

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30-045-38464
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
13. State		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

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

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

(Continued on page 2)

*(Instructions on page 2)



Additional Operator Remarks

Location of Well

0. SHL: NWSW / 2414 FSL / 70 FWL / TWSP: 24N / RANGE: 8W / SECTION: 16 / LAT: 36.31357 / LONG: -107.695789 (TVD: 0 feet, MD: 0 feet)

PPP: SENE / 2312 FNL / 1046 FEL / TWSP: 24N / RANGE: 8W / SECTION: 17 / LAT: 36.31357 / LONG: -107.695789 (TVD: 5344 feet, MD: 5705 feet)

PPP: SESW / 1 FSL / 1888 FWL / TWSP: 24N / RANGE: 8W / SECTION: 8 / LAT: 36.321395 / LONG: -107.707478 (TVD: 5388 feet, MD: 11260 feet)

BHL: NWSW / 1538 FSL / 331 FWL / TWSP: 24N / RANGE: 8W / SECTION: 8 / LAT: 36.325679 / LONG: -107.712744 (TVD: 5388 feet, MD: 11260 feet)

BLM Point of Contact

Name: CHRISTOPHER P WENMAN

Title: Natural Resource Specialist

Phone: (505) 564-7727

Email: cwenman@blm.gov

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number 30-045-38464	Pool Code 98194	Pool Name CROW CANYON MANCOS OIL POOL
Property Code 325183	Property Name CROW CANYON UNIT	Well Number 137H
OGRID No. 371838	Operator Name DJR OPERATING, LLC	Ground Level Elevation 6794'
Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location (SHL)

UL	Section	Township	Range	Lot	Ft from the N/S	Ft from the E/W	Latitude	Longitude	County
L	16	24N	8W		2414' SOUTH	70' WEST	36.313570° N	107.695789° W	SAN JUAN

Bottom Hole Location (BHL)

UL	Section	Township	Range	Lot	Ft from the N/S	Ft from the E/W	Latitude	Longitude	County
L	8	24N	8W		1538' SOUTH	331' WEST	36.325679° N	107.712744° W	SAN JUAN

Dedicated Acres SEC 17: SE/NE, SW/NE, NW/NE, & NE/NW (160 AC.); SEC 8: NW/SW, SW/SW & SE/SW (120 AC.) = 280 ACRES	PENETRATED SPACING UNIT: Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N) N	Consolidation Code UNIT
Order Numbers: R-14090 R-14090A		Well Setbacks are under Common Ownership: ☒ Yes ☐ No		

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft from the N/S	Ft from the E/W	Latitude	Longitude	County
L	16	24N	8W		2414' SOUTH	70' WEST	36.313570° N	107.695789° W	SAN JUAN

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft from the N/S	Ft from the E/W	Latitude	Longitude	County
H	17	24N	8W		2312' NORTH	1046' EAST	36.314959° N	107.699567° W	SAN JUAN

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft from the N/S	Ft from the E/W	Latitude	Longitude	County
L	8	24N	8W		1538' SOUTH	331' WEST	36.325679° N	107.712744° W	SAN JUAN

Unitized Area or Area of Uniform Interest CROW CANYON	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation
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OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Shaw-Marie Ford
Signature

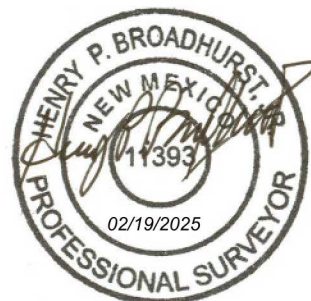
2/19/2025
Date

Shaw-Marie Ford
Printed Name

sford@enduringresources.com
E-mail Address

SURVEYOR CERTIFICATIONS

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.



Signature and Seal of Professional Surveyor:

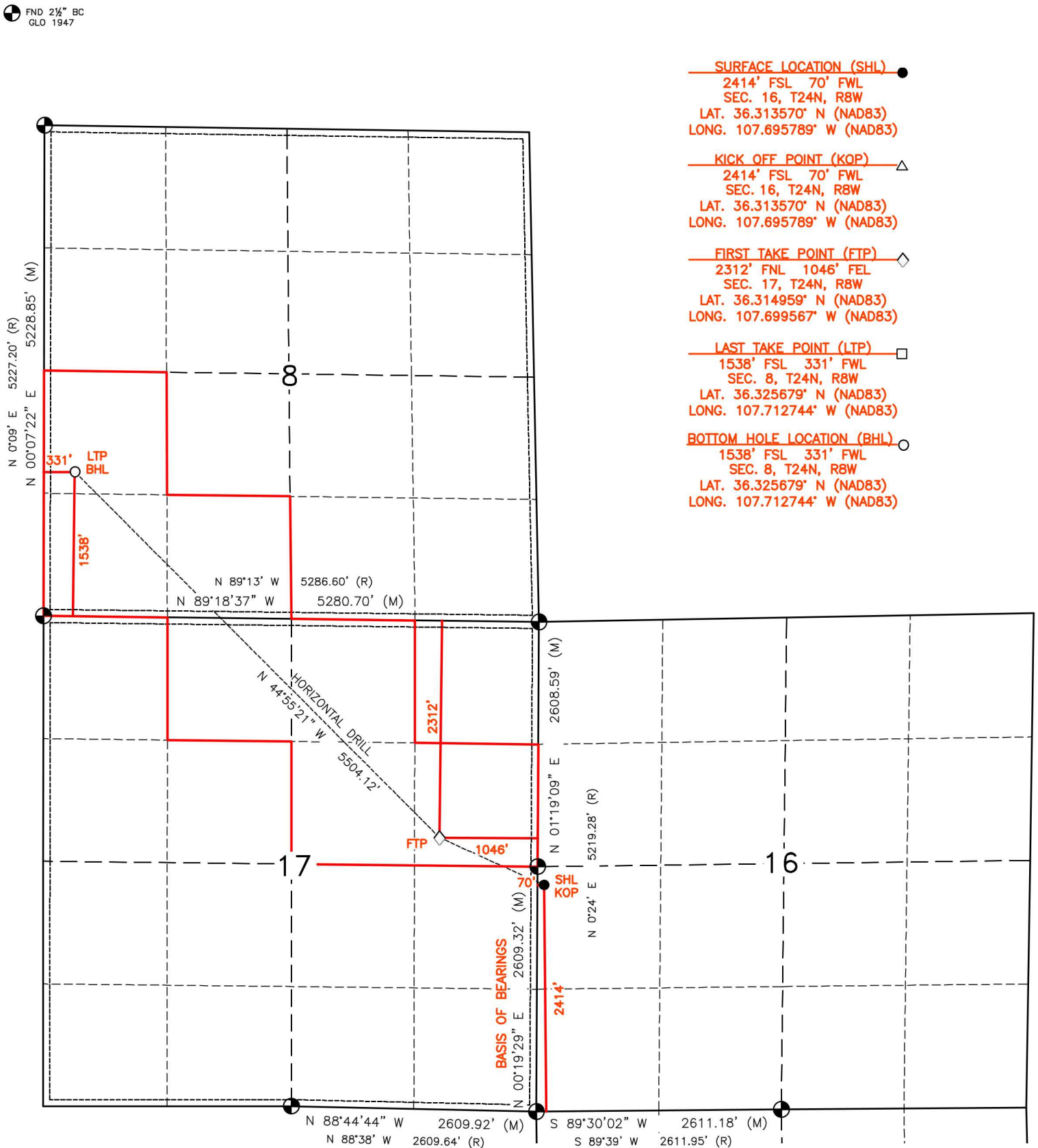
Certificate Number

11393

Date of Survey

JUNE 18, 2021

Note: 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.



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:** 2/14/2025

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
Crow Canyon Unit 130H	TBD	L-16-24N-8W	2413 FSL x 51 FWL	561	1273	196
Crow Canyon Unit 131H	TBD	L-16-24N-8W	2416 FSL x 110 FWL	850	1929	298
Crow Canyon Unit 134H	TBD	L-16-24N-8W	2415 FSL x 91 FWL	489	1109	171
Crow Canyon Unit 135H	TBD	L-16-24N-8W	2417 FSL x 130 FWL	302	685	106
Crow Canyon Unit 136H	TBD	L-16-24N-8W	2412 FSL x 31 FWL	651	1476	228
Crow Canyon Unit 137H	TBD	L-16-24N-8W	2414 FSL x 70 FWL	549	1244	192
				3-year Decline	3-year Decline	3-year Decline
Crow Canyon Unit 130H	TBD	L-16-24N-8W	2413 FSL x 51 FWL	127	507	44
Crow Canyon Unit 131H	TBD	L-16-24N-8W	2416 FSL x 110 FWL	192	768	67
Crow Canyon Unit 134H	TBD	L-16-24N-8W	2415 FSL x 91 FWL	110	442	39
Crow Canyon Unit 135H	TBD	L-16-24N-8W	2417 FSL x 130 FWL	68	273	24
Crow Canyon Unit 136H	TBD	L-16-24N-8W	2412 FSL x 31 FWL	147	588	51
Crow Canyon Unit 137H	TBD	L-16-24N-8W	2414 FSL x 70 FWL	124	496	43

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
Crow Canyon Unit 130H	TBD	7/18/2026	7/26/2026	8/2/2026	8/9/2026	8/11/2026
Crow Canyon Unit 131H	TBD	7/19/2026	7/27/2026	8/3/2026	8/10/2026	8/12/2026
Crow Canyon Unit 134H	TBD	7/20/2026	7/28/2026	8/4/2026	8/11/2026	8/13/2026
Crow Canyon Unit 135H	TBD	7/21/2026	7/29/2026	8/5/2026	8/12/2026	8/14/2026
Crow Canyon Unit 136H	TBD	7/22/2026	7/30/2026	8/6/2026	8/13/2026	8/15/2026
Crow Canyon Unit 137H	TBD	7/23/2026	7/31/2026	8/7/2026	8/14/2026	8/16/2026

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@enduringresources.com
Date: 2/14/2025
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
Crow Canyon Unit 130H, 131H, 134H, 135H, 136H and 137H

SEPARATION EQUIPMENT

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

Separation equipment will be set as follows:

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

Heater treaters will be set as follows:

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

Vapor Recovery Equipment will be set as follows:

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

Production storage tanks will be set as follows:

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



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Crow Canyon Unit 130H, 131H, 134H, 135H, 136H and 137H

VENTING and FLARING

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

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

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

DJR will only flare gas during the following times:

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



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Crow Canyon Unit 130H, 131H, 134H, 135H, 136H and 137H

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
Crow Canyon Unit 130H, 131H, 134H, 135H, 136H and 137H

BEST MANAGEMENT PRACTICES

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

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

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

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

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

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

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

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

Rev 0



DRILLING PLAN

Crow Canyon Unit 137H

San Juan County, New Mexico

Surface Location

70-ft FWL & 2414-ft FSL
 Sec 16 T24N R08W
 Graded Elevation 6794' MSL
 RKB Elevation 6808' (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.3135700° N
 Longitude 107.6957890° W

Kick Off Point for Horizontal Build Curve

4840-ft MD
 4791-ft TVD

Local Coordinates (from SHL)

97-ft North
 635-ft West

Heel Location (Pay zone entry)

1046-ft FEL & 2312-ft FNL
 Sec 17 T24N R08W

Heel Geographical Coordinates (NAD-83)

Latitude 36.31495851° N
 Longitude 107.69956727° W

Bottom Hole Location (TD)

331-ft FWL & 1538-ft FSL
 Sec 8 T24N R08W

BHL Geographical Coordinates (NAD-83)

Latitude 36.3256785° N
 Longitude 107.7127437° W

Well objectives

This well is planned as a 5500-ft lateral in the Gallup B sand.

Bottom Hole temperature and pressure

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

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

Name	MD (ft)	TVD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)	Planned Mud Weight (ppg)
Ojo Alamo	1174	1169	Sd	W	8.3	8.4 – 8.8
Kirtland	1307	1300	Sh	-	8.3	8.4 – 8.8
Fruitland	1700	1689	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1920	1906	Sd	W	8.3	9.0 - 9.5
Lewis	1998	1983	Sh	-		9.0 - 9.5
Chacra	2754	2730	Sd	-	8.3	9.0 - 9.5
Menefee	3427	3395	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4317	4274	Sd	-	8.3	9.0 - 9.5
Mancos	4529	4484	Sh	-		9.0 - 9.5
Mancos Silt	4897	4847	Slt	O/G	6.6	9.0 - 9.5
Gallup A	5467	5280	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5576	5320	Sd	O/G	6.6	8.8 -9.0
Gallup C	NP	NP	Sd	O/G	6.6	8.8 -9.0
Target	5756	5347	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	5705	surf	5344	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	5426	11260	5261	5388	5426

Note: all casing will be new

Rev 0



Casing Design Load Cases

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

Note

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

Casing Design Factors

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

Cement Design

9-5/8" Surface Casing

	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	4340-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	422	219
Volume (bbls)	176	58
Volume (cu.ft.)	988	327
Excess %	55	55



Rev 0

4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	5426-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	490
Volume (bbls)	136
Volume (cu.ft)	765
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 – 5705	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5705 – 11260	8.8 – 9.2	34 – 38	6 – 8	6 – 8

