Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-039-31424

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 07/11/2022

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Approval Date: 07/11/2022

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-31424	97036	~~CABRESTO~~ La Jara CANYON - TERTIARY

[4] Property Code	[5] Property Name	[6] Well Number
~~27470~~ 333064	JICARILLA 29-02-04 SJ	14

[7] OGRID No.	[8] Operator Name	[9] Elevation
11859	JICARILLA APACHE ENERGY CORP.	7787

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	4	29 N	2 W	LOT 1	894	NORTH	900	EAST	RIO ARRIBA

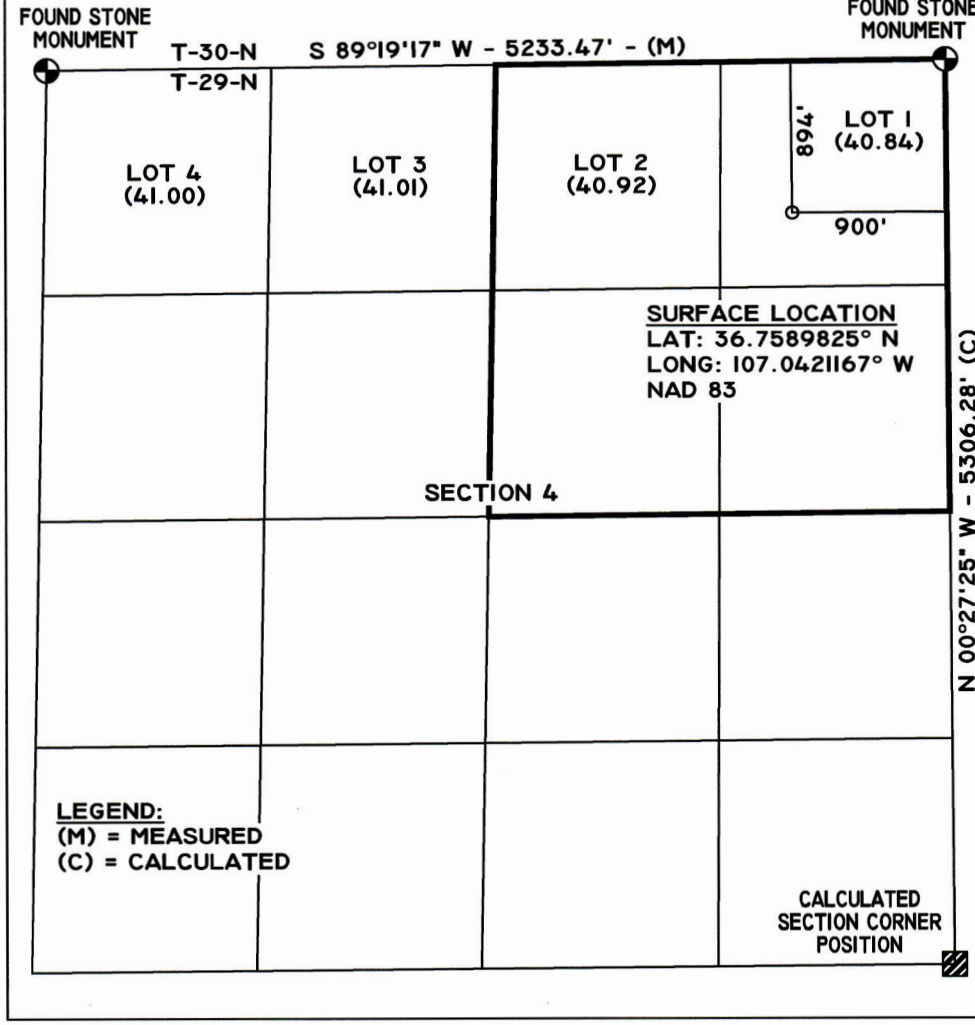
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
161.76 NE/4			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 10/12/2021 Date

Daniel Manus
Printed Name

dmanus@blackhawkenergycorp.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

9/14/20
Date of Survey
Plat and Revised: 10/08/21
Signature and Seal of Professional Surveyor:

JOHN A VUKONICH
NEW MEXICO
14831
PROFESSIONAL SURVEYOR

14831 10/8/2021
Certificate Number

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

SUPO Data Report
07/11/2022

APD ID: 10400078916 **Submission Date:** 09/23/2021

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - Existing Roads

Will existing roads be used? NO

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Jicarilla_29_02_04_SJ_14_Road__cert__20210909095046.pdf

New road type: RESOURCE

Length: 12358.91 Feet **Width (ft.):** 20

Max slope (%): 3 **Max grade (%):** 2

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Crown and ditching to meet BLM basic design requirements

New road access plan or profile prepared? N

New road access plan

Access road engineering design? N

Access road engineering design

Turnout? N

Access surfacing type: NONE

Access topsoil source: ONSITE

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Access surfacing type description:

Access onsite topsoil source depth: 4

Offsite topsoil source description:

Onsite topsoil removal process: Clearing and grubbing should be confined to the specified clearing width.

Access other construction information:

Access miscellaneous information: All construction material for the proposed location site and access road will be borrowed material accumulated during the construction of the location site and access road. No additional construction material from other sources is anticipated at this time. If in the future it is required, the appropriate actions will be taken to acquire it from private sources

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: WATERDIP

Drainage Control comments: During onsite on May 4, 2021, with the Jicarilla Oil and Gas Administration, Jicarilla Game and Fish, and the BIA, it was requested that we use drainage dips or rolling dips.

Road Drainage Control Structures (DCS) description: Spacing of drainage dips depends upon local conditions such as soil material, grade, and topography.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map?

Attach Well map:

Jicarilla_290204SJ_14_Wells1MileRadius_20220527085327.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan?

Estimated Production Facilities description:

Section 5 - Location and Types of Water Supply

Water Source Table

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Water source type: GW WELL

Water source use type: SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

Source latitude: 36.407749 **Source longitude:** -107.173599

Source datum: NAD83

Water source permit type: WATER WELL

Water source transport method: TRUCKING

Source land ownership: COMMERCIAL

Source transportation land ownership: COMMERCIAL

Water source volume (barrels): 1000 **Source volume (acre-feet):** 0.1288931

Source volume (gal): 42000

Water source and transportation

Jicarilla_29_02_04_SJ_14_H2O_Source_Map_20210923130023.pdf

Water source comments:

New water well?

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials:

Construction Materials description:

Construction Materials source location

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drill cutting and fresh water mud

Amount of waste: 147 barrels

Waste disposal frequency : Weekly

Safe containment description: we use a steel containment container (size 8ft wide x 20ft long x 6ft sides) with open top and the container is lined with 5-7 mil liner material to hold any mud liquids of the cuttings.
Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: EnviroTech Landfarm #2 , #43 Rd 7175, Bloomfield, NM 87413 Permit# NM01-0011. 13 Miles south of Bloomfield, NM on US Highway 550.

Waste type: SEWAGE

Waste content description: Portable Restroom

Amount of waste:

Waste disposal frequency : One Time Only

Safe containment description: A sealed self-contained portable restroom.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Approved disposal sewage facility

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling or completion operations will be contained in a portable trash basket and hauled to an approved disposal facility. No toxic waste or hazardous chemicals will be produced by this operation
Amount of waste: gallons

Waste disposal frequency : Daily

Safe containment description: An animal-proof self-contained trash basket with locks

Safe containmant attachment:

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Approved landfill facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?:

Ancillary Facilities

05_Jicarilla_29_02_04_SJ_14_Pipeline_20220601141224.pdf
06_Jicarilla_29_02_04_SJ_14_Road_and_Pipeline_Plats_20220601141228.pdf

Comments:

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 9 - Well Site

Well Site Layout Diagram:

Jicarilla_29_02_04_SJ_14_Cut_and_Fill_20210909114632.pdf

Comments: All construction material for the proposed location site and access road will be borrowed material accumulated during the construction of the location site and access road. No additional construction material from other sources is anticipated at this time. If in the future it is required, the appropriate actions will be taken to acquire it from private sources

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name:

Multiple Well Pad Number:

Recontouring

Drainage/Erosion control construction: Water ditches and berms will be installed to shed and divert water of disturb areas.

Drainage/Erosion control reclamation: Stabilization measures implemented at the time of initial construction may include pre- and post-construction BMPs, contouring, texturing, mulching, slash/brush berming/storage, and weed monitoring/ control

Well pad proposed disturbance (acres): 2.07	**Well pad interim reclamation (acres):** 1.82	**Well pad long term disturbance (acres):** 1.82
Road proposed disturbance (acres): 5.67	**Road interim reclamation (acres):** 1.88	**Road long term disturbance (acres):** 1.88
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 11.51	**Pipeline interim reclamation (acres):** 11.51	**Pipeline long term disturbance (acres):** 11.51
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 19.25	**Total interim reclamation:** 15.21	**Total long term disturbance:** 15.21

Disturbance Comments:

Reconstruction method: The long term objective of final reclamation is to set the course for eventual ecosystem restoration including the restoration of natural vegetation. JECO will avoid disturbance to the mature vegetation that has become well established on the pad perimeter to the extent practicable, and will focus reclamation efforts toward de-compaction, removing sharp, angular features to more closely approximate the natural contours, re-establishing natural drainage patterns, and re-vegetating the abandoned well pad and associated access road.

Topsoil redistribution: Fill material will be pushed into cuts and over the back slope as necessary and any sharp, angular cuts and fills will be smoothed to conform as nearly as practical to the adjacent landform. The pad and road surfaces will then be ripped, scarified, and/or disked to a depth adequate for establishing a suitable root zone. All salvaged topsoil material will be reused and spread evenly over the disturbed areas. Prior to seeding, all disturbed areas will be left with a rough surface to facilitate moisture and seed retention, and vegetative slash/brush will be placed at expected discharge areas to minimize sediment transport. The topsoil in the area is generally deep and no soil amendments are expected or proposed.

Soil treatment: No soil treatment will be used.

Existing Vegetation at the well pad: Flora consists of: Inter-mountain Basins Big Sagebrush Shrubland: This ecological system occurs throughout much of the western U.S., typically in broad basins between mountain ranges, plains, and foothills. Soils are typically deep, well-drained and non-saline. These shrublands are dominated by big sagebrush and/or Wyoming big sagebrush (spp.wyomingensis). Scattered juniper,

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

greasewood (Sarcobatus vermiculatus), and saltbush (Atriplex spp.) may be present in some stands. Perennial herbaceous components typically contribute less than 25 percent vegetative cover. Common graminoid species include Indian ricegrass (Achnatherum hymenoides), blue grama grass, thickspike wheatgrass (Elymus lanceolatus), Idaho fescue (Festuca idahoensis), needle and thread (Hesperostipa comata), and western wheatgrass (Pascopyrum smithii).

Existing Vegetation at the well pad

Existing Vegetation Community at the road: Flora consists of: Inter-mountain Basins Big Sagebrush Shrubland: This ecological system occurs throughout much of the western U.S., typically in broad basins between mountain ranges, plains, and foothills. Soils are typically deep, well-drained and non-saline. These shrublands are dominated by big sagebrush and/or Wyoming big sagebrush (spp.wyomingensis). Scattered juniper, greasewood (Sarcobatus vermiculatus), and saltbush (Atriplex spp.) may be present in some stands. Perennial herbaceous components typically contribute less than 25 percent vegetative cover. Common graminoid species include Indian ricegrass (Achnatherum hymenoides), blue grama grass, thickspike wheatgrass (Elymus lanceolatus), Idaho fescue (Festuca idahoensis), needle and thread (Hesperostipa comata), and western wheatgrass (Pascopyrum smithii).

Existing Vegetation Community at the road

Existing Vegetation Community at the pipeline: Flora consists of: Inter-mountain Basins Big Sagebrush Shrubland: This ecological system occurs throughout much of the western U.S., typically in broad basins between mountain ranges, plains, and foothills. Soils are typically deep, well-drained and non-saline. These shrublands are dominated by big sagebrush and/or Wyoming big sagebrush (spp.wyomingensis). Scattered juniper, greasewood (Sarcobatus vermiculatus), and saltbush (Atriplex spp.) may be present in some stands. Perennial herbaceous components typically contribute less than 25 percent vegetative cover. Common graminoid species include Indian ricegrass (Achnatherum hymenoides), blue grama grass, thickspike wheatgrass (Elymus lanceolatus), Idaho fescue (Festuca idahoensis), needle and thread (Hesperostipa comata), and western wheatgrass (Pascopyrum smithii).

Existing Vegetation Community at the pipeline

Existing Vegetation Community at other disturbances: No other disturbances are required

Existing Vegetation Community at other disturbances

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Seed

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation

Revegetation_and_Seed_Mixture_20210915134439.pdf

Operator Contact/Responsible Official

First Name: Randy **Last Name:** Thompson

Phone: (505)634-5103 **Email:** rthompson@blackhawkenergycorp.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

Weed treatment plan description: JECO objective is to implement an integrated weed management program to control weed populations and establish desirable vegetation utilizing the following strategies: Control the introduction and spread of weeds through early detection. Establish desirable native vegetation on disturbed areas through successful re-vegetation efforts. Treat and control known weed populations. Among the measures that will be implemented to prevent the introduction or establishment of weeds in areas not already infested include: Identification and eradication of new infestations as quickly as practical. Implement successful re-seeding efforts as quickly as practical in areas that have been disturbed. Local factors, such as soil type and stability; grade; associated vegetation; existing and proposed land use; proximity to water; weed type and stage of growth; and severity of infestation; will be considered in selecting the appropriate weed management method(s). The management method(s) selected will be the least environmentally damaging, yet practical and reasonable in achieving the desired results. JECO will utilize chemical treatment as the preferred method of weed management and control. The proper use of herbicides at the optimum time can be an effective method for controlling persistent weeds. A Pesticide Use Proposal (PUP) will be pre-approved by the BLM prior to any chemical treatment. The use and handling of herbicides will be in accordance with all application rates, restrictions, and warnings listed on the label and MSDS. Preparation and application of all herbicides will be licensed by the State of Colorado Department of Agriculture, and a Daily Weed Pesticide Application Record will be completed and retained for all spraying activities. Other methods to be used for weed control will include the following: Remove soil, seeds, and vegetative matter prior to entering or leaving the project site on all construction equipment and transport vehicles, trucks, pickups, and other vehicles ; Ensure that all seed mixes, straw, and/or mulch used in reclamation are certified weed-free; Promptly revegetating disturbed areas; Treating and/or removing weeds prior to ground-disturbing activities to limit seed production and dispersal; Treating noxious weeds that have escaped the project area onto adjacent areas to prevent further expansion into un-infested areas and re-infestation of the treated area;

Weed treatment plan

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Monitoring plan description: Monitoring plan will be a visual inspection on a quarterly timeframe until success standard is achieved

Monitoring plan

Success standards: 70% Vegetation growth

Pit closure description: A close loop system will be utilized, thus no pit closure is needed.

Pit closure attachment:

Section 11 - Surface

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF INDIAN AFFAIRS

Other surface owner description:

BIA Local Office: JICARILLA AGENCY

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other

Right of Way needed? **Use APD as ROW?**

ROW Type(s):

ROW

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

SUPO Additional Information:

Use a previously conducted onsite?

Previous Onsite information:

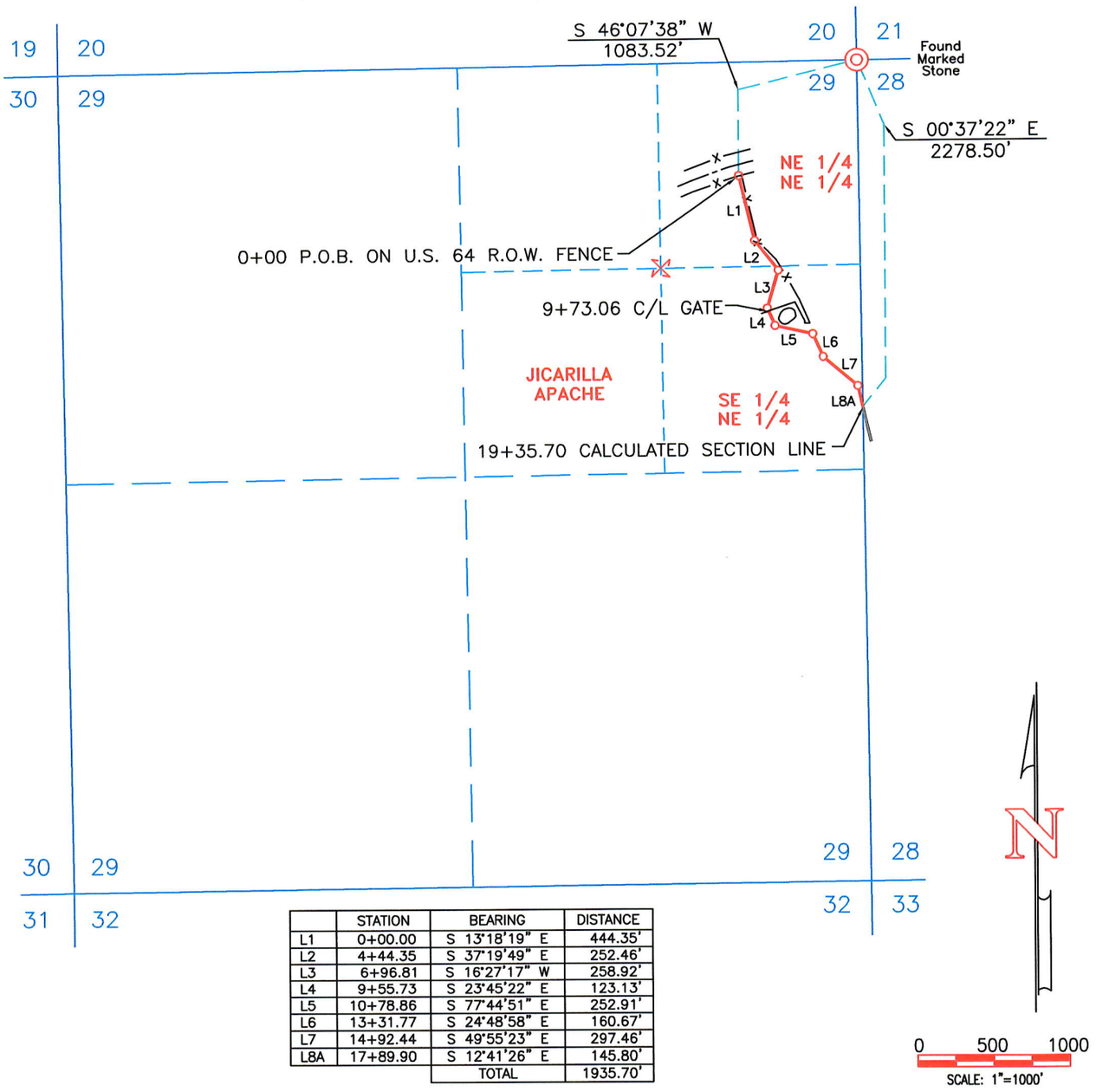
Other SUPO

SurfaceUsePlanJicarilla29_2_4SJ_14_20220601142324.pdf

BLACKHAWK ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD

E 1/2 NE 1/4
OF SEC. 29, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L1	0+00.00	S 13°18'19" E	444.35'
L2	4+44.35	S 37°19'49" E	252.46'
L3	6+96.81	S 16°27'17" W	258.92'
L4	9+55.73	S 23°45'22" E	123.13'
L5	10+78.86	S 77°44'51" E	252.91'
L6	13+31.77	S 24°48'58" E	160.67'
L7	14+92.44	S 49°55'23" E	297.46'
L8A	17+89.90	S 12°41'26" E	145.80'
		TOTAL	1935.70'

Description:

A strip of land 20 feet wide across portions of Section 29, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 10 feet on both sides of the following described centerline:

Beginning at a point located in the Northeast Quarter of the Northeast Quarter of said Section 29. Said point bears South 46°07'38" West, a distance of 1,083.52 feet from a found marked stone for the Northeast corner of said Section 29;

Thence South 13°18'19" East, a distance of 444.35 feet;
Thence South 37°19'49" East, a distance of 252.46 feet;
Thence South 16°27'17" West, a distance of 258.92 feet;
Thence South 23°45'22" East, a distance of 123.13 feet;
Thence South 77°44'51" East, a distance of 252.91 feet;
Thence South 24°48'58" East, a distance of 160.67 feet;
Thence South 49°55'23" East, a distance of 297.46 feet;
Thence South 12°41'26" East, a distance of 145.80 feet to the end of this description at a point located on the calculated East line of the Southeast Quarter of the Northeast Quarter of said Section 29. Said point bears South 00°37'22" East, a distance of 2278.50 feet from said marked stone for the Northeast corner of Section 29.

The above described strip of land totals 1,935.70 feet or 117.315 rods in length and contains 0.889 acres, more or less.

NOTES:

1. BASIS OF BEARING: AS MEASURED BETWEEN THE NORTHEAST CORNER AND THE NORTHWEST CORNER OF SECTION 4, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

P.O.B. = POINT OF BEGINNING

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	0+00.00 TO 19+35.70	1935.70/117.315/0.889

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

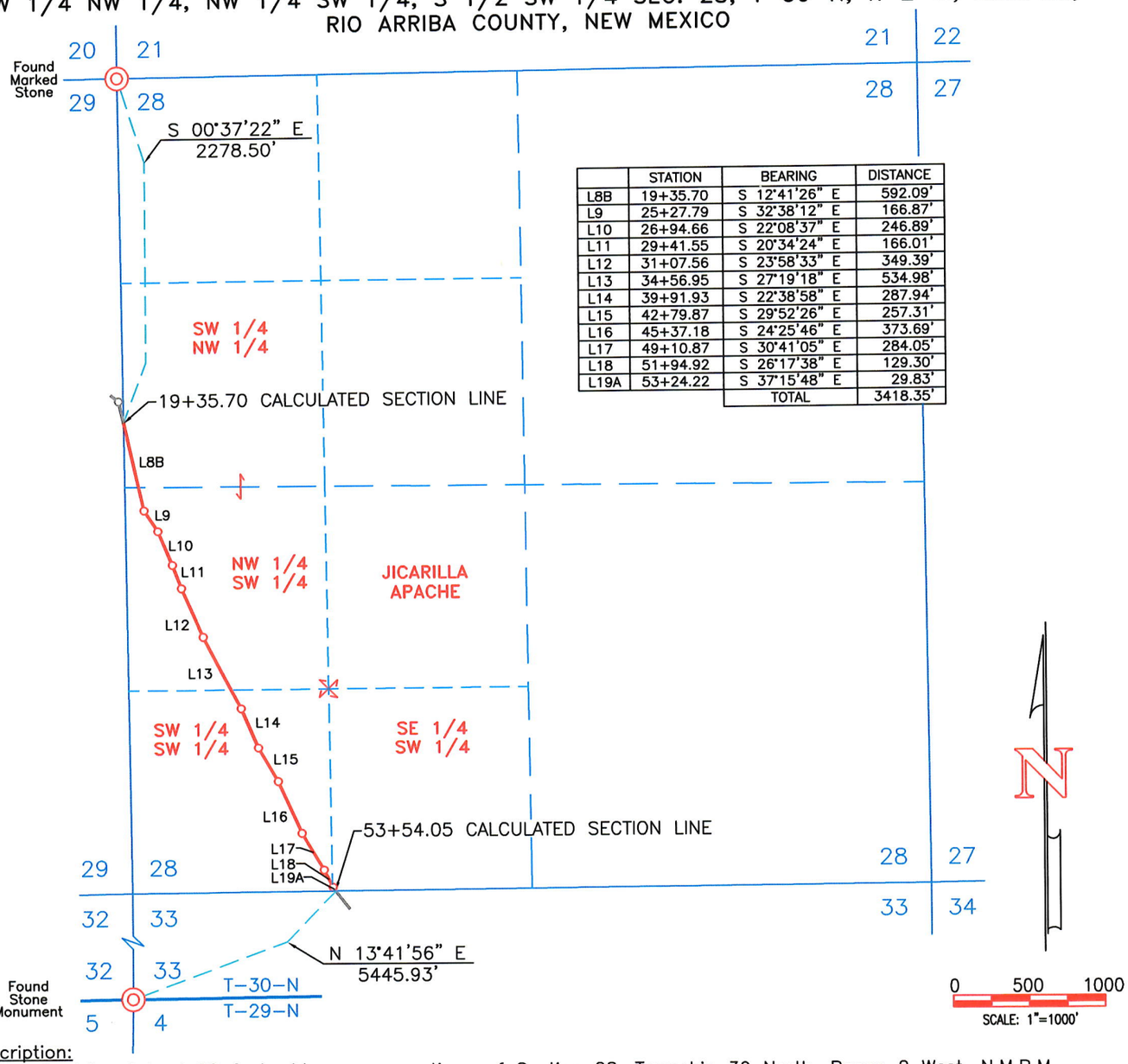
JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 DATE

United Field Services Inc.			P.O. Box 3651 Farmington, NM 87499 Office: (505) 334-0408
DWG. No. : 11446-A05			Revision: 1
Drawn by: A.A.D.	Date Drawn: 5/10/21		Rev. Date:
Surveyed: 5/5/21	App by: J.A.V.		Sheet: 1

BLACKHAWK ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD

SW 1/4 NW 1/4, NW 1/4 SW 1/4, S 1/2 SW 1/4 SEC. 28, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L8B	19+35.70	S 12°41'26" E	592.09'
L9	25+27.79	S 32°38'12" E	166.87'
L10	26+94.66	S 22°08'37" E	246.89'
L11	29+41.55	S 20°34'24" E	166.01'
L12	31+07.56	S 23°58'33" E	349.39'
L13	34+56.95	S 27°19'18" E	534.98'
L14	39+91.93	S 22°38'58" E	287.94'
L15	42+79.87	S 29°52'26" E	257.31'
L16	45+37.18	S 24°25'46" E	373.69'
L17	49+10.87	S 30°41'05" E	284.05'
L18	51+94.92	S 26°17'38" E	129.30'
L19A	53+24.22	S 37°15'48" E	29.83'
		TOTAL	3418.35'

Description:

A strip of land 20 feet wide across portions of Section 28, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 10 feet on both sides of the following described centerline:

Beginning at a point located on the calculated West line of the Southwest Quarter of the Northwest Quarter of said Section 28. Said point bears South 00°37'22" East, a distance of 2278.50 feet from a found marked stone for the Northwest corner of said Section 28;

Thence South 12°41'26" East, a distance of 592.09 feet;
Thence South 32°38'12" East, a distance of 166.87 feet;
Thence South 22°08'37" East, a distance of 246.89 feet;
Thence South 20°34'24" East, a distance of 166.01 feet;
Thence South 23°58'33" East, a distance of 349.39 feet;
Thence South 27°19'18" East, a distance of 534.98 feet;
Thence South 22°38'58" East, a distance of 287.94 feet;
Thence South 29°52'26" East, a distance of 257.31 feet;
Thence South 24°25'46" East, a distance of 373.69 feet;
Thence South 30°41'05" East, a distance of 284.05 feet;
Thence South 26°17'38" East, a distance of 129.30 feet;
Thence South 37°15'48" East, a distance of 29.83 feet to the end of this description at a point located on the calculated South line of the Southeast Quarter of the Southwest Quarter of said Section 28. Said point bears North 13°41'56" East, a distance of 5445.93 feet from a found stone monument for the Southwest corner of Section 33, Township 30 North, Range 2 West, N.M.P.M. Rio Arriba County, New Mexico.

