

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: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. <b>30-043-21510</b>
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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 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). | 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) 748-1283 Fax: (575) 748-9720

**DISTRICT III**  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**DISTRICT IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 1, 2011

Submit one copy to appropriate  
District Office

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-043-21510</b>		<sup>2</sup> Pool Code <b>98174</b>		<sup>3</sup> Pool Name <b>NORTH ALAMITO UNIT MANCOS OIL POOL</b>	
<sup>4</sup> Property Code <b>325267</b>		<sup>5</sup> Property Name <b>NORTH ALAMITO UNIT</b>		<sup>6</sup> Well Number <b>102H</b>	
<sup>7</sup> OGRID No. <b>371838</b>		<sup>8</sup> Operator Name <b>DJR OPERATING, LLC</b>		<sup>9</sup> Elevation <b>6962'</b>	

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	23N	7W		917'	NORTH	1154'	EAST	SANDOVAL

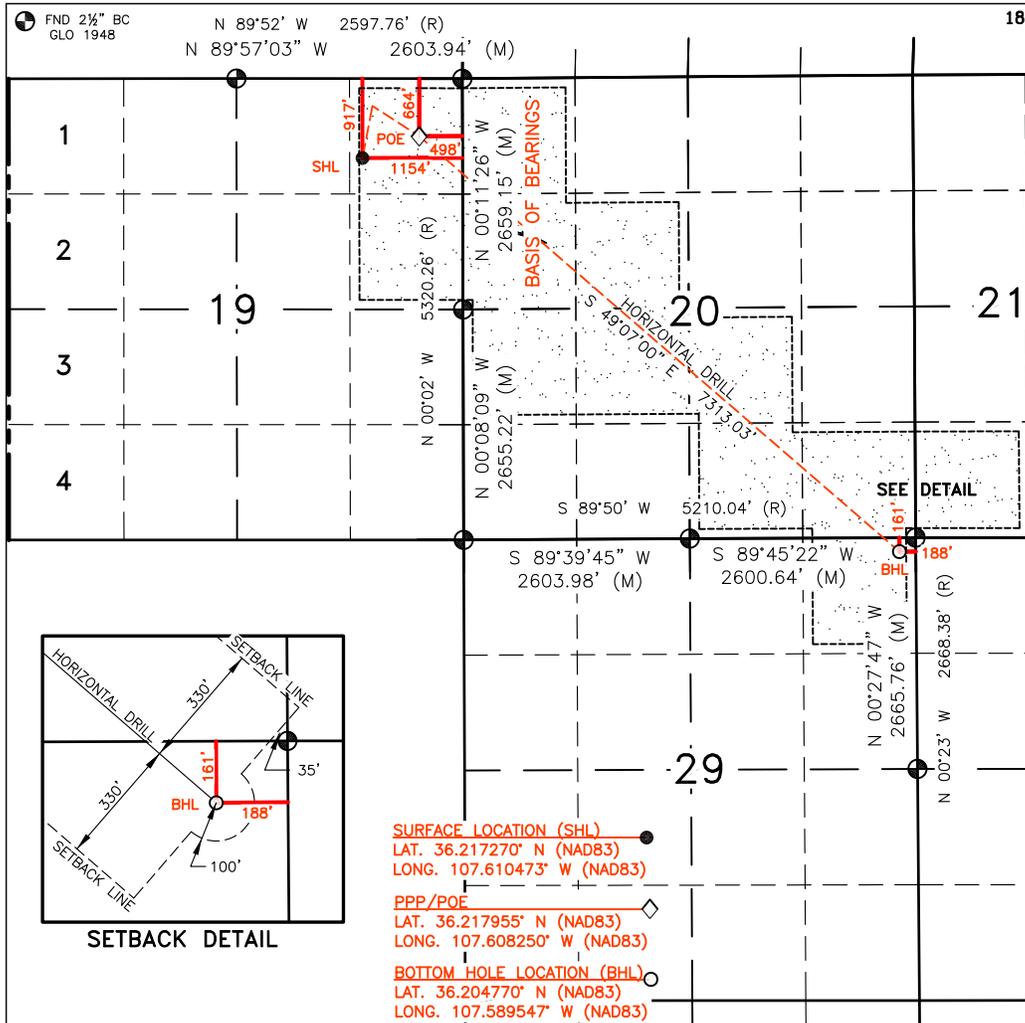
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	29	23N	7W		161'	NORTH	188'	EAST	SANDOVAL

<sup>12</sup> Dedicated Acres PENETRATED SPACING UNIT; SEC 19: NE/NE & SE/NE (80 AC.); SEC 20: NW/NW, SW/NW, SE/NW, NW/SW, NE/SW, NW/SE, SW/SE & SE/SE (320 AC.); SEC 21: SW/SW (40 AC.); SEC 29: NE/NE (40 AC.) = 480 ACRES				<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No. <b>R-14081 R-14081A</b>	
---	--	--	--	-------------------------------	--	----------------------------------	--	--	--

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

16



**17 OPERATOR CERTIFICATION**

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

*Shaw-Marie Ford* 11/8/21  
Signature Date

Shaw-Marie Ford  
Printed Name

sford@djrlc.com  
E-mail Address

**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.

AUGUST 11, 2020

Date of Survey  
Signature and Seal of Professional Surveyor:



Certificate Number 11393

**DISTRICT I**  
1625 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**DISTRICT II**  
811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**DISTRICT III**  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**DISTRICT IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3482

State of New Mexico  
Energy, Minerals & Natural Resources Department

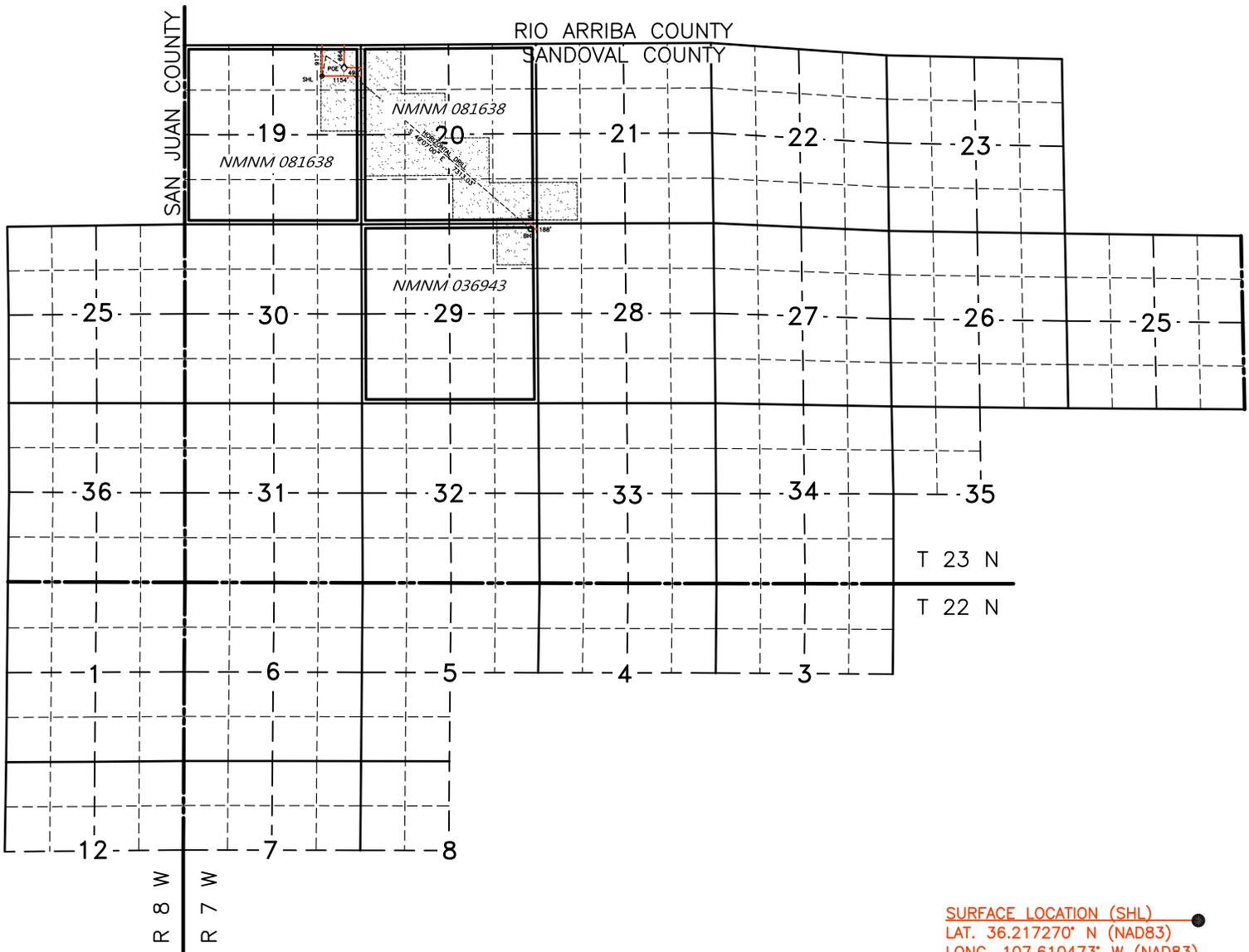
Form C-102  
Revised August 1, 2011

Submit one copy to appropriate  
District Office

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

AMENDED REPORT

DJR OPERATING, LLC  
NORTH ALAMITO UNIT #102H



PENETRATED SPACING UNIT;  
 SEC 19: NE/NE & SE/NE (80 AC.); SEC 20:  
 NW/NW, SW/NW, SE/NW, NW/SW, NE/SW, NW/SE,  
 SW/SE & SE/SE (320 AC.); SEC 21: SW/SW (40  
 AC.); SEC 29: NE/NE (40 AC.) = 480 ACRES  
 TOTAL 14,262.78 ACRES: T23N R7W SEC. 19-23, 25, 26-34 (ALL); 35 (NW/4);  
 T22N R7W SEC. 3 & 4 (N/2); 5 (N/2, SW/4); 6 (ALL); 7 (N/2); 8 (NW/4);  
 T23N R8W SEC. 25, 36 (ALL); T22N R8W SEC. 1 (ALL); SEC. 12 (N/2) -

**SURFACE LOCATION (SHL)** ●  
 LAT. 36.217270° N (NAD83)  
 LONG. 107.610473° W (NAD83)

**PPP/POE** ◇  
 LAT. 36.217955° N (NAD83)  
 LONG. 107.608250° W (NAD83)

**BOTTOM HOLE LOCATION (BHL)** ○  
 LAT. 36.204770° N (NAD83)  
 LONG. 107.589547° W (NAD83)

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:**  11 / 28 / 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
N. Alamito Unit 102H	TBD	A-19-23N-07W	917 FNL x 1154 FEL	300	440	106
N. Alamito Unit 106H	TBD	A-19-23N-07W	897 FNL x 1158 FEL	280	420	100

**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
N. Alamito Unit 102H	TBD	12/08/2022	02/27/2023	05/17/2023	05/27/2023	05/18/2023
N. Alamito Unit 106H	TBD	12/08/2022	02/28/2023	05/18/2023	05/28/2023	05/19/2023

**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: <i>Shaw-Marie Ford</i>
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@djrlc.com
Date: 11/28/2022
Phone: 505-716-3297
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:



DJR OPERATING, LLC.  
OGRID NO: 371838  
NATURAL GAS MANAGEMENT PLAN  
North Alamito Unit 102H and 106H  
NENE A-19-23N-07W

### 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  
North Alamito Unit 102H and 106H  
NENE A-19-23N-07W

### **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:

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



DJR OPERATING, LLC.  
OGRID NO: 371838  
NATURAL GAS MANAGEMENT PLAN  
North Alamito Unit 102H and 106H  
NENE A-19-23N-07W

## 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 its 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  
North Alamito Unit 102H and 106H  
NENE A-19-23N-07W

### **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 North Alamito #102H Sandoval County, New Mexico

**Surface Location**

1154-ft FEL & 917-ft FNL  
Sec 19 T23N R07W  
Graded Elevation 6962' MSL  
RKB Elevation 6976' (14' KB)

**SHL Geographical Coordinates (NAD-83)**

Latitude 36.2172700° N  
Longitude 107.6104730° W

**Kick Off Point for Horizontal Build Curve**

4677-ft MD  
4631-ft TVD

**Local Coordinates (from SHL)**

601-ft North  
115-ft East

**Heel Location (Pay zone entry)**

498-ft FEL & 664-ft FNL  
Sec 19 T23N R07W

**Heel Geographical Coordinates (NAD-83)**

Latitude 36.2179553° N  
Longitude 107.60825000° W

**Bottom Hole Location (TD)**

188-ft FEL & 161-ft FNL  
Sec 29 T23N R07W

**BHL Geographical Coordinates (NAD-83)**

Latitude 36.2047696° N  
Longitude 107.5895469° W

**Well objectives**

This well is planned as a 7310-ft lateral in the Gallup C sand.