Cores, tests and logs

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

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

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

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

Cuttings and drilling fluids management

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

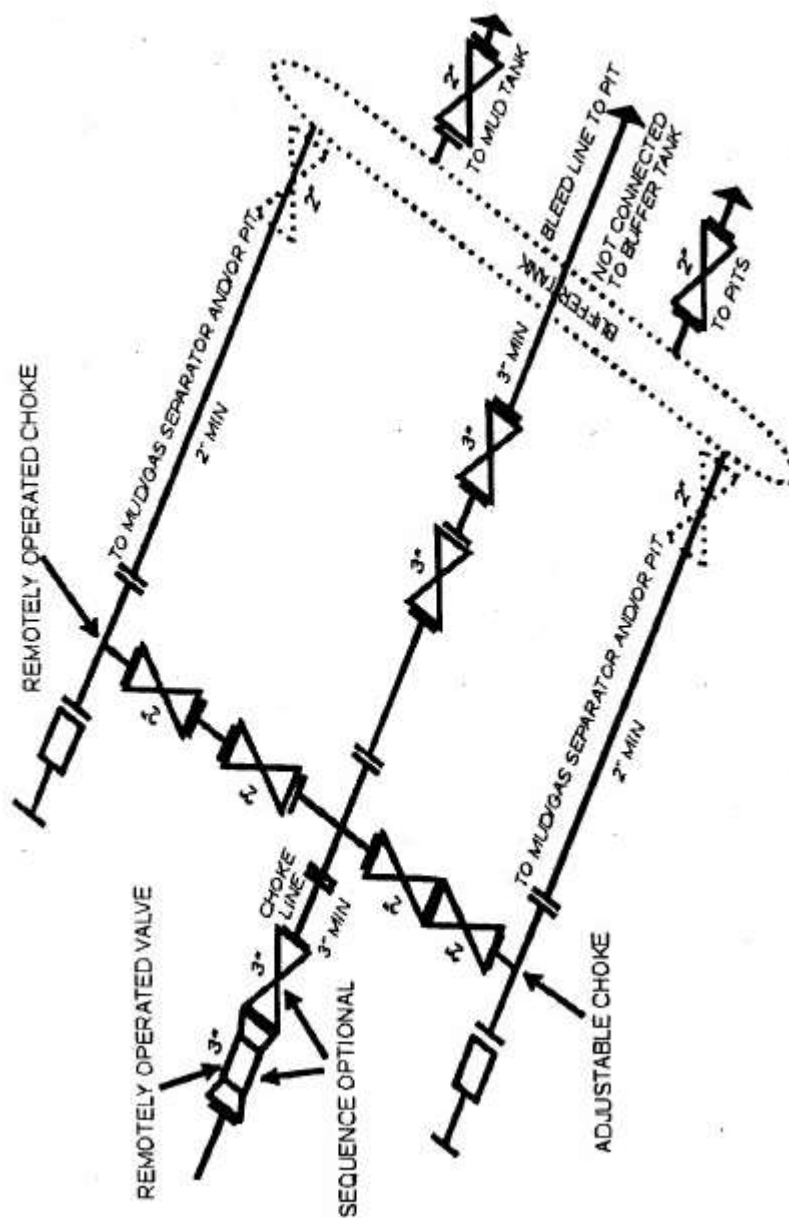
Completion

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



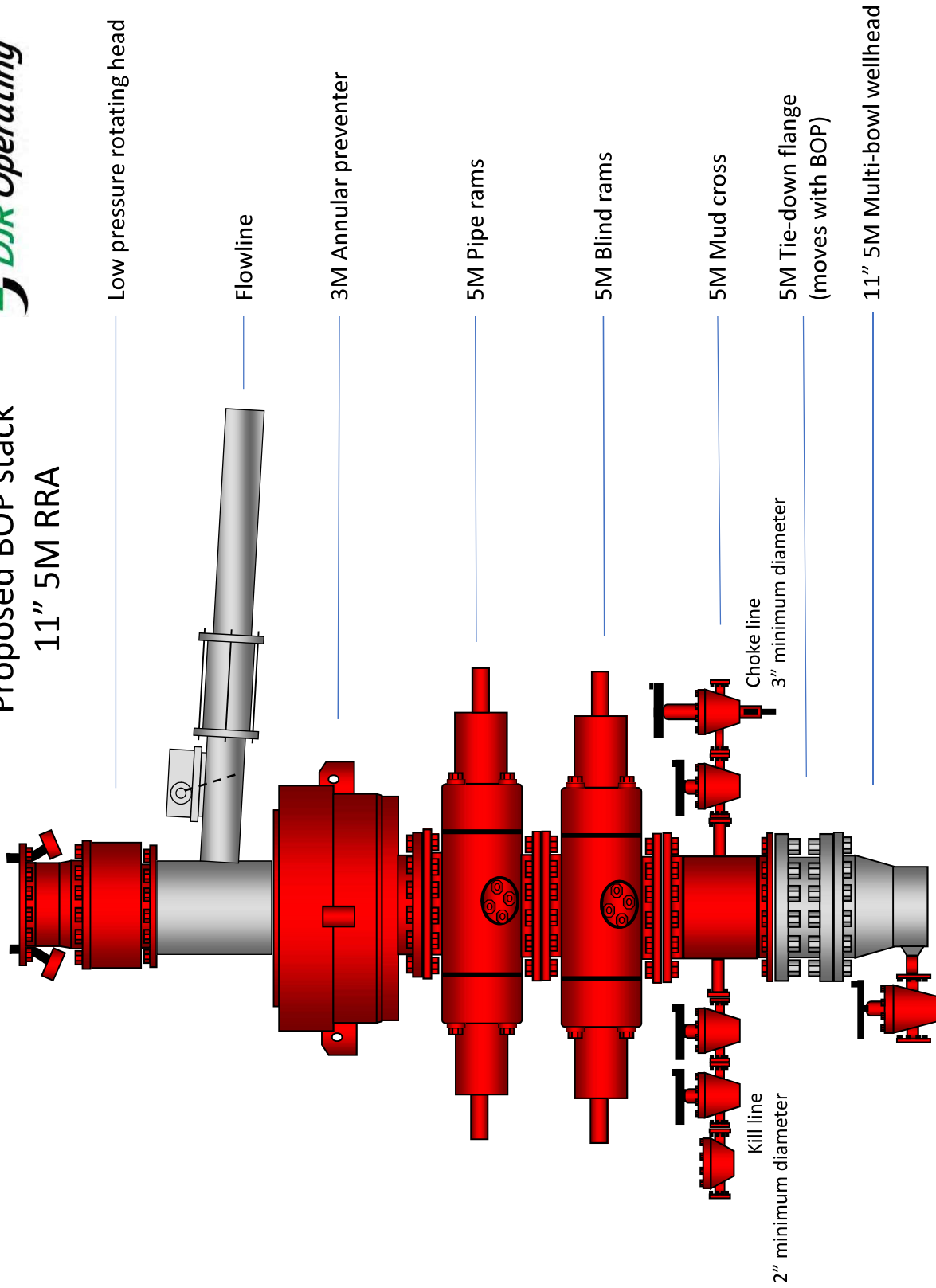
Choke Manifold

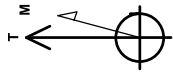
Actual system to conform with Onshore Order 2





Proposed BOP stack
11" 5M RRA





Azimuths to True North: 6.6%
Magnetic North: 8.8%

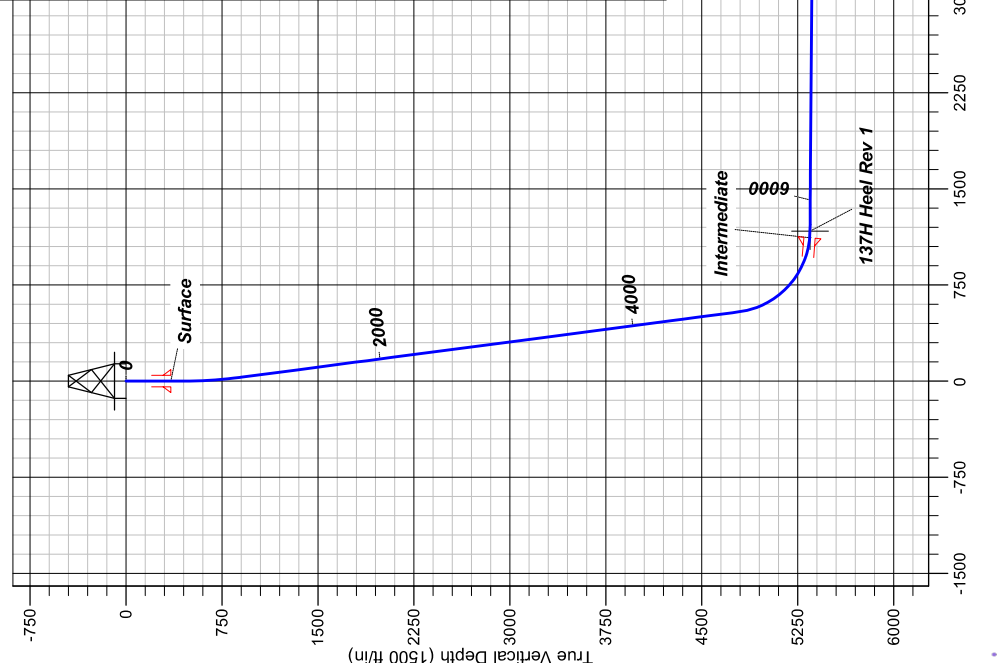
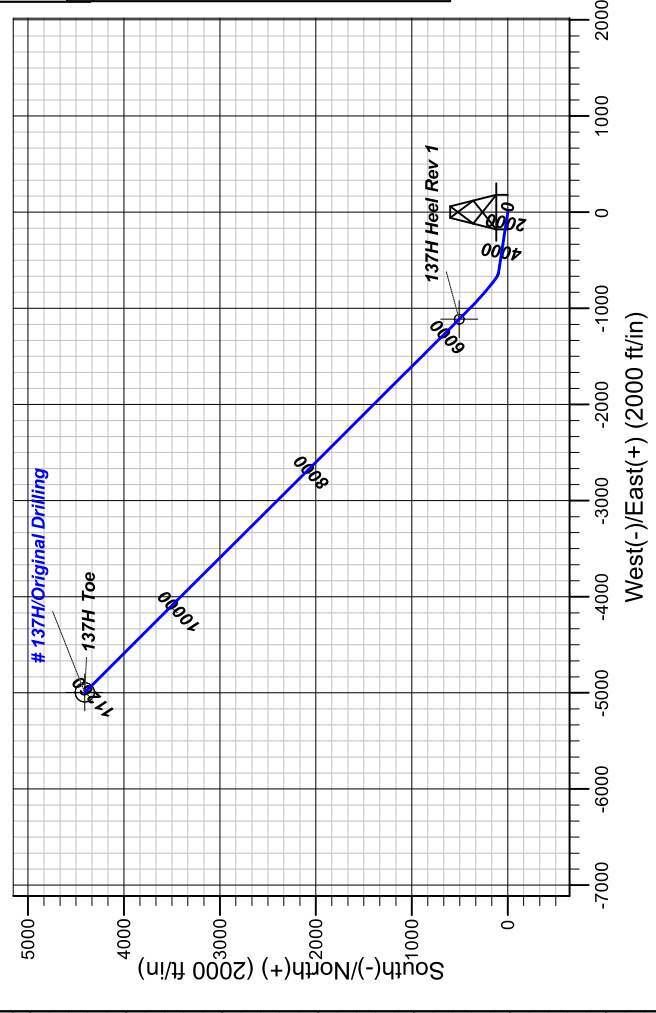
Magnetic Field
Strength: 49374.6
Dip Angle: 62.94
Date: 6/11/2012
Model: IGRF2010

CASING DETAILS

TVD	MD	Name
350	350	Surface
5344	5705	Intermediate

FORMATION DETAILS

Formation	MDPath	TVPPath
Ojo Alamo	1174	1169
Kirtland	1300	1300
Fruitland	1700	1689
Pictured Cliffs	1920	1906
Lewis	1998	1983
Chacra	2754	2730
Menefee	3427	3395
Point Lookout	4317	4274
Mancos	4529	4484
Mancos Silt	4897	4847
Gallup A	5467	5280
Gallup B	5576	5320





DJR Operating

Crow Canyon Unit

L16 2408 Pad

137H - Slot 3

Original Drilling

Plan: APD

Standard Planning Report

24 June, 2021





Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 137H - Slot 3
Company:	DJR Operating	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Project:	Crow Canyon Unit	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site:	L16 2408 Pad	North Reference:	True
Well:	# 137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Project	Crow 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	L16 2408 Pad		
Site Position:		Northing:	1,933,466.49 usft
From:	Lat/Long	Easting:	2,763,573.83 usft
Position Uncertainty:	0 ft	Slot Radius:	13.20 in
		Latitude:	36.31356497
		Longitude:	-107.69592500
		Grid Convergence:	0.08 °

Well	# 137H - Slot 3		
Well Position	+N/-S	2 ft	Northing:
	+E/-W	40 ft	Easting:
Position Uncertainty	0 ft	Wellhead Elevation:	
		Latitude:	36.31356997
		Longitude:	-107.69578900
		Ground Level:	6794 ft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/11/2021	8.78	62.94	49,374.59225462

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	311.43

Plan Survey Tool Program	Date	6/23/2021		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0	11,260	APD (Original Drilling)	MWD+IGRF
				OWSG MWD + IGRF or WMM

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	
893	8.86	278.69	891	5	-34	2.00	2.00	0.00	278.69	
4840	8.86	278.69	4791	97	-635	0.00	0.00	0.00	0.00	
5756	89.57	315.16	5346	505	-1113	9.00	8.81	3.98	36.84	137H Heel Rev 1
11,260	89.57	315.16	5388	4408	-4994	0.00	0.00	0.00	0.00	137H Toe



Lonestar Consulting, LLC

Planning Report



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Project:	Crow Canyon Unit	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site:	L16 2408 Pad	North Reference:	True
Well:	# 137H	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	278.69	500	0	0	0	2.00	2.00	0.00
600	3.00	278.69	600	1	-4	3	2.00	2.00	0.00
700	5.00	278.69	700	2	-11	9	2.00	2.00	0.00
800	7.00	278.69	799	3	-21	18	2.00	2.00	0.00
893	8.86	278.69	891	5	-34	29	2.00	2.00	0.00
900	8.86	278.69	898	5	-35	30	0.00	0.00	0.00
1000	8.86	278.69	997	8	-50	43	0.00	0.00	0.00
1100	8.86	278.69	1096	10	-65	56	0.00	0.00	0.00
1200	8.86	278.69	1195	12	-81	69	0.00	0.00	0.00
1300	8.86	278.69	1293	15	-96	81	0.00	0.00	0.00
1400	8.86	278.69	1392	17	-111	94	0.00	0.00	0.00
1500	8.86	278.69	1491	19	-126	107	0.00	0.00	0.00
1600	8.86	278.69	1590	22	-141	120	0.00	0.00	0.00
1700	8.86	278.69	1689	24	-157	133	0.00	0.00	0.00
1800	8.86	278.69	1787	26	-172	146	0.00	0.00	0.00
1900	8.86	278.69	1886	29	-187	159	0.00	0.00	0.00
2000	8.86	278.69	1985	31	-202	172	0.00	0.00	0.00
2100	8.86	278.69	2084	33	-218	185	0.00	0.00	0.00
2200	8.86	278.69	2183	36	-233	198	0.00	0.00	0.00
2300	8.86	278.69	2281	38	-248	211	0.00	0.00	0.00
2400	8.86	278.69	2380	40	-263	224	0.00	0.00	0.00
2500	8.86	278.69	2479	43	-278	237	0.00	0.00	0.00
2600	8.86	278.69	2578	45	-294	250	0.00	0.00	0.00
2700	8.86	278.69	2677	47	-309	263	0.00	0.00	0.00
2800	8.86	278.69	2775	50	-324	276	0.00	0.00	0.00
2900	8.86	278.69	2874	52	-339	289	0.00	0.00	0.00
3000	8.86	278.69	2973	54	-355	302	0.00	0.00	0.00
3100	8.86	278.69	3072	56	-370	315	0.00	0.00	0.00
3200	8.86	278.69	3171	59	-385	328	0.00	0.00	0.00
3300	8.86	278.69	3270	61	-400	341	0.00	0.00	0.00
3400	8.86	278.69	3368	63	-416	354	0.00	0.00	0.00
3500	8.86	278.69	3467	66	-431	367	0.00	0.00	0.00
3600	8.86	278.69	3566	68	-446	379	0.00	0.00	0.00
3700	8.86	278.69	3665	70	-461	392	0.00	0.00	0.00
3800	8.86	278.69	3764	73	-476	405	0.00	0.00	0.00
3900	8.86	278.69	3862	75	-492	418	0.00	0.00	0.00
4000	8.86	278.69	3961	77	-507	431	0.00	0.00	0.00
4100	8.86	278.69	4060	80	-522	444	0.00	0.00	0.00
4200	8.86	278.69	4159	82	-537	457	0.00	0.00	0.00
4300	8.86	278.69	4258	84	-553	470	0.00	0.00	0.00
4400	8.86	278.69	4356	87	-568	483	0.00	0.00	0.00
4500	8.86	278.69	4455	89	-583	496	0.00	0.00	0.00
4600	8.86	278.69	4554	91	-598	509	0.00	0.00	0.00
4700	8.86	278.69	4653	94	-613	522	0.00	0.00	0.00
4800	8.86	278.69	4752	96	-629	535	0.00	0.00	0.00
4840	8.86	278.69	4791	97	-635	540	0.00	0.00	0.00
4900	13.57	292.61	4850	100	-646	551	9.00	7.85	23.19
5000	22.13	302.01	4945	115	-673	580	9.00	8.55	9.41



