

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.: 137764	2a. Lead (Sponsoring) Agency: BLM-RFO	2b. Other Permitting Agency(ies):	3. Lead Agency Report No.:
4. Title of Report: A Class III Archaeological Survey for the Armstrong Energy Corporation Proposed Liza Jane Fed #1 Well Pad and Access Road Revised Location, Roosevelt County, New Mexico. Author(s) Scott Walley			5. Type of Report <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Positive
6. Investigation Type <input type="checkbox"/> Research Design <input checked="" type="checkbox"/> Survey/Inventory <input type="checkbox"/> Test Excavation <input type="checkbox"/> Excavation <input type="checkbox"/> Collections/Non-Field Study <input type="checkbox"/> Overview/Lit Review <input type="checkbox"/> Monitoring <input type="checkbox"/> Ethnographic study <input type="checkbox"/> Site specific visit <input type="checkbox"/> Other			
7. Description of Undertaking (what does the project entail?): Armstrong Energy Corporation, proposes to construct the Liza Jane Federal #1 well pad and access road in Township 5 South (T5S) Range 34 East (R34E) Section 19 S1/2, Roosevelt County, New Mexico. A previous proposed project area was surveyed and reported recently by Galassini and Broxson (2017, NMCRIS 137529). The proposed project area was moved for reasons unrelated to cultural resources, and a new cultural resource survey was required for the revised location. The proposed pad measures 270 ft north-south by 300 ft east-west. According to the Bureau of Land Management (BLM), Roswell Field Office (RFO), the Area of Potential Effect (APE) for the pad is 400 ft by 400 ft, or 3.67 ac. The proposed road measures 3,486.7 ft long. The proposed easement is 30 ft wide, comprising 2.40 ac. The combined APE is 6.08 ac. After consultation with a BLM/RFO archaeologist on 16 March, 2017, a cultural resource survey was conducted. The surveyed space includes three components: (1) a 600-ft by 600-ft (8.26 ac) block area around the well pad, (2) a 200-ft by 400-ft (1.84 ac) block area around the point where the proposed road intersects the existing road, and (3) a linear survey along 3,176 ft of the proposed road that falls outside the survey blocks. This staked line was surveyed in three 15-m (50-ft) transects, comprising 10.94 ac. The total surveyed space was therefore 21.06 ac. The APE and surveyed space are located entirely on land with private surface ownership. One archaeological site (LA 187372) was newly discovered within the project area. No isolated occurrences were found. There are no previously recorded sites within a mile of the project area. LA 187372 is an aboriginal artifact scatter. It is recommended that National Register of Historic Places (NRP) eligibility for this site remain undetermined at this time. Avoidance is recommended. The site was located about 12 m (40 ft) north of the proposed pad. The pad has been moved 18 m (60 ft) to the south to provide a 30-m (100-ft) buffer between the pad and the site. This will result in no impact to the resource. Additional survey transects were conducted to the south of the original block survey to ensure a 30-m (100-ft.) buffer to the south of the pad as well. The adjusted surveyed space totals 21.89		8. Dates of Investigation: (from: 3/22/2017 to: 3/23/2017) 9. Report Date: 04/05/2017	
10. Performing Agency/Consultant: Boone Archaeological Resource Consultants, LLC (BooneARC) Principal Investigator: Stacy K. Galassini Field Supervisor: Scott Walley Field Personnel Names: Scott Walley		7. Description of Undertaking (cont'd.): If additional cultural material more than 50 years old is observed during construction, work in the vicinity should cease and archaeologists with the BLM/RFO should be consulted for guidance. REFERENCES: Galassini, Stacy K., and Joshua W. Broxson 2017 A Class III Archaeological Survey for the Armstrong Energy Corporation Proposed Liza Jane Fed #1 Well Pad and Access Road, Roosevelt County, New Mexico. Boone Archaeological Resource Consultants Report No. 01-17-52. NMCRIS No. 137529.	
11. Performing Agency/Consultant Report No.: BooneARC 03-17-22		12. Applicable Cultural Resource Permit No(s): BLM: 190-2920-16-V NM: NM-17-157-S	

