

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. 30-045-38319
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
13. State		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

(Continued on page 2)

*(Instructions on page 2)



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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-38319	² Pool Code 5860	³ Pool Name BISTI, S-GALLUP (O)
⁴ Property Code 334695	⁵ Property Name PONDEROSA	⁶ Well Number 116H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6801

¹⁰ Surface Location

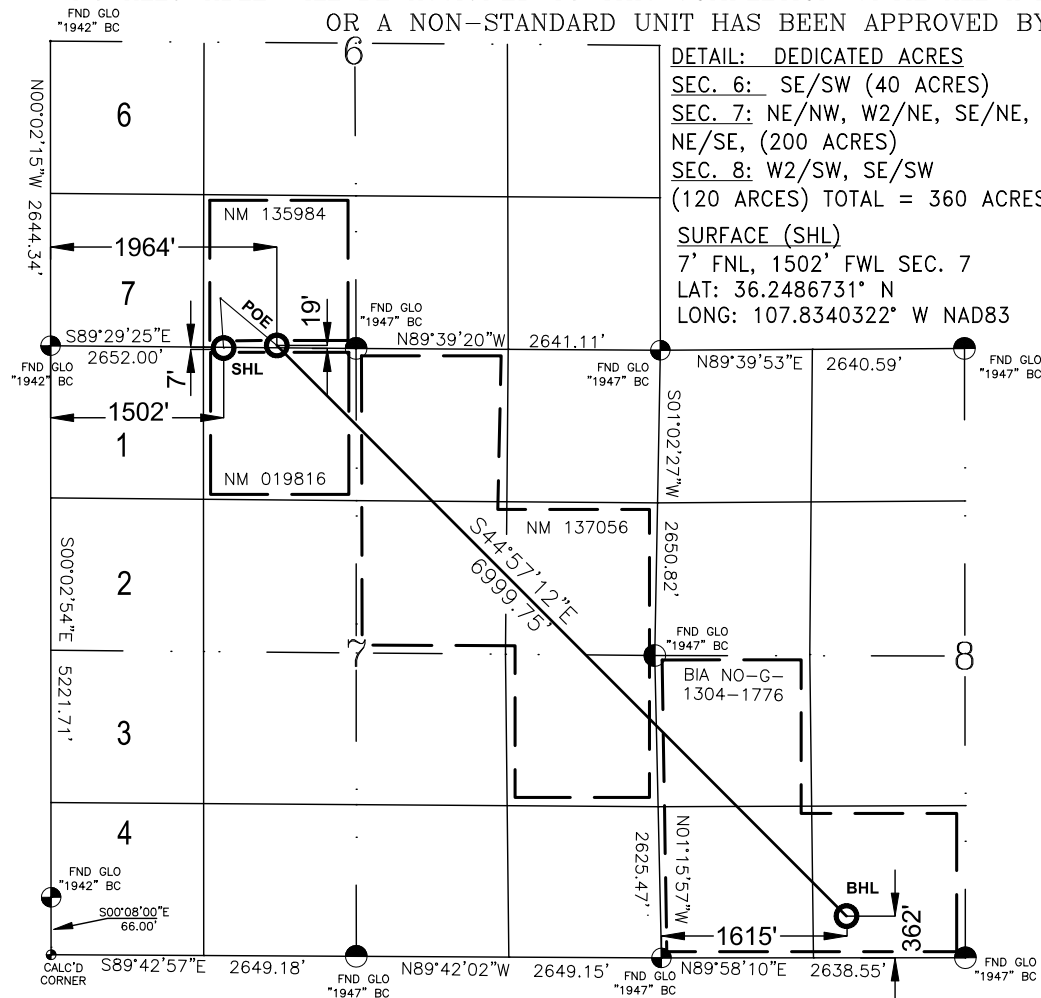
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	7	23-N	9-W		7	NORTH	1502	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	8	23-N	9-W		362	SOUTH	1615	WEST	SAN JUAN

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

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



DETAIL: DEDICATED ACRES
SEC. 6: SE/SW (40 ACRES)
SEC. 7: NE/NW, W2/NE, SE/NE,
NE/SE, (200 ACRES)
SEC. 8: W2/SW, SE/SW
(120 ACRES) TOTAL = 360 ACRES
SURFACE (SHL)
7' FNL, 1502' FWL SEC. 7
LAT: 36.2486731° N
LONG: 107.8340322° W NAD83

¹⁷ OPERATOR CERTIFICATION

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

Shaw-Marie Ford 03/18/22

Signature Date

Shaw-Marie Ford

Printed Name

sford@djrlc.com

E-mail Address

¹⁸ SURVEYOR CERTIFICATION

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

NOVEMBER 11, 2021

Date of Survey

Signature and Seal of Professional Surveyor



GLEN W. RUSSELL

Certificate Number

15703

POINT OF ENTRY (POE)

19' FSL, 1964' FWL SEC. 6

LAT: 36.2487366° N

LONG: 107.8324652° W NAD83

BOTTOM HOLE (BHL)

362' FSL, 1615' FWL SEC. 8

LAT: 36.2351537° N

LONG: 107.8156769° W NAD83

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: DJR Operating, LLC **OGRID:** 371838 **Date:** 09 / 06 / 2023

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
Ponderosa 114H	TBD	C-07-23N-09W	30 FNL x 1534 FWL	383	488	136
Ponderosa 115H	TBD	N-06-23N-09W	4 FSL x 1485 FWL	407	519	145
Ponderosa 116H	TBD	C-07-23N-09W	7 FNL x 1502 FWL	420	535	149
Ponderosa 120H	TBD	C-07-23N-09W	19 FNL x 1518 FWL	371	472	132
Ponderosa 136H	TBD	C-07-23N-09W	41 FNL x 1550 FWL	337	430	120

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

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Ponderosa 114H	TBD	07/01/2024	07/08/2024	08/15/2024	08/25/2024	08/27/2024
Ponderosa 115H	TBD	07/08/2024	07/15/2024	08/15/2024	08/27/2024	08/29/2024
Ponderosa 116H	TBD	07/15/2024	07/22/2024	08/15/2024	08/28/2024	08/30/2024
Ponderosa 120H	TBD	07/22/2024	07/29/2024	08/15/2024	08/29/2024	09/01/2024
Ponderosa 136H	TBD	07/29/2024	08/06/2024	08/15/2024	08/30/2024	09/02/2024

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

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

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

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

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature: <i>Shaw-Marie Ford</i>
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@djrlc.com
Date: 09/06/2023
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
Ponderosa 114H, 115H, 116H, 120H and 136H
NENW C-07-23N-09W

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
Ponderosa 114H, 115H, 116H, 120H and 136H
NENW C-07-23N-09W

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
Ponderosa 114H, 115H, 116H, 120H and 136H
NENW C-07-23N-09W

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
Ponderosa 114H, 115H, 116H, 120H and 136H
NENW C-07-23N-09W

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

Ponderosa #116H

San Juan County, New Mexico

Surface Location

1502-ft FWL & 7-ft FNL
 Sec 7 T23 R9
 Graded Elevation 6801' MSL
 RKB Elevation 6815' (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.2486731° N
 Longitude 107.8340322° W

Kick Off Point for Horizontal Build Curve

4148-ft MD
 4122-ft TVD

Local Coordinates (from SHL)

434-ft North
 30-ft West

Heel Location (Pay zone entry)

1964-ft FWL & 19-ft FSL
 Sec 6 T23 R9

Heel Geographical Coordinates (NAD-83)

Latitude 36.2487366° N
 Longitude 107.83246520° W

Bottom Hole Location (TD)

1615-ft FWL & 362-ft FSL
 Sec 8 T23 R9

BHL Geographical Coordinates (NAD-83)

Latitude 36.2351537° N
 Longitude 107.8156769° W

Well objectives

This well is planned as a 7000-ft lateral in the Gallup C sand.

Bottom Hole temperature and pressure

The temperature in the Gallup C horizontal objective is 134°F. Bottom hole pressure in the Gallup C is forecast to be 1985 psi.

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

Name	MD (ft)	TVD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)	Planned Mud Weight (ppg)
Ojo Alamo	421	421	Sd	W	8.3	8.4 – 8.8
Kirtland	529	529	Sh	-	8.3	8.4 – 8.8
Fruitland	916	914	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1170	1166	Sd	W	8.3	9.0 - 9.5
Lewis	1335	1330	Sh	-		9.0 - 9.5
Chacra	1970	1960	Sd	-	8.3	9.0 - 9.5
Menefee	2598	2583	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	3612	3590	Sd	-	8.3	9.0 - 9.5
Mancos	3768	3744	Sh	-		9.0 - 9.5
Mancos Silt	4075	4049	Slt	O/G	6.6	9.0 - 9.5
Gallup A	4622	4565	Slt	O/G	6.6	9.0 - 9.5
Gallup B	4693	4619	Sd	O/G	6.6	8.8 - 9.0
Gallup C	4860	4723	Sd	O/G	6.6	8.8 - 9.0
Target	5211	4815	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	5152	surf	4813	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	4873	12209	4729	4769	4873

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	3648-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	353	241
Volume (bbls)	147	64
Volume (cu.ft.)	827	360
Excess %	55	55



Rev 0

4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	4873-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	616
Volume (bbls)	172
Volume (cu.ft)	963
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 – 5152	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5152 – 12209	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.



GL 6801' & RKB 14' @ 6815ft

	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
	0	0	1909815.49	2722885.60	36.24867310	-107.83403220

Plan: APD (# 116H/Original Drilling)

Created By: Janie Collins Date: 15:19, August 31 2021

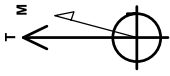
DESIGN TARGET DETAILS

	+N/S	+E/W	Northing	Easting	Latitude	Longitude
Heel	23	462	1909838.61	2723347.64	36.24873660	-107.83246520
Toe	4769	5413	1904894.60	2728298.67	36.23515370	-107.81567690

MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSec
0	0.00	0.00	0	0	0	0.00	0.00	0
450	0.00	0.00	450	0	0	0.00	0.00	0
804	7.09	356.07	804	22	-2	2.00	356.07	-16
4148	7.09	356.07	4122	434	-310	0.00	0.00	-14
5211	90.38	134.96	4815	23	462	9.00	138.64	326
12208	90.38	134.96	4769	-4921	5413	0.00	0.00	7316

SECTION DETAILS

MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSec
0	0.00	0.00	0	0	0	0.00	0.00	0
450	0.00	0.00	450	0	0	0.00	0.00	0
804	7.09	356.07	804	22	-2	2.00	356.07	-16
4148	7.09	356.07	4122	434	-310	0.00	0.00	-14
5211	90.38	134.96	4815	23	462	9.00	138.64	326
12208	90.38	134.96	4769	-4921	5413	0.00	0.00	7316