Lonestar Consulting, LLC

Planning Report



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Project:	Crow Canyon Unit	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site:	L16 2408 Pad	North Reference:	True
Well:	# 137H	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	30.93	306.29	5034	140	-710	625	9.00	8.80	4.28
5200	39.81	308.81	5116	175	-755	682	9.00	8.88	2.52
5300	48.73	310.53	5187	220	-809	752	9.00	8.92	1.72
5400	57.67	311.83	5247	273	-869	832	9.00	8.94	1.30
5500	66.62	312.90	5294	332	-934	920	9.00	8.95	1.07
5600	75.58	313.83	5326	397	-1003	1015	9.00	8.96	0.93
5700	84.54	314.69	5344	466	-1073	1113	9.00	8.96	0.86
5756	89.57	315.16	5346	505	-1113	1169	9.00	8.96	0.83
5800	89.57	315.16	5347	537	-1144	1213	0.00	0.00	0.00
5900	89.57	315.16	5348	608	-1215	1313	0.00	0.00	0.00
6000	89.57	315.16	5348	678	-1285	1412	0.00	0.00	0.00
6100	89.57	315.16	5349	749	-1356	1512	0.00	0.00	0.00
6200	89.57	315.16	5350	820	-1426	1612	0.00	0.00	0.00
6300	89.57	315.16	5351	891	-1497	1712	0.00	0.00	0.00
6400	89.57	315.16	5351	962	-1567	1812	0.00	0.00	0.00
6500	89.57	315.16	5352	1033	-1638	1911	0.00	0.00	0.00
6600	89.57	315.16	5353	1104	-1708	2011	0.00	0.00	0.00
6700	89.57	315.16	5354	1175	-1779	2111	0.00	0.00	0.00
6800	89.57	315.16	5354	1246	-1849	2211	0.00	0.00	0.00
6900	89.57	315.16	5355	1317	-1920	2310	0.00	0.00	0.00
7000	89.57	315.16	5356	1387	-1990	2410	0.00	0.00	0.00
7100	89.57	315.16	5357	1458	-2061	2510	0.00	0.00	0.00
7200	89.57	315.16	5357	1529	-2131	2610	0.00	0.00	0.00
7300	89.57	315.16	5358	1600	-2202	2710	0.00	0.00	0.00
7400	89.57	315.16	5359	1671	-2272	2809	0.00	0.00	0.00
7500	89.57	315.16	5360	1742	-2343	2909	0.00	0.00	0.00
7600	89.57	315.16	5360	1813	-2413	3009	0.00	0.00	0.00
7700	89.57	315.16	5361	1884	-2484	3109	0.00	0.00	0.00
7800	89.57	315.16	5362	1955	-2554	3209	0.00	0.00	0.00
7900	89.57	315.16	5363	2026	-2625	3308	0.00	0.00	0.00
8000	89.57	315.16	5363	2096	-2695	3408	0.00	0.00	0.00
8100	89.57	315.16	5364	2167	-2766	3508	0.00	0.00	0.00
8200	89.57	315.16	5365	2238	-2836	3608	0.00	0.00	0.00
8300	89.57	315.16	5366	2309	-2907	3707	0.00	0.00	0.00
8400	89.57	315.16	5366	2380	-2977	3807	0.00	0.00	0.00
8500	89.57	315.16	5367	2451	-3048	3907	0.00	0.00	0.00
8600	89.57	315.16	5368	2522	-3118	4007	0.00	0.00	0.00
8700	89.57	315.16	5369	2593	-3189	4107	0.00	0.00	0.00
8800	89.57	315.16	5369	2664	-3259	4206	0.00	0.00	0.00
8900	89.57	315.16	5370	2735	-3330	4306	0.00	0.00	0.00
9000	89.57	315.16	5371	2806	-3400	4406	0.00	0.00	0.00
9100	89.57	315.16	5372	2876	-3471	4506	0.00	0.00	0.00
9200	89.57	315.16	5372	2947	-3541	4606	0.00	0.00	0.00
9300	89.57	315.16	5373	3018	-3612	4705	0.00	0.00	0.00
9400	89.57	315.16	5374	3089	-3682	4805	0.00	0.00	0.00
9500	89.57	315.16	5375	3160	-3753	4905	0.00	0.00	0.00
9600	89.57	315.16	5375	3231	-3824	5005	0.00	0.00	0.00
9700	89.57	315.16	5376	3302	-3894	5104	0.00	0.00	0.00
9800	89.57	315.16	5377	3373	-3965	5204	0.00	0.00	0.00
9900	89.57	315.16	5378	3444	-4035	5304	0.00	0.00	0.00
10,000	89.57	315.16	5378	3515	-4106	5404	0.00	0.00	0.00
10,100	89.57	315.16	5379	3585	-4176	5504	0.00	0.00	0.00
10,200	89.57	315.16	5380	3656	-4247	5603	0.00	0.00	0.00
10,300	89.57	315.16	5381	3727	-4317	5703	0.00	0.00	0.00



Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 137H - Slot 3
Company:	DJR Operating	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Project:	Crow Canyon Unit	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site:	L16 2408 Pad	North Reference:	True
Well:	# 137H	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	89.57	315.16	5382	3798	-4388	5803	0.00	0.00	0.00	
10,500	89.57	315.16	5382	3869	-4458	5903	0.00	0.00	0.00	
10,600	89.57	315.16	5383	3940	-4529	6003	0.00	0.00	0.00	
10,700	89.57	315.16	5384	4011	-4599	6102	0.00	0.00	0.00	
10,800	89.57	315.16	5385	4082	-4670	6202	0.00	0.00	0.00	
10,900	89.57	315.16	5385	4153	-4740	6302	0.00	0.00	0.00	
11,000	89.57	315.16	5386	4224	-4811	6402	0.00	0.00	0.00	
11,100	89.57	315.16	5387	4295	-4881	6501	0.00	0.00	0.00	
11,200	89.57	315.16	5388	4365	-4952	6601	0.00	0.00	0.00	
11,260	89.57	315.16	5388	4408	-4994	6662	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude		
- hit/miss target										
- Shape								Longitude		
137H Heel Rev 1	0.00	0.00	5346	505	-1113	1,933,972.27	2,762,500.07	36.31495851		
- plan hits target center										
- Circle (radius 50)										
137H Toe	0.00	0.00	5388	4408	-4994	1,937,869.54	2,758,613.33	36.32567850		
- plan hits target center										
- Circle (radius 100)										

Casing Points						Casing Diameter (in)	Hole Diameter (in)
Measured Depth (ft)	Vertical Depth (ft)	Name					
350	350	Surface				9.63	12.25
5705	5344	Intermediate				7.00	8.75

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1174	1169	Ojo Alamo		0.00	0.00	
1307	1300	Kirtland		0.00	0.00	
1700	1689	Fruitland		0.00	0.00	
1920	1906	Pictured Cliffs		0.00	0.00	
1998	1983	Lewis		0.00	0.00	
2754	2730	Chacra		0.00	0.00	
3427	3395	Menefee		0.00	0.00	
4317	4274	Point Lookout		0.00	0.00	
4529	4484	Mancos		0.00	0.00	
4897	4847	Mancos Silt		0.00	0.00	
5467	5280	Gallup A		0.00	0.00	
5576	5320	Gallup B		0.00	0.00	



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 137H - Slot 3
Company:	DJR Operating	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Project:	Crow Canyon Unit	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site:	L16 2408 Pad	North Reference:	True
Well:	# 137H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		



DJR Operating

Crow Canyon Unit

L16 2408 Pad

137H

Original Drilling

APD

Anticollision Report

24 June, 2021





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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	6/24/2021	
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0	11,260	APD (Original Drilling)	MWD+IGRF	OWSG MWD + IGRF or WMM	

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						
L16 2408 Pad						
# 130H - Original Drilling - APD	557	556	20	16	5.637	CC
# 130H - Original Drilling - APD	700	698	20	16	4.509	ES
# 130H - Original Drilling - APD	10,700	10,926	681	399	2.413	SF
# 131H - Original Drilling - APD	450	450	40	37	14.137	CC
# 131H - Original Drilling - APD	700	703	40	36	8.865	ES
# 131H - Original Drilling - APD	1200	1206	54	45	6.194	SF
# 134H - Original Drilling - APD	450	450	20	17	7.121	CC
# 134H - Original Drilling - APD	500	500	20	17	6.390	ES
# 134H - Original Drilling - APD	11,260	11,095	696	391	2.279	SF
# 135H - Original Drilling - APD	450	450	60	57	21.251	CC
# 135H - Original Drilling - APD	500	501	60	57	18.931	ES
# 135H - Original Drilling - APD	1100	1102	100	92	12.861	SF
# 136H - Original Drilling - APD	1868	1862	25	11	1.795	CC
# 136H - Original Drilling - APD	2100	2094	26	10	1.607	ES
# 136H - Original Drilling - APD	2300	2294	29	10	1.570	SF
Mesa #4 SWD - OH - OH	349	360	4031	4019	336.287	CC
Mesa #4 SWD - OH - OH	600	611	4035	4015	196.976	ES
Mesa #4 SWD - OH - OH	4700	4650	4650	4492	29.389	SF

