

Form 3160-3
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM109385
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No. VENADO CANYON UNIT / NMNM 1353
2. Name of Operator DJR OPERATING LLC		8. Lease Name and Well No. VENADO CANYON UNIT 509H
3a. Address 1700 LINCOLN STREET, SUITE 2800, DENVER, CO 802	3b. Phone No. (include area code) (505) 632-3476	9. API Well No. 30-043-21410
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE / 1246 FSL / 1300 FEL / LAT 36.1482741 / LONG -107.4337526 At proposed prod. zone NENE / 464 FNL / 88 FEL / LAT 36.158532 / LONG -107.44712		10. Field and Pool, or Exploratory BASIN MANCOS/LYBROOK GALLUP
14. Distance in miles and direction from nearest town or post office* 60 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 11/T22N/R6W/NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1246 feet	16. No of acres in lease 400.0	12. County or Parish SANDOVAL
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20 feet	19. Proposed Depth 4940 feet / 10554 feet	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7075 feet	22. Approximate date work will start* 05/09/2021	17. Spacing Unit dedicated to this well FED: NMB001464
24. Attachments		23. Estimated duration 10 days

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 (Electronic Submission)	Name (Printed/Typed) SHAW-MARIE FORD / Ph: (505) 632-3476	Date 11/10/2020
Title Regulatory Specialist		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) DAVE J MANKIEWICZ / Ph: (505) 564-7761	Date 03/03/2022
Title AFM-Minerals Office Farmington Field 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

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21410	² Pool Code 42289	³ Pool Name LYBROOK GALLUP
⁴ Property Code 325271	⁵ Property Name VENADO CANYON UNIT	⁶ Well Number 509H
⁷ GRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 7075

¹⁰ Surface Location

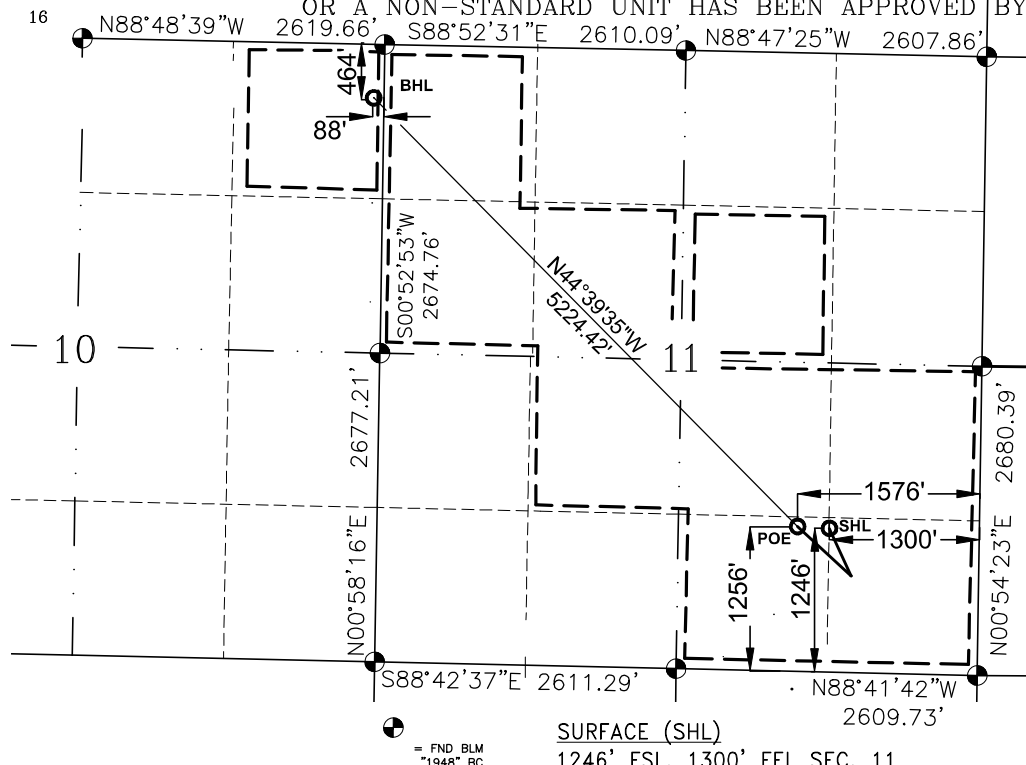
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	11	22-N	6-W		1246	SOUTH	1300	EAST	SANDOVAL

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	22-N	6-W		464	NORTH	88	EAST	SANDOVAL

¹² Dedicated Acres SEE DETAIL BELOW	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-14067 R-14067A
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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



DETAIL:
DEDICATED ACRES
SEC. 11: SE/4, SW/NE, NE/SW,
S2/NW, NW/NW (360 ACRES)
SEC. 10: NE/NE, (40 ACRES)
TOTAL = 400 ACRES

SURFACE (SHL)
1246' FSL, 1300' FEL SEC. 11
LAT: 36.1482741° N
LONG: 107.4337526° W NAD83
POINT OF ENTRY (POE)
1256' FSL, 1576' FEL SEC. 11
LAT: 36.148319° N
LONG: 107.434688° W NAD83
BOTTOM HOLE (BHL)
464' FNL, 88' FEL SEC. 10
LAT: 36.158532° N
LONG: 107.447120° W NAD83

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 a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Shaw-Marie Ford 6/1/21

Signature Date

Shaw-Marie Ford

Printed Name

sford@djrlc.com

E-mail Address

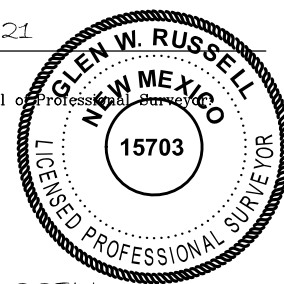
18 SURVEYOR CERTIFICATION

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

MAY 19, 2021

Date of Survey

Signature and Seal of Professional Surveyor



GLEN W. RUSSELL

Certificate Number

15703

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:** _02 / 23 / 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
Venado Canyon Unit 504H	TBD	O-11-22N-06W	1087 FSL x 1405 FEL	280	415	100
Venado Canyon Unit 505H	TBD	O-11-22N-06W	1070 FSL x 1416 FEL	445	660	160
Venado Canyon Unit 506H	TBD	O-11-22N-06W	1104 FSL x 1395 FEL	450	660	160
Venado Canyon Unit 507H	TBD	O-11-22N-06W	1054 FSL x 1427 FEL	280	420	100
Venado Canyon Unit 508H	TBD	O-11-22N-06W	1139 FSL x 1374 FEL	430	640	150
Venado Canyon Unit 509H	TBD	O-11-22N-06W	1121 FSL x 1383 FEL	340	500	120

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
Venado Canyon Unit 504H	TBD	06/03/2022	06/13/2022	10/07/2022	11/01/2022	11/01/2022
Venado Canyon Unit 505H	TBD	05/10/2022	05/20/2022	09/25/2022	11/01/2022	11/01/2022
Venado Canyon Unit 506H	TBD	05/26/2022	06/05/2022	10/03/2022	11/01/2022	11/01/2022
Venado Canyon Unit 507H	TBD	05/19/2022	05/29/2022	09/29/2022	11/01/2022	11/01/2022
Venado Canyon Unit 508H	TBD	06/12/2022	06/22/2022	10/11/2022	11/01/2022	11/01/2022
Venado Canyon Unit 509H	TBD	06/21/2022	07/01/2022	10/15/2022	11/01/2022	11/01/2022

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

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

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

Section 2 – Enhanced Plan**EFFECTIVE APRIL 1, 2022**

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature: <i>Shaw-Marie Ford</i>
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@djrlc.com
Date: 02/23/2022
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
VENADO CANYON UNIT 504H, 505H, 506H, 507H, 508H, 509H
SWSE O-11-22N-06W

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 separators will be set for each individual well.
- The separators 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 separators will each 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 each 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 separators.
- Oil will be separated from the produced water and the 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
VENADO CANYON UNIT 504H, 505H, 506H, 507H, 508H, 509H
SWSE O-11-22N-06W

VENTING and FLARING

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

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

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

DJR will only flare gas during the following times:

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



DJR OPERATING, LLC.
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NATURAL GAS MANAGEMENT PLAN
VENADO CANYON UNIT 504H, 505H, 506H, 507H, 508H, 509H
SWSE O-11-22N-06W

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

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

19.15.27.8 B. Venting and flaring during drilling operations

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

19.15.27.8 E. Venting and flaring during completion or recompletion operations

During Completion Operations, DJR utilizes the following:

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



19.15.27.8 D. Venting and flaring during production operations

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

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

19.15.27.8 E. Performance standards

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



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

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

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



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
VENADO CANYON UNIT 504H, 505H, 506H, 507H, 508H, 509H
SWSE O-11-22N-06W

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 1



DRILLING PLAN

Venado Canyon Unit 509H

Sandoval County, New Mexico

Surface Location

1300-ft FEL & 1246-ft FSL
 Sec 11 T22N R06W
 Graded Elevation 7075' MSL
 RKB Elevation 7089' (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.1482741° N
 Longitude 107.4337526° W

Kick Off Point for Horizontal Build Curve

4257-ft MD
 4230-ft TVD

Local Coordinates (from SHL)

411-ft South
 188-ft East

Heel Location (Pay zone entry)

1576-ft FEL & 1256-ft FSL
 Sec 11 T22N R6W

Heel Geographical Coordinates (NAD-83)

Latitude 36.1483192° N
 Longitude 107.43468830° W

Bottom Hole Location (TD)

88-ft FEL & 464-ft FNL
 Sec 10 T22N R6W

BHL Geographical Coordinates (NAD-83)

Latitude 36.1585318° N
 Longitude 107.4471204° W

Well objectives

This well is planned as a 5220-ft lateral in the Mancos Silt sand.

Bottom Hole temperature and pressure

The temperature in the Mancos Silt horizontal objective is 137°F. Bottom hole pressure in the Mancos Silt 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	1304	1299	Sd	W	8.3	8.4 – 8.8
Kirtland	1454	1448	Sh	-	8.3	8.4 – 8.8
Fruitland	1677	1669	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1873	1864	Sd	W	8.3	9.0 - 9.5
Lewis	1967	1957	Sh	-		9.0 - 9.5
Chacra	2686	2670	Sd	-	8.3	9.0 - 9.5
Menefee	3368	3347	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4145	4118	Sd	-	8.3	9.0 - 9.5
Mancos	4290	4262	Sh	-		9.0 - 9.5
Mancos Silt	4665	4622	Slt	O/G	6.6	9.0 - 9.5
Gallup A	NP	NP	Slt	O/G	6.6	9.0 - 9.5
Gallup B	NP	NP	Sd	O/G	6.6	8.8 -9.0
Gallup C	NP	NP	Sd	O/G	6.6	8.8 -9.0
Target	5330	4940	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	5276	surf	4938	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	4998	10554	4855	4955	4998

Note: all casing will be new

Rev 1



Casing Design Load Cases

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

Note

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

Casing Design Factors

Casing string		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

	Lead
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

	Lead	Tail
	BJ Services	BJ Services
Type	III	Poz/G
Planned top	Surface	3757-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	364	243
Volume (bbls)	152	65
Volume (cu.ft.)	852	363
Excess %	50	50



Rev 1

4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	4998-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	466
Volume (bbls)	130
Volume (cu.ft)	729
Excess %	40

Wellhead & Pressure Control

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

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

Mud Program

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

Hole Section	Fluid type	Interval (MD)	Density (ppg)	Funnel Viscosity	Yield Point	Fluid Loss (cc/30 min)
Surface	Fresh water spud mud	0 – 350	8.4 – 8.8	32 – 44	2 – 12	NC
Intermediate	7% KCl Low solids, non-dispersed	350 – 5276	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5276 – 10554	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

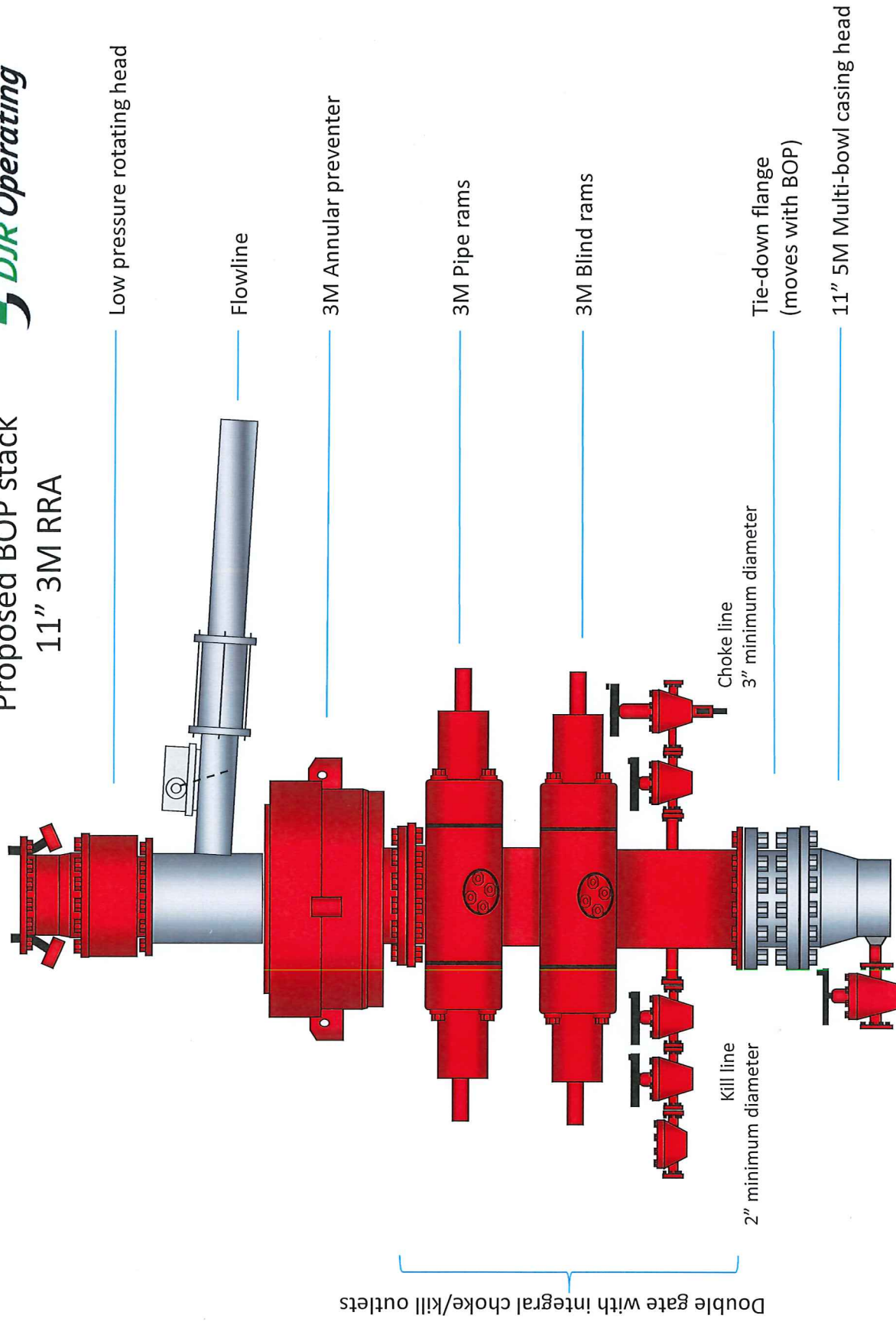
A closed loop, steel tank-based circulating system will be used. In addition to the rig solids control equipment, a dewatering centrifuge and chemical flocculation system will be operational to strip solids from the whole mud. All solids will be collected in 3-sided bins and will then be put into transports 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.