Azimuths to True North
Magnetic North: 10.02°

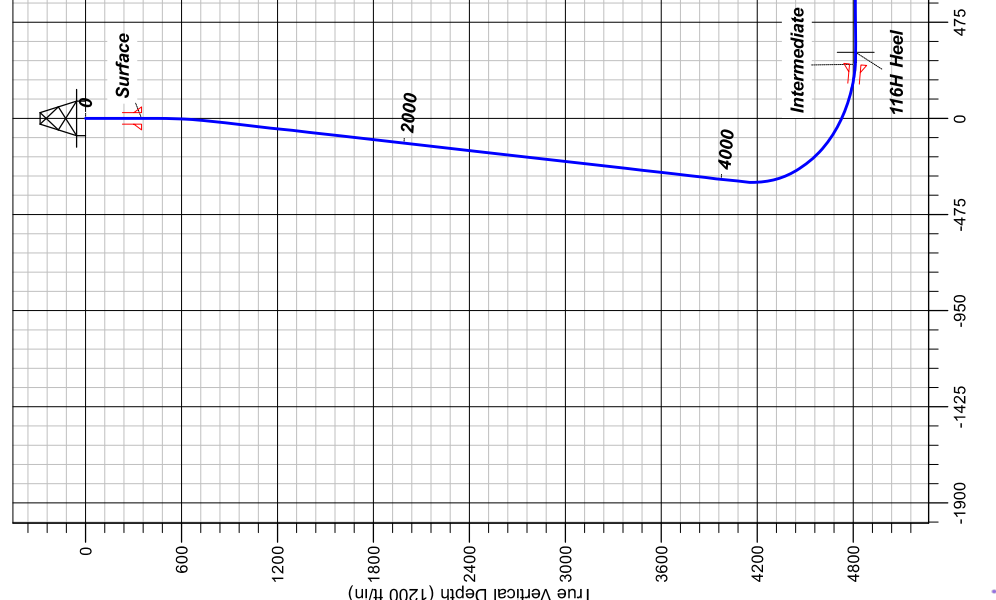
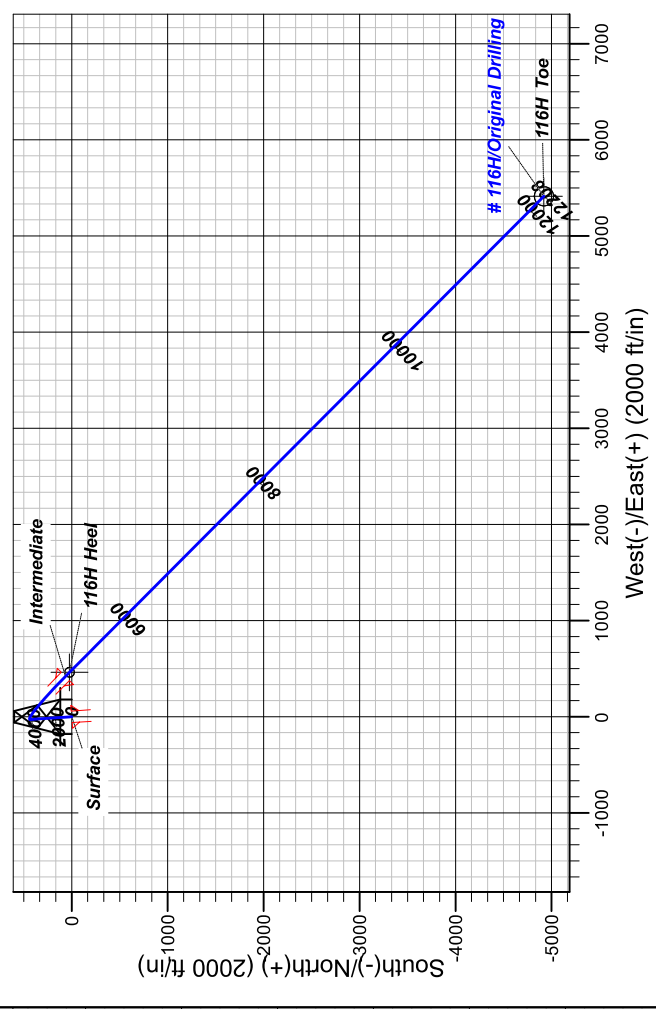
Magnetic Field
Strength: 50613.23
Dip Angle: 63.07°
Date: 12/31/2009
Model: IGRF2005.10

CASING DETAILS

TVD	MD	Name
350	350	Surface
4813	5152	Intermediate

FORMATION DETAILS

MDPath	TVPDPath	Formation
421	421	Ojo Alamo
529	529	Kirtland
914	914	Fruitland
1166	1166	Pictured Cliffs
1330	1330	Lewis
1960	1960	Chacra
2583	2583	Menefee
3590	3590	Point Lookout
3744	3744	Mancos
4049	4049	Mancos Silt
4565	4565	Gallup A
4619	4619	Gallup B
4723	4723	Gallup C



#116H/Original Drilling/APD



DJR Operating

Ponderosa Unit

C07 2309

116H - Slot 4

Original Drilling

Plan: APD

Standard Planning Report

30 August, 2021





Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 116H - Slot 4
Company:	DJR Operating	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Project:	Ponderosa Unit	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site:	C07 2309	North Reference:	True
Well:	# 116H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Project	Ponderosa 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	C07 2309				
Site Position:		Northing:	1,909,781.02 usft	Latitude:	36.24857840
From:	Lat/Long	Easting:	2,722,934.49 usft	Longitude:	-107.83386640
Position Uncertainty:	0 ft	Slot Radius:	13.20 in	Grid Convergence:	0.00

Well	# 116H - Slot 4					
Well Position	+N/-S	34 ft	Northing:	1,909,815.49 usft	Latitude:	36.2486731
	+E/-W	-49 ft	Easting:	2,722,885.60 usft	Longitude:	-107.8340322
Position Uncertainty		0 ft	Wellhead Elevation:		Ground Level:	6801

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	10.02	63.07	50.613.72793240

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	132.27

Plan Survey Tool Program			Date	7/26/2021	
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0	12,208	APD (Original Drilling)	MWD+HDGM	
				OWSG MWD + HDGM	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00	
450	0.00	0.00	450	0	0	0.00	0.00	0.00	0.00	
804	7.09	356.07	804	22	-2	2.00	2.00	0.00	356.07	
4148	7.09	356.07	4122	434	-30	0.00	0.00	0.00	0.00	
5211	90.38	134.96	4815	23	462	9.00	7.83	13.06	138.64	116H Heel
12,208	90.38	134.96	4769	-4921	5413	0.00	0.00	0.00	0.00	116H Toe



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 116H - Slot 4
Company:	DJR Operating	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Project:	Ponderosa Unit	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site:	C07 2309	North Reference:	True
Well:	# 116H	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	356.07	500	0	0	0	2.00	2.00	0.00
600	3.00	356.07	600	4	0	-3	2.00	2.00	0.00
700	5.00	356.07	700	11	-1	-8	2.00	2.00	0.00
800	7.00	356.07	799	21	-1	-15	2.00	2.00	0.00
804	7.09	356.07	804	22	-2	-16	2.00	2.00	0.00
900	7.09	356.07	898	34	-2	-24	0.00	0.00	0.00
1000	7.09	356.07	998	46	-3	-33	0.00	0.00	0.00
1100	7.09	356.07	1097	58	-4	-42	0.00	0.00	0.00
1200	7.09	356.07	1196	71	-5	-51	0.00	0.00	0.00
1300	7.09	356.07	1295	83	-6	-60	0.00	0.00	0.00
1400	7.09	356.07	1395	95	-7	-69	0.00	0.00	0.00
1500	7.09	356.07	1494	107	-7	-78	0.00	0.00	0.00
1600	7.09	356.07	1593	120	-8	-87	0.00	0.00	0.00
1700	7.09	356.07	1692	132	-9	-96	0.00	0.00	0.00
1800	7.09	356.07	1791	144	-10	-104	0.00	0.00	0.00
1900	7.09	356.07	1891	157	-11	-113	0.00	0.00	0.00
2000	7.09	356.07	1990	169	-12	-122	0.00	0.00	0.00
2100	7.09	356.07	2089	181	-12	-131	0.00	0.00	0.00
2200	7.09	356.07	2188	194	-13	-140	0.00	0.00	0.00
2300	7.09	356.07	2288	206	-14	-149	0.00	0.00	0.00
2400	7.09	356.07	2387	218	-15	-158	0.00	0.00	0.00
2500	7.09	356.07	2486	231	-16	-167	0.00	0.00	0.00
2600	7.09	356.07	2585	243	-17	-176	0.00	0.00	0.00
2700	7.09	356.07	2685	255	-18	-185	0.00	0.00	0.00
2800	7.09	356.07	2784	268	-18	-194	0.00	0.00	0.00
2900	7.09	356.07	2883	280	-19	-202	0.00	0.00	0.00
3000	7.09	356.07	2982	292	-20	-211	0.00	0.00	0.00
3100	7.09	356.07	3082	305	-21	-220	0.00	0.00	0.00
3200	7.09	356.07	3181	317	-22	-229	0.00	0.00	0.00
3300	7.09	356.07	3280	329	-23	-238	0.00	0.00	0.00
3400	7.09	356.07	3379	341	-23	-247	0.00	0.00	0.00
3500	7.09	356.07	3478	354	-24	-256	0.00	0.00	0.00
3600	7.09	356.07	3578	366	-25	-265	0.00	0.00	0.00
3700	7.09	356.07	3677	378	-26	-274	0.00	0.00	0.00
3800	7.09	356.07	3776	391	-27	-283	0.00	0.00	0.00
3900	7.09	356.07	3875	403	-28	-292	0.00	0.00	0.00
4000	7.09	356.07	3975	415	-29	-300	0.00	0.00	0.00
4100	7.09	356.07	4074	428	-29	-309	0.00	0.00	0.00
4148	7.09	356.07	4122	434	-30	-314	0.00	0.00	0.00
4200	4.72	36.95	4173	438	-29	-316	9.00	-4.55	78.64
4300	9.56	105.85	4273	439	-18	-309	9.00	4.84	68.90
4400	17.95	120.29	4370	429	3	-287	9.00	8.39	14.44
4500	26.73	125.58	4462	409	35	-249	9.00	8.78	5.28
4600	35.61	128.37	4548	377	76	-198	9.00	8.89	2.79
4700	44.54	130.16	4624	337	126	-133	9.00	8.93	1.79
4800	53.49	131.46	4690	287	183	-58	9.00	8.95	1.30
4900	62.45	132.48	4743	231	246	27	9.00	8.96	1.03
5000	71.41	133.35	4782	168	313	119	9.00	8.96	0.87



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 116H - Slot 4
Company:	DJR Operating	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Project:	Ponderosa Unit	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site:	C07 2309	North Reference:	True
Well:	# 116H	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	80.38	134.13	4806	101	383	215	9.00	8.97	0.78	
5200	89.35	134.87	4815	31	454	315	9.00	8.97	0.74	
5211	90.38	134.96	4815	23	462	326	9.00	8.97	0.73	
5300	90.38	134.96	4814	-39	525	415	0.00	0.00	0.00	
5400	90.38	134.96	4814	-110	595	515	0.00	0.00	0.00	
5500	90.38	134.96	4813	-181	666	615	0.00	0.00	0.00	
5600	90.38	134.96	4812	-251	737	714	0.00	0.00	0.00	
5700	90.38	134.96	4812	-322	808	814	0.00	0.00	0.00	
5800	90.38	134.96	4811	-393	878	914	0.00	0.00	0.00	
5900	90.38	134.96	4810	-463	949	1014	0.00	0.00	0.00	
6000	90.38	134.96	4810	-534	1020	1114	0.00	0.00	0.00	
6100	90.38	134.96	4809	-605	1091	1214	0.00	0.00	0.00	
6200	90.38	134.96	4809	-675	1162	1314	0.00	0.00	0.00	
6300	90.38	134.96	4808	-746	1232	1414	0.00	0.00	0.00	
6400	90.38	134.96	4807	-817	1303	1514	0.00	0.00	0.00	
6500	90.38	134.96	4807	-887	1374	1613	0.00	0.00	0.00	
6600	90.38	134.96	4806	-958	1445	1713	0.00	0.00	0.00	
6700	90.38	134.96	4805	-1029	1515	1813	0.00	0.00	0.00	
6800	90.38	134.96	4805	-1099	1586	1913	0.00	0.00	0.00	
6900	90.38	134.96	4804	-1170	1657	2013	0.00	0.00	0.00	
7000	90.38	134.96	4803	-1241	1728	2113	0.00	0.00	0.00	
7100	90.38	134.96	4803	-1311	1798	2213	0.00	0.00	0.00	
7200	90.38	134.96	4802	-1382	1869	2313	0.00	0.00	0.00	
7300	90.38	134.96	4801	-1453	1940	2413	0.00	0.00	0.00	
7400	90.38	134.96	4801	-1523	2011	2512	0.00	0.00	0.00	
7500	90.38	134.96	4800	-1594	2081	2612	0.00	0.00	0.00	
7600	90.38	134.96	4799	-1665	2152	2712	0.00	0.00	0.00	
7700	90.38	134.96	4799	-1735	2223	2812	0.00	0.00	0.00	
7800	90.38	134.96	4798	-1806	2294	2912	0.00	0.00	0.00	
7900	90.38	134.96	4797	-1877	2364	3012	0.00	0.00	0.00	
8000	90.38	134.96	4797	-1947	2435	3112	0.00	0.00	0.00	
8100	90.38	134.96	4796	-2018	2506	3212	0.00	0.00	0.00	
8200	90.38	134.96	4795	-2089	2577	3312	0.00	0.00	0.00	
8300	90.38	134.96	4795	-2159	2647	3411	0.00	0.00	0.00	
8400	90.38	134.96	4794	-2230	2718	3511	0.00	0.00	0.00	
8500	90.38	134.96	4793	-2301	2789	3611	0.00	0.00	0.00	
8600	90.38	134.96	4793	-2371	2860	3711	0.00	0.00	0.00	
8700	90.38	134.96	4792	-2442	2931	3811	0.00	0.00	0.00	
8800	90.38	134.96	4791	-2512	3001	3911	0.00	0.00	0.00	
8900	90.38	134.96	4791	-2583	3072	4011	0.00	0.00	0.00	
9000	90.38	134.96	4790	-2654	3143	4111	0.00	0.00	0.00	
9100	90.38	134.96	4789	-2724	3214	4211	0.00	0.00	0.00	
9200	90.38	134.96	4789	-2795	3284	4310	0.00	0.00	0.00	
9300	90.38	134.96	4788	-2866	3355	4410	0.00	0.00	0.00	
9400	90.38	134.96	4787	-2936	3426	4510	0.00	0.00	0.00	
9500	90.38	134.96	4787	-3007	3497	4610	0.00	0.00	0.00	
9600	90.38	134.96	4786	-3078	3567	4710	0.00	0.00	0.00	
9700	90.38	134.96	4786	-3148	3638	4810	0.00	0.00	0.00	
9800	90.38	134.96	4785	-3219	3709	4910	0.00	0.00	0.00	
9900	90.38	134.96	4784	-3290	3780	5010	0.00	0.00	0.00	
10,000	90.38	134.96	4784	-3360	3850	5109	0.00	0.00	0.00	
10,100	90.38	134.96	4783	-3431	3921	5209	0.00	0.00	0.00	
10,200	90.38	134.96	4782	-3502	3992	5309	0.00	0.00	0.00	
10,300	90.38	134.96	4782	-3572	4063	5409	0.00	0.00	0.00	