Offset Design: L16 2408 Pad - # 130H - Original Drilling - APD													Offset Site Error: 0 ft	
Survey Program: 0-MWD+IGRF												Offset Well Error: 0 ft		
Reference	Measured Depth (ft)	Vertical Depth (ft)	Offset	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance				Warning	
				Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
	0	0	0	0	0	-93.12	-1	-20	20					
	100	100	100	0	0	-93.12	-1	-20	20	20	0.31	65.081		
	200	200	200	1	1	-93.12	-1	-20	20	19	1.03	19.570		
	300	300	300	1	1	-93.12	-1	-20	20	18	1.74	11.516		
	400	400	400	1	1	-93.12	-1	-20	20	18	2.46	8.159		
	450	450	450	1	1	-93.12	-1	-20	20	17	2.82	7.121		
	500	500	500	2	2	-12.39	-1	-20	20	17	3.17	6.336		
	557	557	556	2	2	-14.47	-2	-22	20	16	3.56	5.637 CC		
	600	600	599	2	2	-17.05	-2	-24	20	16	3.85	5.211		
	700	700	698	2	2	-26.21	-5	-30	20	16	4.54	4.509 ES		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 130H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												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
800	799	797	797	3	3	-38.74	-8	-40	22	17	5.24	4.197	
893	891	890	888	3	3	-51.27	-12	-52	25	19	5.93	4.232	
900	898	896	895	3	3	-52.16	-12	-53	25	19	5.98	4.248	
1000	997	995	992	3	3	-60.90	-18	-69	32	25	6.77	4.726	
1100	1096	1094	1088	4	4	-63.58	-24	-88	42	34	7.57	5.517	
1200	1195	1192	1184	4	4	-63.19	-32	-110	54	46	8.39	6.455	
1300	1293	1291	1280	5	5	-62.62	-39	-133	67	58	9.22	7.260	
1400	1392	1391	1376	5	5	-62.24	-47	-156	80	70	10.07	7.923	
1500	1491	1490	1473	6	6	-61.96	-55	-179	93	82	10.93	8.477	
1600	1590	1589	1569	6	7	-61.75	-62	-202	106	94	11.80	8.946	
1700	1689	1688	1665	7	7	-61.59	-70	-225	118	106	12.66	9.347	
1800	1787	1787	1761	7	8	-61.46	-78	-247	131	118	13.54	9.694	
1900	1886	1886	1857	7	8	-61.35	-86	-270	144	130	14.41	9.997	
2000	1985	1986	1954	8	9	-61.26	-93	-293	157	142	15.29	10.264	
2100	2084	2085	2050	8	9	-61.18	-101	-316	170	154	16.17	10.500	
2200	2183	2184	2146	9	10	-61.12	-109	-339	183	166	17.05	10.710	
2300	2281	2283	2242	9	11	-61.06	-116	-361	196	178	17.94	10.899	
2400	2380	2382	2338	10	11	-61.01	-124	-384	208	190	18.82	11.070	
2500	2479	2481	2435	10	12	-60.96	-132	-407	221	202	19.71	11.224	
2600	2578	2581	2531	11	12	-60.92	-140	-430	234	213	20.60	11.365	
2700	2677	2680	2627	11	13	-60.89	-147	-453	247	225	21.49	11.493	
2800	2775	2779	2723	12	13	-60.86	-155	-476	260	237	22.38	11.611	
2900	2874	2878	2819	12	14	-60.83	-163	-498	273	249	23.27	11.719	
3000	2973	2977	2916	13	15	-60.80	-170	-521	286	261	24.16	11.820	
3100	3072	3076	3012	13	15	-60.78	-178	-544	298	273	25.05	11.912	
3200	3171	3176	3108	13	16	-60.75	-186	-567	311	285	25.94	11.999	
3300	3270	3275	3204	14	16	-60.73	-194	-590	324	297	26.83	12.079	
3400	3368	3374	3300	14	17	-60.72	-201	-613	337	309	27.72	12.154	
3500	3467	3473	3397	15	18	-60.70	-209	-635	350	321	28.62	12.224	
3600	3566	3572	3493	15	18	-60.68	-217	-658	363	333	29.51	12.290	
3700	3665	3671	3589	16	19	-60.67	-224	-681	376	345	30.40	12.351	
3800	3764	3771	3685	16	19	-60.65	-232	-704	388	357	31.30	12.409	
3900	3862	3870	3781	17	20	-60.64	-240	-727	401	369	32.19	12.464	
4000	3961	3969	3878	17	21	-60.63	-248	-750	414	381	33.09	12.516	
4100	4060	4068	3974	18	21	-60.62	-255	-772	427	393	33.98	12.565	
4200	4159	4167	4070	18	22	-60.61	-263	-795	440	405	34.88	12.611	
4300	4258	4266	4166	19	22	-60.59	-271	-818	453	417	35.77	12.655	
4400	4356	4366	4262	19	23	-60.59	-278	-841	466	429	36.67	12.697	
4500	4455	4465	4359	19	23	-60.58	-286	-864	478	441	37.56	12.736	
4600	4554	4564	4455	20	24	-60.57	-294	-887	491	453	38.46	12.774	
4700	4653	4663	4551	20	25	-60.56	-302	-909	504	465	39.35	12.810	
4800	4752	4762	4647	21	25	-60.55	-309	-932	517	477	40.25	12.845	
4840	4791	4802	4686	21	25	-60.55	-312	-941	522	481	40.61	12.858	
4850	4801	4812	4695	21	26	-63.64	-313	-944	523	483	40.70	12.861	
4900	4850	4861	4743	21	26	-73.79	-317	-955	530	489	41.22	12.861	
4950	4898	4910	4791	22	26	-79.41	-321	-966	537	496	41.86	12.840	
5000	4945	4959	4838	22	26	-83.16	-324	-977	545	503	42.60	12.802	
5050	4991	5006	4883	22	27	-86.03	-328	-988	554	511	43.45	12.752	
5100	5034	5052	4928	23	27	-88.42	-332	-999	564	519	44.39	12.698	
5150	5076	5096	4971	23	27	-90.51	-335	-1009	575	529	45.42	12.649	
5200	5116	5152	5025	24	28	-92.89	-338	-1023	586	540	46.64	12.574	
5250	5153	5214	5084	24	28	-95.18	-338	-1042	599	551	47.94	12.489	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 130H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5300	5187	5281	5145	25	28	-97.30	-332	-1067	611	562	49.24	12.410	
5350	5219	5352	5208	25	29	-99.27	-321	-1099	623	573	50.50	12.341	
5400	5247	5429	5272	26	30	-101.08	-302	-1137	635	583	51.69	12.279	
5450	5272	5511	5335	27	30	-102.70	-275	-1184	645	593	52.77	12.230	
5500	5294	5600	5394	27	31	-104.11	-239	-1239	655	601	53.73	12.187	
5550	5312	5693	5446	28	32	-105.24	-193	-1301	662	608	54.58	12.138	
5600	5326	5792	5489	29	33	-106.04	-137	-1370	668	613	55.36	12.070	
5650	5337	5893	5519	30	35	-106.44	-73	-1443	672	615	56.15	11.962	
5700	5344	5996	5533	30	36	-106.43	-3	-1516	673	616	57.00	11.801	
5750	5346	6065	5535	31	37	-106.28	45	-1565	672	614	58.48	11.492	
5755	5346	6069	5535	31	37	-106.28	48	-1568	672	613	58.65	11.457	
5756	5346	6071	5535	31	37	-106.28	49	-1569	672	613	58.69	11.449	
5800	5347	6115	5535	32	38	-106.28	80	-1600	672	612	60.24	11.156	
5900	5348	6215	5536	34	39	-106.28	151	-1671	672	608	63.89	10.520	
6000	5348	6315	5537	36	41	-106.28	222	-1741	672	604	67.68	9.931	
6100	5349	6415	5538	38	43	-106.28	293	-1812	672	601	71.60	9.389	
6200	5350	6515	5538	40	45	-106.28	364	-1882	672	597	75.62	8.891	
6300	5351	6615	5539	42	46	-106.29	435	-1953	672	593	79.73	8.434	
6400	5351	6715	5540	44	48	-106.29	506	-2023	672	589	83.91	8.014	
6500	5352	6815	5541	46	50	-106.29	576	-2094	673	584	88.16	7.629	
6600	5353	6915	5541	49	52	-106.29	647	-2165	673	580	92.46	7.274	
6700	5354	7015	5542	51	55	-106.29	718	-2235	673	576	96.81	6.948	
6800	5354	7115	5543	53	57	-106.29	789	-2306	673	572	101.20	6.647	
6900	5355	7215	5544	55	59	-106.29	860	-2376	673	567	105.63	6.369	
7000	5356	7315	5545	58	61	-106.29	931	-2447	673	563	110.09	6.112	
7100	5357	7415	5545	60	63	-106.29	1002	-2517	673	558	114.58	5.873	
7200	5357	7515	5546	62	65	-106.30	1072	-2588	673	554	119.10	5.651	
7300	5358	7615	5547	65	68	-106.30	1143	-2658	673	549	123.64	5.444	
7400	5359	7715	5548	67	70	-106.30	1214	-2729	673	545	128.20	5.251	
7500	5360	7815	5549	69	72	-106.30	1285	-2800	673	540	132.77	5.070	
7600	5360	7915	5549	72	74	-106.30	1356	-2870	673	536	137.37	4.901	
7700	5361	8015	5550	74	77	-106.30	1427	-2941	673	531	141.97	4.743	
7800	5362	8115	5551	77	79	-106.30	1498	-3011	673	527	146.59	4.594	
7900	5363	8215	5552	79	81	-106.30	1568	-3082	673	522	151.23	4.453	
8000	5363	8315	5552	81	84	-106.30	1639	-3152	674	518	155.87	4.321	
8100	5364	8415	5553	84	86	-106.30	1710	-3223	674	513	160.52	4.196	
8200	5365	8515	5554	86	88	-106.31	1781	-3293	674	508	165.19	4.078	
8300	5366	8615	5555	89	91	-106.31	1852	-3364	674	504	169.86	3.966	
8400	5366	8715	5556	91	93	-106.31	1923	-3435	674	499	174.54	3.860	
8500	5367	8815	5556	93	96	-106.31	1994	-3505	674	495	179.22	3.760	
8600	5368	8915	5557	96	98	-106.31	2064	-3576	674	490	183.92	3.664	
8700	5369	9015	5558	98	100	-106.31	2135	-3646	674	485	188.61	3.573	
8800	5369	9115	5559	101	103	-106.31	2206	-3717	674	481	193.32	3.487	
8900	5370	9215	5560	103	105	-106.31	2277	-3787	674	476	198.03	3.404	
9000	5371	9315	5560	106	108	-106.31	2348	-3858	674	471	202.74	3.325	
9100	5372	9415	5561	108	110	-106.32	2419	-3928	674	467	207.46	3.250	
9200	5372	9515	5562	110	112	-106.32	2490	-3999	674	462	212.19	3.178	
9300	5373	9615	5563	113	115	-106.32	2561	-4070	674	457	216.91	3.109	
9400	5374	9715	5563	115	117	-106.32	2631	-4140	674	453	221.64	3.043	
9500	5375	9815	5564	118	120	-106.32	2702	-4211	675	448	226.38	2.980	
9600	5375	9915	5565	120	122	-106.32	2773	-4281	675	443	231.12	2.919	
9700	5376	10,015	5566	123	125	-106.32	2844	-4352	675	439	235.86	2.860	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 130H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												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	
9800	5377	10,115	5567	125	127	-106.32	2915	-4422	675	434	240.60	2.804	
9900	5378	10,215	5567	128	129	-106.32	2986	-4493	675	429	245.35	2.750	
10,000	5378	10,315	5568	130	132	-106.33	3057	-4563	675	425	250.10	2.698	
10,100	5379	10,415	5569	133	134	-106.33	3127	-4634	675	420	254.85	2.648	
10,200	5380	10,515	5570	135	137	-106.33	3198	-4705	675	415	259.60	2.600	
10,300	5381	10,615	5571	137	139	-106.33	3269	-4775	675	411	264.36	2.554	
10,400	5382	10,715	5571	140	142	-106.33	3340	-4846	675	406	269.11	2.509	
10,500	5382	10,815	5572	142	144	-106.33	3411	-4916	675	401	273.87	2.465	
10,600	5383	10,915	5573	145	146	-106.33	3482	-4987	675	397	278.63	2.424	
10,700	5384	10,926	5573	147	147	-106.33	3490	-4995	681	399	282.25	2.413 SF	
10,800	5385	10,926	5573	150	147	-106.33	3490	-4995	701	421	280.29	2.501	
10,900	5385	10,926	5573	152	147	-106.33	3490	-4995	734	461	273.59	2.684	
11,000	5386	10,926	5573	155	147	-106.33	3490	-4995	779	516	263.65	2.955	
11,100	5387	10,926	5573	157	147	-106.33	3490	-4995	834	582	251.95	3.308	
11,200	5388	10,926	5573	160	147	-106.33	3490	-4995	896	656	239.65	3.738	
11,260	5388	10,926	5573	161	147	-106.33	3490	-4995	937	704	232.26	4.033	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 131H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													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	
0	0	0	0	0	0	86.86	2	40	40					
100	100	100	100	0	0	86.86	2	40	40	40	0.31	129.207		
200	200	200	200	1	1	86.86	2	40	40	39	1.03	38.853		
300	300	300	300	1	1	86.86	2	40	40	38	1.74	22.864		
400	400	400	400	1	1	86.86	2	40	40	37	2.46	16.198		
450	450	450	450	1	1	86.86	2	40	40	37	2.82	14.137 CC		
500	500	501	501	2	2	168.50	2	39	40	37	3.17	12.573		
600	600	602	602	2	2	171.14	1	36	40	36	3.86	10.351		
700	700	703	703	2	2	176.34	-2	29	40	36	4.56	8.865 ES		
800	799	804	803	3	3	-176.20	-6	19	42	36	5.27	7.911		
893	891	898	896	3	3	-167.81	-11	7	44	38	5.96	7.410		
900	898	905	903	3	3	-167.15	-11	6	44	38	6.01	7.383		
1000	997	1006	1002	3	4	-156.69	-17	-10	47	40	6.82	6.936		
1100	1096	1106	1100	4	4	-144.18	-25	-30	50	42	7.72	6.472		
1200	1195	1206	1197	4	4	-130.17	-34	-52	54	45	8.72	6.194 SF		
1300	1293	1305	1293	5	5	-118.10	-43	-75	61	51	9.74	6.247		
1400	1392	1404	1389	5	6	-108.75	-52	-98	70	59	10.72	6.508		
1500	1491	1503	1485	6	6	-101.65	-60	-121	80	68	11.67	6.866		
1600	1590	1602	1581	6	7	-96.23	-69	-144	91	79	12.60	7.257		
1700	1689	1701	1677	7	7	-92.02	-78	-167	103	90	13.51	7.648		
1800	1787	1800	1773	7	8	-88.69	-87	-190	116	101	14.42	8.025		
1900	1886	1899	1869	7	8	-86.02	-96	-212	128	113	15.32	8.380		
2000	1985	1998	1965	8	9	-83.82	-105	-235	141	125	16.22	8.711		
2100	2084	2097	2060	8	10	-81.99	-114	-258	154	137	17.12	9.018		
2200	2183	2196	2156	9	10	-80.45	-123	-281	168	150	18.02	9.302		
2300	2281	2295	2252	9	11	-79.14	-132	-304	181	162	18.92	9.564		
2400	2380	2394	2348	10	11	-78.00	-141	-327	194	175	19.82	9.807		
2500	2479	2493	2444	10	12	-77.02	-150	-350	208	187	20.71	10.031		
2600	2578	2592	2540	11	12	-76.15	-158	-373	221	200	21.61	10.240		
2700	2677	2691	2636	11	13	-75.38	-167	-395	235	212	22.51	10.433		
2800	2775	2790	2732	12	14	-74.70	-176	-418	248	225	23.41	10.613		
2900	2874	2889	2828	12	14	-74.09	-185	-441	262	238	24.31	10.781		
3000	2973	2988	2924	13	15	-73.53	-194	-464	276	251	25.21	10.938		
3100	3072	3087	3020	13	15	-73.03	-203	-487	289	263	26.11	11.085		
3200	3171	3186	3116	13	16	-72.58	-212	-510	303	276	27.01	11.222		
3300	3270	3285	3212	14	17	-72.16	-221	-533	317	289	27.91	11.351		
3400	3368	3384	3308	14	17	-71.78	-230	-556	331	302	28.81	11.473		
3500	3467	3483	3404	15	18	-71.43	-239	-578	344	315	29.71	11.587		
3600	3566	3582	3500	15	18	-71.11	-248	-601	358	327	30.61	11.695		
3700	3665	3681	3596	16	19	-70.81	-256	-624	372	340	31.51	11.798		
3800	3764	3780	3691	16	20	-70.53	-265	-647	386	353	32.41	11.894		
3900	3862	3880	3787	17	20	-70.27	-274	-670	399	366	33.32	11.986		
4000	3961	3979	3883	17	21	-70.03	-283	-693	413	379	34.22	12.073		
4100	4060	4078	3979	18	21	-69.80	-292	-716	427	392	35.12	12.155		
4200	4159	4177	4075	18	22	-69.59	-301	-739	441	405	36.02	12.234		
4300	4258	4276	4171	19	23	-69.39	-310	-761	455	418	36.93	12.309		
4400	4356	4375	4267	19	23	-69.20	-319	-784	468	430	37.83	12.380		
4500	4455	4474	4363	19	24	-69.02	-328	-807	482	443	38.73	12.448		
4600	4554	4573	4459	20	24	-68.86	-337	-830	496	456	39.63	12.513		
4700	4653	4672	4555	20	25	-68.70	-346	-853	510	469	40.54	12.575		
4800	4752	4771	4651	21	26	-68.55	-354	-876	524	482	41.44	12.635		
4840	4791	4810	4689	21	26	-68.49	-358	-885	529	487	41.80	12.658		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 131H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		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	
4850	4801	4820	4699	21	26	-71.57	-359	-887	531	489	41.89	12.664	
4900	4850	4870	4747	21	26	-81.57	-363	-899	538	496	42.42	12.686	
4950	4898	4919	4794	22	26	-87.00	-368	-910	547	504	43.05	12.700	
5000	4945	4967	4841	22	27	-90.50	-372	-921	557	513	43.79	12.710	
5050	4991	5000	4873	22	27	-92.71	-376	-928	568	523	44.46	12.772	
5100	5034	5037	4909	23	27	-94.59	-381	-935	582	536	45.27	12.845	
5150	5076	5067	4938	23	27	-95.84	-387	-939	598	552	46.07	12.974	
5200	5116	5100	4970	24	27	-97.00	-394	-942	617	570	46.98	13.127	
5250	5153	5116	4985	24	27	-96.69	-398	-943	639	591	47.64	13.405	
5300	5187	5135	5004	25	28	-96.17	-403	-945	663	615	48.36	13.719	
5350	5219	5150	5018	25	28	-94.97	-407	-945	691	642	49.03	14.095	
5400	5247	5162	5029	26	28	-92.99	-411	-945	721	672	49.62	14.536	
5450	5272	5170	5038	27	28	-90.26	-413	-945	754	704	50.16	15.029	
5500	5294	5177	5044	27	28	-86.79	-415	-945	788	738	50.64	15.567	
5550	5312	5180	5047	28	28	-82.60	-416	-945	825	773	51.08	16.142	
5600	5326	5182	5048	29	28	-77.78	-417	-945	862	811	51.48	16.745	
5650	5337	5181	5048	30	28	-72.48	-417	-945	900	849	51.84	17.369	
5700	5344	5179	5046	30	28	-66.89	-416	-945	939	887	52.18	18.004	
5750	5346	5175	5042	31	28	-61.22	-415	-945	979	926	52.49	18.645	
5756	5346	5174	5041	31	28	-60.52	-414	-945	984	931	52.53	18.724	
5800	5347	5170	5037	32	28	-60.16	-413	-945	1018	966	52.78	19.295	
5900	5348	5150	5018	34	28	-58.41	-407	-945	1100	1047	53.03	20.744	
6000	5348	5150	5018	36	28	-58.41	-407	-945	1184	1131	53.54	22.120	
6100	5349	5150	5018	38	28	-58.41	-407	-945	1271	1217	53.94	23.561	
6200	5350	5150	5018	40	28	-58.41	-407	-945	1359	1305	54.25	25.054	
6300	5351	5150	5018	42	28	-58.41	-407	-945	1449	1395	54.50	26.590	
6400	5351	5131	5000	44	28	-56.79	-402	-944	1540	1485	54.40	28.303	
6500	5352	5127	4996	46	28	-56.41	-401	-944	1632	1577	54.51	29.937	
6600	5353	5123	4992	49	28	-56.07	-400	-944	1725	1670	54.59	31.593	
6700	5354	5119	4989	51	27	-55.76	-399	-944	1818	1764	54.65	33.267	
6800	5354	5100	4970	53	27	-54.16	-394	-942	1913	1858	54.48	35.106	
6900	5355	5100	4970	55	27	-54.16	-394	-942	2007	1953	54.57	36.781	
7000	5356	5100	4970	58	27	-54.16	-394	-942	2102	2048	54.65	38.469	
7100	5357	5100	4970	60	27	-54.16	-394	-942	2198	2143	54.72	40.168	
7200	5357	5100	4970	62	27	-54.16	-394	-942	2294	2239	54.78	41.876	
7300	5358	5100	4970	65	27	-54.16	-394	-942	2390	2335	54.83	43.591	
7400	5359	5100	4970	67	27	-54.16	-394	-942	2487	2432	54.88	45.314	
7500	5360	5100	4970	69	27	-54.16	-394	-942	2584	2529	54.92	47.042	
7600	5360	5100	4970	72	27	-54.16	-394	-942	2681	2626	54.96	48.775	
7700	5361	5100	4970	74	27	-54.16	-394	-942	2778	2723	55.00	50.511	
7800	5362	5100	4970	77	27	-54.16	-394	-942	2875	2820	55.03	52.251	
7900	5363	5100	4970	79	27	-54.16	-394	-942	2973	2918	55.06	53.994	
8000	5363	5100	4970	81	27	-54.16	-394	-942	3071	3016	55.09	55.739	
8100	5364	5100	4970	84	27	-54.16	-394	-942	3169	3114	55.12	57.486	
8200	5365	5100	4970	86	27	-54.16	-394	-942	3267	3212	55.15	59.234	
8300	5366	5100	4970	89	27	-54.16	-394	-942	3365	3310	55.18	60.982	
8400	5366	5100	4970	91	27	-54.16	-394	-942	3463	3408	55.21	62.732	
8500	5367	5100	4970	93	27	-54.16	-394	-942	3562	3506	55.23	64.482	
8600	5368	5100	4970	96	27	-54.16	-394	-942	3660	3605	55.26	66.231	
8700	5369	5100	4970	98	27	-54.16	-394	-942	3759	3703	55.29	67.981	
8800	5369	5100	4970	101	27	-54.16	-394	-942	3857	3802	55.32	69.730	
8900	5370	5100	4970	103	27	-54.16	-394	-942	3956	3900	55.34	71.478	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 131H - Original Drilling - APD													Offset Site Error:	0 ft	
Survey Program:		0-MWD+IGRF		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0 ft
Reference	Vertical	Measured	Vertical	Reference	Offset	Highside			Distance				Warning		
Measured Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
9000	5371	5078	4949	106	27	-52.35	-389	-940	4054	3999	55.12	73.554			
9100	5372	5077	4948	108	27	-52.27	-389	-940	4153	4098	55.14	75.320			
9200	5372	5076	4947	110	27	-52.20	-389	-940	4252	4197	55.16	77.084			
9300	5373	5075	4946	113	27	-52.14	-388	-940	4351	4295	55.18	78.846			
9400	5374	5075	4946	115	27	-52.08	-388	-940	4450	4394	55.20	80.607			
9500	5375	5074	4945	118	27	-52.01	-388	-940	4548	4493	55.22	82.366			
9600	5375	5073	4944	120	27	-51.96	-388	-940	4647	4592	55.25	84.124			
9700	5376	5072	4943	123	27	-51.90	-388	-939	4747	4691	55.27	85.879			
9800	5377	5050	4922	125	27	-50.12	-383	-937	4846	4791	55.05	88.026			
9900	5378	5050	4922	128	27	-50.12	-383	-937	4945	4890	55.09	89.770			
10,000	5378	5050	4922	130	27	-50.12	-383	-937	5044	4989	55.12	91.512			
10,100	5379	5050	4922	133	27	-50.12	-383	-937	5143	5088	55.16	93.251			
10,200	5380	5050	4922	135	27	-50.12	-383	-937	5243	5187	55.19	94.988			
10,300	5381	5050	4922	137	27	-50.12	-383	-937	5342	5287	55.23	96.722			
10,400	5382	5050	4922	140	27	-50.12	-383	-937	5441	5386	55.27	98.454			
10,500	5382	5050	4922	142	27	-50.12	-383	-937	5540	5485	55.30	100.182			
10,600	5383	5050	4922	145	27	-50.12	-383	-937	5640	5584	55.34	101.908			
10,700	5384	5050	4922	147	27	-50.12	-383	-937	5739	5684	55.38	103.631			
10,800	5385	5050	4922	150	27	-50.12	-383	-937	5838	5783	55.42	105.350			
10,900	5385	5050	4922	152	27	-50.12	-383	-937	5938	5882	55.46	107.066			
11,000	5386	5050	4922	155	27	-50.12	-383	-937	6037	5982	55.50	108.779			
11,100	5387	5050	4922	157	27	-50.12	-383	-937	6137	6081	55.54	110.489			
11,200	5388	5050	4922	160	27	-50.12	-383	-937	6236	6181	55.58	112.195			
11,260	5388	5050	4922	161	27	-50.12	-383	-937	6296	6241	55.61	113.225			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 134H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
				(ft)	(ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0	0	0	0	0	0	86.88	1	20	20					
100	100	100	100	0	0	86.88	1	20	20	20	0.31	65.081		
200	200	200	200	1	1	86.88	1	20	20	19	1.03	19.570		
300	300	300	300	1	1	86.88	1	20	20	18	1.74	11.516		
400	400	400	400	1	1	86.88	1	20	20	18	2.46	8.159		
450	450	450	450	1	1	86.88	1	20	20	17	2.82	7.121 CC		
500	500	500	500	2	2	167.38	1	20	20	17	3.17	6.390 ES		
600	600	600	600	2	2	161.42	4	18	22	18	3.88	5.690		
700	700	701	700	2	2	152.18	10	14	26	22	4.60	5.702		
800	799	800	800	3	3	142.98	19	8	33	28	5.34	6.230		
893	891	893	891	3	3	136.02	30	1	43	37	6.06	7.032		
900	898	900	898	3	3	135.58	30	1	43	37	6.12	7.097		
1000	997	999	995	3	3	128.74	45	-9	55	48	6.93	7.993		
1100	1096	1097	1092	4	4	121.62	62	-20	69	61	7.79	8.827		
1200	1195	1196	1188	4	4	115.59	80	-33	84	75	8.67	9.630		
1300	1293	1294	1284	5	5	111.38	99	-45	99	89	9.56	10.339		
1400	1392	1393	1380	5	5	108.31	117	-57	115	104	10.46	10.958		
1500	1491	1491	1476	6	6	105.99	136	-70	131	119	11.37	11.494		
1600	1590	1590	1572	6	6	104.18	155	-82	147	135	12.28	11.962		
1700	1689	1689	1668	7	7	102.73	173	-94	163	150	13.19	12.371		
1800	1787	1787	1764	7	8	101.54	192	-107	180	165	14.10	12.730		
1900	1886	1886	1860	7	8	100.55	210	-119	196	181	15.02	13.049		
2000	1985	1984	1956	8	9	99.71	229	-131	212	197	15.94	13.332		
2100	2084	2083	2052	8	9	98.99	248	-144	229	212	16.85	13.586		
2200	2183	2181	2148	9	10	98.37	266	-156	246	228	17.77	13.814		
2300	2281	2280	2244	9	10	97.83	285	-168	262	243	18.70	14.021		
2400	2380	2379	2340	10	11	97.36	303	-181	279	259	19.62	14.208		
2500	2479	2477	2436	10	11	96.93	322	-193	295	275	20.54	14.379		
2600	2578	2576	2532	11	12	96.55	341	-205	312	291	21.46	14.535		
2700	2677	2674	2628	11	12	96.21	359	-218	329	306	22.39	14.678		
2800	2775	2773	2724	12	13	95.91	378	-230	345	322	23.31	14.811		
2900	2874	2872	2820	12	13	95.63	396	-242	362	338	24.24	14.933		
3000	2973	2970	2916	13	14	95.37	415	-255	379	353	25.16	15.046		
3100	3072	3069	3012	13	15	95.14	433	-267	395	369	26.09	15.151		
3200	3171	3167	3108	13	15	94.93	452	-279	412	385	27.01	15.250		
3300	3270	3266	3204	14	16	94.73	471	-292	429	401	27.94	15.341		
3400	3368	3365	3300	14	16	94.55	489	-304	445	416	28.87	15.427		
3500	3467	3463	3396	15	17	94.38	508	-316	462	432	29.79	15.507		
3600	3566	3562	3492	15	17	94.22	526	-329	479	448	30.72	15.583		
3700	3665	3660	3588	16	18	94.07	545	-341	495	464	31.65	15.654		
3800	3764	3759	3684	16	18	93.94	564	-354	512	480	32.58	15.721		
3900	3862	3857	3780	17	19	93.81	582	-366	529	495	33.50	15.784		
4000	3961	3956	3876	17	19	93.69	601	-378	546	511	34.43	15.844		
4100	4060	4055	3972	18	20	93.57	619	-391	562	527	35.36	15.901		
4200	4159	4153	4068	18	21	93.47	638	-403	579	543	36.29	15.955		
4300	4258	4252	4164	19	21	93.36	657	-415	596	558	37.22	16.006		
4400	4356	4350	4261	19	22	93.27	675	-428	612	574	38.15	16.055		
4500	4455	4449	4357	19	22	93.18	694	-440	629	590	39.07	16.101		
4600	4554	4548	4453	20	23	93.09	712	-452	646	606	40.00	16.145		
4700	4653	4646	4549	20	23	93.01	731	-465	663	622	40.93	16.187		
4800	4752	4745	4645	21	24	92.93	749	-477	679	637	41.86	16.227		
4840	4791	4784	4683	21	24	92.90	757	-482	686	644	42.23	16.243		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 134H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												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
4850	4801	4794	4693	21	24	89.57	759	-483	688	645	42.33	16.245	
4900	4850	4844	4741	21	24	78.75	768	-489	694	652	42.84	16.212	
4950	4898	4893	4789	22	25	73.23	777	-496	699	656	43.41	16.106	
5000	4945	4942	4837	22	25	70.32	787	-502	702	658	44.04	15.932	
5050	4991	4991	4884	22	25	68.94	796	-508	702	657	44.73	15.696	
5100	5034	5039	4931	23	25	68.60	805	-514	701	655	45.48	15.405	
5150	5076	5085	4976	23	26	69.04	814	-520	698	651	46.29	15.069	
5200	5116	5130	5020	24	26	70.08	822	-525	693	646	47.16	14.696	
5250	5153	5174	5063	24	26	71.60	830	-531	687	639	48.08	14.298	
5300	5187	5200	5088	25	26	72.72	836	-534	681	632	48.87	13.941	
5350	5219	5234	5120	25	27	74.39	844	-540	675	626	49.83	13.554	
5400	5247	5264	5149	26	27	76.02	852	-546	670	619	50.81	13.187	
5450	5272	5300	5182	27	27	78.06	862	-555	665	613	51.92	12.809	
5500	5294	5326	5206	27	27	79.65	871	-562	661	608	52.96	12.477	
5550	5312	5358	5234	28	28	81.60	882	-571	657	603	54.12	12.147	
5600	5326	5390	5262	29	28	83.60	895	-582	655	600	55.32	11.840	
5650	5337	5424	5289	30	28	85.65	909	-594	654	597	56.55	11.561	
5670	5340	5437	5300	30	28	86.48	915	-600	654	597	57.05	11.458	
5700	5344	5458	5317	30	29	87.72	924	-608	654	596	57.78	11.318	
5750	5346	5493	5344	31	29	89.82	941	-623	656	597	58.99	11.113	
5756	5346	5498	5347	31	29	90.08	943	-625	656	597	59.13	11.091	
5800	5347	5531	5372	32	30	92.19	960	-640	659	599	60.18	10.947	
5900	5348	5623	5432	34	31	97.33	1011	-687	670	607	62.70	10.679	
6000	5348	5740	5493	36	33	102.37	1084	-755	683	617	65.65	10.398	
6100	5349	5881	5541	38	35	106.17	1179	-847	693	624	69.38	9.988	
6200	5350	6035	5559	40	38	107.49	1288	-954	697	623	74.03	9.410	
6300	5351	6135	5560	42	40	107.49	1359	-1024	697	619	77.98	8.934	
6400	5351	6235	5561	44	42	107.49	1429	-1095	697	615	82.01	8.495	
6500	5352	6335	5561	46	44	107.49	1500	-1165	697	611	86.12	8.089	
6600	5353	6435	5562	49	46	107.48	1571	-1236	697	606	90.30	7.715	
6700	5354	6535	5563	51	48	107.48	1642	-1306	697	602	94.53	7.369	
6800	5354	6635	5564	53	51	107.48	1713	-1377	697	598	98.82	7.050	
6900	5355	6735	5564	55	53	107.48	1784	-1447	697	593	103.15	6.754	
7000	5356	6835	5565	58	55	107.48	1855	-1518	697	589	107.51	6.479	
7100	5357	6935	5566	60	57	107.47	1926	-1588	697	585	111.92	6.224	
7200	5357	7035	5567	62	60	107.47	1997	-1659	697	580	116.35	5.987	
7300	5358	7135	5567	65	62	107.47	2068	-1729	697	576	120.81	5.766	
7400	5359	7235	5568	67	64	107.47	2139	-1800	697	571	125.29	5.560	
7500	5360	7335	5569	69	66	107.47	2209	-1870	697	567	129.80	5.367	
7600	5360	7435	5569	72	69	107.46	2280	-1941	697	562	134.32	5.186	
7700	5361	7535	5570	74	71	107.46	2351	-2012	697	558	138.87	5.016	
7800	5362	7635	5571	77	74	107.46	2422	-2082	697	553	143.42	4.857	
7900	5363	7735	5572	79	76	107.46	2493	-2153	697	549	148.00	4.707	
8000	5363	7835	5572	81	78	107.46	2564	-2223	697	544	152.58	4.565	
8100	5364	7935	5573	84	81	107.45	2635	-2294	697	539	157.18	4.432	
8200	5365	8035	5574	86	83	107.45	2706	-2364	697	535	161.79	4.305	
8300	5366	8135	5575	89	85	107.45	2777	-2435	697	530	166.41	4.186	
8400	5366	8235	5575	91	88	107.45	2848	-2505	697	526	171.04	4.072	
8500	5367	8335	5576	93	90	107.45	2918	-2576	697	521	175.68	3.965	
8600	5368	8435	5577	96	93	107.44	2989	-2646	697	516	180.32	3.863	
8700	5369	8535	5577	98	95	107.44	3060	-2717	697	512	184.97	3.766	
8800	5369	8635	5578	101	97	107.44	3131	-2787	697	507	189.63	3.673	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 134H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program:		0-MWD+IGRF				Rule Assigned:				Offset Well Error:		0 ft		
Measured Depth	Vertical Reference	Measured Depth	Vertical Offset	Semi Major Axis	Offset	Highside	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	Reference (ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	(ft)			
8900	5370	8735	5579	103	100	107.44	3202	-2858	697	502	194.30	3.585		
9000	5371	8835	5580	106	102	107.44	3273	-2928	697	498	198.97	3.501		
9100	5372	8935	5580	108	105	107.43	3344	-2999	697	493	203.64	3.420		
9200	5372	9035	5581	110	107	107.43	3415	-3069	697	488	208.33	3.343		
9300	5373	9135	5582	113	110	107.43	3486	-3140	697	484	213.01	3.270		
9400	5374	9235	5583	115	112	107.43	3557	-3210	697	479	217.70	3.199		
9500	5375	9335	5583	118	115	107.43	3628	-3281	697	474	222.40	3.132		
9600	5375	9435	5584	120	117	107.42	3698	-3351	697	469	227.10	3.067		
9700	5376	9535	5585	123	119	107.42	3769	-3422	696	465	231.80	3.005		
9800	5377	9635	5585	125	122	107.42	3840	-3492	696	460	236.51	2.945		
9900	5378	9735	5586	128	124	107.42	3911	-3563	696	455	241.22	2.887		
10,000	5378	9835	5587	130	127	107.42	3982	-3633	696	451	245.93	2.832		
10,100	5379	9935	5588	133	129	107.41	4053	-3704	696	446	250.64	2.779		
10,200	5380	10,035	5588	135	132	107.41	4124	-3774	696	441	255.36	2.727		
10,300	5381	10,135	5589	137	134	107.41	4195	-3845	696	436	260.08	2.678		
10,400	5382	10,235	5590	140	137	107.41	4266	-3915	696	432	264.81	2.630		
10,500	5382	10,335	5591	142	139	107.41	4337	-3986	696	427	269.53	2.584		
10,600	5383	10,435	5591	145	141	107.40	4408	-4056	696	422	274.26	2.539		
10,700	5384	10,535	5592	147	144	107.40	4478	-4127	696	417	278.99	2.496		
10,800	5385	10,635	5593	150	146	107.40	4549	-4197	696	413	283.72	2.455		
10,900	5385	10,735	5594	152	149	107.40	4620	-4268	696	408	288.46	2.414		
11,000	5386	10,835	5594	155	151	107.40	4691	-4338	696	403	293.19	2.375		
11,100	5387	10,935	5595	157	154	107.39	4762	-4409	696	399	297.93	2.338		
11,200	5388	11,035	5596	160	156	107.39	4833	-4479	696	394	302.67	2.301		
11,260	5388	11,095	5596	161	158	107.39	4876	-4522	696	391	305.53	2.279 SF		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 135H - Original Drilling - APD													Offset Site Error: 0 ft	
Survey Program: Reference		0-MWD+IGRF						Rule Assigned:					Offset Well Error: 0 ft	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0	0	0	0	0	0	87.21	3	60	60					
100	100	100	100	0	0	87.21	3	60	60	60	0.31	194.227		
200	200	200	200	1	1	87.21	3	60	60	59	1.03	58.404		
300	300	300	300	1	1	87.21	3	60	60	58	1.74	34.369		
400	400	400	400	1	1	87.21	3	60	60	57	2.46	24.349		
450	450	450	450	1	1	87.21	3	60	60	57	2.82	21.251 CC		
500	500	501	501	2	2	168.25	3	60	60	57	3.17	18.931 ES		
600	600	602	601	2	2	166.07	6	58	62	58	3.88	15.905		
700	700	702	702	2	2	162.06	12	54	65	61	4.60	14.195		
800	799	803	802	3	3	156.84	21	48	71	66	5.33	13.329		
893	891	896	894	3	3	151.54	32	40	79	73	6.05	13.049		
900	898	903	901	3	3	151.15	33	40	80	73	6.10	13.038		
1000	997	1003	999	3	4	144.99	47	30	89	82	6.91	12.932		
1100	1096	1102	1096	4	4	138.62	63	19	100	92	7.77	12.861 SF		
1200	1195	1201	1193	4	4	133.44	80	8	111	103	8.65	12.883		
1300	1293	1300	1290	5	5	129.24	97	-3	124	114	9.54	12.957		
1400	1392	1398	1387	5	5	125.81	113	-14	136	126	10.45	13.058		
1500	1491	1497	1484	6	6	122.98	130	-26	150	138	11.36	13.172		
1600	1590	1596	1581	6	6	120.60	146	-37	163	151	12.27	13.288		
1700	1689	1695	1677	7	7	118.59	163	-48	177	164	13.19	13.404		
1800	1787	1794	1774	7	7	116.87	179	-59	191	177	14.11	13.516		
1900	1886	1893	1871	7	8	115.39	196	-70	205	190	15.03	13.623		
2000	1985	1992	1968	8	8	114.09	213	-81	219	203	15.95	13.724		
2100	2084	2091	2065	8	9	112.96	229	-92	233	216	16.87	13.820		
2200	2183	2189	2162	9	9	111.95	246	-104	248	230	17.80	13.909		
2300	2281	2288	2258	9	10	111.06	262	-115	262	243	18.72	13.993		
2400	2380	2387	2355	10	10	110.25	279	-126	276	257	19.64	14.072		
2500	2479	2486	2452	10	11	109.53	295	-137	291	270	20.57	14.146		
2600	2578	2585	2549	11	11	108.88	312	-148	305	284	21.49	14.215		
2700	2677	2684	2646	11	12	108.28	329	-159	320	298	22.41	14.280		
2800	2775	2783	2743	12	12	107.74	345	-171	335	311	23.34	14.342		
2900	2874	2882	2839	12	13	107.25	362	-182	349	325	24.26	14.399		
3000	2973	2980	2936	13	13	106.79	378	-193	364	339	25.19	14.453		
3100	3072	3079	3033	13	14	106.37	395	-204	379	353	26.11	14.505		
3200	3171	3178	3130	13	14	105.98	411	-215	393	366	27.04	14.553		
3300	3270	3277	3227	14	15	105.61	428	-226	408	380	27.96	14.599		
3400	3368	3376	3324	14	16	105.28	444	-237	423	394	28.88	14.642		
3500	3467	3475	3420	15	16	104.96	461	-249	438	408	29.81	14.683		
3600	3566	3574	3517	15	17	104.67	478	-260	452	422	30.73	14.722		
3700	3665	3673	3614	16	17	104.40	494	-271	467	436	31.66	14.759		
3800	3764	3771	3711	16	18	104.14	511	-282	482	449	32.58	14.794		
3900	3862	3870	3808	17	18	103.89	527	-293	497	463	33.51	14.828		
4000	3961	3969	3905	17	19	103.67	544	-304	512	477	34.43	14.860		
4100	4060	4068	4002	18	19	103.45	560	-316	526	491	35.35	14.890		
4200	4159	4167	4098	18	20	103.25	577	-327	541	505	36.28	14.919		
4300	4258	4266	4195	19	20	103.05	594	-338	556	519	37.20	14.947		
4400	4356	4365	4292	19	21	102.87	610	-349	571	533	38.13	14.973		
4500	4455	4464	4389	19	21	102.70	627	-360	586	547	39.05	14.999		
4600	4554	4562	4486	20	22	102.53	643	-371	601	561	39.98	15.023		
4700	4653	4661	4583	20	22	102.37	660	-382	615	575	40.90	15.047		
4800	4752	4760	4679	21	23	102.22	676	-394	630	588	41.83	15.069		
4840	4791	4800	4718	21	23	102.17	683	-398	636	594	42.20	15.078		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 135H - Original Drilling - APD													Offset Site Error: 0 ft	
Survey Program: 0-MWD+IGRF								Rule Assigned:					Offset Well Error: 0 ft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance						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		
4850	4801	4810	4728	21	23	98.83	685	-399	638	595	42.29	15.079		
4900	4850	4859	4776	21	23	88.01	693	-405	644	601	42.79	15.049		
4950	4898	4934	4850	22	24	83.06	703	-411	648	604	43.53	14.885		
5000	4945	5010	4926	22	24	81.79	708	-411	648	604	44.21	14.661		
5050	4991	5078	4993	22	24	82.62	706	-406	646	601	44.79	14.416		
5100	5034	5134	5049	23	24	84.50	701	-397	642	596	45.32	14.158		
5150	5076	5180	5093	23	24	86.67	694	-388	638	592	45.85	13.909		
5200	5116	5215	5126	24	24	88.65	687	-380	635	588	46.35	13.696		
5243	5148	5238	5148	24	24	89.96	682	-373	634	587	46.74	13.560		
5250	5153	5241	5151	24	24	90.13	681	-373	634	587	46.80	13.544		
5300	5187	5259	5168	25	24	91.01	677	-367	636	589	47.18	13.475		
5350	5219	5272	5179	25	24	91.22	673	-363	641	593	47.45	13.502		
5400	5247	5280	5186	26	24	90.79	671	-361	649	601	47.61	13.630		
5450	5272	5283	5189	27	24	89.75	670	-360	660	613	47.65	13.858		
5500	5294	5283	5189	27	24	88.16	670	-360	675	627	47.60	14.180		
5550	5312	5280	5186	28	24	86.07	671	-361	692	645	47.47	14.587		
5600	5326	5275	5182	29	24	83.56	673	-362	712	665	47.28	15.066		
5650	5337	5267	5175	30	24	80.71	675	-365	734	687	47.05	15.605		
5700	5344	5250	5159	30	24	76.92	679	-370	758	711	46.73	16.219		
5750	5346	5250	5159	31	24	74.47	679	-370	783	736	46.59	16.800		
5756	5346	5250	5159	31	24	74.16	679	-370	786	739	46.58	16.873		
5800	5347	5237	5147	32	24	73.19	682	-374	809	763	46.33	17.462		
5900	5348	5218	5130	34	24	71.73	686	-379	867	821	45.84	18.920		
6000	5348	5200	5112	36	24	70.35	690	-383	932	887	45.33	20.559		
6100	5349	5200	5112	38	24	70.35	690	-383	1002	957	45.04	22.253		
6200	5350	5176	5089	40	24	68.51	695	-389	1077	1032	44.49	24.197		
6300	5351	5150	5064	42	24	66.61	699	-394	1155	1111	43.96	26.270		
6400	5351	5150	5064	44	24	66.61	699	-394	1236	1192	43.76	28.239		
6500	5352	5150	5064	46	24	66.61	699	-394	1319	1275	43.57	30.272		
6600	5353	5150	5064	49	24	66.61	699	-394	1405	1361	43.41	32.356		
6700	5354	5132	5047	51	24	65.30	701	-398	1492	1449	43.09	34.616		
6800	5354	5126	5041	53	24	64.85	702	-399	1580	1537	42.92	36.824		
6900	5355	5120	5036	55	24	64.44	702	-400	1670	1627	42.76	39.056		
7000	5356	5100	5015	58	24	62.98	704	-403	1761	1719	42.49	41.452		
7100	5357	5100	5015	60	24	62.98	704	-403	1853	1811	42.42	43.677		
7200	5357	5100	5015	62	24	62.98	704	-403	1945	1903	42.37	45.918		
7300	5358	5100	5015	65	24	62.98	704	-403	2039	1996	42.32	48.173		
7400	5359	5100	5015	67	24	62.98	704	-403	2132	2090	42.28	50.439		
7500	5360	5100	5015	69	24	62.98	704	-403	2227	2185	42.24	52.714		
7600	5360	5100	5015	72	24	62.98	704	-403	2322	2279	42.21	54.997		
7700	5361	5100	5015	74	24	62.98	704	-403	2417	2375	42.19	57.285		
7800	5362	5100	5015	77	24	62.98	704	-403	2512	2470	42.17	59.578		
7900	5363	5100	5015	79	24	62.98	704	-403	2608	2566	42.16	61.874		
8000	5363	5100	5015	81	24	62.98	704	-403	2705	2662	42.15	64.172		
8100	5364	5078	4994	84	24	61.46	706	-406	2801	2759	41.99	66.703		
8200	5365	5076	4992	86	24	61.31	706	-406	2897	2855	41.97	69.030		
8300	5366	5074	4990	89	24	61.17	706	-406	2994	2952	41.96	71.356		
8400	5366	5072	4988	91	24	61.03	706	-406	3091	3049	41.95	73.681		
8500	5367	5050	4966	93	24	59.51	707	-408	3189	3147	41.81	76.265		
8600	5368	5050	4966	96	24	59.51	707	-408	3286	3244	41.83	78.566		
8700	5369	5050	4966	98	24	59.51	707	-408	3384	3342	41.84	80.865		
8800	5369	5050	4966	101	24	59.51	707	-408	3481	3439	41.86	83.163		



