

**RESOLUTION OF THE
RESOURCES AND DEVELOPMENT COMMITTEE
Of the 23rd Navajo Nation Council---First Year 2015**

**AN ACTION
RELATING TO RESOURCES AND DEVELOPMENT; APPROVING A TEMPORARY
CONSTRUCTION EASEMENT TO ENERGEN RESOURCES CORPORATION TO
ESTABLISH, OPERATE AND MAINTAIN A STORAGE AND ANCILLARY
EQUIPMENT AREA LOCATED ADJACENT TO ITS RICHARDSON 200 WITHIN THE
NAVAJO INDIAN IRRIGATION PROJECT VICINITY, NAVAJO NATION TRUST
LAND (SAN JUAN COUNTY, NEW MEXICO)**

Section One. Findings

A. Pursuant to 2 N.N.C. §§500, the Resources and Development Committee is hereby established as a standing committee of the Navajo Nation Council; and

B. Pursuant to 2 N.N.C. §500 B 2(a), the Resources and Development Committee grants final approval for all, non-mineral leases, permits, licenses, rights of ways, and surface easements on Navajo Nation lands and unrestricted (fee) land; and

C. The Energen Resources Corporation, 2010 Afton Place, Farmington, NM 87401, has submitted a temporary construction easement application to establish, operate and maintain a storage and ancillary equipment area adjacent to its existing Richardson 200 within the Navajo Indian Irrigation Project on, over and across Navajo Nation Trust Lands (San Juan County, New Mexico) attached hereto and incorporated herein as Exhibit "A"; and

D. The proposed temporary construction easement is 200 feet wide and 200 feet long, consisting of 0.92 total acres, more or less, Navajo Nation Trust Lands located in the SESE of Section 3, Township 27 North, Range 13 West, NMPM, Navajo Trust Land (San Juan County, New Mexico). The location is more particular described on the survey map attached hereto and incorporated herein as Exhibit "B"; and

E. The Navajo Land Department Project Review Section has obtained the necessary consent from the affected land user which is attached hereto and made a part hereof as Exhibit "C"; and The environmental and archaeological studies have been completed and are attached hereto and incorporated herein by this reference. The Environmental Assessment (Amended), Exhibit "E,"

The Biological Resources Compliance Form, Exhibit "F," Archeological and Historical Clearance Update Exhibit "G," and memorandum from the Navajo Nation Environmental Protection Agency, Office of Environmental Review, Exhibit "H," are attached.

Section Two. Approval

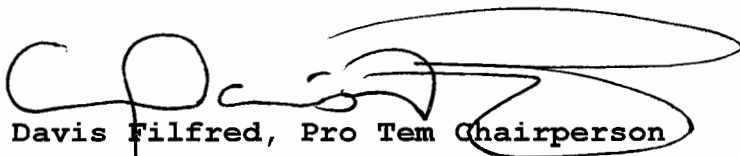
A. Resources and Development Committee of the Navajo Nation Council hereby grants approval of a Temporary Construction Easement to Energen Resources Corporation to establish, operate and maintain a storage and ancillary equipment area on within the Navajo Indian Irrigation Project vicinity, Navajo Nation Trust Lands (San Juan County, New Mexico). The location is more particularly described on the map attached hereto as Exhibit "B."

B. The Resources and Development Committee of the Navajo Nation Council hereby approves the temporary construction easement subject to, but limited to, the following terms and conditions attached hereto and incorporated herein as Exhibit "D."

C. The Resources and Development Committee of the Navajo Nation Council hereby authorizes the President of the Navajo Nation to execute any and all documents necessary to affect the intent and purpose of this resolution.

CERTIFICATION

I, hereby, certify that the foregoing resolution was duly considered by the Resources and Development Committee of the 23rd Navajo Nation Council at a duly called meeting at Navajo Nation Council Chambers, Window Rock, (Navajo Nation) Arizona, at which quorum was present and that same was passed by a vote of 4 in favor, 0 opposed, 0 abstained this 23rd day of November, 2015.



Davis Filfred, Pro Tem Chairperson
Resources and Development Committee
Of the 23rd Navajo Nation Council

Motion: Honorable Leonard Pete
Second: Honorable Walter Phelps



May 7, 2015

Office of the President
P.O. Box 9000
Window Rock, Az., 86515

Subject: Letter of Application for a Temporary Construction Easement for 0.92 acres in SESE Section 3-27N-13W., San Juan County, New Mexico.

Enclosed herewith is Energen Resources (Energen) supporting document for our application for a Temporary Construction Easement (TCE) on Navajo Reservation Lands. The proposed TCE would be immediately adjacent to the following approved well site:

Richardson 200, located in the SESE Section 3-27N-13W., on Tribal surface and Federal Oil and Gas Lease NMSF077972.

(Note: this well will be renamed as the Richardson Navajo 27-13-02 #4H)

The above well was approved by the Bureau of Land Management with the concurrence of the Bureau of Indian Affairs and the Navajo Nation. The permit was issued on November 16, 2011, and extended until November 16, 2015.

Temporary Construction Easement Proposal:

The proposed TCE will be used to temporarily store water tanks, pumps, water transfer lines and other ancillary equipment associated with Energen's well development program for the subject well. This well was originally permitted as a shallow 1700', Fruitland Coal formation well with the intent to drill and complete the well within the approved disturbance area. The drilling permit currently allows for a 200' X 200' (0.92 acres) disturbance area footprint and a 75' X 200' top soil spoil area. Since that time, Energen has amended its development plans and now proposes to drill a horizontal lateral well bore to a vertical depth of approximately 5500' into the Mancos Formation and then from that depth drill another 4500' laterally. The estimated well bore length will be approximately 10,000' and will require significantly more equipment than originally required for the Fruitland Coal completion. Energen's proposal to temporarily use lands under the TCE provisions would limit the long term development footprint to only those lands originally permitted and approved, in this case 0.92 acres. The TCE area would only be used during drilling and completion operations. After the well is completed and production facilities set, the temporary use area would then be properly reclaimed in accordance with Navajo Nation and BIA standards and guidelines. The area Energen is applying for under the TCE is approximately a 200' X 200' area or 0.92 acres.

Onsite Assessment:

On January 29th, 2015, representatives of the Navajo Nation Land Department, Navajo Nation EPA, the Bureau of Indian Affairs, Navajo Agricultural Products Incorporated and Energen conducted an onsite field assessment at the proposed TCE location. A number of options were considered including expanding the approved disturbance area from 200' X 200' (0.92 acres) to approximately a 400' x 450' well pad or 4.1 acres.

After considering all the available options, temporarily using lands immediately adjacent to the proposed well pad for equipment staging and storage was considered the best available option. The TCE option will minimize the long term development foot print and provide the most efficient and expeditious method of application processing.

Exhibit 1, is a list those in attendance at the onsite.

Exhibit 2, is an aerial photo of the lands proposed to be used under the provisions of a TCE. Superimposed on the aerial photo is the currently approved well pad location outlined in red (200' X 200' Pad, including 75' X 200' soil spoil area). The lands proposed for use under the TCE application are outlined in blue. Note that the proposed TCE is limited to only one side of the approved well pad.

Exhibit 3, is the disturbance area outlined in yellow if a 400' X 450' well pad were utilized instead of the TCE. The difference between an expanded pad disturbance area and the proposed TCE is approximately 3.2 acres, but only the TCE area would be fully reclaimed after the well is completed and production facilities permanently set on the approved location (200' X 200'). If instead of the TCE a 400' X 450' pad were used, it would remain throughout the life of the well (estimated to be 30 years).

Exhibit 4, is a survey plat outlining the boundaries of the approved well pad area depicted by the solid lines and the proposed temporary use area depicted by the dashed lines.

And finally, Exhibit 5, is the Amended Environmental Assessment (EA) for the proposed TCE. The original EA for the well, pipeline and associated well pad was updated and expanded to include the impacts associated with the proposed TCE. Also included with the EA is a letter from the Bureau of Indian Affairs, Navajo Indian Irrigation Project Office which provides their cultural report findings for this project proposal. That report indicated that the proposed site is clear of any archeological or cultural resources.

Energen Resources appreciates the long standing relationship we have with the Navajo Nation and look forward your approval of our application. If you require additional information or have any questions regarding the above, please contact me at (505) 324-4120

Sincerely,

A handwritten signature in black ink, appearing to read "Doug Thomas". The signature is fluid and cursive, with the first name "Doug" and last name "Thomas" clearly distinguishable.

Doug Thomas
Drilling Superintendent,
San Juan Basin Operations

Cc:

Michael Howe (BIA- NIIP)
Bertha Spencer (BIA – Gallup)

ENERGEN RESOURCES CORPORATION

RICHARDSON NAVAJO 27-13-02 04H

SURFACE HOLE - 509' FSL & 694' FEL

LOCATED IN THE SE/4 SE/4 OF SECTION 3, T27N, R13W, N.M.P.M.,

BOTTOM HOLE - 380' FSL, 380' FEL

LOCATED IN THE SE/4 SE/4 OF SECTION 2, T27N, R13W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

EXHIBIT

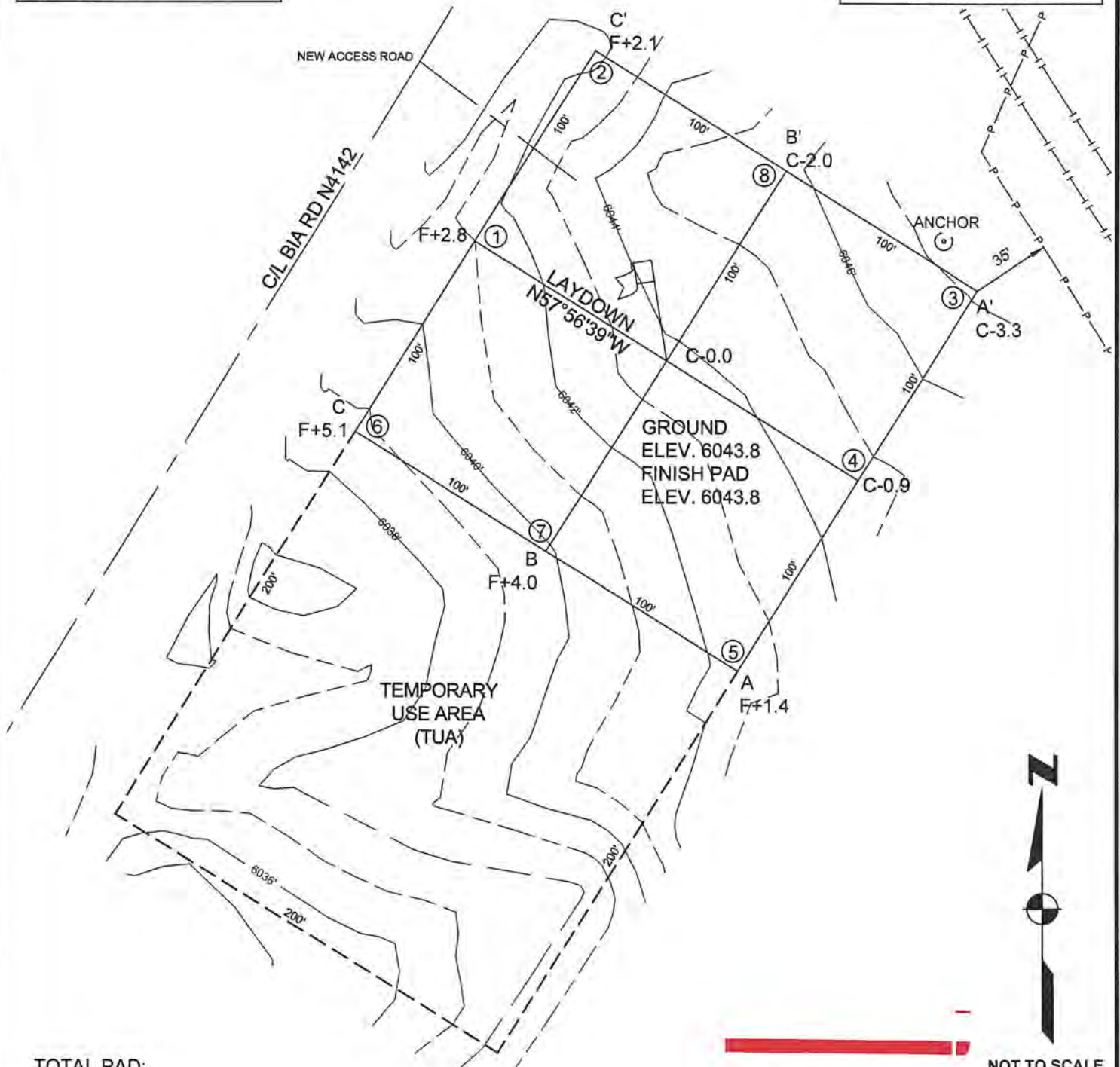
B

WELL FLAG

LATITUDE: 36.598432°N
LONGITUDE: 108.199906°W
DATUM: NAD 83

BOTTOM HOLE

LATITUDE: 36.598060°N
LONGITUDE: 108.180851°W
DATUM: NAD 83



TOTAL PAD:
0.92 ACRES
TOTAL DISTURBANCES:
1.38 ACRES

NOT TO SCALE

Red Skies Surveying & Mapping, Inc.

A Native American Owned Company

101 Fauver Lane, Bloomfield, New Mexico 87413
kwerito@earthlink.net Cell No: (505) 793-5325

ENERGEN RESOURCES CORPORATION
 RICHARDSON NAVAJO 27-13-02 04H
 SURFACE HOLE - 509' FSL & 694' FEL
 LOCATED IN THE SE/4 SE/4 OF SECTION 3,
 BOTTOM HOLE - 380' FSL & 380' FEL
 LOCATED IN THE SE/4 SE/4 OF SECTION 2
 T27N, R13W, N.M.P.M.,
 SAN JUAN COUNTY, NEW MEXICO
 ELEVATION: 6043.8', NAVD 88