**Bottom Hole temperature and pressure**

The temperature in the Gallup C horizontal objective is 141°F. Bottom hole pressure in the Gallup C 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	1056	1052	Sd	W	8.3	8.4 – 8.8
Kirtland	1192	1186	Sh	-	8.3	8.4 – 8.8
Fruitland	1381	1373	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1716	1704	Sd	W	8.3	9.0 - 9.5
Lewis	1848	1835	Sh	-		9.0 - 9.5
Chacra	2512	2491	Sd	-	8.3	9.0 - 9.5
Menefee	3232	3203	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4070	4031	Sd	-	8.3	9.0 - 9.5
Mancos	4256	4215	Sh	-		9.0 - 9.5
Mancos Silt	4588	4544	Slt	O/G	6.6	9.0 - 9.5
Gallup A	5103	5032	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5149	5069	Sd	O/G	6.6	8.8 - 9.0
Gallup C	5283	5164	Sd	O/G	6.6	8.8 - 9.0
Target	5729	5310	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	5669	surf	5308	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	5388	13042	5224	5266	5388

Note: all casing will be new



Rev 0

**Casing Design Load Cases**

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

**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**

Casing string	Casing OD	Design Factors			
		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	4177-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	406	239
Volume (bbls)	169	64
Volume (cu.ft.)	950	357
Excess %	55	55



Rev 0

4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	5388-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	643
Volume (bbls)	179
Volume (cu.ft)	1005
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 geograph 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 – 5669	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5669 – 13042	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.

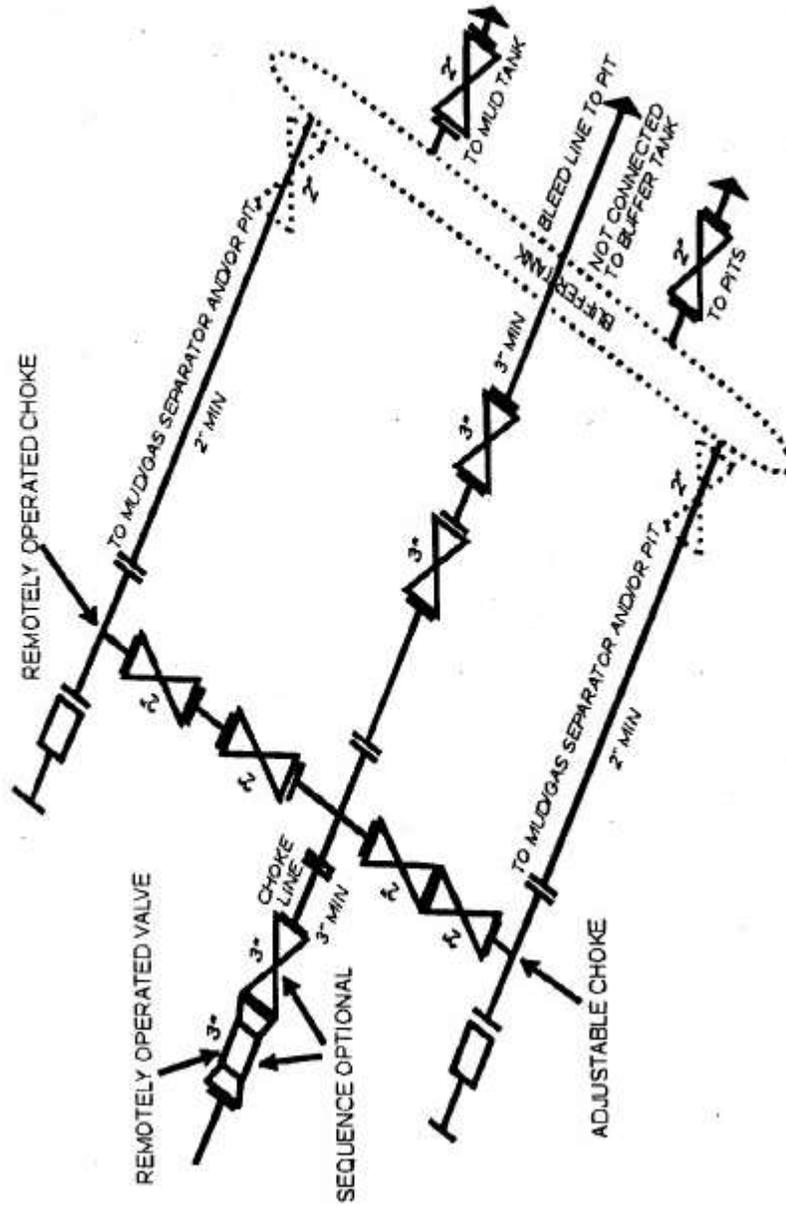
**Completion**

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.



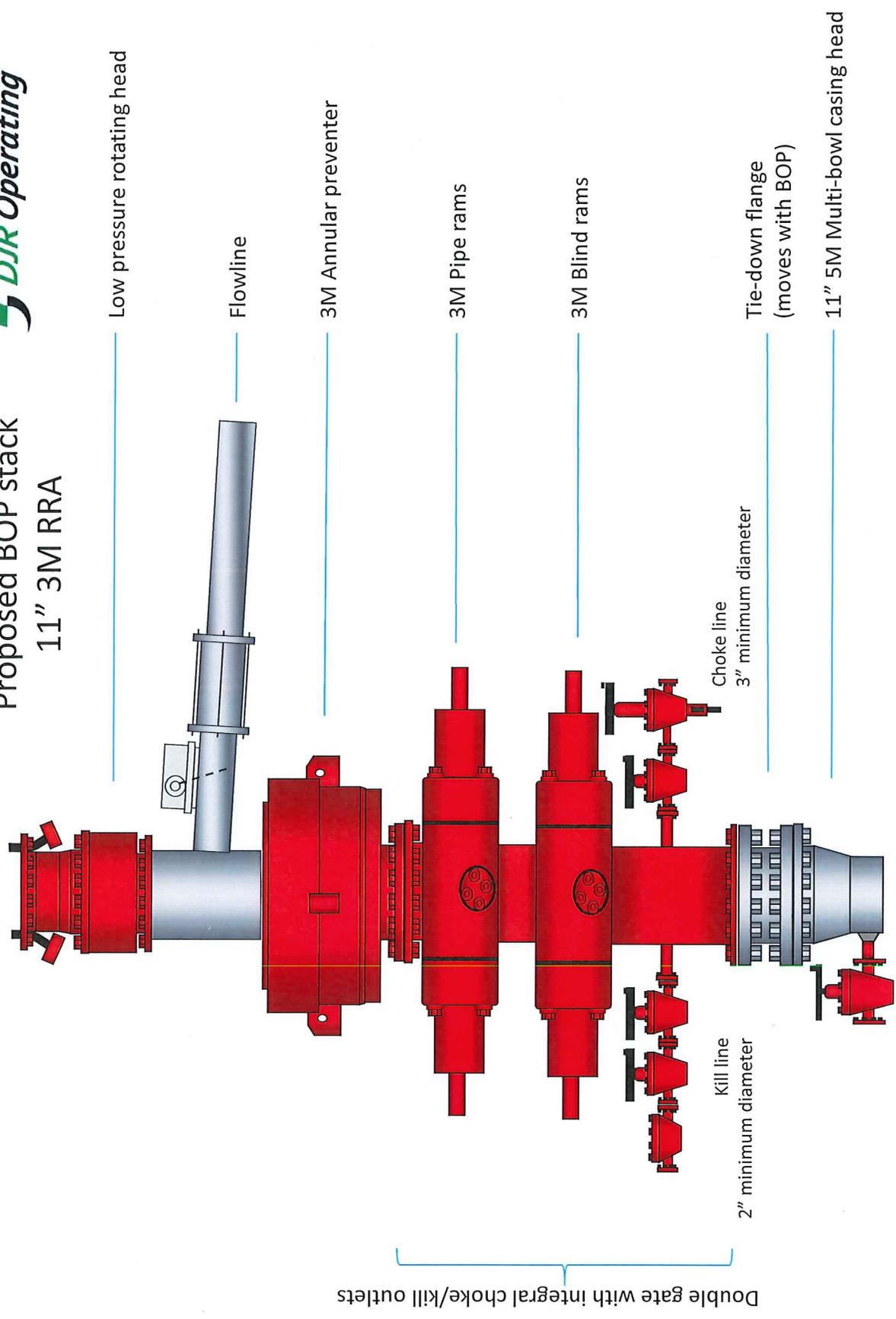
# Choke Manifold

Actual system to conform with Onshore Order 2

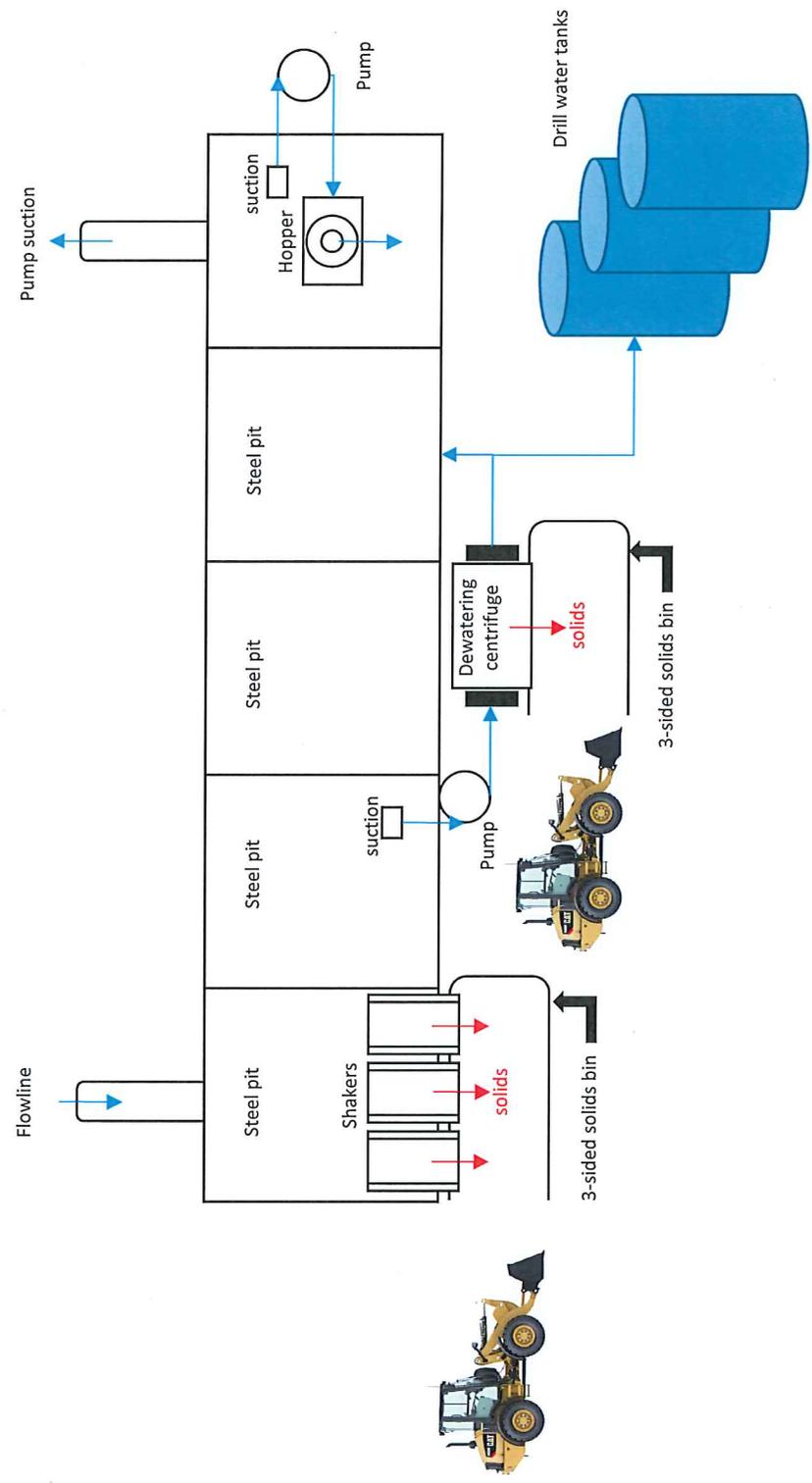




# Proposed BOP stack 11" 3M RRA



# Closed Loop Mud System





Company: DJR Operating  
 Project: North Alamito Unit  
 Site: A19 2307 Pad  
 Well: # 102H  
 Wellbore: Original Drilling  
 Design: APD