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 135H - Original Drilling - APD													Offset Site Error:		0 ft
Survey Program:		0-MWD+IGRF						Rule Assigned:					Offset Well Error:		0 ft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				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)				
8900	5370	5050	4966	103	24	59.51	707	-408	3579	3537	41.88	85.458			
9000	5371	5050	4966	106	24	59.51	707	-408	3677	3635	41.90	87.749			
9100	5372	5050	4966	108	24	59.51	707	-408	3775	3733	41.92	90.038			
9200	5372	5050	4966	110	24	59.51	707	-408	3873	3831	41.95	92.323			
9300	5373	5050	4966	113	24	59.51	707	-408	3971	3929	41.98	94.603			
9400	5374	5050	4966	115	24	59.51	707	-408	4069	4027	42.00	96.880			
9500	5375	5050	4966	118	24	59.51	707	-408	4168	4126	42.03	99.152			
9600	5375	5050	4966	120	24	59.51	707	-408	4266	4224	42.06	101.420			
9700	5376	5050	4966	123	24	59.51	707	-408	4365	4322	42.10	103.682			
9800	5377	5050	4966	125	24	59.51	707	-408	4463	4421	42.13	105.940			
9900	5378	5050	4966	128	24	59.51	707	-408	4562	4520	42.16	108.192			
10,000	5378	5050	4966	130	24	59.51	707	-408	4660	4618	42.20	110.438			
10,100	5379	5050	4966	133	24	59.51	707	-408	4759	4717	42.24	112.679			
10,200	5380	5050	4966	135	24	59.51	707	-408	4858	4816	42.27	114.914			
10,300	5381	5050	4966	137	24	59.51	707	-408	4957	4915	42.31	117.143			
10,400	5382	5050	4966	140	24	59.51	707	-408	5056	5013	42.35	119.366			
10,500	5382	5050	4966	142	24	59.51	707	-408	5155	5112	42.40	121.583			
10,600	5383	5050	4966	145	24	59.51	707	-408	5254	5211	42.44	123.793			
10,700	5384	5050	4966	147	24	59.51	707	-408	5353	5310	42.48	125.996			
10,800	5385	5050	4966	150	24	59.51	707	-408	5452	5409	42.53	128.193			
10,900	5385	5050	4966	152	24	59.51	707	-408	5551	5508	42.57	130.383			
11,000	5386	5050	4966	155	24	59.51	707	-408	5650	5607	42.62	132.566			
11,100	5387	5050	4966	157	24	59.51	707	-408	5749	5706	42.67	134.742			
11,200	5388	5050	4966	160	24	59.51	707	-408	5848	5805	42.72	136.911			
11,260	5388	5050	4966	161	24	59.51	707	-408	5908	5865	42.74	138.218			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 136H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0	0	0	0	0	0	-92.60	-2	-40	40					
100	100	100	100	0	0	-92.60	-2	-40	40	40	0.31	130.103		
200	200	200	200	1	1	-92.60	-2	-40	40	39	1.03	39.122		
300	300	300	300	1	1	-92.60	-2	-40	40	38	1.74	23.022		
400	400	400	400	1	1	-92.60	-2	-40	40	38	2.46	16.310		
450	450	450	450	1	1	-92.60	-2	-40	40	37	2.82	14.235		
500	500	499	499	2	2	-11.35	-2	-40	40	37	3.17	12.669		
600	600	598	598	2	2	-11.83	-2	-44	40	36	3.85	10.412		
700	700	697	696	2	2	-12.80	-1	-51	40	36	4.54	8.832		
800	799	795	794	3	3	-14.25	-1	-61	40	35	5.24	7.671		
893	891	888	886	3	3	-16.31	0	-72	39	33	5.90	6.666		
900	898	895	893	3	3	-16.51	0	-73	39	33	5.95	6.581		
1000	997	995	992	3	3	-19.61	1	-86	37	30	6.69	5.518		
1100	1096	1095	1092	4	4	-23.12	1	-99	35	27	7.43	4.672		
1200	1195	1195	1191	4	4	-27.07	2	-111	33	24	8.19	3.988		
1300	1293	1295	1290	5	5	-31.53	3	-124	31	22	8.98	3.432		
1400	1392	1395	1389	5	5	-36.51	3	-137	29	19	9.80	2.978		
1500	1491	1495	1488	6	6	-42.05	4	-149	28	17	10.66	2.608		
1600	1590	1595	1587	6	6	-48.11	5	-162	27	15	11.55	2.309		
1700	1689	1695	1686	7	6	-54.61	5	-175	26	13	12.49	2.073		
1800	1787	1794	1786	7	7	-61.43	6	-187	25	12	13.46	1.891		
1868	1855	1862	1853	7	7	-66.16	6	-196	25	11	14.13	1.795 CC		
1900	1886	1894	1885	7	7	-68.38	7	-200	25	11	14.45	1.757		
2000	1985	1994	1984	8	8	-75.27	7	-212	26	10	15.44	1.664		
2100	2084	2094	2083	8	8	-81.91	8	-225	26	10	16.41	1.607 ES		
2200	2183	2194	2182	9	9	-88.14	9	-238	27	10	17.35	1.577		
2300	2281	2294	2281	9	9	-93.87	9	-250	29	10	18.25	1.570 SF		
2400	2380	2394	2380	10	9	-99.05	10	-263	30	11	19.13	1.580		
2500	2479	2494	2480	10	10	-103.70	11	-276	32	12	19.97	1.602		
2600	2578	2594	2579	11	10	-107.83	11	-288	34	13	20.79	1.634		
2700	2677	2694	2678	11	11	-111.49	12	-301	36	14	21.59	1.671		
2800	2775	2794	2777	12	11	-114.73	13	-314	38	16	22.38	1.713		
2900	2874	2894	2876	12	12	-117.60	13	-326	41	18	23.16	1.758		
3000	2973	2994	2975	13	12	-120.16	14	-339	43	19	23.93	1.804		
3100	3072	3094	3075	13	12	-122.43	15	-352	46	21	24.69	1.851		
3200	3171	3194	3174	13	13	-124.46	15	-364	48	23	25.45	1.897		
3300	3270	3294	3273	14	13	-126.29	16	-377	51	25	26.22	1.943		
3400	3368	3394	3372	14	14	-127.93	17	-390	54	27	26.98	1.989		
3500	3467	3494	3471	15	14	-129.41	17	-402	56	29	27.73	2.033		
3600	3566	3594	3570	15	15	-130.75	18	-415	59	31	28.49	2.076		
3700	3665	3694	3669	16	15	-131.98	19	-427	62	33	29.25	2.118		
3800	3764	3794	3769	16	15	-133.10	19	-440	65	35	30.01	2.159		
3900	3862	3893	3868	17	16	-134.12	20	-453	68	37	30.78	2.198		
4000	3961	3993	3967	17	16	-135.06	21	-465	71	39	31.54	2.236		
4100	4060	4093	4066	18	17	-135.93	21	-478	73	41	32.30	2.272		
4200	4159	4193	4165	18	17	-136.73	22	-491	76	43	33.06	2.308		
4300	4258	4293	4264	19	18	-137.47	23	-503	79	45	33.83	2.342		
4400	4356	4393	4363	19	18	-138.16	23	-516	82	48	34.59	2.375		
4500	4455	4493	4463	19	18	-138.80	24	-529	85	50	35.36	2.406		
4600	4554	4593	4562	20	19	-139.40	25	-541	88	52	36.12	2.437		
4700	4653	4691	4658	20	19	-139.96	25	-553	91	54	36.86	2.476		
4800	4752	4777	4744	21	20	-140.63	20	-559	104	67	37.09	2.797		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 136H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		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		
4840	4791	4810	4777	21	20	-140.92	16	-558	112	75	37.01	3.038		
4850	4801	4818	4785	21	20	-144.19	14	-558	115	78	36.98	3.110		
4900	4850	4858	4824	21	20	-154.96	8	-556	132	95	36.74	3.589		
4950	4898	4894	4859	22	20	-160.82	0	-552	155	119	36.43	4.256		
5000	4945	4926	4890	22	20	-164.42	-8	-548	184	148	36.07	5.096		
5050	4991	4950	4913	22	20	-166.79	-15	-544	218	182	35.42	6.144		
5100	5034	4978	4939	23	20	-168.50	-24	-539	255	220	35.37	7.222		
5150	5076	5000	4959	23	20	-169.73	-31	-534	297	262	35.20	8.430		
5200	5116	5013	4971	24	20	-170.57	-36	-531	341	306	34.81	9.791		
5250	5153	5025	4982	24	20	-171.17	-40	-527	387	352	34.60	11.184		
5300	5187	5034	4990	25	20	-171.49	-44	-525	435	400	34.45	12.621		
5350	5219	5050	5004	25	20	-171.66	-50	-521	484	449	34.75	13.923		
5400	5247	5050	5004	26	20	-170.60	-50	-521	533	499	34.55	15.438		
5450	5272	5050	5004	27	20	-143.64	-50	-521	583	549	34.50	16.910		
5500	5294	5050	5004	27	20	2.29	-50	-521	633	599	34.56	18.325		
5550	5312	5050	5004	28	20	4.01	-50	-521	683	648	34.71	19.677		
5600	5326	5036	4992	29	20	4.51	-44	-525	732	697	34.54	21.194		
5650	5337	5031	4986	30	20	4.68	-42	-526	780	746	34.68	22.502		
5700	5344	5023	4980	30	20	4.77	-39	-528	828	793	34.84	23.754		
5750	5346	5015	4973	31	20	4.85	-36	-530	874	839	35.03	24.945		
5756	5346	5000	4959	31	20	4.86	-31	-534	880	845	34.70	25.351		
5800	5347	5000	4959	32	20	4.86	-31	-534	919	884	35.07	26.214		
5900	5348	5000	4959	34	20	4.86	-31	-534	1011	975	35.78	28.261		
6000	5348	4977	4937	36	20	4.86	-23	-539	1104	1068	35.90	30.745		
6100	5349	4950	4913	38	20	4.86	-15	-544	1197	1161	35.93	33.327		
6200	5350	4950	4913	40	20	4.86	-15	-544	1291	1255	36.37	35.504		
6300	5351	4950	4913	42	20	4.86	-15	-544	1386	1349	36.73	37.728		
6400	5351	4933	4896	44	20	4.86	-10	-547	1481	1444	36.80	40.243		
6500	5352	4924	4888	46	20	4.86	-8	-548	1576	1539	36.96	42.647		
6600	5353	4900	4865	49	20	4.86	-2	-552	1673	1636	36.92	45.302		
6700	5354	4900	4865	51	20	4.86	-2	-552	1769	1732	37.16	47.603		
6800	5354	4900	4865	53	20	4.86	-2	-552	1865	1828	37.36	49.924		
6900	5355	4900	4865	55	20	4.86	-2	-552	1962	1924	37.54	52.260		
7000	5356	4900	4865	58	20	4.86	-2	-552	2059	2021	37.71	54.608		
7100	5357	4900	4865	60	20	4.86	-2	-552	2157	2119	37.86	56.966		
7200	5357	4879	4845	62	20	4.87	3	-554	2254	2216	37.80	59.629		
7300	5358	4875	4841	65	20	4.87	4	-554	2351	2314	37.89	62.066		
7400	5359	4870	4836	67	20	4.87	5	-555	2449	2411	37.97	64.503		
7500	5360	4850	4817	69	20	4.87	9	-556	2547	2509	37.91	67.185		
7600	5360	4850	4817	72	20	4.87	9	-556	2645	2607	38.03	69.560		
7700	5361	4850	4817	74	20	4.87	9	-556	2743	2705	38.13	71.937		
7800	5362	4850	4817	77	20	4.87	9	-556	2842	2803	38.24	74.316		
7900	5363	4850	4817	79	20	4.87	9	-556	2940	2902	38.33	76.697		
8000	5363	4850	4817	81	20	4.87	9	-556	3038	3000	38.42	79.077		
8100	5364	4850	4817	84	20	4.87	9	-556	3137	3098	38.51	81.456		
8200	5365	4850	4817	86	20	4.87	9	-556	3235	3197	38.59	83.835		
8300	5366	4850	4817	89	20	4.87	9	-556	3334	3295	38.67	86.211		
8400	5366	4850	4817	91	20	4.87	9	-556	3433	3394	38.75	88.586		
8500	5367	4850	4817	93	20	4.87	9	-556	3532	3493	38.83	90.957		
8600	5368	4850	4817	96	20	4.87	9	-556	3631	3592	38.90	93.325		
8700	5369	4850	4817	98	20	4.87	9	-556	3730	3691	38.98	95.690		
8800	5369	4850	4817	101	20	4.87	9	-556	3829	3790	39.05	98.051		