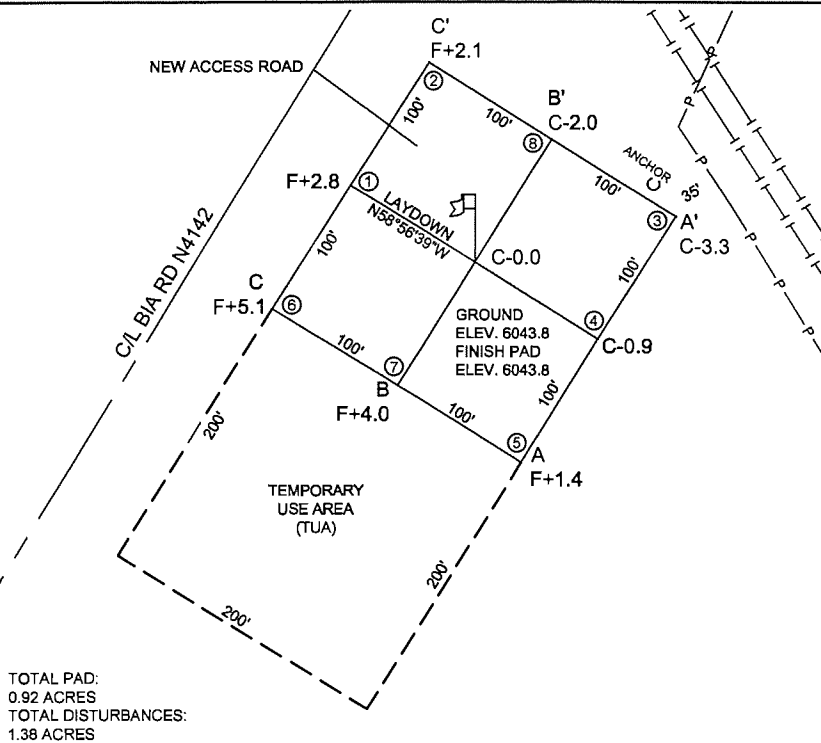
NOT TO SCALE

WELL FLAG
 LATITUDE: 36.59842 N
 LONGITUDE: 108.199906 W
 DATUM: NAD 83

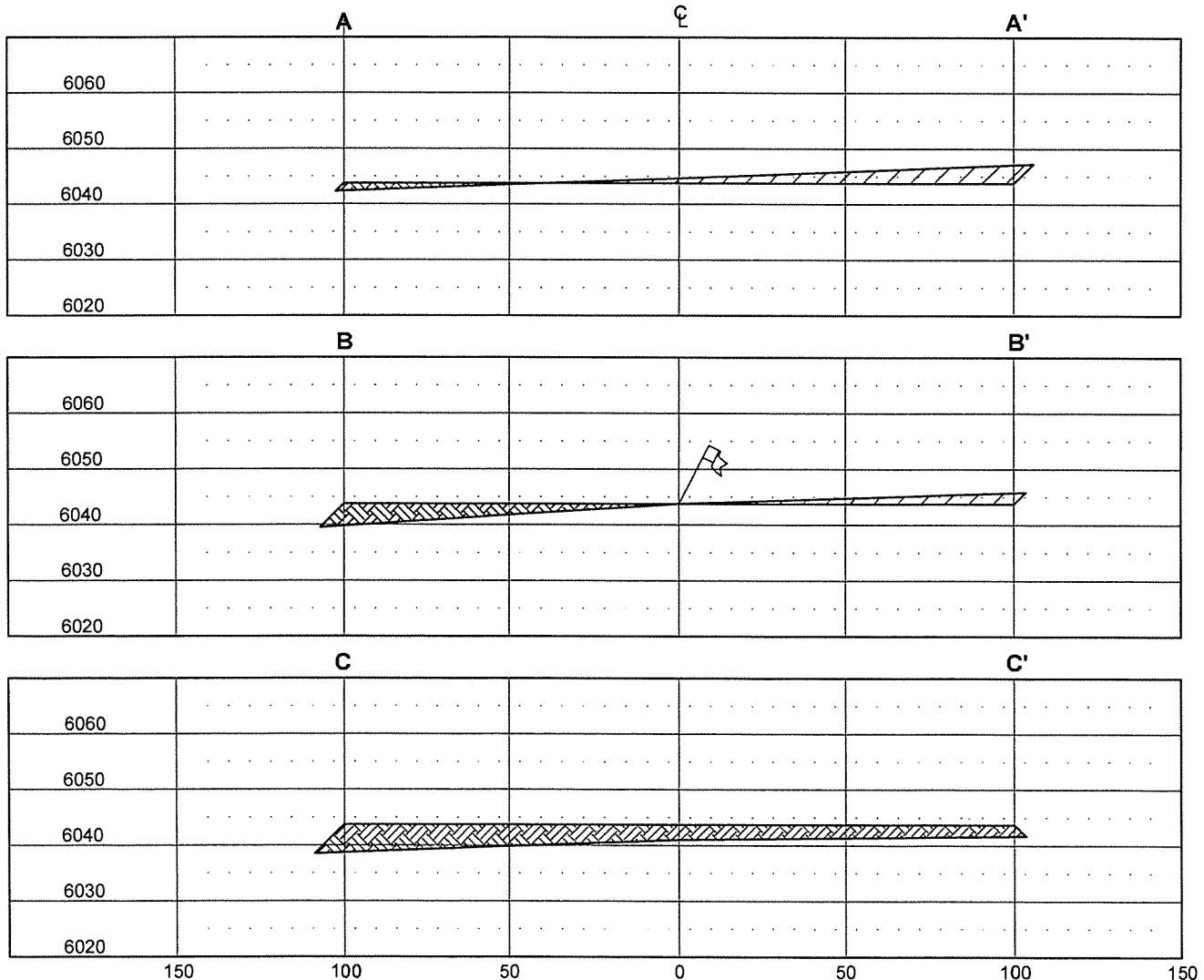
BOTTOM HOLE
 LATITUDE: 36.598060°N
 LONGITUDE: 108.180851°W
 DATUM: NAD 83

WELL FLAG
 LATITUDE: 36.59843°N
 LONGITUDE: 108.19928°W
 DATUM: NAD 27

BOTTOM HOLE
 LATITUDE: 36.59806°N
 LONGITUDE: 108.18022°W
 DATUM: NAD 27



TOTAL PAD:
 0.92 ACRES
 TOTAL DISTURBANCES:
 1.38 ACRES



HORIZ. SCALE: 1"=100'
 VERT. SCALE: 1"=30'

Red Skies Surveying & Mapping, Inc.
 A Native American Owned Company

101 Fauver Lane, Bloomfield, New Mexico 87413
 kwerito@earthlink.net Cell No: (505) 793-5325

ENERGEN RESOURCES CORPORATION

RICHARDSON NAVAJO 27-13-02 04H
SURFACE HOLE - 509' FSL & 694' FEL
LOCATED IN THE SE/4 SE/4 OF SECTION 3, T27N, R13W, N.M.P.M.,
BOTTOM HOLE - 380' FSL, 380' FEL
LOCATED IN THE SE/4 SE/4 OF SECTION 2, T27N, R13W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

WELL FLAG

LATITUDE: 36.598432°N
LONGITUDE: 108.199906°W
DATUM: NAD 83

DRIVING DIRECTIONS:

TRAVEL SOUTH ON 371 FROM FARMINGTON, NM TO THE
INTERSECTION OF HWY 371 AND SJ CO 7100.

TRAVEL SOUTHEAST ON SJ CO 7100 4 MILES TO MP 6.4 AND
THE INTERSECTION OF SJ CO RD 7100 AND BIA RD 4142.

TURN RT AND TRAVEL SOUTHWEST 0.7 MILES TO STAKED
ACCESS RD ON LT TO NEW WELL LOCATION.

Red Skies Surveying & Mapping, Inc.

A Native American Owned Company

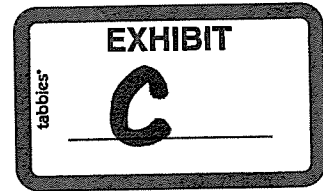
101 Fauver Lane, Bloomfield, New Mexico 87413
kwerito@earthlink.net Cell No: (505) 793-5325



THE NAVAJO NATION

Navajo Land Department

P.O. Box # 2249 · Window Rock, Arizona 86515 · (928) 871-6401 · FAX: (928) 871-7039



MEMORANDUM

TO : Howard P. Draper, Supervisor
Project Review Section, NLD

FROM : *Esther Kee*
Esther Kee, R/W Agent
Project Review Section, NLD

DATE : June 17, 2015

SUBJECT: Energen Temporary Construction Easement for Richardson 200

Energen Resources Corporation, 2010 Afton Place, Farmington, New Mexico 87401, submitted a Revocable Use Permit for Temporary Construction Easement (TCE) adjacent to Richardson 200 well for storage and other ancillary equipment associated with the well project on Navajo Trust Lands within the boundaries of the Navajo Indian Irrigation Project.

The temporary construction easement will be 200'x200'/0.92 acres, located in SESE Section 3, T27N, R13W, San Juan County, New Mexico.

The Navajo Agricultural Products Industry is the only affected land user, land user will be compensated \$460.00 (0.92 ac x \$500.) for surface damages.

Field clearance complete, all supporting documents are attached for your information and reference.

cc: Project file

EXHIBIT "C"

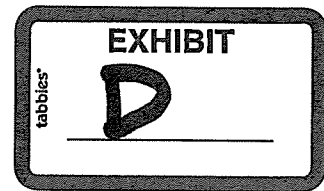


EXHIBIT D

**NAVAJO NATION TEMPORARY CONSTRUCTION EASEMENT
TERMS AND CONDITIONS**

ENERGEN RESOURCES CORPORATION (GRANTEE)

1. The term of the temporary construction easement (TCE) shall be for one (1) year, beginning on the date the TCE is granted by the Secretary of Interior.
2. Consideration for the TCE is assessed at \$717.60 and shall be paid in full to the Controller of the Navajo Nation, in lawful money of the United States, and a copy of the receipt for such payment provided to the Navajo Nation Minerals Department, or its successor, within 10 days of approval of and consent to the grant of the TCE by the Navajo Nation.

Consideration for the grant of the TCE is hereby waived.

☒ NO

☐ YES

If consideration has been waived, then the Navajo Nation contributes the amount listed above to the project because the project serves a public purpose and will benefit Navajo residents.

3. The Grantee may develop, use and occupy the TCE for the purpose(s) of temporary construction easement for storage area for Richardson 200 project. The Grantee may not develop, use or occupy the TCE for any other purpose, nor allow others to use or occupy the TCE for any other purpose, without the prior written approval of the Navajo Nation and the Secretary of the Interior. The approval of the Navajo Nation may be granted, granted upon conditions or withheld in the sole discretion of the Navajo Nation. The Grantee may not develop, use or occupy the TCE for any unlawful purpose.
4. In all activities conducted by the Grantee within the Navajo Nation, the Grantee shall abide by all laws and regulations of the Navajo Nation and of the United States, now in force and effect or as hereafter may come into force and effect, including but not limited to the following:
 - a. Title 25, Code of Federal Regulations, Part 169;
 - b. All applicable federal and Navajo Nation antiquities laws and regulations, with the following additional condition: In the event of a discovery all operations in the immediate vicinity of the discovery must cease and the Navajo Nation Historic Preservation Department must be notified immediately. As used herein, "discovery" means any previously unidentified or incorrectly identified cultural resources, including but not limited to archaeological deposits, human remains, or location reportedly associated with Native American religious/traditional beliefs or practices;
 - c. The Navajo Preference in Employment Act, 15 N.N.C. §§ 601 et seq., and the Navajo Nation Business Opportunity Act, 5 N.N.C. §§ 201 et seq.; and
 - d. The Navajo Nation Water Code, 22 N.N.C. § 1101 et seq.. Grantee shall apply for and submit all applicable permits and information to the Navajo Nation Water Resources Department, or its successor.
5. The Grantee shall ensure that the air quality of the Navajo Nation is not jeopardized due to violation of applicable laws and regulations by its operations pursuant to the TCE.

6. The Grantee shall clear and keep clear the lands within the TCE to the extent compatible with the purpose of the TCE, and shall dispose of all vegetation and other materials cut, uprooted or otherwise accumulated during any surface disturbance activities.
7. The Grantee shall reclaim all surface lands disturbed related to the TCE, as outlined in a restoration and revegetation plan, which shall be approved by the Navajo Nation Environmental Protection Agency (NNEPA) prior to any surface disturbance. The Grantee shall comply with all provisions of such restoration and revegetation plan and shall notify the Director of the NNEPA immediately upon completion of the surface disturbance activities so that a site inspection can be made.
8. The Grantee shall at all times during the term of the TCE and at the Grantee's sole cost and expense, maintain the land subject to the TCE and all improvements located thereon and make all necessary and reasonable repairs.
9. The Grantee shall obtain prior written permission to cross existing TCEs, if any, from the appropriate parties.
10. The Grantee shall be responsible for and promptly pay all damages when they are sustained.
11. The Grantee shall indemnify and hold harmless the Navajo Nation and the Secretary of the Interior and their respective authorized agents, employees, landusers and occupants, against any liability for loss of life, personal injury and property damages arising from the development, use or occupancy or use of TCE by the Grantee.
12. The Grantee shall not assign, convey, transfer or sublet, in any manner whatsoever, the TCE or any interest therein, or in or to any of the improvements on the land subject to TCE, without the prior written consent of the Navajo Nation and the Secretary of the Interior. Any such attempted assignment, conveyance or transfer without such prior written consent shall be void and of no effect. The consent of the Navajo Nation may be granted, granted upon conditions or withheld in the sole discretion of the Navajo Nation.
13. The Navajo Nation may terminate the TCE for violation of any of the terms and conditions stated herein. In addition, the TCE shall be terminable in whole or part by the Navajo Nation for any of the following causes:
 - a. Failure to comply with any term or condition of the grant or of applicable laws or regulations;
 - b. A non-use of the TCE for the purpose for which it is granted for a consecutive two year period; and
 - c. The use of the land subject to the TCE for any purpose inconsistent with the purpose for which the TCE is granted.
 - d. An abandonment of the TCE.
14. At the termination of this TCE, the Grantee shall peaceably and without legal process deliver up the possession of the premises, in good condition, usual wear and tear excepted. Upon the written request of the Navajo Nation, the Grantee shall provide the Navajo Nation, at the Grantee's sole cost and expense, with an environmental audit assessment of the premises at least sixty (60) days prior to delivery of said premises.

15. Holding over by the Grantee after the termination of the TCE shall not constitute a renewal or extension thereof or give the Grantee any rights hereunder or in or to the land subject to the TCE or to any improvements located thereon.
16. The Navajo Nation and the Secretary of the Interior shall have the right, at any reasonable time during the term of the TCE, to enter upon the premises, or any part thereof, to inspect the same and any improvements located thereon.
17. By acceptance of the grant of TCE, the Grantee consents to the full territorial legislative, executive and judicial jurisdiction of the Navajo Nation, including but not limited to the jurisdiction of the Navajo Nation, including but not limited to the jurisdiction to levy fines and to enter judgments for compensatory and punitive damages and injunctive relief, in connection with all activities conducted by the Grantee within the Navajo Nation or which have a proximate (legal) effect on persons or property within the Navajo Nation.
18. By acceptance of the grant of TCE, the Grantee covenants and agrees never to contest or challenge the legislative, executive or judicial jurisdiction of the Navajo Nation on the basis that such jurisdiction is inconsistent with the status of the Navajo Nation as an Indian nation, or that the Navajo Nation government is not a government of general jurisdiction, or that the Navajo Nation government does not possess full police power (i.e., the power to legislate and regulate for the general health and welfare) over all lands, persons and activities within its territorial boundaries, or on any other basis not generally applicable to a similar challenge to the jurisdiction of a state government. Nothing contained in this provision shall be construed to negate or impair federal responsibilities with respect to the land subject to the TCE or to the Navajo Nation.
19. Any action or proceeding brought by the Grantee against the Navajo Nation in connection with or arising out of the terms and conditions of the TCE shall be brought only in the Courts of the Navajo Nation, and no such action or proceeding shall be brought by the Grantee against the Navajo Nation in any court of any state.
20. Nothing contained herein shall be interpreted as constituting a waiver, express or implied, of the sovereign immunity of the Navajo Nation.
21. Except as prohibited by applicable federal law, the law of the Navajo Nation shall govern the construction, performance and enforcement of the terms and conditions contained herein.
22. The terms and conditions contained herein shall extend to and be binding upon the successors, heirs, assigns, executors, administrators, employees and agents, including all contractors and subcontractors, of the Grantee, and the term "Grantee," whenever used herein, shall be deemed to include all such successors, heirs, assigns, executors, administrators, employees and agents.
23. There is expressly reserved to the Navajo Nation full territorial legislative, executive and judicial jurisdiction over the TCE and all lands burdened by the TCE, including without limitation over all persons, including the public, and all activities conducted or otherwise occurring within the TCE; and the TCE and all lands burdened by the TCE shall be and forever remain Navajo Indian Country for purposes of Navajo Nation jurisdiction.



ENVIRONMENTAL ASSESSMENT Amended
FOR

Energen Resources Corporation's

Richardson 100S

Well Pad and Well-tie Pipeline

BLM Lease # NMSF 0077972, NM9447-00R, NM9988-00R, NM10240-00R

Richardson 102S (Name change: Richardson Navajo 27-13-10 4H)

Well Pad and Well-tie Pipeline (and Temporary Use Area)

BLM Lease # NMSF 0077972, NM9447-00R

Richardson 200 (Name change: Richardson Navajo 27-13-02 4H)

Well Pad and Well-tie Pipeline (and Temporary Use Area)

Lease # NMNM 0003554, NM9447-00R

Richardson 301S

Well Pad, Access Road and Well-tie Pipeline

Lease # NMNM 0003554, NM9447-00R

BIA EA# - 10-133

January 2011

(Revised March 2011)

(Amended April 2015)

Division of Environmental, Cultural and Safety Management
Navajo Regional Office, Bureau of Indian Affairs, Gallup, New Mexico
Federal Indian Mineral Office, BIA, Farmington, New Mexico
Farmington Field Office, Bureau of Land Management, Farmington, New Mexico

Prepared by:



Adkins Consulting, Inc • Environmental Permitting Services

Durango, Colorado

www.adkinsconsultinginc.com

TABLE OF CONTENTS

	<u>Page</u>
CHAPTER 1 – PROPOSED ACTION AND ALTERNATIVES	
1.1 Introduction	1
1.2 Purpose and Need	1
1.3 Project Locations and Description	
1.3.1 Project Location and Description	1
1.3.2 Project Construction	2
1.3.3 Operation, Maintenance, and Final Abandonment	3
1.4 Maps	3
1.5 Conformance With Land Use Plans	5
1.6 Authorizing Actions and Relationship to Statutes and Regulations	3
1.7 Summary of the Proposed Action	3
CHAPTER 2 – ALTERNATIVES	
2.1 Proposed Action	6
2.2 No Action Alternative	6
2.3 Proposed Action Alternative	6
CHAPTER 3 – AFFECTED ENVIRONMENT	
3.1 Land Resources	
3.1.1 Topography and Geological Setting	8
3.1.2 Soils	8
3.2 Water Resources	
3.2.1 Surface and Ground Water Hydrology – Water Quality Quantity	8
3.3 Air Resources	
3.3.1 Air Quality	9
3.3.2 Visibility	10
3.3.3 Climate	10
3.4 Biotic Resources	
3.4.1 Wildlife	10
3.4.2 Vegetation	10
3.4.3 Migratory Birds	10
3.4.4 Agriculture/Range	11
3.5 Cultural Resource and Traditional Cultural Properties	12
3.6 Socioeconomic Conditions	
3.6.1 Employment and Income	12
3.6.2 Demographics and Trends	12
3.6.3 Lifestyles, Cultural Values, Attitudes, Expectations	12
3.6.4 Community Infrastructure	12
3.7 Environmental Justice	13
3.8 Indian Trust Resources	13
3.9 Environmental Module	
3.9.1 Resources Conservation and Recovery Act Subtitle C: Hazardous waste/materials	13
3.9.2 Resources Conservation and Recovery Act Subtitle D: Non-hazardous solid waste	13
3.9.3 Resources Conservation and Recovery Act Subtitle I: Underground storage tanks	13
3.9.4 Comprehensive Environmental Response Compensation and Liability Act/Toxic Substances Control Act Sites	13
3.10 Resource/Land Use Patterns	
3.10.1 Hunting, Fishing, Gathering	14
3.10.2 Timber Harvesting	14
3.10.3 Mining	14
3.10.4 Outdoor Recreation	14
3.11 Other Values	
3.11.1 Wilderness	14