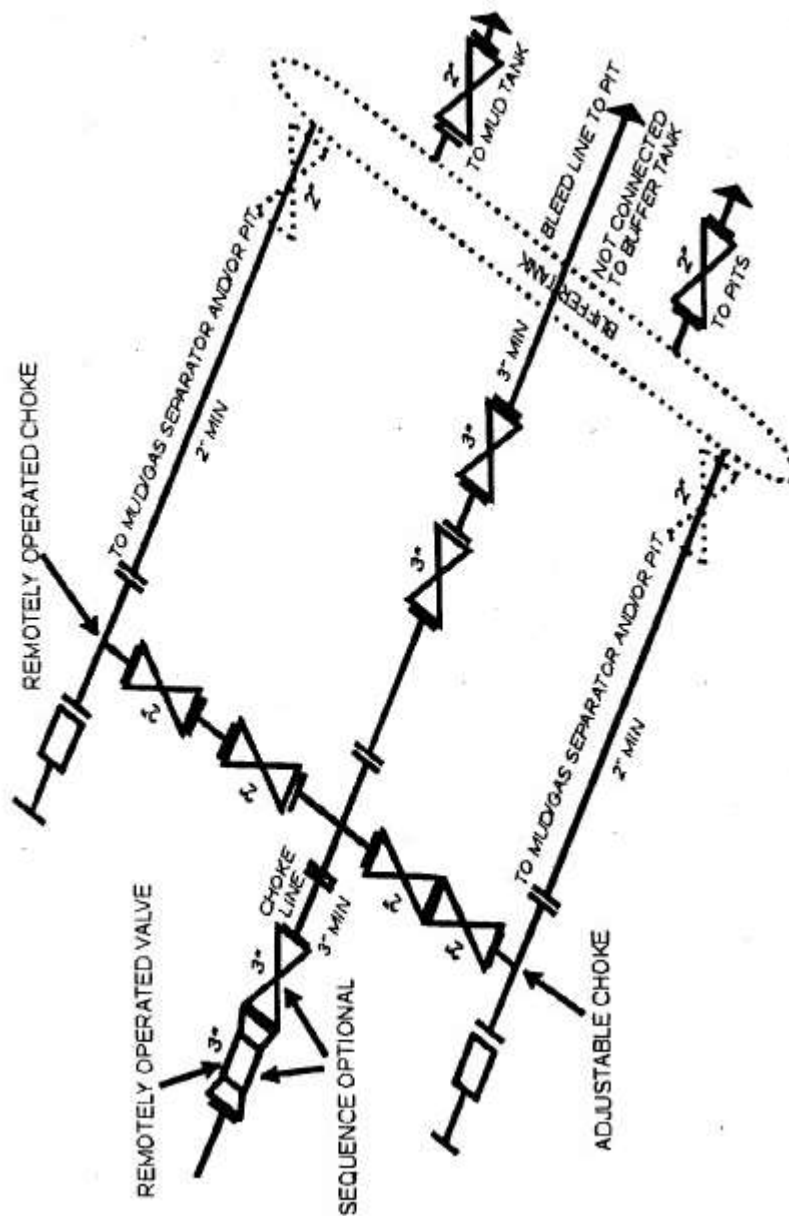
Proposed BOP stack 11" 3M RRA

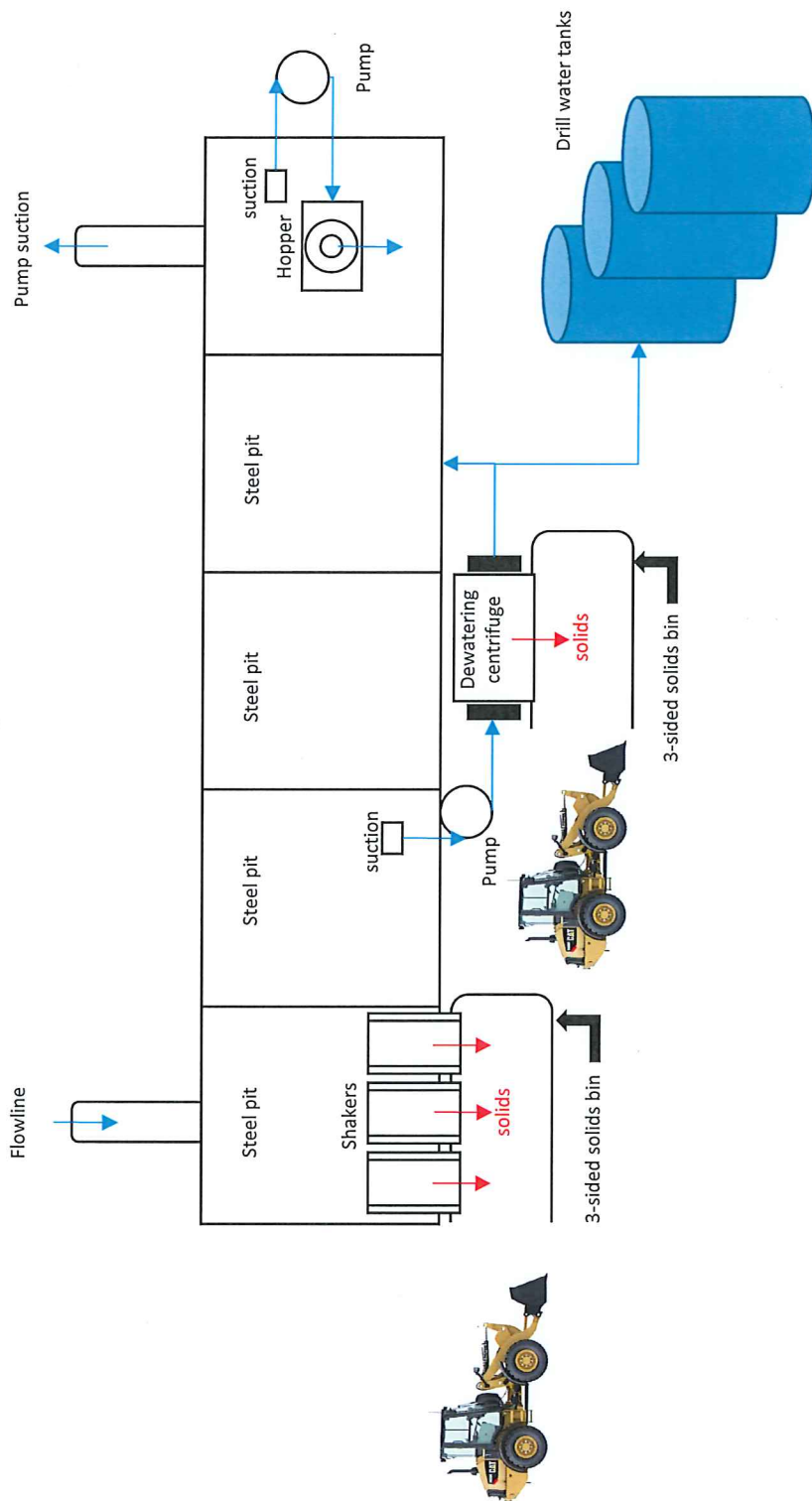




Choke Manifold

Actual system to conform with Onshore Order 2





Closed Loop Mud System



Company: DJR Operating
Project: Venado Canyon Unit
Site: O11 2206 Pad
Well: # 509H
Wellbore: Original Drilling
Design: APD

WELL DETAILS: # 509H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0	0	1873510.93	2841061.26	36.14827410	-107.43375260

GL 7075' & RKB 14' @ 7089ft
Plan: APD (# 509H/Original Drilling)
Created By: Janie Collins Date: 16:17, May 04 2021

PROJECT DETAILS: Venado Canyon Unit

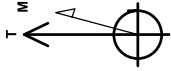
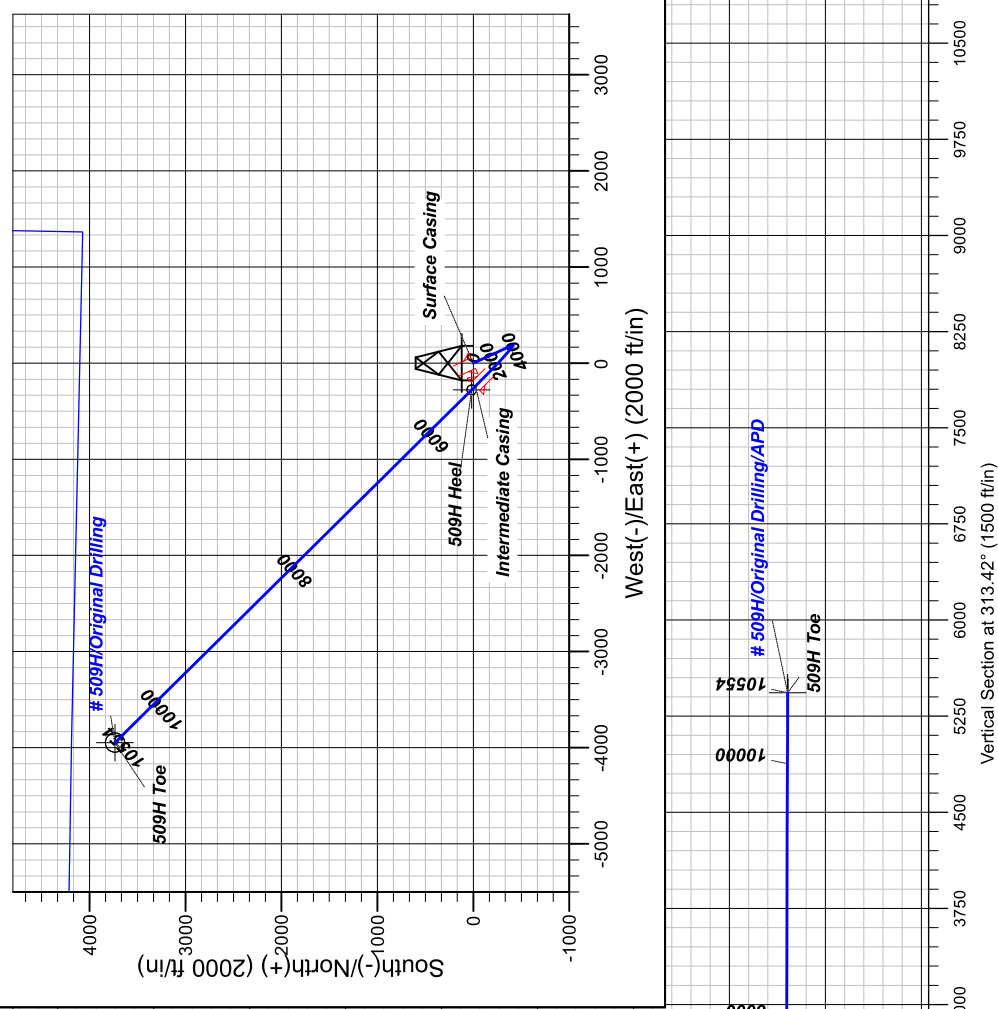
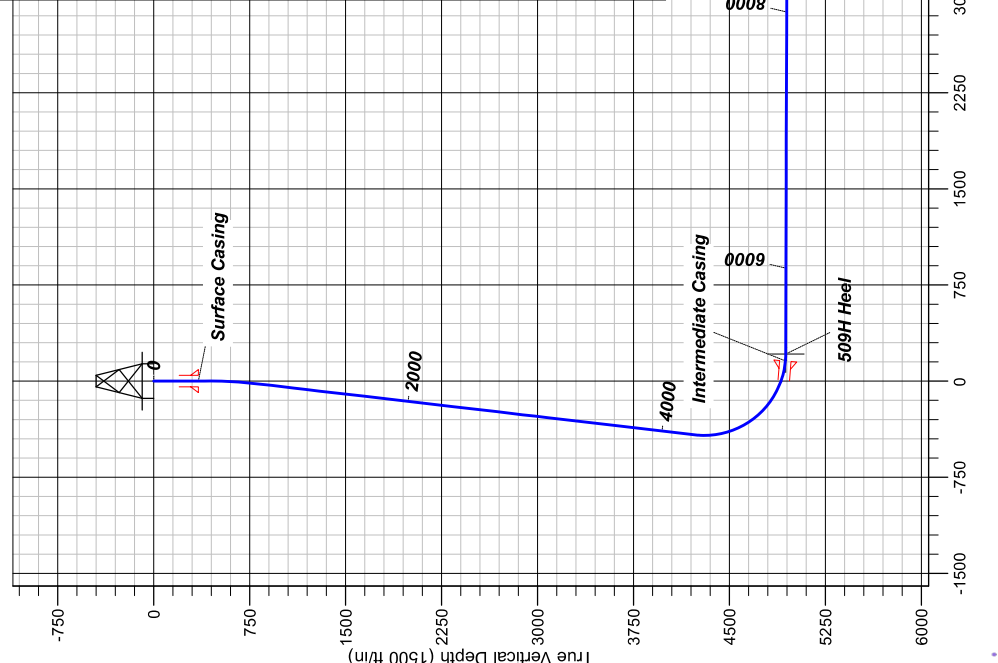
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: True

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
509H Heel	4940	16	-276	1873526.21	2840784.94	36.14831920	-107.43468830
509H Toe	4955	3734	-3946	1877228.97	2837099.77	36.15853180	-107.44712040

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0	0.00	0.00	0	0	0	0.00	0.00	0	
450	0.00	0.00	450	0	0	0.00	0.00	0	
808	7.15	155.38	807	-20	0	0.00	155.38	-21	
4537	7.15	155.38	4530	-41	18	2.00	158.85	-212	509H Heel
5537	89.84	315.37	4940	16	-276	9.00	158.85	-212	509H Toe
10554	89.84	315.37	4955	3734	-3946	0.00	0.00	5433	



Azimuths to True North
Magnetic North: 8.83°
Magnetic Field
Strength: 49466
Dip Angle: 62.88°
Date: 12/31/2019
Model: IGRF2015

CASING DETAILS

TVD	MD	Name
350	350	Surface Casing
4938	5276	Intermediate Casing

FORMATION DETAILS

TVDPath	MDPath	Formation
1299	1304	Ojo Alamo
1448	1454	Kirtland
1669	1677	Fruitland
1864	1873	Pictured Cliffs
1957	1967	Lewis
2670	2686	Chacra
3347	3368	Menefee
4118	4145	Point Lookout
4262	4290	Mancos
4622	4665	Mancos Silt



DJR Operating

Venado Canyon Unit

O11 2206 Pad

509H - Slot 5

Original Drilling

Plan: APD

Standard Planning Report

04 May, 2021





Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 509H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Project:	Venado Canyon Unit	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site:	O11 2206 Pad	North Reference:	True
Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

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

Site	O11 2206 Pad		
Site Position:		Northing:	1,873,443.84 usft
From:	Lat/Long	Easting:	2,841,017.46 usft
Position Uncertainty:	0 ft	Slot Radius:	13.20 in
		Latitude:	36.14809030
		Longitude:	-107.43390190
		Grid Convergence:	0.24 °