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - # 136H - Original Drilling - APD													Offset Site Error: 0 ft		
Survey Program: 0-MWD+IGRF		Offset		Semi Major Axis		Offset Wellbore Centre				Rule Assigned: Distance				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)				
8900	5370	4827	4794	103	20	4.87	13	-558	3927	3888	38.97	100.787			
9000	5371	4825	4792	106	20	4.87	13	-558	4026	3987	39.03	103.170			
9100	5372	4823	4790	108	20	4.87	14	-558	4125	4086	39.09	105.546			
9200	5372	4800	4767	110	20	4.87	17	-559	4225	4186	39.01	108.304			
9300	5373	4800	4767	113	20	4.87	17	-559	4324	4285	39.08	110.643			
9400	5374	4800	4767	115	20	4.87	17	-559	4423	4384	39.15	112.978			
9500	5375	4800	4767	118	20	4.87	17	-559	4522	4483	39.22	115.306			
9600	5375	4800	4767	120	20	4.87	17	-559	4622	4582	39.29	117.629			
9700	5376	4800	4767	123	20	4.87	17	-559	4721	4681	39.36	119.946			
9800	5377	4800	4767	125	20	4.87	17	-559	4820	4781	39.43	122.256			
9900	5378	4800	4767	128	20	4.87	17	-559	4919	4880	39.49	124.560			
10,000	5378	4800	4767	130	20	4.87	17	-559	5019	4979	39.56	126.857			
10,100	5379	4800	4767	133	20	4.87	17	-559	5118	5078	39.63	129.148			
10,200	5380	4800	4767	135	20	4.87	17	-559	5217	5178	39.70	131.431			
10,300	5381	4800	4767	137	20	4.87	17	-559	5317	5277	39.76	133.707			
10,400	5382	4800	4767	140	20	4.87	17	-559	5416	5376	39.83	135.976			
10,500	5382	4800	4767	142	20	4.87	17	-559	5516	5476	39.90	138.238			
10,600	5383	4800	4767	145	20	4.87	17	-559	5615	5575	39.97	140.492			
10,700	5384	4800	4767	147	20	4.87	17	-559	5715	5675	40.04	142.738			
10,800	5385	4800	4767	150	20	4.87	17	-559	5814	5774	40.10	144.976			
10,900	5385	4800	4767	152	20	4.87	17	-559	5914	5873	40.17	147.206			
11,000	5386	4800	4767	155	20	4.87	17	-559	6013	5973	40.24	149.429			
11,100	5387	4800	4767	157	20	4.87	17	-559	6113	6072	40.31	151.643			
11,200	5388	4800	4767	160	20	4.87	17	-559	6212	6172	40.38	153.849			
11,260	5388	4800	4767	161	20	4.87	17	-559	6272	6232	40.42	155.178			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - Mesa #4 SWD - OH - OH													Offset Site Error:	0 ft
Survey Program: 190-INCLINOMETER													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	11	11	0	0	103.46	-938	3921	4032					
100	100	111	111	0	3	103.46	-938	3921	4032	4028	3.53	1,143.646		
200	200	211	211	1	6	103.46	-938	3921	4032	4025	6.92	582.544		
300	300	311	311	1	9	103.46	-938	3921	4032	4021	10.32	390.811		
349	349	360	360	1	11	103.45	-938	3921	4031	4019	11.99	336.287 CC		
400	400	409	409	1	12	103.45	-938	3921	4031	4018	13.66	295.186		
450	450	457	457	1	14	103.45	-938	3921	4031	4016	15.30	263.458		
500	500	506	506	2	15	-175.23	-938	3921	4032	4015	16.94	237.965		
600	600	611	611	2	19	-175.23	-938	3921	4035	4015	20.49	196.976 ES		
700	700	711	711	2	22	-175.22	-938	3921	4042	4019	23.87	169.339		
800	799	810	810	3	25	-175.22	-938	3921	4053	4026	27.25	148.723		
893	891	902	902	3	27	-175.21	-938	3921	4066	4035	30.39	133.796		
900	898	909	909	3	28	-175.21	-938	3921	4067	4036	30.62	132.794		
1000	997	1008	1008	3	31	-175.23	-938	3921	4082	4048	33.98	120.127		
1100	1096	1107	1107	4	34	-175.25	-938	3921	4097	4060	37.34	109.730		
1200	1195	1206	1206	4	37	-175.27	-938	3921	4113	4072	40.70	101.044		
1300	1293	1303	1302	5	40	-175.30	-937	3921	4128	4084	44.01	93.797		
1400	1392	1398	1398	5	42	-175.31	-937	3921	4143	4096	47.28	87.637		
1500	1491	1502	1502	6	46	-175.32	-938	3921	4159	4108	50.80	81.867		
1600	1590	1601	1601	6	49	-175.34	-938	3921	4174	4120	54.17	77.062		
1700	1689	1700	1700	7	52	-175.35	-938	3921	4189	4132	57.53	72.818		
1800	1787	1797	1797	7	55	-175.38	-937	3921	4205	4144	60.85	69.097		
1900	1886	1892	1892	7	57	-175.40	-937	3921	4220	4156	64.12	65.813		
2000	1985	1988	1988	8	60	-175.40	-938	3921	4236	4168	67.39	62.849		
2100	2084	2095	2095	8	64	-175.42	-938	3921	4251	4180	71.01	59.863		
2200	2183	2194	2194	9	67	-175.44	-938	3921	4266	4192	74.38	57.358		
2300	2281	2290	2290	9	70	-175.46	-938	3921	4281	4204	77.68	55.116		
2400	2380	2386	2386	10	72	-175.47	-938	3921	4297	4216	80.96	53.072		
2500	2479	2490	2490	10	76	-175.49	-938	3921	4312	4228	84.49	51.038		
2600	2578	2589	2589	11	79	-175.50	-938	3921	4328	4240	87.86	49.255		
2700	2677	2688	2688	11	82	-175.53	-937	3921	4343	4252	91.23	47.603		
2800	2775	2783	2783	12	85	-175.54	-937	3921	4358	4264	94.50	46.117		
2900	2874	2879	2879	12	87	-175.55	-938	3921	4374	4276	97.77	44.732		
3000	2973	2984	2984	13	91	-175.56	-938	3921	4389	4288	101.35	43.307		
3100	3072	3083	3083	13	94	-175.58	-938	3921	4404	4300	104.72	42.060		
3200	3171	3182	3181	13	97	-175.61	-937	3921	4420	4312	108.08	40.893		
3300	3270	3277	3276	14	100	-175.62	-937	3921	4435	4324	111.34	39.834		
3400	3368	3372	3372	14	102	-175.63	-938	3921	4451	4336	114.60	38.836		
3500	3467	3478	3478	15	106	-175.64	-938	3921	4466	4348	118.21	37.781		
3600	3566	3577	3577	15	109	-175.66	-938	3921	4481	4360	121.58	36.859		
3700	3665	3675	3674	16	112	-175.68	-937	3921	4496	4372	124.91	35.997		
3800	3764	3770	3770	16	114	-175.69	-937	3921	4512	4384	128.18	35.201		
3900	3862	3865	3865	17	117	-175.70	-938	3921	4527	4396	131.44	34.444		
4000	3961	3973	3972	17	121	-175.71	-938	3921	4543	4408	135.07	33.633		
4100	4060	4071	4071	18	124	-175.73	-938	3921	4558	4420	138.44	32.925		
4200	4159	4169	4169	18	127	-175.75	-937	3921	4573	4431	141.78	32.257		
4300	4258	4265	4265	19	130	-175.76	-938	3921	4589	4444	145.07	31.631		
4400	4356	4362	4361	19	132	-175.77	-938	3921	4604	4456	148.36	31.033		
4500	4455	4467	4466	19	136	-175.79	-938	3921	4620	4468	151.93	30.406		
4600	4554	4565	4565	20	139	-175.80	-938	3921	4635	4480	155.30	29.845		
4700	4653	4650	4649	20	141	-175.81	-938	3921	4650	4492	158.23	29.389 SF		
4800	4752	4650	4649	21	141	-175.81	-938	3921	4667	4508	158.52	29.442		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - Mesa #4 SWD - OH - OH												Offset Site Error:	0 ft
Survey Program: 190-INCLINOMETER												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)			
4840	4791	4650	4649	21	141	-175.81	-938	3921	4674	4516	158.61	29.470	
4850	4801	4650	4649	21	141	-179.11	-938	3921	4676	4518	158.63	29.478	
4900	4850	4650	4649	21	141	169.82	-938	3921	4688	4529	158.73	29.535	
4950	4898	4650	4649	22	141	163.42	-938	3921	4704	4545	158.82	29.616	
5000	4945	4650	4649	22	141	158.97	-938	3921	4723	4564	158.90	29.722	
5050	4991	4650	4649	22	141	155.39	-938	3921	4745	4586	158.96	29.852	
5100	5034	4650	4649	23	141	152.17	-938	3921	4771	4612	159.01	30.003	
5150	5076	4650	4649	23	141	149.02	-938	3921	4799	4640	159.04	30.176	
5200	5116	4650	4649	24	141	145.75	-938	3921	4831	4671	159.07	30.367	
5250	5153	4650	4649	24	141	142.19	-938	3921	4864	4705	159.10	30.574	
5300	5187	4650	4649	25	141	138.22	-938	3921	4900	4741	159.12	30.796	
5350	5219	4650	4649	25	141	133.71	-938	3921	4938	4779	159.15	31.029	
5400	5247	4650	4649	26	141	128.54	-938	3921	4978	4819	159.18	31.273	
5450	5272	4650	4649	27	141	122.62	-938	3921	5019	4860	159.22	31.523	
5500	5294	4650	4649	27	141	115.90	-938	3921	5061	4902	159.26	31.779	
5550	5312	4650	4649	28	141	108.43	-938	3921	5104	4945	159.32	32.037	
5600	5326	4650	4649	29	141	100.40	-938	3921	5148	4988	159.40	32.295	
5650	5337	4650	4649	30	141	92.08	-938	3921	5192	5032	159.49	32.552	
5700	5344	4650	4649	30	141	83.87	-938	3921	5236	5076	159.60	32.805	
5750	5346	4650	4649	31	141	76.12	-938	3921	5279	5119	159.73	33.052	
5756	5346	4650	4649	31	141	75.21	-938	3921	5285	5125	159.74	33.082	
5800	5347	4650	4649	32	141	75.21	-938	3921	5323	5163	159.87	33.293	
5900	5348	4650	4649	34	141	75.21	-938	3921	5410	5249	160.18	33.771	
6000	5348	4650	4649	36	141	75.21	-938	3921	5497	5337	160.53	34.243	
6100	5349	4650	4649	38	141	75.21	-938	3921	5585	5424	160.90	34.711	
6200	5350	4650	4649	40	141	75.21	-938	3921	5673	5512	161.30	35.173	
6300	5351	4650	4649	42	141	75.21	-938	3921	5762	5600	161.71	35.632	
6400	5351	4650	4649	44	141	75.21	-938	3921	5851	5689	162.14	36.088	
6500	5352	4650	4649	46	141	75.21	-938	3921	5941	5778	162.57	36.541	
6600	5353	4650	4649	49	141	75.21	-938	3921	6030	5867	163.02	36.992	
6700	5354	4650	4649	51	141	75.21	-938	3921	6120	5957	163.47	37.442	
6800	5354	4650	4649	53	141	75.21	-938	3921	6211	6047	163.92	37.890	
6900	5355	4650	4649	55	141	75.21	-938	3921	6301	6137	164.37	38.336	
7000	5356	4650	4649	58	141	75.21	-938	3921	6392	6228	164.83	38.782	
7100	5357	4650	4649	60	141	75.21	-938	3921	6484	6318	165.28	39.228	
7200	5357	4650	4649	62	141	75.21	-938	3921	6575	6409	165.74	39.672	
7300	5358	4650	4649	65	141	75.21	-938	3921	6667	6501	166.18	40.117	
7400	5359	4650	4649	67	141	75.21	-938	3921	6759	6592	166.63	40.562	
7500	5360	4650	4649	69	141	75.21	-938	3921	6851	6684	167.07	41.006	
7600	5360	4650	4649	72	141	75.21	-938	3921	6943	6776	167.51	41.451	
7700	5361	4650	4649	74	141	75.21	-938	3921	7036	6868	167.94	41.896	
7800	5362	4650	4649	77	141	75.21	-938	3921	7129	6960	168.37	42.341	
7900	5363	4650	4649	79	141	75.21	-938	3921	7222	7053	168.79	42.786	
8000	5363	4650	4649	81	141	75.21	-938	3921	7315	7146	169.20	43.232	
8100	5364	4650	4649	84	141	75.21	-938	3921	7408	7239	169.61	43.678	
8200	5365	4650	4649	86	141	75.21	-938	3921	7502	7332	170.01	44.125	
8300	5366	4650	4649	89	141	75.21	-938	3921	7595	7425	170.41	44.572	
8400	5366	4650	4649	91	141	75.21	-938	3921	7689	7519	170.80	45.019	
8500	5367	4650	4649	93	141	75.21	-938	3921	7783	7612	171.18	45.467	
8600	5368	4650	4649	96	141	75.21	-938	3921	7877	7706	171.56	45.916	
8700	5369	4650	4649	98	141	75.21	-938	3921	7972	7800	171.93	46.365	
8800	5369	4650	4649	101	141	75.21	-938	3921	8066	7894	172.30	46.815	



