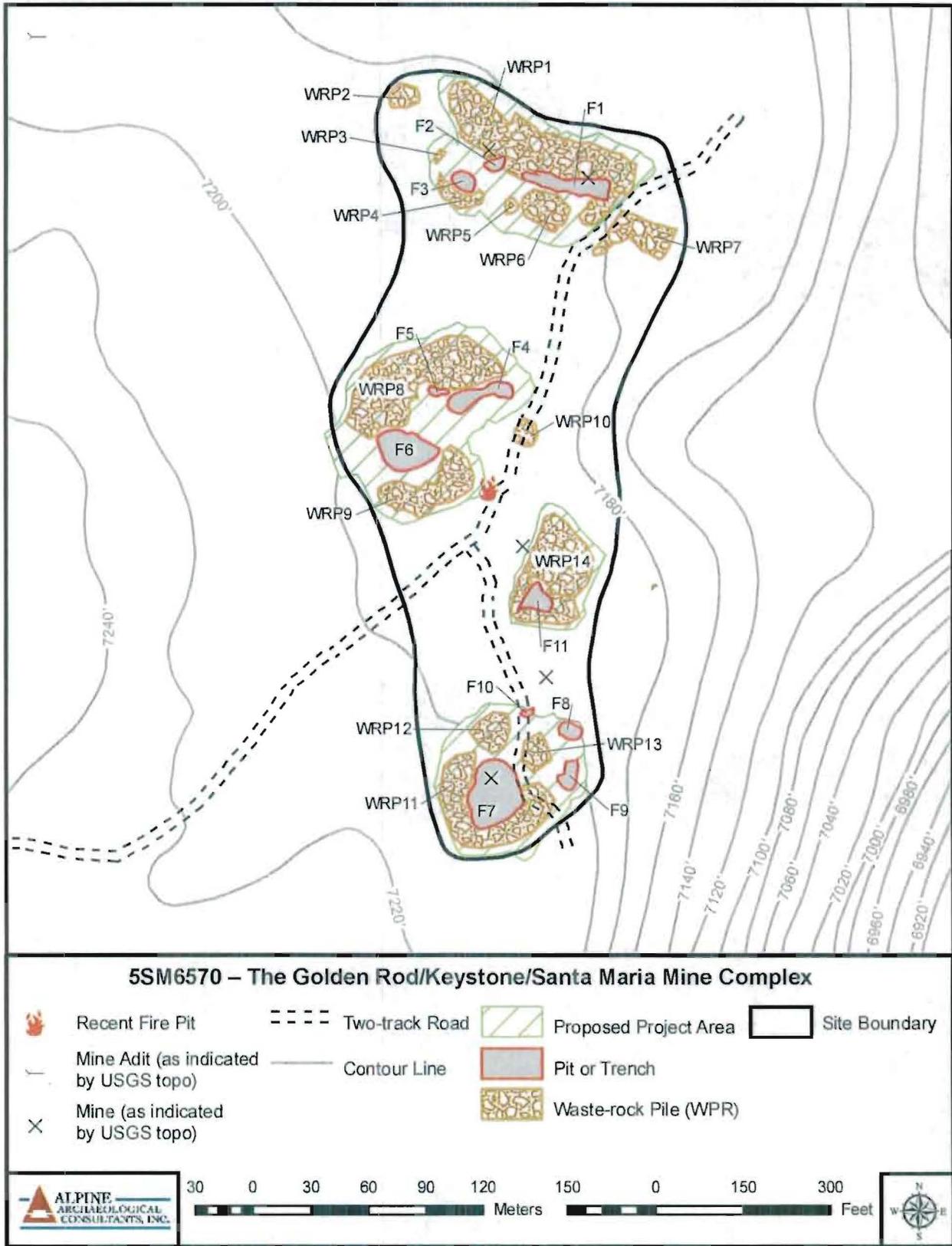


Appendix A-3

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).



For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).





Resource Number: 5SM6569  
Temporary Resource Number: CSR16A GR3

### Management Data Form

(page 2 of 4)

13. USGS Quad Egnar, CO 7.5'  15'  Date(s): 1947 (1994) (attach photocopy)
14. County: San Miguel 15. Other Maps:
16. UTM Reference: Check your Datum  NAD 27  NAD 83
- A. 12: 681688 mE 4206915 mN  
B. 12: mE mN  
C. 12; mE mN  
D. 12; mE mN
17. Address: Lot Block: Addition
18. Location/Access: From the intersection of Co. Hwy. 141 with County Road S.8 near Slick Rock, CO, continue south on Co. Hwy. 141 for 6.1 miles. Turn east on a two-track road and continue 0.5 miles, staying right at the first two intersections and left at the third. The site is 125 ft. to the southeast.

### III. NATURAL ENVIRONMENT

19. Topographic Feature(s):
- |   |  |                                       |
|---|--|---------------------------------------|
| <input type="checkbox"/> mountain           | <input type="checkbox"/> ledge             | <input type="checkbox"/> playa        |
| <input type="checkbox"/> hill               | <input type="checkbox"/> terrace/bench     | <input type="checkbox"/> talus slope  |
| <input type="checkbox"/> tableland/mesa     | <input checked="" type="checkbox"/> canyon | <input type="checkbox"/> alluvial fan |
| <input type="checkbox"/> ridge              | <input type="checkbox"/> valley            | <input type="checkbox"/> plain        |
| <input type="checkbox"/> saddle/pass        | <input type="checkbox"/> basin             | <input type="checkbox"/> dune         |
| <input type="checkbox"/> alcove/rockshelter | <input type="checkbox"/> floodplain        | <input type="checkbox"/>              |
| <input type="checkbox"/> cliff              | <input type="checkbox"/> cutbank           | <input type="checkbox"/>              |
| <input checked="" type="checkbox"/> slope   | <input type="checkbox"/> arroyo/gully      | <input type="checkbox"/>              |
20. Site Topographic Description (mention names landforms):  
The site is near the east-facing rim of Bush Canyon.
21. Site Elevation: 7,240 feet = (x .3048) 2207 meters 22. Aspect: 45 °
23. Degree of Slope on Site: 5 ° 24. Soil Depth: 0-20 cm
25. Soil Description (character and color): Reddish-brown sandy loam
26. Depositional Environment
- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aeolian         | <input checked="" type="checkbox"/> Colluvial | <input checked="" type="checkbox"/> Residual |
| <input type="checkbox"/> Alluvial        | <input type="checkbox"/> Moraine              | <input type="checkbox"/> None                |
| <input type="checkbox"/> Other, specify: |   |  |
27. Nearest Water: name/nature Bush Canyon tributary/ permanent? distance: 320 m 1050 ft
28. Nearest Permanent Water: name: Unnamed Spring distance: 2080 m 6824 ft
29. Vegetation on Site (list predominant species): Pinyon and juniper forest
30. Vegetation Associations/Communities Surrounding Site: Pinyon and juniper forest with sagebrush

Resource Number: 5SM6569  
Temporary Resource Number: CSR16A GR3

### Management Data Form

(page 3 of 4)

#### IV. NATIONAL/STATE REGISTER ELIGIBILITY ASSESSMENT

31. Context or Theme: Mining - Uranium

specify: The Atomic Era (1946-1963), based on Twitty (2008)

32. Applicable National Register Criteria

Does not meet any of the below National Register criteria

A. Associated with events that have made a significant contribution to the broad pattern of our history; or

B. Associated with the lives of persons significant to our past; or

C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Has yielded, or may be likely to yield, information important in history or prehistory; or

Qualifies under exceptions A through G.

Level of Significance: National  State  Local

33. Condition

a. Architectural/Structural

Excellent

Good

Fair

Deteriorated

Ruins

b. Archaeological/Paleontological

Undisturbed

Light disturbance

Moderate disturbance

Heavy disturbance

Total disturbance

34. Describe Condition: No architectural remains; waste rock eroding.

35. Vandalism:  describe

36. National Register Eligibility Field Assessment:

Eligible  Not Eligible  Need Data

Statement of Significance/N.R.H.P. Justification

Like the Golden Rod No. 1 claim, the Golden Rod No. 3 was located early in the history of mining in San Miguel County, during or before Twitty's (2008) second period of significance, the Radium and Vanadium Boom (1906-1922). AEC records indicate that the claim was producing a small tonnage of ore in 1954, which falls within Twitty's (2008) fifth period of significance, the Atomic era (1946-1963). Although work at the mine appears to have been active during these two periods, there is no evidence that this mine was an important producer of ore at any time. (Please see Management Data Continuation Page.)

37. Status in an Existing National Register District:

Contributing  Non-Contributing

38. National Register District Potential

discuss

Resource Number: 5SM6569  
Temporary Resource Number: CSR16A GR3

### Management Data Form

(page 4 of 4)

#### V. MANAGEMENT AND ADMINISTRATIVE DATA

39. Threats to Resource: Water erosion  Wind erosion  Grazing  Neglect   
Vandalism  Recreation  Construction  Other (specify): Reclamation  
comments:
40. Existing Protection: None  Marked  Fenced  Patrolled  Access controlled   
other (specify):
41. Local landmark designation: 42. Easement:
43. Management Recommendations:  
As Alpine recommends the Golden Rod No. 3 Mine as ineligible for the NRHP, no further archaeological or historical work is recommended.