The above described strip of land totals 3,418.35 feet or 207.173 rods in length and contains 1.569 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE NORTHEAST CORNER AND THE NORTHWEST CORNER OF SECTION 4, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	19+35.70 TO 53+54.05	3418.35/207.173/1.569

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

NEW MEXICO 14831 PROFESSIONAL SURVEYOR

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 — DATE 5/13/2021

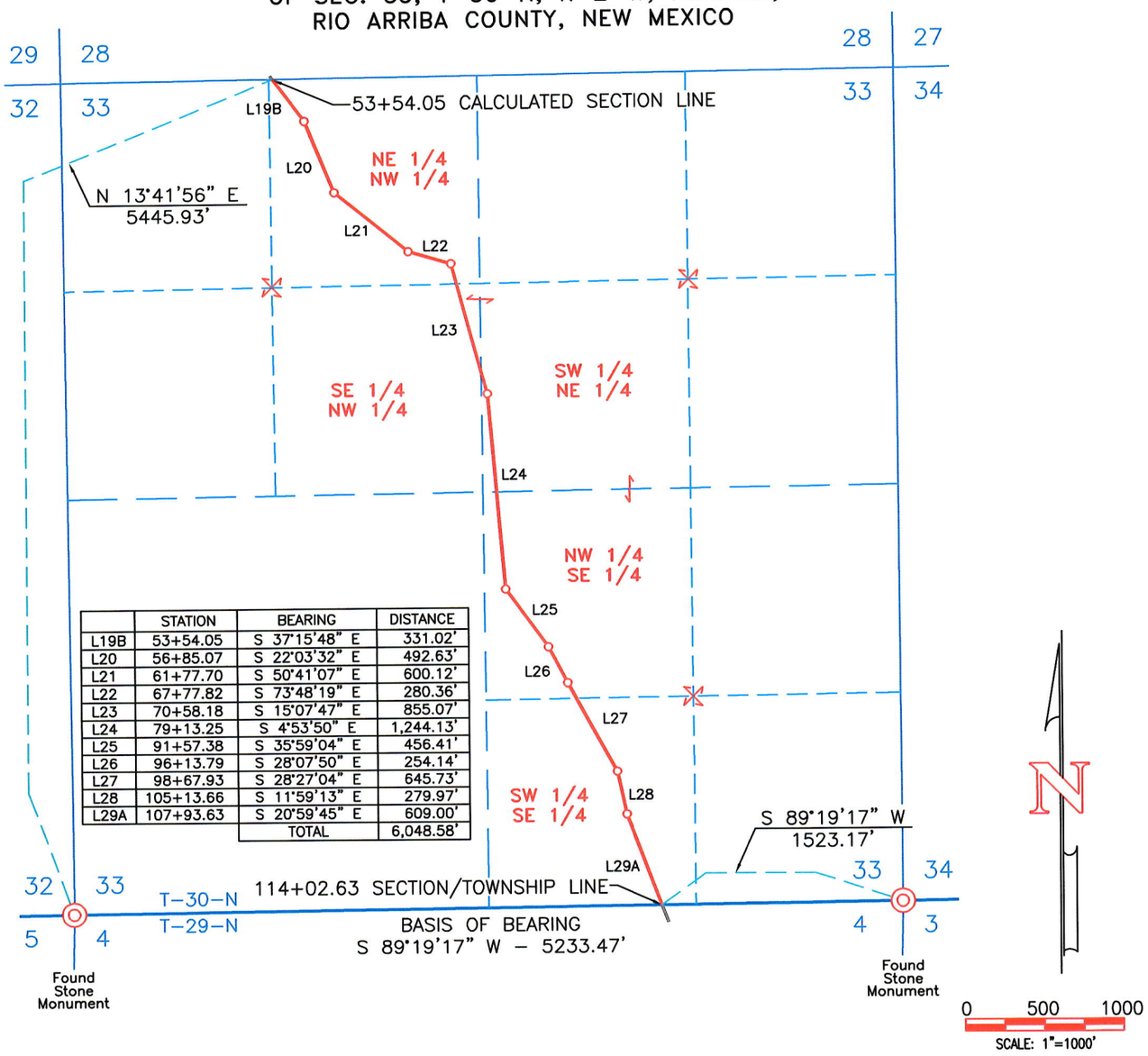
United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-A06		Revision: 1
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date:
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 2

BLACKHAWK ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD

E 1/2 NW 1/4, SW 1/4 NE 1/4 & W 1/2 SE 1/4
OF SEC. 33, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L19B	53+54.05	S 37°15'48" E	331.02'
L20	56+85.07	S 22°03'32" E	492.63'
L21	61+77.70	S 50°41'07" E	600.12'
L22	67+77.82	S 73°48'19" E	280.36'
L23	70+58.18	S 15°07'47" E	855.07'
L24	79+13.25	S 4°53'50" E	1,244.13'
L25	91+57.38	S 35°59'04" E	456.41'
L26	96+13.79	S 28°07'50" E	254.14'
L27	98+67.93	S 28°27'04" E	645.73'
L28	105+13.66	S 11°59'13" E	279.97'
L29A	107+93.63	S 20°59'45" E	609.00'
		TOTAL	6,048.58'

Description:

A strip of land 20 feet wide across portions of Section 33, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 10 feet on both sides of the following described centerline:

Beginning at a point located on the calculated North line of the Northeast Quarter of the Northwest Quarter of said Section 33. Said point bears North 13°41'56" East, a distance of 5445.93 feet from a found stone monument for the Southwest corner of said Section 33;

Thence South 37°15'48" East, a distance of 331.02 feet;
Thence South 22°03'32" East, a distance of 492.63 feet;
Thence South 50°41'07" East, a distance of 600.12 feet;
Thence South 73°48'19" East, a distance of 280.36 feet;
Thence South 15°07'47" East, a distance of 855.07 feet;
Thence South 4°53'50" East, a distance of 1,244.13 feet;
Thence South 35°59'04" East, a distance of 456.41 feet;
Thence South 28°07'50" East, a distance of 254.14 feet;
Thence South 28°27'04" East, a distance of 645.73 feet;
Thence South 11°59'13" East, a distance of 279.97 feet;
Thence South 20°59'45" East, a distance of 609.00 feet to the end of this description at a point located on the South line of the Southwest Quarter of the Southeast Quarter of said Section 33. Said point bears South 89°19'17" West, a distance of 1523.17 feet from a found stone monument for the Southeast corner of said Section 33.

The above described strip of land totals 6,048.58 feet or 366.581 rods in length and contains 2.777 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE SOUTHEAST CORNER AND THE SOUTHWEST CORNER OF SECTION 33, T-30-N, R-2-W N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	53+54.05 TO 114+02.63	6048.58/366.581/2.777

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 — DATE 5/13/2021

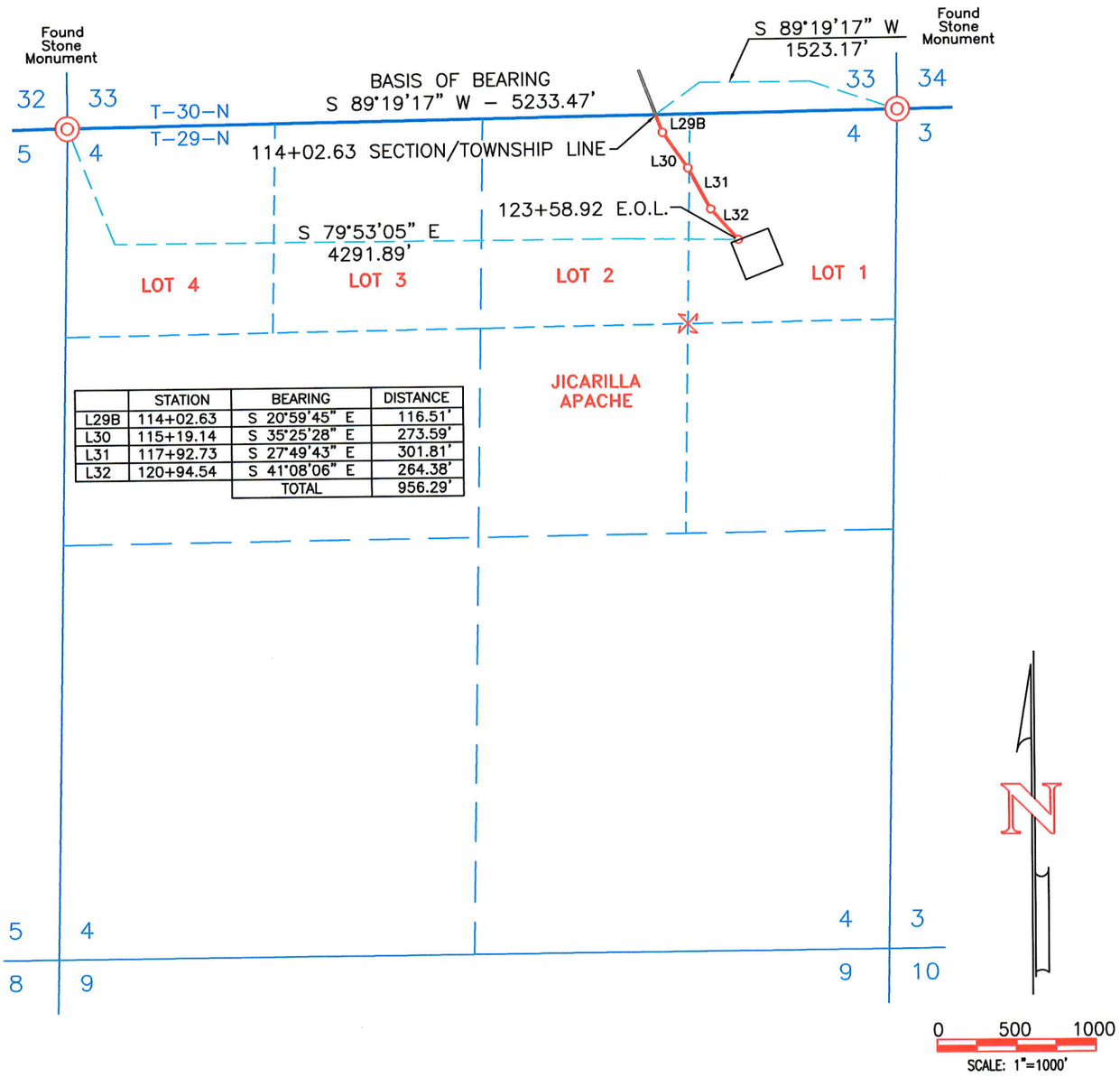
United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-A07		Revision: 1
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date:
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 3

BLACKHAWK ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD

LOT 1 & LOT 2 OF SEC. 4, T-29-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L29B	114+02.63	S 20°59'45" E	116.51'
L30	115+19.14	S 35°25'28" E	273.59'
L31	117+92.73	S 27°49'43" E	301.81'
L32	120+94.54	S 41°08'06" E	264.38'
		TOTAL	956.29'

Description:

A strip of land 20 feet wide across portions of Section 4, Township 29 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 10 feet on both sides of the following described centerline:

Beginning at a point located on the North line of the Northwest Quarter of the Northeast Quarter (Lot 2) of said Section 4. Said point bears South 89°19'17" West, a distance of 1523.17 feet from a found stone monument for the Northeast corner of said Section 4;

Thence South 20°59'45" East, a distance of 116.51 feet;
Thence South 35°25'28" East, a distance of 273.59 feet;
Thence South 27°49'43" East, a distance of 301.81 feet;
Thence South 41°08'06" East, a distance of 264.38 feet to the end of this description at a point located in the Northeast Quarter of the Northeast Quarter (Lot 1) of said Section 4. Said point bears South 79°53'05" East, a distance of 4291.89 feet from a found stone monument for the Northwest corner of said Section 4.

The above described strip of land totals 956.29 feet or 57.957 rods in length and contains 0.439 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE NORTHEAST CORNER AND THE NORTHWEST CORNER OF SECTION 4, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

E.O.L. = END OF LINE

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	114+02.63 TO 123+58.92	956.29/57.957/0.439

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

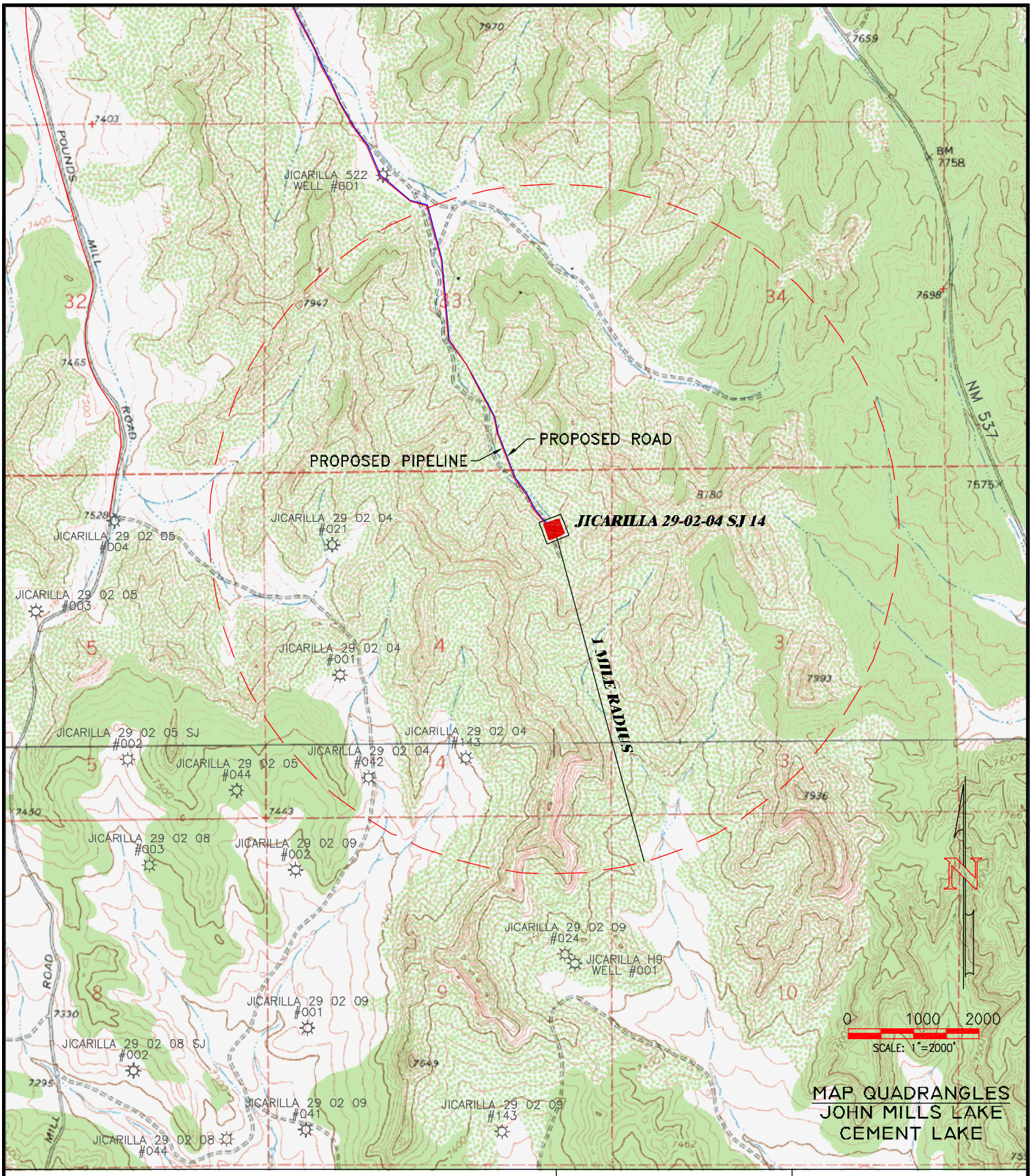
NEW MEXICO (14831) PROFESSIONAL SURVEYOR

5/21/2021

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 DATE

United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-A08		Revision: 1
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date:
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 4



LEASE: JICARILLA 29-02-04 SJ 14

FOOTAGES: 894' FNL, 900' FEL, SEC. 4

TOWNSHIP: 29 N RANGE: 2 W N.M.P.M.

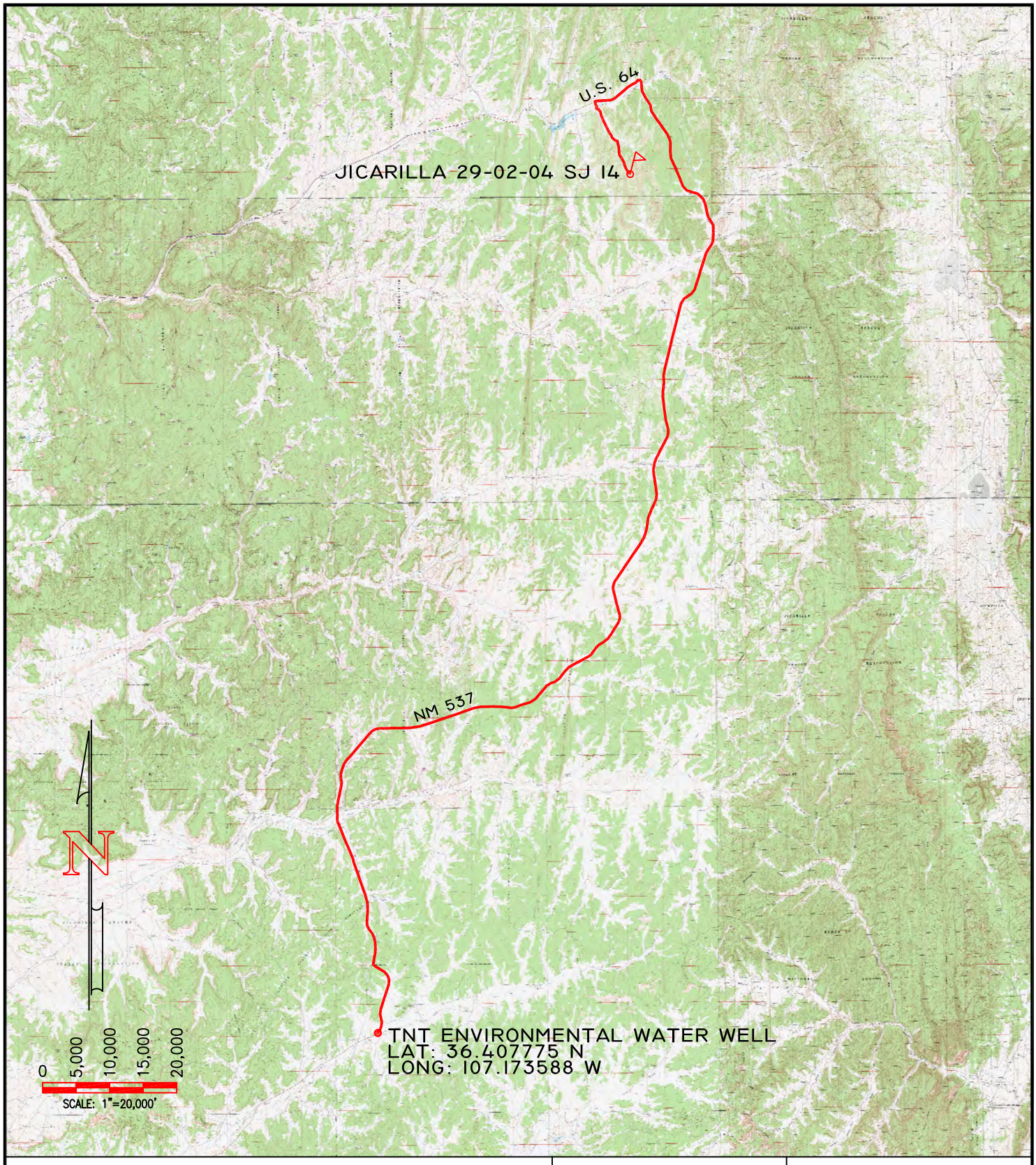
LAT: 36.7589825° N LONG: 107.0421167° W (NAD83)

ELEVATION: 7787

BLACKHAWK ENERGY CORP.

UNITED FIELD SERVICES INC.
P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

SURVEYED: 09/14/20	REV. DATE:	APP. BY: J.A.V.
DRAWN BY: K.S.	DATE DRAWN: 05/27/21	FILE NAME: 11446-WELLS



BLACKHAWK ENERGY CORP.