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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: L16 2408 Pad - Mesa #4 SWD - OH - OH											Offset Site Error:	0 ft
Survey Program: 190-INCLINOMETER											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
8900	5370	4650	4649	103	141	75.21	-938	3921	8161	7988	172.66	47.265
9000	5371	4650	4649	106	141	75.21	-938	3921	8255	8082	173.01	47.715
9100	5372	4650	4649	108	141	75.21	-938	3921	8350	8177	173.36	48.167
9200	5372	4650	4649	110	141	75.21	-938	3921	8445	8272	173.70	48.618
9300	5373	4650	4649	113	141	75.21	-938	3921	8540	8366	174.04	49.070
9400	5374	4650	4649	115	141	75.21	-938	3921	8635	8461	174.37	49.523
9500	5375	4650	4649	118	141	75.21	-938	3921	8731	8556	174.70	49.976
9600	5375	4650	4649	120	141	75.21	-938	3921	8826	8651	175.02	50.429
9700	5376	4650	4649	123	141	75.21	-938	3921	8922	8746	175.33	50.883
9800	5377	4650	4649	125	141	75.21	-938	3921	9017	8841	175.64	51.338
9900	5378	4650	4649	128	141	75.21	-938	3921	9113	8937	175.95	51.793
10,000	5378	4650	4649	130	141	75.21	-938	3921	9209	9032	176.25	52.248
10,100	5379	4650	4649	133	141	75.21	-938	3921	9304	9128	176.54	52.703
10,200	5380	4650	4649	135	141	75.21	-938	3921	9400	9224	176.83	53.159
10,300	5381	4650	4649	137	141	75.21	-938	3921	9496	9319	177.12	53.616
10,400	5382	4650	4649	140	141	75.21	-938	3921	9592	9415	177.40	54.072
10,500	5382	4650	4649	142	141	75.21	-938	3921	9689	9511	177.68	54.529
10,600	5383	4650	4649	145	141	75.21	-938	3921	9785	9607	177.95	54.987
10,700	5384	4650	4649	147	141	75.21	-938	3921	9881	9703	178.22	55.444
10,800	5385	4650	4649	150	141	75.21	-938	3921	9978	9799	178.48	55.902