Well	# 509H - Slot 5		
Well Position	+N/-S	67 ft	Northing: 1,873,510.93 usft
	+E/-W	44 ft	Easting: 2,841,061.26 usft
Position Uncertainty	0 ft	Wellhead Elevation:	Latitude: 36.14827410
			Longitude: -107.43375260
			Ground Level: 7075 ft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/31/2019	8.80	62.86	49,466.57449797

Design	APD			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0	0	0	313.42

Plan Survey Tool Program	Date	5/4/2021		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0	10,554	APD (Original Drilling)	MWD+HDGM
				OWSG MWD + HDGM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00	
450	0.00	0.00	450	0	0	0.00	0.00	0.00	0.00	
808	7.15	155.38	807	-20	9	2.00	2.00	0.00	155.38	
4257	7.15	155.38	4230	-411	188	0.00	0.00	0.00	0.00	
5330	89.84	315.37	4940	16	-276	9.00	7.71	14.91	159.85	509H Heel
10,554	89.84	315.37	4955	3734	-3946	0.00	0.00	0.00	0.00	509H Toe



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 509H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Project:	Venado Canyon Unit	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site:	O11 2206 Pad	North Reference:	True
Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0	0.00	0.00	0	0	0	0	0.00	0.00	0.00
100	0.00	0.00	100	0	0	0	0.00	0.00	0.00
200	0.00	0.00	200	0	0	0	0.00	0.00	0.00
300	0.00	0.00	300	0	0	0	0.00	0.00	0.00
400	0.00	0.00	400	0	0	0	0.00	0.00	0.00
450	0.00	0.00	450	0	0	0	0.00	0.00	0.00
500	1.00	155.38	500	0	0	0	2.00	2.00	0.00
600	3.00	155.38	600	-4	2	-4	2.00	2.00	0.00
700	5.00	155.38	700	-10	5	-10	2.00	2.00	0.00
800	7.00	155.38	799	-19	9	-20	2.00	2.00	0.00
808	7.15	155.38	807	-20	9	-21	2.00	2.00	0.00
900	7.15	155.38	898	-31	14	-31	0.00	0.00	0.00
1000	7.15	155.38	998	-42	19	-43	0.00	0.00	0.00
1100	7.15	155.38	1097	-53	24	-54	0.00	0.00	0.00
1200	7.15	155.38	1196	-65	30	-66	0.00	0.00	0.00
1300	7.15	155.38	1295	-76	35	-78	0.00	0.00	0.00
1400	7.15	155.38	1394	-87	40	-89	0.00	0.00	0.00
1500	7.15	155.38	1494	-99	45	-101	0.00	0.00	0.00
1600	7.15	155.38	1593	-110	50	-112	0.00	0.00	0.00
1700	7.15	155.38	1692	-121	56	-124	0.00	0.00	0.00
1800	7.15	155.38	1791	-133	61	-135	0.00	0.00	0.00
1900	7.15	155.38	1891	-144	66	-147	0.00	0.00	0.00
2000	7.15	155.38	1990	-155	71	-158	0.00	0.00	0.00
2100	7.15	155.38	2089	-167	76	-170	0.00	0.00	0.00
2200	7.15	155.38	2188	-178	82	-182	0.00	0.00	0.00
2300	7.15	155.38	2287	-189	87	-193	0.00	0.00	0.00
2400	7.15	155.38	2387	-201	92	-205	0.00	0.00	0.00
2500	7.15	155.38	2486	-212	97	-216	0.00	0.00	0.00
2600	7.15	155.38	2585	-223	102	-228	0.00	0.00	0.00
2700	7.15	155.38	2684	-235	107	-239	0.00	0.00	0.00
2800	7.15	155.38	2784	-246	113	-251	0.00	0.00	0.00
2900	7.15	155.38	2883	-257	118	-262	0.00	0.00	0.00
3000	7.15	155.38	2982	-269	123	-274	0.00	0.00	0.00
3100	7.15	155.38	3081	-280	128	-285	0.00	0.00	0.00
3200	7.15	155.38	3180	-291	133	-297	0.00	0.00	0.00
3300	7.15	155.38	3280	-302	139	-309	0.00	0.00	0.00
3400	7.15	155.38	3379	-314	144	-320	0.00	0.00	0.00
3500	7.15	155.38	3478	-325	149	-332	0.00	0.00	0.00
3600	7.15	155.38	3577	-336	154	-343	0.00	0.00	0.00
3700	7.15	155.38	3677	-348	159	-355	0.00	0.00	0.00
3800	7.15	155.38	3776	-359	165	-366	0.00	0.00	0.00
3900	7.15	155.38	3875	-370	170	-378	0.00	0.00	0.00
4000	7.15	155.38	3974	-382	175	-389	0.00	0.00	0.00
4100	7.15	155.38	4073	-393	180	-401	0.00	0.00	0.00
4200	7.15	155.38	4173	-404	185	-413	0.00	0.00	0.00
4257	7.15	155.38	4230	-411	188	-419	0.00	0.00	0.00
4300	3.78	175.85	4272	-415	189	-423	9.00	-7.89	47.93
4400	6.60	293.58	4372	-416	184	-420	9.00	2.81	117.73
4500	15.32	306.36	4470	-406	169	-401	9.00	8.72	12.78
4600	24.24	309.91	4564	-384	142	-367	9.00	8.92	3.55
4700	33.20	311.62	4652	-353	106	-320	9.00	8.96	1.71
4800	42.18	312.66	4731	-312	61	-258	9.00	8.98	1.05
4900	51.16	313.40	4799	-262	7	-186	9.00	8.98	0.74
5000	60.15	313.97	4855	-205	-52	-103	9.00	8.99	0.57



Lonestar Consulting, LLC

Planning Report



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Project:	Venado Canyon Unit	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site:	O11 2206 Pad	North Reference:	True
Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5100	69.14	314.44	4898	-142	-117	-13	9.00	8.99	0.47
5200	78.13	314.86	4926	-75	-185	83	9.00	8.99	0.42
5300	87.12	315.26	4939	-5	-255	182	9.00	8.99	0.39
5330	89.84	315.37	4940	16	-276	212	9.00	8.99	0.39
5400	89.84	315.37	4940	66	-325	282	0.00	0.00	0.00
5500	89.84	315.37	4940	137	-396	382	0.00	0.00	0.00
5600	89.84	315.37	4941	208	-466	482	0.00	0.00	0.00
5700	89.84	315.37	4941	280	-536	582	0.00	0.00	0.00
5800	89.84	315.37	4941	351	-606	682	0.00	0.00	0.00
5900	89.84	315.37	4942	422	-677	781	0.00	0.00	0.00
6000	89.84	315.37	4942	493	-747	881	0.00	0.00	0.00
6100	89.84	315.37	4942	564	-817	981	0.00	0.00	0.00
6200	89.84	315.37	4942	635	-887	1081	0.00	0.00	0.00
6300	89.84	315.37	4943	707	-958	1181	0.00	0.00	0.00
6400	89.84	315.37	4943	778	-1028	1281	0.00	0.00	0.00
6500	89.84	315.37	4943	849	-1098	1381	0.00	0.00	0.00
6600	89.84	315.37	4944	920	-1168	1481	0.00	0.00	0.00
6700	89.84	315.37	4944	991	-1239	1581	0.00	0.00	0.00
6800	89.84	315.37	4944	1062	-1309	1681	0.00	0.00	0.00
6900	89.84	315.37	4944	1134	-1379	1781	0.00	0.00	0.00
7000	89.84	315.37	4945	1205	-1449	1881	0.00	0.00	0.00
7100	89.84	315.37	4945	1276	-1520	1981	0.00	0.00	0.00
7200	89.84	315.37	4945	1347	-1590	2081	0.00	0.00	0.00
7300	89.84	315.37	4946	1418	-1660	2181	0.00	0.00	0.00
7400	89.84	315.37	4946	1489	-1730	2281	0.00	0.00	0.00
7500	89.84	315.37	4946	1561	-1801	2381	0.00	0.00	0.00
7600	89.84	315.37	4947	1632	-1871	2480	0.00	0.00	0.00
7700	89.84	315.37	4947	1703	-1941	2580	0.00	0.00	0.00
7800	89.84	315.37	4947	1774	-2011	2680	0.00	0.00	0.00
7900	89.84	315.37	4947	1845	-2082	2780	0.00	0.00	0.00
8000	89.84	315.37	4948	1917	-2152	2880	0.00	0.00	0.00
8100	89.84	315.37	4948	1988	-2222	2980	0.00	0.00	0.00
8200	89.84	315.37	4948	2059	-2292	3080	0.00	0.00	0.00
8300	89.84	315.37	4949	2130	-2363	3180	0.00	0.00	0.00
8400	89.84	315.37	4949	2201	-2433	3280	0.00	0.00	0.00
8500	89.84	315.37	4949	2272	-2503	3380	0.00	0.00	0.00
8600	89.84	315.37	4949	2344	-2573	3480	0.00	0.00	0.00
8700	89.84	315.37	4950	2415	-2644	3580	0.00	0.00	0.00
8800	89.84	315.37	4950	2486	-2714	3680	0.00	0.00	0.00
8900	89.84	315.37	4950	2557	-2784	3780	0.00	0.00	0.00
9000	89.84	315.37	4951	2628	-2854	3880	0.00	0.00	0.00
9100	89.84	315.37	4951	2699	-2925	3980	0.00	0.00	0.00
9200	89.84	315.37	4951	2771	-2995	4080	0.00	0.00	0.00
9300	89.84	315.37	4951	2842	-3065	4179	0.00	0.00	0.00
9400	89.84	315.37	4952	2913	-3135	4279	0.00	0.00	0.00
9500	89.84	315.37	4952	2984	-3206	4379	0.00	0.00	0.00
9600	89.84	315.37	4952	3055	-3276	4479	0.00	0.00	0.00
9700	89.84	315.37	4953	3126	-3346	4579	0.00	0.00	0.00
9800	89.84	315.37	4953	3198	-3416	4679	0.00	0.00	0.00
9900	89.84	315.37	4953	3269	-3487	4779	0.00	0.00	0.00
10,000	89.84	315.37	4953	3340	-3557	4879	0.00	0.00	0.00
10,100	89.84	315.37	4954	3411	-3627	4979	0.00	0.00	0.00
10,200	89.84	315.37	4954	3482	-3697	5079	0.00	0.00	0.00
10,300	89.84	315.37	4954	3553	-3768	5179	0.00	0.00	0.00



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 509H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Project:	Venado Canyon Unit	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site:	O11 2206 Pad	North Reference:	True
Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,400	89.84	315.37	4955	3625	-3838	5279	0.00	0.00	0.00	
10,500	89.84	315.37	4955	3696	-3908	5379	0.00	0.00	0.00	
10,554	89.84	315.37	4955	3734	-3946	5433	0.00	0.00	0.00	

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
509H Heel - plan hits target center - Circle (radius 50)	0.00	0.00	4940	16	-276	1,873,526.21	2,840,784.94	36.14831920	-107.43468830	
509H Toe - plan hits target center - Circle (radius 100)	0.00	0.00	4955	3734	-3946	1,877,228.97	2,837,099.77	36.15853180	-107.44712040	

Casing Points										
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)						
350	350	Surface Casing	9.62	12.25						
5276	4938	Intermediate Casing	7.00	8.75						

Formations										
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)					
1304	1299	Ojo Alamo		0.00	0.00					
1454	1448	Kirtland		0.00	0.00					
1677	1669	Fruitland		0.00	0.00					
1873	1864	Pictured Cliffs		0.00	0.00					
1967	1957	Lewis		0.00	0.00					
2686	2670	Chacra		0.00	0.00					
3368	3347	Menefee		0.00	0.00					
4145	4118	Point Lookout		0.00	0.00					
4290	4262	Mancos		0.00	0.00					
4665	4622	Mancos Silt		0.00	0.00					



DJR Operating

Venado Canyon Unit

O11 2206 Pad

509H

Original Drilling

APD

Anticollision Report

04 May, 2021





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program			Date	5/4/2021	
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0	10,554	APD (Original Drilling)	MWD+HDGM	OWSG MWD + HDGM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
O11 2206 Pad						
# 504H - Original Drilling - APD	450	450	40	37	14.232	CC
# 504H - Original Drilling - APD	500	499	40	37	12.737	ES
# 504H - Original Drilling - APD	9917	10,867	779	546	3.352	SF
# 505H - Original Drilling - APD	402	402	60	57	24.262	CC
# 505H - Original Drilling - APD	450	450	60	57	21.350	ES
# 505H - Original Drilling - APD	1000	989	80	74	12.108	SF
# 506H - Original Drilling - APD	450	450	20	17	7.097	CC
# 506H - Original Drilling - APD	500	500	20	17	6.369	ES
# 506H - Original Drilling - APD	808	806	26	21	5.036	SF
# 507H - Original Drilling - APD	450	450	80	77	28.436	CC
# 507H - Original Drilling - APD	500	499	80	77	25.449	ES
# 507H - Original Drilling - APD	9400	9919	1268	1024	5.191	SF
# 508H - Original Drilling - APD	450	450	20	17	7.081	CC
# 508H - Original Drilling - APD	500	500	20	17	6.371	ES
# 508H - Original Drilling - APD	700	700	25	20	5.451	SF