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 116H - Slot 4
Company:	DJR Operating	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Project:	Ponderosa Unit	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site:	C07 2309	North Reference:	True
Well:	# 116H	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	90.38	134.96	4781	-3643	4133	5509	0.00	0.00	0.00	
10,500	90.38	134.96	4780	-3714	4204	5609	0.00	0.00	0.00	
10,600	90.38	134.96	4780	-3784	4275	5709	0.00	0.00	0.00	
10,700	90.38	134.96	4779	-3855	4346	5809	0.00	0.00	0.00	
10,800	90.38	134.96	4778	-3926	4416	5909	0.00	0.00	0.00	
10,900	90.38	134.96	4778	-3996	4487	6008	0.00	0.00	0.00	
11,000	90.38	134.96	4777	-4067	4558	6108	0.00	0.00	0.00	
11,100	90.38	134.96	4776	-4138	4629	6208	0.00	0.00	0.00	
11,200	90.38	134.96	4776	-4208	4700	6308	0.00	0.00	0.00	
11,300	90.38	134.96	4775	-4279	4770	6408	0.00	0.00	0.00	
11,400	90.38	134.96	4774	-4350	4841	6508	0.00	0.00	0.00	
11,500	90.38	134.96	4774	-4420	4912	6608	0.00	0.00	0.00	
11,600	90.38	134.96	4773	-4491	4983	6708	0.00	0.00	0.00	
11,700	90.38	134.96	4772	-4562	5053	6808	0.00	0.00	0.00	
11,800	90.38	134.96	4772	-4632	5124	6907	0.00	0.00	0.00	
11,900	90.38	134.96	4771	-4703	5195	7007	0.00	0.00	0.00	
12,000	90.38	134.96	4770	-4774	5266	7107	0.00	0.00	0.00	
12,100	90.38	134.96	4770	-4844	5336	7207	0.00	0.00	0.00	
12,200	90.38	134.96	4769	-4915	5407	7307	0.00	0.00	0.00	
12,208	90.38	134.96	4769	-4921	5413	7316	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	Longitude
- hit/miss target									
- Shape									
116H Toe	0.00	0.00	4769	-4921	5413	1,904,894.60	2,728,298.67	36.23515370	-107.81567690
- plan hits target center									
- Circle (radius 100)									
116H Heel	0.00	0.00	4815	23	462	1,909,838.61	2,723,347.64	36.24873660	-107.83246520
- plan hits target center									
- Circle (radius 50)									

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
350	350	Surface	9.63	12.25		
5152	4813	Intermediate	7.00	8.75		



Database:	Grand Junction	Local Co-ordinate Reference:	Well # 116H - Slot 4
Company:	DJR Operating	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Project:	Ponderosa Unit	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site:	C07 2309	North Reference:	True
Well:	# 116H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
421	421	Ojo Alamo		0.00	0.00	
529	529	Kirtland		0.00	0.00	
916	914	Fruitland		0.00	0.00	
1170	1166	Pictured Cliffs		0.00	0.00	
1335	1330	Lewis		0.00	0.00	
1970	1960	Chacra		0.00	0.00	
2598	2583	Menefee		0.00	0.00	
3612	3590	Point Lookout		0.00	0.00	
3768	3744	Mancos		0.00	0.00	
4075	4049	Mancos Silt		0.00	0.00	
4622	4565	Gallup A		0.00	0.00	
4693	4619	Gallup B		0.00	0.00	
4860	4723	Gallup C		0.00	0.00	



DJR Operating

Ponderosa Unit

C07 2309

116H

Original Drilling

APD

Anticollision Report

30 August, 2021





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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 2000ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	7/26/2021		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0	12,208	APD (Original Drilling)	MWD+HDGM	OWSG MWD + HDGM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
C07 2309						
# 114H - Original Drilling - APD	598	599	40	36	10.237	CC
# 114H - Original Drilling - APD	600	602	40	36	10.199	ES
# 114H - Original Drilling - APD	11,000	11,460	1281	946	3.825	SF
# 115H - Original Drilling - APD	450	450	20	17	7.095	CC
# 115H - Original Drilling - APD	500	500	20	17	6.350	ES
# 115H - Original Drilling - APD	11,700	11,669	595	248	1.714	SF
# 120H - Original Drilling - APD	450	450	20	17	7.058	CC
# 120H - Original Drilling - APD	1100	1101	23	16	3.047	ES
# 120H - Original Drilling - APD	1600	1601	31	20	2.716	SF
# 136H - Original Drilling - APD	608	611	59	56	15.091	CC, ES
# 136H - Original Drilling - APD	11,000	10,941	1282	964	4.037	SF