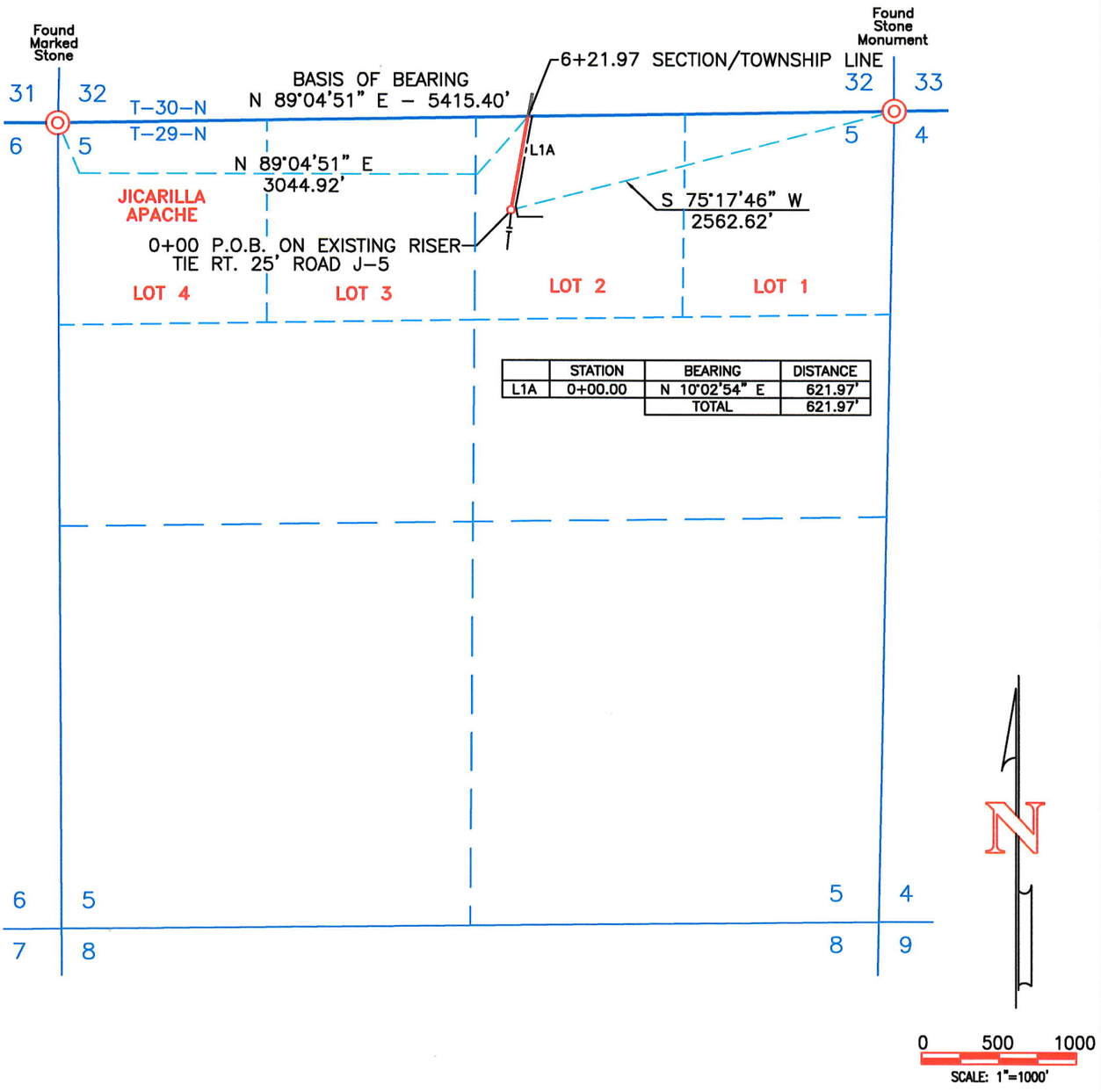
UNITED FIELD SERVICES INC.
P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

SURVEYED: 5/05/21	REV. DATE:	APP. BY J.A.V.
DRAWN BY: C.B.	DATE DRAWN: 09/21/21	FILE NAME: 11446-H20

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 PIPELINE

LOT 2 OF SEC. 5, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L1A	0+00.00	N 10°02'54" E	621.97'
		TOTAL	621.97'

Description:

A strip of land 40 feet wide across a portion of Section 5, Township 29 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 20 feet on both sides of the following described centerline:

Beginning at a point located in the Northwest Quarter of the Northeast Quarter (Lot 2) of said Section 5. Said point bears South 75°17'46" West, a distance of 2562.62 feet from a found stone monument for the Northeast corner of said Section 5;

Thence North 10°02'54" East, a distance of 621.97 feet to the end of this description at a point located on the North line of the Northwest Quarter of the Northeast Quarter (Lot 2) of said Section 5. Said point bears North 89°04'51" East, a distance of 3044.92 feet from a found marked stone for the Northwest corner of said Section 5.

The above described strip of land totals 621.97 feet or 37.695 rods in length and contains 0.571 acres, more or less.

NOTES:

1. BASIS OF BEARING: AS MEASURED BETWEEN THE NORTHWEST CORNER AND THE NORTHEAST CORNER OF SECTION 5, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: N 89°04'51" E - 5415.40'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

P.O.B. = POINT OF BEGINNING

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	0+00.00 TO 6+21.97	621.97/37.695/0.571

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR, NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

NEW MEXICO 14831 PROFESSIONAL SURVEYOR

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 — DATE 10/8/2021

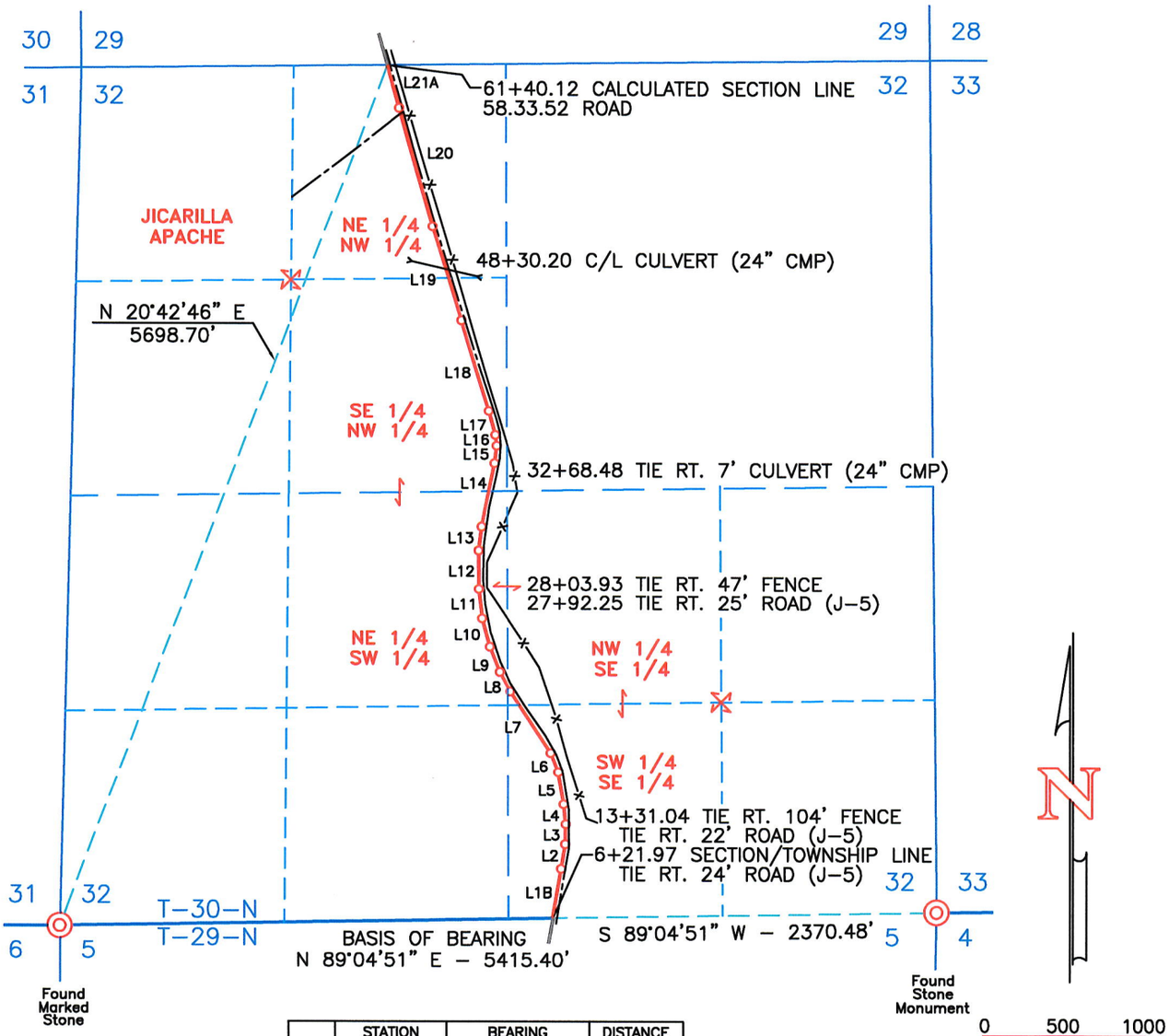
United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-P07		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/K.S.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 1

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 PIPELINE

W 1/2 SE 1/4, NE 1/4 SW 1/4 & THE E 1/2 NW 1/4
OF SEC. 32, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L1B	6+21.97	N 10°02'54" E	303.31'
L2	9+25.28	N 9°16'24" E	153.70'
L3	10+78.98	N 00°55'52" E	125.52'
L4	12+04.50	N 5°28'54" W	126.54'
L5	13+31.04	N 9°30'26" W	206.10'
L6	15+37.14	N 21°14'40" W	128.66'
L7	16+65.80	N 33°30'27" W	451.70'
L8	21+17.50	N 29°03'10" W	136.08'
L9	22+53.58	N 21°27'16" W	167.84'
L10	24+21.42	N 14°47'53" W	185.49'
L11	26+06.91	N 6°17'00" W	186.88'
L12	27+93.79	N 00°20'52" W	239.81'
L13	30+33.60	N 6°49'39" E	146.11'
L14	31+79.71	N 11°32'53" E	392.67'
L15	35+72.38	N 7°07'32" E	109.51'
L16	36+81.89	N 6°57'11" W	69.53'
L17	37+51.42	N 14°36'26" W	157.55'
L18	39+08.97	N 16°46'57" W	590.49'
L19	44+99.46	N 17°06'19" W	605.19'
L20	51+04.65	N 15°50'51" W	762.91'
L21A	58+67.56	N 15°50'48" W	272.56'
		TOTAL	5,518.15'

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE SOUTHWEST CORNER AND THE SOUTHEAST CORNER OF SECTION 32, T-30-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: N 89°04'51" E - 5415.40'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	6+21.97 TO 61+40.12	5518.15/334.433/5.067

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

NEW MEXICO 14831 PROFESSIONAL SURVEYOR

John A. Vukonich 10/8/2021

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 DATE

United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-P08A		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/K.S.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 2

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 PIPELINE

W 1/2 SE 1/4, NE 1/4 SW 1/4 & THE E 1/2 NW 1/4
OF SEC. 32, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO

Description:

A strip of land 40 feet wide across portions of Section 32, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 20 feet on both sides of the following described centerline:

Beginning at a point located on the South line of the Southwest Quarter of the Southeast Quarter of said Section 32. Said point bears South 89°04'51" West, a distance of 2370.48 feet from a found stone monument for the Southeast corner of said Section 32;

Thence North 10°02'54" East, a distance of 303.31 feet;
Thence North 9°16'24" East, a distance of 153.70 feet;
Thence North 00°55'52" East, a distance of 125.52 feet;
Thence North 5°28'54" West, a distance of 126.54 feet;
Thence North 9°30'26" West, a distance of 206.10 feet;
Thence North 21°14'40" West, a distance of 128.66 feet;
Thence North 33°30'27" West, a distance of 451.70 feet;
Thence North 29°03'10" West, a distance of 136.08 feet;
Thence North 21°27'16" West, a distance of 167.84 feet;
Thence North 14°47'53" West, a distance of 185.49 feet;
Thence North 6°17'00" West, a distance of 186.88 feet;
Thence North 00°20'52" West, a distance of 239.81 feet;
Thence North 6°49'39" East, a distance of 146.11 feet;
Thence North 11°32'53" East, a distance of 392.67 feet;
Thence North 7°07'32" East, a distance of 109.51 feet;
Thence North 6°57'11" West, a distance of 69.53 feet;
Thence North 14°36'26" West, a distance of 157.55 feet;
Thence North 16°46'57" West, a distance of 590.49 feet;
Thence North 17°06'19" West, a distance of 605.19 feet;
Thence North 15°50'51" West, a distance of 762.91 feet;

Thence North 15°50'48" West, a distance of 272.56 feet to the end of this description at a point located on the calculated North line of the Northeast Quarter of the Northwest Quarter of said Section 32. Said point bears North 20°42'46" East, a distance of 5698.70 feet from a found marked stone for the Southwest corner of said Section 32.

The above described strip of land totals 5,518.15 feet or 334.433 rods in length and contains 5.067 acres, more or less.

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

NEW MEXICO 14831 PROFESSIONAL SURVEYOR

John A. Vukonich 10/8/2021

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 DATE

United Field Services Inc.

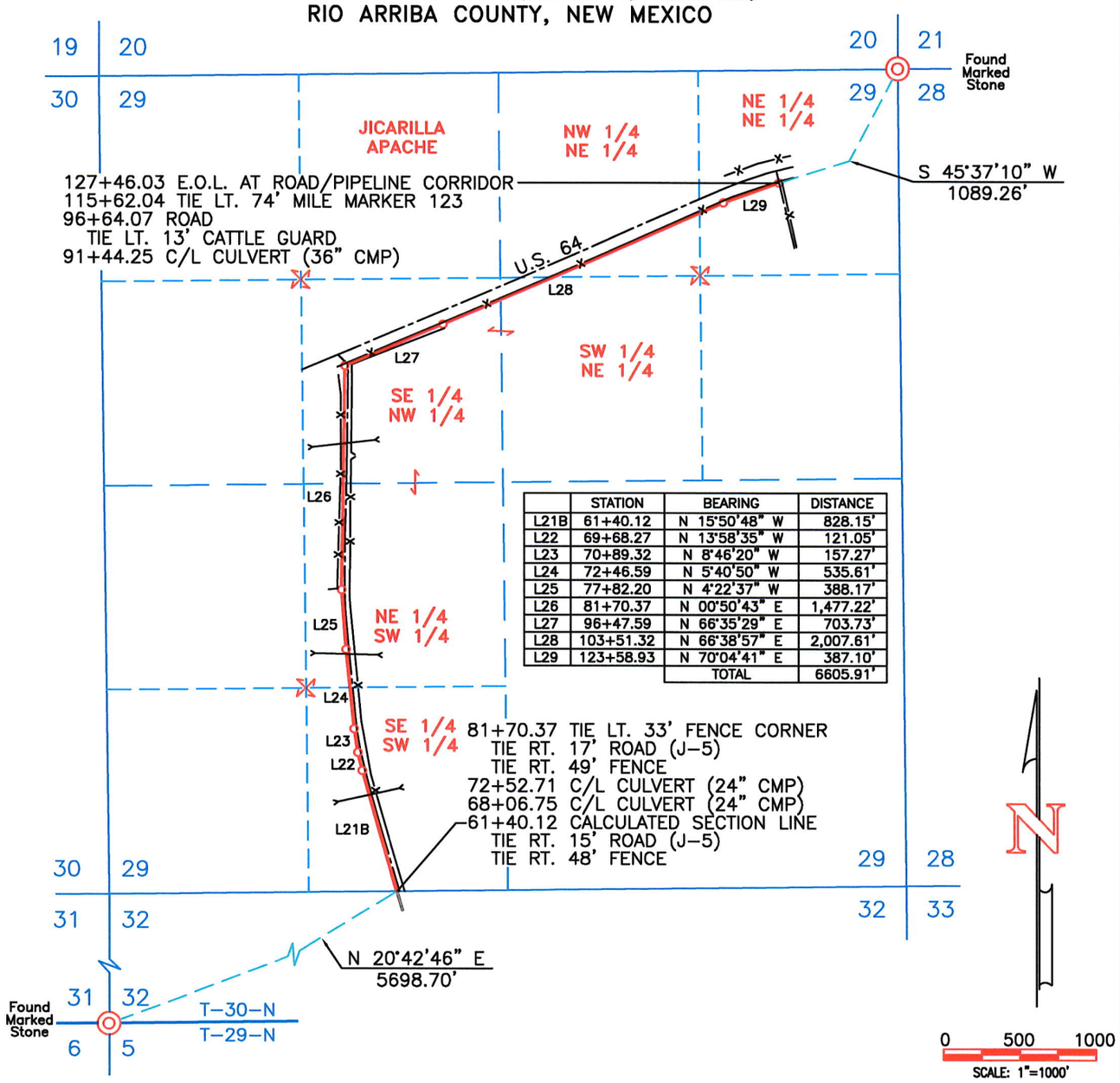
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-P08B		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/K.S.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 3

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 PIPELINE

E 1/2 SW 1/4, SE 1/4 NW 1/4, W 1/2 NE 1/4, NE 1/4 NE 1/4
OF SEC. 29, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L21B	61+40.12	N 15°50'48" W	828.15'
L22	69+68.27	N 13°58'35" W	121.05'
L23	70+89.32	N 8°46'20" W	157.27'
L24	72+46.59	N 5°40'50" W	535.61'
L25	77+82.20	N 4°22'37" W	388.17'
L26	81+70.37	N 00°50'43" E	1,477.22'
L27	96+47.59	N 66°35'29" E	703.73'
L28	103+51.32	N 66°38'57" E	2,007.61'
L29	123+58.93	N 70°04'41" E	387.10'
		TOTAL	6605.91'

Description:

A strip of land 40 feet wide across portions of Section 29, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 20 feet on both sides of the following described centerline:

Beginning at a point located on the calculated South line of the Southeast Quarter of the Southwest Quarter of said Section 29. Said point bears North 20°42'46" East, a distance of 5698.70 feet from a found marked stone for the Southwest corner of Section 32, Township 30 North, Range 2 West, N.M.P.M. Rio Arriba County, New Mexico;

Thence North 15°50'48" West, a distance of 828.15 feet;
Thence North 13°58'35" West, a distance of 121.05 feet;
Thence North 8°46'20" West, a distance of 157.27 feet;
Thence North 5°40'50" West, a distance of 535.61 feet;
Thence North 4°22'37" West, a distance of 388.17 feet;
Thence North 00°50'43" East, a distance of 1,477.22 feet;
Thence North 66°35'29" East, a distance of 703.73 feet;
Thence North 66°38'57" East, a distance of 2,007.61 feet;
Thence North 70°04'41" East, a distance of 387.10 feet to the end of this description at a point located in the Northeast Quarter of the Northeast Quarter of said Section 29. Said point bears South 45°37'10" West, a distance of 1089.26 feet from a found marked stone for the Northeast corner of said Section 29.

The above described strip of land totals 6,605.91 feet or 400.358 rods in length and contains 6.066 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE SOUTHWEST CORNER AND THE SOUTHEAST CORNER OF SECTION 32, T-30-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: N 89°04'51" E - 5415.40'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

E.O.L. = END OF LINE

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	61+40.12 TO 127+46.03	6605.91/400.358/6.066

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

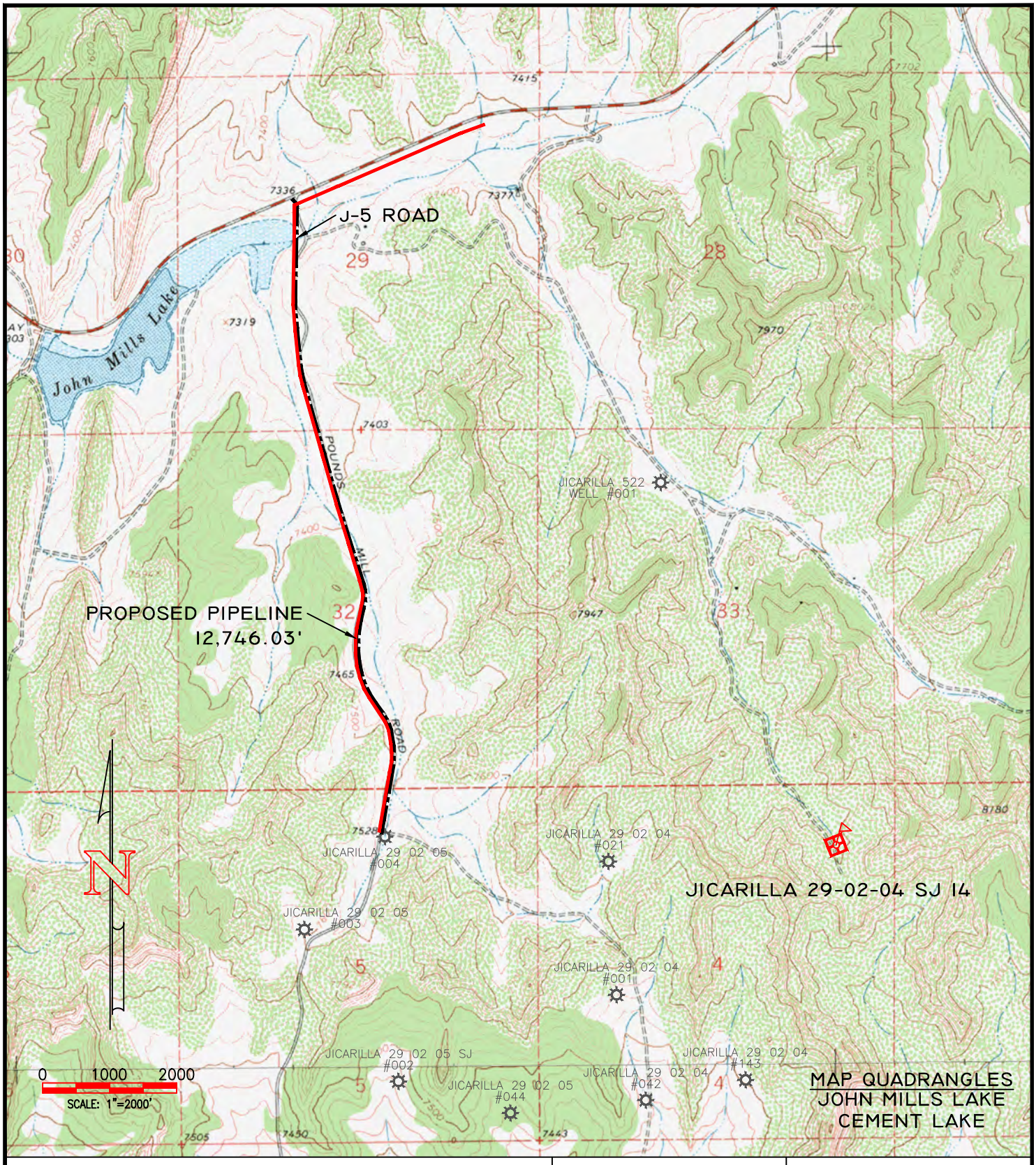
NEW MEXICO 14831 PROFESSIONAL SURVEYOR

John A. Vukonich 10/8/2021

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 DATE

United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-P09		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/K.S.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 4



LEASE: JICARILLA 29-02-04 SJ 14

FOOTAGES: 894' FNL, 900' FEL

SEC. 4 TWN. 29 N RNG. 2 W N.M.P.M.

LAT: N 36.7589825° LONG: W 107.0421167° (NAD 83)

ELEVATION: 7787

JICARILLA APACHE ENERGY CORP.