3.11.2 Sound and Noise	14
3.11.3 Public Health and Safety	14

CHAPTER 4 – ENVIRONMENTAL CONSEQUENCES

4.1 Land Resources: Physical Impacts and Mitigation	
4.1.1 Topography.....	16
4.1.2 Soils.....	16
4.1.3 Geology and Mineral Resources	17
4.2 Water Resources: Impacts and Mitigation	18
4.3 Air Resources: Impacts and Mitigation	18
4.4 Biotic Resources: Impacts and Mitigation	
4.4.1 Wildlife: Terrestrial and Riparian	18
4.4.2 Threatened, Endangered, Sensitive Species, and Species of Concern	19
4.4.3 Migratory Birds.....	19
4.4.4 Vegetation and Invasive Plants	19
4.4.5 Agriculture/Range	20
4.5 Cultural Resources and Traditional Cultural Properties: Impacts and Mitigation	20
4.6 Socioeconomic and Environmental Justice: Impacts and Mitigation	20
4.7 Indian Trust Resources: Impacts and Mitigation	20
4.8 Environmental Module/ Public Health and Safety: Impacts and Mitigation.....	20
4.9 Resource/Land Use Patterns and Other Values: Impacts and Mitigation	21
4.10 Visual Resources: Impacts and Mitigation	21
4.11 Noise: Impacts and Mitigation	21
4.12 Cumulative Impacts	21

CHAPTER 5 – CONSULTATION & COORDINATION	22
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CHAPTER 6 – BIBLIOGRAPHY	23
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APPENDICIES

Appendix A – Navajo Nation Biological Resources Compliance Forms and Compliance Letters With Biological Survey Reports	
Appendix B – Cultural Compliance Letters	
Appendix C – Plats	

CHAPTER 1 – PROPOSED ACTION AND ALTERNATIVES

1.1 Introduction

Energen Resources Corporation (ERC) has filed an application for permit to drill (APD) with the Farmington Field Office of the Bureau of Land Management (FFO/BLM) for four proposed Fruitland Coal natural gas wells, the Richardson 100S, Richardson 102S, Richardson 200 and Richardson 301S, and associated access roads and well-tie pipelines. The proposed project would include the drilling, production and final abandonment of the four wells. The proposed wells, access roads, pipeline ties would be new disturbance.

Amendment Added April 2015:

A finding of no significant impact (FONSI) was granted for the Energen Resources Corporation (ERC) Richardson 102S and Richardson 200 oil and gas wells on April 14, 2011 (FONSI # EA-10-133). These previously approved projects have been renamed: the Richardson 102S is now the Richardson Navajo 27-13-10 #4H, and the Richardson 200 is now the Richardson Navajo 27-13-02 #4H. Here forward in the amended portions of this document, the wells will be referred to by the new names.

ERC has filed a Sundry Notice with the BLM/FFO, and ERC is requesting a Right-of-Way (ROW) easement grant from the Bureau of Indian Affairs (BIA) for a Temporary Use Area (TUA) adjacent to the Richardson Navajo 27-13-10 #4H well pad and for a TUA adjacent to the Richardson Navajo 27-13-02 #4H well pad. A map showing the TUA locations has been added to Section 1.4, and plats depicting construction layout have been added to the appendices.

This Amendment includes only an update to the surface area disturbance due to the requested TUA's, and the inclusion of supporting documents showing biological and archaeological clearance for the TUA's.

The proposed Richardson 100S well would utilize an existing access road and the well-tie pipeline would be approximately 13 feet in length. The proposed Richardson 102S well would utilize an existing access road and the well-tie pipeline would be approximately 14 feet in length. The proposed Richardson 200 well access road would be approximately 87 feet in length and the well-tie pipeline would be approximately 1,664 feet in length paralleling the existing access roads. The proposed Richardson 301S well access road would be approximately 992 feet in length and the well-tie pipeline would be approximately 646 feet in length paralleling the proposed access road.

The project is located on NAPI and Tribal Trust lands for the development of federal minerals in San Juan County, New Mexico.

This environmental assessment (EA) will describe the existing environment and assess impacts of the proposed action and any action alternatives. The effects of the operation, maintenance and final abandonment will be analyzed for site-specific direct and indirect impacts, as well as short-term and long-term consequences. Impact analyses for residual impacts and cumulative impacts will be presented. All impact analyses will be presented with and without the proposed mitigation measures. Impact analyses are presented to identify potential significant impacts, which may occur without the appropriate application of and compliance with mitigation measures as Conditions of Approval (COAs) and right-of-way (ROW) stipulations. This EA is not a decision document, but provides information needed by the Authorized Officer to determine whether the proposed action or an alternative to the proposed action may have significant effects, requiring an Environmental Impact Statement (EIS).

1.2 Purpose and Need

The National Environmental Policy Act (NEPA) requires that the management of federal lands facilitate the development of natural resources important to the Nation, and prevent or eliminate damage to the environment. The purpose of the proposal is to define and produce oil or natural gas on one or more valid Federal or Indian oil and gas mineral leases issued to the applicant by the BLM and/or BIA. It is the

policy of the BLM to make mineral resources available for disposal and to encourage development of mineral resources to meet National, regional, and local needs. The Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq.), authorizes the BLM to issue oil and gas leases for the exploration of oil and gas and permit the development of those leases. The BLM also has responsibilities under those portions of the Federal Regulations pertaining to Indian oil and gas leases (25 CFR 212.4). The existing lease is a binding legal contract that allows development of the mineral by the applicant. An approved Application for Permit to Drill (APD), issued by the BLM and/or BIA, would authorize the applicant to construct and drill the proposed wells. ***ERC's APD's have been approved. The current action is the BLM/FFO's decision to approve or not approve the Sundry Notice, and the BIA's decision to grant ROW easements for the additional TUA's. For the project to continue, ERC must have the TUA's.***

The objective of the project is to produce coal-bed methane and natural gas. Within the San Juan Basin, coal bed methane is produced from the Fruitland Formation, and conventional natural gas is found in the deeper Mesa Verde Group. Natural gas is a key natural resource for the US economy as a primary energy source for space heating and industrial processes, as well as raw material for agricultural and industrial chemicals. US natural gas production is falling, while domestic consumption has been rising, with the result that the US is increasingly dependent on imports of natural gas, primarily from Canada, and recently, in the form of liquefied natural gas from overseas sources. Replacing US natural gas production is essential for US energy security (EIA 2006).

Natural gas that will be produced from the proposed action is a vital component of the country's energy supply. It is one of the cleanest, safest and most useful of all energy sources. Unlike other fossil fuels, natural gas is clean burning and emits lower levels of potentially harmful byproducts into the air. Because of the demand for cleaner forms of energy, the development of methane gas wells is fundamentally important to the preservation and continuation of U.S. energy stability. In the U.S., natural gas is the third most consumed resource just after petroleum and coal. Roughly one-fourth of our country's energy needs are met by natural gas. It is used in 61% of American homes and 69 million residential, commercial, and industrial consumers use natural gas annually. From 1990 through 2004, natural gas consumption increased by nearly 16%. This incremental increase in natural gas consumption requires significant investment in new natural gas wells and other infrastructure to meet the established future demands of our country.

The purposed action would permit ERC to develop their existing natural gas lease rights, while protecting surface resources to the maximum extent possible. The proposed development is needed to produce national energy resources and generate revenue for ERC.

1.3 Project Locations and Description

1.3.1 Project Location and Description

The proposed project area, including the four wells and associated facilities, are proposed to be developed within the San Juan Basin of northern New Mexico, in Sections 2, 3, 10 and 11 of Township 27 North and Range 13 West, Hugh Lake Quadrangle, San Juan County, New Mexico, NMPM. The project area is located along the east edge of Gallegos Mesa, approximately 2.5 miles west of Gallegos Canyon. The San Juan River is located approximately 7 miles to the north of the proposed project area. ***The requested TUA for the Richardson Navajo 27-13-10 4H will be adjacent to the approved Richardson 102S (former name) well pad location. The requested TUA for the Richardson Navajo 27-13-02 4H will be adjacent to the approved Richardson 200 (former name) well pad location.***

The proposed project area is within a sagebrush-grassland vegetation community that consists of sagebrush (*Artemisia tridentata*), juniper (*Juniperus mono-sperma*), galleta (*Hilaria jamesii*), grama (*Bouteloua gracilis*), and indian rice grass (*Oryzopsis hymenoides*). The proposed project area is 5,950-6,000 feet above mean sea level. The entire proposed project area is located within the Huerfano Chapter, on NAPI and Tribal Trust lands administered by the Eastern Agency of the Bureau of Indian Affairs (BIA) and is outlined in Table 1.7. The entire proposed project area is plotted within the Hugh Lake, New Mexico 7.5-minute United States Geological Service (USGS) quadrangle map. The legal coordinates of the four individual wells within the proposed project are as follows:

Richardson 100S – 1116' FNL 984' FEL Section 2
Richardson 102S (*new name: Richardson Navajo 27-13-10 4H*) – 1282' FSL 1386' FWL Section 11
Richardson 200 (*new name: Richardson Navajo 27-13-02 4H*) – 509' FSL 694' FEL Section 3
Richardson 301S – 1450' FNL 1500' FEL Section 10

Township 27 North, Range 13 West, NMPM
San Juan County, New Mexico

1.3.2 Project Construction

The proposed action would include the construction of four level well pads. The level pads would be constructed using a D-8 bulldozer. Clearing for the well pads is needed to provide space and a level surface for a drilling rig, completion rig, and other heavy equipment to access and drill each well. The four well locations would require a total of approximately 6.60 acres of new surface disturbance (Appendix C, Plats):

The Richardson 100S well pad would be approximately 175 feet in length by 200 feet in width with a 50 foot construction zone. The maximum cut of 10.2 feet would be in the west corner, and the maximum fill of 4.7 feet would be in the east corner. The Richardson 100S well pad would require approximately 1.89 acres of new surface disturbance.

The Richardson 102S well pad would be approximately 200 feet in length by 200 feet in width with a 50 foot construction zone. The maximum cut of 3.3 feet would be in the north corner, and the maximum fill of 3.7 feet would be in the south corner. The Richardson 102S well pad would require approximately 2.07 acres of new surface disturbance. ***An additional 200-foot by 200-foot TUA would be required immediately west of the well pad resulting in approximately 0.92 acre of surface disturbance.***

The Richardson 200 well pad would be approximately 200 feet in length by 200 feet in width with a 75 feet by 200 feet spoil area on the south west side of the well pad. The maximum cut of 3.3 feet would be in the east corner, and the maximum fill of 5.1 feet would be in the west corner. The Richardson 200 well pad would require approximately 1.26 acres of new surface disturbance. ***An additional 200-foot by 200-foot TUA would be required immediately south of the well pad resulting in approximately 0.92 acre of surface disturbance.***

The Richardson 301S well pad would be approximately 200 feet in length by 200 feet in width with a 100-foot by 200-foot spoil area on the south side of the well pad. The maximum cut of 1.3 feet would be in the south east corner, and the maximum fill of 4.0 feet would be in the northwest corner. The Richardson 301S well pad would require approximately 1.38 acres of new surface disturbance.

A proposed 1,079 feet of new access roads would be needed to access the Richardson 200 and Richardson 301S locations. The proposed access roads would be constructed within a 30-foot wide corridor on average. The access roads would be constructed and maintained to BLM "Gold Book" standards. Road surfacing and repair of deteriorated sections of the existing access roads may be required. Existing access roads would be used for the Richardson 100S and Richardson 102S locations, and the two remaining well locations would require new access for a total of approximately 0.74 acres of new surface disturbance (Appendix C, Plats):

The Richardson 200 access road would be approximately 87 feet in length by 30 feet in width, and would require approximately 0.06 acres of new surface disturbance.

The Richardson 301S access road would be approximately 992 feet in length by 30 feet in width, and would require approximately 0.68 acres of new surface disturbance.

A proposed 2,337 feet of pipeline ties would be constructed within 45-foot wide construction corridors. Approximately 20' of the construction width would overlap the proposed and existing access roads where the pipeline parallels the road. The four pipelines would require a total of approximately 2.41 acres of surface disturbance (Appendix C, Plats):

The Richardson 100S pipeline would tie into the existing Lateral 6B-7 pipeline in the SENW/4 of Section 2, and would be approximately 13 feet in length. The Richardson 100S pipeline would require approximately 0.01 acre of new surface disturbance.

The Richardson 102S pipeline would tie into the existing Richardson 301 pipeline in the SESW/4 of Section 11, and would be approximately 14 feet in length. The Richardson 102S pipeline would require approximately 0.01 acre of new surface disturbance.

The Richardson 200 pipeline would tie into the existing Richardson 300S pipeline in the E/2 of Section 3, and would be approximately 1,664 feet in length. The Richardson 200 pipeline would require approximately 1.72 acres of new surface disturbance.

The Richardson 301S pipeline would tie into the existing Richardson 300S pipeline in the NE/4 of Section 10, and would be approximately 646 feet in length. The Richardson 301S pipeline would require approximately 0.67 acres of new surface disturbance.

Total surface disturbance of all four wells, new access roads and pipelines would be approximately **11.59** acres and is outlined in Table 1.7. Construction crews, equipment, and disturbance would be restricted to the construction corridor. Silt fencing would be installed where necessary throughout the project area within the construction corridor.

1.3.3 Operation, Maintenance, and Final Abandonment

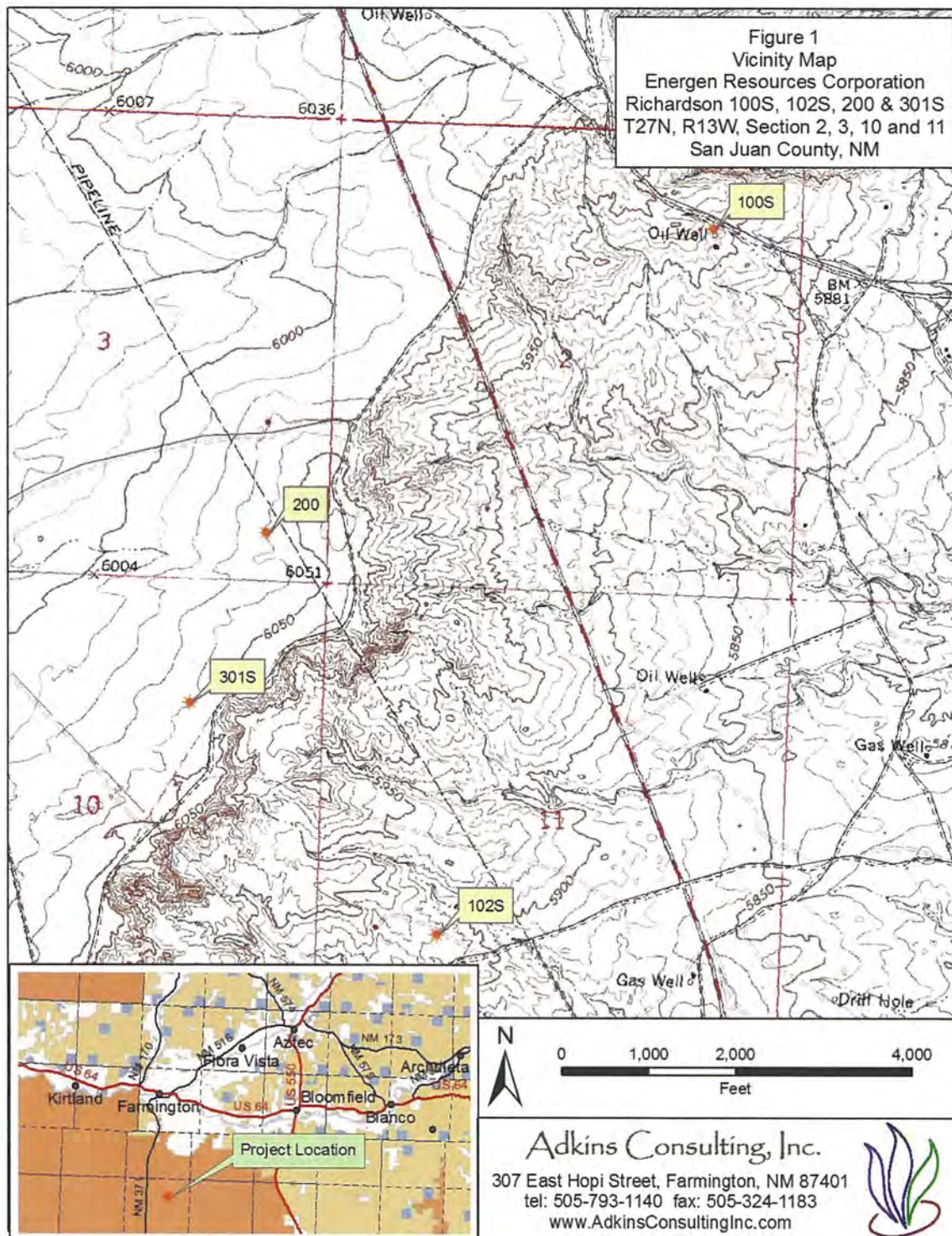
After well production begins, normal maintenance would be required. Initially, personnel would visit the site every day to check production and resolve problems. Once well production has stabilized, personnel would visit the well location approximately six times per week, remote telemetry on location would decrease necessary visits. Occasionally well bore maintenance may be required to retain economic production. Well facilities would include a separator, pump jack, and compressor. A work-over drilling rig would be moved to the site, for down-hole repairs. Surface impacts of a work-over rig would be similar to those described for drilling. The estimated economic production phase of the well is 20 to 30 years.