13. Client/Customer (project proponent): Armstrong Energy Corporation Contact: Kyle Alpers Address: Phone: (575) 623-2999	14. Client/Customer Project No.:
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15. Land Ownership Status (*Must be indicated on project map*):

Land Owner	Acres Surveyed	Acres in APE
Private	21.89	6.08
TOTALS	21.89	6.08

16 Records Search(es):

Date(s) of ARMS File Review 3/21/17	Name of Reviewer(s) S. Walley	
Date(s) of NR/SR File Review 3/21/17	Name of Reviewer(s) S. Walley	
Date(s) of Other Agency File Review 3/14/17	Name of Reviewer(s) J. Ashbaugh	Agency BLM-RFO

17. Survey Data:

a. Source Graphics NAD 27 NAD 83
 USGS 7.5' (1:24,000) topo map Other topo map, Scale:
 GPS Unit Accuracy <1.0m 1-10m 10-100m >100m

b. USGS 7.5' Topographic Map Name USGS Quad Code

Dora SW, 1984	33103-G4

c. County(ies): Eddy

17. Survey Data (continued):

d. Nearest City or Town: Dora

e. Legal Description:

Township (N/S)	Range (E/W)	Section	¼	¼	¼
5S	34E	19			S 1/2.

Projected legal description? Yes , No Unplatted

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

18. Survey Field Methods:

Intensity: 100% coverage <100% coverage

Configuration: block survey units linear survey units (l x w): 968 m x 45 m (3,176 ft x 150 ft)
 other survey units (specify):

Scope: non-selective (all sites recorded) selective/thematic (selected sites recorded)

Coverage Method: systematic pedestrian coverage other method (describe)

Survey Interval (m): 15 **Crew Size:** 1 **Fieldwork Dates:** 3/22/2017

Survey Person Hours: 5 **Recording Person Hours:** 2 **Total Hours:** 7

Additional Narrative: The project area was surveyed in three 15-m (50-ft) transects. When cultural material was observed, the surrounding area was examined in 7-m intervals for additional cultural material. Cultural materials within 20 m of one another were grouped together as either archaeological sites or isolated manifestations based on BLM manual H-8100-1, as amended by the BLM January 2012. The site datum and a diagnostic artifact were mapped utilizing an Ashtech MobileMapper 100 GPS unit with submeter accuracy. All artifacts were analyzed in the field. No artifacts were collected. No subsurface testing was conducted. Photographs were taken of site overviews and the diagnostic artifact.

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.): The project area is located in the Great Plains Physiographic Province on the Llano Estacado, an area described by Hogan (2006) as a "high, isolated pediment surface" characterized by relatively flat terrain with a very slight southeastern gradient. Caliche is at or near the surface, and numerous shallow depressions are present, "many containing playas with lunate dunes on their leeward margins." The terrain is a gently rolling non-dunal plain, with a gentle slope toward a playa west of the proposed pad. Elevation is approximately 4,330 ft above mean sea level.

Soils are classified as Ratiiff Sandy Clay Loam, 0 to 3 percent slope, and Kimbrough Loam, 0 to 3 percent slope. Ratiiff soils dominate the pad area and are found on plains and playa steps. They form in calcareous loamy eolian deposits. Kimbrough soils are found primarily along the east-west portion of the proposed road and the road intersection buffer. These soils are found on plains and form in loamy eolian deposits derived from sedimentary rock (USDA/NRCS 2012).

The dominant vegetation, regardless of terrain, is creosote, mesquite, and sage, with other scattered shrubs and succulents. Grass is sparse.

Hogan, Patrick
2006 Development of Southeastern New Mexico Regional Research Design and Cultural Resource Management Strategy. USDI Bureau of Land Management, New Mexico State Office, Santa Fe.

United States Department of Agriculture, Natural Resources Conservation Service
2012 Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Electronic document accessed 3/23/2017.