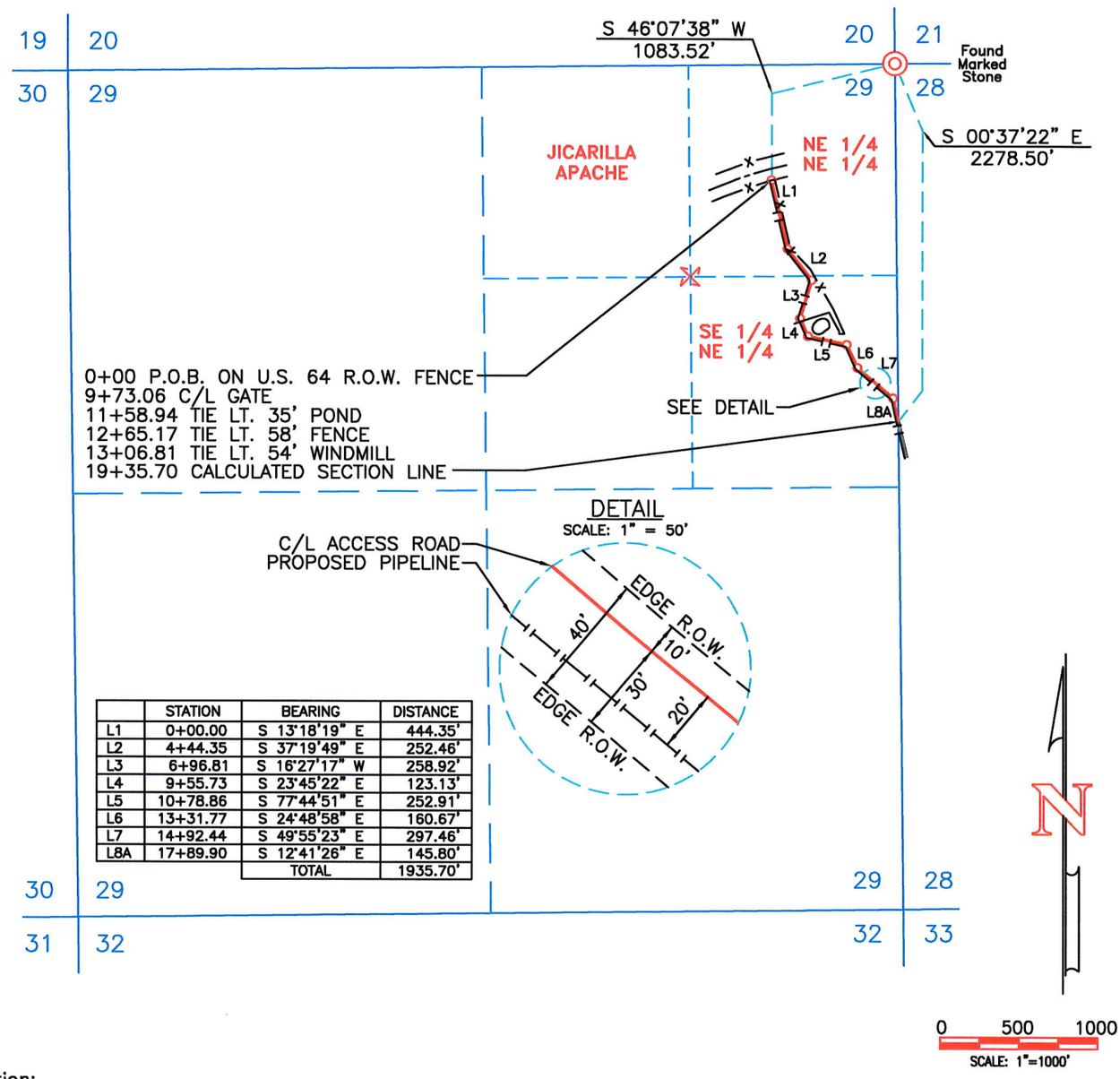
UNITED FIELD SERVICES INC.
P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

SURVEYED: 5/05/21	REV. DATE: 9/30/21	APP. BY J.A.V.
DRAWN BY: K.S.	DATE DRAWN: 10/06/20	FILE NAME: 11446T01

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD/PIPELINE CORRIDOR

E 1/2 NE 1/4
OF SEC. 29, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L1	0+00.00	S 13°18'19" E	444.35'
L2	4+44.35	S 37°19'49" E	252.46'
L3	6+96.81	S 16°27'17" W	258.92'
L4	9+55.73	S 23°45'22" E	123.13'
L5	10+78.86	S 77°44'51" E	252.91'
L6	13+31.77	S 24°48'58" E	160.67'
L7	14+92.44	S 49°55'23" E	297.46'
L8A	17+89.90	S 12°41'26" E	145.80'
		TOTAL	1935.70'

Description:

A strip of land 40 feet wide across portions of Section 29, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 30 feet on the right side and 10 feet on the left side, of the following described centerline:

Beginning at a point located in the Northeast Quarter of the Northeast Quarter of said Section 29. Said point bears South 46°07'38" West, a distance of 1,083.52 feet from a found marked stone for the Northeast corner of said Section 29;

Thence South 13°18'19" East, a distance of 444.35 feet;
Thence South 37°19'49" East, a distance of 252.46 feet;
Thence South 16°27'17" West, a distance of 258.92 feet;
Thence South 23°45'22" East, a distance of 123.13 feet;
Thence South 77°44'51" East, a distance of 252.91 feet;
Thence South 24°48'58" East, a distance of 160.67 feet;
Thence South 49°55'23" East, a distance of 297.46 feet;
Thence South 12°41'26" East, a distance of 145.80 feet to the end of this description at a point located on the calculated East line of the Southeast Quarter of the Northeast Quarter of said Section 29. Said point bears South 00°37'22" East, a distance of 2278.50 feet from said marked stone for the Northeast corner of Section 29.

The above described strip of land totals 1,935.70 feet or 117.315 rods in length and contains 1.778 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE NORTHEAST CORNER AND THE NORTHWEST CORNER OF SECTION 4, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

P.O.B. = POINT OF BEGINNING

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	0+00.00 TO 19+35.70	1935.70/117.315/1.778

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 — DATE 7/8/2021

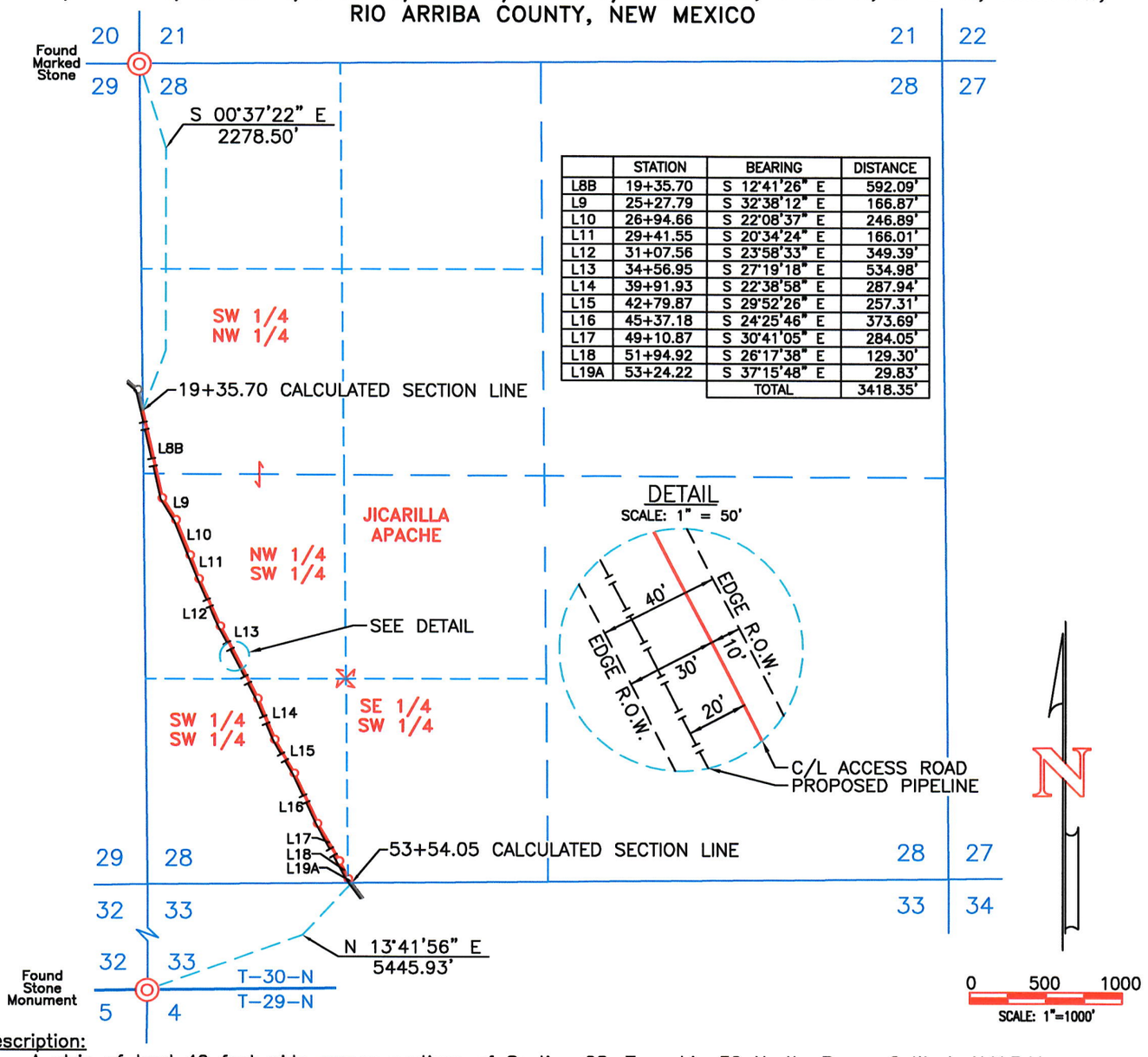
United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-A09		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/C.B.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 1

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD/PIPELINE CORRIDOR

SW 1/4 NW 1/4, NW 1/4 SW 1/4, S 1/2 SW 1/4 SEC. 28, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L8B	19+35.70	S 12°41'26" E	592.09'
L9	25+27.79	S 32°38'12" E	166.87'
L10	26+94.66	S 22°08'37" E	246.89'
L11	29+41.55	S 20°34'24" E	166.01'
L12	31+07.56	S 23°58'33" E	349.39'
L13	34+56.95	S 27°19'18" E	534.98'
L14	39+91.93	S 22°38'58" E	287.94'
L15	42+79.87	S 29°52'26" E	257.31'
L16	45+37.18	S 24°25'46" E	373.69'
L17	49+10.87	S 30°41'05" E	284.05'
L18	51+94.92	S 26°17'38" E	129.30'
L19A	53+24.22	S 37°15'48" E	29.83'
		TOTAL	3418.35'

Description:

A strip of land 40 feet wide across portions of Section 28, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 30 feet on the right side and 10 feet on the left side, of the following described centerline:

Beginning at a point located on the calculated West line of the Southwest Quarter of the Northwest Quarter of said Section 28. Said point bears South 00°37'22" East, a distance of 2278.50 feet from a found marked stone for the Northwest corner of said Section 28;

Thence South 12°41'26" East, a distance of 592.09 feet;
Thence South 32°38'12" East, a distance of 166.87 feet;
Thence South 22°08'37" East, a distance of 246.89 feet;
Thence South 20°34'24" East, a distance of 166.01 feet;
Thence South 23°58'33" East, a distance of 349.39 feet;
Thence South 27°19'18" East, a distance of 534.98 feet;
Thence South 22°38'58" East, a distance of 287.94 feet;
Thence South 29°52'26" East, a distance of 257.31 feet;
Thence South 24°25'46" East, a distance of 373.69 feet;
Thence South 30°41'05" East, a distance of 284.05 feet;
Thence South 26°17'38" East, a distance of 129.30 feet;
Thence South 37°15'48" East, a distance of 29.83 feet to the end of this description at a point located on the calculated South line of the Southeast Quarter of the Southwest Quarter of said Section 28. Said point bears North 13°41'56" East, a distance of 5445.93 feet from a found stone monument for the Southwest corner of Section 33, Township 30 North, Range 2 West, N.M.P.M. Rio Arriba County, New Mexico.

The above described strip of land totals 3,418.35 feet or 207.173 rods in length and contains 3.138 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE NORTHEAST CORNER AND THE NORTHWEST CORNER OF SECTION 4, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

NEW MEXICO PROFESSIONAL SURVEYOR 14831

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 — DATE 9/30/2021

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	19+35.70 TO 53+54.05	3418.35/207.173/3.138

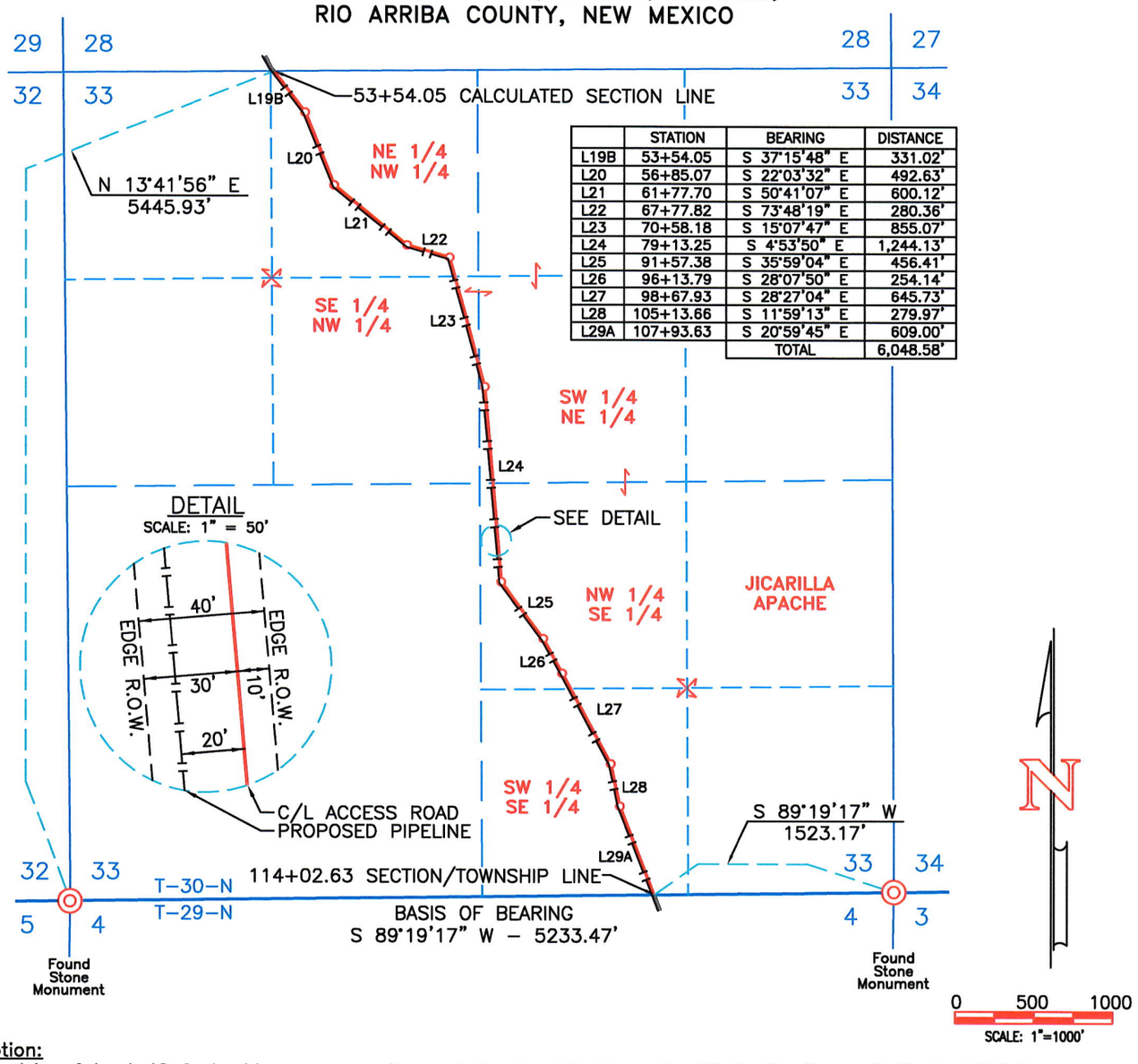
United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-A10		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/C.B.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 2

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD/PIPELINE CORRIDOR

E 1/2 NW 1/4, SW 1/4 NE 1/4 & W 1/2 SE 1/4
OF SEC. 33, T-30-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L19B	53+54.05	S 37°15'48" E	331.02'
L20	56+85.07	S 22°03'32" E	492.63'
L21	61+77.70	S 50°41'07" E	600.12'
L22	67+77.82	S 73°48'19" E	280.36'
L23	70+58.18	S 15°07'47" E	855.07'
L24	79+13.25	S 4°53'50" E	1,244.13'
L25	91+57.38	S 35°59'04" E	456.41'
L26	96+13.79	S 28°07'50" E	254.14'
L27	98+67.93	S 28°27'04" E	645.73'
L28	105+13.66	S 11°59'13" E	279.97'
L29A	107+93.63	S 20°59'45" E	609.00'
		TOTAL	6,048.58'

Description:

A strip of land 40 feet wide across portions of Section 33, Township 30 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 30 feet on the right side and 10 feet on the left side, of the following described centerline:

Beginning at a point located on the calculated North line of the Northeast Quarter of the Northwest Quarter of said Section 33. Said point bears North 13°41'56" East, a distance of 5445.93 feet from a found stone monument for the Southwest corner of said Section 33;

Thence South 37°15'48" East, a distance of 331.02 feet;
Thence South 22°03'32" East, a distance of 492.63 feet;
Thence South 50°41'07" East, a distance of 600.12 feet;
Thence South 73°48'19" East, a distance of 280.36 feet;
Thence South 15°07'47" East, a distance of 855.07 feet;
Thence South 4°53'50" East, a distance of 1,244.13 feet;
Thence South 35°59'04" East, a distance of 456.41 feet;
Thence South 28°07'50" East, a distance of 254.14 feet;
Thence South 28°27'04" East, a distance of 645.73 feet;
Thence South 11°59'13" East, a distance of 279.97 feet;
Thence South 20°59'45" East, a distance of 609.00 feet to the end of this description at a point located on the South line of the Southwest Quarter of the Southeast Quarter of said Section 33. Said point bears South 89°19'17" West, a distance of 1523.17 feet from a found stone monument for the Southeast corner of said Section 33.

The above described strip of land totals 6,048.58 feet or 366.581 rods in length and contains 5.554 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE SOUTHEAST CORNER AND THE SOUTHWEST CORNER OF SECTION 33, T-30-N, R-2-W N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

NEW MEXICO 14831 PROFESSIONAL SURVEYOR

10/8/2021

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 DATE

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	53+54.05 TO 114+02.63	6048.58/366.581/5.554

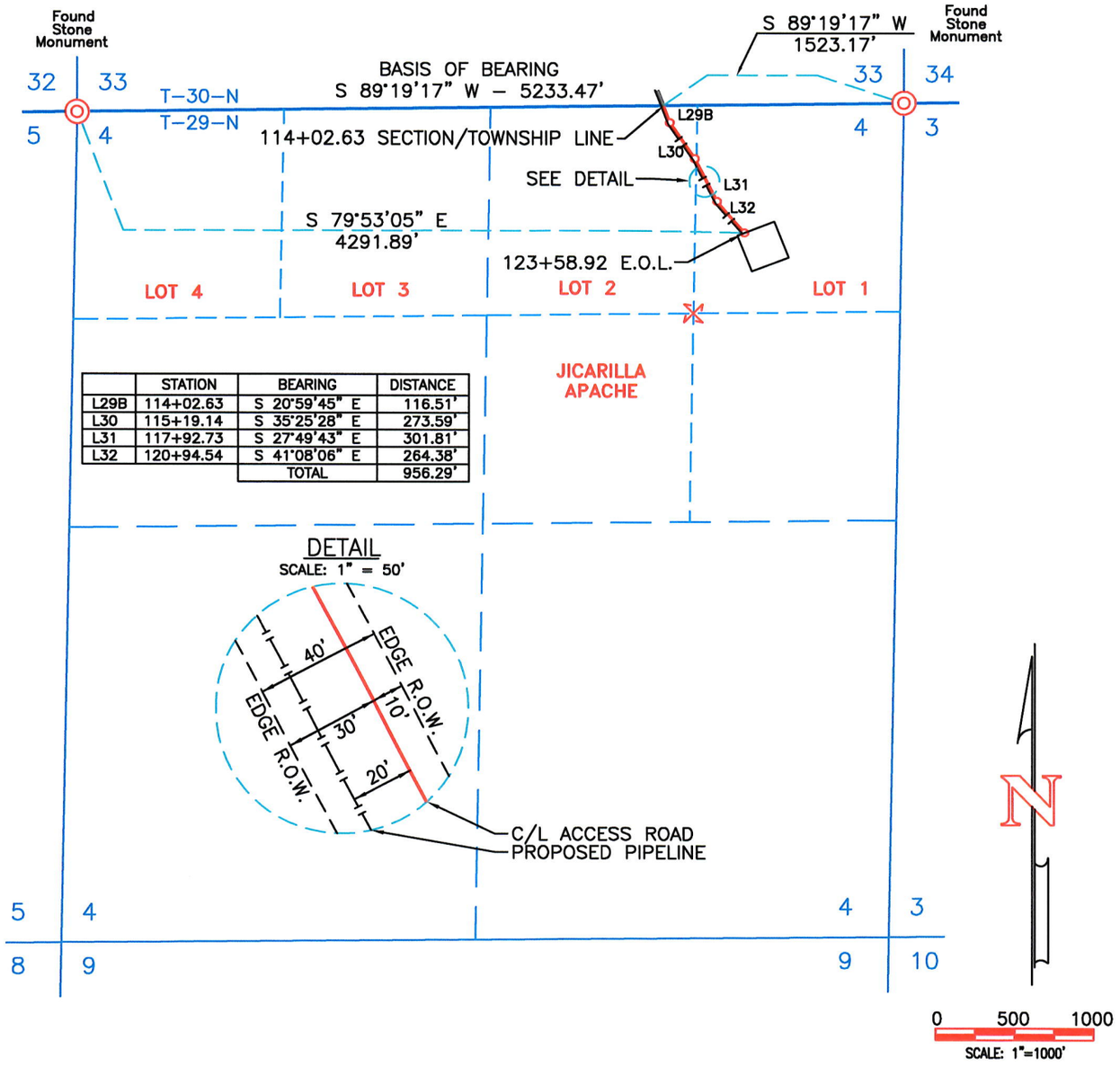
United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-A11		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/C.B.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 3

JICARILLA APACHE ENERGY CORP.

JICARILLA 29-02-04 SJ 14 ACCESS ROAD/PIPELINE CORRIDOR

LOT 1 & LOT 2 OF SEC. 4, T-29-N, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



	STATION	BEARING	DISTANCE
L29B	114+02.63	S 20°59'45" E	116.51'
L30	115+19.14	S 35°25'28" E	273.59'
L31	117+92.73	S 27°49'43" E	301.81'
L32	120+94.54	S 41°08'06" E	264.38'
		TOTAL	956.29'

Description:

A strip of land 40 feet wide across portions of Section 4, Township 29 North, Range 2 West, N.M.P.M., Rio Arriba County, New Mexico, being 30 feet on the right side and 10 feet on the left side, of the following described centerline:

Beginning at a point located on the North line of the Northwest Quarter of the Northeast Quarter (Lot 2) of said Section 4. Said point bears South 89°19'17" West, a distance of 1523.17 feet from a found stone monument for the Northeast corner of said Section 4;

Thence South 20°59'45" East, a distance of 116.51 feet;
Thence South 35°25'28" East, a distance of 273.59 feet;
Thence South 27°49'43" East, a distance of 301.81 feet;
Thence South 41°08'06" East, a distance of 264.38 feet to the end of this description at a point located in the Northeast Quarter of the Northeast Quarter (Lot 1) of said Section 4. Said point bears South 79°53'05" East, a distance of 4291.89 feet from a found stone monument for the Northwest corner of said Section 4.

The above described strip of land totals 956.29 feet or 57.957 rods in length and contains 0.878 acres, more or less.

NOTES:
1. BASIS OF BEARING: AS MEASURED BETWEEN THE NORTHEAST CORNER AND THE NORTHWEST CORNER OF SECTION 4, T-29-N, R-2-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: S 89°19'17" W - 5233.47'
2. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN ARE BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, IN U.S. SURVEY FEET.