When a well is no longer commercially viable, it would be abandoned under BIA regulations, as specified in the COAs of the approved APD. Surface equipment would be removed, except for an aboveground well-bore marker. Underground pipelines are generally purged, plugged, and left in place. All disturbed areas not needed for another purpose would be re-contoured and re-vegetated to BIA requirements.

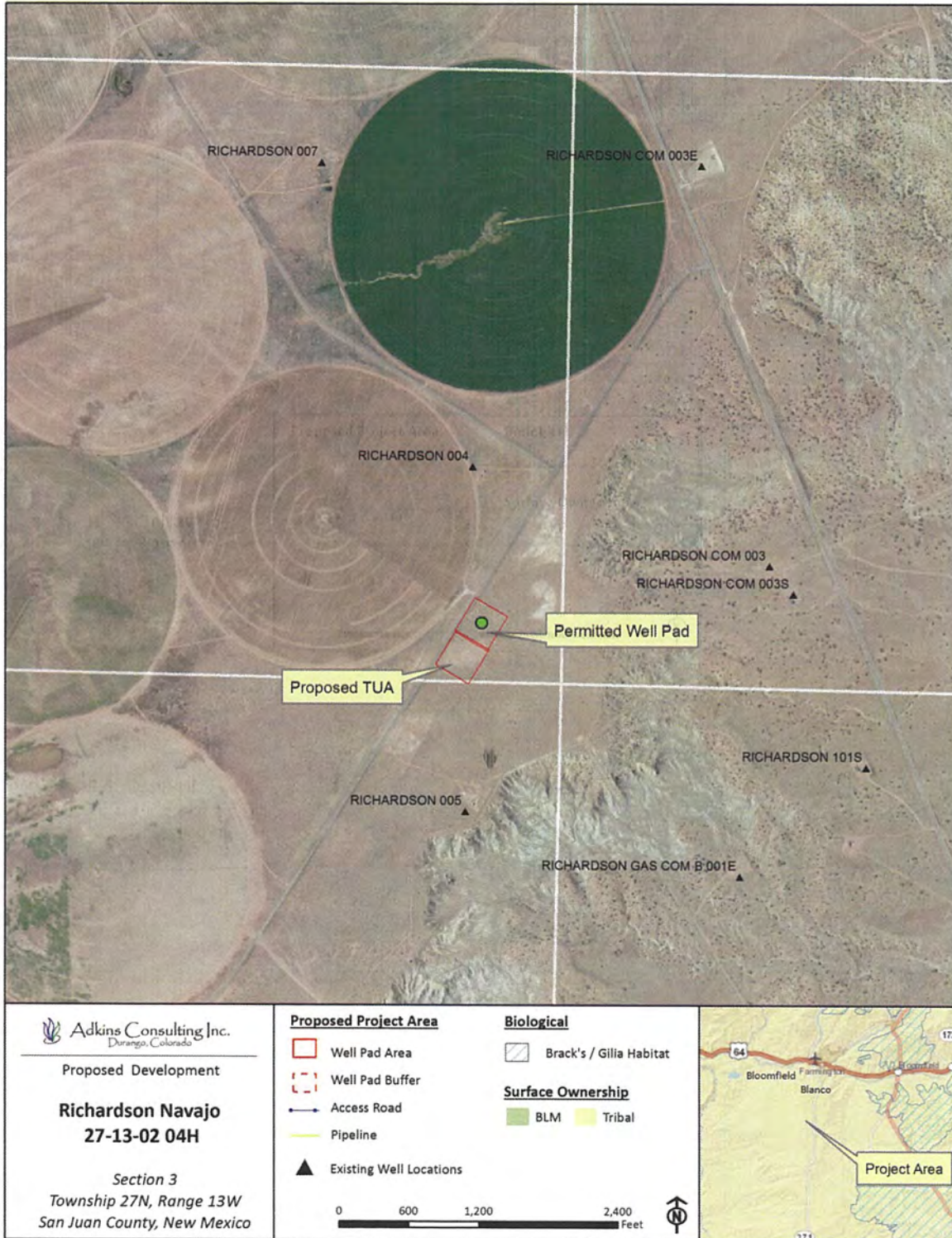
When the pipeline tie is no longer needed, it would be abandoned under BIA regulations and as specified in the ROW grant stipulations. The underground pipeline tie would be purged, plugged and left in place. All disturbed areas not needed for another purpose would be re-contoured and re-vegetated with a BIA prescribed seed mixture.

1.4 Maps

The proposed action is located within the Navajo Nation Eastern Agency, Huerfano Chapter. ***See below for a general vicinity map of all four wells (original names) as well as a map depicting the added TUA's (new names).***







1.5 Conformance with Land Use Plans

The proposed action is located on Navajo land, therefore requiring the Navajo Nation to concur with and approve the proposed action. The BIA issues a concurrence for the proposed action to the Farmington Field Office of the Bureau of Land Management (FFO/BLM). The proposed action is not located within any existing or proposed Specially Designated Area (SDA) or Area of Critical Environmental Concern (ACEC). The proposed action does not conflict or violate any known federal, Navajo Nation, or local laws, regulations, or land use plans.

1.6 Authorizing Actions and Relationships to Statutes and Regulations

Federal, Navajo Nation, and potentially local permits would be required for the construction, operation, maintenance and final abandonment of the proposed action. The proposed action, any feasible alternatives, and the no action alternative would be carried out in full compliance with all federal regulations. This EA is prepared under the authority of the National Environmental Policy Act (NEPA) of 1969, [42 United States Code (D.S.C.) § 4321-4347] and the associated federal implementing regulations in 40 Code of Federal Regulations (CFR) § 1500-1508. A permitted pipeline ROW would be required by the BIA under 25 CFR, Part 169.

The use and disposal of hazardous materials is regulated primarily under the Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901, et seq.), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended (42 U.S.C. 9601, et seq.), and the Toxic Substances Control Act (TSCA) of 1976, as amended (15 U.S.C. 2601, et seq.). Additionally, Spill Prevention Control and Countermeasures (SPCC) may be required and enforced by the Environmental Protection Agency (EPA) for sites that could impact navigable waters of the United States.

As required in their permits from the FFO/BLM and BIA, ERC would comply with all applicable federal and Navajo Nation laws and regulations existing, enacted, or promulgated concerning waste disposal and hazardous materials. ERC would agree to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as defined in CERCLA or RCRA). Additionally, the proponents would comply with TSCA with regard to any toxic substances that were used, generated by, or stored on the project, especially provisions on polychlorinated biphenyls (40 CFR 761.1-761.193). Any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 would be reported as required by the CERCLA, Section 102b.

1.7 Summary of the Proposed Action

Table 1.7 – Summary of the Proposed Action Disturbance

Well	Well Pad		Access Road		Pipeline		Total
	feet	acres	feet	acres	feet	acres	
Richardson 100S	300 x 275	1.89	-	0.00	13 x 45	0.01	1.90
Richardson 102S New Name: Richardson Navajo 27-13-10 4H	300 x 300 TUA 200 x 200	2.07 0.92	-	0.00	14 x 45	0.01	2.08 0.92
Richardson 200 New Name: Richardson Navajo 27-13-02 4H	200 x 200 spoil 200 x 75 TUA 200 x 200	0.92 0.34 0.92	87 x 30	0.06	1664 x 45	1.72	3.04 0.92
Richardson 301S	200 x 200 spoil 200 x 100	0.92 0.46	992 x 30	0.68	646 x 45	0.67	2.73
Total Acres		8.44		0.74		2.41	11.59

CHAPTER 2 – ALTERNATIVES

2.1 Proposed Action

ERC's APD has been approved. The current action is the BLM/FFO's decision to approve or not approve the Sundry Notice, and the BIA's decision to grant ROW easements for the additional TUA's. Refer to Section 1.3-1.7 above for a detailed description of the proposed action.

2.2 No Action Alternative

ERC's APD has been approved. The current action is the BLM/FFO's decision to approve or not approve the Sundry Notice, and the BIA's decision to grant ROW easements for the additional TUA's. For the projects to continue, ERC must have the TUA's, therefore, denying the Sundry Notice and ROW grant would mean Basin Fruitland Coal gas would not be produced from ERC's oil and gas lease, denying ERC their lease right to produced oil and gas. Because ERC has a valid oil and gas lease, denial of lease development is not legal or discretionary. Analysis of the no action alternative is provided as a reference, enabling decision makers to compare the magnitude of environmental effects of the alternatives. The no action would result in the continuation of the current land and resource uses in the project area.

2.3 Proposed Action Alternatives

No other reasonable alternatives that fulfilled the purpose and need of the proposed action were apparent during the on-site inspection. Consultation was done with members of NAPI to determine the best possible locations of all well pads and facilities within the NIIP and NAPI boundaries so as not to interfere with any NAPI activities. A portion of the pipeline that tied the gathering system to the major line for transport was considered in two locations and the least harmful option was chosen and several well locations, access roads and pipeline were moved to avoid disturbing archaeologically significant sites. Alternatives to the different aspects of the proposed action are always considered and applied as preapproval changes, site-specific mitigation and/or Conditions of Approval, if they will alleviate or minimize environmental impacts of the operator's proposal.

Relocating the well to other locations in the legal drilling window (Sections 2, 3, 10 and 11, T27N, R13W) would result in similar to or greater impacts than the proposed location.

CHAPTER 3 – AFFECTED ENVIRONMENT

3.1 Land Resources

3.1.1 Topography and Geographical Setting

Generally, the four proposed actions are located in northwestern New Mexico within the Colorado Plateau, with the San Juan Basin being the dominant topographical feature. The San Juan Basin is a late Cretaceous-early Tertiary structural depression lying along the eastern edge of the Colorado Plateau, on the northwestern New Mexico and southwestern Colorado border. Over 14,000 feet of thickness of Jurassic and Cretaceous age rock have been recorded in the basin, and are the predominant source and reservoir for oil and gas development in the Basin. The basin is bounded on the northwest by the Hogback Monocline, to the north by the San Juan-La Plata Domes, on the northeast by the Archuleta Arch, on the east by the Nacimiento Uplift, and on the south by the less dramatic Chaco Slope. The basin is asymmetric, in that steeply dipping strata are found along the northeast rim of the basin. Sedimentary rocks of Jurassic and Cretaceous age crop out around the basin rim, and over broad areas in the southern and western part of the basin. Tertiary sedimentary rocks cover most of the central, northeastern part of the basin. The San Juan Basin is approximately 100 miles in diameter, and is known for its vast reserves of uranium and coal, as well as oil and gas deposits.

The San Juan Basin holds the second largest accumulation of natural gas in the country in Upper Cretaceous sandstone reservoirs of the Pictured Cliffs, Mesa Verde Group, Gallup, and Dakota sandstones. During the Cretaceous period, thick marine black shale deposited in deep marine environments in the Four Corners area. (Mancos, Menefee, and Lewis Shales) provided the organic material which is the source for the oil and natural gas.

These Cretaceous formations are conventional sources of natural gas, and range in depth from 2,500 to 8,000 feet throughout the basin. Most wells permitted in the New Mexico portion of the basin are conventional. New Mexico alone provides approximately 95 percent of the San Juan Basin production.

Coalbed methane is a more recent development of an unconventional source of natural gas, in that the natural gas is methane associated with coal beds found in the Upper Cretaceous Fruitland Formation. The Fruitland and overlying Kirtland formations both contain coal beds that are mined for coal fired power plants. Coal bed methane wells tend to be shallower, especially along the northeastern edge of the basin, and thus extract large amounts of produced water during production. Coal seam sources contribute more than 60 percent of the basin total output, with New Mexico accounting for approximately 53 percent of the volume. Tertiary sedimentary rocks infill and blanket most of the basin. The Tertiary Formations generally include, in ascending order, the Ojo Alamo Sandstone, the Nacimiento Formation, and the San Jose Formation. The Animas Formation is recognized in the northern part of the basin in the Durango area, and is the approximate equivalent to the Ojo Alamo and Nacimiento Formations. Quaternary deposits are largely restricted to major river valleys, and formed from the melting of glaciers in the San Juan Mountains to the north.

Generally, the four proposed actions are located between 7 and 10 miles south of the San Juan River. Surface geography in the project area consists of the Tertiary Nacimiento Formation. The Nacimiento Formation is widespread in rock outcrop. It extends from the east side of the La Plata River to Aztec, and south to Nageezi and Huerfano.

Specifically, the four proposed wells would be located within the follow terrain and geographical location:

The Richardson 100S well is located 9.8 miles south-southeast of Farmington, NM, 2.3 miles east of Hwy 371 and 2.7 miles west of Gallegos Canyon Wash. Surface topography for this location includes gently to moderately sloping terrain with east-west trending ridges to the north and west. This area has many low dunes and is transected by small ephemeral drainages throughout.

The Richardson 102S well is located 9.8 miles south-southeast of Farmington, NM, 2.3 miles east of Hwy 371 and 2.7 miles west of Gallegos Canyon Wash. Surface topography for this location includes relatively flat to gradually sloping, wind-swept, open terrain.

The Richardson 200 well is located 8.9 miles south-southeast of Farmington, NM, 1.9 miles east of Hwy 371 and 3.2 miles west of Gallegos Canyon Wash. Surface topography for this location includes relatively flat to gradually sloping agricultural terrain with ridges to the east.

The Richardson 301S well is located 9.3 miles SSE of Farmington, NM, 1.7 miles E of Hwy 371 and 3.3 miles W of Gallegos Canyon Wash. Surface topography for this location includes relatively flat to gradually sloping agricultural terrain with ridges to the east.

3.1.2 Soils

The Soil Conservation Service now the Natural Resource Conservation Service (NRCS) has surveyed the soils in the proposed action area. Complete soil information is available in the Soil Survey of San Juan County, New Mexico, Eastern Part, developed by the United States Department of Agriculture, NRCS. The soils of the proposed project area are mapped as the Fruitland-Persayo-Sheppard, Sheppard-Mayqueen-Shiprock, and Shiprock complex.

The Richardson 100S and 102S project areas are mapped as Fruitland-Persayo-Sheppard complex, hilly. Slopes range from 5 to 30%. Included in this unit are small areas of Farb soils on hills and breaks throughout the unit, making up about 5 percent of the total acreage. Fruitland soil is deep and well drained and derived from sandstone and shale. The surface layer is brown fine sandy loam about 4 inches thick and the subsurface is brown fine sandy loam to a depth of 60 inches or more. Permeability is moderately rapid, with a moderate water capacity. Fruitland soils have medium runoff and a moderate hazard of water erosion. The hazard of wind erosion is severe. Persayo soil is shallow and well drained and derived from shale. The surface layer is light brownish gray clay loam about 2 inches thick and the subsurface is light yellowish brown clay loam to a depth of 18 inches. Permeability is moderately slow, with a very low water capacity. Persayo soils have rapid runoff and a high hazard of water erosion. The hazard of wind erosion is severe. Sheppard soil is deep and somewhat excessively drained and derived from mixed sources. The surface layer is light yellowish brown loamy fine sand about 4 inches thick and the subsurface is light yellowish brown loamy fine sand and fine sand to a depth of 60 inches or more. Permeability is rapid, with a low water capacity. Sheppard soils have slow runoff and a slight hazard of water erosion. The hazard of wind erosion is very severe.