Offset Design: O11 2206 Pad - # 504H - Original Drilling - APD													Offset Site Error:	0 ft	
Survey Program:		0-MWD+HDGM		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0 ft
Reference	Vertical	Measured	Vertical	Reference	Offset	Highside			Distance						
Measured	Depth	Depth	Depth	Depth	Depth	Toolface	+N/-S	+E/-W	Between	Between	Minimum	Separation		Warning	
Depth	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	Centres	Ellipses	Separation	Factor			
(ft)									(ft)	(ft)	(ft)				
0	0	0	0	0	0	0	-146.63	-33	-22	40					
100	100	100	100	0	0	0	-146.63	-33	-22	40	40	0.31	130.073		
200	200	200	200	1	1	1	-146.63	-33	-22	40	39	1.03	39.113		
300	300	300	300	1	1	1	-146.63	-33	-22	40	38	1.74	23.017		
400	400	400	400	1	1	1	-146.63	-33	-22	40	38	2.46	16.307		
450	450	450	450	1	1	1	-146.63	-33	-22	40	37	2.82	14.232 CC		
500	500		499	2	2	2	58.14	-34	-22	40	37	3.16	12.737 ES		
600	600		598	2	2	2	59.32	-37	-22	41	37	3.82	10.773		
700	700		697	2	2	2	61.53	-44	-21	43	38	4.50	9.564		
808	807		804	3	3	3	64.75	-55	-21	46	41	5.25	8.801		
900	898		895	3	3	3	66.41	-68	-20	51	45	5.91	8.552		
1000	998		993	3	3	3	65.53	-85	-19	58	51	6.64	8.676		
1100	1097		1091	4	4	4	62.82	-105	-17	67	60	7.37	9.112		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 504H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference	Offset	Rule Assigned:												
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
1200	1196	1188	1180	4	4	59.25	-128	-16	79	71	8.09	9.815		
1300	1295	1286	1274	5	5	55.56	-154	-14	94	86	8.82	10.694		
1400	1394	1385	1369	5	5	52.72	-181	-12	110	100	9.58	11.480		
1500	1494	1483	1464	5	6	50.59	-207	-10	126	115	10.34	12.164		
1600	1593	1582	1559	6	6	48.93	-234	-9	142	131	11.10	12.762		
1700	1692	1681	1654	6	7	47.61	-261	-7	158	146	11.87	13.288		
1800	1791	1779	1749	6	7	46.54	-288	-5	174	161	12.63	13.752		
1900	1891	1878	1844	7	8	45.65	-314	-3	190	176	13.41	14.164		
2000	1990	1976	1939	7	8	44.89	-341	-2	206	192	14.18	14.533		
2100	2089	2075	2034	8	9	44.25	-368	0	222	207	14.95	14.864		
2200	2188	2174	2129	8	9	43.69	-395	2	238	223	15.73	15.162		
2300	2287	2272	2224	8	10	43.21	-421	4	255	238	16.50	15.433		
2400	2387	2371	2319	9	10	42.78	-448	6	271	254	17.28	15.679		
2500	2486	2470	2413	9	11	42.40	-475	7	287	269	18.06	15.905		
2600	2585	2568	2508	10	11	42.06	-502	9	304	285	18.84	16.111		
2700	2684	2667	2603	10	12	41.76	-528	11	320	300	19.62	16.301		
2800	2784	2766	2698	10	12	41.49	-555	13	336	316	20.40	16.477		
2900	2883	2864	2793	11	13	41.24	-582	15	352	331	21.18	16.639		
3000	2982	2963	2888	11	13	41.01	-609	16	369	347	21.96	16.790		
3100	3081	3062	2983	12	14	40.80	-636	18	385	362	22.74	16.931		
3200	3180	3160	3078	12	14	40.61	-662	20	401	378	23.52	17.062		
3300	3280	3259	3173	12	15	40.44	-689	22	418	393	24.31	17.184		
3400	3379	3358	3268	13	15	40.27	-716	24	434	409	25.09	17.299		
3500	3478	3456	3363	13	16	40.12	-743	25	450	424	25.87	17.407		
3600	3577	3555	3458	14	16	39.98	-769	27	467	440	26.65	17.508		
3700	3677	3654	3553	14	17	39.85	-796	29	483	456	27.44	17.604		
3800	3776	3752	3648	14	17	39.73	-823	31	499	471	28.22	17.694		
3900	3875	3851	3743	15	18	39.61	-850	32	516	487	29.01	17.780		
4000	3974	3949	3837	15	18	39.51	-876	34	532	502	29.79	17.860		
4100	4073	4048	3932	16	19	39.41	-903	36	548	518	30.57	17.937		
4200	4173	4147	4027	16	19	39.31	-930	38	565	533	31.36	18.010		
4257	4230	4203	4082	16	20	39.26	-945	39	574	542	31.81	18.050		
4300	4272	4245	4122	16	20	19.32	-957	40	582	550	32.13	18.109		
4350	4322	4294	4169	17	20	-63.16	-970	40	593	560	32.47	18.253		
4400	4372	4341	4215	17	20	-97.60	-983	41	605	573	32.77	18.477		
4450	4421	4388	4259	17	21	-106.26	-995	42	620	587	33.03	18.776		
4500	4470	4433	4303	17	21	-109.91	-1007	43	637	604	33.28	19.147		
4550	4518	4476	4344	17	21	-111.83	-1019	44	656	623	33.50	19.590		
4600	4564	4517	4384	17	21	-112.89	-1030	45	677	644	33.70	20.103		
4650	4609	4556	4421	17	22	-113.39	-1041	45	701	667	33.89	20.684		
4700	4651	4592	4456	17	22	-113.42	-1051	46	727	693	34.08	21.329		
4750	4692	4626	4488	18	22	-113.00	-1060	46	755	721	34.26	22.035		
4800	4731	4656	4518	18	22	-112.10	-1068	47	785	751	34.45	22.797		
4850	4766	4684	4544	18	22	-110.66	-1075	48	818	783	34.65	23.610		
4900	4799	4708	4567	18	22	-108.60	-1082	48	853	818	34.85	24.468		
4950	4829	5926	5367	18	26	-122.13	-716	-513	873	839	33.90	25.754		
5000	4855	5969	5367	19	26	-122.34	-685	-542	856	821	35.16	24.339		
5050	4879	6013	5367	19	27	-122.41	-653	-573	841	805	36.48	23.059		
5100	4898	6059	5368	19	28	-122.39	-620	-605	829	791	37.86	21.898		
5150	4914	6107	5368	20	28	-122.33	-586	-639	819	780	39.27	20.867		
5200	4926	6155	5368	20	29	-122.25	-552	-672	812	771	40.72	19.942		
5250	4935	6204	5368	21	30	-122.20	-516	-707	807	765	42.17	19.140		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 504H - Original Drilling - APD													Offset Site Error:	0 ft	
Survey Program:		0-MWD+HDGM						Rule Assigned:						Offset Well Error:	0 ft
Reference	Offset	Reference	Offset	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
5300	4939	6254	5368	22	31	-122.18	-481	-742	804	761	43.62	18.440			
5330	4940	6284	5368	22	31	-122.19	-459	-763	804	759	44.47	18.075			
5400	4940	6354	5368	23	33	-122.21	-409	-811	803	757	46.50	17.278			
5500	4940	6454	5369	25	34	-122.23	-337	-881	803	753	49.59	16.188			
5600	4941	6554	5369	27	36	-122.26	-266	-951	802	749	52.89	15.169			
5700	4941	6654	5369	29	39	-122.29	-194	-1021	802	745	56.34	14.230			
5800	4941	6754	5370	31	41	-122.31	-123	-1090	801	741	59.93	13.369			
5900	4942	6854	5370	33	43	-122.34	-51	-1160	801	737	63.62	12.584			
6000	4942	6954	5370	35	45	-122.37	21	-1230	800	733	67.40	11.870			
6100	4942	7054	5371	37	47	-122.39	92	-1300	800	728	71.26	11.220			
6200	4942	7154	5371	39	50	-122.42	164	-1370	799	724	75.18	10.628			
6300	4943	7254	5371	42	52	-122.44	236	-1439	798	719	79.15	10.088			
6400	4943	7354	5371	44	54	-122.47	307	-1509	798	715	83.16	9.594			
6500	4943	7454	5372	46	57	-122.50	379	-1579	797	710	87.21	9.142			
6600	4944	7554	5372	49	59	-122.52	450	-1649	797	705	91.30	8.727			
6700	4944	7654	5372	51	61	-122.55	522	-1718	796	701	95.41	8.346			
6800	4944	7754	5373	54	64	-122.58	594	-1788	796	696	99.54	7.993			
6900	4944	7854	5373	56	66	-122.60	665	-1858	795	691	103.70	7.668			
7000	4945	7954	5373	59	69	-122.63	737	-1928	795	687	107.87	7.366			
7100	4945	8054	5374	61	71	-122.66	809	-1998	794	682	112.06	7.086			
7200	4945	8154	5374	63	73	-122.68	880	-2067	793	677	116.26	6.825			
7300	4946	8254	5374	66	76	-122.71	952	-2137	793	672	120.48	6.582			
7400	4946	8354	5374	68	78	-122.74	1023	-2207	792	668	124.70	6.354			
7500	4946	8454	5375	71	81	-122.76	1095	-2277	792	663	128.93	6.141			
7600	4947	8554	5375	73	83	-122.79	1167	-2346	791	658	133.18	5.942			
7700	4947	8654	5375	76	86	-122.82	1238	-2416	791	653	137.42	5.754			
7800	4947	8754	5376	78	88	-122.84	1310	-2486	790	649	141.68	5.577			
7900	4947	8854	5376	81	91	-122.87	1382	-2556	790	644	145.94	5.411			
8000	4948	8954	5376	83	93	-122.90	1453	-2626	789	639	150.20	5.254			
8100	4948	9054	5377	86	96	-122.92	1525	-2695	789	634	154.47	5.105			
8200	4948	9154	5377	89	98	-122.95	1596	-2765	788	629	158.75	4.964			
8300	4949	9254	5377	91	101	-122.98	1668	-2835	787	624	163.02	4.830			
8400	4949	9354	5377	94	103	-123.00	1740	-2905	787	620	167.30	4.704			
8500	4949	9454	5378	96	106	-123.03	1811	-2974	786	615	171.58	4.583			
8600	4949	9554	5378	99	108	-123.06	1883	-3044	786	610	175.86	4.468			
8700	4950	9654	5378	101	111	-123.09	1955	-3114	785	605	180.15	4.359			
8800	4950	9754	5379	104	113	-123.11	2026	-3184	785	600	184.43	4.255			
8900	4950	9854	5379	106	116	-123.14	2098	-3254	784	595	188.72	4.155			
9000	4951	9954	5379	109	118	-123.17	2170	-3323	784	591	193.01	4.060			
9100	4951	10,054	5380	111	121	-123.19	2241	-3393	783	586	197.29	3.969			
9200	4951	10,154	5380	114	123	-123.22	2313	-3463	783	581	201.58	3.882			
9300	4951	10,254	5380	116	126	-123.25	2384	-3533	782	576	205.87	3.799			
9400	4952	10,354	5380	119	129	-123.28	2456	-3602	781	571	210.16	3.718			
9500	4952	10,454	5381	122	131	-123.30	2528	-3672	781	566	214.45	3.642			
9600	4952	10,554	5381	124	134	-123.33	2599	-3742	780	562	218.73	3.568			
9700	4953	10,654	5381	127	136	-123.36	2671	-3812	780	557	223.02	3.497			
9800	4953	10,754	5382	129	139	-123.39	2743	-3882	779	552	227.31	3.428			
9900	4953	10,854	5382	132	141	-123.41	2814	-3951	779	547	231.60	3.362			
9917	4953	10,867	5382	132	142	-123.42	2824	-3960	779	546	232.26	3.352 SF			
10,000	4953	10,867	5382	134	142	-123.42	2824	-3960	783	550	233.04	3.360			
10,100	4954	10,867	5382	137	142	-123.42	2824	-3960	800	569	230.73	3.466			
10,200	4954	10,867	5382	139	142	-123.42	2824	-3960	828	603	225.36	3.676			