20. a. Percent Ground Visibility: 60 **b. Condition of Survey Area (grazed, bladed, undisturbed, etc.):** There is minimal construction activity in the project area. There is a buried pipeline near the west end of the proposed road, and the road passes near the south side of an existing pad. It crosses several fences and two-track roads before intersecting the proposed pad. A two-track road crosses the pad survey area. Cattle grazing is a major impact, due to the proximity of a playa west of the proposed pad, and a ranch complex to the northwest. Cattle trails are evident throughout the project area. Erosion is generally minor along the road, but portions of the pad survey block exhibit sheetwash, especially where the level plain begins to slope down toward the playa.

21. CULTURAL RESOURCE FINDINGS Yes, See Page 3 No, Discuss Why:

<p>22. Required Attachments (check all appropriate boxes):</p> <p><input checked="" type="checkbox"/> USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn</p> <p><input checked="" type="checkbox"/> Copy of NMCRIS Mapperserver Map Check</p> <p><input checked="" type="checkbox"/> LA Site Forms - new sites (<i>with sketch map & topographic map</i>)</p> <p><input type="checkbox"/> LA Site Forms (update) - previously recorded & un-relocated sites (<i>first 2 pages minimum</i>)</p> <p><input type="checkbox"/> Historic Cultural Property Inventory Forms</p> <p><input type="checkbox"/> List and Description of isolates, if applicable</p> <p><input type="checkbox"/> List and Description of Collections, if applicable</p>	<p>23. Other Attachments:</p> <p><input type="checkbox"/> Photographs and Log</p> <p><input checked="" type="checkbox"/> Other Attachments</p> <p>(Describe): Plats, Pre-field Form</p>
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24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Responsible Archaeologist: Stacy K. Galassini

Signature Stacy K. Galassini Date 04/6/17 Title (if not PI):

25. Reviewing Agency:

Reviewer's Name/Date

Accepted () Rejected ()

Tribal Consultation (if applicable): Yes No

26. SHPO

Reviewer's Name/Date:

HPD Log #:

SHPO File Location:

Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

1. NMCRIS Activity No.: 137764	2. Lead (Sponsoring) Agency: BLM-RFO	3. Lead Agency Report No.:
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SURVEY RESULTS:

Sites discovered and registered: 1
Sites discovered and NOT registered: 0
Previously recorded sites revisited *(site update form required)*: 0
Previously recorded sites not relocated *(site update form required)*: 0
TOTAL SITES VISITED: 1
Total isolates recorded: 0 **Non-selective isolate recording?**
Total structures recorded *(new and previously recorded, including acequias)*: 0

MANAGEMENT SUMMARY: Armstrong Energy Corporation, proposes to construct the Liza Jane Federal #1 well pad and access road. After consultation with BLM archaeologist on 16 March, 2017, a cultural resource survey was conducted. The total surveyed space was therefore 21.89 ac. The APE and surveyed space are located entirely on land with private surface ownership.

One archaeological site (LA 187372) was newly discovered within the project area. No isolated occurrences were found. There are no previously recorded sites within a mile of the project area. LA 187372 is an aboriginal artifact scatter. It is recommended that National Register of Historic Places (NRP) eligibility for this site remain undetermined at this time. Avoidance is recommended. The site was located about 12 m (40 ft) north of the proposed pad. The pad was moved 18 m (60 ft) to the south to provide a 30-m (100-ft) buffer between the pad and the site. This will result in no impact to the resource.

If additional cultural material more than 50 years old is observed during construction, work in the vicinity should cease and archaeologists with the BLM/RFO should be consulted for guidance.

IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.

SURVEY LA NUMBER LOG

Sites Discovered:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)
187372	SW 1	Undetermined

Previously recorded revisited sites:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

A Class III Archaeological Survey for the Armstrong Energy Corporation Proposed Liza Jane Fed #1 Well Pad and Access Road Revised Location, Roosevelt County, New Mexico