The Richardson 200 project area is mapped as Sheppard-Mayqueen-Shiprock complex, on mesas and plateaus. Slopes range from 5 to 8%. Included in this unit are small areas of Avalon and Shiprock Variant soils on mesas and plateaus throughout the unit, making up about 5 percent of the total acreage. Sheppard soil is deep and somewhat excessively drained and derived from mixed sources. The surface layer is light yellowish brown loamy fine sand about 4 inches thick and the subsurface is light yellowish brown loamy fine sand and fine sand to a depth of 60 inches or more. Permeability is rapid, with a low water capacity. Sheppard soils have slow runoff and a slight hazard of water erosion. The hazard of wind erosion is very severe. Mayqueen soil is deep and somewhat excessively drained and derived from alluvial and eolian material derived from mixed sources. The surface layer is brown loamy fine sand about 3 inches thick and the subsurface is reddish brown fine sandy loam to a depth of 9 inches. Permeability is rapid, with a moderate water capacity. Mayqueen soils have slow runoff and a slight hazard of water erosion. The hazard of wind erosion is very severe. Shiprock soil is deep and well drained and derived from sandstone and shale. The surface layer is brown fine sandy loam about 4 inches thick and the subsurface is brown fine sandy loam to a depth of 11 inches. The substratum to a depth of 60 inches or more is pale brown and very pale brown sandy loam and fine sandy loam. Permeability is moderately rapid, with a moderate water capacity. Shiprock soils have slow runoff and a slight hazard of water erosion. The hazard of wind erosion is severe.

The Richardson 301S project area is mapped as Shiprock complex, on mesas and plateaus. Slopes range from 2 to 5%. Included in this unit are small areas of Avalon, Sheppard, and Shiprock Variant soils on mesas and plateaus throughout the unit, making up about 10 percent of the total acreage. Shiprock

soil is deep and well drained and derived from sandstone and shale. The surface layer is brown fine sandy loam about 4 inches thick and the subsurface is brown fine sandy loam to a depth of 11 inches. The substratum to a depth of 60 inches or more is pale brown and very pale brown sandy loam and fine sandy loam. Permeability is moderately rapid, with a moderate water capacity. Shiprock soils have slow runoff and a slight hazard of water erosion. The hazard of wind erosion is severe.

3.2 Water Resources

3.2.1 Surface and Ground Water Hydrology-Water Quality and Quantity

The study area is in the Colorado River Drainage Basin. The Animas and San Juan Rivers are the largest perennially flowing streams. Most stream and wash channels in the basin are ephemeral. Because of the area's fragile soils, runoff and sedimentation into washes during precipitation and wind events can be considerable. This natural soil erosion, compounded by man-made barren surfaces, has led to high sedimentation loading of arroyos, and subsequently sedimentation to the San Juan River. Generally, surface water quality in drainages is extremely poor following storm, flood, or rapid snowmelt events. The quantity of this surface water can reach flash flood levels during thunderstorms or rapid snowmelts. Key features that adversely influence the surface water quality include ephemeral water sources, sparse vegetative cover, highly erosive and saline soils, and rapid runoff. Erosion conditions promote the formation of canyons, arroyos, and gullies further contributing to poor water quality. The FFO/BLM estimates that surface runoff frequently contains more than 10,000 milligrams per liter (mg/L) of suspended sediment and more than 1,000 mg/L total dissolved solids (TDS). Public Law 93-320 mandated control of salinity runoff into the Colorado River Basin. No specific quantifiable water quality or quantity data for the proposed action area is available.

There are no perennial water sources within the immediate area around any of the four wells. The San Juan River is approximately 7 miles north of the Richardson 100S, which is the northern most well within the proposed project area. The proposed project area contains no wetlands, seeps, springs, or riparian areas. Slope and drainage in the proposed well areas of the Richardson 200 and Richardson 301S is generally west towards Ojo Amarillo Canyon. The slope and drainage in the proposed well areas of the Richardson 100S and Richardson 102S is generally east towards Gallegos Canyon wash. A review of Federal Emergency Management Agency issued floodplain maps indicates that the proposed action would not be located in or near any designated floodplains (FEMA 2007).

The major ground water aquifer beneath the proposed project area is the Quaternary Alluvium. Most water supplies in the basin are obtained from valley fill deposits of Quaternary age along rivers, and some of the shallower Cretaceous sandstones bodies. Terrace deposits of boulders and cobbles cut into Tertiary bedrock. Thickness of terrace deposits generally does not exceed 30 feet. Alluvial valley fill deposits of sand, gravel, silt and clay rarely exceed 100 feet in thickness. Limited surface and groundwater resources are available due to the arid climate. Irrigation water for agriculture comes from the diversion of perennial streams and rivers. Outside of the river corridors, dry farming is nearly nonexistent.

3.3 Air Resources

3.3.1 Air Quality

Air quality in the San Juan Basin is affected both by nearby industry and by natural terrain. The primary sources of air pollutants in the basin are from electrical power generation plants, oil/gas refineries and treating facilities, and compressor stations. Additional air quality impairment results from the cumulative impact of area motor vehicle emissions and dust, and natural gas well pads. Since the San Juan Basin is a natural depression, air masses sometimes stagnate from lack of circulation resulting in diminished air quality. The New Mexico Air Quality Bureau (NMAQB) is responsible for enforcing the state and national ambient air quality standards in New Mexico. Any emission source must comply with the NMAQB regulations (BLM 2003b).

The project area lies within the Four Corners Interstate Air Quality Control Region. Initial cumulative air quality analysis was conducted in the final EIS for the Proposed Farmington Resource Management Plan (USDI. BLM 2003a). At the present time, the counties that lie within the jurisdictional boundaries of the

FFO are classified as in attainment of all state and national ambient air quality standards as defined in the Clean Air Act of 1972, as amended (USDI, BLM 2003b). However, during the summers of 2000 through 2002, ozone levels in San Juan County were approaching non-attainment. Additional modeling and monitoring was conducted by Alpine Geophysics, LLC and Environ International Corporations, Inc., in 2003 and 2004. Results of the modeling suggest the episodes recorded in 2000 through 2002 were attributable to regional transport and high natural biogenic source emissions. The model also predicted that the region will not violate the ozone NMQS through 2007 and that the trends in the 8-hr ozone values in the region are declining. There is no indication at this time that the approval of the proposed action would result in a violation of ambient air quality standards,

A regional cumulative air quality impact assessment conducted for the Draft EIS for the Northern San Juan Basin Coal Bed Methane Project (BLM and USFS 2004) determined that compressor emissions from oil and gas development in the Farmington Field Office could, at some time in the future, contribute to potential visibility impacts to federal PSD Class I Areas (Mesa Verde National Park and the Weminuche Wilderness Area). The NMAQB has recommended interim limitation of NOx emissions to 2 grams per horsepower hour for new wellhead compressor engines 300 horsepower or less while further studies and monitoring are conducted.

3.3.2 Visibility

The proposed action is located on Navajo Indian Irrigation Project approximately 9 miles south west of Farmington, New Mexico. Visibility in the area is generally good. The proposed action would not be visible from any recreation area, county road, or arterial road.

3.3.3 Climate

The proposed action is within the San Juan Basin of northern New Mexico, having a semi-arid continental climate. Wide variations in temperature, both diurnal and seasonal, are common. Winters in the basin are cold, with snow between December and April accounting for slightly less than half of the annual precipitation. There are approximately 135 frost-free days annually with mean temperatures for January and July being 29° and 74° Fahrenheit (F), respectively. Freezing temperatures are common at night with the daytime temperatures frequently above 50°F. During July and August, temperatures may exceed 100°F. Annual precipitation of the proposed action area averages 10 inches per year. Rains from April through September account for over half of the annual precipitation. Precipitation during June, July, and August influences the occurrence and production of warm season plants, while fall and winter moisture effects the production of cool season plants. Summer rains (July through September) are usually brief, localized, intense thunderstorms that may result in flash floods. Melting snow produces runoff, which may reach flash flood levels. May and June are the driest months. Humidity is generally low, with the highest moisture evaporation usually during June and July.

3.4 Biotic Resources

3.4.1 Wildlife

3.4.1.1 Terrestrial Wildlife

Wildlife potentially occurring in the proposed action area include a wide variety of mammals, birds, and reptiles. Big game hunting within the project area and vicinity is managed by the Navajo Nation; however, generally hunters do not visit the proposed project area. Deer are common to the area. Please see Appendix A (Biological Survey Report) for a listing of species occurring or potentially occurring within the proposed project area. The proposed project area provides potential raptor foraging habitat. There are no major transmission lines within the proposed project vicinity.

3.4.1.2 Riparian/Aquatic Wildlife

The proposed action area contains no aquatic habitats, and aquatic wildlife species are not expected to utilize the area.

3.4.1.3 Migratory Birds

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC §§ 701-715s, as amended), established protections for migratory birds and their parts (i.e. eggs, nests, and feathers) from taking, hunting, capture, transport, sale, or purchase. Information from the New Mexico PIF website

(<http://www.hawksaloft.org/pif.shtml>), the New Mexico PIF highest priority list of species of concern by vegetation type, and the 2002 Birds of Conservation Concern Report for the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR) No. 16 have been used to develop a list of migratory bird species with potential to occur in the action area. The species listed below have not been located within the proposed action area.

Common Name (Scientific name)	Habitat Associations
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Relatively xeric habitats dominated by shrubs and grasses.
Sage thrasher (<i>Oreoscoptes montanus</i>)	Sagebrush plains
Sage Sparrow (<i>Amphispiza belli</i>)	Sagebrush-grassland habitat
Black-throated sparrow (<i>Amphispiza bilineata</i>)	Xeric habitats dominated by open shrubs with areas of bare ground.
Burrowing Owl (<i>Athene cunicularia</i>)	Open grasslands or desert scrub. Presence of suitable nest burrow is critical prerequisite (often prairie dog burrows).
Bendire's Thrasher (<i>Toxostoma bendirei</i>)	Brushy desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca.
Ash-throated Flycatcher (<i>Myiarchus cinerascens</i>)	Arid and semiarid scrub, open woodland, and riparian woodlands.

3.4.1.4 Threatened, Endangered, Sensitive Species and Species of Concern

The Navajo Fish and Wildlife Department (NFWD) has identified eleven (11) federally and/or tribally listed threatened, endangered or sensitive (TES) fauna species with the potential to occur within the proposed project area and vicinity. Ellis & Associates, Inc., permitted by NFWD, conducted a survey for the presence of TES species. No evidence of any federally listed TES fauna or critical habitats were found within the proposed project area. The Navajo Nation Department of Fish and Wildlife Biological Resources Compliance Forms (08ELAS03-100S, 08ELAS03-102S, **08ELAS03-102Sa**, 08ELAS03-200, **08ELAS03-200a**, and 08ELAS03-301S), Consultation letter, and the Biological Survey Report are included in this EA under Appendix A.

3.4.2 Vegetation

3.4.2.1 Terrestrial Vegetation

Vegetation within the proposed action area is that of a sagebrush-grassland community. The plant species noted in the proposed action area are listed in the Biological Survey Report. No federal or State of New Mexico listed noxious/invasive weeds were observed during on-site inspections of the proposed project.

3.4.2.2 Riparian/Aquatic Vegetation

No unique vegetation such as cottonwoods or willows were found within the proposed action area or immediate surroundings.

3.4.2.3 Threatened and Endangered Species

The Navajo Fish and Wildlife Department (NFWD) has identified no federal and/or tribal TES flora species known to occur within three miles of the proposed project area or vicinity, and no federal and/or tribal TES flora species with potential to occur within three miles of the proposed project area or vicinity. Ellis &

Associates, Inc., permitted by NFWD, conducted a survey for the presence of TES species. No evidence of any federal listed TES flora species or critical habitats were found within the proposed project area during the biological evaluation. The Navajo Nation Department of Fish and Wildlife Biological Resources Compliance Forms (08ELAS03-100S, 08ELAS03-102S, **08ELAS03-102Sa**, 08ELAS03-200, **08ELAS03-200a**, and 08ELAS03-301S), Consultation letter, and the Biological Survey Report are included in this EA under Appendix A.

3.4.3 Agriculture/Range

The proposed project is on Navajo Indian Irrigation Project and Navajo Indian Agricultural Product lands near San Juan County Road 7010. The project is in an agriculturally developed area. Consultation was done with members of NAPI to ensure that the proposed well locations considered the farming activity so that no crops will be damaged and there will be no interference with farming activities during the life of the project. The nearest grazing allotment, the Carson-Gallegos Comm, is located approximately 1.8 miles south of the project area.

3.5 Cultural Resources and Traditional Cultural Properties

Cultural history of the region spans time from the Paleo-Indian Period to the present, with a few prehistoric sites in the vicinity. Sites of the Archaic Period, the Ancestral Puebloan Period (formally known as the Anasazi Period) and the Navajo Period are found in the vicinity. In the 1870's, northern New Mexico was settled by Euro-Americans. Euro-American sites primarily represent farming and ranching, as well as the towns that evolved to supply service needs of the settlers.

Cultural resources compliance was requested from the Navajo Nation Historic Preservation Department (NNHPD) and is included in Appendix B of this EA. Archaeological compliance was received for the Richardson 200 and Richardson 301S in BIA File #N48-2009-30 and #N48-2009-18. The compliance letters (Appendix B) states "NONE" for sites found nearby the proposed action. The Richardson 100S was surveyed by Dykeman Roebuck Archaeology, LLC (#DRA091904-1) who encountered one archaeological site (NM-H-26-219) which was determined to be eligible for the National Register of Historic Places, and mitigation with a protection barrier was recommended (CRCF #HPD-10-264). The Richardson 102S was surveyed by Dykeman Roebuck Archaeology, LLC (#DRA091905-1) who encountered one In-Use-Site (IUS) which was not eligible for the National Register of Historic Places, and clearance was recommended (CRCF #HPD-10-072). ***The Richardson Navajo 27-13-10 TUA was surveyed by Julia M Chavez, Archaeologist (#JMC-15NN01) who encountered no cultural sites and clearance was recommended (CRCF #HPD-10-072a). The Richardson Navajo 27-13-2 TUA is located within the area previously inventoried for the Navajo Indian Irrigation Project (NIIP). Archeological and historical clearance has been reviewed and granted (BIA Case File # N48-2015-006).***

In the event of a discovery of any cultural resources during construction, all operations in the immediate vicinity of the discovery would cease, and the NNHPD must be notified.

3.6 Socioeconomic Conditions

Historically, the Huerfano Chapter economy has been largely subsistence farming and ranching and trading. Currently, the chapter economy centers on employment and community farming opportunities with the Navajo Agricultural Products Industry (NAPI).

3.6.1 Employment and Income

Major employers in the Huerfano Chapter include NAPI, employing approximately 340 people; the Dzlith-na-o-dith-hle Health Center, employing approximately 50 people; and the Dzlith-na-o-dith-hle Community School, employing approximately 90 people. Other sources of employment include Giant Industries, the Navajo Nation and the Huerfano Dormitory.

3.6.2 Demographics and Trends

Huerfano Chapter has the largest land base within the Eastern Navajo Agency and the second largest chapter within the Navajo Nation. The Huerfano Chapter has a population of approximately 2,313 Native

American people as of 2000 (U.S. Census Bureau, Census 2000). The Huerfano Chapter is a certified chapter of the Navajo Nation.

3.6.3 Lifestyles, Cultural Values, Attitudes, Expectations

The Huerfano Chapter area attracts tourists as well as scientists who are visiting or working within the Angel Peak Recreation Area, Fossil Forest and the Bisti/De-na-zin Wilderness Area.

3.6.4 Community Infrastructure

Huerfano Chapter is served by three major highways: U.S. Highway 64, U.S. Highway 550, and N.M. Highway 371. U.S. Highway 64 runs east to west near the northern boundary of the Chapter. New Mexico Highway 371 borders the western edge of the Chapter while U.S. Highway 550 runs north to south through the eastern portion of the Chapter. In addition to the number of paved and unpaved roads crisscrossing NAPI, a number of well maintained San Juan County paved and dirt roads branch from all three highways and serve the interior of the Chapter.

Huerfano Chapter educational institutions include the Dzlith-na-o-dith-hle Community School, the Huerfano Dormitory, and Carson Pre-School. Students are also bussed into the Bloomfield public schools. San Juan Community College in Farmington, New Mexico provides close access to higher education opportunities.

The Huerfano Chapter has limited commercial establishments and includes 1 trading post, 2 gasoline stations, 2 convenience stores and 1 video shop. The nearest commercial airport is located in Farmington, approximately 30.0 miles northwest of Huerfano Chapter House.

Medical services are provided by San Juan Regional Medical Center and Presbyterian Medical Services in Farmington, Shiprock Indian Hospital in Shiprock, and the Dzlith-na-o-dith-hle Health Center near Blanco Trading Post.

3.7 Environmental Justice

In February 1994, Executive Order (EO) #12898 was issued pertaining to environmental and health conditions of minority and low-income communities, directing federal agencies to avoid making decisions that discriminate against these communities. This EO requires fair treatment of all peoples of all races, cultures, incomes, and education levels with respect to development, implementation, and enforcement of environmental laws, regulations, and policies.