WELL DETAILS: # 102H

GL6962' & RKB 14' @ 6976.00usft	
Longitude	1
Latitude	-107.61047300
Eastings	36.21727000
Northings	1898459.62
+N/-S	0.00
+E/-W	1898459.62

DESIGN TARGET DETAILS

Time	TVD	+N/-S	+E/-W	Northing	Eastings	Latitude	Longitude
102H Heel	5310.00	249.47	655.72	1898710.59	2789484.85	36.21795530	-107.60825000
102H Toe	5266.00	-4549.76	6173.67	1893924.05	2795013.81	36.20476960	-107.58954890

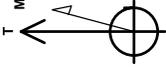
SECTION DETAILS

MD	Inc	Azi	TVD	+E/-W	+N/-S	Dleg	TFace	Vsect	Target
0.00	0.00	0.000	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	
833.13	8.86	10.825	831.48	0.00	0.00	0.00	0.00	0.00	
4576.66	14.36	10.825	4571.10	14.14	2.00	10.83	14.10	14.10	102H Heel
5724.66	90.34	131.015	5311.00	90.97	0.00	119.96	253.98	253.98	102H Toe
13041.82	30.34	131.015	5266.00	-4549.76	6173.67	0.00	0.00	7669.06	

PROJECT DETAILS: North Alamito 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 (# 102H/Original Drilling)  
 Created By: Janie Collins Date: 18:02, August 12 2020



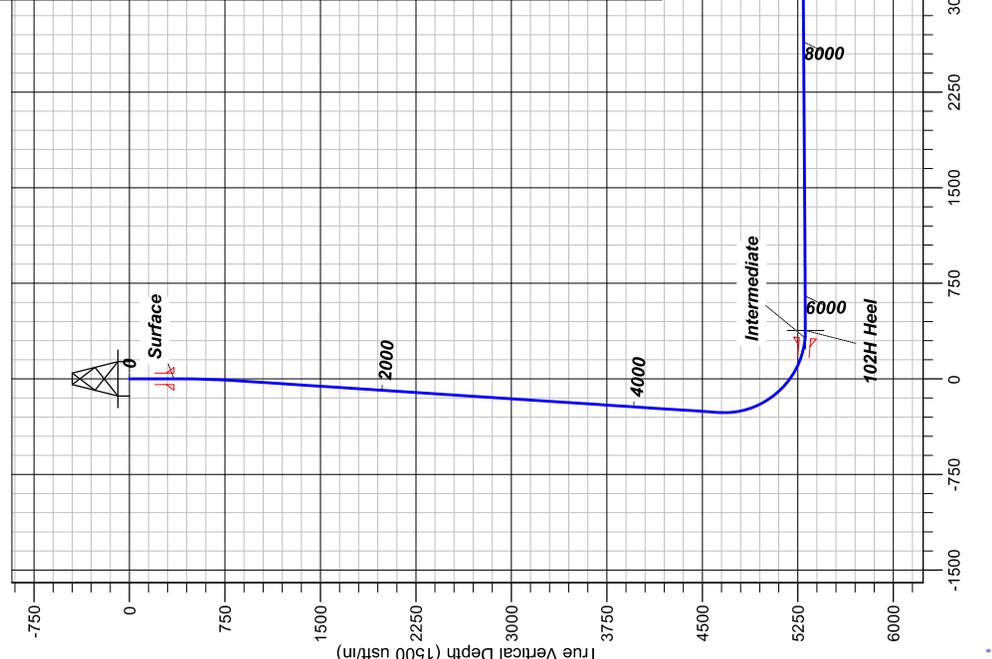
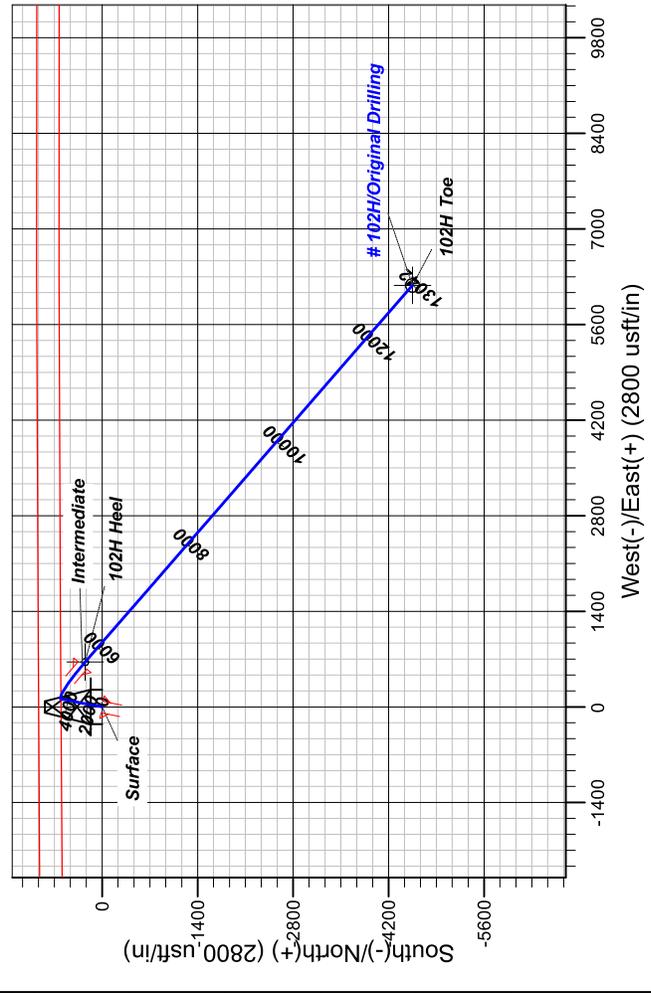
Azimuths to True North  
 Magnetic North: 8.86°  
 Magnetic Field  
 Strength: 49288 nT  
 Dip Angle: 62.23°  
 Date: 7/31/2020  
 Model: HDGM\_FIE

CASING DETAILS

TVD	MD	Net	Surf
350.00	350.00	5307.57	5668.76
			Intermed

FORMATION DETAILS

MDPath	Formation
1052.00	Ojo Alamo
1186.00	Kirtland
1373.00	Fruitland
1704.00	Pictured Cliffs
1835.00	Lewis
2491.00	Chaca
3203.00	Menefee
4031.00	Point Lookout
4215.00	Mancos
4544.00	Mancos Silt
5032.00	Gallup A
5069.00	Gallup B
5164.00	Gallup C





## **DJR Operating**

**North Alamito Unit  
A19 2307 Pad  
# 102H - Slot 1**

**Original Drilling**

**Plan: APD**

## **Standard Planning Report**

**12 August, 2020**





<b>Database:</b>	DJR	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Company:</b>	DJR Operating	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Project:</b>	North Alamito Unit	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site:</b>	A19 2307 Pad	<b>North Reference:</b>	True
<b>Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD		

<b>Project</b>	North Alamito Unit		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Western Zone		

<b>Site</b>	A19 2307 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,898,459.62 usft	<b>Latitude:</b>	36.21727000
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,788,829.70 usft	<b>Longitude:</b>	-107.61047300
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b>	0.13 °

<b>Well</b>	# 102H - Slot 1					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,898,459.62 usft	<b>Latitude:</b>	36.21727000
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,788,829.70 usft	<b>Longitude:</b>	-107.61047300
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	6,962.00 usft

<b>Wellbore</b>	Original Drilling				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM_FILE	7/31/2020	8.62	62.77	49,288.60000000

<b>Design</b>	APD			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	126.389

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/12/2020		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	13,041.82	APD (Original Drilling)	MWD+HDGM OWSG MWD + HDGM

<b>Plan Sections</b>										
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	
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
833.13	8.66	10.825	831.48	32.10	6.14	2.00	2.00	0.00	10.83	
4,676.60	8.66	10.825	4,631.11	600.68	114.86	0.00	0.00	0.00	0.00	
5,728.66	90.34	131.015	5,310.00	249.47	655.72	9.00	7.76	11.42	119.86	102H Heel
13,041.82	90.34	131.015	5,266.00	-4,549.76	6,173.67	0.00	0.00	0.00	0.00	102H Toe



**Lonestar Consulting, LLC**  
Planning Report



<b>Database:</b>	DJR	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Company:</b>	DJR Operating	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Project:</b>	North Alamito Unit	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site:</b>	A19 2307 Pad	<b>North Reference:</b>	True
<b>Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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
500.00	2.00	10.825	499.98	1.71	0.33	-0.75	2.00	2.00	0.00
600.00	4.00	10.825	599.84	6.85	1.31	-3.01	2.00	2.00	0.00
700.00	6.00	10.825	699.45	15.41	2.95	-6.77	2.00	2.00	0.00
800.00	8.00	10.825	798.70	27.38	5.24	-12.03	2.00	2.00	0.00
833.13	8.66	10.825	831.48	32.10	6.14	-14.10	2.00	2.00	0.00
900.00	8.66	10.825	897.59	41.99	8.03	-18.45	0.00	0.00	0.00
1,000.00	8.66	10.825	996.45	56.78	10.86	-24.95	0.00	0.00	0.00
1,100.00	8.66	10.825	1,095.31	71.58	13.69	-31.45	0.00	0.00	0.00
1,200.00	8.66	10.825	1,194.17	86.37	16.52	-37.95	0.00	0.00	0.00
1,300.00	8.66	10.825	1,293.03	101.17	19.34	-44.45	0.00	0.00	0.00
1,400.00	8.66	10.825	1,391.89	115.96	22.17	-50.94	0.00	0.00	0.00
1,500.00	8.66	10.825	1,490.74	130.75	25.00	-57.44	0.00	0.00	0.00
1,600.00	8.66	10.825	1,589.60	145.55	27.83	-63.94	0.00	0.00	0.00
1,700.00	8.66	10.825	1,688.46	160.34	30.66	-70.44	0.00	0.00	0.00
1,800.00	8.66	10.825	1,787.32	175.13	33.49	-76.94	0.00	0.00	0.00
1,900.00	8.66	10.825	1,886.18	189.93	36.32	-83.44	0.00	0.00	0.00
2,000.00	8.66	10.825	1,985.04	204.72	39.15	-89.94	0.00	0.00	0.00
2,100.00	8.66	10.825	2,083.90	219.51	41.97	-96.44	0.00	0.00	0.00
2,200.00	8.66	10.825	2,182.76	234.31	44.80	-102.94	0.00	0.00	0.00
2,300.00	8.66	10.825	2,281.62	249.10	47.63	-109.44	0.00	0.00	0.00
2,400.00	8.66	10.825	2,380.48	263.89	50.46	-115.94	0.00	0.00	0.00
2,500.00	8.66	10.825	2,479.34	278.69	53.29	-122.44	0.00	0.00	0.00
2,600.00	8.66	10.825	2,578.20	293.48	56.12	-128.94	0.00	0.00	0.00
2,700.00	8.66	10.825	2,677.06	308.27	58.95	-135.44	0.00	0.00	0.00
2,800.00	8.66	10.825	2,775.91	323.07	61.77	-141.93	0.00	0.00	0.00
2,900.00	8.66	10.825	2,874.77	337.86	64.60	-148.43	0.00	0.00	0.00
3,000.00	8.66	10.825	2,973.63	352.65	67.43	-154.93	0.00	0.00	0.00
3,100.00	8.66	10.825	3,072.49	367.45	70.26	-161.43	0.00	0.00	0.00
3,200.00	8.66	10.825	3,171.35	382.24	73.09	-167.93	0.00	0.00	0.00
3,300.00	8.66	10.825	3,270.21	397.03	75.92	-174.43	0.00	0.00	0.00
3,400.00	8.66	10.825	3,369.07	411.83	78.75	-180.93	0.00	0.00	0.00
3,500.00	8.66	10.825	3,467.93	426.62	81.58	-187.43	0.00	0.00	0.00
3,600.00	8.66	10.825	3,566.79	441.42	84.40	-193.93	0.00	0.00	0.00
3,700.00	8.66	10.825	3,665.65	456.21	87.23	-200.43	0.00	0.00	0.00
3,800.00	8.66	10.825	3,764.51	471.00	90.06	-206.93	0.00	0.00	0.00
3,900.00	8.66	10.825	3,863.37	485.80	92.89	-213.43	0.00	0.00	0.00
4,000.00	8.66	10.825	3,962.23	500.59	95.72	-219.93	0.00	0.00	0.00
4,100.00	8.66	10.825	4,061.09	515.38	98.55	-226.42	0.00	0.00	0.00
4,200.00	8.66	10.825	4,159.94	530.18	101.38	-232.92	0.00	0.00	0.00
4,300.00	8.66	10.825	4,258.80	544.97	104.21	-239.42	0.00	0.00	0.00
4,400.00	8.66	10.825	4,357.66	559.76	107.03	-245.92	0.00	0.00	0.00
4,500.00	8.66	10.825	4,456.52	574.56	109.86	-252.42	0.00	0.00	0.00
4,600.00	8.66	10.825	4,555.38	589.35	112.69	-258.92	0.00	0.00	0.00
4,676.60	8.66	10.825	4,631.11	600.68	114.86	-263.90	0.00	0.00	0.00
4,700.00	7.83	24.356	4,654.27	603.86	115.85	-264.99	9.00	-3.56	57.83
4,800.00	10.09	83.228	4,753.23	611.12	127.38	-260.01	9.00	2.26	58.87
4,900.00	17.42	106.145	4,850.36	607.98	150.51	-239.53	9.00	7.33	22.92
5,000.00	25.81	115.163	4,943.27	594.53	184.66	-204.06	9.00	8.39	9.02
5,100.00	34.50	119.916	5,029.67	571.11	229.00	-154.46	9.00	8.68	4.75