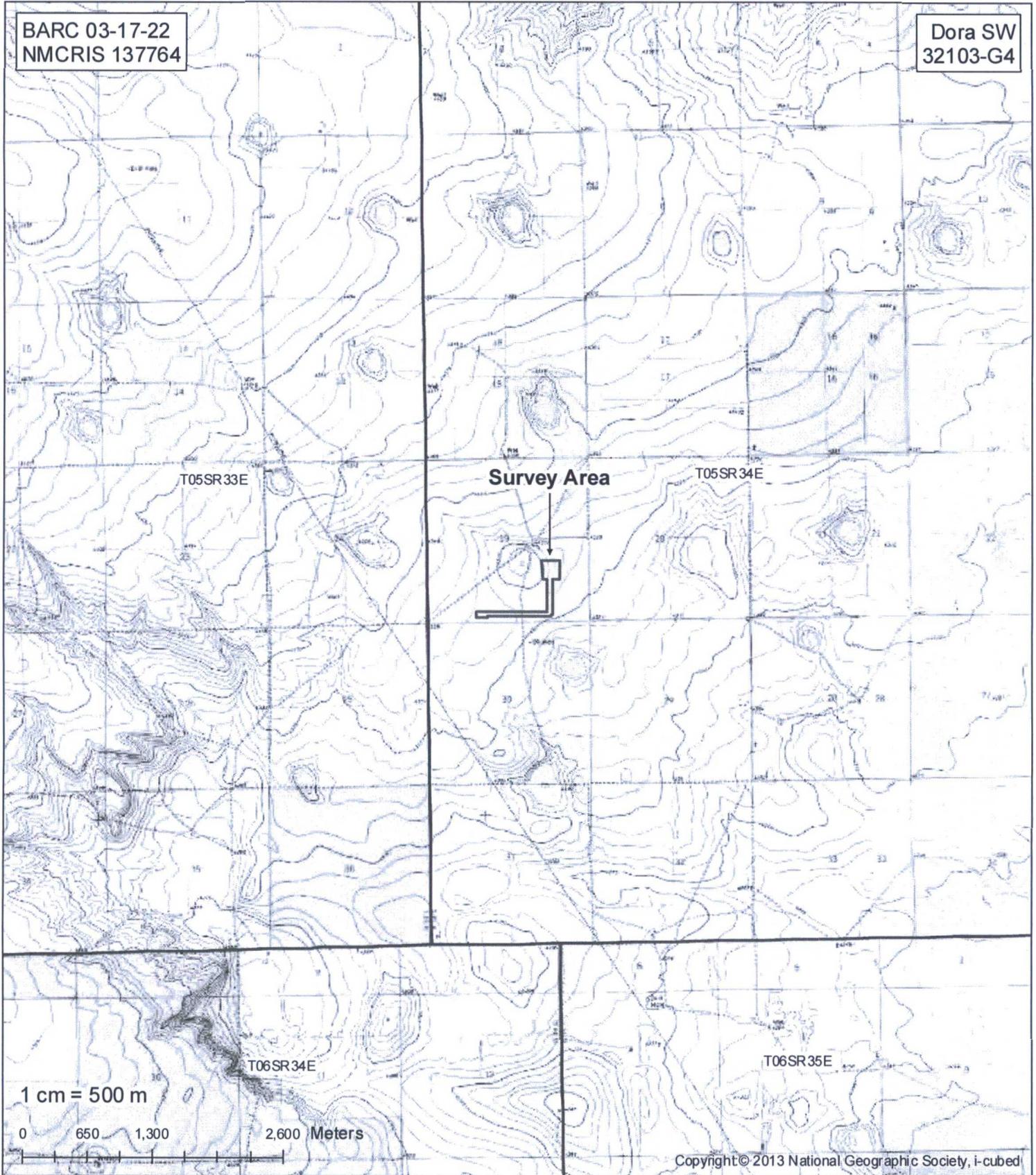


Figure 1. Project Area

Survey Area BLM Private NM State Trust Land



A Class III Archaeological Survey for the Armstrong Energy Corporation Proposed Liza Jane Fed #1 Well Pad and Access Road Revised Location, Roosevelt County, New Mexico