The proposed action is located in a rural setting, within the Navajo Nation. Residences are not known to be located within one mile of, nor in direct line-of-sight of, production activities. People within the vicinity live a contemporary and traditional lifestyle, either working in town or the oil field. Some area residents may graze livestock and conduct farming activities in the evenings and weekends. Native Americans represent a high percentage of the population in San Juan County while Hispanics represent a high percentage of the population in Rio Arriba County (BLM RMP/FEIS 2003).

3.8 Indian Trust Resources

Indian Trust Resources in the vicinity include land, minerals, livestock grazing, wildlife, traditional values and lifestyle, and cultural and traditional cultural properties (TCPs).

3.9 Environmental Module

3.9.1 Resource Conservation and Recovery Act Subtitle C: Hazardous waste/materials

The Resource Conservation and Recovery Act of 1976 (RCRA) established the federal program regulating solid and hazardous waste management. Human solid and liquid wastes would be generated primarily during the construction phases of the project and would be contained within portable facilities at the site. Hazardous substances that may be found at the site may include minimal quantities of materials that may be necessary for welding or gluing, and flammable or combustible substances, fuels, and acids/gels (corrosives) associated with vehicles. These hazardous materials may include oil, fuel, hydraulic fluid, and coolants.

3.9.2 Resource Conservation and Recovery Act Subtitle D: Non-hazardous solid waste

Non-hazardous solid waste generated at the proposed project area would be stored in appropriate containers and disposed of at an approved facility on an as needed basis.

3.9.3 Resource Conservation and Recovery Act Subtitle I; Underground storage tanks

The proposed action would not utilize underground storage tanks.

3.9.4 Comprehensive Environmental Response Compensation and Liability Act/Toxic Substances Control Act Sites

There are no identified existing hazardous materials in the proposed project area. Hazardous substances that may be found at the site may include minimal quantities of materials that may be necessary for welding or gluing, and flammable or combustible substances, fuels, and acids/gels (corrosives) associated with vehicles and welding processes. These hazardous materials may include oil, fuel, hydraulic fluid, drilling fluids, and coolants.

3.10 Resource/Land Use Patterns

The project area is located within the Huerfano Chapter of the Eastern Agency of the Navajo Nation. Resources and land use include extensive oil and gas reserves, coal reserves, and water from the San Juan River and Navajo Reservoir that, through a conveyance system, provides irrigation water to the Navajo Indian Irrigation Project (NIIP) under the jurisdiction of NAPI. Underground water provides for domestic livestock use.

3.10.1 Hunting, Fishing, Gathering

There are no fisheries or permanent water resources in the project area or immediate vicinity. Public recreational activities, including hunting, are limited. Due to the open nature of the proposed project area it is not considered a hunting or gathering area.

3.10.2 Timber Harvesting

The project area contains no saleable timber.

3.10.3 Mining

Basin Fruitland Coal gas would be extracted through drilling by the proposed project. Oil and gas activity is common in the project area; there are no coal or other mining claims nearby.

3.10.4 Outdoor Recreation

The project area is not a known recreational destination. There was no evidence of OHV use near the proposed project area noticed during the onsite inspections.

3.11 Other Values

3.11.1 Wilderness

The proposed action is not located within or near any designated wilderness areas. There are no designated or proposed wild and scenic rivers within the proposed project area.

3.11.2 Sound and Noise

Noise from oil and gas compressors has been identified by the public as all issue of primary concern in the planning area (2003 RMP/FEIS). Sound levels are usually measured and expressed in decibels. The method commonly used to quantify environmental sounds involves evaluating all of the frequencies of a sound according to a weighting system, which reflects that human hearing is less sensitive at low frequencies and extremely high frequencies than at mid-range frequencies. This is called "A" weighting, and the decibel level measured is called the A-weighted sound level, measured in decibels (dBA). A sound level range of 0 to 10 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels.

There are no residences located within approximately 500 feet and in direct line-of-sight of production activities which could experience noise levels in excess of the 55 dBA limit in USEPA guidelines.

Ambient noise levels are generally low given the rural nature of the proposed project area. Noise is generally associated with existing oil and gas development and is either periodic or continually audible in the project area. No residential area exists within 600 feet of the proposed project.

3.11.3 Public Health and Safety

Operation of the proposed action represents health and safety hazards. There is no human occupancy within the proposed action area. The natural gas pipeline would be buried approximately four (4) feet beneath the ground surface and permanently marked. The pipelines would be visually inspected and pressure tested. Public health and safety issues associated with the proposed well would be the responsibility of ERC for the life of the project. Public health and safety issues associated with the proposed pipeline would be the responsibility of Enterprise Field Services for the life of the project.

CHAPTER 4 - ENVIRONMENTAL CONSEQUENCES

This section analyzes the environmental consequences of the proposed action. Effects or impacts can be either long term (permanent or residual) or short term (incidental or temporary). Short-term impacts (usually less than 5-years) affect the environment for only a limited period and then the environment reverts rapidly back to pre-action conditions. Long-term impacts are substantial and permanent alterations to the pre-existing environmental condition. Impacts may be irreversible or residual and affected resources irretrievable. Residual and cumulative impacts are also analyzed. For the purposes of this EA, potential impacts or effects are divided into three (3) categories:

Significant- as defined in the CEQ guidelines (40 CFR 1500-1508), impacts which are substantial in severity and therefore should receive the greatest attention in decision-making.
Moderate - impacts/effects which cause a degree of change that is easy to detect, but do not meet the criteria for significant impacts.
Low - impacts/effects which cannot be easily detected; cause little change in existing environment or resource.

A Summary of the environmental consequences and recommended mitigations are provided in Table 4. Only those elements of the environment potentially impacted by the proposed action are analyzed. The proposed action nor the no action alternative would have any impact on the following CEQ designated critical elements; prime or unique farmlands, wetlands and/or riparian zones, or wild and scenic rivers, wilderness areas, cultural resources, Native American religious concerns, or socio-economics including environmental justice. There are no known geologic impacts or known hazardous or solid wastes within the project area. Under the no action alternative, air quality, existing topography, soils, surface and ground water quality and quantity, vegetation and invasive plants, wildlife, threatened or endangered, sensitive species or species of concern, grazing livestock, cultural resources, paleontology, public health and safety, visual resources, and noise would remain unchanged. These resources would not be impacted by the no action alternative.

Table 4 - Summary of Resource Impacts with Recommended Mitigation Measures

RESOURCE	ENVIRONMENTAL CONSEQUENCES	EFFECTS/IMPACTS	RECOMMENDED STIPULATIONS/MITIGATION MEASURES
Topography	Topography is relatively flat	Low Short and Long term	Erosion control measures, implementation of Best Management Practices (BMPs); re-contouring
Soils	Disturbance, mixing, compaction	Low to Moderate Short-Term Low-Long term.	Erosion control measures and structures, Implementation of BMPs; Good Housekeeping Practices, vehicles restricted to permitted area, successful and permanent re-vegetation.
Geology and Mineral Resources	Removal of finite energy resources	Low Short and Long term	None
Water Resources	Increased sedimentation, decreased surface water quality and potentially San Juan River water quality	Low to Moderate Short-Term Low Long term.	Erosion control measures and BMPs, successful establishment of vegetation, Good Housekeeping Practices.
Air Resources	Some dust and emissions during construction, operation and maintenance	Low to Moderate Short and Long-term	Dust abatement; Possible USEPA Region IX air monitoring
Wildlife	Noise level increases, habitat alteration, construction hazards, human intrusion	Low to Moderate Short-term Low-Long term	Human and vehicle activity restricted to permitted area, successful re-vegetation, containment of all hazards
Threatened, Endangered, and	No threatened or endangered species or	None	None

RESOURCE	ENVIRONMENTAL CONSEQUENCES	EFFECTS/IMPACTS	RECOMMENDED STIPULATIONS/MITIGATION MEASURES
Sensitive Species	potential habitats were identified in the proposed action area		
Vegetation and Invasive Plants	Removal of 11.59 acres of sagebrush-grassland. Potential for introduction of noxious/ invasive weeds	Low to Moderate Short-term Low Long term	Successful and permanent re-vegetation, erosion control measures, weed management
Agriculture/Range	Noise level increases, loss of forage, construction hazards, human intrusion	Low Short and Long term	Successful re-vegetation, fencing and containment of all hazards
Cultural Resources/ TCPs	Indirect removal or damage to Resources from increased human activity	Low Short and Long term	Human and vehicle activity restricted to permitted area.
Socioeconomics and Environmental Justice	Increase in local jobs. Increased economic revenues to local economy, federal, State, and Navajo Nation.	Low Short and Long term	None
Indian Trust Resources	Indian Trust Resources to be mitigated as detailed for the surface resources stated above	Low Short and Long term	Minimal impacts to Indian Trust Resources if mitigation measures are implemented.
Environmental Module/ Public Health and Safety	Requirements for waste and hazardous material handling and disposal. Pipelines to be buried below ground.	Low Short and Long term	Minimal impacts if existing federal, state, and Navajo Nation regulations and plans are implemented
Resource/Land Use: Patterns	Impacts to Resource Land Use Patterns to be mitigated as detailed for the surface resources stated above	Low Short and Long term	Minimal impacts to resources or land use patterns, if mitigation measures are implemented.
Visual Resources	Landscape scars, construction and drilling activities	Moderate Short and Long term	Re-contour, successful and permanent re-vegetation
Noise	Increased noise levels from construction	Moderate Short and Long term	None

4.1 Land Resources - Physical Impacts and Mitigation

4.1.1 Topography

The proposed action would not noticeably alter the existing topography. The proposed action is within and adjacent to existing disturbances. Re-contouring the surface and installation of erosion control devices would also alter existing topography. Following all construction activities, the re-contouring of disturbed areas to as near as possible preconstruction conditions would lessen impacts to topography. Reclamation and installation of erosion control devices would also lessen long-term impacts. Impacts of the proposed action on existing topography are expected to be low for the short and long-term.

4.1.2 Soils

Soils disturbed would be structurally mixed, compacted, displaced, and exposed to the elements of wind and water. The soil-mapping units of the proposed action area have the potential for slight to high water erosion and severe to very severe wind erosion. Disturbed areas would be susceptible to increased erosion levels until the well pad has been successfully re-vegetated. The heaviest amounts erosion sediments potentially entering the drainage systems (silt loading) would be short-term until sufficient vegetation is established. Establishment of permanent, perennial vegetation, installations of functional erosion control devices (including silt fence), and Best Management Practices (BMPs) would decrease long-term soil erosion impacts. The heaviest amounts of wind and water erosion would be moderate for the short term. Following installation of erosion structures and vegetation reestablishment, long-term impacts to soils would be low.

4.1.3 Geology and Mineral Resources

Basin Fruitland Coal methane gas would be extracted by implementation of the proposed project. The extraction of hydrocarbons (oil and gas) and potentially produced water would continue until no longer economically viable. Impacts to mineral resources would be moderate in both the short and long term.

4.2 Water Resources - Impacts and Mitigation

Sedimentation, resulting from both wind and water erosion, would be realized down gradient of the proposed action until successful vegetation has established. This would increase sedimentation into Blanco Canyon. The amount of sedimentation increase would be dependent upon wind and water events in relation to the success of re-vegetation and erosion control measures. Increases in sedimentation are expected to be low with the implementation of mitigation measures.

Reclamation would minimize impacts created by water or wind erosion. Approximately half of the well pad disturbance and nearly the entire pipeline disturbance would be reclaimed. The remaining surface disturbances would remain disturbed for the life of the action for production equipment and vehicle travel surfaces. Stormwater run-off would be diverted around the well pad. The proposed access road would be crowned, ditched, and culverts would be installed as needed to promote proper drainage. Conditions of approval may include additional surface stabilization, diversion ditches, berms, and other such erosion control structures.

Potential spills of hazardous materials during construction may result in adverse impacts to surface or ground water quality. Fluids either stored on location or associated with the pipeline would be properly contained during all operations. All pits would be lined to prohibit drilling and production fluids from infiltrating into groundwater resources or flowing into surface water resources.

Effects to ground water resources would be low due to mitigation measures such as casing and pit lining. Below casing depth, losses of produced water or mud may occur to differing degrees in various formations, but the losses are considered to be low and contained to within a few feet of the well bore. These losses are not considered to be substantial because of the very small amount of groundwater that could be affected (BLM 2003, p. 4-14).

Overall impacts to water resources would be low to moderate for the short term and low for the long term.

4.3 Air Resources - Impacts and Mitigation

Vehicle traffic emissions, construction and reclamation activities for the proposed action would increase the levels of dust during the construction and reclamation phases. Suspended dust from construction could be reduced through sprinkling disturbed areas and heavy traffic areas with fresh water. This would also maintain good visibility and minimize public and worker health and safety impacts. Establishment of vegetation cover would reduce impacts to air quality by reducing erosion and blowing dust.

Additionally, the FFO/BLM is requiring new and replacement wellhead compressors to be limited to NOx emissions of less than two (2) grams per horsepower-hour. This measure is intended to substantially reduce the level and extent of project emissions to form ozone. Given these mitigation measures, potential impacts to air quality are expected to be low to moderate and short term. Long-term impacts to air resources would be low.

4.4 Biotic Resources - Impacts and Mitigation

4.4.1 Wildlife: Terrestrial and Riparian

Some wildlife species react positively to vegetation changes, soil loss, increased traffic and/or human intrusions, some negatively, and some show no reaction at all. Species would continue to inhabit the area or conversely, move out of the area; and the populations may increase or decrease depending on these factors. The proposed action would remove forage and some browse for wildlife species. Vehicular traffic and increased human activity in the area would have a negative impact to wildlife species. Resident small

burrowing animals could be killed or displaced by construction. All construction activities would be confined to the permitted area only. The rapid and permanent vegetation and cover re-establishment would minimize impacts to wildlife. All wildlife hazards associated with construction and operation of the proposed action would be properly contained. The implementation of mitigation measures would minimize potential adverse impacts to wildlife. It is suggested that construction takes place outside of the nesting seasons for these species to avoid any negative impacts associated with the proposed action. During construction, impacts to wildlife would be low to moderate and short term.

During operation and maintenance of the proposed action, periodic light truck traffic would occur. This human and vehicular activity would result in low long term impacts to wildlife species.

4.4.2 Threatened, Endangered, Sensitive Species and Species of Concern

No Navajo Nation Threatened, Endangered, Species of Concern were found in the proposed action area. No impacts to any federally or tribally listed Threatened, Endangered or Species of Concern are expected as a result of the proposed action. Refer to Appendix A, the Biological Survey Report.

4.4.3 Migratory Birds

Adult migratory birds would not be directly harmed by the action alternatives because of their mobility and ability to avoid areas of human activity. Any nests within the area of the proposed action alternatives may be directly impacted, along with eggs and juveniles. The increased human presence during construction, drilling, and reclamation activities may indirectly disturb or displace adults from nests and foraging habitats for a short period of time, three months or less. Long term production operations would result in only a slight increase in human activity in the immediate proposed action area. Effects to the population status of migratory birds are not anticipated due to the mobility of individuals and the abundance of adjacent habitat for these species. In consideration of these factors, there would be low short-term effects to migratory birds, and minimal long-term effects as a result of the action.

Potentially affected migratory bird species listed by New Mexico Partners in Flight as priority for management include black-throated gray warbler, gray flycatcher, ash-throated flycatcher, juniper titmouse, piñon jay, Western bluebird, mountain bluebird, Cassin's kingbird, and Say's phoebe for piñon-juniper habitat; and Bendire's thrasher, sage thrasher, loggerhead shrike, sage sparrow, and brewer's sparrow for sagebrush habitat. Wildlife and bird species may lose nesting/den/burrow habitat and foraging habitat.

Project mitigation measures are designed to minimize effects on migratory birds and other wildlife. These measures include netting of any permanently open pits and vent caps on all open pipes to prevent bird entry and nesting. All construction activities would be confined to permitted areas only. Rapid and permanent vegetation and cover reestablishment would minimize impacts to migratory birds. All hazards associated with construction and operation of the proposed action would be fenced or contained in storage tanks.

Best Management Practices (BMPs) would be used to avoid or minimize the possibility of the unintentional take of migratory birds, as instructed in the MBTA Washington Office Interim Management Guidance and BLM/FFO Interim Management Policy (MOU No. NM-F00-2010-001). If project disturbance is over 4.0 acres of vegetative disturbance, then no construction activities from May 15 to July 31 will be permitted without a BLM/FFO approved migratory bird nest survey. If any active nests are located within the proposed project area, project activities will not be permitted without written approval and monitoring by a BLM/FFO biologist.