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 504H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,300	4954	10,867	5382	142	142	-123.42	2824	-3960	868	650	217.74	3.984	
10,400	4955	10,867	5382	145	142	-123.42	2824	-3960	916	707	208.75	4.388	
10,500	4955	10,867	5382	147	142	-123.42	2824	-3960	972	773	199.11	4.884	
10,554	4955	10,867	5382	149	142	-123.42	2824	-3960	1006	812	193.83	5.190	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 505H - Original Drilling - APD													Offset Site Error: 0 ft	
Survey Program: 0-MWD+HDGM		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned:				Offset Well Error: 0 ft	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0	0	0	0	0	0	-146.66	-50	-33	60					
100	100	100	100	0	0	-146.66	-50	-33	60	60	0.31	194.478		
200	200	200	200	1	1	-146.66	-50	-33	60	59	1.03	58.479		
300	300	300	300	1	1	-146.66	-50	-33	60	58	1.74	34.414		
400	400	400	400	1	1	-146.66	-50	-33	60	57	2.46	24.381		
402	402	402	402	1	1	-146.66	-50	-33	60	57	2.47	24.262	CC	
450	450	450	450	1	1	-146.73	-50	-33	60	57	2.81	21.350	ES	
500	500	499	499	2	2	57.74	-51	-33	60	57	3.15	19.196		
600	600	597	597	2	2	58.01	-55	-33	62	58	3.81	16.274		
700	700	695	695	2	2	58.98	-63	-32	64	60	4.49	14.352		
808	807	801	800	3	3	60.69	-75	-31	68	63	5.24	12.985		
900	898	892	890	3	3	61.61	-88	-30	73	67	5.90	12.323		
1000	998	989	986	3	3	60.91	-105	-28	80	74	6.62	12.108	SF	
1100	1097	1087	1081	4	4	58.96	-126	-27	90	83	7.35	12.287		
1200	1196	1183	1174	4	4	56.29	-149	-25	103	95	8.07	12.785		
1300	1295	1279	1266	5	5	53.34	-176	-23	119	110	8.78	13.548		
1400	1394	1373	1356	5	5	50.41	-205	-20	138	128	9.48	14.537		
1500	1494	1466	1443	5	6	47.66	-237	-18	160	150	10.17	15.719		
1600	1593	1558	1528	6	6	45.17	-270	-15	185	174	10.84	17.063		
1700	1692	1651	1614	6	7	42.94	-307	-12	213	201	11.54	18.427		
1800	1791	1747	1702	6	7	41.15	-345	-9	241	229	12.30	19.599		
1900	1891	1842	1789	7	8	39.73	-383	-6	270	256	13.06	20.638		
2000	1990	1938	1877	7	8	38.58	-421	-3	298	284	13.83	21.564		
2100	2089	2033	1965	8	9	37.64	-459	0	327	312	14.60	22.391		
2200	2188	2129	2053	8	10	36.84	-497	3	356	340	15.37	23.134		
2300	2287	2225	2140	8	10	36.17	-535	6	385	368	16.15	23.805		
2400	2387	2320	2228	9	11	35.59	-573	9	413	396	16.93	24.413		
2500	2486	2416	2316	9	12	35.08	-611	12	442	425	17.72	24.967		
2600	2585	2512	2403	10	12	34.64	-649	16	471	453	18.50	25.472		
2700	2684	2607	2491	10	13	34.25	-687	19	500	481	19.29	25.935		
2800	2784	2703	2579	10	13	33.90	-725	22	529	509	20.08	26.361		
2900	2883	2799	2667	11	14	33.58	-763	25	558	537	20.87	26.754		
3000	2982	2894	2754	11	15	33.30	-801	28	587	566	21.66	27.117		
3100	3081	2990	2842	12	15	33.05	-839	31	616	594	22.45	27.454		
3200	3180	3086	2930	12	16	32.82	-877	34	645	622	23.24	27.767		
3300	3280	3181	3018	12	17	32.60	-915	37	674	650	24.03	28.060		
3400	3379	3277	3105	13	17	32.41	-953	40	703	679	24.83	28.333		
3500	3478	3373	3193	13	18	32.23	-992	43	732	707	25.62	28.588		
3600	3577	3468	3281	14	19	32.06	-1030	46	762	735	26.42	28.828		
3700	3677	3564	3368	14	19	31.91	-1068	49	791	763	27.21	29.053		
3800	3776	3660	3456	14	20	31.77	-1106	52	820	792	28.01	29.265		
3900	3875	3755	3544	15	21	31.63	-1144	55	849	820	28.81	29.465		
4000	3974	3851	3632	15	21	31.51	-1182	59	878	848	29.60	29.654		
4100	4073	3947	3719	16	22	31.39	-1220	62	907	877	30.40	29.833		
4200	4173	4042	3807	16	22	31.28	-1258	65	936	905	31.20	30.002		
4257	4230	4097	3857	16	23	31.23	-1279	66	953	921	31.66	30.095		
4300	4272	4138	3895	16	23	11.71	-1296	68	966	934	31.99	30.198		
4350	4322	4184	3937	17	23	-70.09	-1314	69	984	951	32.35	30.409		
4400	4372	4229	3979	17	24	-103.68	-1332	71	1004	971	32.67	30.714		
4450	4421	4273	4019	17	24	-111.33	-1349	72	1026	993	32.97	31.105		
4500	4470	4315	4057	17	24	-113.82	-1366	73	1050	1016	33.25	31.575		
4550	4518	4354	4093	17	25	-114.45	-1382	75	1076	1042	33.50	32.121		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 505H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
4600	4564	4392	4128	17	25	-114.12	-1397	76	1104	1070	33.73	32.737	
4650	4609	4427	4159	17	25	-113.13	-1410	77	1134	1100	33.94	33.416	
4700	4651	4458	4189	17	25	-111.59	-1423	78	1166	1132	34.14	34.153	
4750	4692	4487	4215	18	25	-109.52	-1435	79	1200	1165	34.34	34.939	
4800	4731	4513	4239	18	26	-106.91	-1445	80	1235	1200	34.53	35.769	
4850	4766	4536	4260	18	26	-103.72	-1454	81	1272	1237	34.71	36.634	
4900	4799	4555	4277	18	26	-99.91	-1461	81	1310	1275	34.90	37.526	
4950	4829	4570	4291	18	26	-95.47	-1467	82	1349	1314	35.09	38.438	
5000	4855	4582	4302	19	26	-90.39	-1472	82	1389	1354	35.28	39.364	
5050	4879	4590	4309	19	26	-84.73	-1475	82	1430	1394	35.48	40.296	
5100	4898	4594	4313	19	26	-78.62	-1477	82	1471	1435	35.67	41.229	
5150	4914	4594	4313	20	26	-72.24	-1477	82	1512	1476	35.87	42.159	
5200	4926	4591	4310	20	26	-65.82	-1476	82	1553	1517	36.06	43.081	
5250	4935	4583	4303	21	26	-59.57	-1473	82	1594	1558	36.24	43.992	
5300	4939	4572	4293	22	26	-53.69	-1468	82	1635	1598	36.42	44.889	
5330	4940	4564	4285	22	26	-50.38	-1465	81	1659	1622	36.51	45.423	
5400	4940	4543	4266	23	26	-49.35	-1457	81	1714	1677	36.75	46.640	
5500	4940	4512	4238	25	26	-47.91	-1445	80	1795	1758	37.09	48.390	
5600	4941	4482	4210	27	25	-46.51	-1432	79	1877	1839	37.42	50.160	
5700	4941	4452	4183	29	25	-45.14	-1420	78	1960	1922	37.73	51.956	
5800	4941	4422	4155	31	25	-43.81	-1408	77	2045	2007	38.02	53.781	
5900	4942	4391	4127	33	25	-42.51	-1396	76	2130	2092	38.28	55.638	
6000	4942	4361	4099	35	25	-41.25	-1384	75	2216	2177	38.52	57.527	
6100	4942	4331	4072	37	24	-40.02	-1372	74	2303	2264	38.73	59.448	
6200	4942	4300	4044	39	24	-38.83	-1360	73	2390	2351	38.93	61.402	
6300	4943	4270	4016	42	24	-37.68	-1348	72	2478	2439	39.10	63.387	
6400	4943	4240	3988	44	24	-36.55	-1336	71	2567	2527	39.24	65.403	
6500	4943	4210	3961	46	24	-35.46	-1324	70	2656	2616	39.37	67.449	
6600	4944	4179	3933	49	23	-34.41	-1312	69	2745	2706	39.49	69.523	
6700	4944	4149	3905	51	23	-33.38	-1300	68	2835	2795	39.58	71.625	
6800	4944	4119	3877	54	23	-32.39	-1288	67	2925	2886	39.66	73.753	
6900	4944	4089	3849	56	23	-31.42	-1276	66	3016	2976	39.73	75.907	
7000	4945	4058	3822	59	23	-30.49	-1264	65	3106	3067	39.78	78.085	
7100	4945	4028	3794	61	22	-29.58	-1252	64	3198	3158	39.83	80.286	
7200	4945	3998	3766	63	22	-28.70	-1240	63	3289	3249	39.86	82.511	
7300	4946	3967	3738	66	22	-27.85	-1228	62	3380	3340	39.88	84.756	
7400	4946	3937	3711	68	22	-27.02	-1216	61	3472	3432	39.90	87.022	
7500	4946	3907	3683	71	22	-26.22	-1204	60	3564	3524	39.91	89.308	
7600	4947	3877	3655	73	21	-25.45	-1192	59	3656	3616	39.91	91.613	
7700	4947	3846	3627	76	21	-24.69	-1180	58	3748	3708	39.90	93.936	
7800	4947	3816	3600	78	21	-23.96	-1168	57	3841	3801	39.89	96.276	
7900	4947	3786	3572	81	21	-23.25	-1156	56	3933	3893	39.88	98.632	
8000	4948	3755	3544	83	21	-22.56	-1144	55	4026	3986	39.86	101.003	
8100	4948	3725	3516	86	20	-21.90	-1132	55	4119	4079	39.84	103.389	
8200	4948	3695	3488	89	20	-21.25	-1120	54	4211	4172	39.81	105.789	
8300	4949	3665	3461	91	20	-20.62	-1108	53	4304	4265	39.78	108.202	
8400	4949	3634	3433	94	20	-20.01	-1095	52	4398	4358	39.75	110.627	
8500	4949	3604	3405	96	19	-19.42	-1083	51	4491	4451	39.72	113.064	
8600	4949	3574	3377	99	19	-18.84	-1071	50	4584	4544	39.68	115.511	
8700	4950	3543	3350	101	19	-18.28	-1059	49	4677	4638	39.65	117.968	
8800	4950	3513	3322	104	19	-17.74	-1047	48	4771	4731	39.61	120.434	
8900	4950	3483	3294	106	19	-17.21	-1035	47	4864	4825	39.58	122.908	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 505H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
9000	4951	3453	3266	109	18	-16.70	-1023	46	4958	4918	39.54	125.390		
9100	4951	3422	3239	111	18	-16.20	-1011	45	5051	5012	39.50	127.879		
9200	4951	3392	3211	114	18	-15.71	-999	44	5145	5106	39.46	130.374		
9300	4951	3362	3183	116	18	-15.24	-987	43	5239	5200	39.43	132.875		
9400	4952	3331	3155	119	18	-14.78	-975	42	5333	5293	39.39	135.380		
9500	4952	3301	3127	122	17	-14.33	-963	41	5427	5387	39.35	137.889		
9600	4952	3271	3100	124	17	-13.90	-951	40	5521	5481	39.32	140.401		
9700	4953	3241	3072	127	17	-13.47	-939	39	5614	5575	39.29	142.916		
9800	4953	3210	3044	129	17	-13.06	-927	38	5708	5669	39.25	145.432		
9900	4953	3180	3016	132	17	-12.65	-915	37	5803	5763	39.22	147.950		
10,000	4953	3150	2989	134	16	-12.26	-903	36	5897	5857	39.19	150.467		
10,100	4954	3120	2961	137	16	-11.88	-891	35	5991	5952	39.16	152.985		
10,200	4954	3089	2933	139	16	-11.51	-879	34	6085	6046	39.13	155.502		
10,300	4954	3059	2905	142	16	-11.14	-867	33	6179	6140	39.10	158.017		
10,400	4955	3029	2877	145	16	-10.79	-855	32	6273	6234	39.08	160.529		
10,500	4955	2998	2850	147	15	-10.44	-843	31	6368	6329	39.06	163.040		
10,554	4955	2982	2835	149	15	-10.26	-836	31	6419	6380	39.04	164.399		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 506H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0	0	0	0	0	0	-146.48	-17	-11	20					
100	100	100	100	0	0	-146.48	-17	-11	20	20	0.31	64.866		
200	200	200	200	1	1	-146.48	-17	-11	20	19	1.03	19.505		
300	300	300	300	1	1	-146.48	-17	-11	20	18	1.74	11.478		
400	400	400	400	1	1	-146.48	-17	-11	20	18	2.46	8.132		
450	450	450	450	1	1	-146.48	-17	-11	20	17	2.82	7.097 CC		
500	500	500	500	2	2	58.44	-17	-11	20	17	3.16	6.369 ES		
600	600	599	599	2	2	60.76	-21	-11	21	17	3.82	5.513		
700	700	699	698	2	2	64.80	-27	-10	23	19	4.50	5.119		
808	807	806	805	3	3	70.05	-39	-10	26	21	5.26	5.036 SF		
900	898	897	895	3	3	71.98	-51	-9	31	25	5.93	5.235		
1000	998	997	994	3	3	70.65	-68	-8	37	31	6.67	5.616		
1100	1097	1097	1092	4	4	69.61	-84	-7	44	37	7.42	5.921		
1200	1196	1196	1190	4	4	68.84	-100	-6	50	42	8.19	6.165		
1300	1295	1296	1289	5	5	68.24	-117	-5	57	48	8.96	6.364		
1400	1394	1396	1387	5	5	67.77	-133	-4	64	54	9.73	6.529		
1500	1494	1496	1486	5	5	67.39	-149	-3	70	60	10.51	6.668		
1600	1593	1595	1584	6	6	67.07	-166	-2	77	65	11.29	6.787		
1700	1692	1695	1683	6	6	66.80	-182	-1	83	71	12.07	6.889		
1800	1791	1795	1781	6	7	66.57	-198	1	90	77	12.85	6.978		
1900	1891	1895	1880	7	7	66.37	-215	2	96	83	13.64	7.056		
2000	1990	1995	1978	7	7	66.19	-231	3	103	88	14.42	7.125		
2100	2089	2094	2076	8	8	66.04	-247	4	109	94	15.21	7.186		
2200	2188	2194	2175	8	8	65.91	-264	5	116	100	16.00	7.241		
2300	2287	2294	2273	8	9	65.79	-280	6	122	106	16.79	7.291		
2400	2387	2394	2372	9	9	65.68	-296	7	129	111	17.58	7.336		
2500	2486	2494	2470	9	10	65.58	-313	8	135	117	18.37	7.377		
2600	2585	2593	2569	10	10	65.49	-329	9	142	123	19.16	7.414		
2700	2684	2693	2667	10	10	65.41	-345	10	149	129	19.95	7.449		
2800	2784	2793	2765	10	11	65.33	-362	11	155	134	20.74	7.480		
2900	2883	2893	2864	11	11	65.27	-378	12	162	140	21.53	7.509		
3000	2982	2992	2962	11	12	65.20	-394	13	168	146	22.32	7.536		
3100	3081	3092	3061	12	12	65.14	-411	14	175	152	23.11	7.561		
3200	3180	3192	3159	12	13	65.09	-427	15	181	157	23.91	7.584		
3300	3280	3292	3258	12	13	65.04	-443	16	188	163	24.70	7.606		
3400	3379	3392	3356	13	13	64.99	-460	17	194	169	25.49	7.627		
3500	3478	3491	3454	13	14	64.95	-476	18	201	175	26.28	7.646		
3600	3577	3591	3553	14	14	64.91	-492	19	208	180	27.08	7.664		
3700	3677	3691	3651	14	15	64.87	-509	20	214	186	27.87	7.680		
3800	3776	3791	3750	14	15	64.83	-525	21	221	192	28.66	7.696		
3900	3875	3891	3848	15	16	64.80	-541	22	227	198	29.46	7.711		
4000	3974	3990	3947	15	16	64.77	-558	23	234	203	30.25	7.725		
4100	4073	4090	4045	16	16	64.74	-574	24	240	209	31.04	7.739		
4200	4173	4190	4144	16	17	64.71	-590	26	247	215	31.84	7.752		
4257	4230	4247	4200	16	17	64.69	-600	26	251	218	32.29	7.759		
4300	4272	4290	4242	16	17	44.23	-607	27	253	221	32.61	7.773		
4350	4322	4339	4291	17	18	-39.46	-615	27	257	224	32.92	7.816		
4400	4372	4388	4339	17	18	-75.71	-623	28	262	229	33.16	7.892		
4450	4421	4436	4387	17	18	-86.70	-631	28	267	234	33.35	8.010		
4500	4470	4483	4433	17	18	-93.08	-638	29	274	241	33.50	8.179		
4550	4518	4528	4478	17	18	-98.02	-646	29	283	249	33.61	8.415		
4600	4564	4572	4521	17	19	-102.26	-653	30	294	260	33.70	8.728		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 506H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4650	4609	4614	4562	17	19	-105.98	-660	30	308	275	33.78	9.128	
4700	4651	4653	4600	17	19	-109.17	-666	30	326	292	33.87	9.621	
4750	4692	4690	4637	18	19	-111.78	-672	31	347	313	33.99	10.209	
4800	4731	4724	4670	18	19	-113.74	-678	31	372	338	34.13	10.890	
4850	4766	4755	4701	18	19	-115.00	-683	31	400	366	34.29	11.659	
4900	4799	4783	4728	18	19	-115.46	-687	32	431	397	34.47	12.512	
4950	4829	4807	4753	18	20	-115.03	-691	32	466	431	34.67	13.439	
5000	4855	4828	4773	19	20	-113.58	-695	32	503	468	34.86	14.434	
5050	4879	4846	4791	19	20	-110.94	-698	32	543	508	35.05	15.488	
5100	4898	4860	4804	19	20	-106.89	-700	33	585	549	35.23	16.593	
5150	4914	4870	4814	20	20	-101.19	-701	33	628	593	35.39	17.741	
5200	4926	4870	4814	20	20	-92.58	-702	33	673	637	35.50	18.944	
5250	4935	4870	4814	21	20	-82.82	-702	33	718	682	35.61	20.163	
5300	4939	4870	4814	22	20	-72.61	-702	33	764	728	35.72	21.386	
5330	4940	4870	4814	22	20	-66.55	-702	33	792	756	35.78	22.121	
5400	4940	4865	4809	23	20	-65.62	-701	33	856	820	35.90	23.851	
5500	4940	4853	4797	25	20	-63.55	-699	32	950	914	36.02	26.374	
5600	4941	4841	4785	27	20	-61.53	-697	32	1045	1009	36.12	28.924	
5700	4941	4828	4773	29	20	-59.57	-695	32	1140	1104	36.20	31.498	
5800	4941	4816	4761	31	20	-57.66	-693	32	1236	1200	36.27	34.089	
5900	4942	4804	4750	33	19	-55.82	-691	32	1333	1297	36.33	36.697	
6000	4942	4792	4738	35	19	-54.04	-689	32	1430	1394	36.37	39.317	
6100	4942	4780	4726	37	19	-52.32	-687	32	1527	1491	36.41	41.948	
6200	4942	4768	4714	39	19	-50.66	-685	32	1625	1588	36.44	44.589	
6300	4943	4756	4702	42	19	-49.06	-683	31	1722	1686	36.46	47.238	
6400	4943	4744	4690	44	19	-47.52	-681	31	1820	1784	36.48	49.894	
6500	4943	4732	4678	46	19	-46.04	-679	31	1918	1882	36.50	52.556	
6600	4944	4720	4666	49	19	-44.62	-677	31	2016	1980	36.51	55.223	
6700	4944	4707	4654	51	19	-43.25	-675	31	2115	2078	36.53	57.896	
6800	4944	4695	4642	54	19	-41.93	-673	31	2213	2176	36.54	60.572	
6900	4944	4683	4630	56	19	-40.67	-671	31	2311	2275	36.54	63.252	
7000	4945	4671	4618	59	19	-39.46	-669	31	2410	2373	36.55	65.934	
7100	4945	4659	4606	61	19	-38.29	-667	30	2508	2472	36.56	68.619	
7200	4945	4647	4594	63	19	-37.17	-665	30	2607	2570	36.56	71.306	
7300	4946	4635	4582	66	19	-36.10	-663	30	2706	2669	36.57	73.994	
7400	4946	4623	4571	68	19	-35.07	-661	30	2804	2768	36.57	76.683	
7500	4946	4611	4559	71	19	-34.08	-659	30	2903	2867	36.58	79.373	
7600	4947	4599	4547	73	19	-33.12	-657	30	3002	2965	36.58	82.063	
7700	4947	4586	4535	76	19	-32.21	-655	30	3101	3064	36.58	84.753	
7800	4947	4574	4523	78	19	-31.33	-653	30	3200	3163	36.59	87.442	
7900	4947	4562	4511	81	18	-30.48	-651	29	3298	3262	36.60	90.131	
8000	4948	4550	4499	83	18	-29.67	-649	29	3397	3361	36.60	92.818	
8100	4948	4538	4487	86	18	-28.89	-647	29	3496	3460	36.61	95.504	
8200	4948	4526	4475	89	18	-28.13	-645	29	3595	3558	36.61	98.188	
8300	4949	4514	4463	91	18	-27.41	-643	29	3694	3657	36.62	100.870	
8400	4949	4502	4451	94	18	-26.71	-641	29	3793	3756	36.63	103.549	
8500	4949	4490	4439	96	18	-26.03	-639	29	3892	3855	36.64	106.226	
8600	4949	4478	4427	99	18	-25.38	-637	29	3991	3954	36.65	108.899	
8700	4950	4465	4415	101	18	-24.76	-635	28	4090	4053	36.66	111.569	
8800	4950	4453	4403	104	18	-24.15	-633	28	4189	4152	36.67	114.236	
8900	4950	4441	4392	106	18	-23.57	-631	28	4288	4251	36.68	116.899	
9000	4951	4429	4380	109	18	-23.01	-629	28	4387	4350	36.69	119.557	