Offset Design: C07 2309 - # 114H - Original Drilling - APD													Offset Site Error: 0 ft	
Survey Program: 0-MWD+HDGM													Offset Well Error: 0 ft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0	0	0	0	0	0	125.38	-23	33	40					
100	100	100	100	0	0	125.38	-23	33	40	40	0.31	129.505		
200	200	200	200	1	1	125.38	-23	33	40	39	1.03	38.942		
300	300	300	300	1	1	125.38	-23	33	40	38	1.74	22.917		
400	400	400	400	1	1	125.38	-23	33	40	37	2.46	16.235		
450	450	450	450	1	1	125.38	-23	33	40	37	2.82	14.170		
500	500	501	501	2	2	130.18	-23	32	40	37	3.17	12.556		
598	598	599	599	2	2	136.98	-23	29	40	36	3.87	10.237	CC	
600	600	602	601	2	2	137.19	-23	29	40	36	3.88	10.199	ES	
700	700	702	702	2	2	150.87	-23	21	41	36	4.59	8.874		
804	804	806	805	3	3	169.06	-23	10	47	41	5.36	8.735		
900	898	900	898	3	3	-175.62	-24	-3	57	51	6.07	9.420		
1000	998	998	994	3	3	-162.55	-24	-20	72	65	6.81	10.526		
1100	1097	1094	1089	4	4	-152.22	-24	-40	90	82	7.54	11.920		
1200	1196	1189	1181	4	4	-144.11	-24	-62	112	104	8.27	13.519		
1300	1295	1282	1270	5	5	-137.69	-25	-87	137	128	8.99	15.262		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 114H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis			Offset Wellbore Centre		Distance				Rule Assigned:		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1400	1395	1374	1358	5	5	-132.53	-25	-115	166	156	9.70	17.110		
1500	1494	1467	1446	5	6	-128.37	-25	-145	197	187	10.44	18.893		
1600	1593	1561	1535	6	6	-125.30	-26	-176	229	218	11.19	20.471		
1700	1692	1655	1624	6	7	-122.98	-26	-206	262	250	11.96	21.876		
1800	1791	1749	1713	7	7	-121.17	-26	-237	294	282	12.73	23.127		
1900	1891	1843	1802	7	8	-119.72	-27	-267	327	314	13.50	24.244		
2000	1990	1938	1891	7	8	-118.53	-27	-298	360	346	14.28	25.245		
2100	2089	2032	1980	8	9	-117.54	-27	-328	394	379	15.06	26.145		
2200	2188	2126	2069	8	10	-116.71	-28	-359	427	411	15.84	26.959		
2300	2288	2220	2158	8	10	-116.00	-28	-389	460	444	16.62	27.697		
2400	2387	2314	2247	9	11	-115.38	-28	-420	494	476	17.41	28.369		
2500	2486	2408	2336	9	11	-114.84	-29	-450	527	509	18.20	28.983		
2600	2585	2502	2426	10	12	-114.37	-29	-480	561	542	18.98	29.546		
2700	2685	2596	2515	10	13	-113.95	-29	-511	594	575	19.77	30.065		
2800	2784	2690	2604	10	13	-113.57	-30	-541	628	608	20.56	30.543		
2900	2883	2785	2693	11	14	-113.23	-30	-572	662	640	21.35	30.986		
3000	2982	2879	2782	11	14	-112.93	-30	-602	695	673	22.15	31.396		
3100	3082	2973	2871	12	15	-112.65	-31	-633	729	706	22.94	31.779		
3200	3181	3067	2960	12	15	-112.40	-31	-663	763	739	23.73	32.135		
3300	3280	3161	3049	12	16	-112.17	-32	-694	796	772	24.53	32.468		
3400	3379	3255	3138	13	17	-111.95	-32	-724	830	805	25.32	32.780		
3500	3478	3349	3227	13	17	-111.76	-32	-755	864	838	26.11	33.072		
3600	3578	3443	3316	14	18	-111.58	-33	-785	897	870	26.91	33.347		
3700	3677	3538	3405	14	18	-111.41	-33	-816	931	903	27.70	33.607		
3800	3776	3632	3494	14	19	-111.25	-33	-846	965	936	28.50	33.851		
3900	3875	3726	3583	15	20	-111.10	-34	-877	998	969	29.30	34.082		
4000	3975	3820	3672	15	20	-110.97	-34	-907	1032	1002	30.09	34.300		
4100	4074	3914	3761	16	21	-110.84	-34	-938	1066	1035	30.89	34.507		
4148	4122	3959	3804	16	21	-110.78	-35	-952	1082	1051	31.27	34.603		
4150	4124	3961	3806	16	21	-111.81	-35	-953	1083	1052	31.29	34.606		
4200	4173	4008	3850	16	21	-152.95	-35	-968	1100	1069	31.67	34.745		
4250	4223	4054	3893	16	22	158.40	-35	-983	1119	1087	32.01	34.959		
4300	4273	4098	3936	16	22	135.82	-35	-997	1139	1107	32.32	35.244		
4350	4322	4142	3977	16	22	125.30	-35	-1011	1160	1128	32.59	35.597		
4400	4370	4183	4016	16	23	119.12	-35	-1025	1182	1149	32.83	36.013		
4450	4417	4254	4083	17	23	115.52	-37	-1047	1205	1172	33.31	36.193		
4500	4462	4395	4220	17	24	114.02	-56	-1075	1227	1193	34.18	35.900		
4550	4506	4535	4354	17	24	112.31	-96	-1081	1246	1211	34.79	35.808		
4600	4548	4755	4544	17	24	110.25	-197	-1046	1260	1225	35.49	35.514		
4650	4587	4947	4676	17	24	106.93	-315	-973	1270	1234	36.41	34.887		
4700	4624	5088	4745	17	25	103.60	-413	-899	1276	1238	37.68	33.856		
4750	4658	5238	4788	17	25	99.71	-522	-805	1278	1238	39.78	32.123		
4800	4690	5368	4798	17	26	95.96	-615	-716	1278	1236	42.13	30.334		
4810	4695	5376	4798	17	26	95.68	-621	-710	1278	1236	42.33	30.194		
4850	4718	5409	4798	18	27	94.60	-644	-687	1278	1235	43.13	29.637		
4900	4743	5453	4798	18	27	93.32	-675	-656	1279	1235	44.22	28.920		
4950	4764	5498	4798	18	28	92.16	-706	-624	1280	1235	45.40	28.189		
5000	4782	5544	4797	19	28	91.16	-739	-591	1281	1234	46.71	27.426		
5050	4796	5592	4797	19	29	90.34	-773	-557	1282	1234	48.10	26.654		
5100	4806	5641	4797	20	30	89.73	-808	-523	1283	1233	49.60	25.864		
5150	4812	5690	4797	21	31	89.33	-843	-488	1283	1232	51.18	25.076		
5200	4815	5740	4796	22	32	89.17	-878	-452	1284	1231	52.85	24.289		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 114H - Original Drilling - APD											Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM											Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
5211	4815	5752	4796	22	32	89.16	-886	-444	1284	1230	53.24	24.111
5300	4814	5840	4796	23	34	89.16	-948	-382	1284	1227	56.38	22.768
5400	4814	5940	4795	25	35	89.17	-1019	-311	1284	1223	60.16	21.336
5500	4813	6040	4795	27	38	89.17	-1090	-240	1283	1219	64.14	20.009
5600	4812	6140	4794	29	40	89.18	-1160	-169	1283	1215	68.30	18.792
5700	4812	6240	4793	31	42	89.18	-1231	-98	1283	1211	72.59	17.680
5800	4811	6340	4793	33	44	89.19	-1301	-27	1283	1206	76.99	16.668
5900	4810	6440	4792	35	46	89.19	-1372	43	1283	1202	81.49	15.747
6000	4810	6540	4792	37	49	89.19	-1443	114	1283	1197	86.06	14.909
6100	4809	6640	4791	40	51	89.20	-1513	185	1283	1192	90.70	14.145
6200	4809	6740	4791	42	53	89.20	-1584	256	1283	1187	95.40	13.447
6300	4808	6840	4790	44	56	89.21	-1654	327	1283	1183	100.15	12.809
6400	4807	6940	4790	47	58	89.21	-1725	397	1283	1178	104.93	12.224
6500	4807	7040	4789	49	61	89.21	-1796	468	1283	1173	109.76	11.686
6600	4806	7140	4788	52	63	89.22	-1866	539	1283	1168	114.61	11.191
6700	4805	7240	4788	54	65	89.22	-1937	610	1282	1163	119.49	10.733
6800	4805	7340	4787	56	68	89.23	-2007	681	1282	1158	124.40	10.309
6900	4804	7440	4787	59	70	89.23	-2078	752	1282	1153	129.32	9.915
7000	4803	7540	4786	61	73	89.23	-2149	822	1282	1148	134.27	9.550
7100	4803	7640	4786	64	75	89.24	-2219	893	1282	1143	139.23	9.209
7200	4802	7740	4785	66	78	89.24	-2290	964	1282	1138	144.20	8.890
7300	4801	7840	4784	69	80	89.25	-2360	1035	1282	1133	149.20	8.592
7400	4801	7940	4784	71	83	89.25	-2431	1106	1282	1128	154.20	8.313
7500	4800	8040	4783	74	85	89.26	-2502	1176	1282	1123	159.21	8.051
7600	4799	8140	4783	76	88	89.26	-2572	1247	1282	1117	164.23	7.804
7700	4799	8240	4782	79	90	89.26	-2643	1318	1282	1112	169.27	7.572
7800	4798	8340	4782	81	93	89.27	-2713	1389	1282	1107	174.31	7.352
7900	4797	8440	4781	84	95	89.27	-2784	1460	1281	1102	179.36	7.145
8000	4797	8540	4780	86	98	89.28	-2855	1531	1281	1097	184.41	6.948
8100	4796	8640	4780	89	100	89.28	-2925	1601	1281	1092	189.47	6.762
8200	4795	8740	4779	92	103	89.28	-2996	1672	1281	1087	194.54	6.586
8300	4795	8840	4779	94	106	89.29	-3066	1743	1281	1081	199.61	6.418
8400	4794	8940	4778	97	108	89.29	-3137	1814	1281	1076	204.69	6.258
8500	4793	9040	4778	99	111	89.30	-3208	1885	1281	1071	209.78	6.106
8600	4793	9140	4777	102	113	89.30	-3278	1955	1281	1066	214.86	5.961
8700	4792	9240	4777	104	116	89.30	-3349	2026	1281	1061	219.96	5.823
8800	4791	9340	4776	107	118	89.31	-3419	2097	1281	1056	225.05	5.691
8900	4791	9440	4775	109	121	89.31	-3490	2168	1281	1050	230.15	5.564
9000	4790	9540	4775	112	123	89.32	-3561	2239	1281	1045	235.25	5.443
9100	4789	9640	4774	114	126	89.32	-3631	2310	1280	1040	240.36	5.327
9200	4789	9740	4774	117	128	89.33	-3702	2380	1280	1035	245.46	5.216
9300	4788	9840	4773	120	131	89.33	-3772	2451	1280	1030	250.58	5.109
9400	4787	9940	4773	122	134	89.33	-3843	2522	1280	1024	255.69	5.007
9500	4787	10,040	4772	125	136	89.34	-3914	2593	1280	1019	260.80	4.908
9600	4786	10,140	4771	127	139	89.34	-3984	2664	1280	1014	265.92	4.813
9700	4786	10,240	4771	130	141	89.35	-4055	2734	1280	1009	271.04	4.722
9800	4785	10,340	4770	132	144	89.35	-4125	2805	1280	1004	276.17	4.634
9900	4784	10,440	4770	135	146	89.35	-4196	2876	1280	998	281.29	4.550
10,000	4784	10,540	4769	138	149	89.36	-4267	2947	1280	993	286.42	4.468
10,100	4783	10,640	4769	140	151	89.36	-4337	3018	1280	988	291.54	4.389
10,200	4782	10,740	4768	143	154	89.37	-4408	3089	1279	983	296.67	4.313
10,300	4782	10,840	4768	145	157	89.37	-4478	3159	1279	978	301.80	4.239



