

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

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		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30-039-31427
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.

(Continued on page 2)

*(Instructions on page 2)



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) 748-1883 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 478-3480 Fax: (505) 478-3482

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 30-039-31427	² Pool Code 48450	³ Pool Name OTERO GALLUP
⁴ Property Code 326978	⁵ Property Name ELK	⁶ Well Number 306H
⁷ GRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6479

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
E	19	24 N	5 W	LOT 2	1904	NORTH	365	WEST	RIO ARRIBA

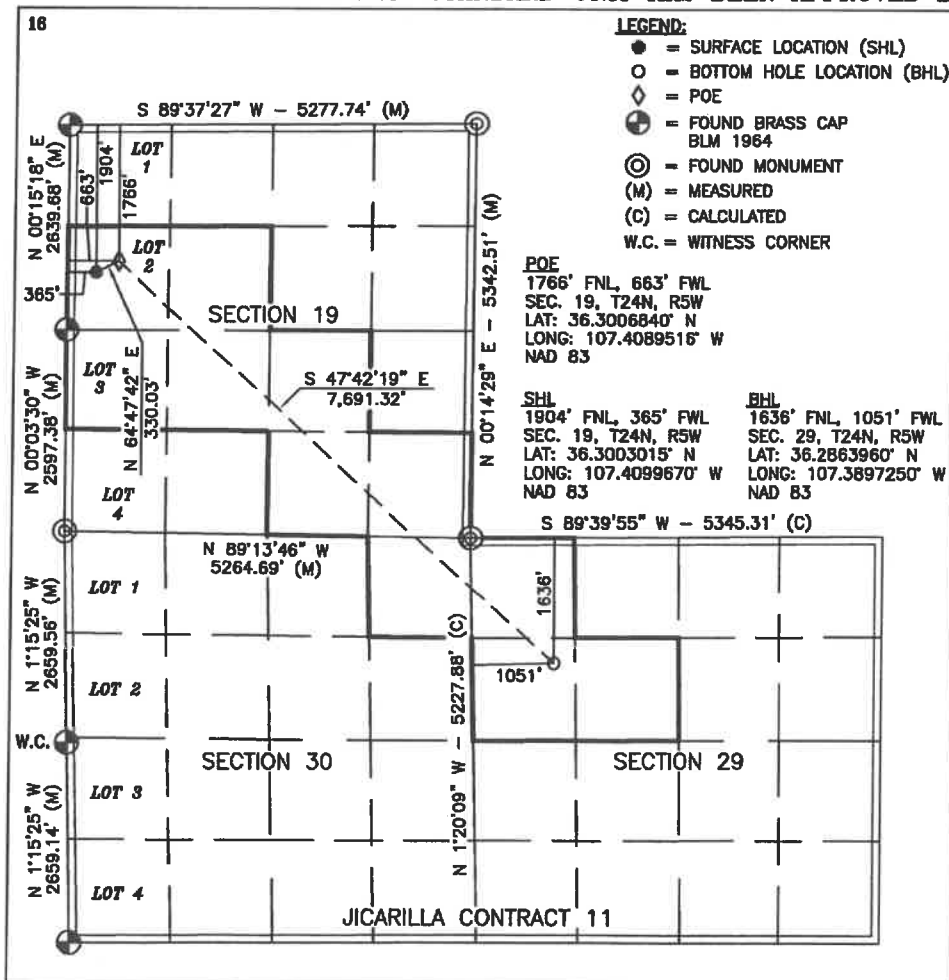
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	29	24 N	5 W		1636	NORTH	1051	WEST	RIO ARRIBA

¹² Dedicated Acres
SEC. 19=LOT 2 (40.68), LOT 3 (40.64), SE/4NW/4, NE/4SW/4, W/2SE/4, SE/4SE/4
SEC. 30=NE/4NE/4; SEC. 29=W/2NW/4, SE/4NW/4
TOTAL = 441.32 ACRES

¹³ Joint or Infill¹⁴ Consolidation Code¹⁵ Order No.

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

**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.

Shaw-Marie Ford 11/24/20
Signature Date

Shaw-Marie Ford
Printed Name

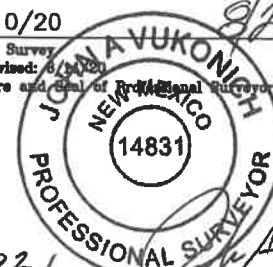
sford@djrlc.com
E-mail Address

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.

3/10/20

Date of Survey
Plat Revised: 8/1/2020
Signature and Seal of Professional Surveyor:

14831
Certificate Number

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: DJR Operating, LLC **OGRID:** 371838 **Date:** 07 / 15 / 2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Elk 306H	TBD	E-19-24N-05W	1904' FNL x 365' FWL	300	450	180
Elk 308H	TBD	E-19-24N-05W	1904' FNL x 385' FWL	300	450	110

IV. Central Delivery Point Name: Chaco Processing Plant [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Elk 306H	TBD	10/04/2022	10/14/2022	11/27/2022	12/04/2022	12/05/2022
Elk 308H	TBD	10/05/2022	10/15/2022	11/27/2022	12/05/2022	12/06/2022

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@djrlc.com
Date: 07/15/2022
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
ELK 306H and 308H
SWNW E-19-24N-05W

SEPARATION EQUIPMENT

DJR Operating, LLC (DJR) has pulled representative pressurized samples from wells in the same producing formation. DJR has utilized these samples in process simulations to determine the amount of gas anticipated in each stage of the process and utilized this information with a safety factor to size the equipment listed below:

Separation equipment will be set as follows:

- Individual 3 phase separator will be set for the individual well.
- The separator will be sized based on the anticipated volume of the well and the pressure of the lines utilized for oil, gas, and water takeaway.
- The 3 phase production separator will be equipped with a 0.75 MMBtu/hr indirect fired heater.

Heater treaters will be set as follows:

- Individual heater treaters will be set for the individual well.
- The heater treaters are sized based on the anticipated combined volume of oil and produced water predicted to come from the initial 3 phase separator.
- Oil will be separated from the produced water and the oil/produced water will be sent to its respective tanks.
- The combined oil and natural gas stream is routed to the Vapor Recovery Tower.

Vapor Recovery Equipment will be set as follows:

- The Vapor Recovery Tower has been sized, based on the anticipated volume of gas from the heater treater and oil and water tanks.
- The Vapor Recovery Unit has been sized, based on the anticipated volume of gas from the heater treater and oil and water tanks. The Vapor Recovery Unit is utilized to push the recovered gas into the sales pipeline.

Production storage tanks will be set as follows:

- The oil and produced water tanks utilize a closed vent capture system to ensure all breathing, working, and flashing losses are routed to the Vapor Recovery Tower and Vapor Recovery Unit.
- Each of the production storage tanks will be equipped with a 0.5 MMBtu/hr indirect heater.



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
ELK 306H and 308H
SWNW E-19-24N-05W

VENTING and FLARING

DJR Operating, LLC (DJR) has a natural gas system available prior to startup of completion operations. DJR utilizes a Vapor Recovery Unit System and sells all natural gas except during periods of startup, shutdown, maintenance, or malfunction for the gas capturing equipment, including the vapor recovery tower, vapor recovery unit, storage tanks, and pipelines.

Currently, DJR utilizes the following from list A-I of Section 3 for its operations to minimize flaring:

- a) DJR utilizes natural gas-powered generators to power its leases where grid power isn't available.
- b) When electrical grid power is unavailable, natural gas generators will be used for major equipment onsite.
- c) DJR's in service compression will be natural gas powered.
- d) Should liquids removal, such as dehydration be required, units will be powered by natural gas.

DJR will only flare gas during the following times:

- Scheduled maintenance for gas capturing equipment including:
 - Vapor Recovery Tower
 - Vapor Recovery Unit
 - Storage tanks
 - Pipelines
 - Emergency flaring



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
ELK 306H and 308H
SWNW E-19-24N-05W

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

DJR Operating, LLC (DJR) understands the requirements of NMAC 19.15.27.8 which states that the venting and flaring of natural gas during drilling, completion or production that constitutes waste as defined in 19.15.2 are prohibited.

19.15.27.8 B. Venting and flaring during drilling operations

- DJR shall capture or combust natural gas if technically feasible during drilling operations using best industry practices.
- A flare stack with a 100% capacity for expected volumes will be set on location of the facility at least 100 feet from the nearest surface hole location, well heads, and storage tanks.
- In the event of an emergency, DJR will vent natural gas in order to avoid substantial impact. DJR shall report the vented or flared gas to the NMOCD.

19.15.27.8 E. Venting and flaring during completion or recompletion operations

During Completion Operations, DJR utilizes the following:

- DJR facilities are built and ready from day 1 of Flowback.
- Individual well test separators will be set to properly separate gas and liquids. Temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline. See Separation Equipment for details.
- Should the facility not yet be capable of processing gas, or the gas does not meet quality standards, then storage tanks will be set that are tied into gas busters or temporary flare to manage natural gas. This flare would meet the following requirements:
 - 1) An appropriately sized flare stack with an automatic igniter.
 - 2) DJR analyzes the natural gas samples twice per week.
 - 3) DJR routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met.
 - 4) DJR provides the NMOCD with pipeline specifications and natural gas data.



19.15.27.8 D. Venting and flaring during production operations

During Production Operations DJR will not vent or flare natural gas except under the following circumstances:

1. During an emergency or malfunction
2. To unload or clean-up liquid holdup in a well to atmospheric pressure, provided:
 - a. DJR does not vent after the well achieves a stabilized rate and pressure.
 - b. DJR will remain present on-site during liquids unloading by manual purging and take all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time.
 - c. DJR will optimize the system to minimize natural gas venting on any well equipped with a plunger lift or auto control system.
 - d. Best Management Practices will be used during downhole well maintenance.
3. During the first year of production from an exploratory well provided:
 - a. DJR receives approval from the NMOCD.
 - b. DJR remains in compliance with the NM gas capture requirements.
 - c. DJR submits an updated C-129 form to the NMOCD.
4. During the following activities unless prohibited:
 - a. Gauging or sampling a storage tank or low-pressure production vessel.
 - b. Loading out liquids from a storage tank.
 - c. Repair and maintenance.
 - d. Normal operation of gas activated pneumatic controller or pump.
 - e. Normal operation of a storage tank but not including venting from a thief hatch.
 - f. Normal operation of dehydration units.
 - g. Normal operations of compressors, compressor engines, turbines, valves, flanges, and connectors.
 - h. During a bradenhead, packer leakage test, or production test lasting less than 24-hours.
 - i. When natural gas does not meet the gathering pipeline specifications.
 - j. Commissioning of pipelines, equipment, or facilities only for as long as necessary to purge introduced impurities.

19.15.27.8 E. Performance standards

1. DJR has utilized process simulations with a safety factor to design all separation and storage equipment. The equipment is routed to a Vapor Recovery System and utilizes a flare as back up for periods of startup, shutdown, maintenance, or malfunction of the VRU System.
2. DJR will install a flare that designed to handle the full volume of vapors from the facility in case of the VRU failure and it is designed with an auto ignition system.
3. Flare stacks will appropriately sized and designed to ensure proper combustion efficiency.



- a. Flare stacks installed or replaced will be equipped with an automatic ignitor or continuous pilot.
 - b. Previously installed flare stacks will be retrofitted with an automatic ignitor, continuous pilot, or technology that alerts DJR of flare malfunction within 18 months after May 25, 2021.
 - c. Flare stacks replaced after May 25, 2021, will be equipped with an automatic ignitor or continuous pilot if located at a well or facility with average daily production of 60,000 cubic feet of natural gas or less.
 - d. Flare stacks will be located at least 100 feet from the well and storage tanks and securely anchored.
4. DJR will conduct an AVO inspection on all components for leaks and defects on a weekly basis.
 5. DJR will make and keep records of AVO inspections which will be available to the NMOCD for at least 5 years.
 6. DJR may use a remote or automated monitoring technology to detect leaks and releases in lieu of AVO inspections with prior NMOCD approval.
 7. Facilities will be designed to minimize waste.
 8. DJR will resolve emergencies as promptly as possible.

19.15.27.8 F. Measurement or estimation of vented and flared natural gas

1. DJR will have meters on both the low- and high-pressure sides of the flares and the volumes will be recorded in DJR's SCADA system.
2. DJR will install equipment to measure the volume of flared natural gas that has an average daily production of 60,000 cubic feet or greater of natural gas.
3. DJR's measuring equipment will conform to the industry standards.
4. The measurement system is designed such that it cannot be bypassed except for inspections and servicing meters.
5. DJR will estimate the volume of vented or flared natural gas using a methodology that can be independently verified if metering is not practicable due to low flow rate or pressure.
6. DJR will estimate the volume of flared and vented natural gas based on the results of an annual GOR test for wells that do not require measuring equipment reported on Form C-116.
7. DJR will install measuring equipment whenever the NMOCD determines that metering is necessary.



