### Received by OCD: 12/11/2023 12:27:03 PM

Form 3160-3 (June 2015)		FORM AF OMB No. Expires: Janu	1004-0137
UNITED STATES			ury 51, 2010
DEPARTMENT OF THE IN BUREAU OF LAND MANA	5. Lease Serial No.		
APPLICATION FOR PERMIT TO DE		6. If Indian, Allotee or	Tribe Name
APPLICATION FOR PERMIT TO DE		0. If Indian, Anotee of	The Name
		7. If Unit or CA Agree	ment, Name and No.
	ENTER		
1b. Type of Well:   Oil Well   Gas Well   Oth	_	8. Lease Name and We	ell No.
1c. Type of Completion:   Hydraulic Fracturing	gle Zone Multiple Zone		
2. Name of Operator		9. API Well No. 30	-045-38331
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or	Exploratory
4. Location of Well <i>(Report location clearly and in accordance w</i>	ith any State requirements.*)	11. Sec., T. R. M. or B	lk. and Survey or Area
At surface			
At proposed prod. zone			
14. Distance in miles and direction from nearest town or post offic	ce*	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. Spac	ing Unit dedicated to this	swell
<ol> <li>Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.</li> </ol>	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	1
	24. Attachments		
The following, completed in accordance with the requirements of (as applicable)	Onshore Oil and Gas Order No. 1, and the	Hydraulic Fracturing rule	e per 43 CFR 3162.3-3
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> </ol>	4. Bond to cover the operation Item 20 above).	ns unless covered by an e	xisting bond on file (see
3. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office)		ormation and/or plans as m	ay be requested by the
25. Signature	Name (Printed/Typed)	D	Pate
Title			
Approved by (Signature)	Name (Printed/Typed)	D	late
Title	Office		
Application approval does not warrant or certify that the applicant applicant to conduct operations thereon. Conditions of approval, if any, are attached.	holds legal or equitable title to those rights	in the subject lease whic	ch would entitle the
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, ma of the United States any false, fictitious or fraudulent statements o			department or agency



\*(Instructions on page 2)

.

(Continued on page 2)

DISTRICT I Form C-102 State of New Mexico 1625 N. French Dr., Hobbs, N.M. 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 Revised August 1, 2011 Energy, Minerals & Natural Resources Department DISTRICT II 811 S. First St., Artesia, N.M. 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 Submit one copy to appropriate District Office OIL CONSERVATION DIVISION DISTRICT III 1000 Rio Brazos Rd., Aztec, N.M. 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 1220 South St. Francis Dr. Santa Fe, NM 87505 DISTRICT IV □ AMENDED REPORT 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 WELL LOCATION AND ACREAGE DEDICATION PLAT <sup>1</sup>API Number <sup>2</sup> Pool Code <sup>3</sup>Pool Name 98175 30-045-38331 BETONNIE TSOSIE WASH UNIT MANCOS OIL POOL <sup>6</sup> Well Number <sup>4</sup> Property Code <sup>5</sup>Property Name 402H BETONNIE TSOSIE WASH UNIT 325179 "OGRID No. <sup>8</sup>Operator Name <sup>9</sup> Elevation DJR OPERATING, LLC 371838 6864' <sup>10</sup> Surface Location North/South line UL or lot no. Section Township Lot Idn Feet from the Feet from the East/West line Range County 1657 NORTH 479' EAST н 28 23N 8W SAN JUAN <sup>11</sup> Bottom Hole Location If Different From Surface UL or lot no. Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line County 2291' NORTH Е 8W 386' WEST SAN JUAN 21 23N PENETRATED SPACING UNIT; <sup>12</sup> Dedicated Acres <sup>13</sup> Joint or Infill <sup>14</sup> Consolidation Code 15 Order No. SEC 28: SE/NE, NE/NE & NW/NE (120 AC.); SEC 21: SW/SE, SE/SW, NE/SW, NW/SW & SW/NW (200 AC.) = 320 ACRES R-13930 R-13930A NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION 16 FND 2½" BC GLO 1947 18 17 OPERATOR CERTIFICATION S 89°44'51" W 2631.01' (M) 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 S 89'50' W 2629.44' (R) 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 Ζ of such a mineral or working interest, or to a voluntary 02°11'14" pooling agreement or a compulsory pooling order heretofore entered by the division. z 2°07' Shaw-Marie Ford 11/2/21 ≶ Date ≶ Signature 5380.32' Shaw-Marie Ford Printed Name 5380.55 <u>ې</u>. R sford@dirllc.com h E-mail Address S SURVEYOR CERTIFICATION E S 89°22'57" W 10" S 89°23' W I hereby certify that the well location shown on this 2637.49' (M) 2635.47' (M) 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. E 89°29' W 5276.04 (R) S MARCH 8, 2021 Date of Survey 2660.08' 2656.83' (R) Signature and Seal of Professional Surveyor: Ŕ BEARINGS BROADA Ъ\_ ш 8 00°10'1 N 0°16' . BASIS ( ш T SURFACE LOCATION (SHL) LAT. 36.200659" N (NAD83) LONG. 107.679369" W (NAD83) Z LAT. 36.202138" N (NAD83) ONAL SI LONG. 107.681255" W (NAD83)