**Lonestar Consulting, LLC**  
Planning Report



<b>Database:</b>	DJR	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Company:</b>	DJR Operating	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Project:</b>	North Alamito Unit	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site:</b>	A19 2307 Pad	<b>North Reference:</b>	True
<b>Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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)
5,200.00	43.30	122.932	5,107.43	538.28	282.44	-91.97	9.00	8.80	3.02
5,300.00	52.15	125.095	5,174.64	496.85	343.65	-18.12	9.00	8.86	2.16
5,400.00	61.04	126.789	5,229.63	447.85	411.13	65.27	9.00	8.89	1.69
5,500.00	69.95	128.214	5,271.07	392.48	483.22	156.15	9.00	8.91	1.42
5,600.00	78.87	129.484	5,297.92	332.11	558.14	252.28	9.00	8.92	1.27
5,700.00	87.79	130.678	5,309.53	268.21	634.05	351.30	9.00	8.92	1.19
5,728.66	90.34	131.015	5,310.00	249.47	655.72	379.86	9.00	8.92	1.18
5,800.00	90.34	131.015	5,309.57	202.66	709.55	450.97	0.00	0.00	0.00
5,900.00	90.34	131.015	5,308.97	137.03	785.00	550.64	0.00	0.00	0.00
6,000.00	90.34	131.015	5,308.37	71.41	860.46	650.31	0.00	0.00	0.00
6,100.00	90.34	131.015	5,307.77	5.78	935.91	749.99	0.00	0.00	0.00
6,200.00	90.34	131.015	5,307.16	-59.84	1,011.36	849.66	0.00	0.00	0.00
6,300.00	90.34	131.015	5,306.56	-125.47	1,086.81	949.33	0.00	0.00	0.00
6,400.00	90.34	131.015	5,305.96	-191.09	1,162.26	1,049.00	0.00	0.00	0.00
6,500.00	90.34	131.015	5,305.36	-256.72	1,237.72	1,148.67	0.00	0.00	0.00
6,600.00	90.34	131.015	5,304.76	-322.34	1,313.17	1,248.35	0.00	0.00	0.00
6,700.00	90.34	131.015	5,304.16	-387.97	1,388.62	1,348.02	0.00	0.00	0.00
6,800.00	90.34	131.015	5,303.55	-453.59	1,464.07	1,447.69	0.00	0.00	0.00
6,900.00	90.34	131.015	5,302.95	-519.22	1,539.53	1,547.36	0.00	0.00	0.00
7,000.00	90.34	131.015	5,302.35	-584.84	1,614.98	1,647.04	0.00	0.00	0.00
7,100.00	90.34	131.015	5,301.75	-650.47	1,690.43	1,746.71	0.00	0.00	0.00
7,200.00	90.34	131.015	5,301.15	-716.09	1,765.88	1,846.38	0.00	0.00	0.00
7,300.00	90.34	131.015	5,300.55	-781.72	1,841.33	1,946.05	0.00	0.00	0.00
7,400.00	90.34	131.015	5,299.94	-847.34	1,916.79	2,045.73	0.00	0.00	0.00
7,500.00	90.34	131.015	5,299.34	-912.97	1,992.24	2,145.40	0.00	0.00	0.00
7,600.00	90.34	131.015	5,298.74	-978.59	2,067.69	2,245.07	0.00	0.00	0.00
7,700.00	90.34	131.015	5,298.14	-1,044.22	2,143.14	2,344.74	0.00	0.00	0.00
7,800.00	90.34	131.015	5,297.54	-1,109.84	2,218.59	2,444.42	0.00	0.00	0.00
7,900.00	90.34	131.015	5,296.94	-1,175.47	2,294.05	2,544.09	0.00	0.00	0.00
8,000.00	90.34	131.015	5,296.33	-1,241.09	2,369.50	2,643.76	0.00	0.00	0.00
8,100.00	90.34	131.015	5,295.73	-1,306.72	2,444.95	2,743.43	0.00	0.00	0.00
8,200.00	90.34	131.015	5,295.13	-1,372.34	2,520.40	2,843.11	0.00	0.00	0.00
8,300.00	90.34	131.015	5,294.53	-1,437.97	2,595.85	2,942.78	0.00	0.00	0.00
8,400.00	90.34	131.015	5,293.93	-1,503.59	2,671.31	3,042.45	0.00	0.00	0.00
8,500.00	90.34	131.015	5,293.33	-1,569.22	2,746.76	3,142.12	0.00	0.00	0.00
8,600.00	90.34	131.015	5,292.72	-1,634.84	2,822.21	3,241.79	0.00	0.00	0.00
8,700.00	90.34	131.015	5,292.12	-1,700.47	2,897.66	3,341.47	0.00	0.00	0.00
8,800.00	90.34	131.015	5,291.52	-1,766.09	2,973.11	3,441.14	0.00	0.00	0.00
8,900.00	90.34	131.015	5,290.92	-1,831.72	3,048.57	3,540.81	0.00	0.00	0.00
9,000.00	90.34	131.015	5,290.32	-1,897.34	3,124.02	3,640.48	0.00	0.00	0.00
9,100.00	90.34	131.015	5,289.72	-1,962.96	3,199.47	3,740.16	0.00	0.00	0.00
9,200.00	90.34	131.015	5,289.11	-2,028.59	3,274.92	3,839.83	0.00	0.00	0.00
9,300.00	90.34	131.015	5,288.51	-2,094.21	3,350.38	3,939.50	0.00	0.00	0.00
9,400.00	90.34	131.015	5,287.91	-2,159.84	3,425.83	4,039.17	0.00	0.00	0.00
9,500.00	90.34	131.015	5,287.31	-2,225.46	3,501.28	4,138.85	0.00	0.00	0.00
9,600.00	90.34	131.015	5,286.71	-2,291.09	3,576.73	4,238.52	0.00	0.00	0.00
9,700.00	90.34	131.015	5,286.11	-2,356.71	3,652.18	4,338.19	0.00	0.00	0.00
9,800.00	90.34	131.015	5,285.50	-2,422.34	3,727.64	4,437.86	0.00	0.00	0.00
9,900.00	90.34	131.015	5,284.90	-2,487.96	3,803.09	4,537.54	0.00	0.00	0.00
10,000.00	90.34	131.015	5,284.30	-2,553.59	3,878.54	4,637.21	0.00	0.00	0.00
10,100.00	90.34	131.015	5,283.70	-2,619.21	3,953.99	4,736.88	0.00	0.00	0.00
10,200.00	90.34	131.015	5,283.10	-2,684.84	4,029.44	4,836.55	0.00	0.00	0.00
10,300.00	90.34	131.015	5,282.50	-2,750.46	4,104.90	4,936.23	0.00	0.00	0.00
10,400.00	90.34	131.015	5,281.89	-2,816.09	4,180.35	5,035.90	0.00	0.00	0.00



<b>Database:</b>	DJR	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Company:</b>	DJR Operating	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Project:</b>	North Alamito Unit	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site:</b>	A19 2307 Pad	<b>North Reference:</b>	True
<b>Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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)	
10,500.00	90.34	131.015	5,281.29	-2,881.71	4,255.80	5,135.57	0.00	0.00	0.00	
10,600.00	90.34	131.015	5,280.69	-2,947.34	4,331.25	5,235.24	0.00	0.00	0.00	
10,700.00	90.34	131.015	5,280.09	-3,012.96	4,406.70	5,334.91	0.00	0.00	0.00	
10,800.00	90.34	131.015	5,279.49	-3,078.59	4,482.16	5,434.59	0.00	0.00	0.00	
10,900.00	90.34	131.015	5,278.89	-3,144.21	4,557.61	5,534.26	0.00	0.00	0.00	
11,000.00	90.34	131.015	5,278.28	-3,209.84	4,633.06	5,633.93	0.00	0.00	0.00	
11,100.00	90.34	131.015	5,277.68	-3,275.46	4,708.51	5,733.60	0.00	0.00	0.00	
11,200.00	90.34	131.015	5,277.08	-3,341.09	4,783.96	5,833.28	0.00	0.00	0.00	
11,300.00	90.34	131.015	5,276.48	-3,406.71	4,859.42	5,932.95	0.00	0.00	0.00	
11,400.00	90.34	131.015	5,275.88	-3,472.34	4,934.87	6,032.62	0.00	0.00	0.00	
11,500.00	90.34	131.015	5,275.28	-3,537.96	5,010.32	6,132.29	0.00	0.00	0.00	
11,600.00	90.34	131.015	5,274.67	-3,603.59	5,085.77	6,231.97	0.00	0.00	0.00	
11,700.00	90.34	131.015	5,274.07	-3,669.21	5,161.23	6,331.64	0.00	0.00	0.00	
11,800.00	90.34	131.015	5,273.47	-3,734.84	5,236.68	6,431.31	0.00	0.00	0.00	
11,900.00	90.34	131.015	5,272.87	-3,800.46	5,312.13	6,530.98	0.00	0.00	0.00	
12,000.00	90.34	131.015	5,272.27	-3,866.09	5,387.58	6,630.66	0.00	0.00	0.00	
12,100.00	90.34	131.015	5,271.67	-3,931.71	5,463.03	6,730.33	0.00	0.00	0.00	
12,200.00	90.34	131.015	5,271.06	-3,997.34	5,538.49	6,830.00	0.00	0.00	0.00	
12,300.00	90.34	131.015	5,270.46	-4,062.96	5,613.94	6,929.67	0.00	0.00	0.00	
12,400.00	90.34	131.015	5,269.86	-4,128.59	5,689.39	7,029.35	0.00	0.00	0.00	
12,500.00	90.34	131.015	5,269.26	-4,194.21	5,764.84	7,129.02	0.00	0.00	0.00	
12,600.00	90.34	131.015	5,268.66	-4,259.83	5,840.29	7,228.69	0.00	0.00	0.00	
12,700.00	90.34	131.015	5,268.06	-4,325.46	5,915.75	7,328.36	0.00	0.00	0.00	
12,800.00	90.34	131.015	5,267.46	-4,391.08	5,991.20	7,428.03	0.00	0.00	0.00	
12,900.00	90.34	131.015	5,266.85	-4,456.71	6,066.65	7,527.71	0.00	0.00	0.00	
13,000.00	90.34	131.015	5,266.25	-4,522.33	6,142.10	7,627.38	0.00	0.00	0.00	
13,041.82	90.34	131.015	5,266.00	-4,549.76	6,173.67	7,669.06	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
102H Toe - hit/miss target - Shape	0.00	0.000	5,266.00	-4,549.76	6,173.67	1,893,924.06	2,795,013.81	36.20476960	-107.58954690
- plan hits target center - Circle (radius 100.00)									
102H Heel - plan hits target center - Circle (radius 50.00)	0.00	0.000	5,310.00	249.47	655.72	1,898,710.60	2,789,484.85	36.21795530	-107.60825000