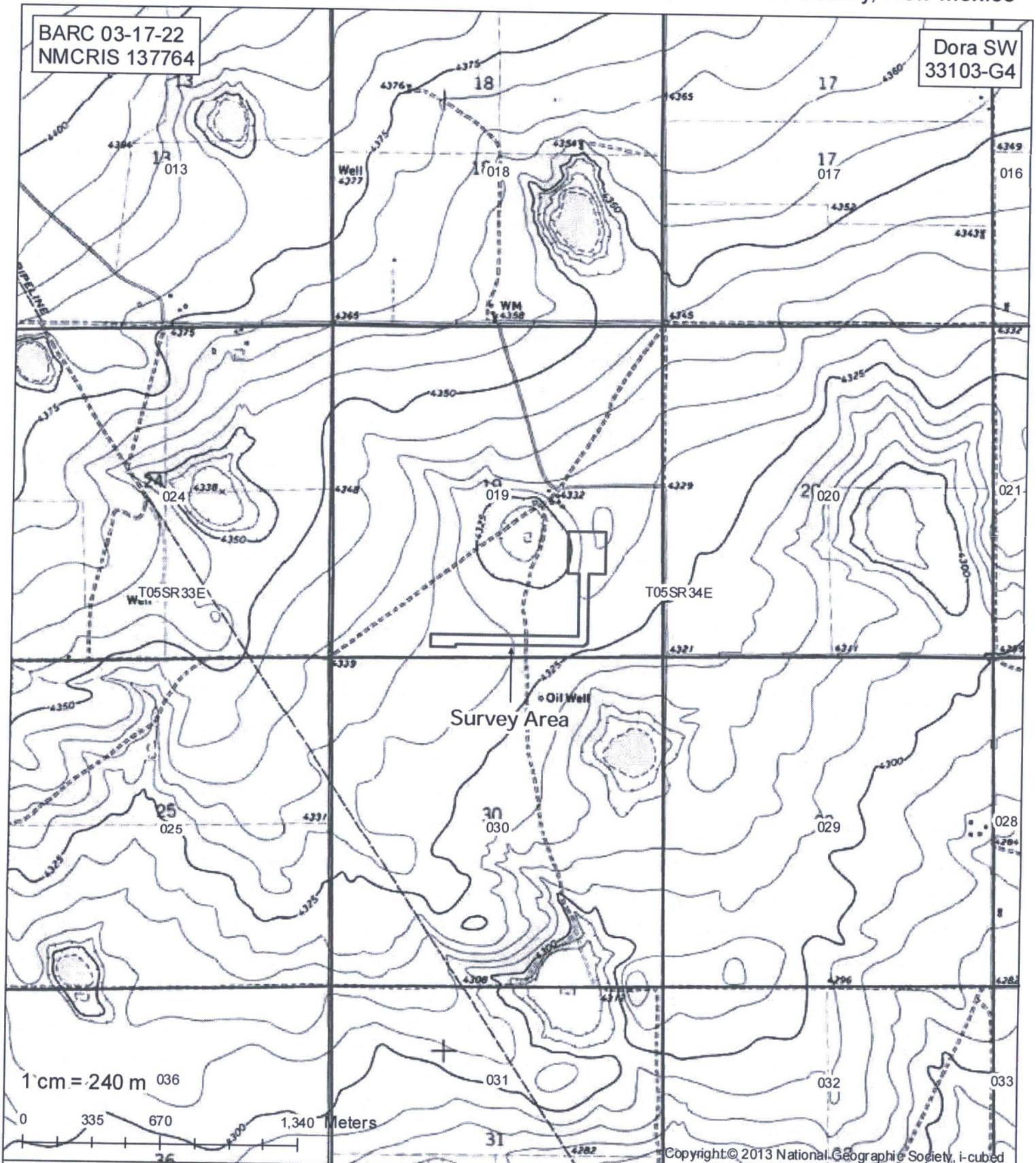


Figure 2. Current & Previous Survey Results

Survey Area
 BLM Private
 NM State Trust Land



A Class III Archaeological Survey for the Armstrong Energy Corporation Proposed Liza Jane Fed #1 Well Pad and Access Road Revised Location, Roosevelt County, New Mexico