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
ELK 306H and 308H
SWNW E-19-24N-05W

BEST MANAGEMENT PRACTICES

DJR Operating, LLC (DJR) utilizes the following Best Management Practices to minimize venting during active and planned maintenance.

DJR has a closed vent capture system to route emissions from the heater treater, tanks, and vapor recovery to the vapor recovery unit with an enclosed combustion device (ECD) for backup. The system is designed such that if the vapor recovery unit is taken out of service for any reason, the vapors will be routed to the ECD for combustion.

DJR will isolate and attempt to route all vapors to the vapor recovery unit or ECD prior to opening any lines for maintenance to minimize venting from the equipment.

DJR shall notify the NMOCD of venting or flaring that exceeds 50 MCF but less than 500 MCF in volume that either resulted from an emergency or malfunction, or an event lasting over eight hours or more cumulatively within any 24-hour period from a single event by filing a form C-129 no later than 15 days following the discovery or commencement of venting or flaring.

DJR shall notify the NMOCD verbally or by e-mail within 24-hours following discovery or commencement of venting or flaring that exceeds 500 MCF in volume or otherwise qualifies as a major release as defined in 19.15.29.7 NMAC from a single event and provide the information required in form C-129 to the NMOCD no later than 15 days that verifies, updates, or corrects the verbal or e-mail notification.

DJR will install measuring equipment to conform to industry standards such as American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) Chapter 14.10 Measurement of Flow to Flares.

DJR's measuring equipment shall not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

DJR shall report the volume of vented and flared natural gas for each well or facility at which venting or flaring occurred on a monthly basis.

Rev 0



DRILLING PLAN

Elk #306H

Rio Arriba County, New Mexico

Surface Location

365-ft FWL & 1904-ft FNL
 Sec 19 T24 N R5 W
 Graded Elevation 6479' MSL
 RKB Elevation 6493 (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.3003015° N
 Longitude 107.4099670° W

Kick Off Point for Horizontal Build Curve

4743-ft MD
 4704-ft TVD

Local Coordinates (from SHL)

535-ft North
 199-ft West

Heel Location (Pay zone entry)

663-ft FWL & 1766-ft FNL
 Sec 19 T24 N R5 W

Heel Geographical Coordinates (NAD-83)

Latitude 36.300684° N
 Longitude 107.40895160° W

Bottom Hole Location (TD)

1070-ft FWL & 1629-ft FNL
 Sec 29 T24 N R5 W

BHL Geographical Coordinates (NAD-83)

Latitude 36.286396° N
 Longitude 107.3897250° W

Well objectives

This well is planned as a 7690-ft lateral in the Gallup B sand.

Bottom Hole temperature and pressure

The temperature in the Gallup B horizontal objective is 143°F. Bottom hole pressure in the Gallup B is forecast to be 1985 psi.

Formation Tops (Sd = Sand; Sh = Shale; Siltstone = Slt, Coal = C; W = water; O = oil; G = gas; NP = no penetration)

Name	MD (ft)	TVD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)	Planned Mud Weight (ppg)
Ojo Alamo	1546	1538	Sd	W	8.3	8.4 – 8.8
Kirtland	1737	1727	Sh	-	8.3	8.4 – 8.8
Fruitland	1856	1845	C	G	8.3	9.0 - 9.5
Pictured Cliffs	2097	2083	Sd	W	8.3	9.0 - 9.5
Lewis	2169	2155	Sh	-		9.0 - 9.5
Chacra	2913	2892	Sd	-	8.3	9.0 - 9.5
Menefee	3695	3666	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4329	4294	Sd	-	8.3	9.0 - 9.5
Mancos	4501	4464	Sh	-		9.0 - 9.5
Mancos Silt	4995	4953	Slt	O/G	6.6	9.0 - 9.5
Gallup A	5543	5358	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5693	5405	Sd	O/G	6.6	8.8 - 9.0
Gallup C	NP	NP	Sd	O/G	6.6	8.8 - 9.0
Target	5825	5418	Sd	O/G	6.6	8.8 - 9.0

Casing Program

Casing OD	Hole Size	Weight (#/ft)	Grade	Coupling	MD Top	MD Bottom	TVD Top	TVD Bottom	Top of Cement
9-5/8"	12-1/4"	36	K-55	STC	surf	350	surf	350	surface
7"	8-3/4"	26	K-55	LTC	surf	5766	surf	5416	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	5488	13516	5333	5387	5488

Note: all casing will be new

Rev 0



Casing Design Load Cases

		Casing String		
Description		9-5/8" Surface	7" Intermediate	4-1/2" Production Liner
Collapse	Full internal evacuation ¹	✓	✓	✓
	Cementing	✓	✓	✓
Burst	Pressure test	✓ ²	✓ ²	✓
	Gas kick		✓ ³	
	Fracture at shoe, 1/3 BHP at surface		✓ ⁴	
	Injection down casing			✓ ⁵
Axial	Dynamic load on casing coupling ⁶	✓	✓	✓
Axial	Overpull ⁷	✓	✓	✓

Note

- 1 Fluid level at shoe, air column to surface, pore pressure outside
- 2 Tested to 80% of minimum internal yield with freshwater inside, pore pressure outside
- 3 50 bbl kick at TD, 0.50 ppg intensity, 4" drill pipe, 9.0 ppg mud, fracture gradient at shoe
- 4 2060 psi BHP, 687 psi surface pressure, 12.5 ppg EMW shoe integrity
- 5 Surface stimulation pressure of 8000 psi on 8.3 ppg fluid column. Stimulation will be down frac string, so load does not apply to 7" intermediate casing.
- 6 Shock load from abrupt pipe deceleration, evaluated against coupling rating
- 7 Overpull values as follows: Surface casing 20,000 lbs, Intermediate & Production 100,000 lbs

Casing Design Factors

		Design Factors			
Casing string	Casing OD	Burst	Collapse	Axial	Triaxial
Surface	9-5/8"	1.25	13.38	8.16	1.56
Intermediate	7"	1.25	1.50	1.68	1.34
Production liner	4-1/2"	1.37	3.68	1.88	1.69

Cement Design

9-5/8" Surface Casing

	<u>Lead</u>
Name	Redi-Mix
Type	I-II
Planned top	Surface
Density (ppg)	14.50
Yield (cf/sx)	1.61
Mix water (gal/sx)	7.41
Volume (sx)	114
Volume (bbls)	33
Volume (cu. ft.)	185
Excess %	50

7" Intermediate Casing

	<u>Lead</u>	<u>Tail</u>
	BJ Services	BJ Services
Type	III	Poz/G
Planned top	Surface	4243-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	413	244
Volume (bbls)	172	65
Volume (cu.ft.)	966	364
Excess %	55	55



Rev 0

4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	5488-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	675
Volume (bbls)	188
Volume (cu.ft)	1055
Excess %	40

Wellhead & Pressure Control

The well head will be an 11" 5M multi-bowl system. A 3M BOPE conforming to Onshore Order #2 will be installed on the surface casing. The BOP and accumulator will meet API 16D and 16E respectively.

A PVT mud monitoring system and a trip tank will be rigged up and operational for all hole intervals. An electronic geolograph will be employed to monitor and record drilling data (ROP, WOB, SPM, Pressure, RPM and torque).

Mud Program

Surface hole will be drilled with a fresh water, native mud system. In intermediate hole, a low weight 7% KCl LSND drilling fluid will be used, with KCl providing chemical stability for the young shales and clays present in the interval. In production hole a LSND system with polymer and lubricant additives is programmed. Sufficient drill water and mud additives will be on hand to maintain adequate pit volumes and maintain well control.

Hole Section	Fluid type	Interval (MD)	Density (ppg)	Funnel Viscosity	Yield Point	Fluid Loss (cc/30 min)
Surface	Fresh water spud mud	0 – 350	8.4 – 8.8	32 – 44	2 – 12	NC
Intermediate	7% KCl Low solids, non-dispersed	350 – 5766	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5766 – 13516	8.8 – 9.2	34 – 38	6 – 8	6 – 8

Cores, tests and logs

Wellbore surveying: Drift (inclination only) surveys will be obtained in surface hole. MWD directional surveys will be taken in intermediate and production hole.

Logging while drilling: None in surface hole. MWD GR in intermediate and production hole.

Mud logging: a two-person mud logging unit with C1 – C4 gas analysis will be operational in intermediate and production hole.

Electric logging: No open hole electric logs are programmed. A cased hole GR/CCL will be run during completions for perforating depth control.

Cuttings and drilling fluids management

A closed loop, steel tank-based circulating system will be used. In addition to the rig solids control equipment, a dewatering centrifuge and chemical flocculation system will be operational to strip solids from the whole mud. All solids will be collected in 3-sided bins and will then be put into transports with a bucket loader. Drying agents will be used if necessary. The solids will be taken to a licensed commercial disposal facility. Whole mud will be dewatered back to drill water and used as make up for subsequent wells or hauled off for disposal. A diagram of the closed loop system is included.

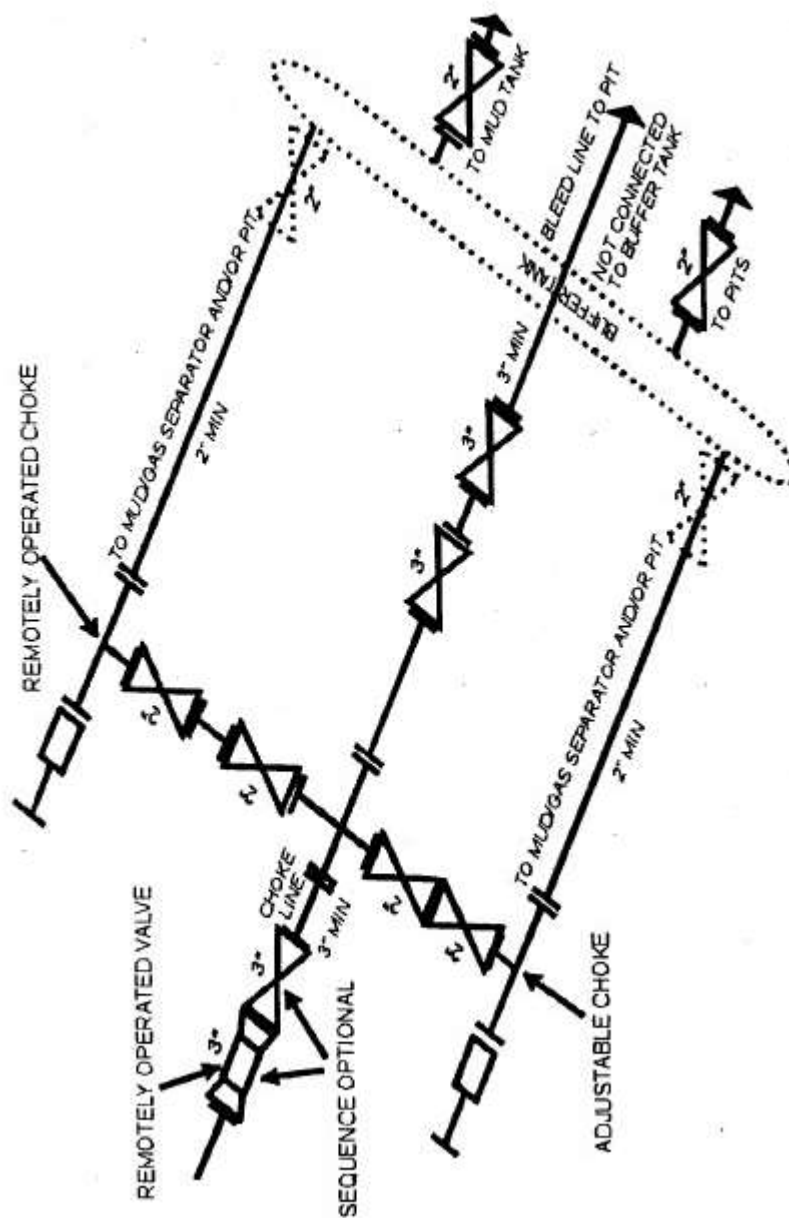
Completion

It is envisioned that this well will be completed with a multi-stage sand frac, using the plug and perf technique. After drilling out the plugs, the current plan is to install a 2-7/8" plunger-assisted gas lift tubing string. The stimulation and completion plan will be sundried at a later date.