**Certificate** Number

11393

**Released to Imaging: 1/5/2024 7:51:43 AM** 

BOTTOM HOLE LOCATION (BHL) LAT. 36.213572' N (NAD83) LONG. 107.694668' W (NAD83) 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

Energy, Minerals & Natural Resources Department

Santa Fe, NM 87505

Form C-102 Revised August 1, 2011

Submit one copy to appropriate District Office

□ AMENDED REPORT

DJR OPERATING, LLC BETONNIE TSOSIE WASH UNIT #402H

State of New Mexico

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

E/4 CORNER SEC 28 LAT. 36.197916" N (NAD83) LONG. 107.677760' W (NAD83)

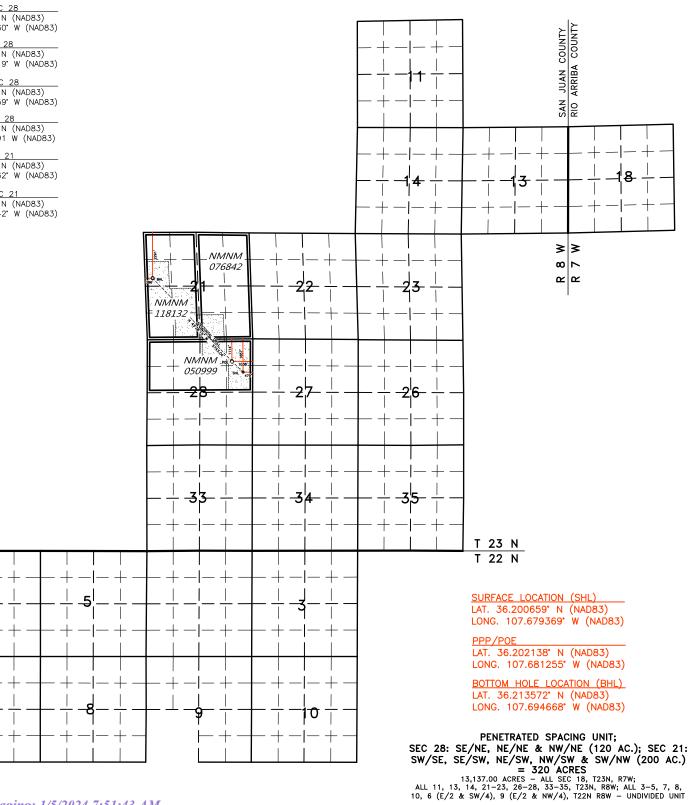
<u>NE CORNER SEC 28</u> LAT. 36.205224\* N (NAD83) LONG. 107.677719\* W (NAD83)