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 114H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM									Rule Assigned:				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)				
10,400	4781	10,940	4767	148	159	89.38	-4549	3230	1279	972	306.94	4.168		
10,500	4780	11,040	4766	150	162	89.38	-4620	3301	1279	967	312.07	4.099		
10,600	4780	11,140	4766	153	164	89.38	-4690	3372	1279	962	317.20	4.033		
10,700	4779	11,240	4765	156	167	89.39	-4761	3443	1279	957	322.34	3.968		
10,800	4778	11,340	4765	158	169	89.39	-4831	3513	1279	951	327.48	3.906		
10,900	4778	11,440	4764	161	172	89.40	-4902	3584	1279	946	332.62	3.845		
10,921	4777	11,460	4764	161	172	89.40	-4916	3598	1279	945	333.66	3.833		
11,000	4777	11,460	4764	163	172	89.40	-4916	3598	1281	946	334.98	3.825 SF		
11,100	4776	11,460	4764	166	172	89.40	-4916	3598	1291	957	334.85	3.857		
11,200	4776	11,460	4764	168	172	89.40	-4916	3598	1309	976	332.82	3.933		
11,300	4775	11,460	4764	171	172	89.40	-4916	3598	1334	1005	329.06	4.054		
11,400	4774	11,460	4764	174	172	89.40	-4916	3598	1366	1042	323.83	4.217		
11,500	4774	11,460	4764	176	172	89.40	-4916	3598	1404	1086	317.42	4.423		
11,600	4773	11,460	4764	179	172	89.40	-4916	3598	1448	1138	310.09	4.670		
11,700	4772	11,460	4764	181	172	89.40	-4916	3598	1498	1195	302.14	4.956		
11,800	4772	11,460	4764	184	172	89.40	-4916	3598	1552	1258	293.80	5.282		
11,900	4771	11,460	4764	186	172	89.40	-4916	3598	1611	1325	285.26	5.646		
12,000	4770	11,460	4764	189	172	89.40	-4916	3598	1673	1397	276.71	6.047		
12,100	4770	11,460	4764	192	172	89.40	-4916	3598	1740	1471	268.25	6.485		
12,208	4769	11,460	4764	194	172	89.40	-4916	3598	1815	1556	259.29	6.999		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 115H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis			Offset Wellbore Centre		Distance			Rule Assigned:		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0	0	0	0	0	0	-54.36	12	-16	20					
100	100	100	100	0	0	-54.36	12	-16	20	20	0.31	64.846		
200	200	200	200	1	1	-54.36	12	-16	20	19	1.03	19.499		
300	300	300	300	1	1	-54.36	12	-16	20	18	1.74	11.475		
400	400	400	400	1	1	-54.36	12	-16	20	18	2.46	8.129		
450	450	450	450	1	1	-54.36	12	-16	20	17	2.82	7.095 CC		
500	500	500	500	2	2	-51.35	12	-17	20	17	3.17	6.350 ES		
600	600	599	599	2	2	-58.17	14	-19	22	18	3.88	5.563		
700	700	698	698	2	2	-69.07	18	-25	25	21	4.59	5.497		
804	804	801	800	3	3	-80.55	25	-33	32	27	5.33	6.041		
900	898	895	893	3	3	-86.92	32	-44	42	36	6.02	6.946		
1000	998	994	991	3	3	-89.94	42	-56	53	47	6.77	7.893		
1100	1097	1094	1090	4	4	-91.88	51	-68	65	58	7.52	8.656		
1200	1196	1193	1188	4	4	-93.22	60	-81	77	69	8.28	9.280		
1300	1295	1292	1286	5	5	-94.21	69	-93	89	80	9.05	9.796		
1400	1395	1392	1384	5	5	-94.97	78	-105	100	91	9.82	10.231		
1500	1494	1491	1482	5	5	-95.57	88	-117	112	102	10.59	10.601		
1600	1593	1590	1580	6	6	-96.05	97	-129	124	113	11.36	10.919		
1700	1692	1689	1678	6	6	-96.46	106	-142	136	124	12.14	11.196		
1800	1791	1789	1776	7	7	-96.79	115	-154	148	135	12.91	11.439		
1900	1891	1888	1874	7	7	-97.08	124	-166	160	146	13.69	11.653		
2000	1990	1987	1973	7	7	-97.32	134	-178	171	157	14.47	11.844		
2100	2089	2087	2071	8	8	-97.54	143	-191	183	168	15.25	12.015		
2200	2188	2186	2169	8	8	-97.73	152	-203	195	179	16.03	12.169		
2300	2288	2285	2267	8	9	-97.90	161	-215	207	190	16.81	12.308		
2400	2387	2385	2365	9	9	-98.04	170	-227	219	201	17.59	12.434		
2500	2486	2484	2463	9	10	-98.18	179	-239	231	212	18.37	12.549		
2600	2585	2583	2561	10	10	-98.30	189	-252	242	223	19.15	12.655		
2700	2685	2682	2659	10	10	-98.41	198	-264	254	234	19.94	12.752		
2800	2784	2782	2757	10	11	-98.51	207	-276	266	245	20.72	12.842		
2900	2883	2881	2855	11	11	-98.60	216	-288	278	256	21.50	12.925		
3000	2982	2980	2954	11	12	-98.68	225	-301	290	268	22.29	13.002		
3100	3082	3080	3052	12	12	-98.76	235	-313	302	279	23.07	13.074		
3200	3181	3179	3150	12	12	-98.83	244	-325	313	290	23.86	13.141		
3300	3280	3278	3248	12	13	-98.90	253	-337	325	301	24.64	13.203		
3400	3379	3377	3346	13	13	-98.96	262	-350	337	312	25.43	13.262		
3500	3478	3477	3444	13	14	-99.02	271	-362	349	323	26.21	13.317		
3600	3578	3576	3542	14	14	-99.07	281	-374	361	334	27.00	13.369		
3700	3677	3675	3640	14	14	-99.12	290	-386	373	345	27.78	13.418		
3800	3776	3775	3738	14	15	-99.17	299	-398	385	356	28.57	13.464		
3900	3875	3874	3837	15	15	-99.21	308	-411	396	367	29.35	13.507		
4000	3975	3988	3950	15	16	-99.46	318	-424	408	377	30.23	13.486		
4100	4074	4132	4093	16	16	-102.70	312	-423	411	380	31.04	13.227		
4148	4122	4196	4156	16	16	-105.43	302	-415	409	378	31.34	13.046		
4150	4124	4199	4159	16	16	-106.51	301	-415	409	377	31.35	13.037		
4200	4173	4262	4219	16	16	-149.23	287	-403	406	375	31.64	12.844		
4250	4223	4323	4275	16	17	160.41	269	-387	405	373	31.92	12.674		
4300	4273	4381	4326	16	17	136.03	248	-369	403	371	32.21	12.525		
4341	4313	4428	4365	16	17	125.44	229	-353	403	371	32.47	12.418		
4350	4322	4437	4373	16	17	123.68	225	-349	403	371	32.52	12.396		
4400	4370	4491	4415	16	17	115.68	201	-326	404	371	32.86	12.289		
4450	4417	4543	4453	17	17	109.61	175	-303	405	372	33.21	12.206		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 115H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4500	4462	4593	4487	17	17	104.56	147	-278	408	374	33.57	12.149	
4550	4506	4641	4517	17	17	100.15	120	-252	411	377	33.93	12.118	
4600	4548	4688	4543	17	18	96.17	91	-225	415	381	34.30	12.111	
4650	4587	4734	4565	17	18	92.53	62	-198	420	386	34.67	12.123	
4700	4624	4778	4584	17	18	89.15	33	-170	426	391	35.05	12.150	
4750	4658	4822	4600	17	19	86.02	4	-142	432	396	35.45	12.185	
4800	4690	4864	4613	17	19	83.10	-26	-115	438	403	35.87	12.221	
4850	4718	4906	4623	18	20	80.40	-55	-87	445	409	36.33	12.250	
4900	4743	4950	4631	18	20	77.75	-86	-56	452	415	36.90	12.250	
4950	4764	4987	4635	18	21	75.57	-113	-31	459	421	37.43	12.260	
5000	4782	5027	4637	19	21	73.43	-141	-4	466	428	38.07	12.233	
5050	4796	5071	4637	19	22	71.38	-173	27	472	433	38.87	12.149	
5100	4806	5120	4637	20	23	69.76	-208	61	478	438	39.90	11.969	
5150	4812	5169	4636	21	23	68.71	-244	96	481	440	41.11	11.706	
5200	4815	5219	4636	22	24	68.26	-280	130	483	441	42.51	11.371	
5211	4815	5231	4636	22	24	68.24	-288	138	484	441	42.86	11.284	
5300	4814	5319	4635	23	26	68.31	-352	200	485	439	45.70	10.615	
5400	4814	5419	4635	25	28	68.39	-424	269	487	438	49.17	9.900	
5500	4813	5519	4634	27	30	68.47	-496	339	488	436	52.86	9.240	
5600	4812	5619	4633	29	32	68.54	-568	408	490	433	56.73	8.639	
5700	4812	5719	4633	31	34	68.62	-639	478	492	431	60.74	8.095	
5800	4811	5819	4632	33	37	68.70	-711	547	493	429	64.88	7.605	
5900	4810	5919	4631	35	39	68.77	-783	617	495	426	69.11	7.164	
6000	4810	6019	4631	37	41	68.85	-855	686	497	423	73.42	6.765	
6100	4809	6119	4630	40	43	68.92	-927	756	498	421	77.80	6.406	
6200	4809	6219	4629	42	46	69.00	-999	825	500	418	82.25	6.080	
6300	4808	6319	4629	44	48	69.07	-1071	894	502	415	86.74	5.784	
6400	4807	6419	4628	47	51	69.15	-1143	964	503	412	91.27	5.515	
6500	4807	6519	4627	49	53	69.22	-1215	1033	505	409	95.84	5.269	
6600	4806	6619	4627	52	55	69.29	-1287	1103	507	406	100.45	5.044	
6700	4805	6719	4626	54	58	69.36	-1358	1172	508	403	105.08	4.838	
6800	4805	6819	4625	56	60	69.43	-1430	1242	510	400	109.74	4.648	
6900	4804	6919	4625	59	63	69.51	-1502	1311	512	397	114.43	4.472	
7000	4803	7019	4624	61	65	69.58	-1574	1381	513	394	119.13	4.309	
7100	4803	7119	4624	64	68	69.65	-1646	1450	515	391	123.85	4.159	
7200	4802	7219	4623	66	70	69.72	-1718	1520	517	388	128.59	4.018	
7300	4801	7319	4622	69	73	69.79	-1790	1589	518	385	133.35	3.888	
7400	4801	7419	4622	71	75	69.85	-1862	1659	520	382	138.12	3.765	
7500	4800	7519	4621	74	78	69.92	-1934	1728	522	379	142.90	3.651	
7600	4799	7619	4620	76	80	69.99	-2006	1798	523	376	147.69	3.544	
7700	4799	7719	4620	79	83	70.06	-2077	1867	525	373	152.50	3.443	
7800	4798	7819	4619	81	85	70.13	-2149	1937	527	369	157.32	3.348	
7900	4797	7919	4618	84	88	70.19	-2221	2006	528	366	162.14	3.259	
8000	4797	8019	4618	86	90	70.26	-2293	2076	530	363	166.98	3.175	
8100	4796	8119	4617	89	93	70.32	-2365	2145	532	360	171.82	3.095	
8200	4795	8219	4616	92	95	70.39	-2437	2214	533	357	176.67	3.020	
8300	4795	8319	4616	94	98	70.45	-2509	2284	535	354	181.53	2.948	
8400	4794	8419	4615	97	100	70.52	-2581	2353	537	350	186.40	2.880	
8500	4793	8519	4614	99	103	70.58	-2653	2423	539	347	191.27	2.815	
8600	4793	8619	4614	102	105	70.65	-2725	2492	540	344	196.15	2.754	
8700	4792	8719	4613	104	108	70.71	-2796	2562	542	341	201.04	2.695	
8800	4791	8819	4613	107	110	70.77	-2868	2631	544	338	205.93	2.640	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 115H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8900	4791	8919	4612	109	113	70.84	-2940	2701	545	334	210.83	2.586	
9000	4790	9019	4611	112	115	70.90	-3012	2770	547	331	215.73	2.535	
9100	4789	9119	4611	114	118	70.96	-3084	2840	549	328	220.64	2.486	
9200	4789	9218	4610	117	121	71.02	-3156	2909	550	325	225.56	2.440	
9300	4788	9318	4609	120	123	71.08	-3228	2979	552	322	230.48	2.395	
9400	4787	9418	4609	122	126	71.14	-3300	3048	554	318	235.40	2.352	
9500	4787	9518	4608	125	128	71.20	-3372	3118	555	315	240.33	2.311	
9600	4786	9618	4607	127	131	71.26	-3444	3187	557	312	245.26	2.271	
9700	4786	9718	4607	130	133	71.32	-3515	3257	559	309	250.20	2.233	
9800	4785	9818	4606	132	136	71.38	-3587	3326	560	305	255.14	2.197	
9900	4784	9918	4605	135	138	71.44	-3659	3396	562	302	260.08	2.161	
10,000	4784	10,018	4605	138	141	71.50	-3731	3465	564	299	265.03	2.127	
10,100	4783	10,118	4604	140	143	71.56	-3803	3535	566	296	269.98	2.095	
10,200	4782	10,218	4603	143	146	71.62	-3875	3604	567	292	274.94	2.063	
10,300	4782	10,318	4603	145	149	71.67	-3947	3673	569	289	279.90	2.032	
10,400	4781	10,418	4602	148	151	71.73	-4019	3743	571	286	284.86	2.003	
10,500	4780	10,518	4601	150	154	71.79	-4091	3812	572	282	289.83	1.975	
10,600	4780	10,618	4601	153	156	71.84	-4162	3882	574	279	294.79	1.947	
10,700	4779	10,718	4600	156	159	71.90	-4234	3951	576	276	299.77	1.920	
10,800	4778	10,818	4600	158	161	71.96	-4306	4021	577	273	304.74	1.895	
10,900	4778	10,918	4599	161	164	72.01	-4378	4090	579	269	309.72	1.870	
11,000	4777	11,018	4598	163	166	72.07	-4450	4160	581	266	314.70	1.845	
11,100	4776	11,118	4598	166	169	72.12	-4522	4229	582	263	319.69	1.822	
11,200	4776	11,218	4597	168	171	72.18	-4594	4299	584	259	324.67	1.799	
11,300	4775	11,318	4596	171	174	72.23	-4666	4368	586	256	329.66	1.777	
11,400	4774	11,418	4596	174	177	72.28	-4738	4438	588	253	334.66	1.756	
11,500	4774	11,518	4595	176	179	72.34	-4810	4507	589	250	339.65	1.735	
11,600	4773	11,618	4594	179	182	72.39	-4882	4577	591	246	344.65	1.715	
11,700	4772	11,669	4594	181	183	72.42	-4918	4612	595	248	346.90	1.714 SF	
11,800	4772	11,669	4594	184	183	72.42	-4918	4612	613	273	339.47	1.805	
11,900	4771	11,669	4594	186	183	72.42	-4918	4612	646	321	324.76	1.989	
12,000	4770	11,669	4594	189	183	72.42	-4918	4612	692	386	305.75	2.263	
12,100	4770	11,669	4594	192	183	72.42	-4918	4612	749	464	285.12	2.626	
12,208	4769	11,669	4594	194	183	72.42	-4918	4612	820	557	263.04	3.117	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 120H - Original Drilling - APD														Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM														Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0	0	0	0	0	0	125.21	-11	16	20						
100	100	100	100	0	0	125.21	-11	16	20	20	0.31	64.504			
200	200	200	200	1	1	125.21	-11	16	20	19	1.03	19.396			
300	300	300	300	1	1	125.21	-11	16	20	18	1.74	11.414			
400	400	400	400	1	1	125.21	-11	16	20	17	2.46	8.086			
450	450	450	450	1	1	125.21	-11	16	20	17	2.82	7.058 CC			
500	500	500	500	2	2	129.06	-11	16	20	17	3.18	6.272			
600	600	601	600	2	2	128.40	-8	16	20	16	3.89	5.194			
700	700	701	701	2	2	127.13	0	17	21	16	4.61	4.515			
804	804	806	805	3	3	125.28	11	17	22	16	5.37	4.058			
900	898	902	900	3	3	119.98	24	18	22	16	6.08	3.650			
1000	998	1002	999	3	3	112.22	39	18	22	16	6.84	3.288			
1100	1097	1101	1097	4	4	104.80	54	19	23	16	7.61	3.047 ES			
1200	1196	1201	1196	4	4	97.93	69	19	24	16	8.39	2.892			
1300	1295	1301	1295	5	5	91.71	84	20	26	16	9.17	2.797			
1400	1395	1401	1394	5	5	86.18	99	21	27	17	9.95	2.744			
1500	1494	1501	1493	5	5	81.33	114	21	29	18	10.73	2.720			
1600	1593	1601	1591	6	6	77.09	129	22	31	20	11.50	2.716 SF			
1700	1692	1701	1690	6	6	73.39	144	22	33	21	12.27	2.726			
1800	1791	1801	1789	7	7	70.16	159	23	36	23	13.04	2.744			
1900	1891	1901	1888	7	7	67.34	174	23	38	24	13.81	2.768			
2000	1990	2001	1987	7	7	64.86	189	24	41	26	14.57	2.796			
2100	2089	2101	2086	8	8	62.67	204	25	43	28	15.33	2.825			
2200	2188	2201	2184	8	8	60.73	219	25	46	30	16.10	2.856			
2300	2288	2301	2283	8	9	59.00	233	26	49	32	16.86	2.886			
2400	2387	2401	2382	9	9	57.45	248	26	51	34	17.61	2.916			
2500	2486	2501	2481	9	9	56.06	263	27	54	36	18.37	2.946			
2600	2585	2601	2580	10	10	54.81	278	27	57	38	19.13	2.975			
2700	2685	2701	2679	10	10	53.67	293	28	60	40	19.89	3.003			
2800	2784	2801	2777	10	11	52.64	308	29	63	42	20.65	3.030			
2900	2883	2901	2876	11	11	51.69	323	29	65	44	21.41	3.056			
3000	2982	3001	2975	11	11	50.83	338	30	68	46	22.16	3.081			
3100	3082	3101	3074	12	12	50.03	353	30	71	48	22.92	3.105			
3200	3181	3201	3173	12	12	49.30	368	31	74	50	23.68	3.128			
3300	3280	3300	3272	12	13	48.62	383	32	77	53	24.43	3.150			
3400	3379	3400	3370	13	13	47.99	398	32	80	55	25.19	3.171			
3500	3478	3500	3469	13	14	47.41	413	33	83	57	25.95	3.191			
3600	3578	3600	3568	14	14	46.86	428	33	86	59	26.70	3.211			
3700	3677	3700	3667	14	14	46.35	443	34	89	61	27.46	3.229			
3800	3776	3800	3766	14	15	46.52	457	35	92	63	28.23	3.244			
3900	3875	3899	3864	15	15	54.07	463	45	95	66	29.13	3.259			
4000	3975	3992	3955	15	15	68.07	458	64	104	74	29.87	3.485			
4100	4074	4076	4034	16	16	83.04	446	89	127	97	29.75	4.255			
4148	4122	4113	4067	16	16	89.21	438	103	143	114	29.34	4.878			
4150	4124	4114	4068	16	16	88.54	437	103	144	115	29.31	4.908			
4200	4173	4150	4100	16	16	55.18	428	117	164	135	28.66	5.707			
4250	4223	4187	4131	16	16	13.08	418	133	184	156	28.05	6.553			
4300	4273	4222	4161	16	16	-4.16	406	149	204	177	27.32	7.470			
4350	4322	4257	4188	16	16	-10.16	394	166	224	197	26.56	8.435			
4400	4370	4291	4214	16	16	-12.43	380	184	243	218	25.77	9.443			
4450	4417	4325	4239	17	16	-13.25	366	202	262	237	24.96	10.492			
4500	4462	4358	4262	17	16	-13.46	351	221	280	255	24.15	11.576			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 120H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4550	4506	4391	4283	17	16	-13.38	335	240	296	273	23.33	12.692	
4600	4548	4424	4303	17	16	-13.18	318	260	312	289	22.52	13.840	
4650	4587	4450	4318	17	16	-13.03	304	276	326	305	21.37	15.265	
4700	4624	4489	4339	17	17	-12.67	283	301	339	318	20.96	16.179	
4750	4658	4521	4354	17	17	-12.43	264	322	351	331	20.25	17.340	
4800	4690	4550	4367	17	17	-12.23	247	342	362	342	19.46	18.584	
4850	4718	4584	4381	18	17	-12.02	226	365	371	352	19.01	19.510	
4900	4743	4616	4392	18	18	-11.87	206	387	379	360	18.53	20.445	
4950	4764	4650	4402	18	18	-11.74	184	411	385	367	18.24	21.131	
5000	4782	4679	4410	19	19	-11.66	164	431	391	373	17.93	21.784	
5050	4796	4711	4416	19	19	-11.61	143	454	394	376	17.84	22.104	
5100	4806	4750	4422	20	20	-11.59	116	482	397	379	18.04	21.986	
5150	4812	4773	4425	21	20	-11.62	100	498	397	379	18.13	21.922	
5200	4815	4800	4426	22	20	-11.68	81	517	397	378	18.50	21.461	
5211	4815	4812	4427	22	20	-11.70	73	526	397	378	18.63	21.286	