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
350.00	350.00	Surface	9.62	12.25	
5,668.76	5,307.57	Intermediate	4.50	6.00	



<b>Database:</b>	DJR	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Company:</b>	DJR Operating	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Project:</b>	North Alamito Unit	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site:</b>	A19 2307 Pad	<b>North Reference:</b>	True
<b>Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,056.19	1,052.00	Ojo Alamo		0.00	0.000	
1,191.74	1,186.00	Kirtland		0.00	0.000	
1,380.90	1,373.00	Fruitland		0.00	0.000	
1,715.72	1,704.00	Pictured Cliffs		0.00	0.000	
1,848.23	1,835.00	Lewis		0.00	0.000	
2,511.80	2,491.00	Chacra		0.00	0.000	
3,232.01	3,203.00	Menefee		0.00	0.000	
4,069.57	4,031.00	Point Lookout		0.00	0.000	
4,255.69	4,215.00	Mancos		0.00	0.000	
4,588.49	4,544.00	Mancos Silt		0.00	0.000	
5,102.83	5,032.00	Gallup A		0.00	0.000	
5,149.03	5,069.00	Gallup B		0.00	0.000	
5,282.95	5,164.00	Gallup C		0.00	0.000	



## **DJR Operating**

**North Alamito Unit  
A19 2307 Pad  
# 102H**

**Original Drilling  
APD**

## **Anticollision Report**

**12 August, 2020**





**Lonestar Consulting, LLC**  
Anticollision Report



<b>Company:</b>	DJR Operating	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Project:</b>	North Alamito Unit	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Reference Site:</b>	A19 2307 Pad	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	DJR
<b>Reference Design:</b>	APD	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b>	8/12/2020		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	13,041.82	APD (Original Drilling)	MWD+HDGM	OWSG MWD + HDGM

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (usft)</b>	<b>Offset Measured Depth (usft)</b>	<b>Distance Between Centres (usft)</b>	<b>Distance Between Ellipses (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
A19 2307 Pad						
# 106H - Original Drilling - APD	580.18	579.46	17.85	14.12	4.782	CC
# 106H - Original Drilling - APD	600.00	599.10	17.97	14.10	4.641	ES
# 106H - Original Drilling - APD	13,041.82	13,782.55	1,576.24	1,158.31	3.772	SF

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.00 usft	
A19 2307 Pad - # 106H - Original Drilling - APD												<b>Offset Well Error:</b>	0.00 usft	
Survey Program: 0-MWD+IGRF														
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	-13.75	19.29	-4.72	19.86					
100.00	100.00	100.00	100.00	0.15	0.15	-13.75	19.29	-4.72	19.86	19.55	0.31	64.427		
200.00	200.00	200.00	200.00	0.51	0.51	-13.75	19.29	-4.72	19.86	18.84	1.03	19.373		
300.00	300.00	300.00	300.00	0.87	0.87	-13.75	19.29	-4.72	19.86	18.12	1.74	11.401		
400.00	400.00	400.00	400.00	1.23	1.23	-13.75	19.29	-4.72	19.86	17.40	2.46	8.077		
500.00	499.98	499.76	499.74	1.59	1.58	-31.93	19.29	-6.46	18.84	15.67	3.17	5.948		
580.18	580.06	579.46	579.35	1.88	1.86	-50.50	19.28	-10.34	17.85	14.12	3.73	4.782	CC	
600.00	599.84	599.10	598.94	1.95	1.93	-56.89	19.28	-11.64	17.97	14.10	3.87	4.641	ES	
700.00	699.45	697.58	697.04	2.32	2.29	-90.74	19.27	-20.16	23.55	18.98	4.58	5.147		
800.00	798.70	794.80	793.55	2.68	2.67	-111.98	19.25	-31.88	38.35	33.06	5.29	7.250		
833.13	831.48	826.66	825.09	2.81	2.80	-116.25	19.24	-36.43	44.93	39.40	5.53	8.125		
900.00	897.59	890.53	888.13	3.06	3.06	-121.97	19.22	-46.61	59.95	53.94	6.01	9.978		
1,000.00	996.45	984.94	980.89	3.45	3.48	-125.80	19.19	-64.23	85.40	78.68	6.72	12.708		
1,100.00	1,095.31	1,077.90	1,071.60	3.84	3.94	-127.12	19.16	-84.55	113.85	106.42	7.43	15.320		
1,200.00	1,194.17	1,169.25	1,160.04	4.24	4.42	-127.33	19.12	-107.38	145.04	136.91	8.14	17.829		
1,300.00	1,293.03	1,258.85	1,246.05	4.63	4.94	-127.01	19.08	-132.50	178.89	170.05	8.84	20.240		
1,400.00	1,391.89	1,349.74	1,332.57	5.03	5.50	-126.48	19.03	-160.30	214.96	205.39	9.57	22.461		
1,500.00	1,490.74	1,442.88	1,421.16	5.44	6.09	-126.06	18.99	-189.07	251.31	240.97	10.34	24.301		
1,600.00	1,589.60	1,536.02	1,509.75	5.84	6.70	-125.74	18.94	-217.84	287.68	276.56	11.12	25.869		
1,700.00	1,688.46	1,629.16	1,598.34	6.24	7.32	-125.49	18.89	-246.61	324.05	312.15	11.90	27.220		
1,800.00	1,787.32	1,722.31	1,686.92	6.65	7.95	-125.30	18.84	-275.38	360.43	347.73	12.69	28.394		
1,900.00	1,886.18	1,815.45	1,775.51	7.05	8.58	-125.14	18.79	-304.15	396.80	383.32	13.49	29.422		
2,000.00	1,985.04	1,908.59	1,864.10	7.46	9.22	-125.00	18.75	-332.92	433.18	418.90	14.28	30.330		
2,100.00	2,083.90	2,001.74	1,952.69	7.86	9.86	-124.89	18.70	-361.70	469.57	454.48	15.08	31.136		



**Lonestar Consulting, LLC**  
Anticollision Report



<b>Company:</b>	DJR Operating	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Project:</b>	North Alamito Unit	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Reference Site:</b>	A19 2307 Pad	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	DJR
<b>Reference Design:</b>	APD	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF													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	2,182.76	2,094.88	2,041.28	8.27	10.51	-124.79	18.65	-390.47	505.95	490.07	15.88	31.857		
2,300.00	2,281.62	2,188.02	2,129.87	8.68	11.15	-124.71	18.60	-419.24	542.33	525.65	16.68	32.505		
2,400.00	2,380.48	2,281.17	2,218.45	9.09	11.80	-124.64	18.55	-448.01	578.72	561.23	17.49	33.091		
2,500.00	2,479.34	2,374.31	2,307.04	9.49	12.45	-124.57	18.51	-476.78	615.10	596.81	18.29	33.622		
2,600.00	2,578.20	2,467.45	2,395.63	9.90	13.10	-124.51	18.46	-505.55	651.49	632.39	19.10	34.107		
2,700.00	2,677.06	2,560.60	2,484.22	10.31	13.75	-124.46	18.41	-534.32	687.88	667.97	19.91	34.550		
2,800.00	2,775.91	2,653.74	2,572.81	10.72	14.41	-124.42	18.36	-563.09	724.27	703.55	20.72	34.957		
2,900.00	2,874.77	2,746.88	2,661.39	11.12	15.06	-124.37	18.31	-591.87	760.65	739.12	21.53	35.332		
3,000.00	2,973.63	2,840.03	2,749.98	11.53	15.72	-124.34	18.27	-620.64	797.04	774.70	22.34	35.679		
3,100.00	3,072.49	2,933.17	2,838.57	11.94	16.37	-124.30	18.22	-649.41	833.43	810.28	23.15	36.000		
3,200.00	3,171.35	3,026.31	2,927.16	12.35	17.03	-124.27	18.17	-678.18	869.82	845.86	23.96	36.298		
3,300.00	3,270.21	3,119.46	3,015.75	12.76	17.69	-124.24	18.12	-706.95	906.21	881.43	24.78	36.576		
3,400.00	3,369.07	3,212.60	3,104.34	13.17	18.35	-124.21	18.07	-735.72	942.60	917.01	25.59	36.836		
3,500.00	3,467.93	3,305.74	3,192.92	13.58	19.00	-124.19	18.03	-764.49	978.99	952.58	26.40	37.079		
3,600.00	3,566.79	3,398.89	3,281.51	13.99	19.66	-124.17	17.98	-793.27	1,015.38	988.16	27.22	37.306		
3,700.00	3,665.65	3,492.03	3,370.10	14.39	20.32	-124.15	17.93	-822.04	1,051.77	1,023.73	28.03	37.520		
3,800.00	3,764.51	3,585.17	3,458.69	14.80	20.98	-124.13	17.88	-850.81	1,088.15	1,059.31	28.85	37.721		
3,900.00	3,863.37	3,678.32	3,547.28	15.21	21.64	-124.11	17.83	-879.58	1,124.54	1,094.88	29.66	37.911		
4,000.00	3,962.23	3,771.46	3,635.87	15.62	22.30	-124.09	17.79	-908.35	1,160.93	1,130.46	30.48	38.090		
4,100.00	4,061.09	3,864.60	3,724.45	16.03	22.96	-124.07	17.74	-937.12	1,197.32	1,166.03	31.29	38.260		
4,200.00	4,159.94	3,957.75	3,813.04	16.44	23.62	-124.06	17.69	-965.89	1,233.71	1,201.60	32.11	38.420		
4,300.00	4,258.80	4,050.89	3,901.63	16.85	24.28	-124.04	17.64	-994.67	1,270.10	1,237.18	32.93	38.572		
4,400.00	4,357.66	4,144.03	3,990.22	17.26	24.94	-124.03	17.59	-1,023.44	1,306.49	1,272.75	33.75	38.716		
4,500.00	4,456.52	4,237.18	4,078.81	17.67	25.60	-124.02	17.55	-1,052.21	1,342.89	1,308.32	34.56	38.853		
4,600.00	4,555.38	4,330.32	4,167.39	18.08	26.27	-124.00	17.50	-1,080.98	1,379.28	1,343.89	35.38	38.984		
4,676.60	4,631.11	4,401.67	4,235.25	18.39	26.77	-123.99	17.46	-1,103.02	1,407.15	1,371.14	36.01	39.079		
4,700.00	4,654.27	4,423.39	4,255.91	18.49	26.93	-138.13	17.45	-1,109.73	1,415.84	1,379.65	36.20	39.116		
4,750.00	4,703.83	4,469.19	4,299.48	18.68	27.25	-172.91	17.43	-1,123.88	1,435.54	1,398.97	36.57	39.257		
4,800.00	4,753.23	4,513.95	4,342.04	18.85	27.57	160.35	17.40	-1,137.70	1,456.71	1,419.81	36.90	39.477		
4,850.00	4,802.18	4,557.37	4,383.34	19.01	27.88	144.47	17.38	-1,151.11	1,479.26	1,442.07	37.19	39.775		
4,900.00	4,850.36	4,599.18	4,423.11	19.16	28.17	134.61	17.36	-1,164.03	1,503.13	1,465.69	37.44	40.146		
4,950.00	4,897.49	4,639.15	4,461.12	19.29	28.46	127.74	17.34	-1,176.38	1,528.24	1,490.59	37.65	40.587		
5,000.00	4,943.27	5,889.25	5,284.84	19.41	28.54	109.78	-541.43	-806.41	1,545.74	1,503.16	42.58	36.304		
5,050.00	4,987.42	5,911.75	5,284.74	19.52	28.50	106.97	-556.24	-789.47	1,542.35	1,499.19	43.16	35.738		
5,100.00	5,029.67	5,937.68	5,284.63	19.62	28.48	104.58	-573.30	-769.95	1,540.32	1,496.56	43.76	35.202		
5,150.00	5,069.75	5,966.89	5,284.51	19.70	28.47	102.45	-592.52	-747.96	1,539.50	1,495.17	44.33	34.726		
5,163.26	5,079.99	5,975.15	5,284.47	19.72	28.46	101.91	-597.96	-741.74	1,539.47	1,494.98	44.48	34.607		
5,200.00	5,107.43	5,999.18	5,284.37	19.77	28.46	100.48	-613.78	-723.65	1,539.72	1,494.84	44.89	34.302		
5,250.00	5,142.46	6,034.37	5,284.22	19.83	28.49	98.65	-636.94	-697.16	1,540.79	1,495.27	45.52	33.851		
5,300.00	5,174.64	6,072.24	5,284.05	19.89	28.55	96.93	-661.86	-668.65	1,542.50	1,496.35	46.16	33.418		
5,350.00	5,203.75	6,112.55	5,283.88	19.94	28.68	95.33	-688.39	-638.30	1,544.67	1,497.60	47.06	32.821		
5,400.00	5,229.63	6,155.06	5,283.69	20.07	28.88	93.87	-716.37	-606.30	1,547.08	1,499.14	47.95	32.266		
5,450.00	5,252.12	6,199.49	5,283.50	20.41	29.19	92.56	-745.61	-572.84	1,549.57	1,500.62	48.95	31.655		
5,500.00	5,271.07	6,245.59	5,283.30	20.87	29.62	91.43	-775.95	-538.13	1,551.95	1,501.90	50.05	31.009		
5,550.00	5,286.37	6,293.06	5,283.10	21.41	30.16	90.50	-807.20	-502.39	1,554.07	1,502.82	51.25	30.321		
5,600.00	5,297.92	6,341.62	5,282.89	22.01	30.80	89.78	-839.15	-465.84	1,555.83	1,503.26	52.57	29.597		
5,650.00	5,305.66	6,390.95	5,282.68	22.67	31.52	89.28	-871.62	-428.69	1,557.11	1,503.13	53.97	28.849		
5,700.00	5,309.53	6,440.77	5,282.46	23.37	32.31	89.02	-904.41	-391.19	1,557.85	1,502.37	55.47	28.083		
5,728.66	5,310.00	6,469.42	5,282.34	23.79	32.78	88.98	-923.27	-369.62	1,558.01	1,501.65	56.36	27.643		
5,800.00	5,309.57	6,540.76	5,282.03	24.91	34.01	88.99	-970.22	-315.91	1,558.19	1,499.50	58.69	26.551		
5,900.00	5,308.97	6,640.76	5,281.60	26.61	35.84	88.99	-1,036.03	-240.62	1,558.44	1,496.26	62.18	25.063		
6,000.00	5,308.37	6,740.76	5,281.17	28.47	37.76	89.00	-1,101.85	-165.33	1,558.69	1,492.77	65.91	23.648		