#### VI. DOCUMENTATION

44. Previous Actions Accomplished at the site:  
a. Excavations: Test  Partial  Complete  Date(s):  
b. Stabilization: Date(s):  
c. HABS/HAER Documentation Date(s) and Numbers:  
d. Other:
45. Known collections/reports/interviews and other references (list):
46. Primary Location of Additional Data: Alpine Archaeological Cons., 900 S. Townsend, Montrose, CO 81401
47. State or Federal Permit Number: BLM C-46920 Collection Authorized:   
Artifact Collection:  Artifact Repository: N/A  
Collection Method: Diagnostics  Grab Sample  Random Sample  Transect   
Other (specify):
48. Photograph Numbers: SMM-DUL-09-2: images 21 and 22 Negatives filed at: Alpine
49. Report Title: Documentation of Historic Mine Features on U.S. Department of Energy Uranium Lease Tracts in Western Colorado: Phase 1, Slick Rock Area, San Miguel County, Colorado
50. Recorder(s): Summer Moore-McMillan, Jeremy Omvig Date(s): 6/25/2009
51. Recorder Affiliation: Alpine Archaeological Consultants, Inc. Montrose, CO
52. Phone Number: (970) 249-6167

NOTE: Please attach a sketch map, a photocopy of the USGS quad. map indicating resource location, and photographs.

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COLORADO CULTURAL RESOURCE SURVEY

**Management Data Form**

**Continuation Page**

Resource Number: 5SM6569  
Temporary Resource Number: CSR16A GR3

**36. National Register Eligibility Field Assessment:**

**Statement of Significance/N.R.H.P. Justification:**

Furthermore, it has little physical integrity and its method of operation was very simple or is no longer evident. The mine is not very visible as a feature of the mining landscape, as it has no structures in association, its waste-rock pile is not very extensive, and it is located in a very remote area. Alpine considers the Golden Rod No. 3 Mine as not eligible for the NRHP.

Reference Cited:

Twitty, Eric (2008). "Guide to Assessing Historic Radium, Uranium, and Vanadium Mining Resources in Montrose and San Miguel Counties." Prepared by Mountain States Historical, Boulder, Colorado. Prepared for Western Colorado Interpretive Association, Delta, Colorado.

**Historic Archaeological Component Form**

(page 1 of 4)

Use this form in conjunction with the Management Data Form. One of these forms should be completed for each historical resources with archaeological potential.

Does this form pertain to the site in general?

OR

a particular feature/structure (please note feature/structure number)

1. Resource Number: 5SM6569                      2. Temporary Resource Number: CSR16A GR3
3. Site/Feature Type: Uranium Mine
4. General Site/Feature Description:

The Golden Rod No. 3 Mine is a 0.2-acre uranium mine near the east-facing rim of Bush Canyon. The mine is on an unpatented mining claim within the DOE Uranium Reserve, on land administered by the BLM-DFO. The elevation of the site is 7,240 ft. (2,207 m), in an area primarily vegetated by pinyon and juniper forest in association with sagebrush. Cultural remains at the site include one trench feature.

Feature 1 is a trench measuring approximately 30 ft. north-south by 20 ft. east-west. The trench is 5 ft. deep and oriented at 200 degrees. DOE personnel identified the trench to the field crew as a discovery trench. It has steep bedrock walls, and its base has silted in. A waste-rock pile measuring roughly 40 ft. in diameter is situated 20 ft. to the southwest. No artifacts were observed within site boundaries.

5. Historic Component Date(s) and/or Sociopolitical Period: 1915-1954

Justification: Historical documents

6. Component Function(s)

Original Use: Uranium mine

Present Use: None

Comments:

7. Ethnic affiliation of occupants: Historic

Justification: Historical records

Resource Number 5SM6569

Temporary Resource Number: CSR16A GR3

## Historic Archaeological Component Form

(page 2 of 4)

8. Artifact Classes: Please list specific attributes on the first line and artifact quantity (either count or estimate on the second line. Particularly important attributes are listed following the artifact class.

A. Glass: type function, color, manufacturing technique, makers marks, inscriptions, thickness, shape

**Bottle glass:** purple    clear    aqua    cobalt blue    amber  
light green    olive green    yellowish    other:

**Vessel finish:**     hand-finished     machine-made

**Vessel types:**

**Makers marks/embossing:**

**Other vessel types:**

**Total estimated number of vessels:**

B. Ceramics: type, function, surface treatment/glaze, shape, trademarks, color, decorations

**Earthenware:**

**Estimated number of vessels:**

**Stoneware:**

**Estimated number of vessels:**

**Porcelain:**

**Estimated number of vessels:**

C. Nails: size, material type and manufacture technique, if not wire or cut

**Cut nails:**     Quantity:                      **Wirenails:**     Quantity:

**Other fasteners:**

**Quantity:**

Resource Number 5SM6569

Temporary Resource Number: CSR16A GR3

### Historic Archaeological Component Form

(page 3 of 4)

D. Cans: function, size, material type, type of opening, seams, inscriptions Quantity

Hole-in-cap:

Hole-in-top:

Sanitary:

Other:

E. Cartridge Cases: type, size, inscriptions, material type

Rimfire:

Centerfire:

Other:

F. Construction Material: type, material, function (includes items such as logs, lumber, brick, adobe, cement, concrete, stone/rock, sheet metal, asphalt, tar, pipe)

Window glass:  Quantity:

Other:

G. Misc. Other Items: type, material, function (includes items such as utensils, stove parts, wire, nuts, bolts, rivets, screws, buckets, barrels, vehicle parts, machinery, leather, clothing, bone, furniture, buttons, etc.)

List:

9. Artifact Density:  Heavy  Medium  Light

Describe: No artifacts were observed at the site.

10. Additional Information:

Historical Background

Although the original Location Certificate could not be located for the Golden Rod No. 3 in the San Miguel County Courthouse, an Amended Location Certificate was filed for the Golden Rod No. 3 on March 29, 1915, by John Overall (San Miguel County Courthouse, County Clerk's Office, Book 122, Page 3). Overall, who was the owner of the claim at that time, filed the AOL every year for the Golden Rod claim between 1915 and 1935. In 1935 and 1936, the AOL documents were filed by Carl Barth (San Miguel County Courthouse, County Clerk's Office, Book 166, Page 457); between 1937 and 1939, the documents were filed by William A. Baehr (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 71).

Based on the AOL records, North Continent Mines appears to have assumed ownership of the Golden Rod No. 3 between 1939 and 1940, as this company filed the AOL for each year between 1940 and 1944 (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 351). In 1945 and 1946, Union Mines Development Company filed the AOL (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 156). (Please see Historic Archaeological Component Continuation Page.)

Resource Number 5SM6569

Temporary Resource Number: CSR16A GR3

### Historic Archaeological Component Form

(page 4 of 4)

**Note: Complete parts 11 and 12 only if this form pertains to the site in general.**

11. Architectural Features(s). Please complete a Historic Architectural Component Form when appropriate.

Map Ref.	Description	Construction Material	Dimensions
----------	-------------	-----------------------	------------

12.. Non-architectural features(s).

Map Ref.	Description	Construction Material	Dimensions
<u>F1</u>	<u>Trench, steep bedrock walls</u>	<u>Earth and rock</u>	<u>30 by 20 by 5 ft.</u>
<u>WRP1</u>	<u>Waste-rock pile</u>	<u>Discarded rock</u>	<u>40-ft. diameter</u>

13. Discuss Archaeological potential:

The site has no archaeological potential.

14. Recorder(s): Summer Moore-McMillan, Jeremy Orvig

15. Date: 6/25/2009

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COLORADO CULTURAL RESOURCE SURVEY  
**Historic Archaeological Component Form**  
Continuation Page

Resource Number: 5SM6569  
Temporary Resource Number: CSR16A\_GR3

**10. Additional Information (Historical Background), Continued:**

In 1947 and 1948, Union Mines Development Company, listed as owner of the Golden Rod, filed a Notice in Lieu of Assessment of Work for the mine (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 325; Book 204, Page 375). Although no San Miguel County Courthouse documentation exists concerning mine operation after 1948, AEC records indicate that 323.98 tons of ore were recovered from the Golden Rod No. 3 claim in 1954. As Feature 1 was identified to the field crew as a discovery trench, it is unclear whether the source for the tonnage given was the feature recorded within site boundaries or an alternate adit or mine feature.



5SM6569. Golden Rod No. 3 Mine Feature 1, trench, facing south-south-west.

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).