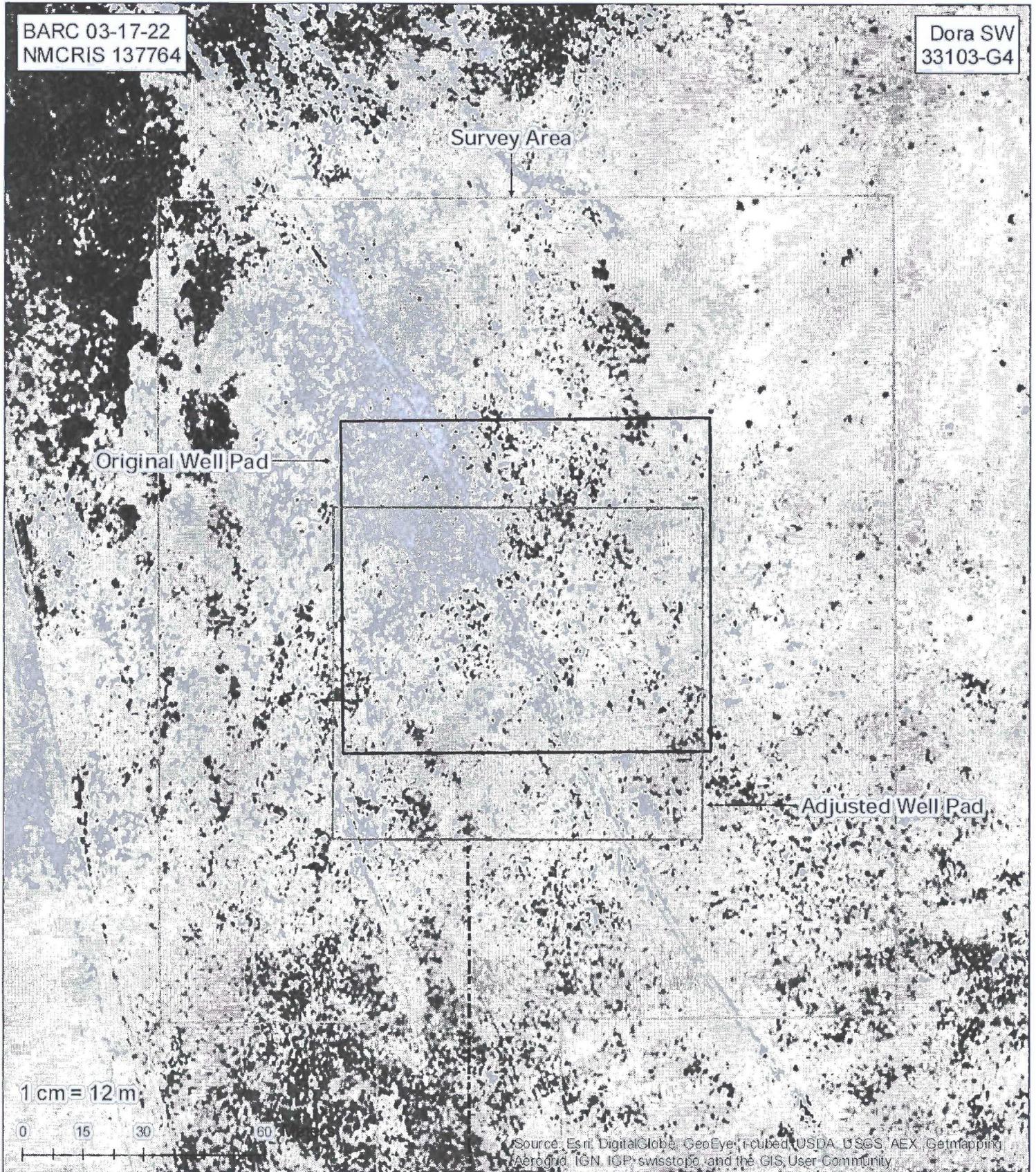


Figure 3. Well Pad Adjustment

- Survey Area
- Original Well Pad
- Access Road
- BLM
- NM State Trust Land
- Private



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELDWORK AUTHORIZATION REQUEST