E.O.L. = END OF LINE

OWNER	STATION	FEET/RODS/ACRES
JICARILLA APACHE	114+02.63 TO 123+58.92	956.29/57.957/0.878

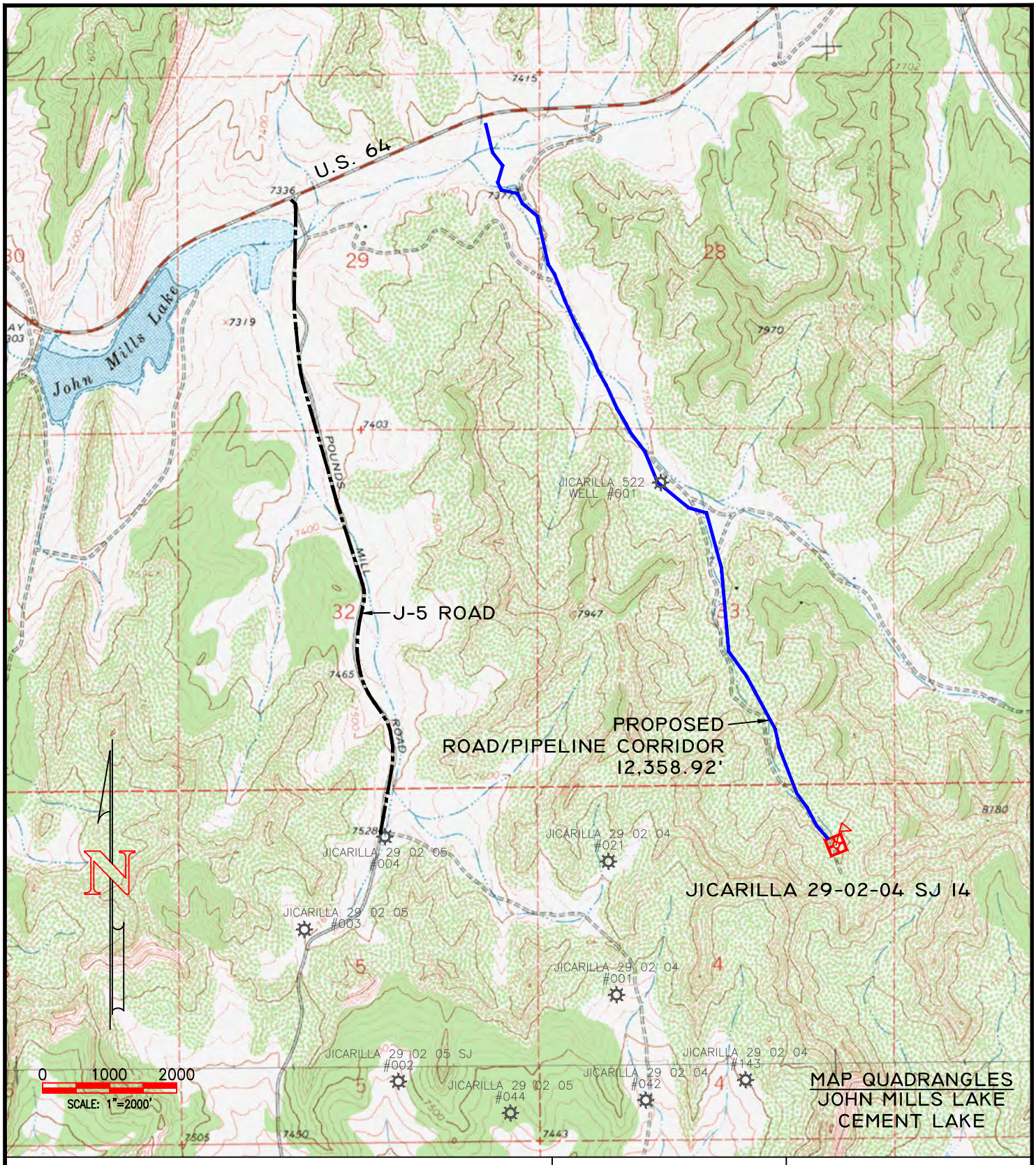
I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

NEW MEXICO 14831 PROFESSIONAL SURVEYOR

JOHN A. VUKONICH P.E./P.S., N.M.P.S. #14831 — DATE 10/8/2021

United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11446-A12		Revision: 2
Drawn by: A.A.D.	Date Drawn: 5/10/21	Rev. Date/By: 9/30/21/C.B.
Surveyed: 5/5/21	App by: J.A.V.	Sheet: 4



LEASE: JICARILLA 29-02-04 SJ 14

FOOTAGES: 894' FNL, 900' FEL

SEC. 4 TWN. 29 N RNG. 2 W N.M.P.M.

LAT: N 36.7589825° LONG: W 107.0421167° (NAD 83)

ELEVATION: 7787

JICARILLA APACHE ENERGY CORP.

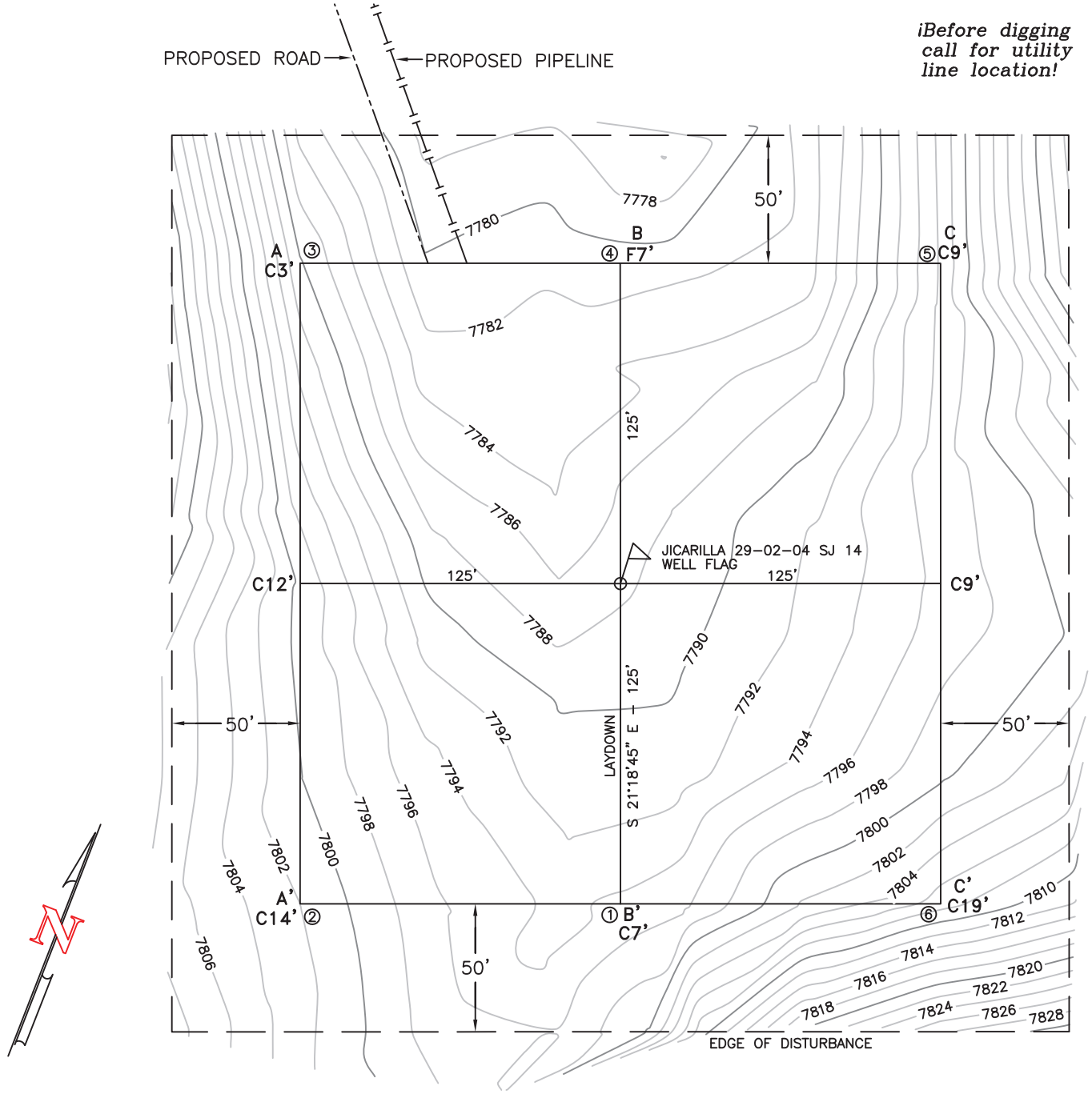
UNITED FIELD SERVICES INC.
P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

SURVEYED: 5/05/21	REV. DATE: 9/30/21	APP. BY J.A.V.
DRAWN BY: K.S.	DATE DRAWN: 10/06/20	FILE NAME: 11446T02

BLACKHAWK ENERGY CORP.

JICARILLA 29-02-04 SJ 14

SEC. 4, T-29-S, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO



Notes:

1. All Bearings and distances are based upon the New Mexico State Plane Coordinate System, West Zone, NAD 83, in U.S. survey feet.
2. Basis of elevation is referenced to the North American Vertical Datum of 1988.
3. Contractor shall contact "One-Call" for location of any marked or unmarked buried pipelines or cables on pad and/or access road at least two (2) working days prior to construction.
4. United Field Services Inc. is not liable for underground utilities or pipelines.
5. Cut and fill calculations are rounded to the nearest foot.

PAGE 1 OF 2

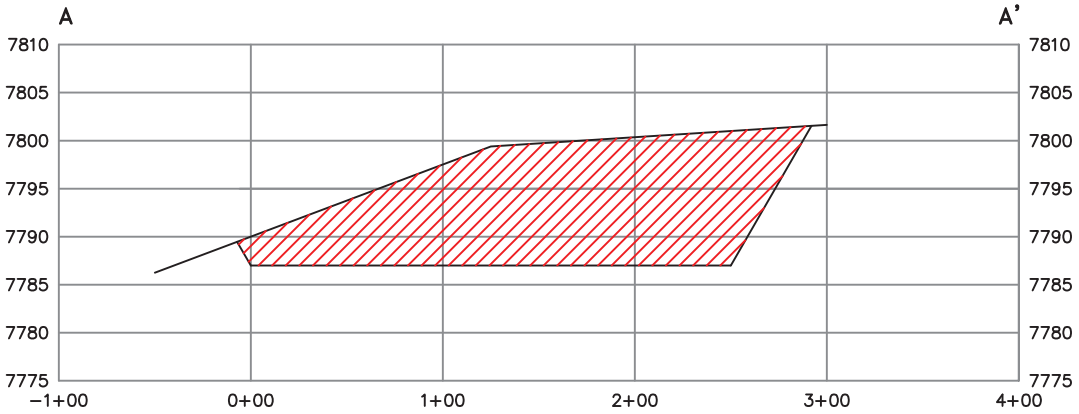
United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

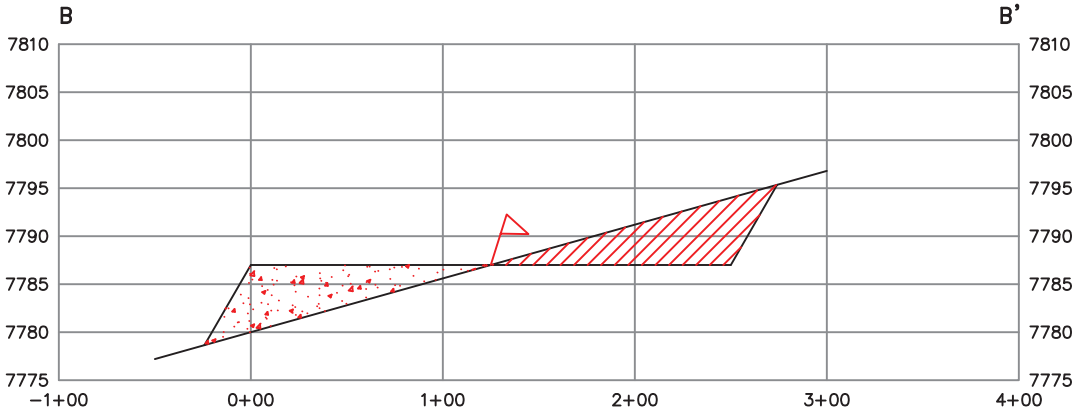
Surveyed: 9/14/20	Rev. date:	App. by: J.A.V.
Drawn by: K.S.	Date drawn: 10/05/20	File name: 11446-PAD

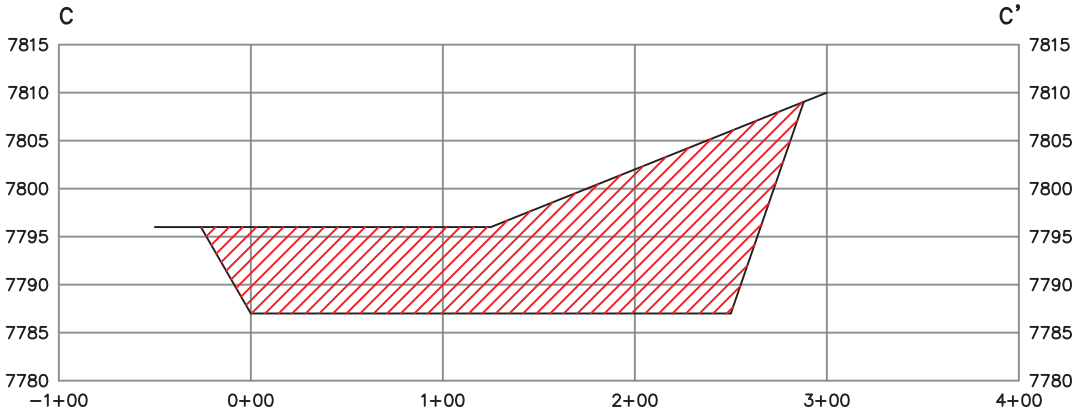
BLACKHAWK ENERGY CORP.

JICARILLA 29-02-04 SJ 14

SEC. 4, T-29-S, R-2-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO







PAGE 2 OF 2

Horizontal Scale: 1" = 100'
Vertical Scale: 1" = 20'

United Field Services Inc.
P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

Surveyed: 9/14/20	Rev. date:	App. by: J.A.V.
Drawn by: K.S.	Date drawn: 10/05/20	File name: 11446-PAD

REVEGETATION

Following soil preparations, a range drill (disk type seed drill) will be used to apply the approved seed mix over the disturbed areas. The drill will be equipped with a depth regulator to ensure even planting depths appropriate to the plant species and soil types. Should broadcast seeding be deemed more appropriate in some areas, the seed application rates will be doubled and a rake or harrow used to incorporate the seed into the soil. Any steep slopes, greater than 2:1, will be blanketed for soil stabilization and seed retention.

The seed mixture and application rates for the Bureau of Indian Affairs, Jicarilla Agency, and the Jicarilla Environmental Protection Office Recommendation will be as follows:

Species	Variety	Pound/Acre (PLS)
Western wheatgrass	Arriba	3.2
Arizona Fescue	Redondo	1.0
Intermediate Wheatgrass	Amur or Oahe	2.25
Smooth Brome	Manchar	1.95
Galleta (caryopsis)	Viva	0.6
Spike Muhly	El Vado	0.45
Rocky Mountain Penstemon	Bandera	0.1
Small Burnet	Delar	2.0

Jicarilla 29-02-04 SJ #14
894' FNL & 900' FEL (NE/NE) Unit A
Sec.4 T29N R2W
Rio Arriba County, New Mexico
Lease: Indian Mineral Development Agreement 701-98-0013, Tract 4

SURFACE USE PLAN of OPERATION

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Federal Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. This NOS process includes an onsite meeting which was held on May 4, 2021, as determined by the Bureau of Indian Affairs (BIA), Jicarilla Tribal Historic Preservation Office (THPO), and Jicarilla Oil & Gas Administration (JOGA). The specific concerns of Jicarilla Apache Energy Corporation (JECO), BIA, THPO, and JOGA were discussed.

1) EXISTING ROADS:
   A) Proposed well site and access roads to the location are shown on the attached maps/plat. The existing established roads U.S. Highway 64, will be utilized during drilling and production operations.
   B) ***Directions to location: From the U.S. Postal Service Bloomfield, New Mexico, travel approximately 58.9 miles east on Highway 64. Turn right (South) onto an unnamed driveway where a new access road is proposed.***

2) NEW OR RECONSTRUCTED ACCESS ROADS
   A) Routes to be used for access to the Jicarilla 29-02-04 SJ #14 well pad is shown on the attached road maps.
   B) Maximum grades will not exceed BLM standards.
   C) Water turnouts and water bars/wing ditches will be utilized as necessary.
   D) No fence cuts will be necessary. A gate and cattleguard will be installed under the Jicarilla Oil and Gas Administration and BIA guidance. A New Mexico Drive Way Permit will be obtained from the New Mexico Department of Transportation.
   E) Low-water crossings, if necessary, will be installed prior to drilling operations. In the access road, culverts or gravel bottom low water crossings, if necessary, will be placed on firm uniform beds and aligned parallel to the channel to minimize erosion. Backfill will be thoroughly compacted.
   F) Surfacing material will consist of native soil and, if necessary, sandstone material.
   G) A rights-of-way will be obtained through the Bureau of Indian Affairs, Branch of Real Estate Service, Jicarilla Agency, Dulce, NM for the access road and pipeline.

3) LOCATION OF EXISTING WELLS WITHIN ONE MILE
   See attached 1-Mile map and Table 1 for locations of existing wells within a 1 – mile radius

Proposed	1
Drilling	0
Abandoned	0
Disposal injection	0
Shut-In	0
Producing	3

4) LOCATIONS OF EXISTING and/or PROPOSED PRODUCTION FACILITIES

A) If the well proves to be successful, necessary production facilities and tanks will be installed on the drilling pad. The new well will also be tied into the existing piping, which might include the following: up to two (2) pipelines will be installed in a single trench as follows: 1) gas pipeline to be 4" polyline, and 2) water pipeline 3" poly. The maximum anticipated working pressure is 200 psi.

B) Production equipment will be painted light reflective colors to limit evaporation and waste of liquid hydrocarbons. All above ground permanent structures will be painted Munsell Color Juniper Green, based on BLM guidelines.

5) LOCATION AND TYPES OF WATER SUPPLY

It is planned to drill the proposed well with water obtained from private or commercial sources which will be transported to the location. No water wells will be drilled on the location.

6) CONSTRUCTION MATERIALS

All construction material for the proposed location site and access road will be borrowed material accumulated during the construction of the location site and access road. No additional construction material from other sources is anticipated at this time. If in the future it is required, the appropriate actions will be taken to acquire it from private sources.

7) METHODS OF HANDLING WASTE

A) Drill cuttings not retained for evaluation purposes will be disposed of in the closed loop system.

B) A portable chemical toilet will be provided for onsite personnel during the drilling and completion operations.

C) Garbage and trash produced during drilling or completion operations will be contained in a portable trash basket and hauled to an approved disposal facility. No toxic waste or hazardous chemicals will be produced by this operation.

D) After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. As weather permits, the unused portion of the well site will be leveled and reseeded per BIA specifications. Only that part of the pad required for production facilities will be kept in use.

8) ANCILLARY FACILITIES

No ancillary facilities will be necessary.

9) WELLSITE LAYOUT

A) A drill site layout map is attached in the APD specifies the drill site layout as stake. A cut and fill map shows cross-sections to visualize the planned cuts and fills across the location. An average minimum of six (6) inches of topsoil will be stripped from the location (including the areas of cut and fill) and stockpiled for future reclamation of the well site.

B) See attached plat for the planned orientation for the production layout.

C) Operator will notify the Authorized Officer at least 48 hours prior to construction of the well pad, access road, and/ related facilities.

10) PLANS FOR SURFACE RECLAMTION

A. The BLM and BIA will be contacted at least 48 hours prior to planning and pre-construction on-sites and prior to commencement of any reclamation.

B. Producing Locations

1. Immediately upon well completion, the well location and surrounding area(s) willbe cleared of all debris, materials, trash, and junk not required for production.
2. Other waste and spoil materials will be disposed of immediately upon completion of

drilling and work-over activities.

3. Topsoil storage piles, storm water control features, temporarily disturbed areasalong roads and pipelines, and cut and fill slopes will be seeded at the time of construction or within 30 days, to stabilize materials, maintain biotic soil activities, and minimize weeds. Seedbed prep will be required unless seeding occurs immediately after construction.
4. If the well is a producer, JECO will upgrade and maintain access roads as necessary to prevent soil erosion and accommodate year-round traffic. Areas unnecessary to operations will have areas reshaped. Topsoil will be redistributedand disked. All areas outside the work area will be reseeded according to the BIA recommendations for seed mixture.

C. Short-Term Interim Reclamation

1. Stabilization measures will begin at the time of construction, or at least within 72hours after initial surface disturbing activities, to stabilize materials, maintain biotic soil activities and minimize weed infestations.
2. Seeding of topsoil berms/windrows, cut/fill slopes, and temporarily disturbed areas along roads/ and pipelines will be done at the time of disturbance/ construction. Seedbed prep may not be required for topsoil storage piles or otherareas of temporary seeding if seeding is immediate.
3. Other stabilization measures implemented at the time of initial construction mayinclude pre- and post-construction BMPs, contouring, texturing, slash/brush berming/storage, and weed monitoring control.

D. Interim Reclamation:

1. Interim Reclamation will be conducted in accordance with the BIA and BLM FFO Standard COAs.
2. Prior to interim reclamation, JECO will meet with JOGA, BIA, and BLM to inspect the disturbed area, to review the existing reclamation plan and agree upon any revisions to the plan.
3. Seed tags will be submitted for BLM approval at least 14 days before proposedseeding date.
4. The JOGA, BIA and BLM will be notified at least 48 hours prior to beginning any reclamationwork.
5. Only areas needed for production will be left in place. Fill slope soils will be pulled up and returned to cut areas by pushing up and over the edges of the cut. Compacted areas will be ripped in two passes at opposite directions before beingreshaped.
6. Salvaged topsoil will be evenly redistributed. Soil amendments will be used as permitted or required. The seed bed will be prepared by scarifying (roughening)spread topsoil prior to seeding, unless seeding takes place immediately or is drilled. Seedbed preparation may include pocking, ripping, disking or other soilroughening techniques.
7. Disturbed areas will be seeded with a seed mixture approved by the BIA. Seedswill contain no noxious, prohibited or restricted weed seeds and contain no morethan 0.5 percent by weight of other weed seeds. Only viability-tested, certified seed for the current year, with a minimum germination rate of 80 percent and a minimum purity of 90 percent will be used. Seed that does not meet the criteria will not be applied to Jicarilla Apache lands.
8. Seeding will be conducted no more than 24 hours following final seedbed preparation. If interim revegetation is unsuccessful, JECO will implementsubsequent reseedings until interim reclamation standards are met.

9. Cut-and-fill slopes will be protected against erosion with the use of pocking/pitting, lateral furrows, or other measures approved by the BIA. Additional vegetation, BMPs or methods may be required near drainages orin areas with high erosion potential.
10. JECO will regularly monitor for reclamation success and for invasive species. All sites will be categorized as "operator reclamation in progress."

E. Final Reclamation and Dry Hole/Abandoned and Plugged Locations

1. Final Reclamation will be conducted in accordance with JOGA, BIA, and BLM FFO Standard Conditions of Approval unless superseded by site specific requirements.
2. A well pad that no longer has a producing well will undergo final reclamation within no more than 1 year following plugging and abandonment of the final wellon that pad. Buried pipelines will be reclaimed to final reclamation standards at the time of installation.
3. Prior to final reclamation of a well pad or pipeline, JECO will meet with JOGA, BIA, and BLM to inspect the disturbed area, review the existing reclamation plan, and agree to any changes to the plan.
4. JECO will notify BIA and BLM at least 48 hours prior to commencing any reclamation work and within 48 hours of completion of reclamation work.
5. Prior to recontouring and reseeding the pad, JECO will complete thefollowing:
    - All equipment, facilities, and trash will be removed from the location.
    - Each borehole will be plugged and capped, and its related surface equipment removed.
    - Subsurface pipelines will be purged and plugged at specific intervals.
    - Dry hole markers will be installed to BLM standards.
6. Recontouring for final reclamation will consist of returning the pad, materialstorage piles, cut-and-fill slopes, and storm water control features to natural contours that blend with adjacent undisturbed areas, as specified in the final reclamation plan or final reclamation plat approved by JOGA, BIA, and BLM.
7. Requirements for seedbed preparation, soil amendments, seed, seeding procedures, mulching, erosion control, fencing, site security, and monitoring will be as specified for interim reclamation.

11) PIPELINES AND FLOWLINES

A) JECO dba BlackHawk proposes to tie into the existing gas gathering system pipeline as shown on the attached plat. One pipeline would transport gas from the well to the main gas gathering system. The gas pipeline will be 4" steel. The second pipeline will transport produced water, and will be in the same trench as the gas gathering pipeline and will be constructed at the same time. The water pipeline will be 3" poly.

B) A pipeline Rights-of-Way will be obtained through the BIA, Branch of Real Estate Service, Jicarilla Agency, Dulce, NM.

11) SURFACE OWNERSHIP

The Jicarilla Apache Indian Tribe holds the surface for the proposed location site and access road to the pad.

12) OTHER INFORMATIONS

A) The Project Area is roughly 20 miles southeast of Navajo Reservoir, and roughly 14 miles southwest of the town of Dulce, New Mexico. The well site is located in the northeastern portion of the San Juan Basin, completely within Rio Arriba County and within the boundaries of the Jicarilla Apache Reservation. Additionally for reference, the well locations can be found on the Bixler Ranch, N.M. (1963) and Cement Lake, N.M. (1963) U.S. Geological Survey (USGS) 7.5' topographic quadrangle maps (Geo Community 2007). The well is located on the north side of U.S. Highway 64 and would be accessed from existing roads branching from Jicarilla Road J-10 North.

B) Topographic and geologic features - The topographic pattern of the area is varied consisting of defined ridges, deep and relatively incised valleys and canyons, savannahs, and open meadows ranging from 6,000 to 9,000 feet above mean sea level (BIA 1994). The Project Area can be described as somewhat mountainous having a relatively high relief between the ridge tops and the valleys below. Valley floors range from narrow to wide with the wider valleys having deeper and wider arroyos. A few plateaus with steep to very steep slopes are also present in the area. According to published geologic mapping (Manley et al. 1987), the Eocene San Jose Formation is present immediately below the surface within the Project Area, and the proposed wells will be drilled into the Cretaceous Dakota and Fruitland Formations.