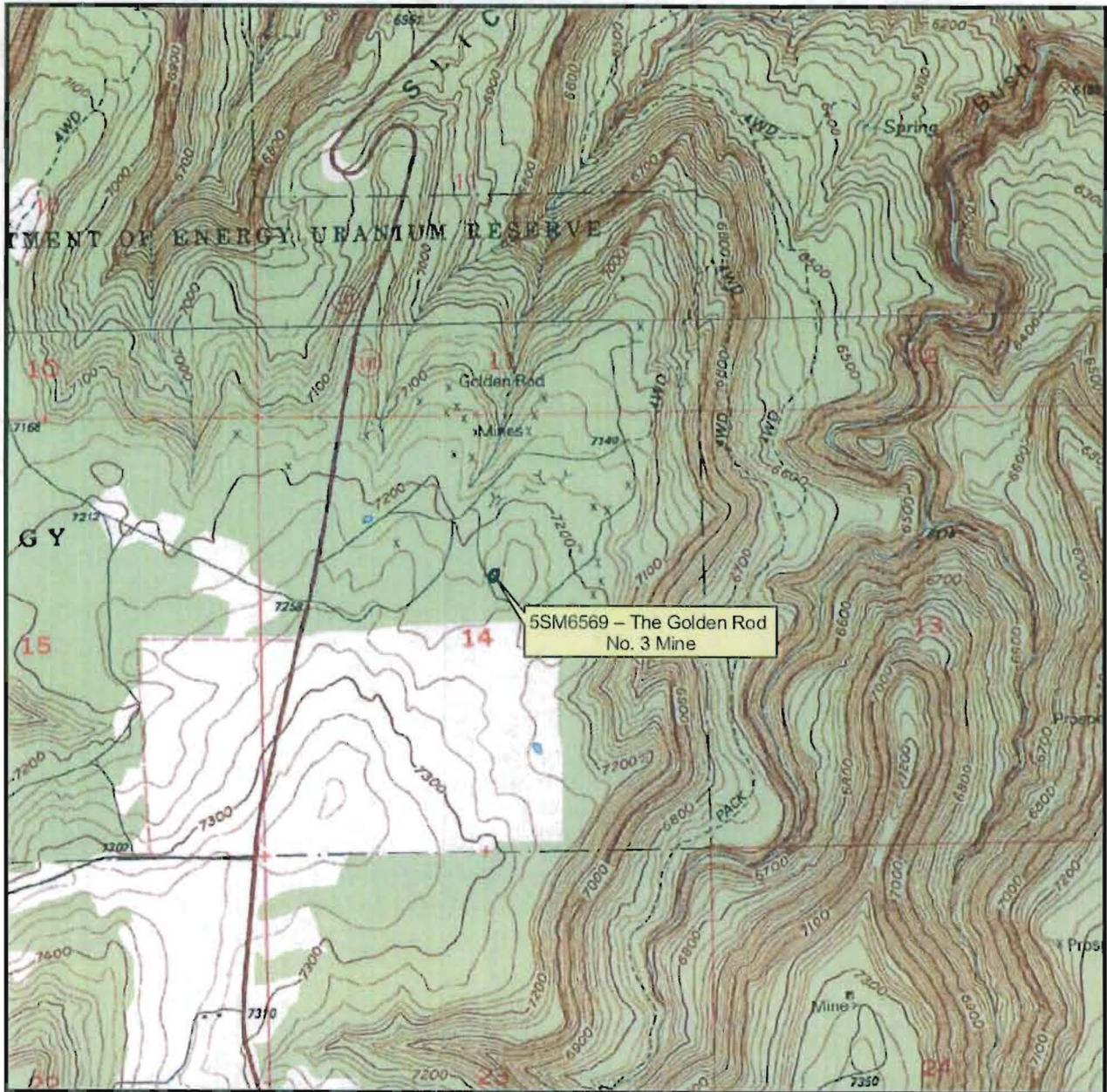


**5SM6569 – The Golden Rod No. 3 Mine**

-  Recent Fire Pit
-  Two-track Road
-  Proposed Project Area
-  Waste-rock Pile (WRP)
-  Contour Line
-  Trench
-  Site Boundary

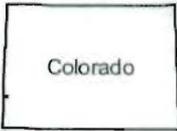
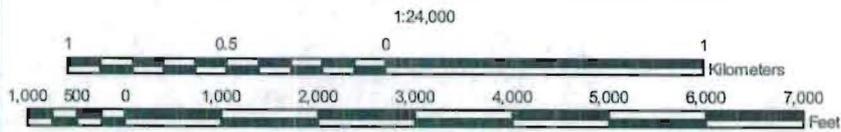


For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).



Egnar, CO  
1947 (1994)  
NM PM T43N R19W  
San Miguel County

Documentation of Historic Mine  
Features on U.S. Department of  
Energy Uranium Lease Tracts in  
Western Colorado: Phase 1, Slick  
Rock Area, San Miguel County,  
Colorado





Resource Number: 5SM6570  
Temporary Resource Number: CSR16ACmpx

### Management Data Form

(page 2 of 4)

13. USGS Quad Egnar, CO 7.5'  15'  Date(s): 1947 (1994) (attach photocopy)
14. County: San Miguel 15. Other Maps:
16. UTM Reference: Check your Datum  NAD 27  NAD 83
- |    |     |                  |                   |
|----|-----|------------------|-------------------|
| A. | 12. | <u>682053</u> mE | <u>4207020</u> mN |
| B. | 12. | mE               | mN                |
| C. | 12; | mE               | mN                |
| D. | 12; | mE               | mN                |
17. Address: Lot Block: Addition
18. Location/Access: From the intersection of Co. Hwy. 141 with County Road S.8 near Slick Rock, CO, continue south on Co. Hwy. 141 for 6.1 miles. Turn east on a two-track road and continue 0.8 miles, staying right at the first two intersections and left at the third. The road dead-ends. Turn right or south and continue south for 1,000 ft. to reach the site.

### III. NATURAL ENVIRONMENT

19. Topographic Feature(s):
- |   |  |                                       |
|---|--|---------------------------------------|
| <input type="checkbox"/> mountain           | <input type="checkbox"/> ledge             | <input type="checkbox"/> playa        |
| <input type="checkbox"/> hill               | <input type="checkbox"/> terrace/bench     | <input type="checkbox"/> talus slope  |
| <input type="checkbox"/> tableland/mesa     | <input checked="" type="checkbox"/> canyon | <input type="checkbox"/> alluvial fan |
| <input checked="" type="checkbox"/> ridge   | <input type="checkbox"/> valley            | <input type="checkbox"/> plain        |
| <input type="checkbox"/> saddle/pass        | <input type="checkbox"/> basin             | <input type="checkbox"/> dune         |
| <input type="checkbox"/> alcove/rockshelter | <input type="checkbox"/> floodplain        | <input type="checkbox"/>              |
| <input type="checkbox"/> cliff              | <input type="checkbox"/> cutbank           | <input type="checkbox"/>              |
| <input checked="" type="checkbox"/> slope   | <input type="checkbox"/> arroyo/gully      | <input type="checkbox"/>              |
20. Site Topographic Description (mention names landforms):  
The site is on the east-facing rim of Bush Canyon.
21. Site Elevation: 7,200 feet = (x .3048) 2195 meters 22. Aspect: 45 °
23. Degree of Slope on Site: 5 ° 24. Soil Depth: 0-20 cm
25. Soil Description (character and color): Reddish-brown sandy loam
26. Depositional Environment
- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aeolian         | <input checked="" type="checkbox"/> Colluvial | <input checked="" type="checkbox"/> Residual |
| <input type="checkbox"/> Alluvial        | <input type="checkbox"/> Moraine              | <input type="checkbox"/> None                |
| <input type="checkbox"/> Other, specify: |   |  |
27. Nearest Water: name/nature Bush Canyon tributary/ permanent distance: 350 m 1148 ft
28. Nearest Permanent Water: name: Bush Canyon tributary distance: 350 m 1148 ft
29. Vegetation on Site (list predominant species): Pinyon and juniper forest
30. Vegetation Associations/Communities Surrounding Site: Pinyon and juniper forest with sagebrush

Resource Number: 5SM6570  
Temporary Resource Number: CSR16ACmpx

### Management Data Form

(page 3 of 4)

#### IV. NATIONAL/STATE REGISTER ELIGIBILITY ASSESSMENT

31. Context or Theme: Mining - Uranium

specify: The Atomic Era (1946-1963), based on Twitty (2008)

32. Applicable National Register Criteria

- Does not meet any of the below National Register criteria
- A. Associated with events that have made a significant contribution to the broad pattern of our history; or
- B. Associated with the lives of persons significant to our past; or
- C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Has yielded, or may be likely to yield, information important in history or prehistory; or
- Qualifies under exceptions A through G.

Level of Significance: National  State  Local

33. Condition:

a. Architectural/Structural

- Excellent
- Good
- Fair
- Deteriorated
- Ruins

b. Archaeological/Paleontological

- Undisturbed
- Light disturbance
- Moderate disturbance
- Heavy disturbance
- Total disturbance

34. Describe Condition: No architectural features; waste rock eroding.

35. Vandalism:  describe

36. National Register Eligibility Field Assessment:

Eligible  Not Eligible  Need Data

Statement of Significance/N.R.H.P. Justification

The Golden Rod/Keystone/Santa Maria Mine has a complex history that has lasted from the discovery of the Golden Rod Lode during or prior to Twitty's (2008) second period of significance, the Radium and Vanadium Boom (1906-1922), through and even after the sixth period of significance, the Last Boom (1974-1980). The production records available from the mine date to 1948, which falls near the beginning of Twitty's (2008) fifth period of significance, the Atomic era (1946-1963). (Please see Management Data Continuation Page.)

37. Status in an Existing National Register District:

Contributing  Non-Contributing

38. National Register District Potential

discuss

Resource Number: 5SM6570  
Temporary Resource Number: CSR16ACmpx

### Management Data Form

(page 4 of 4)

#### V. MANAGEMENT AND ADMINISTRATIVE DATA

39. Threats to Resource: Water erosion  Wind erosion  Grazing  Neglect   
Vandalism  Recreation  Construction  Other (specify): Reclamation  
comments:
40. Existing Protection: None  Marked  Fenced  Patrolled  Access controlled   
other (specify):
41. Local landmark designation: 42. Easement:
43. Management Recommendations:  
As Alpine recommends the reclaimed Golden Rod/Keystone/Santa Maria Mine as ineligible for the NRHP, no further archaeological or historical work is recommended.