**Lonestar Consulting, LLC**  
Anticollision Report



<b>Company:</b>	DJR Operating	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Project:</b>	North Alamito Unit	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Reference Site:</b>	A19 2307 Pad	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	DJR
<b>Reference Design:</b>	APD	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF													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		
6,100.00	5,307.77	6,840.76	5,280.73	30.44	39.75	89.01	-1,167.66	-90.05	1,558.94	1,489.10	69.84	22.321		
6,200.00	5,307.16	6,940.76	5,280.30	32.51	41.79	89.01	-1,233.48	-14.76	1,559.18	1,485.25	73.93	21.090		
6,300.00	5,306.56	7,040.76	5,279.87	34.66	43.89	89.02	-1,299.29	60.53	1,559.43	1,481.27	78.16	19.952		
6,400.00	5,305.96	7,140.76	5,279.44	36.88	46.04	89.02	-1,365.11	135.82	1,559.68	1,477.18	82.50	18.905		
6,500.00	5,305.36	7,240.76	5,279.01	39.16	48.21	89.03	-1,430.92	211.10	1,559.93	1,472.99	86.94	17.942		
6,600.00	5,304.76	7,340.76	5,278.57	41.48	50.42	89.04	-1,496.73	286.39	1,560.18	1,468.72	91.46	17.058		
6,700.00	5,304.16	7,440.76	5,278.14	43.84	52.66	89.04	-1,562.55	361.68	1,560.43	1,464.37	96.05	16.245		
6,800.00	5,303.55	7,540.76	5,277.71	46.24	54.92	89.05	-1,628.36	436.96	1,560.67	1,459.97	100.71	15.497		
6,900.00	5,302.95	7,640.76	5,277.28	48.66	57.21	89.06	-1,694.18	512.25	1,560.92	1,455.51	105.41	14.808		
7,000.00	5,302.35	7,740.76	5,276.85	51.11	59.51	89.06	-1,759.99	587.54	1,561.17	1,451.01	110.16	14.172		
7,100.00	5,301.75	7,840.75	5,276.42	53.58	61.83	89.07	-1,825.81	662.83	1,561.42	1,446.47	114.95	13.583		
7,200.00	5,301.15	7,940.75	5,275.98	56.07	64.17	89.08	-1,891.62	738.11	1,561.67	1,441.89	119.78	13.038		
7,300.00	5,300.55	8,040.75	5,275.55	58.57	66.52	89.08	-1,957.44	813.40	1,561.92	1,437.28	124.63	12.532		
7,400.00	5,299.94	8,140.75	5,275.12	61.09	68.88	89.09	-2,023.25	888.69	1,562.17	1,432.65	129.52	12.062		
7,500.00	5,299.34	8,240.75	5,274.69	63.62	71.25	89.10	-2,089.07	963.98	1,562.41	1,427.99	134.42	11.623		
7,600.00	5,298.74	8,340.75	5,274.26	66.17	73.63	89.10	-2,154.88	1,039.26	1,562.66	1,423.31	139.35	11.214		
7,700.00	5,298.14	8,440.75	5,273.83	68.72	76.03	89.11	-2,220.69	1,114.55	1,562.91	1,418.61	144.30	10.831		
7,800.00	5,297.54	8,540.75	5,273.39	71.28	78.43	89.11	-2,286.51	1,189.84	1,563.16	1,413.89	149.27	10.472		
7,900.00	5,296.94	8,640.75	5,272.96	73.85	80.84	89.12	-2,352.32	1,265.12	1,563.41	1,409.16	154.25	10.136		
8,000.00	5,296.33	8,740.75	5,272.53	76.43	83.25	89.13	-2,418.14	1,340.41	1,563.66	1,404.41	159.25	9.819		
8,100.00	5,295.73	8,840.75	5,272.10	79.01	85.67	89.13	-2,483.95	1,415.70	1,563.91	1,399.65	164.26	9.521		
8,200.00	5,295.13	8,940.75	5,271.67	81.60	88.10	89.14	-2,549.77	1,490.99	1,564.15	1,394.88	169.28	9.240		
8,300.00	5,294.53	9,040.75	5,271.23	84.19	90.54	89.15	-2,615.58	1,566.27	1,564.40	1,390.09	174.31	8.975		
8,400.00	5,293.93	9,140.75	5,270.80	86.79	92.98	89.15	-2,681.40	1,641.56	1,564.65	1,385.30	179.35	8.724		
8,500.00	5,293.33	9,240.75	5,270.37	89.40	95.42	89.16	-2,747.21	1,716.85	1,564.90	1,380.49	184.41	8.486		
8,600.00	5,292.72	9,340.75	5,269.94	92.00	97.87	89.17	-2,813.03	1,792.13	1,565.15	1,375.68	189.47	8.261		
8,700.00	5,292.12	9,440.75	5,269.51	94.61	100.32	89.17	-2,878.84	1,867.42	1,565.40	1,370.86	194.54	8.047		
8,800.00	5,291.52	9,540.75	5,269.08	97.23	102.78	89.18	-2,944.65	1,942.71	1,565.65	1,366.04	199.61	7.844		
8,900.00	5,290.92	9,640.75	5,268.64	99.84	105.24	89.18	-3,010.47	2,018.00	1,565.90	1,361.20	204.69	7.650		
9,000.00	5,290.32	9,740.75	5,268.21	102.47	107.70	89.19	-3,076.28	2,093.28	1,566.15	1,356.36	209.78	7.466		
9,100.00	5,289.72	9,840.75	5,267.78	105.09	110.17	89.20	-3,142.10	2,168.57	1,566.39	1,351.52	214.87	7.290		
9,200.00	5,289.11	9,940.75	5,267.35	107.71	112.64	89.20	-3,207.91	2,243.86	1,566.64	1,346.67	219.97	7.122		
9,300.00	5,288.51	10,040.74	5,266.92	110.34	115.11	89.21	-3,273.73	2,319.15	1,566.89	1,341.81	225.08	6.962		
9,400.00	5,287.91	10,140.74	5,266.49	112.97	117.58	89.22	-3,339.54	2,394.43	1,567.14	1,336.95	230.19	6.808		
9,500.00	5,287.31	10,240.74	5,266.05	115.60	120.06	89.22	-3,405.36	2,469.72	1,567.39	1,332.09	235.30	6.661		
9,600.00	5,286.71	10,340.74	5,265.62	118.24	122.54	89.23	-3,471.17	2,545.01	1,567.64	1,327.22	240.42	6.520		
9,700.00	5,286.11	10,440.74	5,265.19	120.87	125.02	89.23	-3,536.99	2,620.29	1,567.89	1,322.35	245.54	6.386		
9,800.00	5,285.50	10,540.74	5,264.76	123.51	127.51	89.24	-3,602.80	2,695.58	1,568.14	1,317.47	250.66	6.256		
9,900.00	5,284.90	10,640.74	5,264.33	126.15	129.99	89.25	-3,668.61	2,770.87	1,568.39	1,312.59	255.79	6.131		
10,000.00	5,284.30	10,740.74	5,263.90	128.79	132.48	89.25	-3,734.43	2,846.16	1,568.64	1,307.71	260.92	6.012		
10,100.00	5,283.70	10,840.74	5,263.46	131.43	134.97	89.26	-3,800.24	2,921.44	1,568.88	1,302.83	266.06	5.897		
10,200.00	5,283.10	10,940.74	5,263.03	134.07	137.46	89.27	-3,866.06	2,996.73	1,569.13	1,297.94	271.19	5.786		
10,300.00	5,282.50	11,040.74	5,262.60	136.72	139.95	89.27	-3,931.87	3,072.02	1,569.38	1,293.05	276.33	5.679		
10,400.00	5,281.89	11,140.74	5,262.17	139.36	142.44	89.28	-3,997.69	3,147.31	1,569.63	1,288.16	281.48	5.576		
10,500.00	5,281.29	11,240.74	5,261.74	142.01	144.94	89.29	-4,063.50	3,222.59	1,569.88	1,283.26	286.62	5.477		
10,600.00	5,280.69	11,340.74	5,261.30	144.65	147.44	89.29	-4,129.32	3,297.88	1,570.13	1,278.36	291.77	5.381		
10,700.00	5,280.09	11,440.74	5,260.87	147.30	149.93	89.30	-4,195.13	3,373.17	1,570.38	1,273.46	296.92	5.289		
10,800.00	5,279.49	11,540.74	5,260.44	149.95	152.43	89.30	-4,260.95	3,448.45	1,570.63	1,268.56	302.07	5.200		
10,900.00	5,278.89	11,640.74	5,260.01	152.60	154.93	89.31	-4,326.76	3,523.74	1,570.88	1,263.66	307.22	5.113		
11,000.00	5,278.28	11,740.74	5,259.58	155.25	157.43	89.32	-4,392.57	3,599.03	1,571.13	1,258.75	312.38	5.030		
11,100.00	5,277.68	11,840.74	5,259.15	157.90	159.94	89.32	-4,458.39	3,674.32	1,571.38	1,253.84	317.53	4.949		
11,200.00	5,277.08	11,940.74	5,258.71	160.56	162.44	89.33	-4,524.20	3,749.60	1,571.63	1,248.93	322.69	4.870		