4.4.4 Vegetation and Invasive Plants

Construction of the proposed action would result in the removal **11.59 acres** of vegetation and a corresponding increase in erosion and sedimentation. Vegetation removal would result in a change in species composition, density and diversity. No trees would be removed for construction of the proposed well pad. Surface disturbance increases the likelihood of invasive/noxious weed infestations resulting in

an indirect affect to vegetation. It would be ERC's responsibility to monitor, control and eradicate all invasive/noxious weeds within the proposed action area during the life of the project. Re-establishment of vegetation is expected to take one (1) to three (3) growing seasons, depending on precipitation.

Vehicles would be restricted to the permitted area to minimize impacts to vegetation. With mitigation, the proposal is projected to have low to moderate short-term impacts on vegetation and low impacts over the long term.

4.4.5 Agriculture/Range

The proposed action surface disturbance would result in the loss of approximately 0.30 of an Animal Unit Month (AUM) (at an estimated 20 acres per AUM) until the area has been re-vegetated. All construction activities would be confined to the permitted area only. If the area is successfully re-vegetated, the proposed project may benefit area grazing by providing additional palatable ground cover. All hazards to livestock and wildlife would be fenced or contained. No livestock improvements would be impacted. Impacts to rangeland are anticipated to be low in both the short and long term.

4.5 Cultural Resources and Traditional Cultural Properties - Impacts and Mitigation

The Richardson 100S and Richardson 102S project areas were surveyed for cultural resources by Dykeman Roebuck Archaeology, LLC for approval by Navajo Nation Historic Preservation Department (NNHPD). One site (NAU Project #263-NM-4) was found to occur in the proposed action area of the Richardson 100S and would be mitigated with a protective barrier and avoided by construction activities. The proposed action would not impact any known traditional cultural properties (TCPs).

The Richardson 200 and Richardson 301S project areas were reviewed by the BIA and Navajo Indian Irrigation Project and given archaeological clearance. These clearances are included in the Appendix along with the Cultural Resource Compliance Forms issued by the NNHPD.

If any site were encountered during construction, the contractor would immediately stop all maintenance and/or construction activities and notify the BIA. The BIA would then evaluate the site in consultation with the NNHPD. Mitigation strategies would be required to protect sites adjacent to the project area. A potential indirect effect from the project is the increase in human activity in the area. This increases the possibility of irretrievable loss of information pertaining to the cultural past of the project region. Conversely, the benefits to cultural resources derived from the project are the cultural and historic survey that adds to literature, information, and knowledge of these irreplaceable resources. Impacts to cultural resources and any unknown TCPs are anticipated to be low for the short and long term.

4.6 Socioeconomics and Environmental Justice - Impacts and Mitigation

Temporary jobs would be generated during the construction phase of the proposed action. Service businesses would also benefit in the short term from the presence of work-crews. The resulting increased natural gas production would increase revenues to the Navajo Nation.

Construction and increased natural gas production may result in increased employment opportunities and royalty income to Native Americans and other minority and traditionally low income groups. The proposed action would not impact traditional lifestyles. Low short term and long term impacts to current socioeconomic conditions are anticipated. The proposed action is not anticipated to have any adverse impacts to socioeconomics in the Huerfano Chapter.

4.7 Indian Trust Resources - Impacts and Mitigation

Indian trust resources in the area that may be impacted include land, surface water quality, wildlife, livestock forage, cultural resources, traditional cultural properties, paleontological resources, and agricultural lands and operations. Although temporary, project construction may have some impacts on these surface resources. Low short and long term impacts to Indian Trust Resources are anticipated.

4.8 Environmental Module/ Public Health and Safety - Impacts and Mitigation

ERC would implement Good Housekeeping Practices to minimize the potential impacts from hazardous and non hazardous wastes. Any releases would be contained and disposed of in accordance with federal

or Navajo Nation regulations. All hazardous materials would be properly contained on site. With compliance to federal and Navajo Nation laws, low short and long term impacts to public health and safety are anticipated.

4.9 Resource/Land Use Patterns and Other Values - Impacts and Mitigation

Impacts to the land, water, mineral, air, biotic, cultural resources, and socioeconomic conditions are described above.

4.10 Visual Resources - Impacts and Mitigation

The proposed action would result in topographic and vegetation alterations in the proposed action area. During construction and drilling disturbed ground, construction equipment and machinery would be visible. The proposed action would not be visible from any New Mexico State Highway, county, or BIA road. Rapid construction, reclamation and re-vegetation would decrease the period of moderate visual impact. Painting of surface equipment, as specified by the BIA or FFO/BLM to blend into the surrounding ecosystem would lessen long-term visual impacts. For safety purposes, some equipment or parts of equipment may be required to be painted appropriate colors. With rapid and successful restoration and re-vegetation, impacts to visual resources would be moderate for the short-term and low for the long-term.

4.11 Noise - Impacts and Mitigation

During any maintenance activities, noise within the vicinity would moderately increase. During the project operation phase, no additional noise or sound would be added to the project area. Therefore, a low short-term noise increase in project area relative to current ambient levels is anticipated. The operational phase would not contribute to long-term deterioration of sound quality in the vicinity. The project is not located within any existing or proposed noise sensitive area. The proposed action is not within close proximity of a human occupation. Noise impacts are expected to be low for the short-term and long-term.

4.12 Cumulative Impacts

The leased area of the proposed action has been industrialized with oil and gas well development. The surface disturbance for each project that has been permitted has created a spreading out of land use fragmentation. The cumulative impacts fluctuate with the gradual reclamation of well abandonments and the creation of new additional surface disturbances in the construction of new access roads and well pads. The on-going process of restoration of abandonments and creating new disturbances for drilling new wells gradually accumulates as the minerals are extracted from the land. Preserving as much land as possible and applying appropriate mitigation measures will alleviate the cumulative impacts.

Due to the absence of regulatory requirements to measure Green House Gasses (GHG) emissions and the variability of oil and gas activities on federal minerals, it is not possible to accurately quantify potential GHG emissions in the affected areas as a result of approving this application for permit to drill. A general assumption, however, can be made: drilling these wells may contribute to GHG emissions.

The lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts. However, potential impacts to natural resources and plant and animal species due to climate change are likely to be varied, including those in the southwestern United States. For example, if global climate change results in a warmer and drier climate, increased particulate matter impacts could occur due to increased windblown dust from drier and less stable soils. Cool season plant species' spatial ranges are predicted to move north and to higher elevations, and extinction of endemic threatened/endangered plants may be accelerated.

Due to loss of habitat or competition from other species whose ranges may shift northward, the population of some animal species may be reduced or increased. Less snow at lower elevations would likely impact the timing and quantity of snowmelt, which, in turn, could impact water resources and species dependant on historic water conditions. Forests at higher elevations in New Mexico, for example, have been exposed to warmer and drier conditions over a ten year period. Should the trend continue, the habitats and identified drought sensitive species in these forested areas and higher elevations may also be more affected by climate change.

CHAPTER 5 – CONSULTATION AND COORDINATION

All four project areas were onsited on June 19, 2009 with BIA, BLM, and ERC and again January 4, 2011 with ERC.

The following agencies and individuals contributed to the preparation of this document:

Robert Hanna		Director, NAPI
Bertha Spencer	BIA	present at June 19, 2009 onsite
Herrilene Yazzie	BIA	
Bruce Jaquez	BIA-NIIP	
Pamela Kyselka	NNHP, NNDFW	
Jeff Cole	NNFWD	
Ron Maldonado	NNHPD	
Marcella Martinez	BLM	present at June 19, 2009 onsite
Bob Schmidt	Energen Resources Corporation	present at June 19, 2009 onsite
Michael Dean	Energen Resources Corporation	present at June 19, 2009 onsite
Perry Kirk	Energen Resources Corporation	present at June 19, 2009 onsite
John Harrington	Energen Resources Corporation	present at June 19, 2009 onsite
Doug Dykeman	Dykeman and Roebuck	present at January 4, 2011 onsite
Kenneth Wireto	Red Skies Surveying	
Max Libby	Ellis & Associates	present at June 19, 2009 onsite
Maria Adkins	Adkins Consulting	present at June 19, 2009 onsite
Keri Caraher	Adkins Consulting	
Lori Gregory	Adkins Consulting	

CHAPTER 6 – BIBLIOGRAPHY

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Julia M Chavez, Archaeologist. 2015. Energen Resources Corporation Richardson Navajo 27-13-10 04H Well Pad, Temporary Use Area, and Pipeline Cultural Resources Survey, Huerfano Chapter, San Juan County, New Mexico (Report No. JMC-15NN01). Farmington, New Mexico.

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BIOLOGICAL RESOURCES COMPLIANCE FORM
NAVAJO NATION DEPARTMENT OF FISH AND WILDLIFE
 P.O. BOX 1480, WINDOW ROCK, ARIZONA 86515-1480

It is the Department's opinion the project described below, with applicable conditions, is in compliance with Tribal and Federal laws protecting biological resources including the Navajo Endangered Species and Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection and National Environmental Policy Acts. This form does not preclude or replace consultation with the U.S. Fish and Wildlife Service if a Federally-listed species is affected.

PROJECT NAME & NO.: Energen Resources Corporation, Richardson #200 (Richardson Navajo 27-13-2 #4H)

DESCRIPTION: Energen Resources requests an amendment to the existing BRCF (NNDFW Review No. 08ELAS03-200) to include a 200-ft. X 200 ft. TUA. The pipeline was previously permitted.

LOCATION: SE¼ SE¼ of Section 3, T27N, R13W, NMPM, San Juan County, New Mexico

REPRESENTATIVE: Lori Gregory, Adkins Consulting, Inc. for addendum TUA

ACTION AGENCY: Energen Resources Corporation

B.R. REPORT TITLE / DATE / PREPARER: Request for amended BRCF/23 APR 2015/Lori Gregory

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 3.

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED: NA

FEDERALLY-LISTED SPECIES AFFECTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

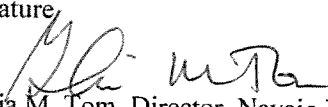
AVOIDANCE / MITIGATION MEASURES: [1] The NNDFW highly recommends that project construction avoids the Migratory Bird breeding season of 01 MAR-15 AUG or a survey for active nests will precede all ground-disturbing activity.

CONDITIONS OF COMPLIANCE*: NA

FORM PREPARED BY / DATE: Pamela A. Kyselka/28 APR 2015

COPIES TO: (add categories as necessary)

☐ _____ ☐ _____

2 NTC § 164 Recommendation: <input checked="" type="checkbox"/> Approval <input type="checkbox"/> Conditional Approval (with memo) <input type="checkbox"/> Disapproval (with memo) <input type="checkbox"/> Categorical Exclusion (with request letter) <input type="checkbox"/> None (with memo)	Signature  Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife	Date 4/29/15
--	---	------------------------

*I understand and accept the conditions of compliance, and acknowledge that lack of signature may be grounds for the Department not recommending the above described project for approval to the Tribal Decision-maker.

Representative's signature



Date 5-7-15



United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
Navajo Indian Irrigation Project
304 North Auburn, Suite B
Farmington, New Mexico 87401



March 30, 2015

Energen Resources Corporation
2010 Afton Place
Farmington, NM 87401

Dear Mr. Lovato,

A request has been made for Archeological and Historical Clearance from Navajo Indian Irrigation Project (NIIP) Farmington, NM for the following location:

BIA Case File #:	N48-2015-006
Well Site:	Richardson Navajo 27-13-02 #4H Sec. 3, T. 27 N., R. 13 W. NMPM SE1/4 of the SE1/4
Operator:	Energen Resources Corporation
Date Reviewed:	NIIP March 16, 2015

After reviewing, the proposed site is clear of archaeological and historical resources that were inventoried for the Navajo Indian Irrigation Project. If you have questions, please contact the NIIP office at (505) 325-1864.

Sincerely,

Michael Howe
Civil Engineer

Enclosure
File

BIA CASE FILE #: N48-2015-006
DATE REVIEWED BY: 3 - 18 - 2015
REVIEWED BY: Michael Howe
(FOR BIA USE ONLY)

NAVAJO INDIAN IRRIGATION PROJECT
304 NORTH AUBURN, SUITE B
FARMINGTON, NM 87401

Date: 3-3-2015

RE: NIIP ARCHEOLOGICAL AND HISTORICAL CLEARANCE UPDATE (Project Description):
Energen Resources Corporation request: Well Site and Access Road archaeological and historical clearance review to an existing (Richardson Navajo 23-13-02 #4H) for additional surface disturbance on existing well site.

Dear Project Manager:

I hereby request archeological clearance for a project, which I believe, is located entirely within the boundaries of the Navajo Indian Irrigation Project. This project will consist of (brief description): **Well Site: (400' x 200) with NEW Access Road** and is designated by the following name and/or number in our company files: **Richardson Navajo 27-13-02 #4H** as shown on the attached map(s); 4 copies provided and enclosed.

The project is located in Township 27 North, Range 13 West, Section 3 in the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of the $\frac{1}{4}$ (describing a 10 acre parcel). Access will be obtained as also shown on the attached map. No more than **1.38 acres** (hectares) will be used or occupied considering all direct and indirect effects of proposed project activities.

I certify that I am the duly authorized agent of the proposed project sponsor and will take responsibility for the accuracy of the information submitted above. When clearance is received, I will assure that the instructions indicated below and in any future guidance from you for this project will be followed.

Archeological clearance for the area described is hereby granted under the terms of the Memorandum of Agreement for Protection of Archeological and Historical resources in the Navajo Indian Irrigation Project consummated by the Advisory Council for Historic Preservation on July 17, 1977.

The area of the currently proposed project was intensively inventoried for archeological and historic resources as documented in (Report # 79-NM-120). These sites (listed by number) were located in the area of this newly proposed project **LA30847, LA30837, LA30831, LA30843, LA30842**

These sites (listed by number) were located within 100 feet (33 meters) on the newly proposed project and special efforts should be taken to avoid inadvertent impacts in these areas: **NONE**

This clearance does not constitute approval of right-of-way, concurrence in the proposed action by the Bureau of Indian Affairs, or approval to proceed with the project. This clearance constitute one of several mandated requirements which must be completed prior to the granting of right-of-way, easement, or approval by the BIA for land modifying project proposed within the Navajo Indian Irrigation Project boundaries.

IT IS THE RESPONSIBILITY OF THE PROJECT SPONSOR TO ACQUANIT CONTRACTORS AND SUB-CONTRACTORS WITH THE BOUNDARIES FOR WHICH THIS CLEARANCE IS GRANTED.

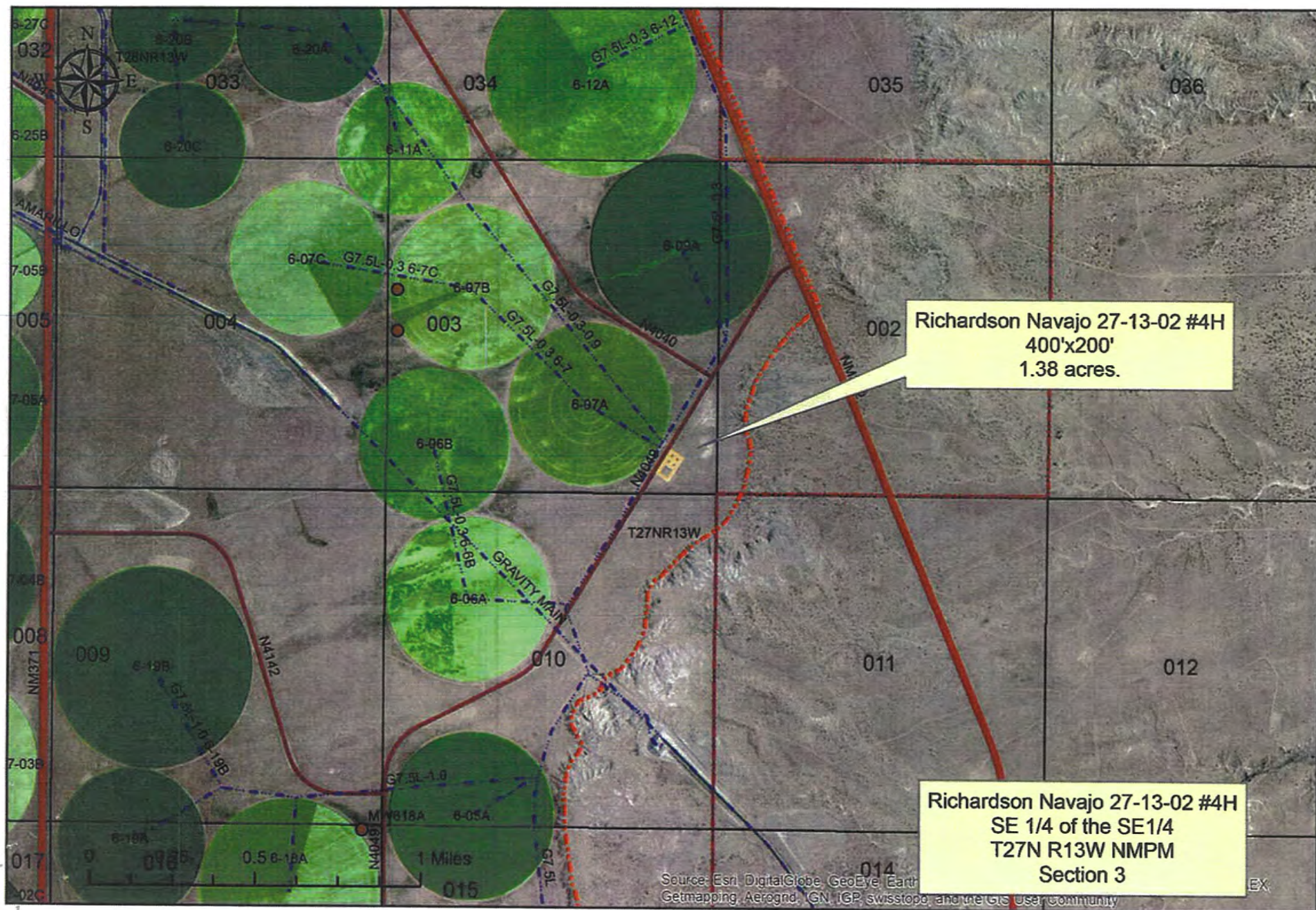
Discovery Clause (36 CFR Part 800.7) Should any archeological or historical resources be discovered during project operations, all work must cease in the immediate area of the exposed resource. The Navajo Tribal Archeologist and the BIA Navajo Area Archeologist shall be notified to arrange an on-site inspection for the purpose of determining the significance and disposition of the remains. Such discoveries may be subject to the provision and prohibitions of the Archeological Resource Protection Act (P. L. 93-95, Title 43 CFR, Part 7).