#### VI. DOCUMENTATION

44. Previous Actions Accomplished at the site:  
a. Excavations: Test  Partial  Complete  Date(s):  
b. Stabilization: Date(s):  
c. HABS/HAER Documentation Date(s) and Numbers:  
d. Other:
45. Known collections/reports/interviews and other references (list):
46. Primary Location of Additional Data: Alpine Archaeological Cons., 900 S. Townsend, Montrose, CO 81401
47. State or Federal Permit Number: BLM C-46920 Collection Authorized:   
Artifact Collection:  Artifact Repository: N/A  
Collection Method: Diagnostics  Grab Sample  Random Sample  Transect   
Other (specify):
48. Photograph Numbers: SMM-DUL-09-2: images 23 - 27 Negatives filed at: Alpine
49. Report Title: Documentation of Historic Mine Features on U.S. Department of Energy Uranium Lease Tracts in Western Colorado: Phase 1, Slick Rock Area, San Miguel County, Colorado
50. Recorder(s): Summer Moore-McMillan, Jeremy Omvig Date(s): 6/25/2009
51. Recorder Affiliation: Alpine Archaeological Consultants, Inc. Montrose, CO
52. Phone Number: (970) 249-6167

NOTE: Please attach a sketch map, a photocopy of the USGS quad. map indicating resource location, and photographs.

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COLORADO CULTURAL RESOURCE SURVEY

**Management Data Form**

**Continuation Page**

Resource Number: 5SM6570  
Temporary Resource Number: CSR16ACmpx

12. Legal Location, continued:

PM NM Township 43N Range 19W Section 14 NW 1/4 of SW 1/4 of SE 1/4 of NE and  
NE 1/4 of SE 1/4 of SW 1/4 of NE

**36. National Register Eligibility Field Assessment:**

**Statement of Significance/N.R.H.P. Justification:**

However, production from the mine during this year was not great, suggesting that this mine may not have played a particularly important role in Atomic-era uranium and vanadium production. It has little physical integrity and its method of operation was very simple or is no longer evident. The mine is not very visible as a feature of the mining landscape, as it has no structures in association, its waste-rock pile is not very extensive, and it is located in a very remote area. Alpine considers the Golden Rod/Keystone/Santa Maria Mine as not eligible for the NRHP.

Reference Cited:

Twitty, Eric (2008). "Guide to Assessing Historic Radium, Uranium, and Vanadium Mining Resources in Montrose and San Miguel Counties." Prepared by Mountain States Historical, Boulder, Colorado. Prepared for Western Colorado Interpretive Association, Delta, Colorado.

## Historic Archaeological Component Form

(page 1 of 4)

Use this form in conjunction with the Management Data Form. One of these forms should be completed for each historical resources with archaeological potential.

Does this form pertain to the site in general?

OR

a particular feature/structure (please note feature/structure number)

1. Resource Number: 5SM6570                      2. Temporary Resource Number: CSR16ACmpx
3. Site/Feature Type: Uranium Mine
4. General Site/Feature Description:

The Golden Rod/Keystone/Santa Maria Mine Complex (5SM6569) is an 11.9-acre uranium mine site on the east-facing rim of Bush Canyon. The mines are on an unpatented mining claim within the DOE Uranium Reserve, on land administered by the BLM-DFO. The elevation of the site is 7,200 ft. (2,195 m), in an area primarily vegetated by pinyon and juniper forest in association with sagebrush. Cultural remains at the mine site include 11 large pits and trenches, 14 waste-rock piles, and a small, scattered artifact assemblage containing a variety of structural, domestic, and industrial artifacts. Dimensions of the various waste-rock piles at the site are provided in Table 1 (attached.) The features are summarized in the attached Table 2 and described below.

Feature 1 is a long, shallow open-cut mine surrounded by waste-rock piles in the northern portion of the site, near a cluster of features including Features 2 and 3. Feature 1 measures 155 ft. east-west and 10 ft. north-south. It is approximately 8 to 10 ft. deep and is oriented at 280 degrees. The mine was excavated or blasted into bedrock. Artifacts identified within Feature 1 include a wooden-framed screen door, a rusted oil or lubricant can, a 6-ft.-long piece of metal drywall frame, a large, crushed metal can, and an Old Milwaukee pull-tab beer can. Pull-tab cans were introduced in the early 1960s and used through the mid-1970s (Martells 1976). Based on the presence of the screen door and drywall frame, it seems likely that a structure once stood in the area, although no evidence of any building remains today.

Feature 2 is a small, irregularly shaped trench or open-cut mine 10 ft. northwest of Feature 1, on the southern side of Waste-rock Pile 1. This feature measures 20 ft. north-south by 35 ft. east-west and is approximately 8 ft. deep in most locations. It is oriented at 226 degrees. The walls of the trench are formed from both bedrock and loose rock and soil rubble. Two boulders within the rubble have dynamite holes, suggesting that it this feature may have been created by blasting. The bottom has silted in, creating a flat appearance. One artifact was identified within Feature 2, a pull-tab beer can with the letters "OLYMP".

Feature 3 is a shallow, irregularly shaped open-cut mine 20 ft. southwest of Feature 2, just north of Waste-rock Pile 4. This feature measures 25 ft. north-south by 35 ft. east-west, with a maximum depth of approximately 8 to 10 ft. It is oriented at 290 degrees. The sides of the pit are primarily formed by bedrock, although loose soil and rocks form the walls in some locations. The deepest portion of the pit is at the northern corner, where a hole was dynamited into bedrock. The remains of three dynamite holes can be seen in the rock at the side of the pit, where the rock cleaved along the line where the dynamite holes were drilled. No artifacts were observed in Feature 3. (Please see Historic Archaeological Component Continuation Page.)

5. Historic Component Date(s) and/or Sociopolitical Period: 1915-1991

Justification: Historical documents

6. Component Function(s)

Original Use: Uranium mine

Present Use: None

Comments:

7. Ethnic affiliation of occupants: Historic

Justification: Historical records

Resource Number 5SM6570

Temporary Resource Number: CSR16ACmpx

### Historic Archaeological Component Form

(page 2 of 4)

8. Artifact Classes: Please list specific attributes on the first line and artifact quantity (either count or estimate on the second line. Particularly important attributes are listed following the artifact class.

A. Glass: type function, color, manufacturing technique, makers marks, inscriptions, thickness, shape

**Bottle glass:**  purple     clear     aqua     cobalt blue     amber  
 light green     olive green     yellowish    other:

**Vessel finish:**     hand-finished     machine-made

**Vessel types:**

**Makers marks/embossing:**

**Other vessel types:**

**Total estimated number of vessels:**

B. Ceramics: type, function, surface treatment/glaze, shape, trademarks, color, decorations

**Earthenware:**

**Estimated number of vessels:**

**Stoneware:**

**Estimated number of vessels:**

**Porcelain:**

**Estimated number of vessels:**

C. Nails: size, material type and manufacture technique, if not wire or cut

**Cut nails:**     **Quantity:**                      **Wirenails:**     **Quantity:**

**Other fasteners:**

**Quantity:**

Resource Number 5SM6570

Temporary Resource Number: CSR16ACmpx

### Historic Archaeological Component Form

(page 3 of 4)

D. Cans: function, size, material type, type of opening, seams, inscriptions Quantity

**Hole-in-cap:**

**Hole-in-top:**

**Sanitary:** Two food cans 2

**Other:** A rusted oil or lubricant can, large crushed metal can, OLD MILWAUKEE pull-tab beer can, pull-tab OLYMPIA beer can, large tin, and a crushed metal can 6

E. Cartridge Cases: type, size, inscriptions, material type

**Rimfire:**

**Centerfire:**

**Other:**

F. Construction Material: type, material, function (includes items such as logs, lumber, brick, adobe, cement, concrete, stone/rock, sheet metal, asphalt, tar, pipe)

**Window glass:**  **Quantity:**

**Other:** Wooden-framed screen door and a piece of metal drywall frame

G. Misc. Other Items: type, material, function (includes items such as utensils, stove parts, wire, nuts, bolts, rivets, screws, buckets, barrels, vehicle parts, machinery, leather, clothing, bone, furniture, buttons, etc.)

**List:**

9. Artifact Density:  Heavy  Medium  Light

Describe: Only a few structural, domestic, and industrial artifacts were identified scattered throughout the features at the site.

10. Additional Information:

Historical Background

The Golden Rod No. 1 claim, which comprises the northernmost features at the site—Features 1, 2, and 3—was the first one of the three to be located. Although the original Location Certificate could not be located for the Golden Rod in the San Miguel County Courthouse, an Amended Location Certificate was filed for the Golden Rod No. 1 on March 29, 1915, by John Overall (San Miguel County Courthouse, County Clerk's Office, Book 122, Page 3). Overall, who was the owner of the claim at that time, filed the AOL every year for the Golden Rod claim between 1915 and 1935. In 1935 and 1936, the AOL documents were filed by Carl Barth (San Miguel County Courthouse, County Clerk's Office, Book 166, Page 457); between 1937 and 1939, the documents were filed by William A. Baehr (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 71). (Please see Historic Archaeological Component Continuation Page.)