To Conduct Specific Cultural Resource Work Under the Authority of a Cultural Resource Use Permit Issued by the Bureau of Land Management Pursuant to Sec. 302(b) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732 and Sec. 4 of P.L. 96-95, October 31, 1979, 16 U.S.C. 470cc

1. Name of Permittee and Company <i>Stacy Galassini, Boone</i>	
2. Date Permit Issued <i>7-29-16</i>	
3. Contact Telephone Number <i>575-885-1352</i>	
4. Project Name and Client Name <i>Armstrong Energy Li Za Jane Fed#1 Well Pad Access Road BARC 03-17-22</i>	
5. Location of Work or Legal Description (Include map) a. Description of Public Lands Involved <i>T55R34E S19</i>	
6. Nature of Cultural Resource Work (Survey, APE, etc.) a. Identification of Previous Surveys and Sites (if applicable) <i>APE is 400' x 400' for well pad. APE is 30' for a distance of 3258'. The western portion of the access road is covered by NMCRIS #137529. Approx. 1670' of the access road require inventory. The cultural buffer is 100' on all sides for the wellpad & 50' on all sides for the access road. The survey area is 600' x 600' for the wellpad & ~1970' x 130' for the access road</i>	
7. Name of Individual(s) Responsible for Planning & Supervising Field Work, & Approving Reports, Evaluations, & Recommendations <i>Stacy Galassini</i>	
8. Signature of Individual Conducting Pre-Field Consultation <i>James W. Ashbaugh</i>	9. Date <i>3/14/17</i>

The individual named in item 7 above shall be present during the conduct of field work authorized herein, or shall notify the authorized officer of the need for any extended absence, and shall make provision that the work will be carried out under supervision of equal quality, by an individual approved by the authorized officer

All terms and conditions of the permit continue to apply; any special conditions attached hereto have the same force and effect as conditions of the permit

Permittee shall immediately notify the authorized officer of any change in items 3 through 7 above.

Fieldwork Authorization Request approved by:

Date:

[Signature]
(Signature of BLM Authorized Officer)

16 March 2017

Authorization # (BLM Use):

BLM Requirements for Field Authorization

Class III inventory of the wellpad and access road. The APE for direct effects of the wellpad is 400 feet by 400 feet. The cultural buffer is 100 feet in all directions. The APE for direct effect of the access road is a width of 30 feet for a distance of approximately 3258 feet. The western portion of the access road is previously surveyed. The remaining 1670 feet of the access road require survey. The cultural buffer is 50 feet to either side of the road.