THE PROJECT SPONSOR IS RESPONSIBLE FOR ADVISING CONTRACTORS AND SUB-CONTRACTORS OF THIS REQUIREMENT AND ASSURING HIS COMPLIANCE.

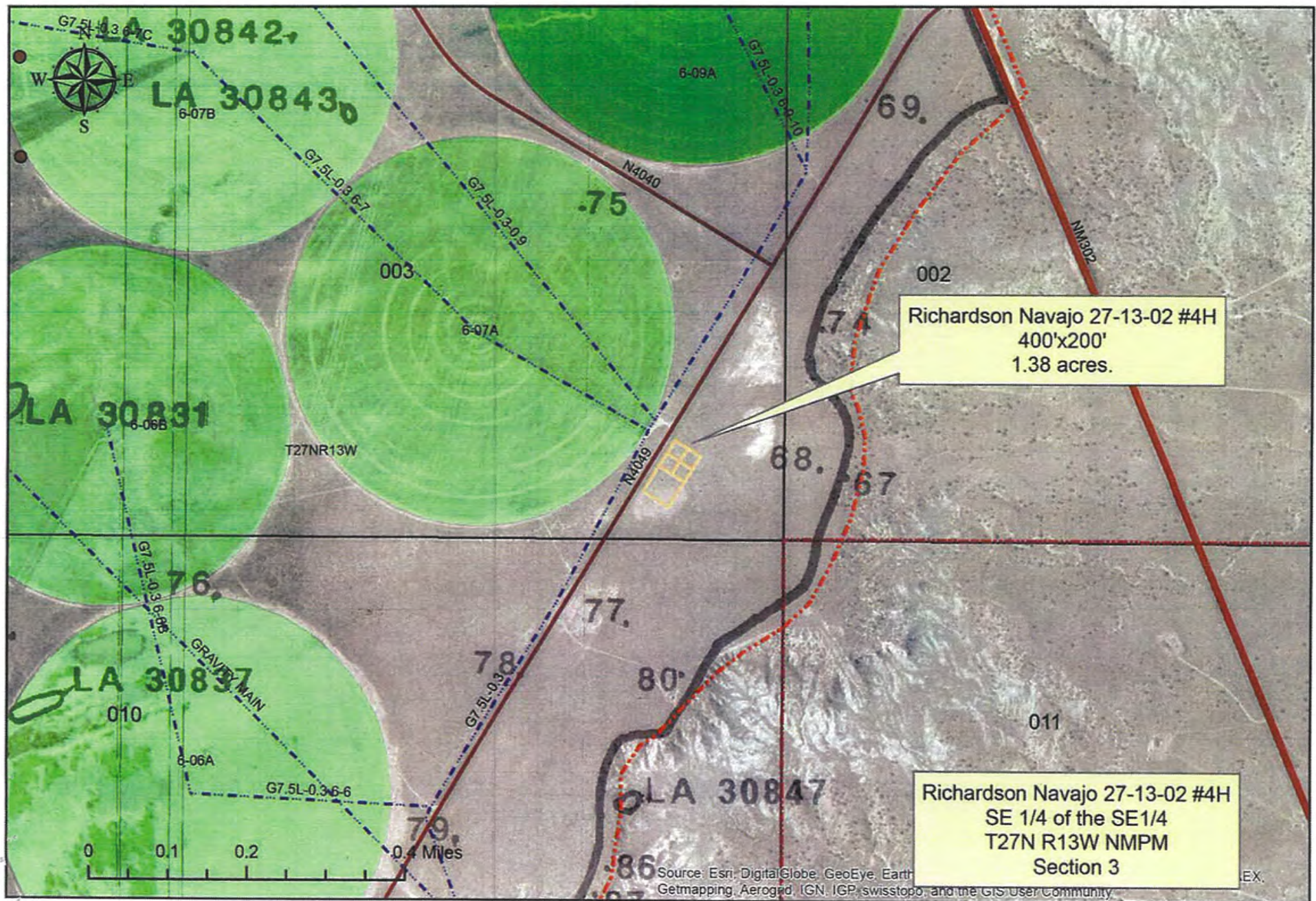
Michael Howe
NIIP Project

3/27/2015
Date

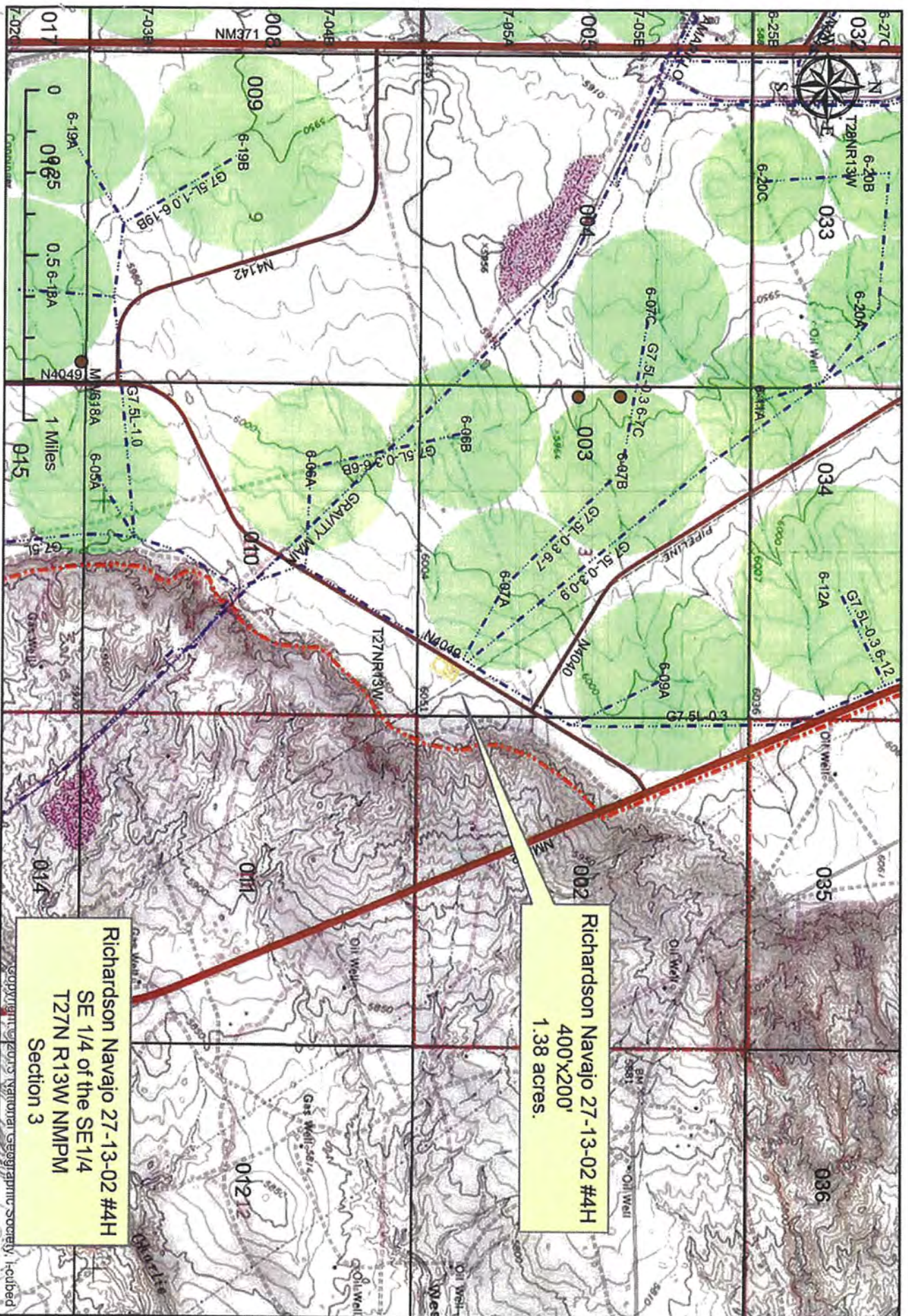
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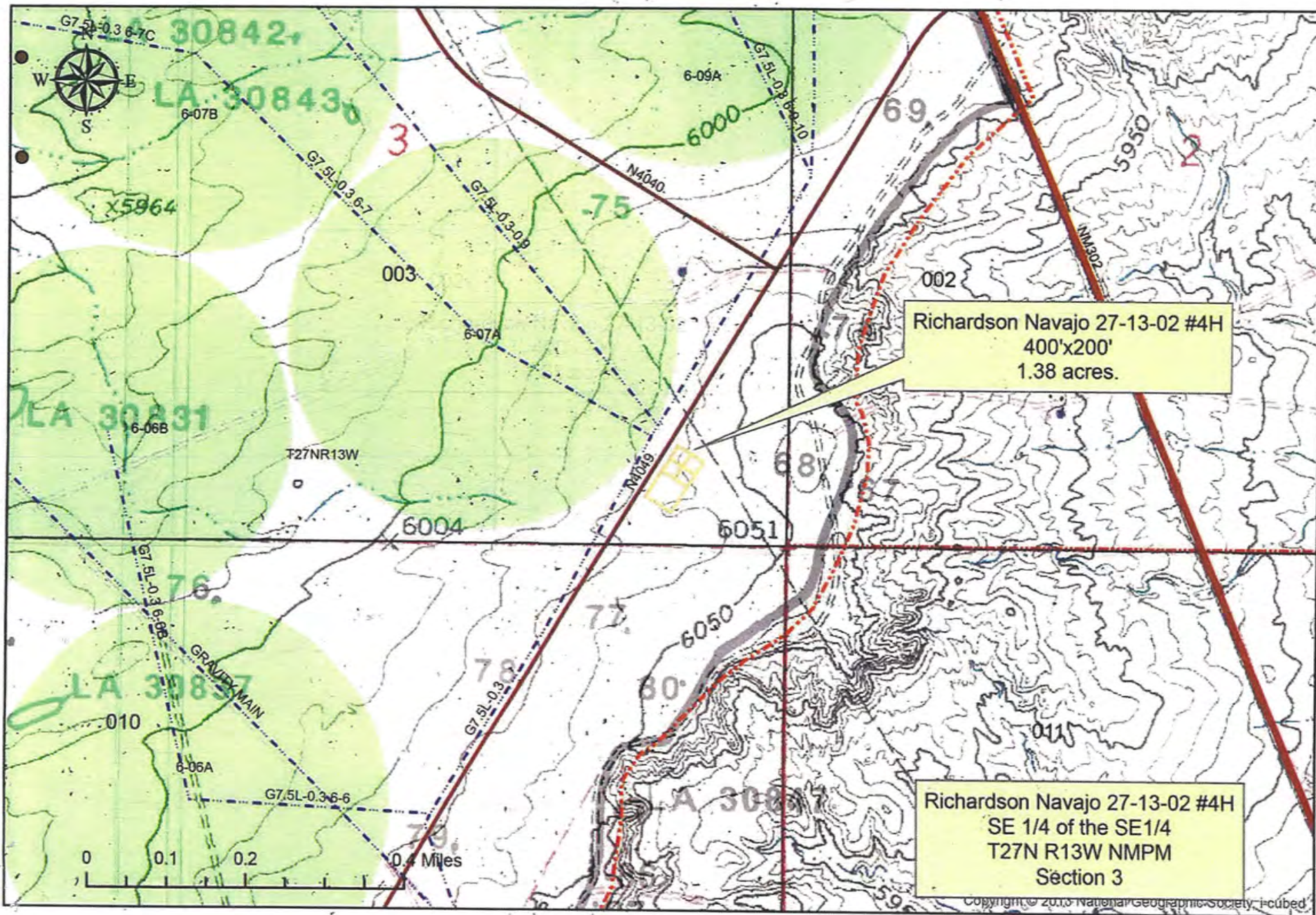
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N48-2015-006





N48-2015-006

**Energen Resources Corporation,
2010 Afton Place, Farmington, New Mexico 87401**

March 25, 2015

Navajo Indian Irrigation Project
Attn.: Michael Howe
304 North Auburn, Suite B
Farmington, NM 87401

Dear Mr. Howe,

Thanks for taking the time to work with Bob Schmidt, Drilling Foreman for our company. I was recently assigned the responsibility of completing the request for the Archeological Review with your office and hope that the following information will meet your requirements. I understand that you previously received the project shape files and hardcopy well site survey plats. If this is not the case, please let me know.

Well Name:

Richardson Navajo 27-13-02, 04H

Legal Description (Wellsite and Pad):

509' FSL & 694' FEL Section 3, T., 27N., R. 13W., San Juan County, New Mexico

Well Pad Dimensions:

400' X 200' (1.83 acres)

Access Road:

87' long X 30' wide (.052 acres)

Pipeline (Enterprise):

1664' long X 45' wide, (1.72 acres)

Legal Description of the Site:

SW/4SE/4SE/4 Section 3, T., 27N., R. 13W

Company Name:

Energen Resources

Well Location and Dedicated Acreage:

509' FSL and 694' FEL Section 3, T., 27N., R. 13W., S1/2 (320 acres) Dedication

Latitude/Longitude (NAD 83):

Latitude: 36.59842 N Longitude 108.199906 W

Thanks again and if you have any questions, you can contact me at (505) 324-4141 or on my cell phone at (505) 793-1956.

Jim Lovato

A handwritten signature in black ink that reads "Jim Lovato".

Senior District Engineer,
Energen Resources



THE NAVAJO NATION

RUSSELL BEGAYE **PRESIDENT**
JONATHAN NEZ **VICE PRESIDENT**



ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF EXECUTIVE DIRECTOR/ADMINISTRATION

OFFICE OF ENVIRONMENTAL REVIEW

PO BOX 339 WINDOW ROCK ARIZONA 86515 Office: 928/871-7188 Fax: 928/871-7996

Website: www.navajonationepa.org

M E M O R A N D U M

TO: Howard Draper, Program & Project Specialist
Project Review Office
Navajo Land Department
Division of Natural Resources

FROM:

Rita Whitehorse-Larsen, Senior Environmental Specialist
Office of Executive Director/Administration
Office of Environmental Review
NNEPA

DATE: August 10, 2015

SUBJECT: 164 EOR 003983 Energen Res TCE Richardson 200 [Richardson Navajo 27-13-02 #4H]

The Energen Resources Corporation (Energen), 2010 Afton Place, Farmington, NM, 87401, submitted a temporary construction easement (TCE) application to establish, operate and maintain a storage area and ancillary adjacent to their existing Richardson 200 [Richardson Navajo 27-13-02 #4H] within the NIIP on, over and across Navajo Nation Trust Lands, San Juan County, New Mexico. The proposed temporary construction easement is 200 feet wide and 200 feet long, consisting of 0.92 acres, more or less, of Navajo Nation. The proposed TCE will be used to store temporarily store water tanks, pumps, water transfer lines and other ancillary equipment associated with Energen's well development program for the subject well. Energen will reclaim the area disturbed using Navajo Nation and BIA's standards and guidelines. The Navajo Nation Environmental Protection Agency (NNEPA) reviewed¹ and recommends *approval* for the proposed action.

If there are any questions, you may contact Rita Whitehorse-Larsen at 928/871-7188. Thank you.

¹ Adkins Consulting Inc. Environmental Assessment Amended for Energen Resources Corporation Richardson 200 (Name Change Richardson Navajo 27-13-02 4H) Well Pad and Well-Tie Pipeline and Temporary Use Area Lease #NMNM 0003554, NM9447-00R. April 2015.