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 506H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
9100	4951	4417	4368	111	18	-22.46	-627	28	4486	4449	36.71	122.211	
9200	4951	4405	4356	114	18	-21.94	-625	28	4585	4548	36.72	124.861	
9300	4951	4393	4344	116	18	-21.43	-623	28	4684	4647	36.74	127.505	
9400	4952	4381	4332	119	18	-20.93	-621	28	4783	4746	36.75	130.144	
9500	4952	4369	4320	122	18	-20.46	-619	27	4882	4846	36.77	132.778	
9600	4952	4357	4308	124	18	-20.00	-617	27	4981	4945	36.79	135.407	
9700	4953	4345	4296	127	18	-19.55	-616	27	5080	5044	36.81	138.029	
9800	4953	4332	4284	129	17	-19.12	-614	27	5180	5143	36.83	140.646	
9900	4953	4320	4272	132	17	-18.70	-612	27	5279	5242	36.85	143.256	
10,000	4953	4308	4260	134	17	-18.29	-610	27	5378	5341	36.87	145.860	
10,100	4954	4296	4248	137	17	-17.90	-608	27	5477	5440	36.89	148.457	
10,200	4954	4284	4236	139	17	-17.52	-606	27	5576	5539	36.92	151.047	
10,300	4954	4272	4224	142	17	-17.15	-604	26	5675	5638	36.94	153.630	
10,400	4955	4260	4213	145	17	-16.79	-602	26	5774	5737	36.97	156.206	
10,500	4955	4248	4201	147	17	-16.44	-600	26	5873	5836	36.99	158.774	
10,554	4955	4241	4194	149	17	-16.25	-599	26	5927	5890	37.01	160.164	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 507H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference	Offset	Rule Assigned:												
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre	Distance	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0	0	0	0	0	0	-146.62	-67	-44	80					
100	100	100	100	0	0	-146.62	-67	-44	80	80	0.31	259.896		
200	200	200	200	1	1	-146.62	-67	-44	80	79	1.03	78.151		
300	300	300	300	1	1	-146.62	-67	-44	80	78	1.74	45.990		
400	400	400	400	1	1	-146.62	-67	-44	80	78	2.46	32.582		
450	450	450	450	1	1	-146.62	-67	-44	80	77	2.82	28.436 CC		
500	500	499	499	2	2	58.14	-67	-44	80	77	3.15	25.449 ES		
600	600	596	596	2	2	59.27	-71	-45	82	78	3.81	21.419		
700	700	694	693	2	2	61.40	-77	-46	84	80	4.48	18.822		
808	807	798	797	3	3	64.60	-88	-48	89	84	5.22	17.060		
900	898	888	886	3	3	67.11	-100	-51	95	89	5.87	16.238		
1000	998	984	981	3	3	68.53	-116	-54	105	98	6.59	15.944		
1100	1097	1080	1075	4	4	68.81	-135	-58	117	110	7.31	16.082		
1200	1196	1176	1168	4	4	68.26	-157	-62	133	125	8.03	16.539		
1300	1295	1270	1259	5	5	67.18	-181	-67	151	142	8.74	17.249		
1400	1394	1363	1348	5	5	65.80	-208	-72	172	162	9.45	18.157		
1500	1494	1455	1435	5	5	64.28	-238	-78	195	185	10.16	19.237		
1600	1593	1546	1519	6	6	62.74	-270	-85	222	211	10.84	20.465		
1700	1692	1638	1604	6	7	61.22	-305	-92	251	239	11.56	21.701		
1800	1791	1733	1692	6	7	59.93	-341	-99	281	268	12.34	22.734		
1900	1891	1829	1780	7	8	58.89	-377	-106	310	297	13.12	23.643		
2000	1990	1924	1868	7	8	58.04	-413	-113	340	326	13.90	24.448		
2100	2089	2019	1956	8	9	57.32	-450	-121	370	355	14.69	25.164		
2200	2188	2115	2044	8	9	56.70	-486	-128	400	384	15.48	25.805		
2300	2287	2210	2132	8	10	56.17	-522	-135	429	413	16.28	26.381		
2400	2387	2305	2220	9	11	55.71	-559	-142	459	442	17.07	26.902		
2500	2486	2401	2307	9	11	55.31	-595	-150	489	471	17.87	27.374		
2600	2585	2496	2395	10	12	54.95	-631	-157	519	500	18.67	27.805		
2700	2684	2592	2483	10	12	54.64	-667	-164	549	530	19.47	28.199		
2800	2784	2687	2571	10	13	54.35	-704	-171	579	559	20.28	28.560		
2900	2883	2782	2659	11	14	54.09	-740	-179	609	588	21.08	28.894		
3000	2982	2878	2747	11	14	53.86	-776	-186	639	617	21.89	29.201		
3100	3081	2973	2835	12	15	53.65	-812	-193	669	646	22.69	29.486		
3200	3180	3068	2923	12	16	53.45	-849	-200	699	676	23.50	29.751		
3300	3280	3164	3011	12	16	53.28	-885	-208	729	705	24.31	29.997		
3400	3379	3259	3099	13	17	53.11	-921	-215	759	734	25.11	30.227		
3500	3478	3354	3186	13	17	52.96	-958	-222	789	763	25.92	30.443		
3600	3577	3450	3274	14	18	52.82	-994	-229	819	792	26.73	30.644		
3700	3677	3545	3362	14	19	52.69	-1030	-237	849	822	27.54	30.834		
3800	3776	3641	3450	14	19	52.57	-1066	-244	879	851	28.35	31.012		
3900	3875	3736	3538	15	20	52.46	-1103	-251	909	880	29.16	31.180		
4000	3974	3831	3626	15	21	52.35	-1139	-258	939	909	29.98	31.338		
4100	4073	3927	3714	16	21	52.25	-1175	-266	969	939	30.79	31.488		
4200	4173	4022	3802	16	22	52.16	-1212	-273	999	968	31.60	31.630		
4257	4230	4077	3852	16	22	52.11	-1232	-277	1017	985	32.07	31.708		
4300	4272	4117	3889	16	22	32.80	-1248	-280	1030	998	32.40	31.790		
4350	4322	4164	3933	17	23	-48.87	-1266	-284	1046	1014	32.75	31.952		
4400	4372	4210	3975	17	23	-82.45	-1283	-287	1064	1031	33.06	32.182		
4450	4421	4255	4016	17	23	-90.22	-1300	-291	1083	1049	33.34	32.469		
4500	4470	4298	4056	17	24	-92.97	-1316	-294	1102	1069	33.59	32.811		
4550	4518	4339	4094	17	24	-94.01	-1332	-297	1123	1089	33.82	33.203		
4600	4564	4378	4130	17	24	-94.24	-1347	-300	1145	1111	34.02	33.642		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 507H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4650	4609	4415	4164	17	24	-93.98	-1361	-303	1167	1133	34.21	34.123	
4700	4651	4461	4207	17	25	-93.76	-1378	-306	1191	1157	34.49	34.539	
4750	4692	4594	4332	18	25	-95.98	-1417	-329	1215	1179	35.44	34.271	
4800	4731	4777	4501	18	26	-98.29	-1439	-392	1235	1199	36.35	33.987	
4850	4766	4983	4674	18	27	-99.23	-1416	-499	1251	1214	36.97	33.835	
4900	4799	5287	4859	18	26	-97.68	-1299	-706	1259	1221	38.35	32.842	
4950	4829	5485	4915	18	26	-94.57	-1179	-853	1261	1220	40.55	31.084	
5000	4855	5612	4923	19	26	-92.06	-1091	-944	1258	1215	42.61	29.525	
5050	4879	5656	4923	19	26	-91.42	-1059	-975	1256	1212	43.75	28.713	
5100	4898	5703	4923	19	26	-90.80	-1027	-1007	1255	1210	44.86	27.975	
5150	4914	5750	4923	20	27	-90.25	-993	-1041	1254	1208	46.00	27.265	
5200	4926	5798	4924	20	27	-89.81	-959	-1075	1254	1206	47.51	26.392	
5250	4935	5848	4924	21	28	-89.49	-924	-1110	1254	1205	48.97	25.601	
5273	4937	5871	4924	21	29	-89.38	-907	-1126	1254	1204	49.68	25.233	
5300	4939	5898	4924	22	29	-89.31	-888	-1145	1254	1203	50.53	24.809	
5330	4940	5928	4924	22	30	-89.27	-867	-1166	1254	1202	51.49	24.349	
5400	4940	5998	4924	23	31	-89.27	-817	-1215	1254	1200	53.82	23.299	
5500	4940	6098	4925	25	33	-89.27	-746	-1286	1254	1197	57.38	21.856	
5600	4941	6198	4925	27	35	-89.27	-675	-1356	1254	1193	61.19	20.503	
5700	4941	6298	4925	29	37	-89.28	-604	-1426	1255	1190	65.18	19.251	
5800	4941	6398	4925	31	39	-89.28	-533	-1497	1255	1186	69.33	18.102	
5900	4942	6498	4926	33	41	-89.28	-462	-1567	1255	1182	73.62	17.052	
6000	4942	6598	4926	35	44	-89.28	-391	-1638	1256	1178	78.01	16.095	
6100	4942	6698	4926	37	46	-89.28	-320	-1708	1256	1173	82.50	15.224	
6200	4942	6798	4927	39	48	-89.28	-250	-1779	1256	1169	87.06	14.429	
6300	4943	6898	4927	42	50	-89.28	-179	-1849	1257	1165	91.69	13.704	
6400	4943	6998	4927	44	53	-89.28	-108	-1920	1257	1160	96.37	13.041	
6500	4943	7098	4928	46	55	-89.28	-37	-1990	1257	1156	101.10	12.434	
6600	4944	7198	4928	49	58	-89.28	34	-2061	1257	1152	105.88	11.876	
6700	4944	7298	4928	51	60	-89.28	105	-2131	1258	1147	110.68	11.363	
6800	4944	7398	4928	54	62	-89.28	176	-2201	1258	1142	115.52	10.889	
6900	4944	7498	4929	56	65	-89.29	247	-2272	1258	1138	120.39	10.451	
7000	4945	7598	4929	59	67	-89.29	318	-2342	1259	1133	125.28	10.046	
7100	4945	7698	4929	61	70	-89.29	389	-2413	1259	1129	130.20	9.669	
7200	4945	7798	4930	63	72	-89.29	460	-2483	1259	1124	135.13	9.318	
7300	4946	7898	4930	66	75	-89.29	531	-2554	1259	1119	140.08	8.991	
7400	4946	7998	4930	68	77	-89.29	602	-2624	1260	1115	145.04	8.685	
7500	4946	8098	4931	71	80	-89.29	673	-2695	1260	1110	150.02	8.399	
7600	4947	8198	4931	73	82	-89.29	744	-2765	1260	1105	155.01	8.130	
7700	4947	8298	4931	76	84	-89.29	815	-2836	1261	1101	160.02	7.878	
7800	4947	8398	4931	78	87	-89.29	886	-2906	1261	1096	165.03	7.640	
7900	4947	8498	4932	81	89	-89.29	957	-2976	1261	1091	170.05	7.416	
8000	4948	8598	4932	83	92	-89.29	1028	-3047	1261	1086	175.08	7.205	
8100	4948	8698	4932	86	94	-89.29	1099	-3117	1262	1082	180.12	7.005	
8200	4948	8798	4933	89	97	-89.29	1170	-3188	1262	1077	185.17	6.816	
8300	4949	8898	4933	91	100	-89.29	1241	-3258	1262	1072	190.22	6.636	
8400	4949	8998	4933	94	102	-89.30	1312	-3329	1263	1067	195.28	6.466	
8500	4949	9098	4934	96	105	-89.30	1383	-3399	1263	1063	200.34	6.304	
8600	4949	9198	4934	99	107	-89.30	1454	-3470	1263	1058	205.41	6.149	
8700	4950	9298	4934	101	110	-89.30	1525	-3540	1263	1053	210.49	6.003	
8800	4950	9398	4934	104	112	-89.30	1596	-3611	1264	1048	215.57	5.862	
8900	4950	9498	4935	106	115	-89.30	1667	-3681	1264	1043	220.65	5.729	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 507H - Original Drilling - APD											Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM											Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
9000	4951	9598	4935	109	117	-89.30	1737	-3752	1264	1039	225.74	5.601
9100	4951	9698	4935	111	120	-89.30	1808	-3822	1265	1034	230.83	5.479
9200	4951	9798	4936	114	122	-89.30	1879	-3892	1265	1029	235.92	5.362
9300	4951	9898	4936	116	125	-89.30	1950	-3963	1265	1024	241.02	5.249
9400	4952	9919	4936	119	125	-89.30	1966	-3978	1268	1024	244.27	5.191 SF
9500	4952	9919	4936	122	125	-89.30	1966	-3978	1278	1033	245.68	5.203
9600	4952	9919	4936	124	125	-89.30	1966	-3978	1296	1051	245.67	5.277
9700	4953	9919	4936	127	125	-89.30	1966	-3978	1322	1077	244.33	5.409
9800	4953	9919	4936	129	125	-89.30	1966	-3978	1354	1112	241.84	5.599
9900	4953	9919	4936	132	125	-89.30	1966	-3978	1393	1154	238.40	5.842
10,000	4953	9919	4936	134	125	-89.30	1966	-3978	1437	1203	234.22	6.137
10,100	4954	9919	4936	137	125	-89.30	1966	-3978	1487	1258	229.48	6.482
10,200	4954	9919	4936	139	125	-89.30	1966	-3978	1542	1318	224.38	6.874
10,300	4954	9919	4936	142	125	-89.30	1966	-3978	1602	1383	219.06	7.312
10,400	4955	9919	4936	145	125	-89.30	1966	-3978	1665	1451	213.65	7.793
10,500	4955	9919	4936	147	125	-89.30	1966	-3978	1732	1523	208.24	8.315
10,554	4955	9919	4936	149	125	-89.30	1966	-3978	1769	1564	205.34	8.615