C) Soil characteristics – Soil compositions found in the Project Area include contents of fine sandy loams, sandy clay loams, and weathered and unweathered bedrock. Soils types in the Project Area consist of the Parkelei-Menefee-Vessilla complex (Natural Resources Conservation Service [NRCS] 2007).

D) Flora consists of: Inter-mountain Basins Big Sagebrush Shrubland: This ecological system occurs throughout much of the western U.S., typically in broad basins between mountain ranges, plains, and foothills. Soils are typically deep, well-drained and non-saline. These shrublands are dominated by big sagebrush and/or Wyoming big sagebrush (spp.*wyomingensis*). Scattered juniper, greasewood (*Sarcobatus vermiculatus*), and saltbush (*Atriplex* spp.) may be present in some stands. Perennial herbaceous components typically contribute less than 25 percent vegetative cover. Common graminoid species include Indian ricegrass (*Achnatherum hymenoides*), blue grama grass, thickspike wheatgrass (*Elymus lanceolatus*), Idaho fescue (*Festuca idahoensis*), needle and thread (*Hesperostipa comata*), and western wheatgrass (*Pascopyrum smithii*).

E) Fauna – none observed, assume deer, Elk, Wild Horses, coyotes, rabbits, raptors, and rodents.

F) Concurrent surface use - grazing.

G) Mineral Lessor: Jicarilla Apache Nation

H) Surface Owner: Jicarilla Apache Nation
Drillsite: Jicarilla Apache Nation
Access: Jicarilla Apache Nation

I) Proximity of water, occupied dwellings or other features – unnamed intermittent drainage – ±1 mile north of the location is Cañon Chicosa. There are two perennial streams on the Jicarilla Apache Reservation, the Navajo River and Willow Creek. Neither of these streams is located within or near the Project Area. All other water features on the Reservation and near the Project Area are intermittent or ephemeral in nature and flow only in response to snowmelt or precipitation events. Most of these ephemeral streams are small sandy washes with defined channels. The wider valleys and larger catchments tend to have deeper and wider arroyos (BIA 1994).

J) A current archeological report was done by Interior West Consulting, Inc of Doloris, Colorado which was submitted to the BIA regional Office in Albuquerque, New Mexico and the Jicarilla Tribal Historic Preservation office in Dulce, New Mexico.

13) LESSEE'S OR OPERATOR'S REPRESENTATIVE:

Representative
Daniel Manus, Regulatory Specialist
JECO dba BlackHawk Energy Corp.
700 Dekalb Dr | P.O. Box 1048
Farmington, NM 87401
Office: 505-634-5104
Email: dmanus@blackhawkenergycorp.coom

Field Representative
Randy Thompson, VP Operation
JECO dba BlackHawk Energy Corp.
700 Dekalb Dr | P.O. Box 1048
Farmington, NM 87401
Office: 505-634-5103
Email: rthompson@blackhawkenergycorp.com

14) CERTIFICATION:

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Executed this 1st day of June, 2022

Daniel R. Manus
Regulatory Specialist
Jicarilla Apache Energy Corporation dba BlackHawk Energy Corporation
dmanus@blackhawkenergycorp.com

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

PWD Data Report
07/11/2022

APD ID: 10400078916 **Submission Date:** 09/23/2021

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Lined pit Monitor description:

Lined pit Monitor

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information

Section 3 - Unlined

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule

Unlined pit reclamation description:

Unlined pit reclamation

Unlined pit Monitor description:

Unlined pit Monitor

Do you propose to put the produced water to beneficial use?

Beneficial use user

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic

State

Unlined Produced Water Pit Estimated

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information

Section 4 -

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection

Underground Injection Control (UIC) Permit?

UIC Permit

Section 5 - Surface

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 -

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data
07/11/2022

APD ID: 10400078916 **Submission Date:** 09/23/2021

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes
Show Final Text

Bond

Federal/Indian APD: IND

BLM Bond number:

BIA Bond number: LPM9269518

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	8.75	7.0	NEW	API	N	0	250	0	250	7787	7537	250	J-55	20	ST&C	1.125	1	DRY	1.8	DRY	1.8
2	PRODUCTION	6.25	4.5	NEW	API	N	0	2000	0	2000	7787	5787	2000	J-55	10.5	ST&C	1.125	1	DRY	1.8	DRY	1.8

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Safety_Factors___Federal_Standard_model___program___surface_casing_Jicarilla_29_02_04_SJ__2__20210818103223.pdf

Casing ID: 2 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Safety_Factors___Federal_Standard_model___program___Production_casing_Jicarilla_29_02_04_SJ__1__20210818103428.pdf

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data
07/11/2022

APD ID: 10400078916 **Submission Date:** 09/23/2021

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - General

APD ID: 10400078916 **Tie to previous NOS?** Y **Submission Date:** 09/23/2021

BLM Office: Rio Puerco **User:** DANIEL MANUS **Title:** REGULATORY SPECIALIST

Federal/Indian APD: IND **Is the first lease penetrated for production Federal or Indian?** IND

Lease number: IMDA 701-98-0013 **Lease Acres:** 39360

Surface access agreement in place? Y **Allotted?** N **Reservation:** JICARILLA APACHE

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO **APD Operator:** JICARILLA APACHE ENERGY CORPORATION

Operator letter of

Operator Info

Operator Organization Name: JICARILLA APACHE ENERGY CORPORATION

Operator Address: 700 DEKALB STREET **Zip:** 87499

Operator PO Box:

Operator City: FARMINGTON **State:** NM

Operator Phone: (575)759-3224

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14 **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** LA JARA CANYON TERTIARY **Pool Name:**

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Is the proposed well in an area containing other mineral resources? NATURAL GAS

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: VERTICAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 15 Miles **Distance to nearest well:** 3400 FT **Distance to lease line:** 877 FT

Reservoir well spacing assigned acres Measurement: 161.76 Acres

Well plat: 01_Jicarilla_29_02_04_SJ_14_C102__cert_10_8_21__20211012100501.pdf

Well work start Date: 09/27/2021 **Duration:** 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 14831 **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	894	FNL	900	FEL	29N	2W	4	Lot 1	36.7589825	-107.0421167	RIO ARRIBA	NEW MEXICO	NEW MEXICO	I	701-98-0013	7787	0	0	Y
BHL Leg #1	894	FNL	900	FEL	29N	2W	4	Lot 1	36.7589825	-107.0421167	RIO ARRIBA	NEW MEXICO	NEW MEXICO	I	701-98-0013	5787	2000	2000	Y

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
07/11/2022

APD ID: 10400078916 **Submission Date:** 09/23/2021

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
6870254	SAN JOSE	7787	1520	1520	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 2000

Equipment: 3M 11 inch B.O.P.E

Requesting Variance? NO

Variance request:

Testing Procedure: BOPs and choke manifold will be installed and pressure tested before drilling out under surface casing (subsequent pressure test will be performed whenever pressure seals are broken) and then will be checked daily as to mechanical operating condition. BOP's will be pressure tested at least once every 30 days. Ramtype preventors and related pressure control equipment will be pressure tested to 1,000 psi. Annular type preventor will be pressure tested to 50% of the rated working pressure, not to exceed 1,000 psi. All casing strings will be pressure tested to 0.22 psi/ft. or 1,500 psi, whichever is greater, not to exceed 70% of internal yield. BOP to be either double gate rams or an annular preventor as per Onshore Order No. 2.

Choke Diagram Attachment:

3M_BOPE___Choke_Manifold_Diagram__1___1__20210819102815.docx

BOP Diagram Attachment:

3M_BOPE___Choke_Manifold_Diagram__1___1__20210819102827.docx

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead	250	0	250	66	1.15	15.8	38	100	Type III or Class G	with additives
PRODUCTION	Lead	2000	0	2000	229	1.52	14.2	349	70	Type II or Class G	with additives

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with Onshore Order No. 2 for 3M systems. A remote accumulator will be used. Pressures, capacities, location of remote hydraulic and manual controls will be identified at the time of the BLM supervised BOP test.

Describe the mud monitoring system utilized: Mud monitoring will be visually observed

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	250	WATER-BASED MUD	8.5	8.5							
250	2000	WATER-BASED MUD	8.5	8.6						15	

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Resistivity/Conductivity - Neutron/Density
Possible DST - None anticipated. Drill stem tests may be run on shows of interest

List of open and cased hole logs run in the well:

CEMENT BOND LOG,GAMMA RAY LOG,SPONTANEOUS POTENTIAL LOG,CALIPER,DIRECTIONAL SURVEY,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 620 **Anticipated Surface Pressure:** 179

Anticipated Bottom Hole Temperature(F): 120

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S_Revised_20210908123330.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Other proposed operations facets description:

Completion -
The location pad will be of sufficient size to accommodate all completion activities and equipment. The well will be perforated based on log results. The well may be acid stimulated or frac stimulated if needed. A string of 2-3/8" J-55 4.7#/ft tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted

Other proposed operations facets attachment:

Other Variance attachment:

SIMPLE CHECK OF CASING DESIGN SAFETY FACTORS (NO TRIAXIAL STRESS, NO BOUYANCY, ECT.)

DATE: 8/17/2021

Well Name: Jicarilla 29-02-04 SJ

Operator: BlackHawk Energy Corp.

Location: UL A , Sec 4, T29N, R2W
894 FNL & 900 FEL
Rio Arriba County, New Mexico

Surface Casing	Size	Weight	Grade	Connection
7", 20#, J55, STC	7 ''	20.00	J55	STC

INPUTS

Top of Surface Casing:	0'	MD(KB)	
Surface Casing Set At:	2,000'	MD(KB)	
Previous Casing Shoe:	250'	MD(KB)	
TD of Next Hole Section:	2,000'	MD(KB)	
Surface Casing run in this Mud Weight:	8.5	ppg @ 250' MD(KB)	
MW At TD of Next Hole Section :	8.5	ppg @ 2,000' MD(KB) =	0.44 psi/ft
Mud Gradient At Next TD w/ 8.5 ppg mud:	0.44	psi/ft	
Assumed Pore Pressure Gradient At Next TD:	0.10	psi/ft	**(Use: 0.10 psi/ft for TD's < 12,000', 0.15 psi/ft for TD's > 12,000')**

CASING

7", 20#, J55, STC

100% STRENGTHS

COLLAPSE	BURST	TENSION	BODY YIELD	ID	DRIFT	WALL
2,270 psi	3,740 psi	234 Mlbs	316 Mlbs	6.456''	6.331''	0.272''

DESIGN SAFETY FACTORS

COLLAPSE:	1.125
BURST:	1.000
TENSION:	1.800

CALCULATED SAFETY FACTORS

COLLAPSE:	2.568	COLLAPSE OK
BURST:	5.468	BURST OK
TENSION:	5.850	TENSION OK

CALCULATED SAFETY FACTORS

COLLAPSE CALCULATION:

ASSUMES:

- Surface Casing Consistes Of A Single Size, Weight, and Grade Of Casing. No Mixed Weights/Grades.
- Total Evacuation Inside Of Surface Casing From Surface To TD
- Nothing Inside of the Surface Casing (Hydrostatic Head = 0 psi)
- Full Mud Column Of 8.5 ppg Mud In The Annulus Outside Of The Surface Casing (0' - 2,000')

Mud Weight Outside Of Surface Casing	8.5	ppg
Mud Column Outside Of Surface Casing (0' - 2,000')	2,000'	
Hydrostatic Pressure Outside Of Surface Casing	884	psi
7", 20#, J55, STC Collapse Resistance	2,270	psi
Calculated Design Factor = 2,270 psi / 884 psi	2.568	
Design Safety Factor	1.125	

CALC'D COLLAPSE SAFETY FACTOR IS GREATER THAN DESIGN SAFETY FACTOR. DESIGN IS ACCEPTABLE.

BURST CALCULATION:

ASSUMES:

- Surface Casing Consistes Of A Single Size, Weight, and Grade Of Casing. No Mixed Weights/Grades.
- No Mud Hydrostatic Head Outside Of Surface Casing From Surface To TD
- 100% Mud Evacuation Inside of the Surface Casing w/ Full Gas Column Of 0.10 psi/ft, From Next Section TD = 2,000'
- No Additional Pressure Imposed At Surface (Surface Pressure = 0 psi)

Hydrostatic Head Outside Of Surface Casing	0	psi
Gas Gradient Inside Of Surface Casing (0' - 2,000')	0.10	psi/ft
Hydrostatic Pressure Inside Of Surface Casing	200	psi
Formation Pressure At TD = 2,000' w/ Gradient of 0.44 psi/ft	884	psi
Burst Pressure Imposed At Surface	684	psi
Surface Casing Burst Resistance	3,740	psi
Calculated Design Factor = 3,740 psi / 684 psi	5.468	
Design Safety Factor	1.000	

CALC'D BURST SAFETY FACTOR IS GREATER THAN DESIGN SAFETY FACTOR. DESIGN IS ACCEPTABLE.

TENSION CALCULATION:

ASSUMES:

- Surface Casing Consistes Of A Single Size, Weight, and Grade Of Casing. No Mixed Weights/Grades.
- Total Evacuation Inside Of COLLAPSE CALCULATION: From Surface To TD
- Nothing Inside of the COLLAPSE CALCULATION: (Hydrostatic Head = 0 psi)
- Full Mud Column Of .0 ppg Mud In The Annulus Outside Of The COLLAPSE CALCULATION: (0' - ')

Surface Casing Set At	2,000'	MD(KB)
Weight Of 2,000' of 7", 20#, J55, STC, In Air	40,000	lbs
Tensional Stregth Of 7", 20#, J55, STC	234,000	lbs
Calculated Design Factor = 234,000 lbs / 40,000 lbs	5.850	
Design Safety Factor	1.800	

CALC'D TENSION SAFETY FACTOR IS GREATER THAN DESIGN SAFETY FACTOR. DESIGN IS ACCEPTABLE.

SIMPLE CHECK OF CASING DESIGN SAFETY FACTORS (NO TRIAXIAL STRESS, NO BOUYANCY, ECT.) **DATE:** 8/17/2021

Well Name: Jicarilla 29-02-04 SJ **Operator:** BlackHawk Energy Corp.

Location: UL A , Sec 4, T29N, R2W
894 FNL & 900 FEL
Rio Arriba County, New Mexico

Production Casing	Size	Weight	Grade	Connection
4½", 10.5#, J55, STC	4 1/2''	10.50	J55	STC

INPUTS

Top of Production Casing:	0'	MD(KB)
Production Casing Set At:	2,000'	MD(KB)
Previous Casing Shoe:	250'	MD(KB)
TD of Next Hole Section:	2,000'	MD(KB)
Production Casing run in this Mud Weight:	8.5	ppg @ 250' MD(KB)
MW At TD of Next Hole Section :	8.5	ppg @ 2,000' MD(KB) = 0.44 psi/ft
Mud Gradient At Next TD w/ 8.5 ppg mud:	0.44	psi/ft
Assumed Pore Pressure Gradient At Next TD:	0.10	psi/ft **(Use: 0.10 psi/ft for TD's < 12,000', 0.15 psi/ft for TD's > 12,000')**

CASING

4½", 10.5#, J55, STC

100% STRENGTHS

COLLAPSE	BURST	TENSION	BODY YIELD	ID	DRIFT	WALL
4,010 psi	4,790 psi	132 Mlbs	165 Mlbs	4.052''	3.927''	0.224''

DESIGN SAFETY FACTORS

COLLAPSE:	1.125
BURST:	1.000
TENSION:	1.800

CALCULATED SAFETY FACTORS

COLLAPSE:	4.536	COLLAPSE OK
BURST:	7.003	BURST OK
TENSION:	6.286	TENSION OK

CALCULATED SAFETY FACTORS

COLLAPSE CALCULATION:

ASSUMES:

- Production Casing Consistes Of A Single Size, Weight, and Grade Of Casing. No Mixed Weights/Grades.
- Total Evacuation Inside Of Production Casing From Surface To TD
- Nothing Inside of the Production Casing (Hydrostatic Head = 0 psi)
- Full Mud Column Of 8.5 ppg Mud In The Annulus Outside Of The Production Casing (0' - 2,000')

Mud Weight Outside Of Production Casing	8.5	ppg
Mud Column Outside Of Production Casing (0' - 2,000')	2,000'	
Hydrostatic Pressure Outside Of Production Casing	884	psi
4½", 10.5#, J55, STC Collapse Resistance	4,010	psi
Calculated Design Factor = 4,010 psi / 884 psi	4.536	
Design Safety Factor	1.125	

CALC'D COLLAPSE SAFETY FACTOR IS GREATER THAN DESIGN SAFETY FACTOR. DESIGN IS ACCEPTABLE.

BURST CALCULATION:

ASSUMES:

- Production Casing Consistes Of A Single Size, Weight, and Grade Of Casing. No Mixed Weights/Grades.
- No Mud Hydrostatic Head Outside Of Production Casing From Surface To TD
- 100% Mud Evacuation Inside of the Production Casing w/ Full Gas Column Of 0.10 psi/ft, From Next Section TD = 2,000'
- No Additional Pressure Imposed At Surface (Surface Pressure = 0 psi)

Hydrostatic Head Outside Of Production Casing	0	psi
Gas Gradient Inside Of Production Casing (0' - 2,000')	0.10	psi/ft
Hydrostatic Pressure Inside Of Production Casing	200	psi
Formation Pressure At TD = 2,000' w/ Gradient of 0.44 psi/ft	884	psi
Burst Pressure Imposed At Surface	684	psi
Production Casing Burst Resistance	4,790	psi
Calculated Design Factor = 4,790 psi / 684 psi	7.003	
Design Safety Factor	1.000	

CALC'D BURST SAFETY FACTOR IS GREATER THAN DESIGN SAFETY FACTOR. DESIGN IS ACCEPTABLE.

TENSION CALCULATION:

ASSUMES:

- Production Casing Consistes Of A Single Size, Weight, and Grade Of Casing. No Mixed Weights/Grades.
- Total Evacuation Inside Of COLLAPSE CALCULATION: From Surface To TD
- Nothing Inside of the COLLAPSE CALCULATION: (Hydrostatic Head = 0 psi)
- Full Mud Column Of .0 ppg Mud In The Annulus Outside Of The COLLAPSE CALCULATION: (0' - ')

Production Casing Set At	2,000'	MD(KB)
Weight Of 2,000' of 4½", 10.5#, J55, STC, In Air	21,000	lbs
Tensional Stregth Of 4½", 10.5#, J55, STC	132,000	lbs
Calculated Design Factor = 132,000 lbs / 21,000 lbs	6.286	
Design Safety Factor	1.800	

CALC'D TENSION SAFETY FACTOR IS GREATER THAN DESIGN SAFETY FACTOR. DESIGN IS ACCEPTABLE.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Blvd, Suite A
Farmington, New Mexico 87402

In Reply Refer To:
3162.3-1(NMF0110)

Jicarilla Apache Energy Corporation
#14 Jicarilla 29-02-04 SJ
Lease: IMDA 701-98-0013
SH: Lot 1 Section 4, T.29 N., R.2 W.
BH: Lot 1 Section 4, T.29 N., R.2 W.
Rio Arriba, New Mexico

***Above Data Required on Well Sign**

GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

The following special requirements apply and are effective when **checked**:

A. ☒ Note all surface/drilling conditions of approval attached.

B. ☒ The required wait on cement (WOC) time will be a minimum of 500 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated

C. ☐ Test the surface casing to a minimum of _____ psi for 30 minutes.

D. ☐ Test all casing strings below the surface casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield burst) for a minimum of 30 minutes.

Approval Date: 07/11/2022

E. ☐ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, New Mexico State Office, Reservoir Management Group, 301 Dinosaur Trail, Santa Fe, New Mexico 87508.
The effective date of the agreement must be **prior** to any sales. Surface commingling with Unit production is not allowed. The well will only report production to the assigned Communitization Agreement. Allocation will determine how much production is allocated to outside the Unit area and allocated to the existing tracts within the Unit area.

F. ☐ The use of co-flex hose is authorized contingent upon the following:
1. From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.
2. From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.
3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

I. GENERAL

A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.

B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).

C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.

E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).

F. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to at Virgil Lucero at 505-793-1836.**

G. The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.

H. Unless drilling operations are commenced within two years, approval of the Application for Permit to Drill will expire. A written request for a two years extension may be granted if submitted prior to expiration.

I. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all time, unless the well is secured with blowout preventers or cement plugs.

J. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

II. REPORTING REQUIREMENTS

A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.

B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.

1 .Original and three copies on Federal and an Original and five copies on Indian leases of Sundry Notice (Form 3150-5), giving complete information concerning.

a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.

b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.

c. Subsequent Report of Abandonment, show the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.

2. Well Completion Report (Form 3160-4) will be submitted with 30 days after well has been completed.

a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.

3. Submit a cement evaluation log, if cement is not circulated to surface.

III. DRILLER'S LOG

The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results. 2) Blowout preventer tests for proper functioning, 3) Blowout

Approval Date: 07/11/2022

prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drill stem test.

IV. GAS FLARING

Gas produced from this well may not be vented or flared beyond an initial, authorized test period of * Days or 50 MMCF following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

*30 days, unless a longer test period is specifically approved by the authorized officer. The 30-day period will commence upon the first gas to surface.

V. SAFETY

A. All rig heating stoves are to be of the explosion-proof type.

B. Rig safety lines are to be installed.

C. Hard hats and other Personal Protective Equipment (PPE) must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

A. Any changes of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F.

B. If the well is dry, it is to be plugged in accordance with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section II.B.1c.

C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM-Authorized Officer.

VII. PHONE NUMBERS

A. For BOPE tests, cementing, and plugging operations the phone number is 505-564-7750 and must be called 24 hours in advance in order that a BLM representative may witness the operations.

B. Emergency program changes after hours contact: **Virgil Lucero (505) 793-1836**

OIL & GAS ADMINISTRATION

JICARILLA APACHE NATION

AMENDED

November 29, 2021

Bureau of Indian Affairs-Jicarilla Agency
Attention: Verinda Reval, Superintendent
P.O. Box 167
Dulce, New Mexico 87528

Dear Mrs. Reval:

On May 4, 2021 our office conducted an onsite for Blackhawk Energy Corporation at J-5 and Highway 64 at 9:00 a.m. Our letter includes comments made by the participants for mitigation of the request for Application for Permit to Drill (APD).

Daniel Manus/Randy Thompson	Blackhawk Energy Corp.
Cascindra Harrison/Orson Harrison	Jicarilla Oil & Gas Administration
Kurt Sandoval	BIA-Realty
Eudane Vicenti	Jicarilla Game & Fish Department
Robert Bridge	B & B Vac Service
John Vukonich	United Field Services
Jeff Blythe	JAN THPO
Jeff Adams/Mark Lowe	Interior West
Jason Sandoval	Jicarilla Oil & Gas Administration

Conditions of Approval

Operator: **Blackhawk Energy Corp.** Well Name: **Jicarilla 29-02-04 SJ 14**

Legal Description: **Section 4, T29N, R2W** Footage: **894'FNL, 900'FEL**

Lease Number: **IMDA 701-98-0013** Onsite Date: **May 4, 2021**

The following Conditions of Approval (COA) will apply to this well, access road, pipeline and the record title holder, operators, sub-contractors, and their employees. Failure to comply with these requirements will result in the assessment of additional damages or penalties pursuant to Jicarilla Apache Nations Codes (JANC) Title 18, Bureau of Indian Affairs (BIA) 25 CFR Part 169 and 211, and/or Bureau of Land Management (BLM) 43 CFR 3163.1 or 3163.2. A copy of this COA, including exhibits and the Plan(s) of Operation, will be present on the location during construction, drilling and reclamation activity.

The approval of the Application for Permit to Drill (APD) does not relieve the record title holder, operators, sub-contractors, and their employees from obtaining any authorization

required for mineral development on the Jicarilla Apache Reservation. Additionally, the approval of this action does not grant or imply approval of any off-lease or off-unit action. It is the responsibility of the applicant to obtain any required approval from the Surface Management Agency (BIA).

The operator, sub-contractor, and their employees are subject to the conditions of the Oil & Gas Operating Permit as per J.A.N.C Title 18 Chapter 9 §1-7. If you have questions please call the Permits Supervisor at (575) 759-3485 ext. 107.