N/4 CORNER SEC 28 LAT. 36.205157\* N (NAD83) LONG. 107.686659" W (NAD83)

NW CORNER SEC 28 LAT. 36.205090° N (NAD83) LONG. 107.695591 W (NAD83)

NW CORNER SEC 21 LAT. 36.219861° N (NAD83) LONG. 107.696262° W (NAD83)

N/4 CORNER SEC 21 LAT. 36.219882\* N (NAD83) LONG. 107.687342\* W (NAD83)



Released to Imaging: 1/5/2024 7:51:43 AM

Er	Submit Via E-j	Electronically				
		1220 South	ation Division St. Francis Dr. NM 87505			
N	ATUI	RAL GAS N	IANAGEMEN	Г PLAN		
This Natural Gas Management Plan mu	ıst be sı	Ibmitted with each	n Application for Perm	it to Drill (APD)	) for a new or r	ecompleted well.
			Plan Description May 25, 2021	<u>n</u>		
I. Operator:DJR Operating, LLC		OGRI	<b>D:</b> 371838	Da	nte: _12_/_11_/	_2023_
II. Type: 🛛 Original 🗆 Amendment	due to [	□ 19.15.27.9.D(6)	)(a) NMAC □ 19.15.27	7.9.D(6)(b) NM	AC 🗆 Other.	
If Other, please describe:						
<b>III. Well(s):</b> Provide the following infe be recompleted from a single well pad				et of wells propo	osed to be drille	ed or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Betonnie Tsosie Wash Unit 401H	TBD	H-28-23N-08W	1651 FNL x 461 FEL	423	538	150
Betonnie Tsosie Wash Unit 402H	TBD	H-28-23N-08W	1657 FNL x 479 FEL	345	439	123
Betonnie Tsosie Wash Unit 732H	TBD	H-28-23N-08W	1645 FNL x 442 FEL	289	368	103
IV. Central Delivery Point Name:		_Chaco Processin	g Plant	[	See 19.15.27.9	(D)(1) NMAC]
V. Anticipated Schedule: Provide the					of wells propose	ed to be drilled or
proposed to be recompleted from a sing	gle well	pad or connected	to a central delivery po	oint.		
Well Name	API	Spud Date	TD Reached Date	Completion Commenceme Date	nt Flow Bac Date	First k Production Date
Betonnie Tsosie Wash Unit 401H	TBD	07/04/2024	07/16/2024	09/15/2024	09/25/2024	4 09/27/2024
Betonnie Tsosie Wash Unit 40111 Betonnie Tsosie Wash Unit 402H	TBD	07/05/2024	07/18/2024	09/15/2024	09/27/2024	
Betonnie Tsosie Wash Unit 732H	TBD	07/06/2024	07/20/2024	09/15/2024	09/29/2024	
VI. Separation Equipment: 🛛 Attach	a comp	blete description o	f how Operator will siz	e separation equ	upment to opti	mize gas capture.
<b>VII. Operational Practices:</b> Attac Subsection A through F of 19.15.27.81			of the actions Operato	r will take to c	omply with the	e requirements of

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

Page 1 of 4

# <u>Section 2 – Enhanced Plan</u> <u>EFFECTIVE APRIL 1, 2022</u>

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.**  $\Box$  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  $\Box$  will  $\Box$  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  $\Box$  does  $\Box$  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).

 $\Box$  Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:**  $\Box$  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.