5245	4815	4833	4427	22	21	-11.72	58	541	396	377	19.00	20.848	
5300	4814	4888	4427	23	22	-11.73	19	580	396	376	19.63	20.176	
5400	4814	4988	4426	25	23	-11.74	-51	651	396	375	20.87	18.976	
5500	4813	5088	4425	27	25	-11.76	-122	721	396	374	22.20	17.839	
5600	4812	5188	4425	29	27	-11.77	-192	792	396	372	23.61	16.778	
5700	4812	5288	4424	31	30	-11.79	-263	863	396	371	25.08	15.796	
5800	4811	5388	4423	33	32	-11.80	-334	934	396	370	26.60	14.893	
5900	4810	5488	4423	35	34	-11.82	-404	1005	396	368	28.16	14.067	
6000	4810	5588	4422	37	36	-11.83	-475	1076	396	366	29.76	13.310	
6100	4809	5688	4421	40	39	-11.85	-545	1146	396	365	31.40	12.618	
6200	4809	5788	4421	42	41	-11.86	-616	1217	396	363	33.06	11.984	
6300	4808	5888	4420	44	43	-11.88	-686	1288	396	361	34.75	11.403	
6400	4807	5988	4419	47	46	-11.89	-757	1359	396	360	36.45	10.870	
6500	4807	6088	4419	49	48	-11.91	-828	1430	396	358	38.18	10.379	
6600	4806	6188	4418	52	51	-11.92	-898	1501	396	356	39.92	9.927	
6700	4805	6288	4418	54	53	-11.94	-969	1571	396	355	41.67	9.510	
6800	4805	6388	4417	56	55	-11.95	-1039	1642	396	353	43.44	9.123	
6900	4804	6488	4416	59	58	-11.96	-1110	1713	396	351	45.22	8.765	
7000	4803	6588	4416	61	60	-11.98	-1181	1784	396	349	47.00	8.432	
7100	4803	6688	4415	64	63	-11.99	-1251	1855	396	348	48.80	8.121	
7200	4802	6788	4414	66	65	-12.01	-1322	1926	396	346	50.61	7.832	
7300	4801	6888	4414	69	68	-12.02	-1392	1996	396	344	52.42	7.561	
7400	4801	6988	4413	71	70	-12.04	-1463	2067	396	342	54.24	7.308	
7500	4800	7088	4412	74	73	-12.05	-1534	2138	396	340	56.07	7.070	
7600	4799	7188	4412	76	75	-12.07	-1604	2209	396	339	57.90	6.846	
7700	4799	7288	4411	79	78	-12.08	-1675	2280	396	337	59.74	6.636	
7800	4798	7388	4410	81	80	-12.10	-1745	2351	396	335	61.59	6.437	
7900	4797	7488	4410	84	83	-12.11	-1816	2421	396	333	63.43	6.250	
8000	4797	7588	4409	86	86	-12.13	-1886	2492	396	331	65.29	6.073	
8100	4796	7688	4408	89	88	-12.14	-1957	2563	397	329	67.15	5.905	
8200	4795	7788	4408	92	91	-12.16	-2028	2634	397	328	69.01	5.746	
8300	4795	7888	4407	94	93	-12.17	-2098	2705	397	326	70.87	5.595	
8400	4794	7988	4406	97	96	-12.18	-2169	2776	397	324	72.74	5.451	
8500	4793	8088	4406	99	98	-12.20	-2239	2846	397	322	74.62	5.315	
8600	4793	8188	4405	102	101	-12.21	-2310	2917	397	320	76.49	5.185	
8700	4792	8288	4404	104	103	-12.23	-2381	2988	397	318	78.37	5.060	
8800	4791	8388	4404	107	106	-12.24	-2451	3059	397	316	80.26	4.942	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 120H - Original Drilling - APD													Offset Site Error:	0 ft	
Survey Program:		0-MWD+HDGM						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	Warning		
8900	4791	8488	4403	109	109	-12.26	-2522	3130	397	314	82.14	4.829			
9000	4790	8588	4403	112	111	-12.27	-2592	3201	397	313	84.03	4.720			
9100	4789	8688	4402	114	114	-12.29	-2663	3271	397	311	85.92	4.617			
9200	4789	8788	4401	117	116	-12.30	-2733	3342	397	309	87.82	4.517			
9300	4788	8888	4401	120	119	-12.32	-2804	3413	397	307	89.71	4.422			
9400	4787	8988	4400	122	121	-12.33	-2875	3484	397	305	91.61	4.330			
9500	4787	9088	4399	125	124	-12.35	-2945	3555	397	303	93.52	4.242			
9600	4786	9188	4399	127	126	-12.36	-3016	3626	397	301	95.42	4.158			
9700	4786	9288	4398	130	129	-12.38	-3086	3696	397	299	97.33	4.077			
9800	4785	9388	4397	132	132	-12.39	-3157	3767	397	298	99.24	3.998			
9900	4784	9488	4397	135	134	-12.40	-3228	3838	397	296	101.15	3.923			
10,000	4784	9588	4396	138	137	-12.42	-3298	3909	397	294	103.06	3.850			
10,100	4783	9688	4395	140	139	-12.43	-3369	3980	397	292	104.98	3.780			
10,200	4782	9788	4395	143	142	-12.45	-3439	4051	397	290	106.89	3.713			
10,300	4782	9888	4394	145	144	-12.46	-3510	4121	397	288	108.81	3.647			
10,400	4781	9988	4393	148	147	-12.48	-3580	4192	397	286	110.74	3.584			
10,500	4780	10,088	4393	150	150	-12.49	-3651	4263	397	284	112.66	3.523			
10,600	4780	10,188	4392	153	152	-12.51	-3722	4334	397	282	114.59	3.464			
10,700	4779	10,288	4391	156	155	-12.52	-3792	4405	397	280	116.52	3.407			
10,800	4778	10,388	4391	158	157	-12.54	-3863	4476	397	279	118.45	3.351			
10,900	4778	10,488	4390	161	160	-12.55	-3933	4546	397	277	120.38	3.298			
11,000	4777	10,588	4389	163	162	-12.57	-4004	4617	397	275	122.31	3.246			
11,100	4776	10,688	4389	166	165	-12.58	-4075	4688	397	273	124.25	3.195			
11,200	4776	10,788	4388	168	168	-12.60	-4145	4759	397	271	126.18	3.146			
11,300	4775	10,888	4388	171	170	-12.61	-4216	4830	397	269	128.12	3.099			
11,400	4774	10,988	4387	174	173	-12.62	-4286	4900	397	267	130.07	3.053			
11,500	4774	11,088	4386	176	175	-12.64	-4357	4971	397	265	132.01	3.008			
11,600	4773	11,188	4386	179	178	-12.65	-4428	5042	397	263	133.95	2.964			
11,700	4772	11,288	4385	181	180	-12.67	-4498	5113	397	261	135.90	2.922			
11,800	4772	11,388	4384	184	183	-12.68	-4569	5184	397	259	137.85	2.881			
11,900	4771	11,488	4384	186	186	-12.70	-4639	5255	397	257	139.80	2.841			
12,000	4770	11,588	4383	189	188	-12.71	-4710	5325	397	255	141.75	2.802			
12,100	4770	11,688	4382	192	191	-12.73	-4780	5396	397	253	143.71	2.764			
12,208	4769	11,796	4382	194	194	-12.74	-4857	5473	397	251	145.82	2.724			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 136H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0 ft
Reference	Offset	Rule Assigned:												
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S	+E/-W	Between Centres	Between Ellipses	(ft)			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0	0	0	0	0	0	125.19	-34	49	60					
100	100	100	100	0	0	125.19	-34	49	60	60	0.31	194.038		
200	200	200	200	1	1	125.19	-34	49	60	59	1.03	58.347		
300	300	300	300	1	1	125.19	-34	49	60	58	1.74	34.336		
400	400	400	400	1	1	125.19	-34	49	60	57	2.46	24.326		
450	450	450	450	1	1	125.19	-34	49	60	57	2.82	21.231		
500	500	501	501	2	2	129.73	-35	48	60	57	3.17	18.826		
600	600	602	602	2	2	134.59	-35	45	59	56	3.88	15.328		
608	608	611	611	2	2	135.22	-35	44	59	56	3.94	15.091 CC, ES		
700	700	703	703	2	2	144.18	-35	38	60	56	4.59	13.106		
804	804	807	807	3	3	158.00	-36	27	65	59	5.36	12.057		
900	898	902	900	3	3	171.36	-37	13	73	66	6.07	11.961		
1000	998	1000	996	3	3	-175.78	-39	-4	84	78	6.82	12.389		
1100	1097	1096	1091	4	4	-164.65	-40	-23	100	93	7.57	13.267		
1200	1196	1191	1183	4	4	-155.39	-42	-46	120	112	8.31	14.496		
1300	1295	1284	1273	5	5	-147.83	-44	-71	144	135	9.04	15.984		
1400	1395	1377	1361	5	5	-141.63	-46	-99	172	162	9.76	17.638		
1500	1494	1470	1449	5	6	-136.78	-48	-129	202	192	10.50	19.281		
1600	1593	1564	1538	6	6	-133.14	-50	-159	234	222	11.26	20.763		
1700	1692	1658	1627	6	7	-130.35	-53	-189	266	254	12.02	22.105		
1800	1791	1752	1717	7	7	-128.15	-55	-218	298	285	12.78	23.315		
1900	1891	1846	1806	7	8	-126.39	-57	-248	331	317	13.55	24.404		
2000	1990	1940	1895	7	8	-124.94	-60	-278	364	349	14.33	25.388		
2100	2089	2034	1984	8	9	-123.73	-62	-308	397	382	15.10	26.278		
2200	2188	2128	2073	8	10	-122.70	-64	-338	430	414	15.88	27.086		
2300	2288	2222	2162	8	10	-121.82	-67	-367	463	447	16.66	27.822		
2400	2387	2317	2252	9	11	-121.06	-69	-397	497	479	17.44	28.494		
2500	2486	2411	2341	9	11	-120.40	-71	-427	530	512	18.22	29.110		
2600	2585	2505	2430	10	12	-119.81	-73	-457	564	545	19.00	29.677		
2700	2685	2599	2519	10	12	-119.29	-76	-487	598	578	19.79	30.199		
2800	2784	2693	2608	10	13	-118.83	-78	-517	631	611	20.57	30.682		
2900	2883	2787	2697	11	14	-118.41	-80	-546	665	644	21.36	31.130		
3000	2982	2881	2787	11	14	-118.03	-83	-576	699	676	22.15	31.546		
3100	3082	2975	2876	12	15	-117.69	-85	-606	732	709	22.93	31.934		
3200	3181	3069	2965	12	15	-117.38	-87	-636	766	742	23.72	32.296		
3300	3280	3163	3054	12	16	-117.09	-89	-666	800	775	24.51	32.635		
3400	3379	3257	3143	13	16	-116.83	-92	-695	834	808	25.30	32.953		
3500	3478	3351	3232	13	17	-116.59	-94	-725	867	841	26.09	33.251		
3600	3578	3445	3322	14	18	-116.36	-96	-755	901	874	26.88	33.532		
3700	3677	3539	3411	14	18	-116.15	-99	-785	935	907	27.67	33.796		
3800	3776	3633	3500	14	19	-115.96	-101	-815	969	941	28.46	34.046		
3900	3875	3727	3589	15	19	-115.78	-103	-845	1003	974	29.25	34.282		
4000	3975	3829	3686	15	20	-115.61	-106	-877	1037	1007	30.11	34.427		
4100	4074	3978	3830	16	21	-116.59	-126	-909	1067	1036	31.30	34.099		
4148	4122	4047	3896	16	21	-117.63	-143	-915	1081	1049	31.80	33.980		
4150	4124	4050	3899	16	21	-118.69	-144	-915	1081	1049	31.82	33.975		
4200	4173	4119	3964	16	21	-160.87	-167	-916	1094	1062	32.28	33.905		
4250	4223	4185	4024	16	21	149.37	-193	-912	1108	1075	32.69	33.892		
4300	4273	4248	4080	16	21	125.65	-221	-903	1121	1088	33.06	33.918		
4350	4322	4309	4131	16	21	113.99	-253	-890	1135	1101	33.41	33.963		
4400	4370	4368	4177	16	22	106.73	-285	-874	1148	1114	33.75	34.013		
4450	4417	4425	4219	17	22	101.43	-319	-855	1161	1127	34.10	34.054		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 136H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program:		0-MWD+HDGM						Rule Assigned:				Offset Well Error:	0 ft	
Measured Depth	Reference	Vertical	Measured	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)		Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor		
4500		4462	4481	4256	17	22	97.20	-354	-834	1174	1140	34.46	34.074	
4550		4506	4534	4289	17	22	93.62	-389	-810	1187	1152	34.85	34.060	
4600		4548	4586	4317	17	22	90.49	-425	-785	1199	1164	35.27	34.001	
4650		4587	4637	4341	17	22	87.70	-460	-758	1211	1175	35.74	33.886	
4700		4624	4686	4362	17	22	85.19	-496	-731	1222	1186	36.27	33.705	
4750		4658	4734	4378	17	22	82.91	-530	-702	1233	1196	36.86	33.455	
4800		4690	4781	4391	17	22	80.84	-565	-672	1243	1206	37.48	33.167	
4850		4718	4827	4401	18	22	78.97	-598	-642	1252	1214	38.22	32.765	
4900		4743	4872	4407	18	23	77.28	-631	-612	1261	1222	39.03	32.300	
4950		4764	4917	4410	18	23	75.75	-662	-581	1268	1228	39.92	31.771	
5000		4782	4961	4410	19	24	74.39	-694	-550	1275	1234	40.90	31.165	
5050		4796	5009	4410	19	24	73.24	-728	-516	1280	1238	42.05	30.444	
5100		4806	5058	4410	20	25	72.40	-762	-481	1284	1241	43.32	29.638	
5150		4812	5108	4410	21	26	71.86	-797	-446	1287	1242	44.72	28.773	
5200		4815	5157	4409	22	26	71.64	-833	-411	1288	1241	46.23	27.854	
5211		4815	5169	4409	22	27	71.63	-841	-402	1288	1241	46.59	27.640	
5300		4814	5257	4409	23	28	71.63	-903	-340	1288	1238	49.51	26.007	
5400		4814	5357	4408	25	30	71.63	-974	-269	1288	1234	53.06	24.268	
5500		4813	5457	4407	27	32	71.63	-1044	-198	1287	1231	56.81	22.661	
5600		4812	5557	4407	29	34	71.63	-1115	-127	1287	1227	60.74	21.193	
5700		4812	5657	4406	31	37	71.64	-1186	-56	1287	1222	64.82	19.860	
5800		4811	5757	4406	33	39	71.64	-1256	14	1287	1218	69.00	18.654	
5900		4810	5857	4405	35	41	71.64	-1327	85	1287	1214	73.28	17.563	
6000		4810	5957	4404	37	43	71.64	-1397	156	1287	1209	77.64	16.575	
6100		4809	6057	4404	40	46	71.64	-1468	227	1287	1205	82.07	15.680	
6200		4809	6157	4403	42	48	71.64	-1539	298	1287	1200	86.55	14.867	
6300		4808	6257	4403	44	51	71.65	-1609	368	1287	1196	91.08	14.127	
6400		4807	6357	4402	47	53	71.65	-1680	439	1287	1191	95.65	13.451	
6500		4807	6457	4402	49	55	71.65	-1750	510	1286	1186	100.25	12.832	
6600		4806	6557	4401	52	58	71.65	-1821	581	1286	1181	104.89	12.264	
6700		4805	6657	4400	54	60	71.65	-1892	652	1286	1177	109.55	11.741	
6800		4805	6757	4400	56	63	71.65	-1962	723	1286	1172	114.23	11.259	
6900		4804	6857	4399	59	65	71.66	-2033	793	1286	1167	118.94	10.813	
7000		4803	6957	4399	61	68	71.66	-2103	864	1286	1162	123.66	10.399	
7100		4803	7057	4398	64	70	71.66	-2174	935	1286	1157	128.40	10.014	
7200		4802	7157	4397	66	73	71.66	-2245	1006	1286	1153	133.15	9.656	
7300		4801	7257	4397	69	75	71.66	-2315	1077	1286	1148	137.92	9.322	
7400		4801	7357	4396	71	78	71.66	-2386	1147	1286	1143	142.69	9.009	
7500		4800	7457	4396	74	80	71.66	-2456	1218	1285	1138	147.48	8.716	
7600		4799	7557	4395	76	83	71.67	-2527	1289	1285	1133	152.28	8.440	
7700		4799	7657	4394	79	85	71.67	-2598	1360	1285	1128	157.09	8.181	
7800		4798	7757	4394	81	88	71.67	-2668	1431	1285	1123	161.90	7.938	
7900		4797	7857	4393	84	90	71.67	-2739	1502	1285	1118	166.72	7.707	
8000		4797	7957	4393	86	93	71.67	-2809	1572	1285	1113	171.55	7.490	
8100		4796	8057	4392	89	95	71.67	-2880	1643	1285	1108	176.38	7.284	
8200		4795	8157	4391	92	98	71.68	-2951	1714	1285	1103	181.22	7.089	
8300		4795	8257	4391	94	100	71.68	-3021	1785	1285	1099	186.07	6.904	
8400		4794	8357	4390	97	103	71.68	-3092	1856	1284	1094	190.92	6.728	
8500		4793	8457	4390	99	106	71.68	-3162	1926	1284	1089	195.77	6.561	
8600		4793	8557	4389	102	108	71.68	-3233	1997	1284	1084	200.63	6.401	
8700		4792	8657	4389	104	111	71.68	-3304	2068	1284	1079	205.49	6.249	
8800		4791	8757	4388	107	113	71.69	-3374	2139	1284	1074	210.35	6.104	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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: C07 2309 - # 136H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program:		0-MWD+HDGM					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		
8900	4791	8857	4387	109	116	71.69	-3445	2210	1284	1069	215.22	5.966		
9000	4790	8957	4387	112	118	71.69	-3515	2281	1284	1064	220.10	5.833		
9100	4789	9057	4386	114	121	71.69	-3586	2351	1284	1059	224.97	5.706		
9200	4789	9157	4386	117	123	71.69	-3657	2422	1284	1054	229.85	5.585		
9300	4788	9257	4385	120	126	71.69	-3727	2493	1284	1049	234.73	5.468		
9400	4787	9357	4384	122	129	71.70	-3798	2564	1283	1044	239.61	5.356		
9500	4787	9457	4384	125	131	71.70	-3868	2635	1283	1039	244.49	5.249		
9600	4786	9557	4383	127	134	71.70	-3939	2706	1283	1034	249.38	5.146		
9700	4786	9657	4383	130	136	71.70	-4010	2776	1283	1029	254.27	5.046		
9800	4785	9757	4382	132	139	71.70	-4080	2847	1283	1024	259.16	4.951		
9900	4784	9857	4381	135	141	71.70	-4151	2918	1283	1019	264.05	4.859		
10,000	4784	9957	4381	138	144	71.70	-4221	2989	1283	1014	268.95	4.770		
10,100	4783	10,057	4380	140	146	71.71	-4292	3060	1283	1009	273.84	4.684		
10,200	4782	10,157	4380	143	149	71.71	-4363	3130	1283	1004	278.74	4.602		
10,300	4782	10,257	4379	145	152	71.71	-4433	3201	1283	999	283.64	4.522		
10,400	4781	10,357	4378	148	154	71.71	-4504	3272	1282	994	288.54	4.445		
10,500	4780	10,457	4378	150	157	71.71	-4574	3343	1282	989	293.44	4.370		
10,600	4780	10,557	4377	153	159	71.71	-4645	3414	1282	984	298.34	4.298		
10,700	4779	10,657	4377	156	162	71.72	-4715	3485	1282	979	303.25	4.228		
10,800	4778	10,757	4376	158	164	71.72	-4786	3555	1282	974	308.15	4.160		
10,900	4778	10,857	4376	161	167	71.72	-4857	3626	1282	969	313.06	4.095		
10,985	4777	10,941	4375	163	169	71.72	-4916	3686	1282	965	317.20	4.041		
11,000	4777	10,941	4375	163	169	71.72	-4916	3686	1282	964	317.54	4.037 SF		
11,100	4776	10,941	4375	166	169	71.72	-4916	3686	1287	968	318.73	4.038		
11,200	4776	10,941	4375	168	169	71.72	-4916	3686	1300	982	318.04	4.087		
11,300	4775	10,941	4375	171	169	71.72	-4916	3686	1320	1004	315.59	4.182		
11,400	4774	10,941	4375	174	169	71.72	-4916	3686	1347	1036	311.59	4.324		
11,500	4774	10,941	4375	176	169	71.72	-4916	3686	1381	1075	306.28	4.510		
11,600	4773	10,941	4375	179	169	71.72	-4916	3686	1422	1122	299.94	4.740		
11,700	4772	10,941	4375	181	169	71.72	-4916	3686	1468	1175	292.82	5.012		
11,800	4772	10,941	4375	184	169	71.72	-4916	3686	1519	1234	285.18	5.326		
11,900	4771	10,941	4375	186	169	71.72	-4916	3686	1575	1298	277.24	5.680		
12,000	4770	10,941	4375	189	169	71.72	-4916	3686	1635	1366	269.17	6.074		
12,100	4770	10,941	4375	192	169	71.72	-4916	3686	1699	1438	261.11	6.506		
12,208	4769	10,941	4375	194	169	71.72	-4916	3686	1772	1519	252.51	7.017		