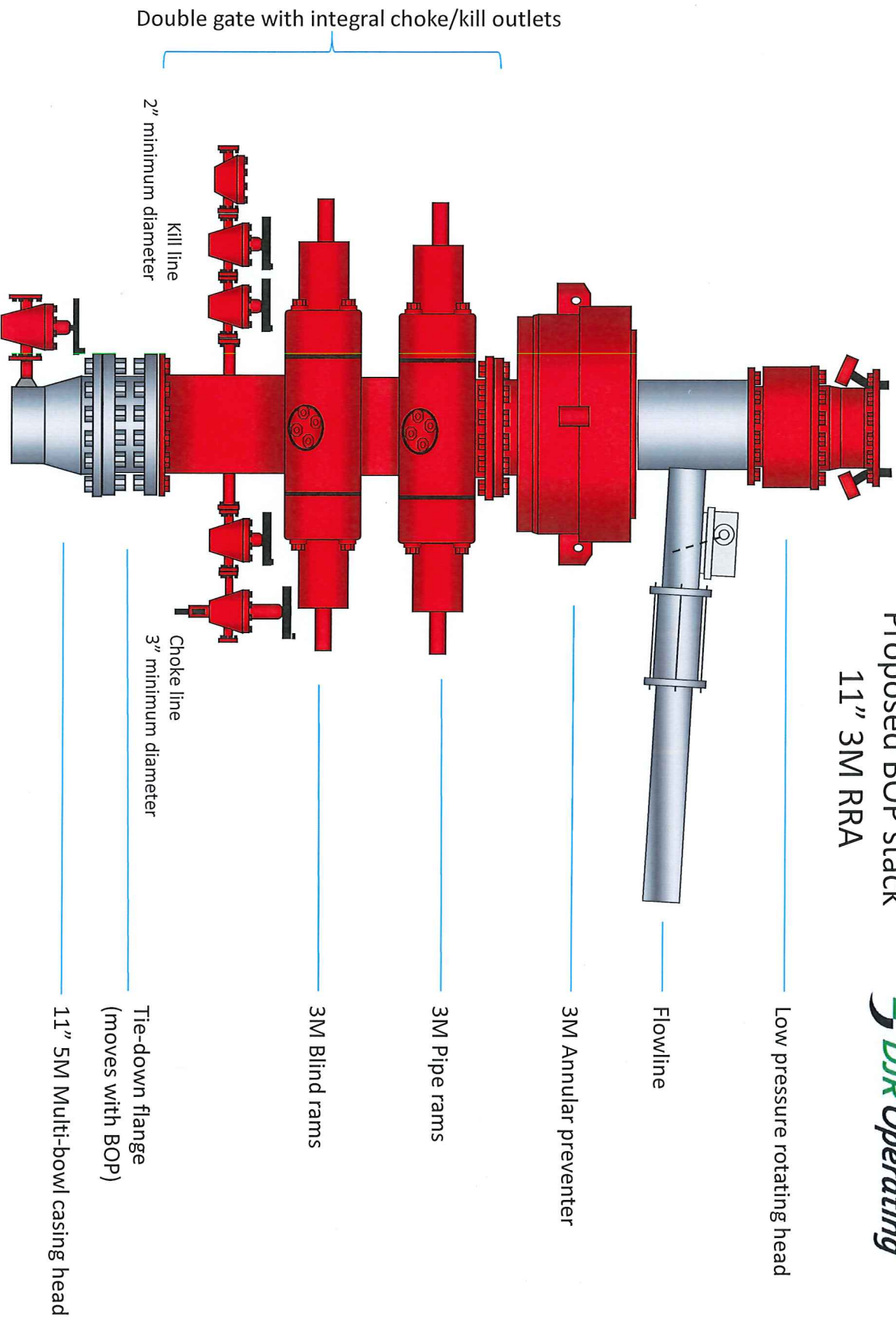
Choke Manifold

Actual system to conform with Onshore Order 2

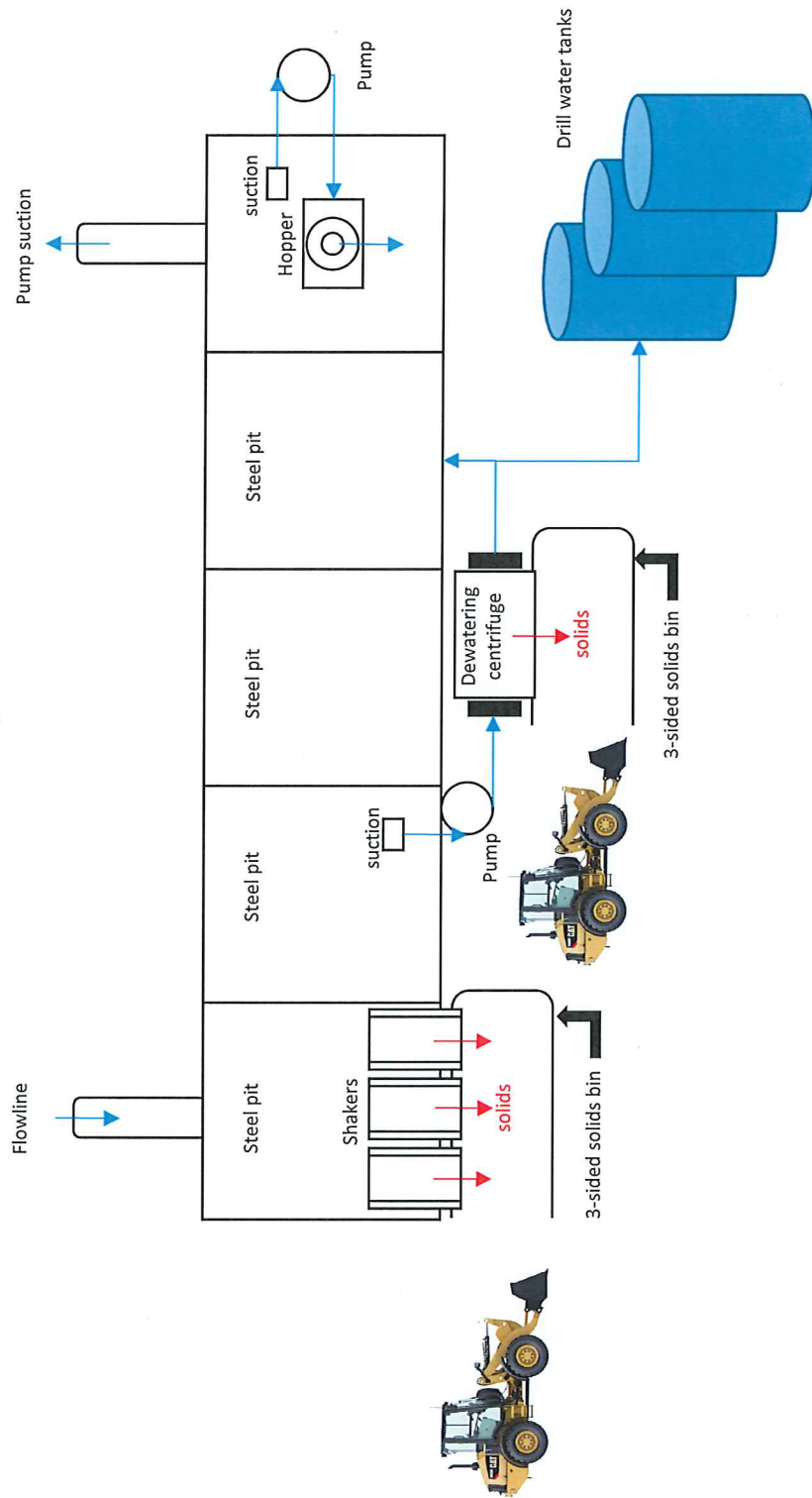




Proposed BOP stack 11" 3M RRA



Closed Loop Mud System





Company: DJR Operating
Project: Proposed Elk Unit
Site: Little Largo Pad 1
Well: # 306H
Wellbore: Original Drilling
Design: APD

WELL DETAILS: # 306H

GL 6479' & RKB 14' @ 6493.00usft			
+N/-S	+E/-W	Northing	Longitude
0.00	0.00	1928882.36	-107.40996705

DESIGN TARGET DETAILS

Time	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
306H Heel	5418.00	139.24	299.22	1929022.90	2848140.53	36.30068400	-107.40895160
306H Toe	5387.00	-5061.44	5965.73	1923847.06	2853829.74	36.28639600	-107.38972500

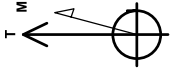
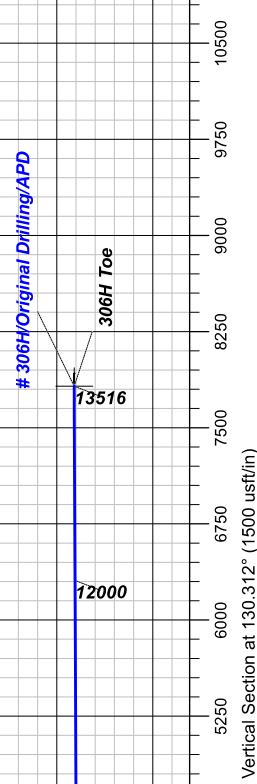
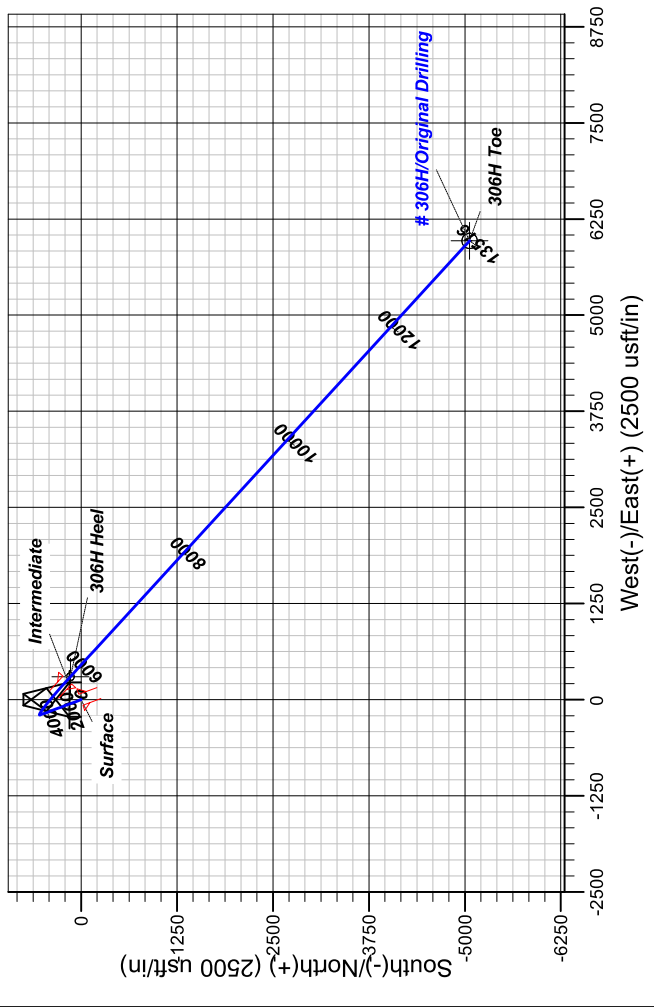
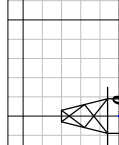
PROJECT DETAILS: Proposed Elk Unit

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: True

Plan: APD (# 306H/Original Drilling)	
Created By:	Janie Collins
Date:	17:55, June 24 2020

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
425.00	0.00	0.000	425.00	0.00	0.00	0.00	0.00	0.00	
822.92	7.96	338.591	821.64	25.86	-8.62	2.00	339.59	-24.07	
4143.33	17.96	339.591	4143.33	536.59	-18.62	2.00	152.91	138.53	306H Heel
5387.00	90.23	132.545	5387.00	-5061.44	5965.73	0.00	0.00	7823.56	306H Toe



Azimuths to True North:
Magnetic North: 8.22°
Magnetic Field
Strength: 49353
Dip Angle: 62.22°
Date: 6/17/2020
Model: HDGM_FIE