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 508H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis			Offset Wellbore Centre		Distance			Rule Assigned:		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0	0	0	0	0	0	33.50	17	11	20					
100	100	100	100	0	0	33.50	17	11	20	20	0.31	64.714		
200	200	200	200	1	1	33.50	17	11	20	19	1.03	19.460		
300	300	300	300	1	1	33.50	17	11	20	18	1.74	11.452		
400	400	400	400	1	1	33.50	17	11	20	17	2.46	8.113		
450	450	450	450	1	1	33.50	17	11	20	17	2.82	7.081 CC		
500	500	500	500	2	2	-121.69	16	11	20	17	3.16	6.371 ES		
600	600	600	600	2	2	-120.33	14	14	22	18	3.83	5.647		
700	700	700	700	2	2	-118.09	10	19	25	20	4.52	5.451 SF		
808	807	808	807	3	3	-115.41	3	28	30	24	5.30	5.601		
900	898	900	898	3	3	-112.78	-5	38	35	29	5.98	5.816		
1000	998	1000	997	3	3	-110.62	-13	48	40	34	6.73	5.997		
1100	1097	1099	1096	4	4	-108.98	-22	58	46	39	7.50	6.138		
1200	1196	1199	1195	4	4	-107.71	-30	68	52	43	8.27	6.251		
1300	1295	1299	1294	5	5	-106.68	-38	78	57	48	9.04	6.343		
1400	1394	1399	1393	5	5	-105.84	-46	88	63	53	9.83	6.420		
1500	1494	1499	1492	5	5	-105.14	-54	98	69	58	10.61	6.484		
1600	1593	1599	1591	6	6	-104.55	-63	108	75	63	11.40	6.538		
1700	1692	1698	1690	6	6	-104.04	-71	118	80	68	12.19	6.585		
1800	1791	1798	1789	6	7	-103.60	-79	128	86	73	12.98	6.625		
1900	1891	1898	1888	7	7	-103.22	-87	138	92	78	13.77	6.661		
2000	1990	1998	1987	7	7	-102.88	-96	148	97	83	14.57	6.692		
2100	2089	2098	2086	8	8	-102.58	-104	158	103	88	15.36	6.720		
2200	2188	2198	2185	8	8	-102.31	-112	168	109	93	16.16	6.745		
2300	2287	2297	2284	8	9	-102.07	-120	178	115	98	16.96	6.767		
2400	2387	2397	2383	9	9	-101.85	-128	188	121	103	17.75	6.788		
2500	2486	2497	2482	9	9	-101.65	-137	198	126	108	18.55	6.806		
2600	2585	2597	2581	10	10	-101.46	-145	208	132	113	19.35	6.823		
2700	2684	2697	2680	10	10	-101.30	-153	219	138	118	20.15	6.838		
2800	2784	2797	2779	10	11	-101.14	-161	229	144	123	20.95	6.852		
2900	2883	2896	2878	11	11	-101.00	-170	239	149	128	21.75	6.865		
3000	2982	2996	2977	11	11	-100.87	-178	249	155	133	22.55	6.877		
3100	3081	3096	3076	12	12	-100.75	-186	259	161	137	23.35	6.889		
3200	3180	3196	3175	12	12	-100.64	-194	269	167	142	24.15	6.899		
3300	3280	3296	3274	12	13	-100.53	-202	279	172	147	24.95	6.909		
3400	3379	3396	3373	13	13	-100.43	-211	289	178	152	25.75	6.918		
3500	3478	3495	3472	13	13	-100.34	-219	299	184	157	26.55	6.926		
3600	3577	3595	3571	14	14	-100.25	-227	309	190	162	27.35	6.934		
3700	3677	3695	3670	14	14	-100.17	-235	319	195	167	28.16	6.942		
3800	3776	3795	3769	14	15	-100.09	-244	329	201	172	28.96	6.949		
3900	3875	3895	3868	15	15	-100.02	-252	339	207	177	29.76	6.955		
4000	3974	3995	3967	15	15	-99.95	-260	349	213	182	30.56	6.962		
4100	4073	4094	4066	16	16	-99.88	-268	359	219	187	31.36	6.968		
4200	4173	4194	4165	16	16	-99.82	-277	369	224	192	32.16	6.973		
4257	4230	4252	4221	16	16	-99.79	-281	375	228	195	32.62	6.976		
4300	4272	4294	4264	16	17	-120.04	-285	379	230	197	32.96	6.988		
4350	4322	4344	4313	17	17	158.05	-289	384	234	201	33.32	7.030		
4400	4372	4393	4361	17	17	125.07	-293	389	239	206	33.65	7.108		
4450	4421	4439	4407	17	17	118.48	-297	394	246	212	33.93	7.236		
4500	4470	4479	4447	17	17	117.38	-302	400	255	220	34.13	7.459		
4550	4518	4516	4482	17	18	118.11	-308	407	268	233	34.25	7.812		
4600	4564	4550	4515	17	18	119.55	-315	414	285	251	34.28	8.315		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 508H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4650	4609	4575	4538	17	18	120.08	-321	420	307	273	34.13	9.009	
4700	4651	4600	4561	17	18	120.51	-327	427	335	301	33.98	9.853	
4750	4692	4616	4576	18	18	119.25	-332	432	367	333	33.69	10.885	
4800	4731	4630	4589	18	18	117.14	-336	436	402	369	33.43	12.039	
4850	4766	4641	4598	18	18	113.63	-339	440	441	408	33.18	13.301	
4900	4799	4650	4606	18	18	108.89	-342	443	483	450	33.01	14.626	
4950	4829	4650	4606	18	18	101.06	-342	443	526	493	32.74	16.072	
5000	4855	4650	4606	19	18	91.99	-342	443	571	538	32.57	17.525	
5050	4879	4650	4606	19	18	82.11	-342	443	616	584	32.50	18.962	
5100	4898	4650	4606	19	18	72.09	-342	443	662	630	32.51	20.367	
5150	4914	4650	4606	20	18	62.63	-342	443	708	675	32.58	21.731	
5200	4926	4650	4606	20	18	54.23	-342	443	754	721	32.70	23.048	
5250	4935	4635	4593	21	18	45.46	-337	438	799	766	32.62	24.480	
5300	4939	4627	4586	22	18	39.21	-335	435	843	810	32.70	25.773	
5330	4940	4622	4581	22	18	36.06	-333	434	869	836	32.76	26.528	
5400	4940	4600	4561	23	18	34.56	-327	427	930	897	32.77	28.369	
5500	4940	4600	4561	25	18	34.56	-327	427	1018	985	33.17	30.687	
5600	4941	4579	4542	27	18	33.20	-322	421	1108	1074	33.28	33.290	
5700	4941	4566	4530	29	18	32.41	-318	418	1199	1165	33.43	35.854	
5800	4941	4550	4515	31	18	31.43	-315	414	1291	1257	33.53	38.491	
5900	4942	4550	4515	33	18	31.43	-315	414	1384	1350	33.74	41.008	
6000	4942	4550	4515	35	18	31.43	-315	414	1477	1443	33.91	43.566	
6100	4942	4526	4492	37	18	30.08	-310	409	1571	1537	33.91	46.339	
6200	4942	4518	4484	39	18	29.65	-308	407	1666	1632	34.00	49.003	
6300	4943	4500	4467	42	17	28.70	-305	403	1761	1727	34.02	51.770	
6400	4943	4500	4467	44	17	28.70	-305	403	1857	1823	34.13	54.398	
6500	4943	4500	4467	46	17	28.70	-305	403	1953	1919	34.23	57.044	
6600	4944	4500	4467	49	17	28.70	-305	403	2049	2015	34.32	59.705	
6700	4944	4500	4467	51	17	28.70	-305	403	2146	2111	34.40	62.378	
6800	4944	4500	4467	54	17	28.70	-305	403	2243	2208	34.47	65.061	
6900	4944	4477	4444	56	17	27.56	-301	400	2339	2305	34.45	67.899	
7000	4945	4473	4440	59	17	27.35	-301	399	2437	2402	34.50	70.619	
7100	4945	4450	4418	61	17	26.32	-298	396	2534	2500	34.49	73.480	
7200	4945	4450	4418	63	17	26.32	-298	396	2632	2597	34.55	76.171	
7300	4946	4450	4418	66	17	26.32	-298	396	2729	2695	34.61	78.866	
7400	4946	4450	4418	68	17	26.32	-298	396	2827	2793	34.66	81.563	
7500	4946	4450	4418	71	17	26.32	-298	396	2925	2890	34.72	84.262	
7600	4947	4450	4418	73	17	26.32	-298	396	3023	2989	34.77	86.962	
7700	4947	4450	4418	76	17	26.32	-298	396	3121	3087	34.81	89.661	
7800	4947	4450	4418	78	17	26.32	-298	396	3220	3185	34.86	92.360	
7900	4947	4450	4418	81	17	26.32	-298	396	3318	3283	34.91	95.057	
8000	4948	4450	4418	83	17	26.32	-298	396	3417	3382	34.95	97.751	
8100	4948	4438	4406	86	17	25.80	-297	394	3515	3480	34.97	100.517	
8200	4948	4436	4404	89	17	25.70	-297	394	3614	3579	35.01	103.219	
8300	4949	4423	4391	91	17	25.15	-295	392	3713	3678	35.03	105.992	
8400	4949	4423	4391	94	17	25.15	-295	392	3811	3776	35.07	108.670	
8500	4949	4423	4391	96	17	25.15	-295	392	3910	3875	35.12	111.344	
8600	4949	4423	4391	99	17	25.15	-295	392	4009	3974	35.16	114.013	
8700	4950	4423	4391	101	17	25.15	-295	392	4108	4073	35.21	116.677	
8800	4950	4423	4391	104	17	25.15	-295	392	4207	4171	35.25	119.335	
8900	4950	4422	4390	106	17	25.13	-295	392	4306	4270	35.30	121.991	
9000	4951	4409	4378	109	17	24.62	-294	391	4405	4369	35.32	124.719	



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design: O11 2206 Pad - # 508H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
9100	4951	4397	4365	111	17	24.13	-293	390	4504	4468	35.34	127.441		
9200	4951	4384	4353	114	17	23.65	-292	389	4603	4567	35.36	130.155		
9300	4951	4371	4340	116	17	23.19	-291	387	4702	4666	35.39	132.861		
9400	4952	4359	4328	119	17	22.75	-290	386	4801	4765	35.41	135.560		
9500	4952	4346	4315	122	17	22.33	-289	385	4900	4864	35.44	138.251		
9600	4952	4333	4303	124	17	21.91	-288	383	4999	4963	35.47	140.933		
9700	4953	4321	4290	127	17	21.51	-287	382	5098	5062	35.50	143.607		
9800	4953	4308	4277	129	17	21.13	-286	381	5197	5162	35.53	146.272		
9900	4953	4296	4265	132	17	20.76	-285	380	5296	5261	35.56	148.929		
10,000	4953	4283	4252	134	17	20.39	-284	378	5395	5360	35.59	151.576		
10,100	4954	4270	4240	137	17	20.04	-283	377	5494	5459	35.63	154.215		
10,200	4954	4258	4227	139	16	19.71	-282	376	5593	5558	35.66	156.844		
10,300	4954	4245	4215	142	16	19.38	-281	375	5692	5657	35.70	159.463		
10,400	4955	4232	4202	145	16	19.06	-280	373	5792	5756	35.73	162.073		
10,500	4955	4220	4190	147	16	18.75	-279	372	5891	5855	35.77	164.673		
10,554	4955	4213	4183	149	16	18.58	-278	371	5944	5909	35.79	166.080		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 509H - Slot 5
Project:	Venado Canyon Unit	TVD Reference:	GL 7075' & RKB 14' @ 7089ft
Reference Site:	O11 2206 Pad	MD Reference:	GL 7075' & RKB 14' @ 7089ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 509H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 7075' & RKB 14' @ 7089ft

Offset Depths are relative to Offset Datum

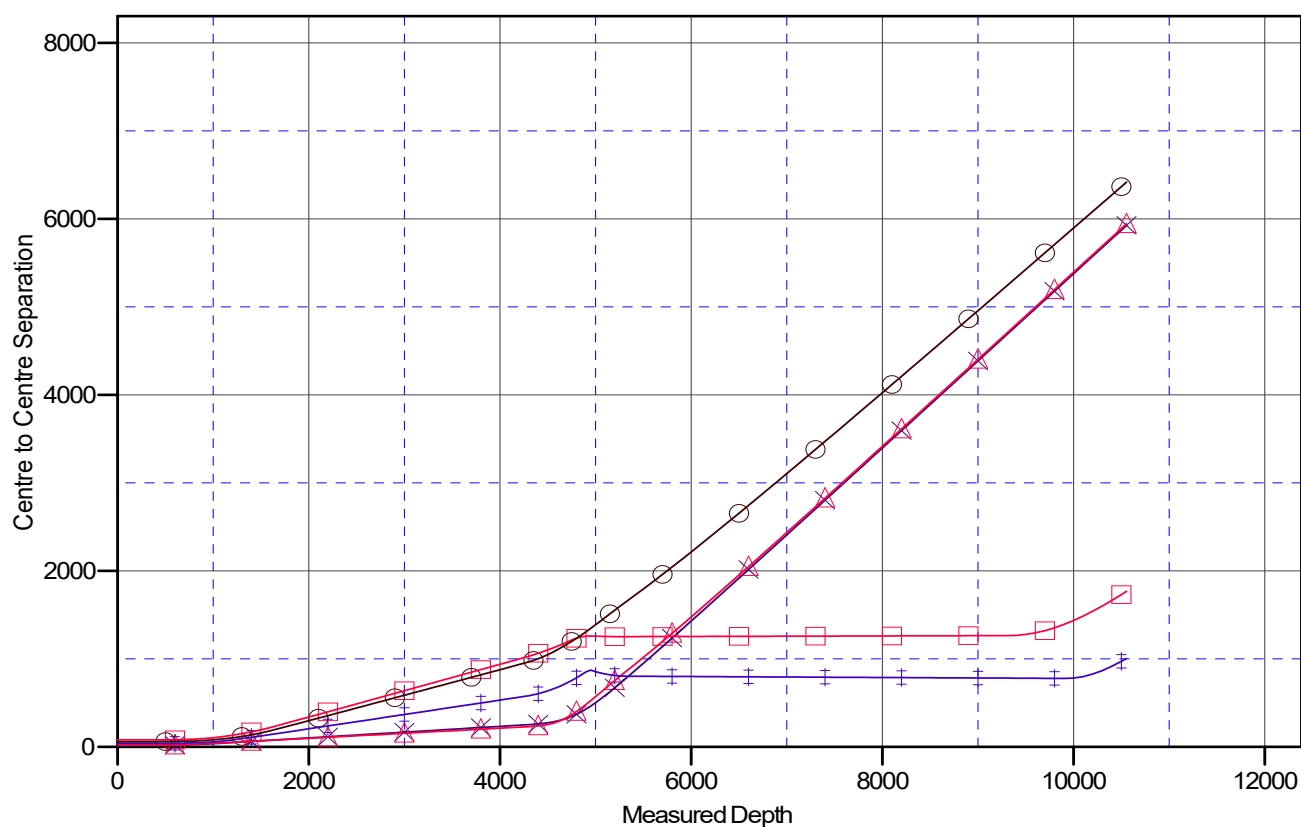
Central Meridian is -107.8333333

Coordinates are relative to: # 509H - Slot 5

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

Grid Convergence at Surface is: 0.24°

Ladder Plot



LEGEND

#506H Original Drilling.g, APDVO
 #504H Original Drilling.g, APDVO
 #505H Original Drilling.g, APDVO