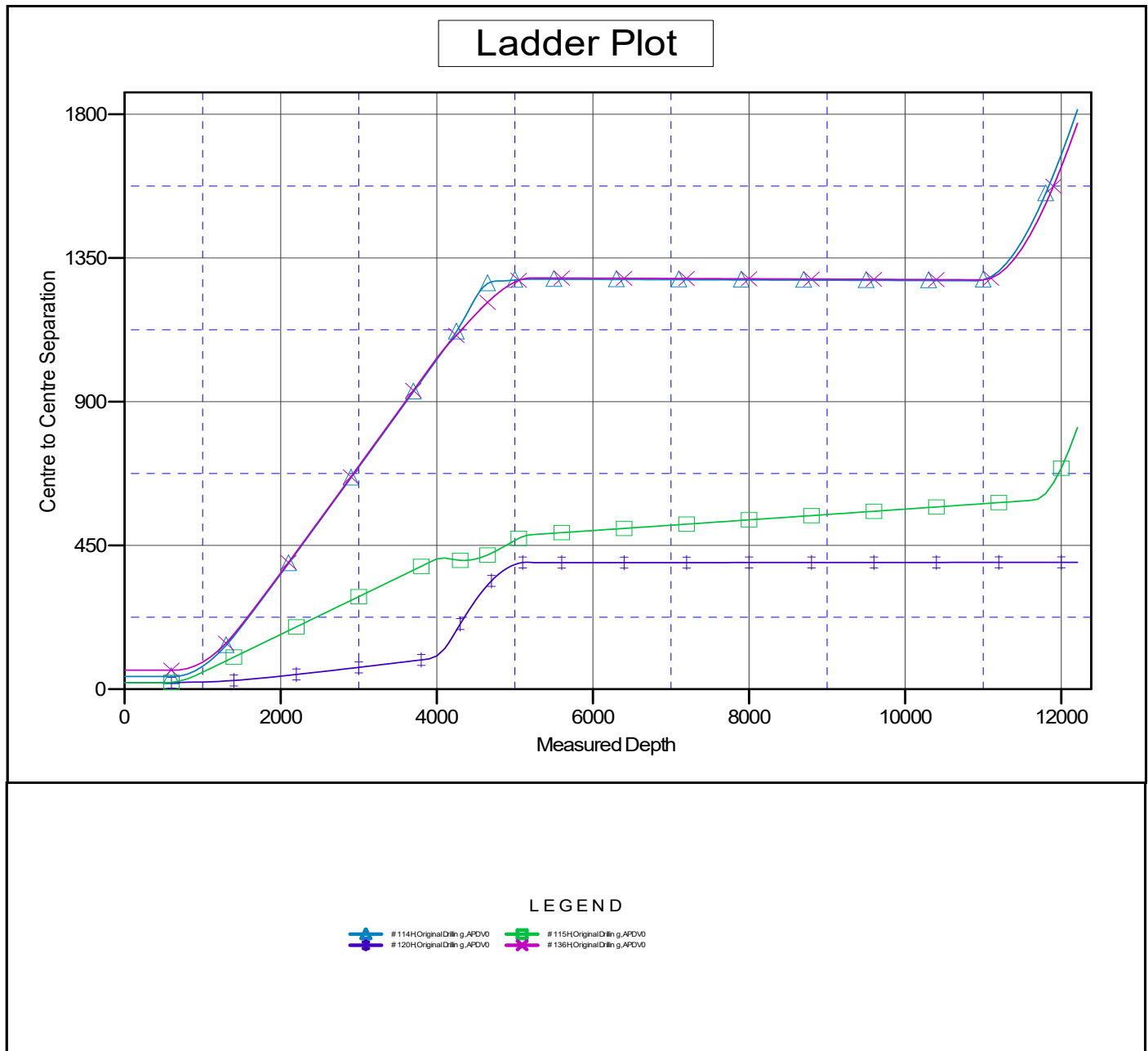
Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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 6801' & RKB 14' @ 6815ft
Offset Depths are relative to Offset Datum
Central Meridian is -107.83333333