Lonestar Consulting, LLC

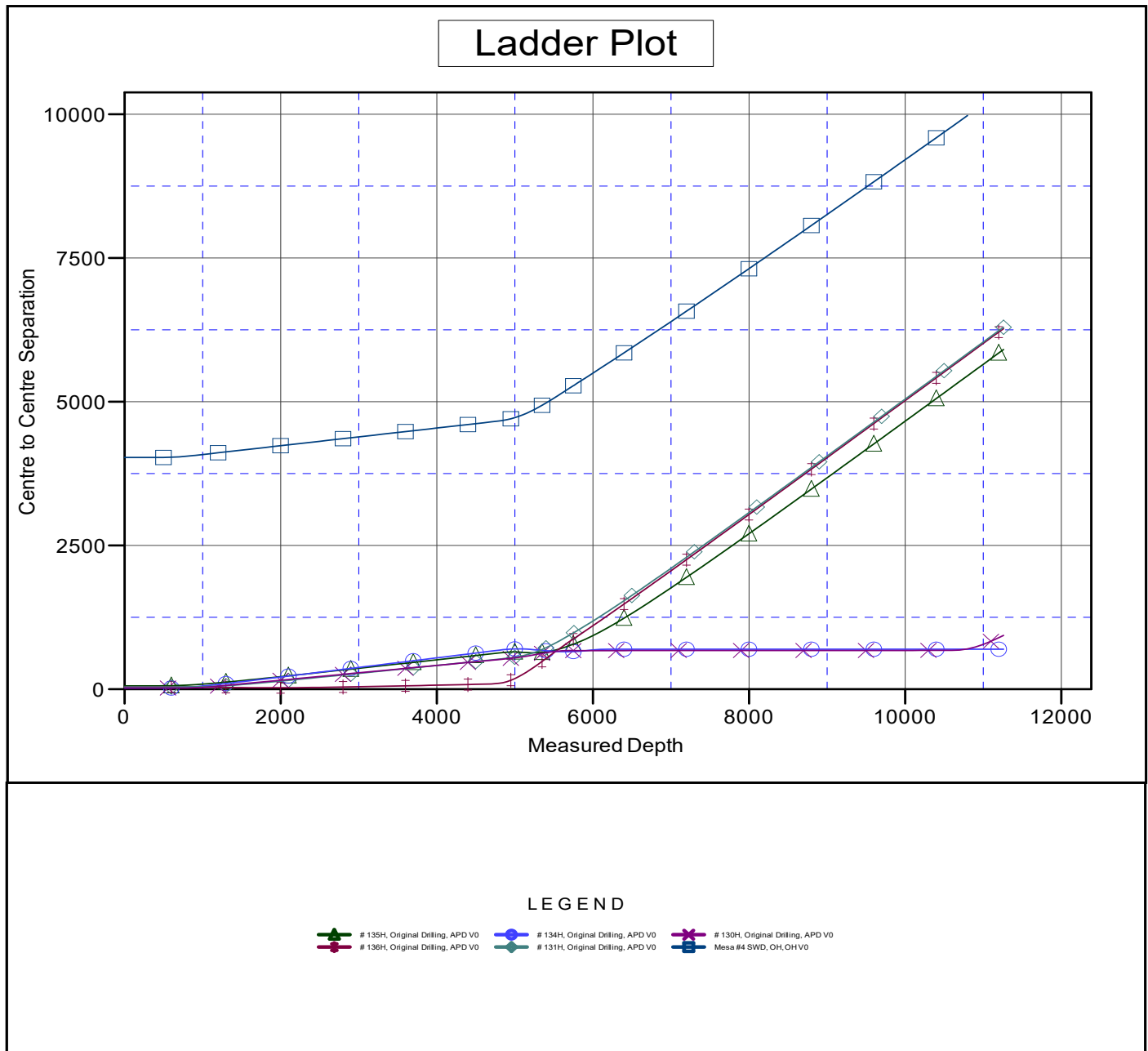
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 137H - Slot 3
Project:	Crow Canyon Unit	TVD Reference:	GL 6794' & RKB 14' @ 6808ft
Reference Site:	L16 2408 Pad	MD Reference:	GL 6794' & RKB 14' @ 6808ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 137H	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 6794' & RKB 14' @ 6808ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.83333333

Coordinates are relative to: # 137H - Slot 3
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.08°





Lonestar Consulting, LLC

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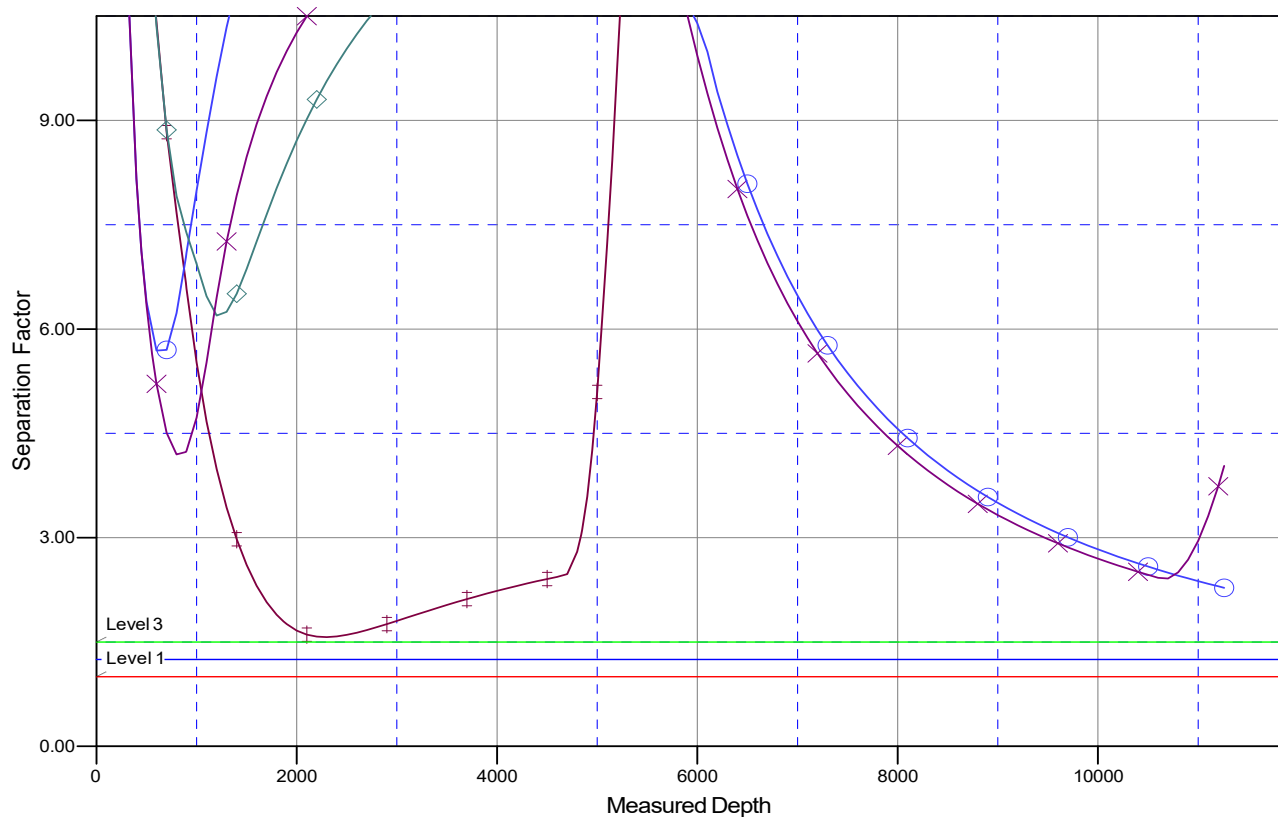
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Coordinates are relative to: # 137H - Slot 3

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

Grid Convergence at Surface is: 0.08°

Separation Factor Plot



LEGEND

- # 135H, Original Drilling, APD V0
- # 136H, Original Drilling, APD V0
- # 134H, Original Drilling, APD V0
- # 131H, Original Drilling, APD V0
- # 130H, Original Drilling, APD V0
- Mesa #4 SWD, OH, OH V0



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

#137H CROW CANYON UNIT

Lease: NMNM026047 Unit: NMNM135203A
SH: NW¼SW¼ Section 16, T. 24 N., R. 8 W.
San Juan County, New Mexico
BH: NW¼SW¼ Section 8, T.24 N., R. 8 W.
San Juan 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 all casing strings below the conductor 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. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.
- D. ☐ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, New Mexico State Office, Reservoir Management Group, 301 Dinosaur Trail, Santa Fe, New Mexico 87508.
The effective date of the agreement must be **prior** to any sales.
- E. ☐ 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 and regulations, 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 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. BOP equipment (except the annular preventer) shall be tested utilizing a test plug to full working pressure for 10 minutes. No bleed-off of pressure is acceptable. (See 43 CFR 3172.6(b)(9)(ii)).
- G. The operator shall have sufficient weighting materials and lost circulation materials on location in the event of a pressure kick or in the event of lost circulation. (See 43 CFR 3172.8(a)).
- H. The flare line(s) discharge shall be located not less than 100 feet from the well head, having straight lines unless turns are targeted with running tees, and shall be positioned downwind of the prevailing wind direction and shall be anchored. The flare system shall have an effective method for ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare. (See 43 CFR 3172.8(b)(7)).
- I. 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 sundry within three business days. **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 Virgil Lucero at 505-793-1836.**
- J. **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.**
- K. Unless drilling operations are commenced within three years according to 43 CFR 3171.14, approval of the Application for Permit to Drill will expire. No extensions will be granted.

- L. 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 times, unless the well is secured with blowout preventers or cement plugs.
- M. 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.
- N. **Commingling:** No production (oil, gas, and water) from the subject well should start until Sundry Notices (if necessary) granting variances from applicable regulations as related to commingling and off-lease measurement are approved by this office. (See 43 CFR 3173.14)

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 online through AFMSS 2 within 30 days after the work is completed.
 - 1. Provide 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 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 way 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 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.
- C. Production Startup Notification is required no later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site or resumes production in the case of a well which has been off production for more than 90 days. The operator shall notify the Authorized Officer by letter or Sundry Notice, Form 3160-5, or orally to be followed by a letter or Sundry Notice, of the date on which such production has begun or resumed. CFR 43 3162.4-1(c).

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, 20 MMCF following its (completion)(recompletion), or flowback has been routed to the production separator, whichever first occurs, without the prior, written approval of the authorized officer in accordance with 43 CFR 3179.81. 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 beginning of flowback following completion or recompletion.*

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 to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.I.
- 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.I. 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.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 471676

CONDITIONS

Operator: DJR OPERATING, LLC 200 Energy Court Farmington, NM 87401	OGRID: 371838
	Action Number: 471676
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
scrues76	Cement is required to circulate on both surface and intermediate1 strings of casing.	6/6/2025
scrues76	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	6/6/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	7/18/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	7/18/2025
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	7/18/2025
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	7/18/2025