**Lonestar Consulting, LLC**  
Anticollision Report



<b>Company:</b>	DJR Operating	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Project:</b>	North Alamito Unit	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Reference Site:</b>	A19 2307 Pad	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	DJR
<b>Reference Design:</b>	APD	<b>Offset TVD Reference:</b>	Offset Datum

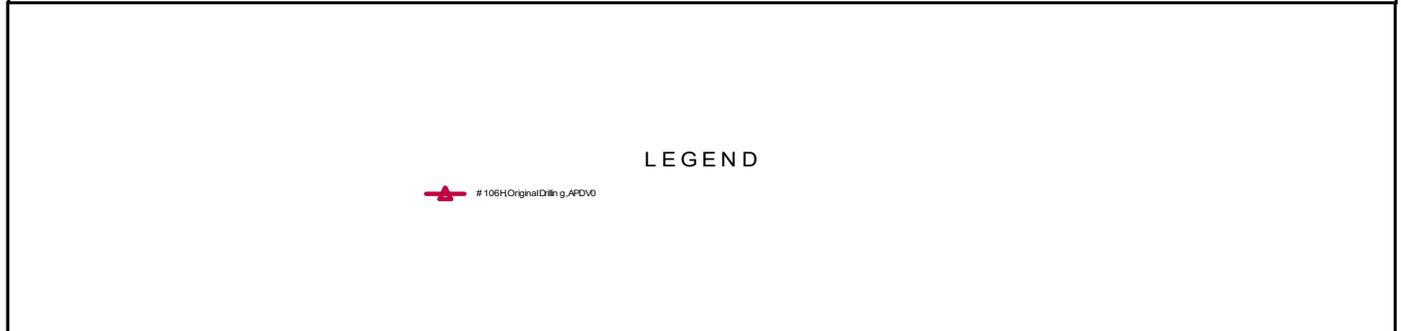
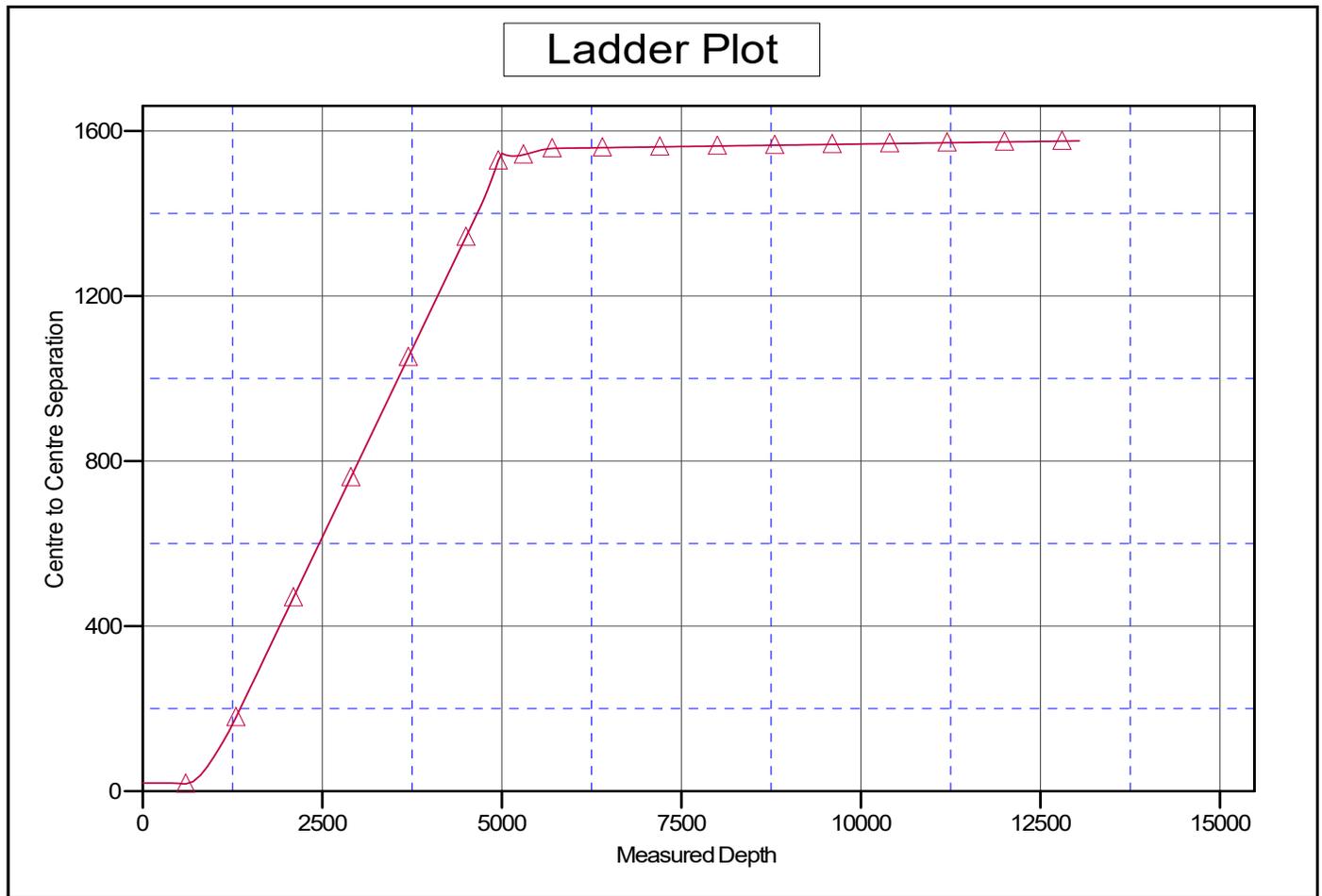
Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
11,300.00	5,276.48	12,040.74	5,258.28	163.21	164.94	89.34	-4,590.02	3,824.89	1,571.87	1,244.02	327.85	4.794		
11,400.00	5,275.88	12,140.74	5,257.85	165.86	167.45	89.34	-4,655.83	3,900.18	1,572.12	1,239.11	333.01	4.721		
11,500.00	5,275.28	12,240.73	5,257.42	168.52	169.95	89.35	-4,721.65	3,975.46	1,572.37	1,234.20	338.18	4.650		
11,600.00	5,274.67	12,340.73	5,256.99	171.17	172.46	89.35	-4,787.46	4,050.75	1,572.62	1,229.28	343.34	4.580		
11,700.00	5,274.07	12,440.73	5,256.56	173.83	174.97	89.36	-4,853.28	4,126.04	1,572.87	1,224.37	348.51	4.513		
11,800.00	5,273.47	12,540.73	5,256.12	176.48	177.48	89.37	-4,919.09	4,201.33	1,573.12	1,219.45	353.67	4.448		
11,900.00	5,272.87	12,640.73	5,255.69	179.14	179.99	89.37	-4,984.91	4,276.61	1,573.37	1,214.53	358.84	4.385		
12,000.00	5,272.27	12,740.73	5,255.26	181.80	182.50	89.38	-5,050.72	4,351.90	1,573.62	1,209.61	364.01	4.323		
12,100.00	5,271.67	12,840.73	5,254.83	184.45	185.01	89.39	-5,116.53	4,427.19	1,573.87	1,204.69	369.18	4.263		
12,200.00	5,271.06	12,940.73	5,254.40	187.11	187.52	89.39	-5,182.35	4,502.48	1,574.12	1,199.77	374.35	4.205		
12,300.00	5,270.46	13,040.73	5,253.96	189.77	190.03	89.40	-5,248.16	4,577.76	1,574.37	1,194.84	379.53	4.148		
12,400.00	5,269.86	13,140.73	5,253.53	192.43	192.54	89.40	-5,313.98	4,653.05	1,574.62	1,189.92	384.70	4.093		
12,500.00	5,269.26	13,240.73	5,253.10	195.09	195.05	89.41	-5,379.79	4,728.34	1,574.87	1,184.99	389.87	4.039		
12,600.00	5,268.66	13,340.73	5,252.67	197.75	197.57	89.42	-5,445.61	4,803.62	1,575.12	1,180.07	395.05	3.987		
12,700.00	5,268.06	13,440.73	5,252.24	200.41	200.08	89.42	-5,511.42	4,878.91	1,575.37	1,175.14	400.23	3.936		
12,800.00	5,267.46	13,540.73	5,251.81	203.07	202.60	89.43	-5,577.24	4,954.20	1,575.62	1,170.21	405.40	3.887		
12,900.00	5,266.85	13,640.73	5,251.37	205.73	205.11	89.44	-5,643.05	5,029.49	1,575.87	1,165.29	410.58	3.838		
13,000.00	5,266.25	13,740.73	5,250.94	208.39	207.63	89.44	-5,708.87	5,104.77	1,576.12	1,160.36	415.76	3.791		
13,041.82	5,266.00	13,782.55	5,250.76	209.50	208.68	89.45	-5,736.39	5,136.26	1,576.24	1,158.31	417.93	3.772 SF		



<b>Company:</b>	DJR Operating	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Project:</b>	North Alamito Unit	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Reference Site:</b>	A19 2307 Pad	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	DJR
<b>Reference Design:</b>	APD	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to GL 6962' & RKB 14' @ 6976.00usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -107.8333333

Coordinates are relative to: # 102H - Slot 1  
 Coordinate System is US State Plane 1983, New Mexico Western Zone  
 Grid Convergence at Surface is: 0.13°



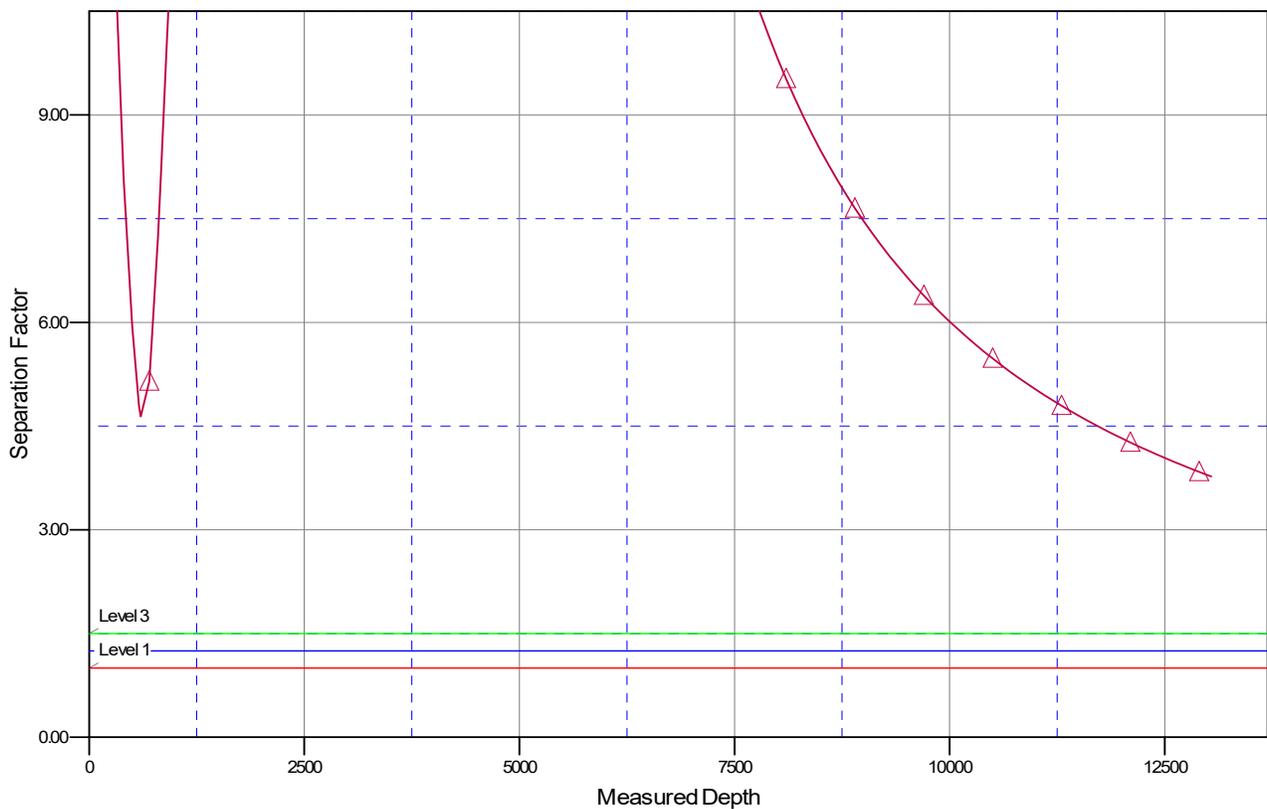


<b>Company:</b>	DJR Operating	<b>Local Co-ordinate Reference:</b>	Well # 102H - Slot 1
<b>Project:</b>	North Alamito Unit	<b>TVD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Reference Site:</b>	A19 2307 Pad	<b>MD Reference:</b>	GL 6962' & RKB 14' @ 6976.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	# 102H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	DJR
<b>Reference Design:</b>	APD	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to GL 6962' & RKB 14' @ 6976.00usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -107.83333333