SITE SPECIFIC STIPULATIONS

Surface location staked at 894 feet from the North line and 900 from the East line in Section 4, Township 29 North, Range 2 West, N.M.P.M. This location will be 250'x250' well pad with a 50 foot buffer around the well pad. This area is in pretty much flat area. Company will need to avoid all ponderosas. Cut and block all trees that will be cut and haul to Jicarilla tribal services. There is an Eagle Nests located on west side of the proposed access road and they are endangered species and recommends ½ mile buffer around. Eudane Vicenti, Director of Game & Fish would like the access route relocated. Company will reroute the access and pipeline. They will provide updated maps. The access road and pipeline will be rerouted to come straight from well pad to NM 64 to avoid all archeological site. Access road will be 12,358.92 feet in length and buried gas pipeline measuring 26,104.95 feet in length. The access road will enter the well pad area on the North side. Road will connect directly south side of US Highway 64. The access road width would be a total of 30 feet including 25 foot wide and 2.5 foot wide drainage ditches. The pipeline will be a total of 26,104.95 feet in length. The pipeline will leave the well pad to the north and follow the proposed access road along the south side of U.S. Highway 64, where it turns west and will parallel the fence and crosses to J-5 road then turns south and parallels the west side of J-5 Road. The pipeline will tie into an existing pipeline along the west side of J-5 road. Follow the natural contour to avoid large imprint and trees. The access road, well pad and pipeline are approved with all attached stipulations.

If you have any questions or concerns please contact the Technical and Research Division at (505) 759-3485 ext. 106. Thank you.

Sincerely,

Todd Osmera
Director

Attached: Oil & Gas Administration Conditions of Approval
Road Policy

STANDARD STIPULATIONS

A. GENERAL

1. Operator, sub-contractor, and their employees will conduct all operations in a professional workmanlike manner.

2. The lessee will be responsible for prompt payment for assessed damages and penalties.

3. The operator/sub-contractor shall minimize disturbance to existing fences and other improvements. The operator/sub-contractor will contact Jicarilla Oil and Gas Administration (JOGA) prior to disturbance and are required to have written authorization from JOGA Director.

4. When passing through an existing fence line, the fence will be H-braced on both sides of the passageway prior to cutting the fence. A cattle guard or gate will be installed as determined by JOGA.

5. The record title holder, lessee, operator, sub-contractor, and their employees will indemnify and hold harmless the Jicarilla Apache Nation and its authorized agents, employees, range unit operators, tribal members, and occupants against liability for loss of life, personal injury, and property damages arising from the construction, maintenance, occupancy or use of lands.

B. FORESTRY STIPULATIONS

1. All trees (commercial and woodland) greater than 6 inches DBH (diameter 4.5 feet above ground level) shall be cut not pushed over.

2. All stumps cut as low as possible, no higher than the diameter of the tree or 12" whichever is less.

3. Timber shall be left tree length, bucked at 6" top diameter, limbed (but flush with the bole), and stacked adjacent to the nearest access road.

4. Woodland (firewood) will be cut approximately 16" lengths and hauled to the Jicarilla Apache Nation Public Services facility in Dulce, NM. Contact Public Services at 575-759-4312 to make arrangements for placement at the facility in Dulce.

5. All slash (limbs, branches, stumps) will be lopped and scattered, chipped, buried or piled and burned. Contact the Branch of Forestry Fire Management Section at 575-759-3963 prior to any burning.

6. Stumps that are grubbed out of the ground shall be buried or placed in an arroyo as designated by BIA Forestry or BIA Natural Resources personnel.

7. Slash and debris will not be pushed up against residual trees.

C. WATER

1. All new oil and gas well production sites shall not infringe on existing water wells or water ponds (500 feet minimum)

2. All permeable zones containing fresh water and/or usable water shall be isolated and protected from contamination by cement circulated in place. Permeable zones in all formations, down to and including the Ojo Alamo are to be treated as aquifers containing usable water.

3. Water Resource improvement fund. All production companies drilling new oil and gas wells shall pay a fee in the amount of $2,000.00 to the Office of Water Administration to be used for the following:

   a. Water Testing (wells, ponds, etc.)

   b. Solar Well Production (wildlife, livestock, etc.)

   c. Pond, Dike Construction and Repair.

4. Only clean fresh water shall be used to drill or circulate cement in place. No produced water shall be approved for drilling, circulating or mixing of cement.

5. The Office of Water Administration shall be notified immediately of any contamination to aquifers caused by drilling or work done by industry. Notification of the Office of Water Administration shall also pertain to any hydrocarbons or contaminated water spilled to surface, such as produced water, drill pit fluids, etc.

6. Surface casing shall be no less than 500 feet. If for any reason 500-feet cannot be reached than cement shall be circulated to surface with intermediate casing.

D. WELL LOCATION

1. The top six inches of soil material will be stripped and stockpiled during construction of the well pad. Prior to reseeding, the stockpiled material will be used to reclaim the pad which includes the reserve pit and cut and fill slopes. Spreading will not be done when the ground or topsoil is frozen or wet.

2. Where applicable, the final cut and fill slope will be restored to the 3:1 ratio and/or Approximate Original Contour (AOC) and reseeded. To obtain this ratio, pits and slopes shall be back-sloped onto the pad upon completion of drilling. Construction slopes can be much steeper during drilling,

but will be recontoured to the above ratio during reclamation. Production equipment, including facilities associated with pipeline construction, shall be placed on location as not to interfere with reclaiming the cut and fill slopes to their proper ratio. If equipment is found to interfere with the proper reclamation of the slope, the company will be required to move equipment so proper recontouring can occur.

3. All liquid waste, completion fluids, and drilling products associated with oil and gas operations will be contained, removed, and deposited at a licensed disposal facility.

4. Compressor units, pump jacks, and other associated equipment require the containment of fluids.

5. Where applicable, berms will be constructed in order to contain 1.5 (one and one half) times the amount of fluids contained in the storage containers or the combined capacity of storage containers in the event more than one storage container was compromised. Berm walls will be compacted.

6. Where applicable, diversion ditches will be constructed above the cut slope draining away from the well pad. Drainage plan required for mitigation of erosion and non-point source pollution originating from development activities.

7. Where applicable, all above ground structures not subject to safety requirements will be painted by the lessee to blend with the natural color of the landscape. A reflective material will be used to reduce hazards when such structures are near J-roads.

8. When construction activity destroys a natural barrier used for livestock control, gaps thus opened will be fenced to prevent drift of livestock. The subject natural barrier shall be identified and fenced by the holder as per instructions of the JOGA Administrator.

E. PITS

1. Reserve pits will be lined with an impervious (welded or sealed) material at a minimum 15 mil thick. Reserve pits will be constructed so as not to leak, break or allow discharge of liquids or produced solids.

2. At least half of the capacity of the reserve pit must be in cut material.

3. The top of the outside wall of the pit will be smoothed-off with a minimum of one blade width. The pit will have adequate capacity to maintain 2 feet of free board. Reserve pits are not to be located in natural drainages.

4. Prior to closing the pit, the material must be allowed to dry, be pumped dry, or solidified in-situ prior to filling. The pit liner must be removed to the solids level and the liner will be cut off at the mud level. The excess liner will be removed and deposited at a licensed disposal facility.

5. All unguarded reserve, production, or blow pits which contain liquids will be fenced with six (6) feet high hog wire fencing. T-post spacing of twelve 12 feet. The corners will be raised and reinforced.

6. Drilling pits will be fenced on three sides. The fourth side will be fenced once the rig leaves the location.

7. Reserve pits will be closed and rehabbed 90 days after completion. All reserve pits remaining open after 90 days are required to have written authorization from JOGA/BIA. Liquids in pits will be allowed to evaporate or be properly disposed of prior to filling and recontouring. Aeration of pit fluids must be confined within pit area.

8. Upon completion of the well, the reserve pit may be covered with screening or netting and remain covered until the pit is reclaimed.

9. To protect migratory birds and other wildlife, all permanent production tanks and pits, regardless of diameter used for containment of produced water, oil, or condensate, will be screened, netted or otherwise covered.

10. Under no circumstances will pits be trenched (cut) or filled (squeezed) while still containing fluids.

11. The pit area will be covered with enough additional material to allow for settling, or mounded, in order to create a positive surface drainage.

F. ROADS

1. Adhere to the Jicarilla Apache Nation's Roads Policy while on the Jicarilla Apache Indian Reservation.

2. Performing construction maintenance activities outside the approved access road is not allowed.

3. Access roads will not be restricted to travel. Gates and cattle guards will not be locked or closed by the operator without written authorization from JOGA Director.

4. Maintain access roads so that user traffic remains within BIA approved right-of-way.

5. Road maintenance will include drainage dips, turnout ditches, crowning, out sloping/in sloping, low water crossings, and vehicle turnouts. Cattle guards and culverts will be cleaned, repaired, or replaced when necessary.

6. Crowning and ditching on both sides of the road is required. The crown shall have a grade of approximately two percent (2%) (i.e., two-inch crown on a 14-foot-wide road). The road cross section will conform to the BLM Gold Book guidelines.

7. The operator shall be responsible for dust abatement. Reseed any disturbed area using the following designated seed mixture and to the specifications given in the RESEEDING AND ABANDONMENT section below.

8. Unless otherwise approved in writing by the JOGA Administrator, drainage dip for the location for grades over two percent (2%) shall be determined by the BLM Gold Book.

9. Where applicable, drainage control shall be ensured over the entire road through the use of borrow ditches, drainage dips, out sloping, in sloping, natural rolling topography, and/or turnout ditches. Every drainage dip shall drain water into an adjacent turnout ditch.

10. Unless otherwise approved in writing by the JOGA Director, all turnout ditches shall be graded to drain water with one percent (1%) minimum to three percent (3%) maximum ditch slope as determined by the BLM Gold Book.

11. Construct low water crossing in a manner that will prevent any blockage or restriction of the existing channel.

12. No borrow material including sand, gravel, or other related materials on the Nation's land will be used in construction or upgrade of roads, well sites, etc., without prior written authorization from the JOGA Director/BIA.

13. Roads and road segments, where serious erosional damage has occurred, will be promptly repaired in order to ensure the safety and welfare of the Nation and the public. The action will include oversight by JOGA and the BIA – Jicarilla Agency.

14. Access roadway edge will not be constructed within ten (10) feet of pipeline center. This added precaution will allow for the maintenance of the access road.

G. PIPELINE

1. The operator/subcontractor shall mark the exterior boundaries of the ROW with stake and/or lath at 200-foot intervals. The tops of the stakes and/or laths will be painted and/or flagged. The survey station numbers will be marked on the boundary stakes and/or laths at the entrance and exit.

2. The operator/subcontractor shall maintain all boundary stakes and/or laths in place until final cleanup and restoration is completed. The stakes and/or laths will then be removed.

3. Maintain a minimum of ten (10) feet of undisturbed surface between fence lines and roads that are constructed parallel to fences.

4. The operator/sub-contractor will recontour the disturbed area to re-establish the approximate original contours of the land in the right-of-way. Specifically, the surface overlying the excavated areas will be mounded to account for settling. If the settling of soil occurs, then the site will be addressed. The pipeline ROW will have water-bars constructed to avoid erosion.

5. Unless otherwise approved in writing by the JOGA Director, drainage dip for the location for grades over two percent (2%) shall be determined by the BLM Gold Book.

6. All above ground structures not subject to safety requirements will be painted by the operator/sub-contractor to blend with the natural color of the landscape. A reflective material will be used to reduce hazards when such structures are near J-roads.

7. Reseed all disturbed areas (except the driving surface and road shoulders) using the following designated seed mixture and to the specifications given in the RESEEDING AND ABANDONMENT section below. Disturbed areas shall be reseeded within one year of final construction.

8. The operator/sub-contractor will prevent exposure of pipeline as per 25 CFR 169 requirements.

9. Pipeline exposures, where serious erosional damage has occurred, will be promptly attended to in order to ensure the safety and welfare of the Nation and the public. The action will include oversight by JOGA and the BIA – Jicarilla Agency.

H. PIPELINE EROSION CONTROL

1. Operator will be responsible for erosion control on any pipeline installation and ROW for the lifetime of the lease.

2. Erosion controls will be installed immediately following clean up and backfilling. Erosion controls will provide long-term stability to the right-of-way, prevent excessive soil erosion, and divert water to stable areas adjacent to the pipeline. Erosion control devices will be especially maintained until re-vegetation of adjacent ROW is considered successful or the area is stabilized.

3. Water bars, rock diversions, silt fences, or straw waddles should be used as needed at operator's preference and as agreed upon through JOGA C&E or BIA compliance inspection.

4. Suggested water bar spacing:

Water Bar Spacing		
Grade	Low to non-erosive soils	Erosive soils
0-5%	245′	130′
6-10%	200′	100′
11-15%	150′	65′
16-20%	115′	50′
21-30%	100′	40′
>31%	50′	30′

I. DRAINAGE CROSSINGS

1. Where swales and flow patterns intersect the pipeline, erosion control methods such as natural fiber matting, wattles or cobble shall be installed to reduce erosion.
2. Check dams may be used as needed up and/or downstream of pipeline to control erosion.

Rock Check Dam Spacing for Various Dam Heights
(after USDA NRCS WY specs, http://wy.nrcs.usda.gov)

Channel Slope %	Rock Check Dam Spacing (feet)		
	1 Ft High dam	2 ft high dam	3 ft high dam
<2	100	200	300
2-5	40	80	120
5-10	20	40	60
10-15	13	25	40
15-20	10	20	30
>20	Not recommended		

J. CATHODIC PROTECTION

1. Prior to construction activity for a cathodic protection system, the operator is required to obtain a permit from the Jicarilla Apache Water Administration.

K. CULTURAL RESOURCES

1. Discovery of Cultural Resources in the Absence of Monitoring: If, in its operations, operator/sub-contractor discovers any unidentified historic or prehistoric cultural resources, the work in the vicinity of the discovery will be suspended. The discovery will be promptly reported to the Cultural Resource Office. The Surface Managing Agency (BIA) will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, the plan will then be executed. In the absence of an approved plan, the Surface Managing Agency (BIA) will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section, 800.11. Minor recordation, stabilization, or data recovery may be performed by the Surface Managing Agency or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/sub-contractor prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until required treatment is completed. Failure to notify the Surface Managing Agency about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

2. Discovery of Cultural Resources during Monitoring: If monitoring confirms the presence of previously unidentified cultural resource, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the Surface Managing Agency (BIA) who will then specify what action is to be taken. If there is an approved "discovery plan"

in place for the project, then the plan will be executed. In the absence of an approved plan, the Surface Managing Agency will evaluate the significance of the discovery and consult with the appropriate Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by the Surface Managing Agency (BIA) or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/sub-contractor prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed. Failure to notify Surface Managing Agency (BIA) about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

3. Damage to Sites: If, in its operation, operator/sub-contractor damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/sub-contractor agrees, at their expense, to have a permitted cultural resources consultant prepare and have executed a Surface Managing Agency (BIA) approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

4. If the Archeological Survey Report is greater than fifteen (15) years old, a new report is required in order to provide adequate protection of sensitive areas.

L. ENVIRONMENTAL

1. Construction sites shall be maintained in a sanitary condition at all times. Waste materials at the site will be removed and deposited at a licensed disposal facility. Waste refers to all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, produced water, ashes, and equipment.

2. Air and water quality standards or related facility siting standards established by or pursuant to applicable Federal Laws will not be violated.

3. Use of pesticides and herbicides will comply with applicable Federal and Tribal laws. Pesticides and herbicides will be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, sub-contractors will obtain written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary, from the BIA Natural Resources. Emergency use of pesticides shall be approved in writing by the BIA Natural Resources prior to use.

4. The operator/sub-contractor is responsible for weed control and selective control of invasive weeds on disturbed and reclaimed areas within the limits of the well pad, associated road, and pipeline right-of-way (ROW). The operator/sub-contractor is responsible for consultation with the Environmental Protection Office (EPO) for acceptable weed control methods within limits imposed in the COA.

5. Oil and gas development activities will not infringe within five hundred (500) feet of existing water wells, water ponds, or major water ways.

6. All permeable zones containing fresh water and/or usable water shall be isolated and protected from contamination by circulating cement in place in accordance to 43 CFR Section 3126.5-2 (d).

M. THREATENED AND ENDANGERED SPECIES

1. If, in its operation, operator/sub-contractor discovers any Threatened/Endangered/Sensitive Species - Plant/Animal, the work in the vicinity of the discovery will be suspended and the discovery promptly reported to the Surface Managing Agency (BIA). The Authorized Officer will then specify what action is to be taken. Failure to notify the Surface Managing Agency (BIA) about a discovery that leads to the take of a listed species may result in civil or criminal penalties in accordance with the Endangered Species Act of 1973 (as amended).

N. RESEEDING AND MULCHING

1. All surface areas disturbed during drilling activities and not in use for production activities will be reseeded and mulched. Any stockpiled topsoil on location will be used in the reseeding effort. The goal of reseeding is the successful revegetation of the site. If, in the opinion of the Surface Managing Agency (BIA), the seeding is unsuccessful, the operator/subcontractor will be required to make subsequent seedings.

2. Prior to developing the site location, all topsoil should be stockpiled separately when the site is disturbed. Upon completion of the project the disturbed area should be recontoured to its original shape wherever possible and the topsoil evenly distributed. Disking will enhance the seedbed preparation if large clods are present. If the soil is rocky or too much debris is apparent, avoid disking and broadcast the seed.

3. Seeding types vary from dead litter cover, rangeland, critical area treatment, pasture, hay land, etc. Oil and Gas impacts should be treated as critical area treatment sites because of the potential for increased soil erosion and introduction of noxious weed infestations. Sloped areas 4:1 or flatter will be treated by using a suitable seed drill for seeding. Slopes steeper than 4:1, but less than 3:1 will include hand raking or chain harrowing to cover seed to a depth of ¼" to ½". Steep slope seeding will be applied to slopes greater than 3:1 as follows: seed and fertilizer will be applied on the slope by a hydroseeder and the appropriate mulch will be applied immediately afterward.

4. Certified weed free straw mulch (i.e. barley, wheat, oat, etc.) will be uniformly applied at a rate of 1.5 tons (3,000#) per acre on slopes greater than 4:1. Mulch will be applied the same day to those areas where the seed and fertilizer are in place. Mulch anchoring will utilize an approved commercial liquid tackifier at a sufficient rate to prevent mulch from moving due to winds or turbulence caused by traffic on adjacent roadways. Also, mulch can be anchored on slopes < 4:1 by lightly crimping with a disk. Do not use grass hay for mulch.

5. Soil retention blankets (i.e. jute netting, American Excelsior blankets, or an approved equal) will be required on locations where it is impractical to use a tackifier or crimper to anchor the mulch. This method will apply to severe slopes, remote sites, or other areas prone to excessive erosion. Blankets will be anchored by using 8" x 1" x 8" "U" shaped steel staples of 0.091 minimum diameter and spaced per the manufacturer's recommendation. Blankets will be laid from top to bottom on the slopes with seams running vertically and lapped as specified by the manufacturer.

6. In conformance with the BIA - Jicarilla Agency and Jicarilla Apache Nation's Environmental Protection Office (EPO), the following recommended seed mixtures will be applied

NORTH OF T26N Seed Mix

Species	Variety	PLS/A**
Western wheatgrass	Arriba or Barton	3.2
Arizona Fescue	Redondo	1.0
Intermediate Wheatgrass	Amur or Oahe	2.25
Smooth Brome	Manchar	1.95
Galleta (caryopsis)	Viva	0.6
Spike Muhly	El Vado	0.45
Rocky Mtn. Penstemon	Bandera	0.1
Small burnet	Delar	2.0
	Total	11.55

SOUTH OF T27N Seed Mix

Species	Variety	PLS/A**
Blue Grama	Hachita	0.6
Galleta	Viva	0.8
Indian Ricegrass	Paloma or Nezpar	1.1
Western Wheatgrass	Arriba or Barton	3.2
Pubescent Wheatgrass	Luna	2.1
Crested Wheatgrass	Ephraim or Hycrest	1.5
Blue Flax	Appar	0.3
Palmar Penstemon	Cedar	1.0
	Total	10.60

Jicarilla Apache Nation-Game & Fish Mesa Seed Mix

SPECIES	LBS/PER/ACRE	Total #
Sandberg Bluegrass	2	2
Indian Rice grass Rimrock	2	2
Lewis Flax	0.5	0.5
Small Burnet	1	1
UT Sweet vetch	0.25	0.25

Antelope Bitterbrush	2	2
Sand Drop seed	0.5	0.5
Mountain Mahogany	2	2
Side oats Grama	3.3	3.3
Blue Gramma	3.3	3.3
Galleta	3.3	3.3
	Total	20.15

Southwest Seed Inc. (970) 565-8722 Phone (970) 565-2576 Fax

* Recommended seeding rate will be doubled if seed is applied by broadcasting or hydroseeding.

** Pure Live Seed (PLS) = Purity x (Germination + Hard Seed) x Total Bulk#
Example: 25# PLS = 50% Purity x (35% Germ + 15% dormant) x 100# bulk

7. Fertilizer may be applied to location if deemed necessary.

8. Whenever possible, seed will be planted approximately ½" to ¾" deep with a suitable seed drill on a firm seedbed free of weeds and litter. If seed is broadcast then double the recommended rate and drag with a harrow, rail, or chain link fence to obtain adequate soil contact. Defer from grazing for two complete growing seasons. Do not seed when wet conditions exist.

9. Seed mixture used must be certified weed free. There will be NO primary or secondary noxious weeds in seed mixture. Seed labels from each bag shall be available for inspection while seed is being sown.

10. Seeding may be accomplished between July 1 and October 14 annually (other dates may be requested and approved on a case-by-case basis with BIA/JOGA approval). Seeding will be repeated if a satisfactory stand is not obtained as determined by BIA/JOGA upon evaluation after the second growing season.

11. Mulch/cover seeded area following seeding.

O. ABANDONMENT

1. The location will be recontoured in a manner that resembles the original topography of the site prior to development activities.

2. At the time of abandonment of the well location, the retention of the access road will be determined by JOGA.

3. If, upon abandonment of wells, the retention of access road is not considered necessary for the management and multiple-use of the natural resources, it will be ripped a minimum of 12" in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead-end ditch and earthen barricade at the entrance to these ripped areas. Reseeding of affected areas will be required.

4. An inspection will be held within 30 days of final plugging between a representative of JOGA and the operator to determine an acceptable rehabilitation plan. The plan will include, but not be limited to, removal of equipment, removal of drainage structures, and removal of surfacing materials, re-contour of topsoil, and reseeding. The rehabilitation will be complete within 30 days of the inspection, considering weather or season is not a limiting factor.

5. The JOGA will notify the BIA the reclamation effort is completed. A final inspection of the location will be conducted by BIA. The BIA will recommend final approval of the procedure to the BLM.

P. CONTACT INFORMATION

For wells within the exterior boundaries of the Jicarilla Apache Nation, the operator can contact: Jicarilla Oil & Gas Administration, P.O. Box 146, Dulce, NM 87528 at (575) 759-3485.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDI AFFAIRS
JICARILLA AGENCY
P.O. BOX 167
DULCE, NEW MEXICO 87528

IN REPLY REFER TO:
Office of the
Superintendent

APR 1 6 2010

Notice to Industry
Roads Policy
All Companies operating on the Jicarilla Apache Nation Lands

Companies' responsibility for operation and maintenance (O&M) activities of Roads utilized on the Jicarilla Apache Nation Lands

The Jicarilla Apache Nations Roads System has been degrading due to operations of individuals and companies involved in the oil and gas industry on the Jicarilla Apache Nation Lands. Many roads have become nearly impassable even outside of inclement weather conditions. Therefore, in order to protect Jicarilla Apache Nation Lands and enforce regulations, lease terms, APD conditions of approval, Onshore Oil and Gas Orders, Notices to Lessees, and orders and instructions of the authorized officer, BIA is establishing a new roads policy.

Objective:

- To emphasize when Industry utilizes any Jicarilla Apache Nation road in the performance of required operations, all roads must be maintained by the operator in a safe and environmentally responsible manner.
- The operator shall meet the requirements of BLM Onshore Order No. 1 (Surface Use Plan of Operations, 2a and b) and BLM **Gold Book, Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, Fourth Edition—Revised 2007.**
- When access involves the use of existing roads, operators must obtain approval and may be required to upgrade the roads, contribute to road maintenance funds, or participate in road maintenance agreements.
- When operations are deemed necessary during Inclement Weather and result in damage to roads, operators are required to repair the roads as needed as weather permits. *See Farmington Field Office, BLM Inclement Weather Road Compliance Guidelines, February 2010.*
- All operators need to submit a updated road maintenance plan.