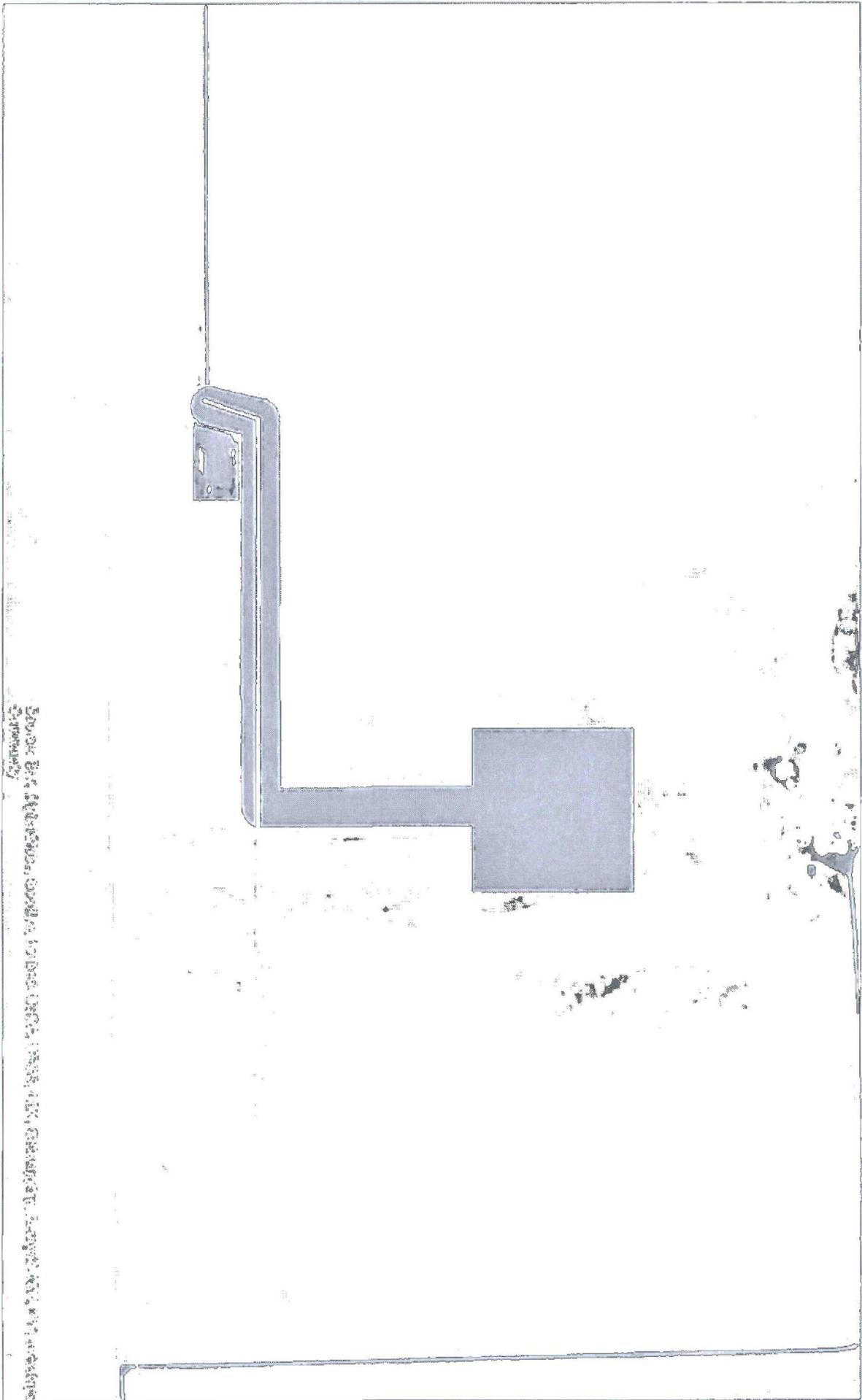


Figure 1: A technical drawing of a mechanical part, possibly a bracket or a component of a machine. The part is shown in a perspective view, highlighting its L-shaped profile. It features a vertical section on the left, a horizontal section extending to the right, and a square-shaped protrusion on the right side. The drawing is enclosed in a rectangular frame.



Prefield Map BARC 03-17-22

Liza Jane Fed #1 Well Pad and Access Road

1:12,000



Legend

-  Project Route
-  RFO Site Point
-  RFO Site Boundary
-  Cultural Site
-  2017 NMCRIS Site Boundary
-  2017 NMCRIS Historic Property
-  2017 NMCRIS HCPI
-  2017 NMCRIS Survey
-  RFO Survey

NM Surface Ownership

- Bureau of Land Management
- Bureau of Reclamation
- Dept. of Defense
- Forest Service
- Fish & Wildlife Service
- Tribal
- National Park Service
- Private
- State
- State Game & Fish
- State Park



Source: USGS, Digital Data, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.



A Class III Archaeological Survey
for the Armstrong Energy Corporation Proposed Liza Jane Fed #1
Well Pad and Access Road Revised Location,
Roosevelt County, New Mexico.

Prepared by:
Scott Walley

Cultural History by:
Chris Mickwee

Submitted by:
Boone Archaeological Resource Consultants (BooneARC)
Carlsbad, NM 88220

Presented to:
Armstrong Energy Corporation

BLM Permit # 190-2920-16-V
New Mexico Permit # NM 17-157-S
NMCRIS Activity No.: 137764

BooneARC Report No.: 03-17-22
05 April 2017

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TABLE A.1. SITE LOCATION DATA (NAD 83, ZONE 13)	ERROR! BOOKMARK NOT DEFINED.