Resource Number 5SM6570

Temporary Resource Number: CSR16ACmpx

### Historic Archaeological Component Form

(page 4 of 4)

**Note: Complete parts 11 and 12 only if this form pertains to the site in general.**

11. Architectural Features(s). Please complete a Historic Architectural Component Form when appropriate.

Map Ref.	Description	Construction Material	Dimensions
----------	-------------	-----------------------	------------

12.. Non-architectural features(s).

Map Ref.	Description	Construction Material	Dimensions
<u>WRP1-14</u>	<u>14 waste-rock piles, see attached table</u>	<u>Discarded rock</u>	<u>see Table 1</u>
<u>F1 - F11</u>	<u>11 features, see attached table</u>	<u>Earth and rock</u>	<u>see Table 2</u>

13. Discuss Archaeological potential:

The site has no archaeological potential.

14. Recorder(s): Summer Moore-McMillan, Jeremy Omvig

15. Date: 6/25/2009

Colorado Historical Society - Office of Archaeology and Historic Preservation,  
1300 Broadway, Denver, CO 80203  
1303-866-3395

COLORADO CULTURAL RESOURCE SURVEY  
**Historic Archaeological Component Form**  
Continuation Page

Resource Number: 5SM6570  
Temporary Resource Number: CSR16ACmpx

**4. General Site/Feature Description, Continued:**

Feature 4 is a shallow, irregularly shaped open-cut mine or trench within a cluster of features, also including Features 5 and 6, near the center of the site. This feature measures 160 ft. east-west by 35 ft. north-south and is a maximum of 7 ft. deep. The orientation of Feature 4 is 70 degrees. The pit was dug down or blasted down to bedrock and has subsequently silted in. At least five drill holes are present in the exposed bedrock. A single large tin can was observed in Feature 4.

Feature 5 is a small trench immediately adjacent to the northwestern corner of Feature 4. It measures 35 ft. east-west by 15 ft. north-south and is 9 ft. deep. The trench is oriented at 280 degrees. It appears to have been blasted out of bedrock using dynamite and is now silted in. Only one artifact was present within Feature 5, a crushed metal can.

Feature 6 is a large, irregularly shaped cavity measuring 120 ft. east-west and 60 ft. north-south, approximately 70 ft. southwest of Features 4 and 5. It is a maximum of 7 ft. deep. The cavity is oriented at 290 degrees. It appears to have been blasted out of bedrock, although the bottom has now filled in with soil. No artifacts were observed in Feature 6.

Feature 7 is a large, shallow pit with irregularly shaped sides and bottom. This feature is within a cluster of features at the southern end of the site that also includes Features 8, 9, and 10. Feature 7 measures 110 ft. north-south by 90 ft. east-west. This feature is surrounded by Waste-rock Piles 11, 12, and 13 and has a maximum depth of approximately 4 ft. Orientation of the feature is at 360 degrees. It appears that the miners blasted out a few areas of bedrock within a low area to create Feature 7. No artifacts were observed in Feature 7.

Feature 8 is a small, shallow pit with an essentially round shape, approximately 120 ft. northeast of Feature 7. The feature is oriented at 100 degrees and measures 35 ft. east-west by 20 ft. north-south. It is 4 or 5 ft. deep. The function of this pit is unknown. Two sanitary cans were observed in the immediate vicinity.

Feature 9 is a narrow, deep trench situated 70 ft. east of Feature 7 and 25 ft. south of Feature 8. Feature 9 measures 55 ft. north-south and 30 ft. east-west, by 8 ft. deep. Orientation of the trench is 224 degrees. The trench has been dynamited to bedrock, although its function is unknown. No artifacts were observed in Feature 9.

Feature 10 is a small, irregularly shaped pit 50 ft. northwest of Feature 8. It measures 20 ft. east-west by 10 ft. north-south, with a depth of 4 ft. The pit is oriented at 75 degrees. The function of the feature is unknown. It has sharply sloping sides and a silted-in bottom. No artifacts were observed in Feature 10.

Feature 11 is a shallow, irregularly shaped pit set apart from the other pits and trenches and surrounded by Waste-rock Pile 14. The pit is 60 ft. east-west and 50 ft. north-south, with a depth of 8 ft. It is oriented at 36 degrees. Its function is unknown, and no artifacts were observed in association.

Reference Cited:

Martells, Jack (1976). "The Beer Can Collector's Bible." Greatlakes Living Press, Matteson, Illinois.

**10. Additional Information (Historical Background), Continued:**

Based on the AOL records, North Continent Mines appears to have assumed ownership of the Golden Rod No. 1 between 1939 and 1940, as this company filed the AOL for each year between 1940 and 1944 (San Miguel County Courthouse, County Clerk's Office, Book 176, Page 351). In 1945 and 1946, Union Mines Development Company filed the AOL (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 156). In 1947 and 1948, Union Mines Development Company, listed as owner of the Golden Rod, filed a Notice in Lieu of Assessment of Work for the mine (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 325; Book 204, Page 375). In 1948, AEC records have three separate tonnage listings for the Golden Rod No. 1. Fahrion and Sagril are listed as having recovered 351.42 tons of ore from the mine, and Jack Fahrion is given as having recovered 280.10 tons of ore. Although San Miguel County Courthouse records cease for the Golden Rod No. 1 after 1948, AEC records show that James Fahrion obtained 7.71 tons of ore from the mine in 1954.

In contrast to the Golden Rod No. 1, the Santa Maria and Keystone claims, which encompass the remainder of the mining features identified at the site, although discovered at different times followed a very similar trail of ownership. These mines were likely operated as one entity for most of their period of operation. The Santa Maria claim, which was originally filed as the Santa Marie, was discovered December 13, 1939, by W. W. Goforth and C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 124, Page 79). The Keystone claim was discovered August 26, 1941, by C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 174, Page 201). AOL documents were filed for both claims on June 29, 1943, by C. A. Snyder, who continued to file the AOL every year until 1948 (San Miguel County Courthouse, County Clerk's Office, Book 204, Page 3; Book 204, Page 71; Book 204, Page 141; Book 204, Page 241; Book 204, Page 326).

In 1948, F. A. Sitton filed the AOL for both claims; for the Keystone claim, San Miguel County Courthouse records show that Sitton filed the AOL on behalf of C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 120, Page 447). AEC tonnage records show that, in 1948, 141.79 tons of ore from the Keystone claim were attributed to F. A. Sitton; in the same year, 74.96 tons of ore from the Keystone claim were also attributed to Robert A. Snyder. Although his relationship to the claims at this time is unclear, Robert A. Snyder filed the AOL for the claims in 1951 and 1952, and it can be assumed that he was a relative of C. A. Snyder. AEC records also indicate that 47.40 tons of ore were recovered from the Santa Maria in 1948, by an unidentified party. In 1949, the AOL for the Keystone claim was filed by F. A. Sitton on behalf of himself; that year, the Santa Maria AOL was filed by C. A. Snyder (San Miguel County Courthouse, County Clerk's Office, Book 120, Page 470).

C. A. Snyder appears to have passed away between 1949 and 1950, as in 1950, the AOL was filed by the estate of C. A. Snyder. In 1951 and, Robert A. Snyder, likely as heir to C. A. Snyder, filed the AOL (San Miguel County Courthouse, County Clerk's Office, Book 120, Page 552; Book 120, Page 609). In 1953, James J. Rychtarik filed the AOL for both claims (San Miguel County Courthouse, County Clerk's Office, Book 222, Page 8-80). In 1954, Rychtarik filed the AOL for the Santa Maria claim (San Miguel County Courthouse, County Clerk's Office, Book 222, Page 8-395), while the AOL for the Keystone claim was filed by C. S. Gillaspay (San Miguel County Courthouse, County Clerk's Office, Book 222, Page 8-462). In 1955, the AOL was filed by Robert S. Palmer for both claims (San Miguel County Courthouse, County Clerk's Office, Book 254, Page 145).

Beginning in 1956, Uranium Metals, Inc., became involved in the Keystone and Santa Maria claims, filing the AOL for the Keystone every year between 1956 and 1964 and for the Santa Maria every year between 1956 and 1962 (San Miguel County Courthouse, County Clerk's Office, Book 267A, Page 272; Book 275, Page 14; Book 275, Page 161; Book 287, Page 275; Book 295, Page 96; Book 295, Page 235; Book 302, Page 48; Book 310, Page 7). In 1962, Uranium Metals was identified as the lessee on the AOL document, suggesting that the company had been leasing these claims throughout the period (San Miguel County Courthouse, County Clerk's Office, Book 295, Page 235). The AOL for the Santa Maria was filed Robert S. Palmer in 1963 (San Miguel County Courthouse, County Clerk's Office, Book 302, Page 281). In 1964, Climax Uranium Company began filing the AOL for the Santa Maria, which it continued to do through 1971 (San Miguel County Courthouse, County Clerk's Office, Book 302, Page 493; Book 310, Page 196; Book 310, Page 503; Book 321, Page 148; Book 321, Page 437; Book 321, Page 501; Book 321, Page 813; Book 321, Page 942).