CASING DETAILS

TVD	MD	Na
350.00	350.00	Surface
5415.58	5766.40	Intermed

FORMATION DETAILS

MDPath	Formation
1538.00	Ojo Alamo
1727.00	Kirtland
1845.00	Fruitland
2083.00	Pictured Cliffs
2155.00	Lewis
2892.00	Chacra
3666.00	Menefee
4294.00	Point Lookout
4464.00	Mancos
4953.00	Mancos Silt
5358.00	Gallup A
5405.00	Gallup B



DJR Operating

**Proposed Elk Unit
Little Largo Pad 1
306H - Slot 1**

Original Drilling

Plan: APD

Standard Planning Report

24 June, 2020





Lonestar Consulting, LLC
Planning Report



Database:	DJR	Local Co-ordinate Reference:	Well # 306H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Project:	Proposed Elk Unit	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site:	Little Largo Pad 1	North Reference:	True
Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Project	Proposed Elk Unit		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Little Largo Pad 1				
Site Position:		Northing:	1,928,882.69 usft	Latitude:	36.30030220
From:	Lat/Long	Easting:	2,847,861.95 usft	Longitude:	-107.40989910
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.25 °

Well	# 306H - Slot 1					
Well Position	+N/-S	-0.25 usft	Northing:	1,928,882.36 usft	Latitude:	36.30030152
	+E/-W	-20.02 usft	Easting:	2,847,841.93 usft	Longitude:	-107.40996705
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	6,479.00 usft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	6/17/2020	8.52	62.80	49,353.40000000

Design	APD			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	130.312

Plan Survey Tool Program	Date	6/24/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,516.01	APD (Original Drilling)	MWD+HDGM
				OWSG MWD + HDGM

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
425.00	0.00	0.000	425.00	0.00	0.00	0.00	0.00	0.00	0.00	
822.92	7.96	339.591	821.64	25.86	-9.62	2.00	2.00	0.00	339.59	
4,743.37	7.96	339.591	4,704.33	534.59	-198.91	0.00	0.00	0.00	0.00	
5,824.64	90.23	132.545	5,418.00	139.24	299.22	9.00	7.61	14.15	152.71	306H Heel
13,516.01	90.23	132.545	5,387.00	-5,061.44	5,965.73	0.00	0.00	0.00	0.00	306H Toe



Lonestar Consulting, LLC

Planning Report



Database:	DJR	Local Co-ordinate Reference:	Well # 306H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Project:	Proposed Elk Unit	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site:	Little Largo Pad 1	North Reference:	True
Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
425.00	0.00	0.000	425.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	1.50	339.591	499.99	0.92	-0.34	-0.86	2.00	2.00	0.00
600.00	3.50	339.591	599.89	5.01	-1.86	-4.66	2.00	2.00	0.00
700.00	5.50	339.591	699.58	12.36	-4.60	-11.50	2.00	2.00	0.00
800.00	7.50	339.591	798.93	22.97	-8.55	-21.38	2.00	2.00	0.00
822.92	7.96	339.591	821.64	25.86	-9.62	-24.07	2.00	2.00	0.00
900.00	7.96	339.591	897.98	35.86	-13.34	-33.38	0.00	0.00	0.00
1,000.00	7.96	339.591	997.02	48.84	-18.17	-45.45	0.00	0.00	0.00
1,100.00	7.96	339.591	1,096.05	61.81	-23.00	-57.53	0.00	0.00	0.00
1,200.00	7.96	339.591	1,195.09	74.79	-27.83	-69.61	0.00	0.00	0.00
1,300.00	7.96	339.591	1,294.13	87.77	-32.66	-81.68	0.00	0.00	0.00
1,400.00	7.96	339.591	1,393.16	100.74	-37.48	-93.76	0.00	0.00	0.00
1,500.00	7.96	339.591	1,492.20	113.72	-42.31	-105.84	0.00	0.00	0.00
1,600.00	7.96	339.591	1,591.24	126.70	-47.14	-117.91	0.00	0.00	0.00
1,700.00	7.96	339.591	1,690.27	139.67	-51.97	-129.99	0.00	0.00	0.00
1,800.00	7.96	339.591	1,789.31	152.65	-56.80	-142.07	0.00	0.00	0.00
1,900.00	7.96	339.591	1,888.35	165.62	-61.63	-154.14	0.00	0.00	0.00
2,000.00	7.96	339.591	1,987.39	178.60	-66.45	-166.22	0.00	0.00	0.00
2,100.00	7.96	339.591	2,086.42	191.58	-71.28	-178.30	0.00	0.00	0.00
2,200.00	7.96	339.591	2,185.46	204.55	-76.11	-190.37	0.00	0.00	0.00
2,300.00	7.96	339.591	2,284.50	217.53	-80.94	-202.45	0.00	0.00	0.00
2,400.00	7.96	339.591	2,383.53	230.51	-85.77	-214.53	0.00	0.00	0.00
2,500.00	7.96	339.591	2,482.57	243.48	-90.60	-226.60	0.00	0.00	0.00
2,600.00	7.96	339.591	2,581.61	256.46	-95.42	-238.68	0.00	0.00	0.00
2,700.00	7.96	339.591	2,680.64	269.43	-100.25	-250.76	0.00	0.00	0.00
2,800.00	7.96	339.591	2,779.68	282.41	-105.08	-262.83	0.00	0.00	0.00
2,900.00	7.96	339.591	2,878.72	295.39	-109.91	-274.91	0.00	0.00	0.00
3,000.00	7.96	339.591	2,977.75	308.36	-114.74	-286.99	0.00	0.00	0.00
3,100.00	7.96	339.591	3,076.79	321.34	-119.57	-299.06	0.00	0.00	0.00
3,200.00	7.96	339.591	3,175.83	334.32	-124.39	-311.14	0.00	0.00	0.00
3,300.00	7.96	339.591	3,274.86	347.29	-129.22	-323.22	0.00	0.00	0.00
3,400.00	7.96	339.591	3,373.90	360.27	-134.05	-335.29	0.00	0.00	0.00
3,500.00	7.96	339.591	3,472.94	373.25	-138.88	-347.37	0.00	0.00	0.00
3,600.00	7.96	339.591	3,571.98	386.22	-143.71	-359.45	0.00	0.00	0.00
3,700.00	7.96	339.591	3,671.01	399.20	-148.53	-371.52	0.00	0.00	0.00
3,800.00	7.96	339.591	3,770.05	412.17	-153.36	-383.60	0.00	0.00	0.00
3,900.00	7.96	339.591	3,869.09	425.15	-158.19	-395.68	0.00	0.00	0.00
4,000.00	7.96	339.591	3,968.12	438.13	-163.02	-407.75	0.00	0.00	0.00
4,100.00	7.96	339.591	4,067.16	451.10	-167.85	-419.83	0.00	0.00	0.00
4,200.00	7.96	339.591	4,166.20	464.08	-172.68	-431.91	0.00	0.00	0.00
4,300.00	7.96	339.591	4,265.23	477.06	-177.50	-443.98	0.00	0.00	0.00
4,400.00	7.96	339.591	4,364.27	490.03	-182.33	-456.06	0.00	0.00	0.00
4,500.00	7.96	339.591	4,463.31	503.01	-187.16	-468.14	0.00	0.00	0.00
4,600.00	7.96	339.591	4,562.34	515.98	-191.99	-480.21	0.00	0.00	0.00
4,700.00	7.96	339.591	4,661.38	528.96	-196.82	-492.29	0.00	0.00	0.00
4,743.37	7.96	339.591	4,704.33	534.59	-198.91	-497.53	0.00	0.00	0.00
4,800.00	4.15	13.882	4,760.65	540.25	-199.79	-501.86	9.00	-6.73	60.56
4,900.00	7.90	105.243	4,860.25	541.96	-192.28	-497.24	9.00	3.75	91.36
5,000.00	16.41	120.061	4,957.94	533.06	-173.38	-477.07	9.00	8.51	14.82



Lonestar Consulting, LLC

Planning Report



Database:	DJR	Local Co-ordinate Reference:	Well # 306H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Project:	Proposed Elk Unit	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site:	Little Largo Pad 1	North Reference:	True
Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,100.00	25.26	124.785	5,051.32	513.77	-143.57	-441.86	9.00	8.85	4.72	
5,200.00	34.18	127.158	5,138.08	484.57	-103.58	-392.47	9.00	8.92	2.37	
5,300.00	43.14	128.639	5,216.08	446.17	-54.38	-330.12	9.00	8.95	1.48	
5,400.00	52.10	129.693	5,283.42	399.53	2.80	-256.34	9.00	8.97	1.05	
5,500.00	61.08	130.517	5,338.42	345.79	66.56	-172.95	9.00	8.97	0.82	
5,600.00	70.06	131.208	5,379.74	286.27	135.34	-82.00	9.00	8.98	0.69	
5,700.00	79.04	131.825	5,406.36	222.44	207.42	14.26	9.00	8.98	0.62	
5,800.00	88.02	132.405	5,417.62	155.87	281.05	113.47	9.00	8.98	0.58	
5,824.64	90.23	132.545	5,418.00	139.24	299.22	138.09	9.00	8.98	0.57	
5,900.00	90.23	132.545	5,417.70	88.28	354.74	213.39	0.00	0.00	0.00	
6,000.00	90.23	132.545	5,417.29	20.66	428.42	313.32	0.00	0.00	0.00	
6,100.00	90.23	132.545	5,416.89	-46.96	502.09	413.24	0.00	0.00	0.00	
6,200.00	90.23	132.545	5,416.49	-114.57	575.76	513.16	0.00	0.00	0.00	
6,300.00	90.23	132.545	5,416.08	-182.19	649.44	613.09	0.00	0.00	0.00	
6,400.00	90.23	132.545	5,415.68	-249.81	723.11	713.01	0.00	0.00	0.00	
6,500.00	90.23	132.545	5,415.28	-317.42	796.78	812.93	0.00	0.00	0.00	
6,600.00	90.23	132.545	5,414.88	-385.04	870.46	912.85	0.00	0.00	0.00	
6,700.00	90.23	132.545	5,414.47	-452.66	944.13	1,012.78	0.00	0.00	0.00	
6,800.00	90.23	132.545	5,414.07	-520.28	1,017.80	1,112.70	0.00	0.00	0.00	
6,900.00	90.23	132.545	5,413.67	-587.89	1,091.48	1,212.62	0.00	0.00	0.00	
7,000.00	90.23	132.545	5,413.26	-655.51	1,165.15	1,312.55	0.00	0.00	0.00	
7,100.00	90.23	132.545	5,412.86	-723.13	1,238.82	1,412.47	0.00	0.00	0.00	
7,200.00	90.23	132.545	5,412.46	-790.74	1,312.50	1,512.39	0.00	0.00	0.00	
7,300.00	90.23	132.545	5,412.05	-858.36	1,386.17	1,612.32	0.00	0.00	0.00	
7,400.00	90.23	132.545	5,411.65	-925.98	1,459.84	1,712.24	0.00	0.00	0.00	
7,500.00	90.23	132.545	5,411.25	-993.59	1,533.52	1,812.16	0.00	0.00	0.00	
7,600.00	90.23	132.545	5,410.84	-1,061.21	1,607.19	1,912.09	0.00	0.00	0.00	
7,700.00	90.23	132.545	5,410.44	-1,128.83	1,680.87	2,012.01	0.00	0.00	0.00	
7,800.00	90.23	132.545	5,410.04	-1,196.45	1,754.54	2,111.93	0.00	0.00	0.00	
7,900.00	90.23	132.545	5,409.64	-1,264.06	1,828.21	2,211.86	0.00	0.00	0.00	
8,000.00	90.23	132.545	5,409.23	-1,331.68	1,901.89	2,311.78	0.00	0.00	0.00	
8,100.00	90.23	132.545	5,408.83	-1,399.30	1,975.56	2,411.70	0.00	0.00	0.00	
8,200.00	90.23	132.545	5,408.43	-1,466.91	2,049.23	2,511.63	0.00	0.00	0.00	
8,300.00	90.23	132.545	5,408.02	-1,534.53	2,122.91	2,611.55	0.00	0.00	0.00	
8,400.00	90.23	132.545	5,407.62	-1,602.15	2,196.58	2,711.47	0.00	0.00	0.00	
8,500.00	90.23	132.545	5,407.22	-1,669.76	2,270.25	2,811.40	0.00	0.00	0.00	
8,600.00	90.23	132.545	5,406.81	-1,737.38	2,343.93	2,911.32	0.00	0.00	0.00	
8,700.00	90.23	132.545	5,406.41	-1,805.00	2,417.60	3,011.24	0.00	0.00	0.00	
8,800.00	90.23	132.545	5,406.01	-1,872.62	2,491.27	3,111.17	0.00	0.00	0.00	
8,900.00	90.23	132.545	5,405.60	-1,940.23	2,564.95	3,211.09	0.00	0.00	0.00	
9,000.00	90.23	132.545	5,405.20	-2,007.85	2,638.62	3,311.01	0.00	0.00	0.00	
9,100.00	90.23	132.545	5,404.80	-2,075.47	2,712.29	3,410.94	0.00	0.00	0.00	
9,200.00	90.23	132.545	5,404.40	-2,143.08	2,785.97	3,510.86	0.00	0.00	0.00	
9,300.00	90.23	132.545	5,403.99	-2,210.70	2,859.64	3,610.78	0.00	0.00	0.00	
9,400.00	90.23	132.545	5,403.59	-2,278.32	2,933.31	3,710.70	0.00	0.00	0.00	
9,500.00	90.23	132.545	5,403.19	-2,345.93	3,006.99	3,810.63	0.00	0.00	0.00	
9,600.00	90.23	132.545	5,402.78	-2,413.55	3,080.66	3,910.55	0.00	0.00	0.00	
9,700.00	90.23	132.545	5,402.38	-2,481.17	3,154.34	4,010.47	0.00	0.00	0.00	
9,800.00	90.23	132.545	5,401.98	-2,548.78	3,228.01	4,110.40	0.00	0.00	0.00	
9,900.00	90.23	132.545	5,401.57	-2,616.40	3,301.68	4,210.32	0.00	0.00	0.00	
10,000.00	90.23	132.545	5,401.17	-2,684.02	3,375.36	4,310.24	0.00	0.00	0.00	
10,100.00	90.23	132.545	5,400.77	-2,751.64	3,449.03	4,410.17	0.00	0.00	0.00	
10,200.00	90.23	132.545	5,400.37	-2,819.25	3,522.70	4,510.09	0.00	0.00	0.00	
10,300.00	90.23	132.545	5,399.96	-2,886.87	3,596.38	4,610.01	0.00	0.00	0.00	