Coordinates are relative to: # 116H - Slot 4
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.00°





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 116H - Slot 4
Project:	Ponderosa Unit	TVD Reference:	GL 6801' & RKB 14' @ 6815ft
Reference Site:	C07 2309	MD Reference:	GL 6801' & RKB 14' @ 6815ft
Site Error:	0 ft	North Reference:	True
Reference Well:	# 116H	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 6801' & RKB 14' @ 6815ft

Offset Depths are relative to Offset Datum

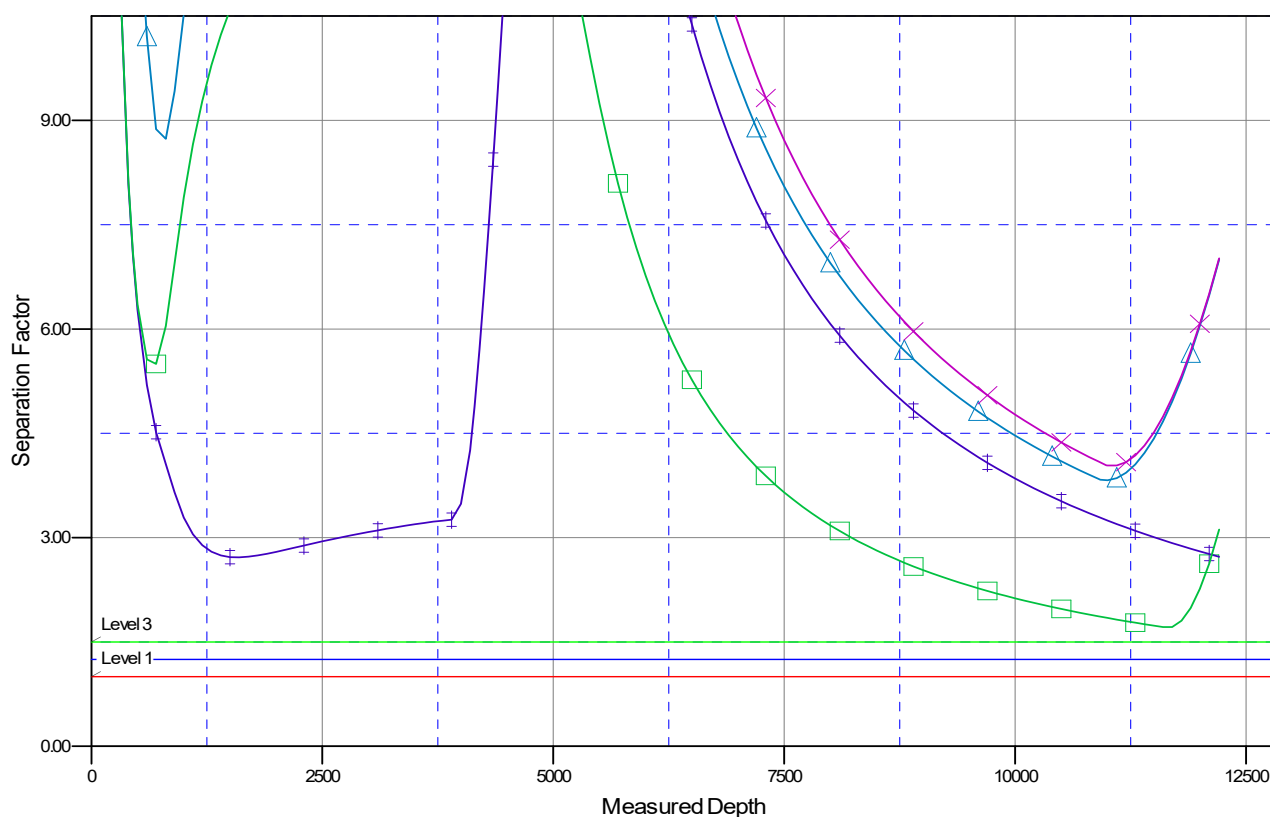
Central Meridian is -107.8333333

Coordinates are relative to: # 116H - Slot 4

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

Grid Convergence at Surface is: 0.00°

Separation Factor Plot



LEGEND

#114H Original Drilling g.APDV0
 #115H Original Drilling g.APDV0
 #120H Original Drilling g.APDV0



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

PONDEROSA #116H

Lease: NMNM19816

SH: NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 7, T.23 N., R.9 W.
San Juan County, New Mexico

BH: SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 8, T.23 N., R.9 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 the surface casing to a minimum of _____ psi for 30 minutes.
- D. ☒ Test all casing strings below the surface casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield burst) for a minimum of 30 minutes.
- E. ☒ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, 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.
- F. ☒ The use of co-flex hose is authorized contingent upon the following:
 1. From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.
 2. From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.
 3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

I. GENERAL

- A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report (Form 3160-4) is filed. The report should be on 8-1/2 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).
- F. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to at Virgil Lucero at 505-793-1836.**
- G. **The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.**
- H. Unless drilling operations are commenced within two years, approval of the Application for Permit to Drill will expire. A written request for a two years extension may be granted if submitted prior to expiration.
- I. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all time, unless the well is secured with blowout preventers or cement plugs.
- J. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

II. REPORTING REQUIREMENTS

- A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.
- B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.
1. Provide complete information (submit in AFMSS 2) concerning.
 - a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.
 - b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.
 - c. Subsequent Report of Abandonment, show the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.
 2. Well Completion Report (submit in AFMSS 2) will be submitted with 30 days after well has been completed.
 - a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.
 3. Submit a cement evaluation log, if cement is not circulated to surface.

III. DRILLER'S LOG

The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results. 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drill stem test.

IV. GAS FLARING

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

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

V. SAFETY

- A. All rig heating stoves are to be of the explosion-proof type.
- B. Rig safety lines are to be installed.
- C. Hard hats and other Personal Protective Equipment (PPE) must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

- A. Any changes of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F.
- B. If the well is dry, it is to be plugged in accordance with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section II.B.1c.
- C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM-Authorized Officer.

VII. PHONE NUMBERS

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

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

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

CONDITIONS

Action 262406

CONDITIONS

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID:
	371838
	Action Number:
	262406
Action Type:	
[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)	

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	9/13/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	9/13/2023
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	9/13/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	9/13/2023
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	9/13/2023