In 1965, Ruben Snyder filed the AOL for the Keystone claim (San Miguel County Courthouse, County Clerk's Office, Book 310, Page 321). In 1966, AOL documents record that one half-interest in the claim was held by Edwin C. Hall and the other by Climax Uranium Company (San Miguel County Courthouse, County Clerk's Office, Book 310, Page 498; Book 310, Page 321). Between the years 1966 and 1971, based on AOL records it appears that Climax Uranium maintained a half-interest in the claim, while an ownership consortium consisting of Edwin C. Hall, Bruce B. Hall, Grant Fredrickson, and Warren E. Wright controlled the other half. The half owned by Climax Uranium was evidently transferred to Atlas Corporation sometime before 1973 (San Miguel County Courthouse, County Clerk's Office, Book 345, Page 617). With few exceptions, Atlas Corporation and the ownership consortium referred to above appear to have controlled the Keystone claim until the claim was evidently let lapse after 1997 (San Miguel County Courthouse, County Clerk's Office, Book 350, Page 121; Book 350, Page 757; Book 354, Page 13; Book 354, Page 26; Book 360, Page 298; Book 360, Page 361; Book 361, Page 835; Book 367, Page 99; Book 373, Page 188; Book 373, Page 253; Book 381, Page 697; Book 382, Page 127; Book 388, Page 572; Book 388, Page 149; Book 395, Page 98; Book 395, Page 139; Book 400, Page 803; Book 406, Page 324; Book 412, Page 285; Book 422, Page 161; Book 429, Page 906; Book 438, Page 544; Book 445, Page 560; Book 456, Page 263; Book 470, Page 180; Book 481, Page 915; Book 497, Page 366; Book 516, Page 577; Book 534, Page 21; Book 550, Page 639; Book 565, Page 772; Book 577, Page 915). Recorded ore production for the Keystone claim prior to 1971 totaled 437 tons, including 1,691 lbs. of uranium and 16,952 lbs. of vanadium (Nelson-Moore et al. 1978).

The Santa Maria claim appears also to have come under the control of Atlas Corporation in 1973 (San Miguel County Courthouse, County Clerk's Office, Book 345, Page 617). Atlas Corporation or Atlas Minerals filed the AOL every year between 1973 and 1982 (San Miguel County Courthouse, County Clerk's Office, Book 345, Page 617; Book 345, Page 617; Book 350, Page 121; Book 354, Page 13; Book 360, Page 298; Book 366, Page 835; Book 373, Page 253; Book 381, Page 697; Book 388, Page 572; Book 395, Page 117; Book 400, Page 801). Between 1983 and 1986, Robert A. Snyder filed the AOL every year (San Miguel County Courthouse, County Clerk's Office, Book 406, Page 326; Book 413, Page 295; Book 421, Page 6; Book 429, Page 263). Between 1987 and 1991, Glenn and Diana Kindred appear to have owned the claim together, with one or both of them filing the AOL every year (San Miguel County Courthouse, County Clerk's Office, Book 437, Page 121; Book 445, Page 217; Book 455, Page 183; Book 469, Page 750; Book 481, Page 71). After 1991, the claim appears to have been let lapse. Recorded ore production for the Santa Maria claim prior to 1971 totaled 47 tons, including 157 lbs. of uranium and 2,587 lbs. of vanadium (Nelson-Moore et al. 1978).

Reference Cited:

Nelson-Moore, James L, Donna Bishop Collins, and A. L. Hornbaker (1978). "Bulletin 40: Radioactive Mineral Occurrences of Colorado and Bibliography", Colorado Geological Survey, Department of Natural Resources, State of Colorado, Denver.

Table 1. Waste-Rock Pile Dimensions at Site 5SM6570.

Waste-Rock Pile No.	North-South Dimensions (ft.)	East-West Dimensions (ft.)
1	85	360
2	35	40
3	15	20
4	20	80
5	20	20
6	65	75
7	55	180
8	130	260
9	95	175
10	50	45
11	160	200
12	70	70
13	65	45
14	195	110

Table 2. Features Observed at Site 5SM6570.

Feature No.	Description	Orientation (degrees)	Maximum Depth (ft.)	North-South Dimensions (ft.)	East-West Dimensions (ft.)
1	Long, shallow open-cut mine	280	8 - 10	10	155
2	Small, irregularly shaped trench or open-cut mine	226	8	20	35
3	Shallow, irregularly shaped open-cut mine	290	8 - 10	25	35
4	Shallow, irregularly shaped open-cut mine or trench	70	7	35	160
5	Small trench	280	9	15	35
6	Large, irregularly shaped cavity	290	7	60	120
7	Large, shallow irregularly shaped pit	360	4	110	90
8	Small, shallow pit with an essentially round shape	100	4 - 5	20	35
9	Narrow, deep trench	224	8	55	30
10	Small, irregularly shaped pit	75	4	10	30
11	Shallow, irregularly shaped pit	36	8	50	60



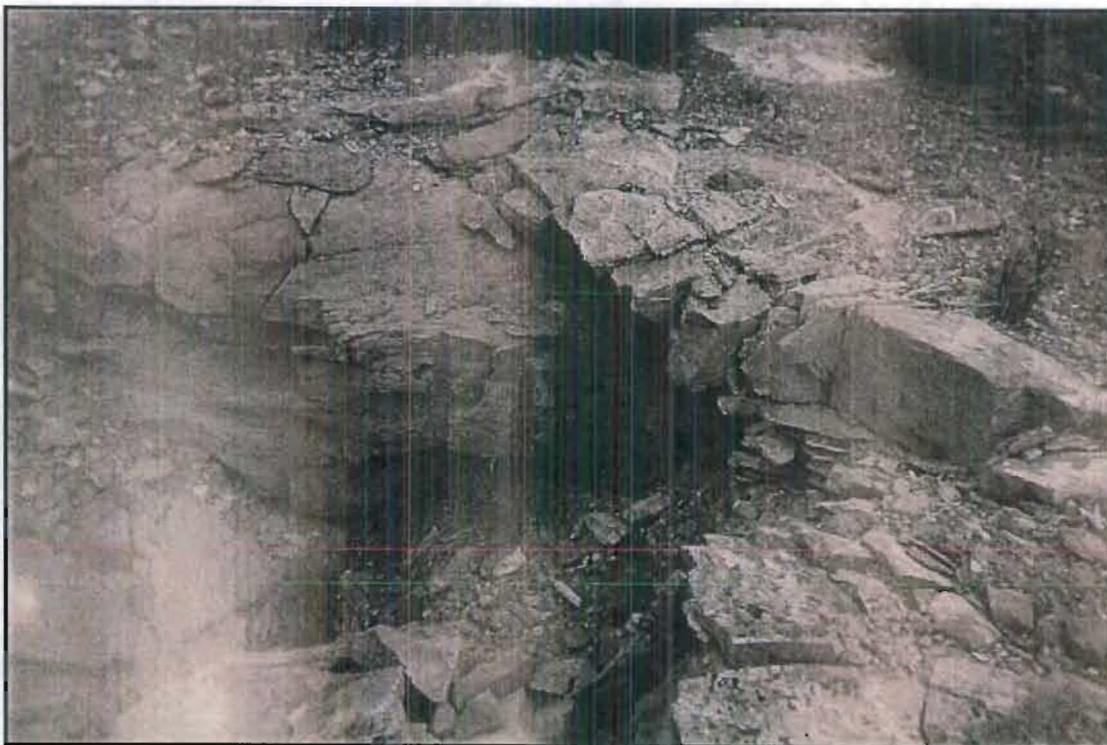
**5SM6570.** Overview of Golden Rod, Keystone, Santa Maria disturbance area, looking east.



**5SM6570.** Feature 1, trench, ATV at end of trench, facing east.



**5SM6570.** Feature 2 overview, Feature 3 in background, looking west.



**5SM6570.** Feature 3, detail of drill holes, facing northeast.



5SM6570. Feature 4, facing east- northeast.



5SM6570. Golden Rod, Keystone, Santa Maria Feature 5, facing northwest.



5SM6570. Golden Rod, Keystone, Santa Maria Feature 6, looking west.



5SM6570. Feature 7, facing north-northwest.



5SM6570. Golden Rod, Keystone, Santa Maria Feature 8, looking east.



5SM6570. Feature 9, facing southwest.