Lonestar Consulting, LLC

Planning Report



Database:	DJR	Local Co-ordinate Reference:	Well # 306H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Project:	Proposed Elk Unit	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site:	Little Largo Pad 1	North Reference:	True
Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
10,400.00	90.23	132.545	5,399.56	-2,954.49	3,670.05	4,709.94	0.00	0.00	0.00	
10,500.00	90.23	132.545	5,399.16	-3,022.10	3,743.72	4,809.86	0.00	0.00	0.00	
10,600.00	90.23	132.545	5,398.75	-3,089.72	3,817.40	4,909.78	0.00	0.00	0.00	
10,700.00	90.23	132.545	5,398.35	-3,157.34	3,891.07	5,009.71	0.00	0.00	0.00	
10,800.00	90.23	132.545	5,397.95	-3,224.95	3,964.74	5,109.63	0.00	0.00	0.00	
10,900.00	90.23	132.545	5,397.54	-3,292.57	4,038.42	5,209.55	0.00	0.00	0.00	
11,000.00	90.23	132.545	5,397.14	-3,360.19	4,112.09	5,309.48	0.00	0.00	0.00	
11,100.00	90.23	132.545	5,396.74	-3,427.81	4,185.76	5,409.40	0.00	0.00	0.00	
11,200.00	90.23	132.545	5,396.33	-3,495.42	4,259.44	5,509.32	0.00	0.00	0.00	
11,300.00	90.23	132.545	5,395.93	-3,563.04	4,333.11	5,609.25	0.00	0.00	0.00	
11,400.00	90.23	132.545	5,395.53	-3,630.66	4,406.78	5,709.17	0.00	0.00	0.00	
11,500.00	90.23	132.545	5,395.13	-3,698.27	4,480.46	5,809.09	0.00	0.00	0.00	
11,600.00	90.23	132.545	5,394.72	-3,765.89	4,554.13	5,909.02	0.00	0.00	0.00	
11,700.00	90.23	132.545	5,394.32	-3,833.51	4,627.80	6,008.94	0.00	0.00	0.00	
11,800.00	90.23	132.545	5,393.92	-3,901.12	4,701.48	6,108.86	0.00	0.00	0.00	
11,900.00	90.23	132.545	5,393.51	-3,968.74	4,775.15	6,208.79	0.00	0.00	0.00	
12,000.00	90.23	132.545	5,393.11	-4,036.36	4,848.83	6,308.71	0.00	0.00	0.00	
12,100.00	90.23	132.545	5,392.71	-4,103.98	4,922.50	6,408.63	0.00	0.00	0.00	
12,200.00	90.23	132.545	5,392.30	-4,171.59	4,996.17	6,508.56	0.00	0.00	0.00	
12,300.00	90.23	132.545	5,391.90	-4,239.21	5,069.85	6,608.48	0.00	0.00	0.00	
12,400.00	90.23	132.545	5,391.50	-4,306.83	5,143.52	6,708.40	0.00	0.00	0.00	
12,500.00	90.23	132.545	5,391.10	-4,374.44	5,217.19	6,808.32	0.00	0.00	0.00	
12,600.00	90.23	132.545	5,390.69	-4,442.06	5,290.87	6,908.25	0.00	0.00	0.00	
12,700.00	90.23	132.545	5,390.29	-4,509.68	5,364.54	7,008.17	0.00	0.00	0.00	
12,800.00	90.23	132.545	5,389.89	-4,577.29	5,438.21	7,108.09	0.00	0.00	0.00	
12,900.00	90.23	132.545	5,389.48	-4,644.91	5,511.89	7,208.02	0.00	0.00	0.00	
13,000.00	90.23	132.545	5,389.08	-4,712.53	5,585.56	7,307.94	0.00	0.00	0.00	
13,100.00	90.23	132.545	5,388.68	-4,780.14	5,659.23	7,407.86	0.00	0.00	0.00	
13,200.00	90.23	132.545	5,388.27	-4,847.76	5,732.91	7,507.79	0.00	0.00	0.00	
13,300.00	90.23	132.545	5,387.87	-4,915.38	5,806.58	7,607.71	0.00	0.00	0.00	
13,400.00	90.23	132.545	5,387.47	-4,983.00	5,880.25	7,707.63	0.00	0.00	0.00	
13,500.00	90.23	132.545	5,387.06	-5,050.61	5,953.93	7,807.56	0.00	0.00	0.00	
13,516.01	90.23	132.545	5,387.00	-5,061.44	5,965.73	7,823.56	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
306H Toe	0.00	0.000	5,387.00	-5,061.44	5,965.73	1,923,847.07	2,853,829.74	36.28639600	-107.38972500	
- plan hits target center										
- Circle (radius 100.00)										
306H Heel	0.00	0.000	5,418.00	139.24	299.22	1,929,022.90	2,848,140.53	36.30068400	-107.40895160	
- plan hits target center										
- Circle (radius 50.00)										



Lonestar Consulting, LLC
Planning Report



Database:	DJR	Local Co-ordinate Reference:	Well # 306H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Project:	Proposed Elk Unit	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site:	Little Largo Pad 1	North Reference:	True
Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
350.00	350.00	Surface	9.62	12.25	
5,766.40	5,415.58	Intermediate	7.00	8.75	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,546.24	1,538.00	Ojo Alamo		0.00	0.000	
1,737.08	1,727.00	Kirtland		0.00	0.000	
1,856.23	1,845.00	Fruitland		0.00	0.000	
2,096.54	2,083.00	Pictured Cliffs		0.00	0.000	
2,169.25	2,155.00	Lewis		0.00	0.000	
2,913.41	2,892.00	Chacra		0.00	0.000	
3,694.94	3,666.00	Menefee		0.00	0.000	
4,329.05	4,294.00	Point Lookout		0.00	0.000	
4,500.70	4,464.00	Mancos		0.00	0.000	
4,994.85	4,953.00	Mancos Silt		0.00	0.000	
5,543.15	5,358.00	Gallup A		0.00	0.000	
5,693.03	5,405.00	Gallup B		0.00	0.000	



DJR Operating

**Proposed Elk Unit
Little Largo Pad 1
306H**

**Original Drilling
APD**

Anticollision Report

24 June, 2020





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 306H - Slot 1
Project:	Proposed Elk Unit	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Reference Site:	Little Largo Pad 1	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	6/24/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	13,516.01	APD (Original Drilling)	MWD+HDGM	OWSG MWD + HDGM	

Summary						
Site Name	Reference	Offset	Distance		Separation	Warning
	Measured	Measured	Between	Between		
Offset Well - Wellbore - Design	Depth	Depth	Centres	Ellipses	Factor	
	(usft)	(usft)	(usft)	(usft)		
Little Largo Pad 1						
# 308H - Original Drilling - APD	519.26	519.60	19.49	16.19	5.914	CC, ES
# 308H - Original Drilling - APD	13,516.01	12,857.01	1,206.66	790.60	2.900	SF