Coordinates are relative to: # 102H - Slot 1  
 Coordinate System is US State Plane 1983, New Mexico Western Zone  
 Grid Convergence at Surface is: 0.13°

### Separation Factor Plot



#### LEGEND

 # 106H Original Drilling APDVO



# 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  
#102H NORTH ALAMITO UNIT  
Lease: NMNM81638  
SH: NE $\frac{1}{4}$ NE $\frac{1}{4}$  Section 19, T.23 N., R.7W.  
Sandoval County, New Mexico  
BH: NE $\frac{1}{4}$ NE $\frac{1}{4}$  Section 29, T.23 N., R7 W.  
Sandoval 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.
- 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.

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

## **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**  
**Joe Killins (505) 564-7736**

**BLM Farmington Field Office**

**Conditions of Approval**

**DOI-BLM-NM-F010-2021-0046-EA**

**North Alamito Unit N17-2307 well pad, access road, pipeline, production facilities, staging area:**  
North Alamito Unit Well Numbers 05H, 06H

**North Alamito Unit A19-2307 well pad, access road, pipeline, production facilities, staging area:**  
North Alamito Unit Well Numbers 102H, 106H

**North Alamito Unit D29-2307 well pad, access road, pipeline, production facilities, G tank/staging area:**  
North Alamito Unit Well Numbers 320H, 565H

**North Alamito Unit L29-2307 well pad, access road, pipeline, production facilities, staging area:**  
North Alamito Unit Well Numbers 236H, 534H

**September 2022**

The following conditions of approval will apply to DJR Operating, LLC's North Alamito Unit well pads, associated facilities, and items listed in the above paragraph, unless a particular Surface Managing Agency or private surface owner has supplied to Bureau of Land Management and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in an assessment or civil penalties pursuant to 43 CFR 3163.1 or 3163.2.

**Disclaimers:** BLM's approval of the APD does not relieve the lessee and operator from obtaining any other authorizations that may be required by the BIA, Navajo Tribe, State or other jurisdictional entities.

**Copy of Plans:** A complete copy of the APD package, including: Surface Use Plan of Operations, Bare Soil Reclamation Plan, Plan of Development (if required), Conditions of Approval, Cultural Resource Record of Review, Cultural Resources Compliance Form (if required), and Project Stipulations (if required) shall be at the project area at all times and available to all persons.

**Review of NEPA documents:** It is the responsibility of the operator to follow all the design features, best management practices, and mitigation measures as contained in Environmental Assessment DOI-BLM-NM-F010-2021-0040-EA, entitled "North Alamito Unit L29-2307, D29-2307, A19-2307, and N17-2307 Cluster Oil and Natural Gas Wells Project". Copies of the EA, Decision Record, and Finding of No Significant Impact may be obtained from the BLM FFO public room, or online at [eplanning.blm.gov](http://eplanning.blm.gov).

**Best Management Practices (BMPs):** Farmington Field Office established environmental Best Management Practices (BMP's) will be followed during construction and reclamation of well site pads, access roads, pipeline ties, facility placement or any other surface disturbing activity associated with this project. Bureau wide standard BMP's are found in the Gold Book, Fourth Edition-Revised 2007. Farmington Field Office BMP's are integrated into the Environmental Assessment, Surface Use Plan of Operations, Bare Soil Reclamation Plan, and COAs.

**Construction & Reclamation Notification:** The operator or their contractor will contact Randy McKee, BLM Environmental Protection Specialist at (505) 564-7708 or email ([RMcKee@blm.gov](mailto:RMcKee@blm.gov)), at least 48 hours prior to any construction or reclamation on this project. The operator or their contractor will contact the grazing permittee and fee surface owner to give notice at least 10 days prior to start of construction operations.

**Weather:** No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet.

**Stockpile of Soil:** The top 6 inches of soil material will be stripped and stockpiled in the construction zones around the pad [construction zones may be restricted or deleted to provide resource avoidance]. The stockpiled soil will be

free of brush and tree limbs, trunks and roots. The stockpiled soil material will be spread on the reclaimed portions of the pad [including the cut and fill slopes] prior to re-seeding. Spreading shall not be done when the ground or topsoil is frozen or wet.

**Grazing Permittee Notification and Concerns:** The operator will notify the grazing lease operator(s) at least ten business days prior to beginning any construction activity to ensure there will be no conflicts between construction activities and livestock grazing operations. The operator is not obligated to cease or delay construction unless directed by the AO. Any range improvement (fences, pipelines, ponds, etc.) disturbed by construction activities will be repaired immediately following construction and will be repaired to the condition the improvement was in prior to disturbance. Cattle guards will be installed to replace any livestock fencing or gates removed for road construction.

**Paleontology:** “Any paleontological resource discovered by the Operator, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.”  
A paleo monitor will be required during initial construction of the D29-2307 pipeline corridor between STA 152+73.43 and STA 165+83.45 in case of buried fossil material where undisturbed Nacimiento badlands exist.

**Wildlife:** Migratory Bird Nest Survey: For any construction activities that exceed 4.0 acres of ground disturbance from 5/15 to 7/31 within the same lease, a migratory bird nest survey is required prior to any new ground disturbance.

Nest surveys will be conducted within 48 hours of scheduled construction by BLM/FFO personnel or approved biologist. Any active nests will require a disturbance buffer to eliminate impacts to nesting birds. Active nests will not be disturbed.

Applicant will adhere to timing limitations and management measures if any new raptor nests are discovered within the project area. These timing limitations are species specific depending on the raptor that is discovered. The following timing limitations may apply:

Raptor Species of Nest Discovered	Timing Limitation
Bald Eagle	March 1-June 30
Burrowing Owl	April 1-August 15
Golden Eagle	February 1-June 30
Other Raptors	March 1- June 30

**Storage Tanks:** All open top permanent production or storage tanks regardless of diameter made of fiberglass, steel, or other material used for the containment of oil, condensate, produced water and or other production waste shall be screened, netted, or otherwise covered to protect migratory birds and other wildlife from access.

**Special Status Plant Species and Animal Species:** DJR will attain the services of an approved (by BLM) horticulturist, as required in 2017 policy. The horticulturist will conduct and/or oversee any transplanting of Clover’s cactus directly impacted by proposed project. A transplant plan with all the pertinent details will be submitted to BLM/FFO prior to any transplant effort. The transplant plan will require approval by the BLM New Mexico State Office, A transplant permit is also required by the State of New Mexico prior to any cacti removal. DJR will monitor the transplant population for a minimum of 5 years. Annual reports will be submitted to the BLM/FFO biologist/botanist.

**Cultural Resources:** Six Class III Archaeological Surveys (NMCRIS No. 148551; BLM Report No. 2021(III)007.1F, NMCRIS No. 147835; BLM Report No. 2021(III)007F, NMCRIS No. 129521; BLM Report No. 2014(II)023F, NMCRIS No. 142848; BLM Report No. 2019(IV)013F, NMCRIS No. 129656; BLM Report No. 2014(II)043F, & NMCRIS No. 146878; BLM Report No. 2021(I)006F) were conducted in the proposed project area.

Four cultural sites (LA178150, LA178097, LA198931, & LA198932) were discovered in close proximity to the proposed project areas. LA198931 and LA198932 were both given Undetermined eligibility statuses for listing on the NRHP, and LA178150 and LA178097 were both called Eligible for listing on the NRHP. All four of these sites will require site protection fencing and archaeological monitoring.

### **Cultural Resources Stipulations:**

**A.** BLM Report Number: 2021(III)007.1F

Project Name: Rerouted Road and Pipeline - North Alamito Unit (NAU) #106H/#102H and North Alamito Unit (NAU)#06H/#05H Well Pads, Gas and Liquids Pipelines, Access Roads, and Staging Area.

Project Sponsor: DJR Operating LLC.

#### **1. SITE PROTECTION AND EMPLOYEE EDUCATION:**

All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm) when on federal land and the New Mexico Cultural Properties Act NMSA 1978 when on state land.

#### **2. ARCHAEOLOGICAL MONITORING IS REQUIRED:**

A copy of these stipulations will be supplied to the archeological monitor at least two working days prior to the start of construction activities. No construction activities, including vegetation removal, may begin before the arrival of the archaeological monitor.

The monitor will:

- Ensure that site protection barriers are located as indicated on the attached maps in the vicinity of LA198931, & LA198932.
- Observe all construction activities within 100' of LA198931, & LA198932.
- Submit a report of the monitoring activities within 30 days of completion of monitoring unless other arrangements are made with the BLM. These stipulations must be attached to the report.

#### **3. SITE PROTECTION BARRIER:**

- The temporary site protection barriers will be erected prior to the beginning of construction. The barriers will consist of upright wooden survey lath spaced no more than 10 feet apart and marked with blue flagging or blue paint. The barriers will remain in place through reclamation and reseeding and shall be promptly removed after reclamation.
- The barriers will be placed as indicated on the attached maps of the report.
- There will be no surface-disturbing activities or vehicle traffic past the barriers.

**B.** BLM Report Number: 2021(I)006F

Project Name: NAU L29-2307 and NAU D29-2307 Well Pads, Gas and Liquids Pipelines, Access Roads, G Tank and Staging Area.

Project Sponsor: DJR Operating LLC.

#### **1. SITE PROTECTION AND EMPLOYEE EDUCATION:**

All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16

U.S.C. 470aa-mm) when on federal land and the New Mexico Cultural Properties Act NMSA 1978 when on state land.

**2. ARCHAEOLOGICAL MONITORING IS REQUIRED:**

A copy of these stipulations will be supplied to the archeological monitor at least two working days prior to the start of construction activities. No construction activities, including vegetation removal, may begin before the arrival of the archaeological monitor.

The monitor will:

- Ensure that site protection barriers are located as indicated on the attached maps in the vicinity of LA178097, & LA178150.
- Observe all surface disturbing activities within 100' of LA178097, & LA178150.
- Submit a report of the monitoring activities within 30 days of completion of monitoring unless other arrangements are made with the BLM. These stipulations must be attached to the report.

**3. SITE PROTECTION BARRIER:**

- The temporary site protection barriers will be erected prior to construction. The barriers will consist of upright wooden survey lath spaced no more than 10 feet apart and marked with blue flagging or blue paint. The barriers will remain in place through reclamation and reseeding and shall be promptly removed after reclamation.
- The barriers will be placed as indicated on the attached map of the report.
- There will be no surface-disturbing activities or vehicle traffic past the barriers.

**Note:** If there are questions about these stipulations, contact Kim Adams (BLM) at 505.564.7683 or kadams@blm.gov.

**Fee Surface Contact Information:**

Owner: Jason W. Gallegos; 101 Ortega Road NW; Albuquerque, NM 87114; 505-261-1068

**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 164461

**CONDITIONS**

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID: 371838
	Action Number: 164461
	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	12/14/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	12/14/2022
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	12/14/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	12/14/2022
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	12/14/2022