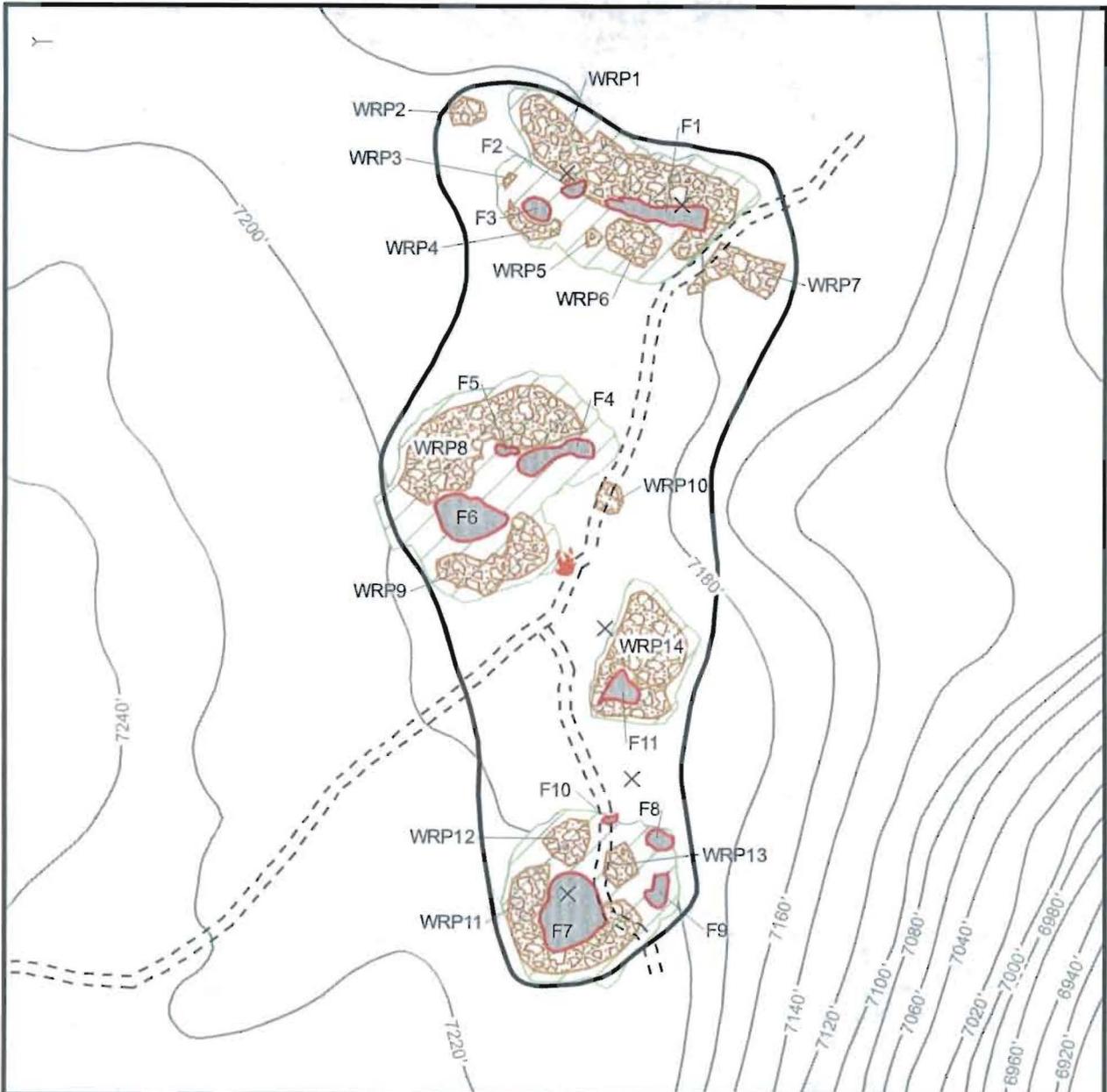


5SM6570. Feature 10, looking southwest.



5SM6570. Golden Rod, Keystone, Santa Maria Feature 11, facing northeast.

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).

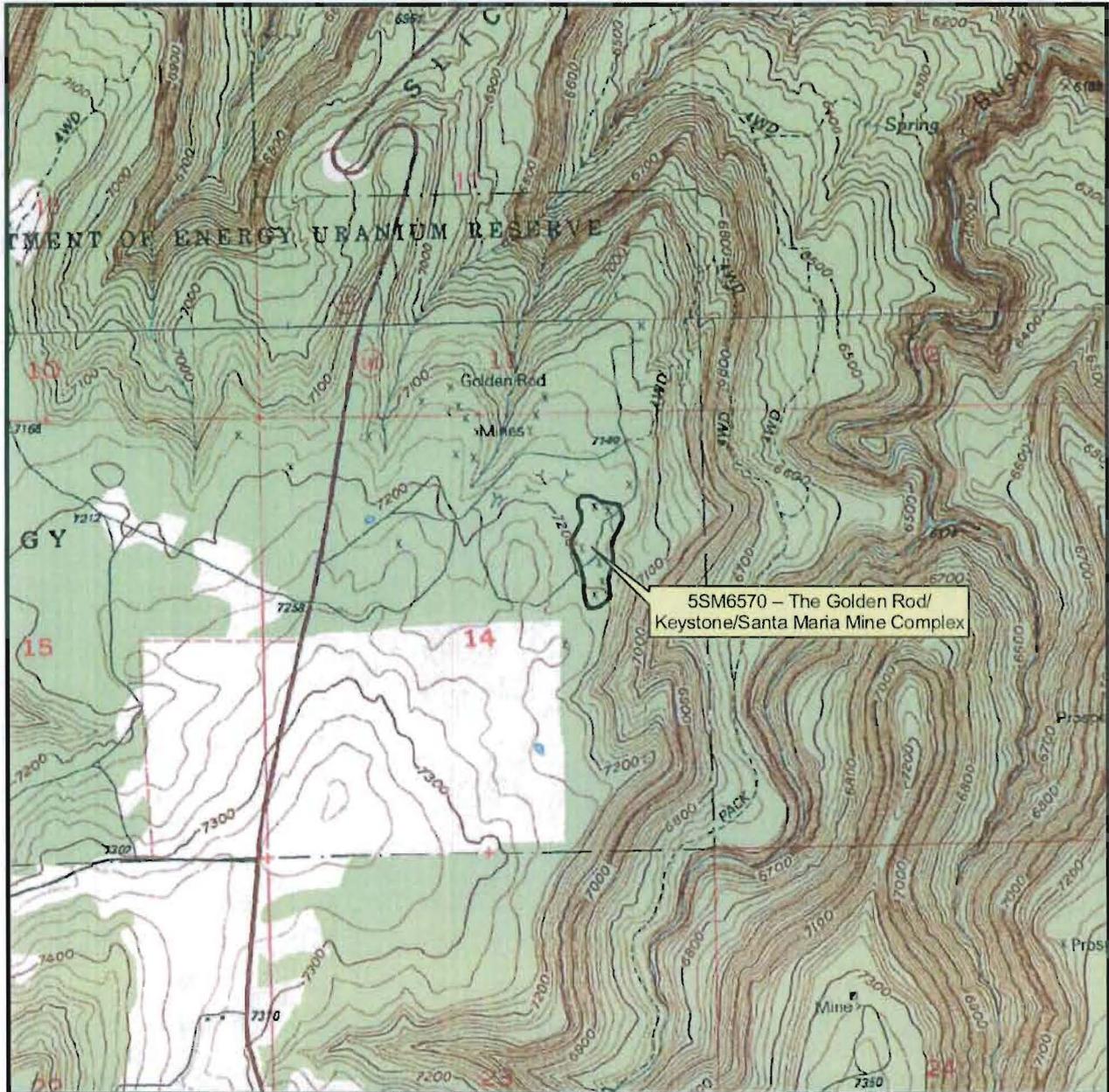


**5SM6570 – The Golden Rod/Keystone/Santa Maria Mine Complex**

- |                                       |                |                       |                       |
|---------------------------------------|----------------|-----------------------|-----------------------|
| Recent Fire Pit                       | Two-track Road | Proposed Project Area | Site Boundary         |
| Mine Adit (as indicated by USGS topo) | Contour Line   | Pit or Trench         | Waste-rock Pile (WPR) |
| Mine (as indicated by USGS topo)      |                |                       |                       |

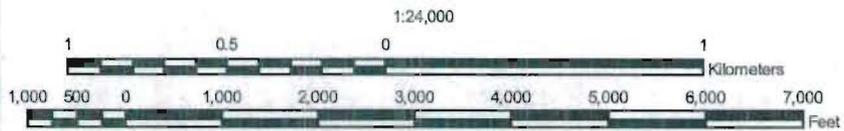


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Egnar, CO  
1947 (1994)  
NM PM T43N R19W  
San Miguel County

Documentation of Historic Mine  
Features on U.S. Department of  
Energy Uranium Lease Tracts in  
Western Colorado: Phase 1, Slick  
Rock Area, San Miguel County,  
Colorado



Colorado

**Isolated Find Record****I. IDENTIFICATION AND LOCATION**

1. Resource Number: 5SM6575                      2. Temporary Resource Number: IF-SMM-5  
 3. County: San Miguel  
 4. Legal Location: PM NM Township 43N Range 19W  
 Sec 14 - NW 1/4 of SE 1/4 of NW 1/4 of NE 1/4  
 if section is irregular, explain alignment method:  
 5. UTM's: Zone 12 , 681926 mE, 4207260 mN NAD: 83  
 6. USGS Quad Name: Egnar, CO  
 Date: 1947 (1994)

**II. ARCHAEOLOGICAL DATA**

7. Artifacts: The isolated find is the reclaimed Golden Rod uranium mine. No evidence of the original workings of the mine is now present. A subsidence has developed within the reclaimed area, which DOE personnel indicated is a collapsed drift. The subsidence measures 7 ft. by 4 ft. and is approximately 20 ft. deep. No artifacts were observed in association with the subsidence.
8. IF Dimensions: 5 X 5 m                      OR Single Artifact   
 9. Inferred Function(s): reclaimed uranium mine  
 10. Cultural Affiliation/Time Period: Historic  
 11. Comments: An amended Location Certificate was filed for the Golden Rod No. 1 on March 29, 1915, by John Overall (San Miguel County Courthouse, County Clerk's Office, Book 122, Page 3). Overall filed

**III. ENVIRONMENTAL DATA**

12. Elevation: Feet: 7,180                      Meters: 2,188  
 13. Soil: reddish-brown sandy loam  
 14. Topography: broad, gently sloping area between Summit Canyon and Bush Canyon  
 15. Slope: Site: 1-2°                      Surrounding: 1-2°  
 16. Nearest Water: Name/Nature Bush Canyon tributary/ intermittent  
 Elevation: 7120 feet                      Distance: 255 m                      Direction: WNW  
 17. Vegetation: pinyon and juniper with associated Gambel oak and sagebrush