In order to meet the above objectives operators shall submit a road maintenance plan for all roads that are used in their zone of operations. The maintenance plan will contain provisions for maintaining the traveled way, protection of the roadway features, requirements for road management, and the method to be used in carrying out maintenance activities. Maintenance activities normally required include monitoring, blading, surface replacement, dust abatement, spot repairs, slide removal, ditch

ning, cattleguard cleaning or repair, culvert cleaning, litter cleanup, noxious weed control, and snow removal. When applicable, specific areas shall be identified in the road maintenance plan for disposal of slide material, borrow or quarry sites, stockpile or other uses that are needed for the project. A key maintenance consideration includ regular inspections; reduction of ruts and holes; maintenance of crowns and outslope to keep water off the road; replacement of surfacing materials; clearing of sediment blocking ditches and culverts; maintenance of interim reclamation; and noxious weed control. Blade only when necessary and avoid blading established grass and forb vegetation in ditches and adjacent to the road. Ensure that maintenance operators ha proper training and understand the surface management agency's road maintenance objectives.

Authorized users may perform their share of road maintenance, enter into road maintenance agreements administered by the users, or may be required to deposit sufficient funds with the BIA to provide for their share of maintenance. If the road has only one permitted user, other than incidental use by others, that user may have total responsibility for maintenance.

All operators will submit an updated road maintenance plan. Failure to comply with th policy will result in enforcement actions under 25 CFR §211.55 Penalties.

Sincerely,

Superintendent

THE JICARILLA APACHE NATION

P.O. BOX 507 • DULCE, NEW MEXICO • 87528-0507

September 28, 2021

U.S. Department of the Interior
Bureau of Indian Affairs, Southwest Region
ATTN: Patricia L. Mattingly, Regional Director
Division of Environmental, Safety, and Cultural Resource Management, MC-620
1001 Indian School Road, N.W.
Albuquerque, NM 87104-2303

Re: Section 106 Consultation for BlackHawk Energy Corporation Proposed Jicarilla San Jose 2A Well Pad, Access Road, and Pipeline, Jicarilla Apache Tribal Lands

Dear Ms. Mattingly,

Thank you for consulting with our office per 36 CFR 800 in your letter of September 14, 2021 regarding effects to historic properties from the proposed BlackHawk Energy, Corp. Jicarilla San Jose 2A well pad, access road, and pipeline on Jicarilla Apache tribal lands in Sections 28, 29 and 33 of T30N, R2W. The project is to construct and operate a new natural gas well, associated pipeline, and access road. The project will also require some modifications of existing roads.

We believe you have taken adequate steps to identify historic properties in the area of potential effect (APE) based on the results of the *Cultural Resource Inventory: BlackHawk Energy Corp. Proposed Jicarilla San Jose 2A Well Pad, Access Road, and Pipeline, Rio Arriba County, New Mexico* (NMCRIS No. 148466, 08/12/21), prepared by Jeffrey A. Adams of Interior West Consulting. The report documents six (6) previously unrecorded archaeological sites (LA199470-5) and seven (7) isolated occurrences (IO's).

We concur that:

- Sites LA199471 and LA199473 are eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion D;
- Sites LA199472 and LA199475 are eligible for the NRHP under Criteria A and D; and
- Sites LA199470 and LA199474 are not NRHP-eligible.

Sites LA199470 and LA199474 and the 7 IO's will require no further management.

We concur with your finding of *no adverse effect* for this undertaking given the following stipulations.

- The proposed pipeline will bisect the southeastern edge of Site LA199471 within an area of existing disturbance along J-5. A 100' long protective fence shall be constructed as indicated in Figure 3 of Adams 2021. Pipeline construction shall be limited to the area of existing disturbance along J5, and archaeological monitoring will be required.
- The eastern portion of Site LA199472 is bisected by J5. There is an existing stock fence that restricts access to the western two-thirds of the site. Pipeline construction shall be limited to the area of existing disturbance along J5, and archaeological monitoring will be required.
- Site LA199473 shall be avoided by all project activities.
- Site LA199475 is a linear resource that will be crossed by the pipeline/access road in four locations as indicated in Figure 7 of Adams 2021. At each of these locations there is existing disturbance. Project activities shall be limited to these disturbed area, and archaeological monitoring will be required for all construction within 100' of the site.
- Please contact our office regarding reporting requirements for archeological monitoring.
- In the event of the inadvertent discovery of cultural deposits or human remains during project activities, all ground disturbing activities shall be halted within 100' of the discovery and our office contacted immediately.

If you have questions, please contact me at (575) 756-8659 or jblythe@jan-nsn.com.

Sincerely,

Jeffrey Blythe, Tribal Historic Preservation Officer

Cc: Daniel Manus, BlackHawk Energy (email)
Cascindra Harrison, APD Specialist, JOGA (email)
Emelene Baltazar, Director, Cultural Affairs (email)
Erin Laughlin, Regional Archaeologist, BIA SW Region (email)
President Edward Velarde

Hydrogen Sulfide Drilling Operation Plan

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within three days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training sessions shell include a review of the site-specific H2S drilling Operation Plan and the Public Protection Plan

II. H2S Safety Equipment and Systems

Note: All H2S safety equipment and systems (if necessary) will be installed, tested, and operational when drilling reaches a depth of 500 feet above the three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

1. Well control equipment:
    a. Choke manifold with a minimum of one remote choke.
    b. Blind rams and pipe rams to accommodate all pipe sizes with the properly sized closing unit.
2. Protective Equipment for essential personnel
    a. Mark II Surniveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.
3. H2S detection and monitoring equipment:
    a. Two portable H2S monitors will be positioned on location for best coverage and response.
4. Visual warning systems:
    a. Wind direction indicators as shown on the well site diagram.

   b. Caution/Danger signs shall be posted on roads providing direct access to the location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

5. Mud program:
   a. The mud program is designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S zones.
6. Metallurgy:
   a. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
   b. All elastomers used for packing and seals shall be H2S trim.
7. Communication:
   a. Cellular telephone communications in company vehicles and on the drilling rig
8. Well testing:
   a. Drilling stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drilling stem testing will conduct during daylight hours, and formation fluids will not flow to the surface. All drill stem testing operations conducted in an H2S environment will use the closed chamber method of testing.

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials:

Construction Materials description:

Construction Materials source location

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drill cutting and fresh water mud

Amount of waste: 147 barrels

Waste disposal frequency : Weekly

Safe containment description: we use a steel containment container (size 8ft wide x 20ft long x 6ft sides) with open top and the container is lined with 5-7 mil liner material to hold any mud liquids of the cuttings.
Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: EnviroTech Landfarm #2 , #43 Rd 7175, Bloomfield, NM 87413 Permit# NM01-0011. 13 Miles south of Bloomfield, NM on US Highway 550.

Waste type: SEWAGE

Waste content description: Portable Restroom

Amount of waste:

Waste disposal frequency : One Time Only

Safe containment description: A sealed self-contained portable restroom.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Approved disposal sewage facility

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling or completion operations will be contained in a portable trash basket and hauled to an approved disposal facility. No toxic waste or hazardous chemicals will be produced by this operation
Amount of waste: gallons

Waste disposal frequency : Daily

Safe containment description: An animal-proof self-contained trash basket with locks

Safe containmant attachment:

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
07/11/2022

APD ID: 10400078916 **Submission Date:** 09/23/2021

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
6870254	SAN JOSE	7787	1520	1520	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 2000

Equipment: 3M 11 inch B.O.P.E

Requesting Variance? NO

Variance request:

Testing Procedure: BOPs and choke manifold will be installed and pressure tested before drilling out under surface casing (subsequent pressure test will be performed whenever pressure seals are broken) and then will be checked daily as to mechanical operating condition. BOP's will be pressure tested at least once every 30 days. Ramtype preventors and related pressure control equipment will be pressure tested to 1,000 psi. Annular type preventor will be pressure tested to 50% of the rated working pressure, not to exceed 1,000 psi. All casing strings will be pressure tested to 0.22 psi/ft. or 1,500 psi, whichever is greater, not to exceed 70% of internal yield. BOP to be either double gate rams or an annular preventor as per Onshore Order No. 2.

Choke Diagram Attachment:

3M_BOPE___Choke_Manifold_Diagram__1___1__20210819102815.docx

BOP Diagram Attachment:

3M_BOPE___Choke_Manifold_Diagram__1___1__20210819102827.docx

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	8.75	7.0	NEW	API	N	0	250	0	250	7787	7537	250	J-55	20	ST&C	1.125	1	DRY	1.8	DRY	1.8
2	PRODUCTION	6.25	4.5	NEW	API	N	0	2000	0	2000	7787	5787	2000	J-55	10.5	ST&C	1.125	1	DRY	1.8	DRY	1.8

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Safety_Factors___Federal_Standard_model___program___surface_casing_Jicarilla_29_02_04_SJ__2__20210818103223.pdf

Casing ID: 2 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Safety_Factors___Federal_Standard_model___program___Production_casing_Jicarilla_29_02_04_SJ__1__20210818103428.pdf

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead	250	0	250	66	1.15	15.8	38	100	Type III or Class G	with additives
PRODUCTION	Lead	2000	0	2000	229	1.52	14.2	349	70	Type II or Class G	with additives

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with Onshore Order No. 2 for 3M systems. A remote accumulator will be used. Pressures, capacities, location of remote hydraulic and manual controls will be identified at the time of the BLM supervised BOP test.

Describe the mud monitoring system utilized: Mud monitoring will be visually observed

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	250	WATER-BASED MUD	8.5	8.5							
250	2000	WATER-BASED MUD	8.5	8.6						15	

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Resistivity/Conductivity - Neutron/Density
Possible DST - None anticipated. Drill stem tests may be run on shows of interest

List of open and cased hole logs run in the well:

CEMENT BOND LOG,GAMMA RAY LOG,SPONTANEOUS POTENTIAL LOG,CALIPER,DIRECTIONAL SURVEY,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 620 **Anticipated Surface Pressure:** 179

Anticipated Bottom Hole Temperature(F): 120

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S_Revised_20210908123330.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

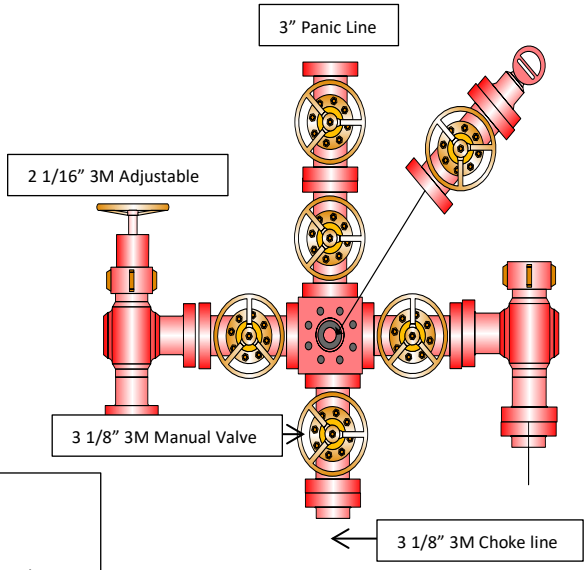
Other proposed operations facets description:

Completion -
The location pad will be of sufficient size to accommodate all completion activities and equipment. The well will be perforated based on log results. The well may be acid stimulated or frac stimulated if needed. A string of 2-3/8" J-55 4.7#/ft tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted

Other proposed operations facets attachment:

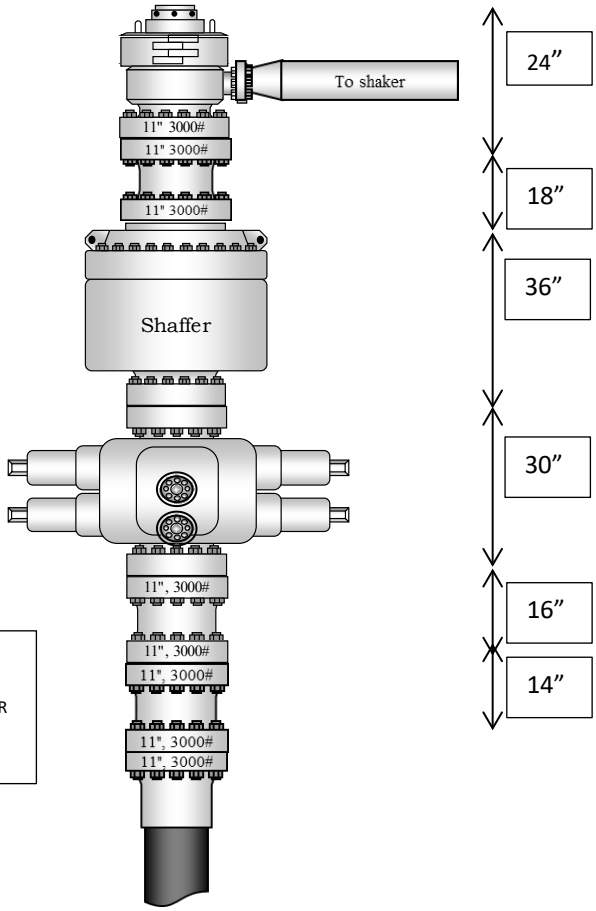
Other Variance attachment:

3M 11” B.O.P.E Diagram



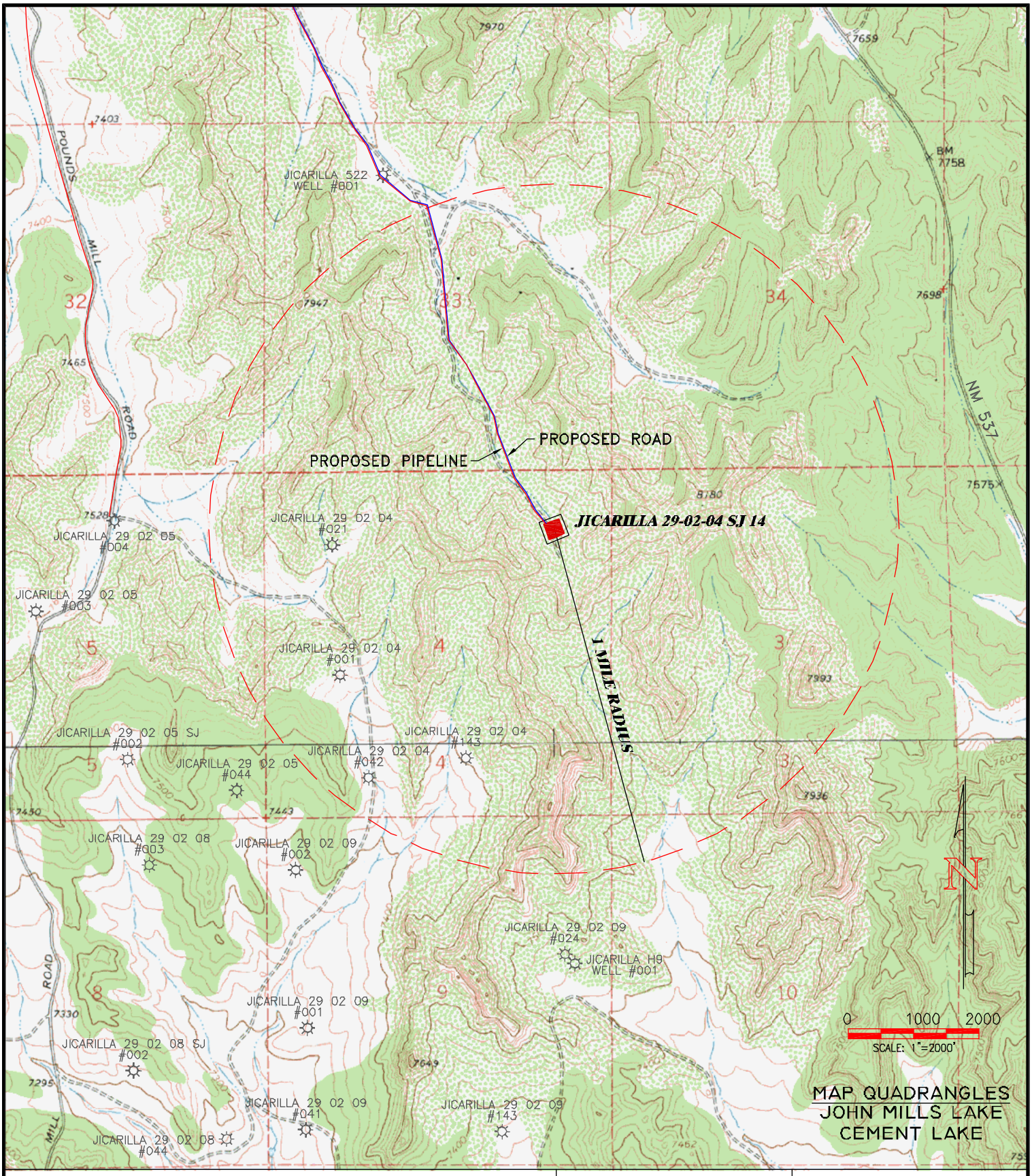
Choke Diagram for a 3,000psi system

- Features all 3 1/8” 3M Manual Valves
- Two 2 1/16” Manual Adjustable Choke Valves
- 3” Panic Line and 2” Vent lines
- (2) 3 1/8” 3M Coflex Hose f/Choke to BOP



11” 3,000psi BOP

- Choke Side has (1) manual 3 1/8” Valve (1) HCR
- Kill Side has (2) 2 1/16” Manual Valve and (1) check valve



LEASE: JICARILLA 29-02-04 SJ 14

FOOTAGES: 894' FNL, 900' FEL, SEC. 4

TOWNSHIP: 29 N RANGE: 2 W N.M.P.M.

LAT: 36.7589825° N LONG: 107.0421167° W (NAD83)

ELEVATION: 7787

BLACKHAWK ENERGY CORP.

UNITED FIELD SERVICES INC.
P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

SURVEYED: 09/14/20	REV. DATE:	APP. BY: J.A.V.
DRAWN BY: K.S.	DATE DRAWN: 05/27/21	FILE NAME: 11446-WELLS

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
07/11/2022

APD ID: 10400078916 **Submission Date:** 09/23/2021

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
6870254	SAN JOSE	7787	1520	1520	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 2000

Equipment: 3M 11 inch B.O.P.E

Requesting Variance? NO

Variance request:

Testing Procedure: BOPs and choke manifold will be installed and pressure tested before drilling out under surface casing (subsequent pressure test will be performed whenever pressure seals are broken) and then will be checked daily as to mechanical operating condition. BOP's will be pressure tested at least once every 30 days. Ramtype preventors and related pressure control equipment will be pressure tested to 1,000 psi. Annular type preventor will be pressure tested to 50% of the rated working pressure, not to exceed 1,000 psi. All casing strings will be pressure tested to 0.22 psi/ft. or 1,500 psi, whichever is greater, not to exceed 70% of internal yield. BOP to be either double gate rams or an annular preventor as per Onshore Order No. 2.

Choke Diagram Attachment:

3M_BOPE___Choke_Manifold_Diagram__1___1__20210819102815.docx

BOP Diagram Attachment:

3M_BOPE___Choke_Manifold_Diagram__1___1__20210819102827.docx

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	8.75	7.0	NEW	API	N	0	250	0	250	7787	7537	250	J-55	20	ST&C	1.125	1	DRY	1.8	DRY	1.8
2	PRODUCTION	6.25	4.5	NEW	API	N	0	2000	0	2000	7787	5787	2000	J-55	10.5	ST&C	1.125	1	DRY	1.8	DRY	1.8

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Safety_Factors___Federal_Standard_model___program___surface_casing_Jicarilla_29_02_04_SJ__2__20210818103223.pdf

Casing ID: 2 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Safety_Factors___Federal_Standard_model___program___Production_casing_Jicarilla_29_02_04_SJ__1__20210818103428.pdf

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead	250	0	250	66	1.15	15.8	38	100	Type III or Class G	with additives
PRODUCTION	Lead	2000	0	2000	229	1.52	14.2	349	70	Type II or Class G	with additives

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with Onshore Order No. 2 for 3M systems. A remote accumulator will be used. Pressures, capacities, location of remote hydraulic and manual controls will be identified at the time of the BLM supervised BOP test.

Describe the mud monitoring system utilized: Mud monitoring will be visually observed

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	250	WATER-BASED MUD	8.5	8.5							
250	2000	WATER-BASED MUD	8.5	8.6						15	

Operator Name: JICARILLA APACHE ENERGY CORPORATION

Well Name: JICARILLA 29-02-04 SJ **Well Number:** 14

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Resistivity/Conductivity - Neutron/Density
Possible DST - None anticipated. Drill stem tests may be run on shows of interest

List of open and cased hole logs run in the well:

CEMENT BOND LOG,GAMMA RAY LOG,SPONTANEOUS POTENTIAL LOG,CALIPER,DIRECTIONAL SURVEY,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 620 **Anticipated Surface Pressure:** 179

Anticipated Bottom Hole Temperature(F): 120

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S_Revised_20210908123330.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

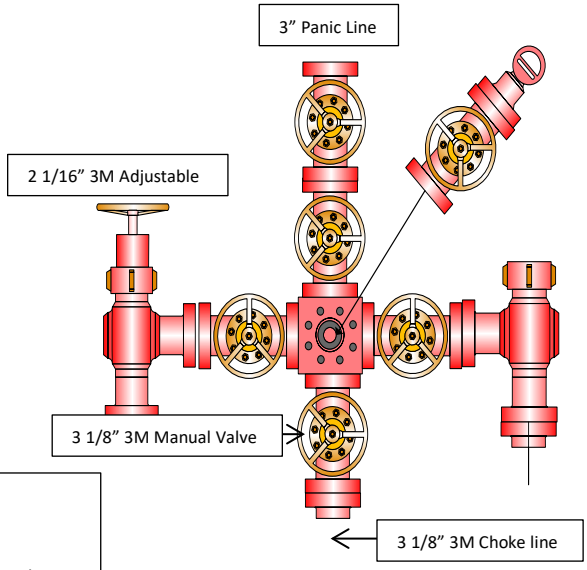
Other proposed operations facets description:

Completion -
The location pad will be of sufficient size to accommodate all completion activities and equipment. The well will be perforated based on log results. The well may be acid stimulated or frac stimulated if needed. A string of 2-3/8" J-55 4.7#/ft tubing will be run for a flowing string. A Sundry Notice will be submitted with a revised completion program if warranted

Other proposed operations facets attachment:

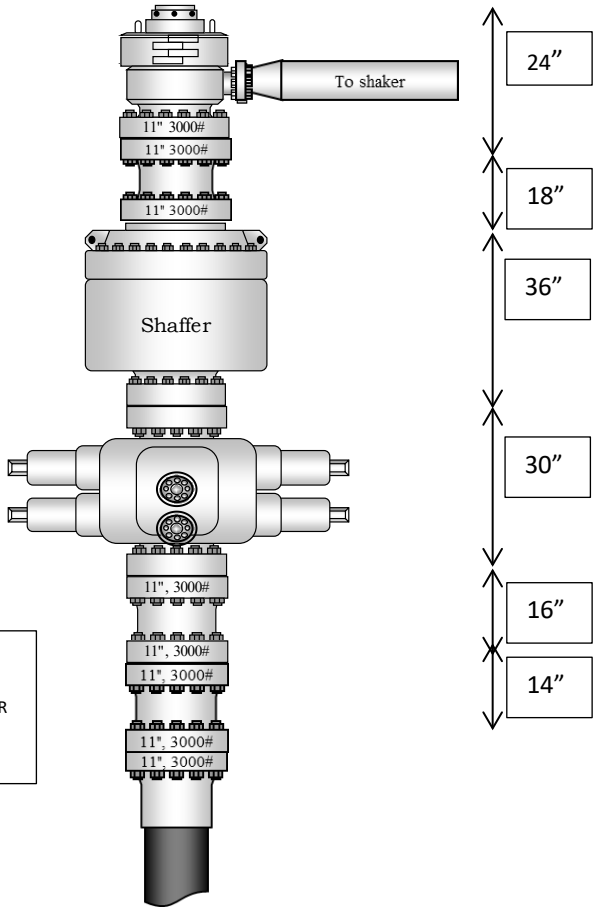
Other Variance attachment:

3M 11” B.O.P.E Diagram



Choke Diagram for a 3,000psi system

- Features all 3 1/8” 3M Manual Valves
- Two 2 1/16” Manual Adjustable Choke Valves
- 3” Panic Line and 2” Vent lines
- (2) 3 1/8” 3M Coflex Hose f/Choke to BOP



11” 3,000psi BOP

- Choke Side has (1) manual 3 1/8” Valve (1) HCR
- Kill Side has (2) 2 1/16” Manual Valve and (1) check valve

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 124723

CONDITIONS

Operator: JICARILLA ENERGY CO P.O. 1048 Farmington, NM 87401	OGRID: 11859
	Action Number: 124723
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	7/14/2022
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	7/14/2022
kpickford	Cement is required to circulate on both surface and production strings of casing	7/14/2022
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	7/14/2022