Offset Design	Little Largo Pad 1 - # 308H - Original Drilling - APD											Offset Site Error:	0.00 usft
Survey Program:	0-MWD+HDGM											Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis	Distance	Warning									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	89.29	0.25	20.02	20.02				
100.00	100.00	100.00	100.00	0.15	0.15	89.29	0.25	20.02	20.02	19.72	0.31	64.953	
200.00	200.00	200.00	200.00	0.51	0.51	89.29	0.25	20.02	20.02	19.00	1.03	19.531	
300.00	300.00	300.00	300.00	0.87	0.87	89.29	0.25	20.02	20.02	18.28	1.74	11.494	
400.00	400.00	400.00	400.00	1.23	1.23	89.29	0.25	20.02	20.02	17.57	2.46	8.143	
425.00	425.00	425.10	425.10	1.32	1.32	89.55	0.16	19.96	19.96	17.33	2.63	7.576	
500.00	499.99	500.32	500.30	1.59	1.57	116.73	-1.22	19.06	19.53	16.37	3.16	6.177	
519.26	519.24	519.60	519.56	1.66	1.64	120.17	-1.84	18.66	19.49	16.19	3.30	5.914 CC, ES	
600.00	599.89	600.12	599.96	1.95	1.92	140.79	-5.61	16.21	20.96	17.10	3.86	5.434	
700.00	699.58	698.83	698.29	2.31	2.26	167.65	-12.80	11.53	29.92	25.34	4.57	6.541	
800.00	798.93	795.91	794.65	2.68	2.61	-176.20	-22.64	5.12	47.81	42.52	5.29	9.042	
822.92	821.64	817.88	816.40	2.77	2.70	-173.77	-25.25	3.43	53.01	47.55	5.46	9.715	
900.00	897.98	891.10	888.69	3.05	2.98	-167.66	-34.94	-2.88	72.17	66.19	5.99	12.051	
1,000.00	997.02	985.56	981.53	3.44	3.36	-162.41	-49.58	-12.41	99.79	93.11	6.68	14.943	
1,100.00	1,096.05	1,081.18	1,075.38	3.82	3.75	-159.22	-64.93	-22.40	128.42	121.04	7.39	17.386	
1,200.00	1,195.09	1,176.80	1,169.23	4.21	4.16	-157.19	-80.29	-32.40	157.29	149.19	8.10	19.428	
1,300.00	1,294.13	1,272.42	1,263.08	4.61	4.56	-155.79	-95.65	-42.39	186.28	177.46	8.82	21.127	
1,400.00	1,393.16	1,368.05	1,356.93	5.00	4.98	-154.77	-111.00	-52.39	215.34	205.80	9.54	22.574	
1,500.00	1,492.20	1,463.67	1,450.78	5.40	5.40	-153.99	-126.36	-62.38	244.45	234.19	10.26	23.815	
1,600.00	1,591.24	1,559.29	1,544.63	5.80	5.82	-153.38	-141.72	-72.38	273.60	262.60	10.99	24.889	
1,700.00	1,690.27	1,654.91	1,638.48	6.19	6.24	-152.89	-157.07	-82.38	302.76	291.04	11.72	25.828	
1,800.00	1,789.31	1,750.54	1,732.33	6.59	6.66	-152.48	-172.43	-92.37	331.95	319.49	12.45	26.654	
1,900.00	1,888.35	1,846.16	1,826.18	6.99	7.08	-152.14	-187.79	-102.37	361.14	347.96	13.19	27.387	
2,000.00	1,987.39	1,941.78	1,920.03	7.39	7.51	-151.85	-203.14	-112.36	390.35	376.43	13.92	28.042	
2,100.00	2,086.42	2,037.40	2,013.88	7.79	7.94	-151.60	-218.50	-122.36	419.57	404.91	14.66	28.629	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 306H - Slot 1
Project:	Proposed Elk Unit	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Reference Site:	Little Largo Pad 1	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Little Largo Pad 1 - # 308H - Original Drilling - APD		Offset Site Error:		0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
2,200.00	2,185.46	2,133.03	2,107.73	8.19	8.36	-151.38	-233.86	-132.35	448.79	433.40	15.39	29.159					
2,300.00	2,284.50	2,228.65	2,201.58	8.59	8.79	-151.19	-249.22	-142.35	478.01	461.89	16.13	29.640					
2,400.00	2,383.53	2,324.27	2,295.43	8.99	9.22	-151.02	-264.57	-152.35	507.24	490.38	16.86	30.078					
2,500.00	2,482.57	2,419.89	2,389.28	9.39	9.65	-150.87	-279.93	-162.34	536.48	518.88	17.60	30.478					
2,600.00	2,581.61	2,515.52	2,483.13	9.80	10.08	-150.73	-295.29	-172.34	565.72	547.38	18.34	30.846					
2,700.00	2,680.64	2,611.14	2,576.98	10.20	10.51	-150.61	-310.64	-182.33	594.96	575.88	19.08	31.184					
2,800.00	2,779.68	2,706.76	2,670.83	10.60	10.94	-150.50	-326.00	-192.33	624.20	604.38	19.82	31.497					
2,900.00	2,878.72	2,802.38	2,764.68	11.00	11.37	-150.40	-341.36	-202.32	653.44	632.89	20.56	31.786					
3,000.00	2,977.75	2,898.00	2,858.53	11.40	11.80	-150.31	-356.71	-212.32	682.69	661.39	21.30	32.056					
3,100.00	3,076.79	2,993.63	2,952.38	11.81	12.23	-150.22	-372.07	-222.31	711.94	689.90	22.04	32.306					
3,200.00	3,175.83	3,089.25	3,046.23	12.21	12.67	-150.14	-387.43	-232.31	741.18	718.41	22.78	32.540					
3,300.00	3,274.86	3,184.87	3,140.08	12.61	13.10	-150.07	-402.78	-242.31	770.43	746.92	23.52	32.759					
3,400.00	3,373.90	3,280.49	3,233.93	13.01	13.53	-150.01	-418.14	-252.30	799.69	775.43	24.26	32.965					
3,500.00	3,472.94	3,376.12	3,327.78	13.41	13.96	-149.94	-433.50	-262.30	828.94	803.94	25.00	33.158					
3,600.00	3,571.98	3,471.74	3,421.63	13.82	14.39	-149.89	-448.85	-272.29	858.19	832.45	25.74	33.339					
3,700.00	3,671.01	3,567.36	3,515.48	14.22	14.83	-149.83	-464.21	-282.29	887.44	860.96	26.48	33.510					
3,800.00	3,770.05	3,662.98	3,609.34	14.62	15.26	-149.78	-479.57	-292.28	916.70	889.47	27.22	33.672					
3,900.00	3,869.09	3,758.61	3,703.19	15.03	15.69	-149.74	-494.93	-302.28	945.95	917.99	27.97	33.825					
4,000.00	3,968.12	3,854.23	3,797.04	15.43	16.12	-149.69	-510.28	-312.28	975.21	946.50	28.71	33.969					
4,100.00	4,067.16	3,949.85	3,890.89	15.83	16.56	-149.65	-525.64	-322.27	1,004.46	975.01	29.45	34.107					
4,200.00	4,166.20	4,045.47	3,984.74	16.23	16.99	-149.61	-541.00	-332.27	1,033.72	1,003.53	30.19	34.237					
4,300.00	4,265.23	4,141.09	4,078.59	16.64	17.42	-149.57	-556.35	-342.26	1,062.98	1,032.04	30.94	34.361					
4,400.00	4,364.27	4,236.72	4,172.44	17.04	17.86	-149.54	-571.71	-352.26	1,092.23	1,060.55	31.68	34.479					
4,500.00	4,463.31	4,332.34	4,266.29	17.44	18.29	-149.50	-587.07	-362.25	1,121.49	1,089.07	32.42	34.591					
4,600.00	4,562.34	4,427.96	4,360.14	17.85	18.72	-149.47	-602.42	-372.25	1,150.75	1,117.58	33.16	34.699					
4,700.00	4,661.38	4,523.58	4,453.99	18.25	19.16	-149.44	-617.78	-382.25	1,180.01	1,146.10	33.91	34.801					
4,743.37	4,704.33	4,565.06	4,494.69	18.42	19.34	-149.43	-624.44	-386.58	1,192.69	1,158.47	34.23	34.844					
4,750.00	4,710.90	4,571.40	4,500.92	18.45	19.37	-151.67	-625.46	-387.24	1,194.62	1,160.34	34.28	34.850					
4,800.00	4,760.65	4,619.51	4,548.14	18.64	19.59	175.36	-633.19	-392.27	1,207.96	1,173.32	34.64	34.872					
4,850.00	4,810.54	4,667.88	4,595.61	18.80	19.81	111.58	-640.96	-397.33	1,219.24	1,184.26	34.98	34.851					
4,900.00	4,860.25	4,716.21	4,643.04	18.94	20.03	83.41	-648.72	-402.38	1,228.43	1,193.11	35.31	34.787					
4,950.00	4,909.49	4,764.19	4,690.14	19.07	20.25	73.58	-656.42	-407.40	1,235.53	1,199.91	35.63	34.680					
5,000.00	4,957.94	4,811.54	4,736.61	19.19	20.46	69.19	-664.03	-412.35	1,240.61	1,204.68	35.93	34.531					
5,050.00	5,005.32	4,857.96	4,782.17	19.29	20.67	67.04	-671.48	-417.20	1,243.73	1,207.52	36.22	34.343					
5,100.00	5,051.32	4,887.41	4,811.07	19.38	20.81	65.76	-676.36	-420.12	1,245.23	1,208.86	36.37	34.241					
5,150.00	5,095.66	4,900.00	4,823.40	19.47	20.86	64.77	-678.68	-421.10	1,245.83	1,209.45	36.37	34.251					
5,200.00	5,138.08	4,933.57	4,856.18	19.55	21.02	64.67	-685.69	-422.80	1,245.34	1,208.78	36.56	34.065					
5,250.00	5,178.30	4,950.00	4,872.15	19.64	21.09	64.50	-689.54	-423.16	1,244.10	1,207.50	36.60	33.988					
5,300.00	5,216.08	4,979.61	4,900.75	19.74	21.22	64.89	-697.17	-423.00	1,241.99	1,205.21	36.79	33.760					
5,350.00	5,251.19	5,000.00	4,920.30	19.86	21.32	65.25	-702.94	-422.29	1,239.17	1,202.25	36.92	33.561					
5,400.00	5,283.42	5,025.50	4,944.52	20.01	21.43	65.91	-710.72	-420.72	1,235.67	1,198.52	37.15	33.261					
5,450.00	5,312.55	5,050.00	4,967.55	20.22	21.54	66.71	-718.79	-418.49	1,231.57	1,194.14	37.43	32.904					
5,500.00	5,338.42	5,071.20	4,987.24	20.48	21.63	67.53	-726.23	-416.01	1,226.96	1,189.21	37.74	32.507					
5,550.00	5,360.87	5,100.00	5,013.62	20.80	21.76	68.71	-737.01	-411.80	1,221.95	1,183.74	38.22	31.974					
5,600.00	5,379.74	5,116.63	5,028.63	21.19	21.83	69.59	-743.57	-408.93	1,216.58	1,177.92	38.66	31.469					
5,650.00	5,394.94	5,139.21	5,048.73	21.65	21.93	70.74	-752.87	-404.54	1,211.03	1,171.77	39.25	30.851					
5,700.00	5,406.36	5,161.68	5,068.38	22.18	22.03	71.97	-762.56	-399.60	1,205.37	1,165.43	39.94	30.179					
5,750.00	5,413.94	5,184.00	5,087.55	22.76	22.12	73.25	-772.60	-394.13	1,199.74	1,159.03	40.72	29.466					
5,800.00	5,417.62	5,206.14	5,106.19	23.40	22.21	74.56	-782.97	-388.17	1,194.26	1,152.69	41.57	28.729					
5,824.64	5,418.00	5,216.98	5,115.16	23.73	22.26	75.22	-788.18	-385.06	1,191.66	1,149.64	42.02	28.361					
5,900.00	5,417.70	5,250.00	5,141.89	24.81	22.40	76.54	-804.62	-374.79	1,185.56	1,142.10	43.46	27.278					
6,000.00	5,417.29	5,311.00	5,188.63	26.42	22.65	78.85	-837.06	-352.83	1,182.50	1,136.83	45.67	25.893					