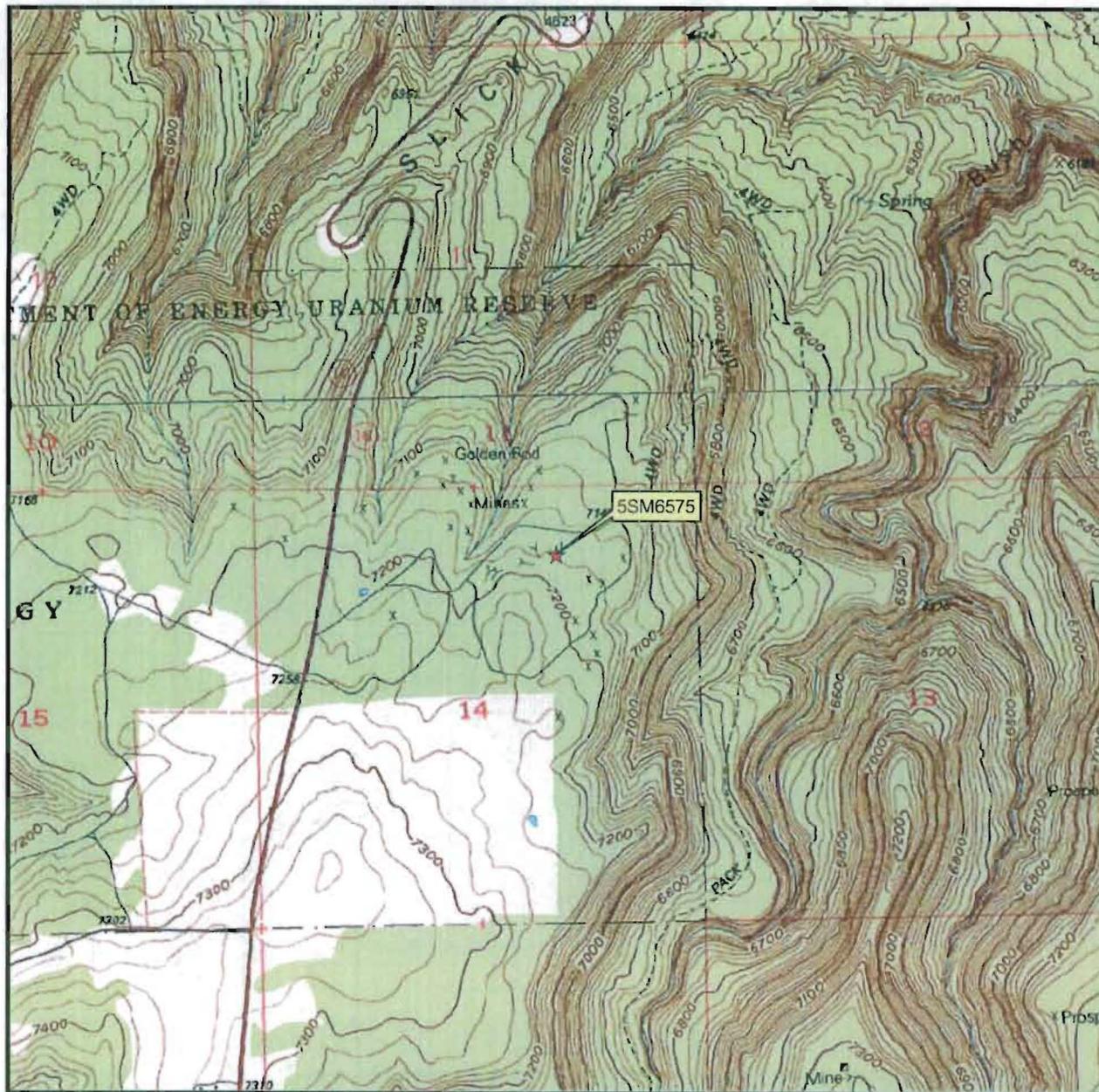
**IV. REFERENCE DATA**

18. Collection?:  Describe:  
 19. Repository: N/A  
 20. Landowner: Bureau of Land Mgmt, Dolores Field Office; Department of Energy  
 21. Report Title: Documentation of Historic Mine Features on U.S. Department of Energy Uranium Lease Tracts in Western Colorado: Phase 1, Slick Rock Area, San Miguel County, Colorado  
 22. Recorder(s): Summer Moore-McMillan, Jeremy Omvig  
 23. Recorder Affiliation: Alpine Archaeological Consultants, Inc.  
 24. Date(s): 6/25/2009



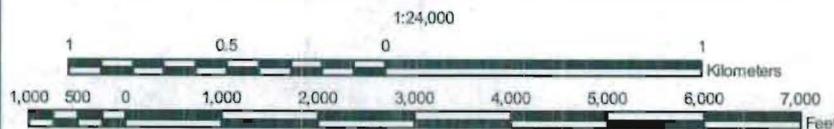
5SM6575. A west-facing view of the subsidence at Golden Rod.

For Official Use Only: Disclosure of site locations prohibited (43 CFR 7.18).



Egnar, CO  
1947 (1994)  
NM PM T43N R19W  
San Miguel County

Documentation of Historic Mine  
Features on U.S. Department of  
Energy Uranium Lease Tracts in  
Western Colorado: Phase 1, Slick  
Rock Area, San Miguel County,  
Colorado



Colorado



Department of Energy  
Office of Legacy Management

June 15, 2009

OLM-SRS-2009-068

Mr. Dick White, Vice President  
Exploration Colorado/Utah Operations  
Energy Fuels Resources  
P.O. Box 888  
Nucla, CO 81424

Subject: Annual Royalties for Mining Lease Numbers AT(05-1)-ML-60.8-C-SR-16A,  
C-CM-24, C-G-26, and C-G-27

Dear Mr. White:

In accordance with the Lease Agreements for U.S. Department of Energy (DOE) Lease Tracts **C-SR-16A**, C-CM-24, C-G-26, and C-G-27, annual royalties in the aggregate amount of \$23,100 are due and payable to DOE on June 27, 2009. With reference to recent discussions, DOE has identified specific work scope (hazard mitigation and reclamation activities) that can be performed on various DOE lease tracts in lieu of these annual royalty payments. The DOE has determined the value of this work scope is equitable to the royalties owed. A copy of the specific work scope is enclosed for your review.

On the basis of your review, if Energy Fuels Resources (EFR) agrees to perform the work scope specified, please formalize your acceptance by signing in the space provided on the enclosure and returning that document to me. If accepted, please recognize that no payment for annual royalties will be due to DOE for the 2009-2010 lease year. Project personnel will coordinate a schedule with you that will ensure the completion of these activities in 2009. Upon completion of all activities, EFR will be credited with the appropriate annual royalty payments.

If you choose to decline this option at this time, the entire annual royalty amount (\$23,100) is due and payable on June 27, 2009.

If you have questions concerning this matter, please contact me at (720) 377-9683.

Sincerely,

Steven R. Schiesswohl  
2009.06.16 14:48:47  
-06'00'

Steven R. Schiesswohl  
Realty Officer

Enclosure

cc: Project File ULSCF 2.0 (E. Cotter)

2597 B 3/4 Road, Grand Junction, CO 81503

1000 Independence Ave., S.W., Washington, DC 20585

10995 Hamilton-Cleves Highway, Harrison, OH 45030

232 Energy Way, N. Las Vegas, NV 89030

REPLY TO: Westminster, CO Office

3600 Collins Ferry Road, Morgantown, WV 26505

11025 Dover St., Suite 1000, Westminster, CO 80021

955 Mound Road, Miamisburg, OH 45342

**Acknowledgment and Acceptance**

Energy Fuels Resources hereby acknowledges the work scope, and its determined value (\$23,100), as referenced in the letter dated June 15, 2009. Energy Fuels Resources hereby agrees to perform the defined work scope in lieu of the annual royalty payments due for Lease Tracts C-SR-16A, C-CM-24, C-G-26, and C-G-27 for the 2009-2010 lease year (aggregate sum of \$23,100). Energy Fuels Resources further acknowledges that the performance of this work scope completely satisfies the annual royalties owed.

\_\_\_\_\_  
Signature/Title

\_\_\_\_\_  
Date



## EFR Reclamation in-lieu-of Royalties - Estimated Costs

Description	Days on Job	4-day Weeks	Cost per Week	Total Cost
Equip. Operators	12	3	2,000	6000
Laborers	1	0.25	1,400	350
Trackhoe (320)	0	0	4,560	0
Trackhoe (307)	6	1.5	3,600	5400
Mini-Excavator	0	0	1,400	0
Dozer (D-8)	0	0	6,800	0
Dozer (D-6)	0	0	5,520	0
Dozer (D-4)	6	1.5	2,540	3810
FE Loader (966)	6	1.5	3,120	4680
Backhoe (580)	0	0	2,640	0
Skidster Loader	0	0	1,680	0
Grader/Maintainer	0	0	3,120	0
Dump Truck (tdm)	2	0.5	2,880	1440
Dump Truck (rock)	0	0	0	0
Water Truck	0	0	2,880	0
Flatbed Trailer	0	0	700	0
Pickup (4X4)	0	0	1,920	0
Portable Welder	0	0	540	0
Oxy/Acet Torch Kit	0	0	540	0
Bat Gate Inst. (LS)	0	0		0
Seed Mix (LS)	5	5	300	1500
PUF (LS)	0	0	200	0
	0	0	0	0
<b>Total Cost</b>				<b>23180</b>