Lonestar Consulting, LLC

Anticollision Report



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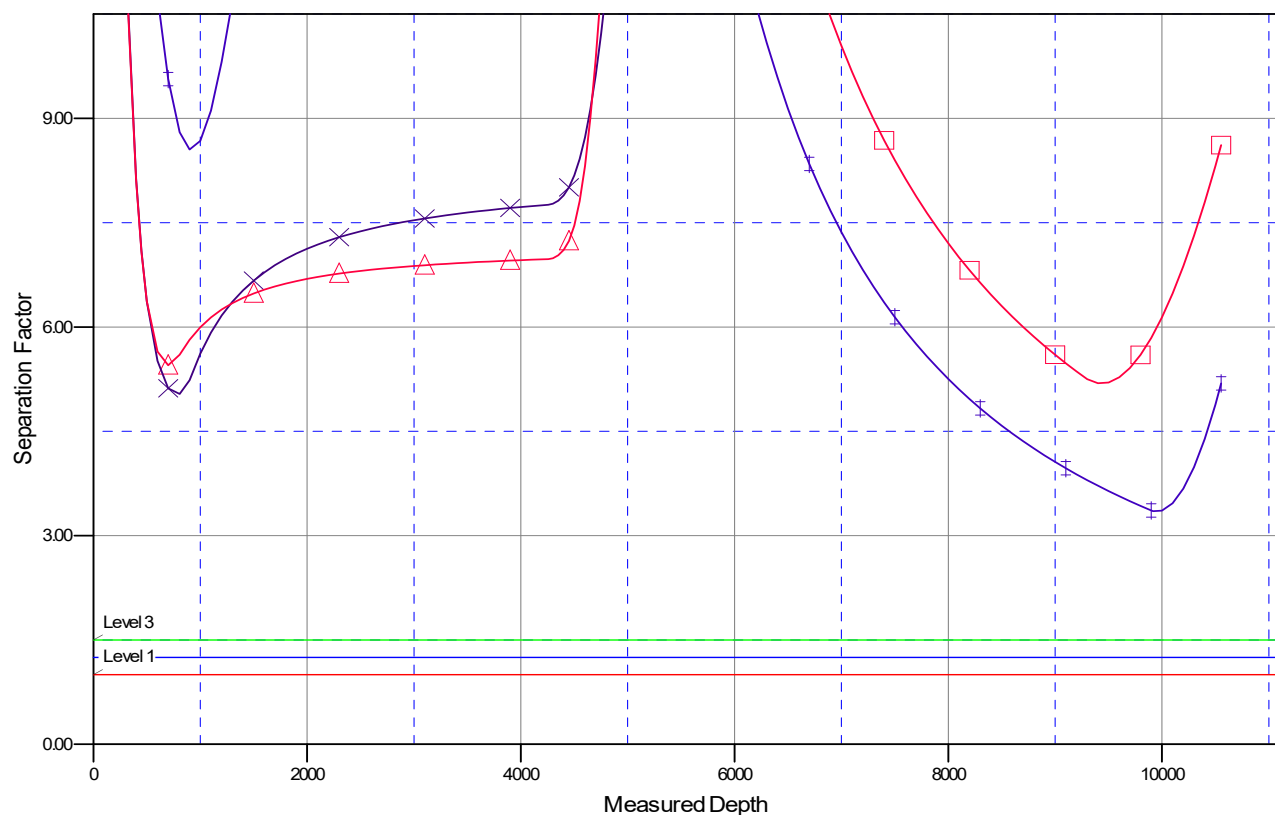
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Coordinates are relative to: # 509H - Slot 5

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

Grid Convergence at Surface is: 0.24°

Separation Factor Plot



LEGEND

#506H Original Drilling, APOVO
 #504H Original Drilling, APOVO
 #505H Original Drilling, APOVO

Conditions Of Approval

Air Resources

- Areas not required for facilities would be revegetated during interim reclamation.
- Dirt roads would be watered during periods of high use (magnesium chloride, organic-based compounds, and/or polymer compounds could also be used on dirt roads upon approval of the BLM).
- BMPs provided in The Gold Book would be implemented for proposed and existing roads (BLM and U.S. Forest Service 2007).
- Compressor engines 300 horsepower or less used during well production must be rated by the manufacturer as emitting NO_x at 2 grams per horsepower hour or less to comply with the NMED Air Quality Bureau's guidance.

Water Resources

- To prevent erosion, certain areas surrounding the proposed site would be recontoured during interim reclamation.
- Culverts and silt traps would be installed as appropriate, and placement will be determined during the BLM onsite and facility onsite.

Wildlife, Migratory Birds, and Special-Status Species

- Any wildlife encountered within the proposed project area would be avoided and allowed to move out of the proposed project area. No wildlife would be intentionally harmed or harassed.
- Wildlife hazards, such as storage tanks, associated with the proposed project would be fenced or covered, as necessary.
- Because the proposed project would disturb more than 4.0 acres of vegetation, migratory breeding bird nesting surveys would be required if construction activities are scheduled to occur during the migratory bird nesting season (May 15 – July 31). If an active nest is encountered, it would be avoided (avoidance buffer to be determined by BLM FFO) and left undisturbed until the nest has failed, or nestlings have fledged. If present, an inactive nest could be cleared by a BLM FFO-approved wildlife biologist.
- DJR would notify the BLM and U.S. Fish and Wildlife Service (USFWS) upon discovery of a dead or injured migratory bird, bald eagle, or golden eagle within or adjacent to the proposed project area. If the BLM becomes aware of such mortality or injury, the BLM will inform DJR. If DJR fails to notify the USFWS of the mortality or injury, the BLM would notify the USFWS. The BLM and the USFWS would then attempt to determine the cause of mortality and identify appropriate mitigation measures to avoid future occurrences.
- Should other special-status species be observed within the proposed project area prior to or during the proposed project, construction would cease, and the BLM FFO would be immediately contacted. The BLM FFO would then evaluate the resource. Should a discovery be evaluated as significant (protected under the Endangered Species Act, etc.), it would be protected in place until mitigation could be developed and implemented according to guidelines set by the BLM FFO.
- Per BLM FFO Instruction Memorandum No. NM-200-2008-001 (BLM 2008b), an updated pre-construction biological survey could be required for the proposed project if vegetation removal would occur more than 1 year following the previous biological survey.

Soil, Upland Vegetation, and Noxious Weeds and Invasive Species

- Reclamation would follow the guidance provided in the *Farmington Field Office Bare Soil Reclamation Procedures* (BLM 2013). These procedures are referenced in DJR's Surface Reclamation Plan.
- During the pre-disturbance onsite meeting with the BLM, a suitable vegetation community from the *Farmington Field Office Bare Soil Reclamation Procedures* (BLM 2013) will be selected by the BLM. Plant species will be chosen from the BLM FFO's seed pick list for the selected community.
- A noxious weed inventory utilizing the New Mexico Noxious Weed List (New Mexico Department of Agriculture 2009) and the U.S. Department of Agriculture's (USDA's) Federal Noxious Weed List (Natural Resources Conservation Service 2017 USDA 2010, 2012) will be conducted during the pre-disturbance onsite meeting.
- Identified noxious weeds would be treated prior to new surface disturbance as determined by the BLM FFO Noxious Weed Specialist (505-564-7600). A Pesticide Use Proposal (PUP) would be submitted to and approved by the BLM FFO Noxious Weed Specialist prior to application of any pesticide.
- See the above water resources section for erosion-control features.

Cultural Resources

- All cultural resources stipulations would be followed as indicated in the BLM Cultural Resource Records of Review and the Conditions of Approvals. These stipulations may include, but are not limited to, temporary or permanent fencing or other physical barriers, monitoring of earth-disturbing construction, project area reduction and/or specific construction avoidance zones, and employee education.
- All employees, contractors, and subcontractors would be informed by the project proponent that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment, that it is illegal to collect, damage, or disturb cultural resources, and that such activities on federal and tribal lands are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (ARPA) (16 USC 470aa-mm) when on federal land and the New Mexico Cultural Properties Act NMSA 1978 when on State land.
- In the event of a cultural resource's discovery during construction, construction activities would immediately cease in the immediate vicinity of the discovery, and DJR would immediately notify the archaeological monitor, if present, or the BLM. The BLM would then ensure that the site is evaluated. Should a discovery be evaluated as significant (e.g., National Register of Historic Places, Native American Graves Protection and Repatriation Act of 1990, ARPA), it would be protected in place until mitigating measures can be developed and implemented according to guidelines set by the BLM.
- Known sites and sites identified during the pre-construction cultural resources inventory surveys would be avoided.
- Please see the attached Culture Resources Record of Review for additional site-specific cultural resource requirements.

Paleontological Resources

If any paleontological resources are discovered during activities associated with the proposed project:

- DJR would immediately inform the BLM Authorized Officer.

- Activities in the vicinity of the discovery would be immediately suspended until written authorization to proceed is issued by the BLM Authorized Officer.
- The discovery would be protected from damage or looting.
- The Authorized Officer would ensure evaluation of the discovery as soon as possible.
- Appropriate measures to mitigate adverse effects to significant paleontological resources would be determined by the Authorized Officer after consulting with the operator.

Visual Resources and Dark Skies

- Equipment not subject to safety requirements would be painted a BLM Standard Environmental Color (Covert Green) to minimize contrast with the surrounding landscape.
- If applicable, during reclamation, stockpiled rocks, if available, would be placed within the reclaimed area for erosion control and/or to discourage off-highway vehicle traffic (if requested by the BLM FFO). Rocks would be placed in a manner that visually blends with the adjacent, undisturbed landscape.
- Lights would be limited to those needed for safety during construction and operations.
- Lighting would be downward-facing or shielded where possible.

Livestock Grazing and Rangeland Health Standards

- Livestock grazing operators in the vicinity of the proposed project area would be contacted prior to construction.
- Safety meetings would be conducted prior to construction to increase awareness of livestock, such as the presence of open range and driving speed to avoid livestock collisions.
- To the extent feasible, construction activities would not be conducted when livestock are present within the proposed project area.
- If livestock are present during construction, barriers would be placed to ensure that livestock do not come in contact with potential hazards. Barrier examples could include fencing of exposed ditch-type holes, covering of holes when personnel are not present onsite, and containing contaminants, fluid leaks, or hazards that could cause injury to livestock.

Public Health and Safety

- The hauling of equipment and materials on public roads would comply with New Mexico Department of Transportation regulations. Any accidents involving persons or property would be reported to the BLM FFO. DJR would notify the public of potential hazards by posting signage, having flaggers, or using lighted signs, as necessary.
- Worker safety incidents would be reported to the BLM FFO as required under NTL-3A (U.S. Geological Survey 1979). DJR would adhere to company safety policies and Occupational Safety and Health Administration regulations.
- Vehicles would be restricted to proposed and existing disturbance areas.
- The proposed site would have an informational sign, delineating Operator, Legal Description, etc.
- DJR traffic is expected to adhere to all posted speed limits and signs. Drivers would be appropriately licensed and inspected.

Lay-Flat Water Pipeline BMPs

- Time construction activities at perennial, intermittent, and ephemeral drainage crossings (e.g., buried pipelines, culverts) to avoid high-flow conditions. When construction disturbs a flowing stream, utilize either a piped stream diversion or a cofferdam and pump to divert flow around the disturbed area.
- Design and construct surface pipelines at drainage crossings at an adequate height above possible flood levels. Bore/bury pipeline crossings below the surface deep enough to remain undisturbed by scour and fill processes typically associated with peak flows. Complete a hydraulic analysis during the pipeline design phase to avoid repeated maintenance of such a crossing and eliminate costly repairs and potential environmental degradation associated with pipeline breaks at stream crossings. Utilize horizontal directional boring techniques below perennial water bodies and/or wetland complexes when environmental circumstances allow.
- X-ray pipeline welds within 100 feet of a perennial stream to prevent leakage into the stream. Where pipelines cross streams that support federally listed or state-listed threatened or endangered species or BLM-listed sensitive species, utilize additional safeguards (such as double-walled pipe and remotely actuated block or check valves) on both sides of the stream.
- Avoid water courses when locating pipelines and flowlines; utilize road corridors wherever possible to minimize surface disturbance and provide better leak detection and access for installation and repair activities.
- Reclamation, including seeding, of temporarily disturbed areas along roads and pipelines, and of topsoil piles and berms, shall be completed within 30 days following completion of construction. Any such area on which construction is completed prior to December 1 shall be seeded during the remainder of the early winter season instead of during the following spring unless BLM approves otherwise based on weather. If road or pipeline construction occurs discontinuously (e.g., new segments installed as new pads are built) or continuously but with a total duration greater than 30 days, reclamation, including seeding, shall be phased such that no portion of the temporarily disturbed area remains in an un-reclaimed condition for longer than 30 days. BLM may authorize deviation from this requirement based on the season and the amount of work remaining on the entirety of the road or pipeline when the 30-day period has expired.
- To the extent practical, existing vegetation shall be preserved when clearing and grading for pads, roads, and pipelines. Cleared trees and rocks may be salvaged for redistribution over reshaped cut-and-fill slopes or along linear features.

Sundry Design Features submitted 1/22/22

Emissions

- Equip internal combustion engines for production operations with ignition controls to reduce emissions.
- Leak detection and repair (LDAR) will be conducted quarterly during production operation.
- Weekly audio, visual and olfactory (AVO) inspections will be conducted at each pad during production operations consistent with the requirements of the New Mexico Oil Conservation Division.
- Install instrumentation to reduce emissions from pneumatic controllers and pumps during production operations.

Noise

- Sound reduction walls will be installed for internal combustion engines used for gas lift compression.
- Hospital grade mufflers will be installed in association with gas lift compression.
- Sound readings will be conducted to confirm sound mitigation measures are below the standard of 48.6 dB(A) at a receptor designated by the Authorized Officer of the BLM.

Roads

- In coordination with Sandoval County, DJR will maintain the condition of Indian Service Road 474 in the same or better condition for that portion of the road which accesses the Venda Canyon Unit well pads.

Additional Site-Specific Cultural Mitigation Measures

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 a site protection barrier is located as indicated on the attached map in the vicinity of LA199269.
- Observe all surface disturbing activities within 100' of LA199268, & LA199269.
- 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.

SITE PROTECTION BARRIER:

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



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
#509H VENADO CANYON UNIT
Lease: NMNM109385
SH: SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 11, T.22 N., R.6W.
Sandoval County, New Mexico
BH: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 13, T.22 N., R6 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

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 86004

CONDITIONS

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID: 371838
	Action Number: 86004
	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	3/8/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	3/8/2022
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	3/8/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	3/8/2022
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	3/8/2022