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 306H - Slot 1
Project:	Proposed Elk Unit	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Reference Site:	Little Largo Pad 1	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design		Little Largo Pad 1 - # 308H - Original Drilling - APD											Offset Site Error:		0.00 usft
Survey Program:		0-MWD+HDGM											Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)				
6,009.42	5,417.26	5,317.20	5,193.17	26.58	22.68	79.08	-840.50	-350.38	1,182.48	1,136.59	45.89	25.767			
6,100.00	5,416.89	5,384.35	5,239.75	28.18	22.97	81.38	-879.24	-321.52	1,184.23	1,136.15	48.08	24.629			
6,200.00	5,416.49	5,476.92	5,295.41	30.06	23.38	84.13	-936.62	-274.99	1,189.20	1,138.45	50.75	23.434			
6,300.00	5,416.08	5,591.70	5,349.05	32.06	24.00	86.77	-1,012.45	-207.83	1,195.30	1,141.54	53.76	22.235			
6,400.00	5,415.68	5,727.54	5,388.37	34.14	25.01	88.69	-1,105.74	-117.63	1,200.09	1,142.88	57.21	20.979			
6,500.00	5,415.28	5,868.09	5,399.95	36.29	26.53	89.27	-1,202.03	-16.28	1,201.60	1,140.31	61.29	19.605			
6,600.00	5,414.88	5,968.09	5,399.64	38.50	27.90	89.27	-1,269.70	57.34	1,201.66	1,136.54	65.12	18.453			
6,700.00	5,414.47	6,068.09	5,399.32	40.77	29.49	89.28	-1,337.36	130.97	1,201.73	1,132.58	69.15	17.378			
6,800.00	5,414.07	6,168.09	5,399.01	43.07	31.25	89.28	-1,405.03	204.60	1,201.80	1,128.44	73.36	16.383			
6,900.00	5,413.67	6,268.09	5,398.70	45.42	33.14	89.29	-1,472.70	278.22	1,201.87	1,124.17	77.70	15.468			
7,000.00	5,413.26	6,368.09	5,398.38	47.79	35.14	89.29	-1,540.37	351.85	1,201.93	1,119.78	82.16	14.630			
7,100.00	5,412.86	6,468.09	5,398.07	50.19	37.22	89.29	-1,608.03	425.48	1,202.00	1,115.29	86.71	13.862			
7,200.00	5,412.46	6,568.09	5,397.75	52.61	39.38	89.30	-1,675.70	499.11	1,202.07	1,110.72	91.35	13.159			
7,300.00	5,412.05	6,668.09	5,397.44	55.06	41.60	89.30	-1,743.37	572.73	1,202.14	1,106.08	96.06	12.514			
7,400.00	5,411.65	6,768.09	5,397.12	57.52	43.86	89.31	-1,811.04	646.36	1,202.21	1,101.38	100.83	11.923			
7,500.00	5,411.25	6,868.09	5,396.81	59.99	46.17	89.31	-1,878.70	719.99	1,202.27	1,096.62	105.65	11.380			
7,600.00	5,410.84	6,968.09	5,396.50	62.48	48.51	89.32	-1,946.37	793.62	1,202.34	1,091.83	110.51	10.880			
7,700.00	5,410.44	7,068.09	5,396.18	64.98	50.88	89.32	-2,014.04	867.24	1,202.41	1,086.99	115.41	10.418			
7,800.00	5,410.04	7,168.09	5,395.87	67.49	53.28	89.32	-2,081.71	940.87	1,202.48	1,082.13	120.35	9.992			
7,900.00	5,409.64	7,268.09	5,395.55	70.01	55.70	89.33	-2,149.38	1,014.50	1,202.54	1,077.23	125.31	9.596			
8,000.00	5,409.23	7,368.09	5,395.24	72.54	58.14	89.33	-2,217.04	1,088.12	1,202.61	1,072.31	130.30	9.229			
8,100.00	5,408.83	7,468.09	5,394.93	75.08	60.60	89.34	-2,284.71	1,161.75	1,202.68	1,067.36	135.31	8.888			
8,200.00	5,408.43	7,568.09	5,394.61	77.62	63.07	89.34	-2,352.38	1,235.38	1,202.75	1,062.40	140.35	8.570			
8,300.00	5,408.02	7,668.09	5,394.30	80.17	65.56	89.35	-2,420.05	1,309.01	1,202.81	1,057.42	145.40	8.273			
8,400.00	5,407.62	7,768.09	5,393.98	82.72	68.05	89.35	-2,487.71	1,382.63	1,202.88	1,052.42	150.46	7.995			
8,500.00	5,407.22	7,868.09	5,393.67	85.29	70.56	89.35	-2,555.38	1,456.26	1,202.95	1,047.41	155.54	7.734			
8,600.00	5,406.81	7,968.09	5,393.36	87.85	73.08	89.36	-2,623.05	1,529.89	1,203.02	1,042.38	160.64	7.489			
8,700.00	5,406.41	8,068.09	5,393.04	90.42	75.60	89.36	-2,690.72	1,603.51	1,203.09	1,037.34	165.74	7.259			
8,800.00	5,406.01	8,168.09	5,392.73	92.99	78.14	89.37	-2,758.39	1,677.14	1,203.15	1,032.29	170.86	7.042			
8,900.00	5,405.60	8,268.09	5,392.41	95.57	80.68	89.37	-2,826.05	1,750.77	1,203.22	1,027.24	175.98	6.837			
9,000.00	5,405.20	8,368.09	5,392.10	98.15	83.22	89.38	-2,893.72	1,824.40	1,203.29	1,022.17	181.12	6.644			
9,100.00	5,404.80	8,468.08	5,391.79	100.73	85.77	89.38	-2,961.39	1,898.02	1,203.36	1,017.09	186.26	6.461			
9,200.00	5,404.40	8,568.08	5,391.47	103.32	88.33	89.38	-3,029.06	1,971.65	1,203.42	1,012.01	191.41	6.287			
9,300.00	5,403.99	8,668.08	5,391.16	105.91	90.89	89.39	-3,096.72	2,045.28	1,203.49	1,006.92	196.57	6.122			
9,400.00	5,403.59	8,768.08	5,390.84	108.50	93.46	89.39	-3,164.39	2,118.90	1,203.56	1,001.83	201.73	5.966			
9,500.00	5,403.19	8,868.08	5,390.53	111.09	96.03	89.40	-3,232.06	2,192.53	1,203.63	996.72	206.90	5.817			
9,600.00	5,402.78	8,968.08	5,390.21	113.69	98.60	89.40	-3,299.73	2,266.16	1,203.69	991.62	212.08	5.676			
9,700.00	5,402.38	9,068.08	5,389.90	116.28	101.18	89.41	-3,367.40	2,339.79	1,203.76	986.50	217.26	5.541			
9,800.00	5,401.98	9,168.08	5,389.59	118.88	103.76	89.41	-3,435.06	2,413.41	1,203.83	981.39	222.44	5.412			
9,900.00	5,401.57	9,268.08	5,389.27	121.48	106.34	89.41	-3,502.73	2,487.04	1,203.90	976.27	227.63	5.289			
10,000.00	5,401.17	9,368.08	5,388.96	124.09	108.93	89.42	-3,570.40	2,560.67	1,203.97	971.14	232.82	5.171			
10,100.00	5,400.77	9,468.08	5,388.64	126.69	111.52	89.42	-3,638.07	2,634.30	1,204.03	966.01	238.02	5.059			
10,200.00	5,400.37	9,568.08	5,388.33	129.30	114.11	89.43	-3,705.73	2,707.92	1,204.10	960.88	243.22	4.951			
10,300.00	5,399.96	9,668.08	5,388.02	131.90	116.70	89.43	-3,773.40	2,781.55	1,204.17	955.74	248.42	4.847			
10,400.00	5,399.56	9,768.08	5,387.70	134.51	119.29	89.44	-3,841.07	2,855.18	1,204.24	950.61	253.63	4.748			
10,500.00	5,399.16	9,868.08	5,387.39	137.12	121.89	89.44	-3,908.74	2,928.80	1,204.30	945.46	258.84	4.653			
10,600.00	5,398.75	9,968.08	5,387.07	139.73	124.49	89.44	-3,976.40	3,002.43	1,204.37	940.32	264.05	4.561			
10,700.00	5,398.35	10,068.08	5,386.76	142.34	127.09	89.45	-4,044.07	3,076.06	1,204.44	935.17	269.27	4.473			
10,800.00	5,397.95	10,168.08	5,386.45	144.95	129.69	89.45	-4,111.74	3,149.69	1,204.51	930.02	274.49	4.388			
10,900.00	5,397.54	10,268.08	5,386.13	147.57	132.29	89.46	-4,179.41	3,223.31	1,204.58	924.87	279.70	4.307			
11,000.00	5,397.14	10,368.08	5,385.82	150.18	134.90	89.46	-4,247.08	3,296.94	1,204.64	919.72	284.93	4.228			
11,100.00	5,396.74	10,468.08	5,385.50	152.80	137.50	89.47	-4,314.74	3,370.57	1,204.71	914.56	290.15	4.152			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 306H - Slot 1
Project:	Proposed Elk Unit	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Reference Site:	Little Largo Pad 1	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:		0.00 usft
Survey Program: 0-MWD+HDGM												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
11,200.00	5,396.33	10,568.08	5,385.19	155.41	140.11	89.47	-4,382.41	3,444.19	1,204.78	909.40	295.38	4.079		
11,300.00	5,395.93	10,668.08	5,384.88	158.03	142.72	89.47	-4,450.08	3,517.82	1,204.85	904.24	300.60	4.008		
11,400.00	5,395.53	10,768.08	5,384.56	160.65	145.33	89.48	-4,517.75	3,591.45	1,204.92	899.08	305.83	3.940		
11,500.00	5,395.13	10,868.08	5,384.25	163.27	147.94	89.48	-4,585.41	3,665.08	1,204.98	893.92	311.06	3.874		
11,600.00	5,394.72	10,968.08	5,383.93	165.89	150.55	89.49	-4,653.08	3,738.70	1,205.05	888.76	316.30	3.810		
11,700.00	5,394.32	11,068.08	5,383.62	168.50	153.16	89.49	-4,720.75	3,812.33	1,205.12	883.59	321.53	3.748		
11,800.00	5,393.92	11,168.08	5,383.30	171.13	155.77	89.50	-4,788.42	3,885.96	1,205.19	878.42	326.77	3.688		
11,900.00	5,393.51	11,268.08	5,382.99	173.75	158.39	89.50	-4,856.09	3,959.59	1,205.26	873.25	332.00	3.630		
12,000.00	5,393.11	11,368.08	5,382.68	176.37	161.00	89.50	-4,923.75	4,033.21	1,205.32	868.08	337.24	3.574		
12,100.00	5,392.71	11,468.08	5,382.36	178.99	163.62	89.51	-4,991.42	4,106.84	1,205.39	862.91	342.48	3.520		
12,200.00	5,392.30	11,568.08	5,382.05	181.61	166.24	89.51	-5,059.09	4,180.47	1,205.46	857.74	347.72	3.467		
12,300.00	5,391.90	11,668.08	5,381.73	184.23	168.85	89.52	-5,126.76	4,254.09	1,205.53	852.56	352.96	3.415		
12,400.00	5,391.50	11,768.08	5,381.42	186.86	171.47	89.52	-5,194.42	4,327.72	1,205.59	847.39	358.20	3.366		
12,500.00	5,391.10	11,868.08	5,381.11	189.48	174.09	89.53	-5,262.09	4,401.35	1,205.66	842.21	363.45	3.317		
12,600.00	5,390.69	11,968.08	5,380.79	192.11	176.71	89.53	-5,329.76	4,474.98	1,205.73	837.04	368.69	3.270		
12,700.00	5,390.29	12,068.08	5,380.48	194.73	179.33	89.53	-5,397.43	4,548.60	1,205.80	831.86	373.94	3.225		
12,800.00	5,389.89	12,168.08	5,380.16	197.35	181.95	89.54	-5,465.10	4,622.23	1,205.87	826.68	379.19	3.180		
12,900.00	5,389.48	12,268.08	5,379.85	199.98	184.57	89.54	-5,532.76	4,695.86	1,205.93	821.50	384.43	3.137		
13,000.00	5,389.08	12,368.08	5,379.54	202.61	187.19	89.55	-5,600.43	4,769.48	1,206.00	816.32	389.68	3.095		
13,100.00	5,388.68	12,468.08	5,379.22	205.23	189.81	89.55	-5,668.10	4,843.11	1,206.07	811.14	394.93	3.054		
13,200.00	5,388.27	12,568.08	5,378.91	207.86	192.43	89.55	-5,735.77	4,916.74	1,206.14	805.96	400.18	3.014		
13,300.00	5,387.87	12,668.08	5,378.59	210.48	195.05	89.56	-5,803.43	4,990.37	1,206.21	800.78	405.43	2.975		
13,400.00	5,387.47	12,768.08	5,378.28	213.11	197.68	89.56	-5,871.10	5,063.99	1,206.27	795.59	410.68	2.937		
13,402.15	5,387.46	12,770.23	5,378.27	213.17	197.73	89.56	-5,872.56	5,065.58	1,206.28	795.48	410.79	2.936		
13,500.00	5,387.06	12,857.01	5,378.00	215.74	200.01	89.57	-5,931.27	5,129.47	1,206.39	790.73	415.66	2.902		
13,516.01	5,387.00	12,857.01	5,378.00	216.16	200.01	89.57	-5,931.27	5,129.47	1,206.66	790.60	416.05	2.900 SF		



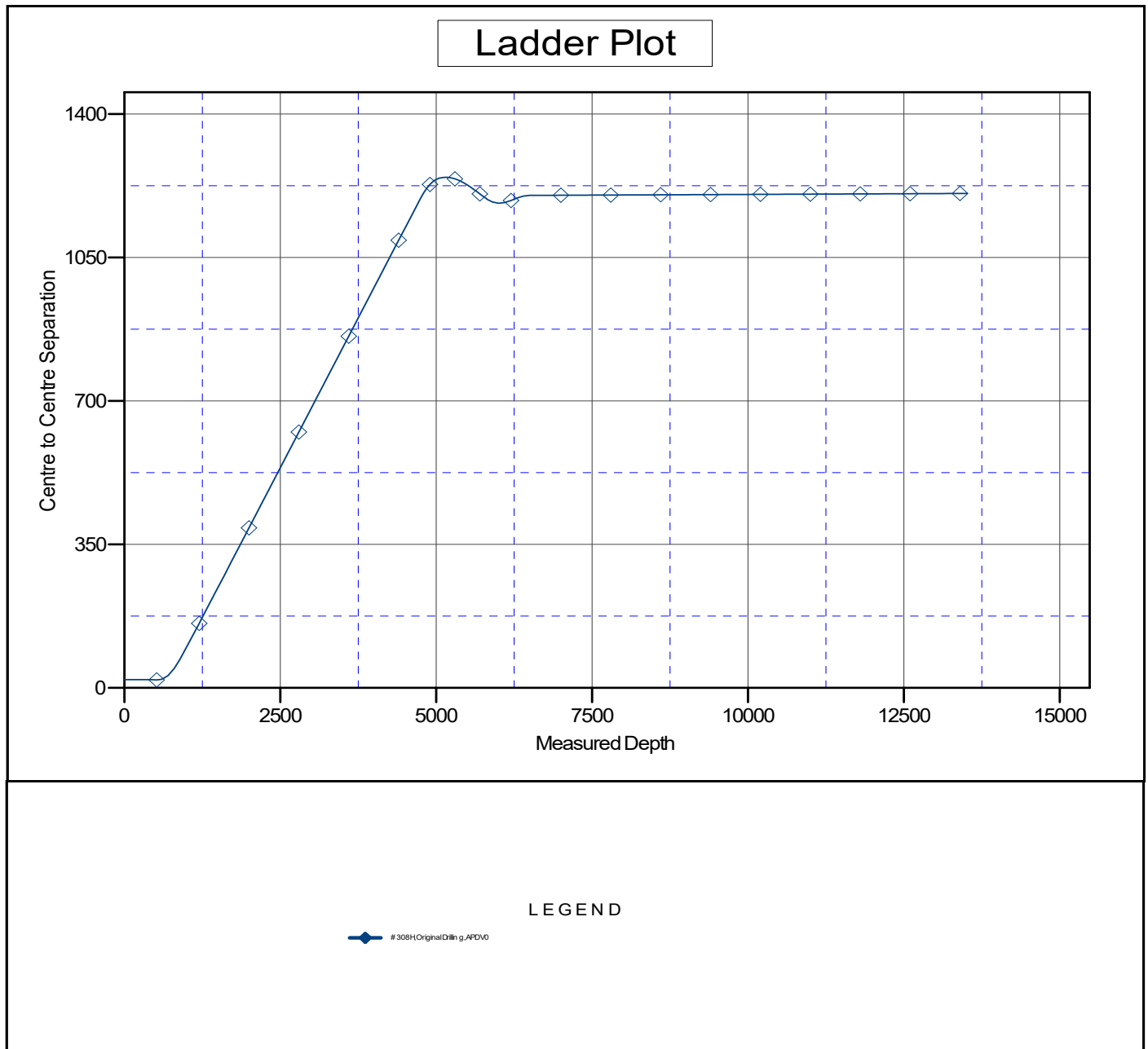
Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 306H - Slot 1
Project:	Proposed Elk Unit	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Reference Site:	Little Largo Pad 1	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6479' & RKB 14' @ 6493.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -107.83333333

Coordinates are relative to: # 306H - Slot 1
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.25°





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 306H - Slot 1
Project:	Proposed Elk Unit	TVD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Reference Site:	Little Largo Pad 1	MD Reference:	GL 6479' & RKB 14' @ 6493.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 306H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6479' & RKB 14' @ 6493.00usft

Offset Depths are relative to Offset Datum

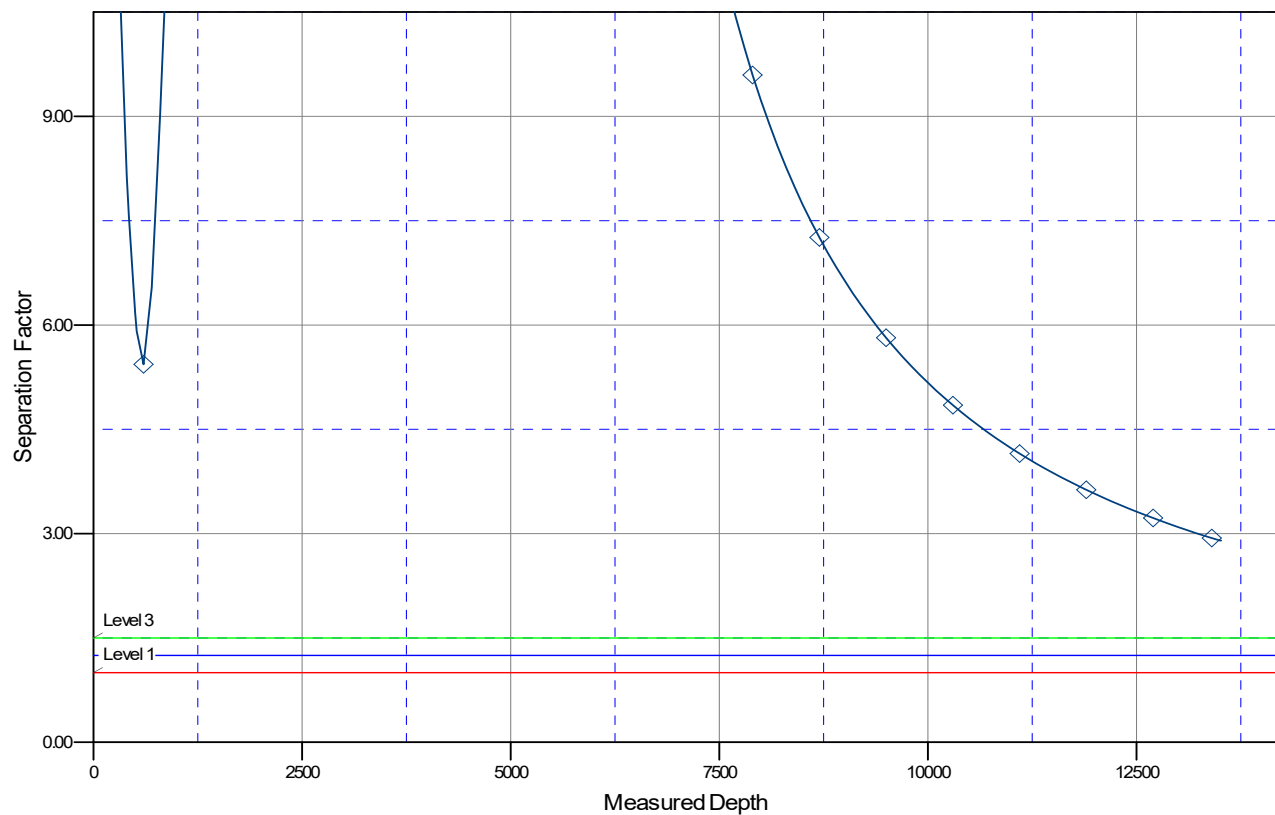
Central Meridian is -107.8333333

Coordinates are relative to: # 306H - Slot 1

Coordinate System is US State Plane 1983, New Mexico Western Zone

Grid Convergence at Surface is: 0.25°

Separation Factor Plot



LEGEND

◆ # 306H Original Drilling APD/D



OIL & GAS ADMINISTRATION

JICARILLA APACHE NATION

November 17, 2021

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

RECEIVED
BUREAU OF INDIAN AFFAIRS

NOV 30 2021

JICARILLA AGENCY
Office of the Superintendent

Dear Mrs. Reval:

On October 20, 2020 our office conducted an onsite for DJR Operating, LLC at J-7 and NM Highway 537 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).

Gary Smith
Cascindra Harrison
Kurt Sandoval
Paul Lehrman
Orson Harrison
Jeff Blythe

BLM Farmington
Jicarilla Oil & Gas Administration
BIA-Realty
DJR Operating, LLC
Jicarilla Oil & Gas Administration
THPO

RECEIVED
BUREAU OF INDIAN AFFAIRS

DEC - 3 2021

JICARILLA AGENCY
BRANCH OF REAL PROPERTY

Conditions of Approval

Operator:	DJR Operating, LLC	Well Name:	Elk 306H
Legal Description:	Section 19, T24N, R5W Section 29, T24N, R5W	Footage:	1904'FNL, 365'FWL 1636'FNL, 1051'FWL
Lease Number:	Lease 11	Onsite Date:	October 20, 2020

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

Approval Date: 05/12/2022

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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 18 Chapter 9 §1-7. If you have questions, please call the Permits Supervisor at (575) 759-3485 ext. 232.

SITE SPECIFIC STIPULATIONS

Surface location is staked at 1904 feet from the north line and 365 feet from the west line in Section 19, Township 24 North, Range 5 West, N.M.P.M. The bottom hole is staked at 1636 feet from the north line and 1051 feet from west line in Section 29, 24N, R5W, N.M.P.M. The company will construct a well pad 535 ft. x 560 ft. with a 50 ft. construction zone. The company will utilize an existing access road. The existing access (J-36) road will be upgraded. The company will reclaim what needs to be after the construction is completed. Equipment and/or facilities will be painted culvert green. There is going to be two wells located on the same well pad the other being the Elk 308H. The company shall follow all other standard site stipulations. The well pad, access road and pipeline are hereby approved.

If you have any questions or concerns, please contact the Technical and Research Division at (575) 759-3485 ext. 106. Thank you.

Sincerely,



Todd Osmera
Director

$$\begin{aligned} 535 \times 540 &= 299,400 \div 43540 \\ &= 6.878 \text{ ac.} \\ 635 \times 640 &= 419,100 \div 43540 \\ &= 9.421 \text{ ac.} \end{aligned}$$

Attached: Oil & Gas Administration Conditions of Approval
Road Policy
THPO Clearance Letter

Approval Date: 05/12/2022

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Jicarilla Apache Nation
THPO Advisory
Review Board

Veronica Tiller, Ph.D.
President

Maureen Olson
Vice President

Deea Velarde
Secretary

THE JICARILLA APACHE NATION

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

February 16, 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 DJR Operating, LLC Proposed
Little Largo No. 1 Well Pad with Elk #306H and Elk #308H Wells,
G-Tank Pad, Staging Area, Access Road, and Well Tie Pipeline,
Jicarilla Apache Tribal Lands (Jicarilla 2021-017)

Dear Ms. Mattingly,

Thank you for consulting with our office per 36 CFR 800 in your letter of December 9, 2020 regarding effects to historic properties from the proposed DJR Operating, LLC Little Largo No. 1 Well Pad with Elk #306H and Elk #308H wells, G-tank pad, staging area, access road, and well tie pipeline on Jicarilla Apache tribal lands in Section 19 of T23N, R5W. The proposed undertaking is to develop a maximum 560' by 535' pad to accommodate the wells Elk #306H and Elk #308H. The undertaking also includes construction of an access road, a tank pad, a staging area, and a well tie pipeline. This location went through the on-site process administered by the Jicarilla Apache Oil and Gas Administration on October 20, 2020.

We believe you have taken adequate steps to identify historic properties in the area of potential effect (APE) based on the negative results of *The Cultural Resources Inventory of DJR Operating LLC's Proposed Little Largo No. 1 Well Pad with the Elk 306H and Elk 308H Wells Heads, G-Tank Pad, Staging Area, Access Road, and Well Tie Pipeline, Jicarilla Apache Nation, Rio Arriba County, New Mexico* (NMCRIS No. 146556, 11/19/20), prepared by Jason Meininger of the Division of Conservation Archaeology, Bloomfield, New Mexico. We also have identified no other concerns with regard to resources of traditional or cultural significance to the Jicarilla Apache Nation. Therefore, we concur with your finding of *no historic properties affected*.

We are requesting immediate notification in the event of the inadvertent discovery of cultural deposits or human remains during project activities. If you have questions, please contact me at (575) 756-8659 or janthpo@gmail.com.



Approval Date: 05/12/2022

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Sincerely,



Jeffrey Blythe, Tribal Historic Preservation Officer

Cc: Kurt Sandoval, Realty Officer, BIA Jicarilla Agency (email)
Cascindra Harrison, APD Specialist, JOGA (email)
Vern Petago, Director, Cultural Affairs
Peter McKenna, Acting Regional Archaeologist, BIA SW Region
President Edward Velarde

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. WELL LOCATION

1. The top six inches of soil material will be stripped and stockpiled during construction of the well pad. Prior to reseeded, 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 number 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.

D. 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.

E. 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.

F. 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.

G. 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'

H. 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		

I. 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.

J. 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).

K. 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).

L. 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 reseeded effort. The goal of reseeded 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 $\frac{1}{2}$ " to $\frac{3}{4}$ " 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.

M. 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 reseeded. 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.

N. 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.



IN REPLY REFER TO:
Office of the
Superintendent

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



APR 16 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:

- o 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.
- o 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.**
- o 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.
- o 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.*
- o 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

Approval Date: 05/12/2022

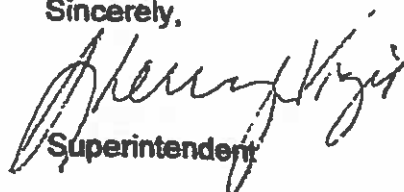
Released to Imaging: 7/22/2022 10:41:26 AM

cleaning, yard cleaning or repair, culvert clearing, 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, stockpiles, or other uses that are needed for the project. A key maintenance consideration include regular inspections; reduction of ruts and holes; maintenance of crowns and outslopes 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 have 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 this policy will result in enforcement actions under 25 CFR §211.55 Penalties.

Sincerely,



Superintendent



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)

* DJR Operating, LLC
#306H ELK
Lease: JIC11
SH: SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 19, T.24 N., R.5 W.
BH: SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 29, T.24 N., R.5 W.
Rio Arriba County, 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.
- E. ☐ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, Farmington District Office, Branch of Reservoir Management, 6251 College Blvd. Suite A, Farmington, New Mexico 87402. The effective date of the agreement must be **prior** to any sales.

INTERIOR REGION 7 - UPPER COLORADO BASIN
COLORADO, NEW MEXICO, UTAH, WYOMING

- 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.
- D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report (Form 3160-4) is filed. The report should be on 8-1/2 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- 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 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

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 127374

CONDITIONS

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID:
	371838
	Action Number:
	127374
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	7/21/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/21/2022
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	7/21/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	7/21/2022
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	7/21/2022