# <u>Section 3 - Certifications</u> <u>Effective May 25, 2021</u>

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

 $\boxtimes$  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

 $\Box$  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.**  $\Box$  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.**  $\Box$  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: Shaw-Maris Ford
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@djrllc.com
Date: 12/11/2023
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 Betonnie Tsosie Wash Unit 401H, 402H, 732H SENE H-28-23N-08W

# **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.

1 Road 3263 Aztec, NM 87410 Phone (505) 632-3476 Fax (505) 632-8151



# DJR OPERATING, LLC. OGRID NO: 371838 NATURAL GAS MANAGEMENT PLAN Betonnie Tsosie Wash Unit 401H, 402H, 732H SENE H-28-23N-08W

# **VENTING and FLARING**

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

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

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

DJR will only flare gas during the following times:

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

1 Road 3263 Aztec, NM 87410



# DJR OPERATING, LLC. OGRID NO: 371838 NATURAL GAS MANAGEMENT PLAN Betonnie Tsosie Wash Unit 401H, 402H, 732H SENE H-28-23N-08W

# **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.

1 Road 3263 Aztec, NM 87410 Phone (505) 632-3476 Fax (505) 632-8151



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

### 19.15.27.8 E. Performance standards

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

1 Road 3263 Aztec, NM 87410 Phone (505) 632-3476 Fax (505) 632-8151



- 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 Betonnie Tsosie Wash Unit 305H, 306H, 721H NWNE B-21-23N-08W

# **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.

DJRs 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.

1 Road 3263 Aztec, NM 87410 Phone (505) 632-3476 Fax (505) 632-8151 Rev 0



**J**DJR Operating

# DRILLING PLAN Betonnie Tsosie Tsosie Wash Unit #402H San Juan County, New Mexico

### Surface Location

479-ft FEL & 1657-ft FNL Sec 28 T23N R08W Graded Elevation 6864' MSL RKB Elevation 6878' (14' KB)

Kick Off Point for Horizontal Build Curve 4324-ft MD 4321-ft TVD

Heel Location (Pay zone entry) 1038-ft FEL & 1114-ft FNL Sec 28 T23N R08W

### Bottom Hole Location (TD)

386-ft FWL & 2291-ft FNL Sec 21 T23N R08W SHL Geographical Coordinates (NAD-83) Latitude 36.2006590° N Longitude 107.6793690° W

Local Coordinates (from SHL) 84-ft North 119-ft West

Heel Geographical Coordinates (NAD-83)Latitude36.20213764° NLongitude107.68125517° W

BHL Geographical Coordinates (NAD-83) Latitude 36.21357184° N Longitude 107.6946683° W

### Well objectives

This well is planned as a 5740-ft lateral in the Gallup C sand.

### Bottom Hole temperature and pressure

The temperature in the Gallup C horizontal objective is 137°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	629	629	Sd	W	8.3	8.4 - 8.8
Kirtland	748	748	Sh	-	8.3	8.4 - 8.8
Fruitland	1000	1000	С	G	8.3	9.0 - 9.5
Pictured Cliffs	1306	1305	Sd	W	8.3	9.0 - 9.5
Lewis	1428	1427	Sh	-		9.0 - 9.5
Chacra	2023	2022	Sd	-	8.3	9.0 - 9.5
Menefee	2769	2767	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	3721	3719	Sd	-	8.3	9.0 - 9.5
Mancos	3892	3890	Sh	-		9.0 - 9.5
Mancos Silt	4152	4149	Slt	O/G	6.6	9.0 - 9.5
Gallup A	4676	4652	Slt	O/G	6.6	9.0 - 9.5
Gallup B	4746	4708	Sd	O/G	6.6	8.8 -9.0
Gallup C	4893	4808	Sd	O/G	6.6	8.8 -9.0
Target	5295	4934	Sd	O/G	6.6	8.8 -9.0

### **Casing Program**

Casing	Hole	Weight			MD	MD	TVD	TVD	Top of Cement
OD	Size	(#/ft)	Grade	Coupling	Тор	Bottom	Тор	Bottom	
9-5/8"	12-1/4"	36	K-55	STC	surf	350	surf	350	surface
7"	8-3/4"	26	K-55	LTC	surf	5245	surf	4932	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	4967	11038	4849	4984	4967

Note: all casing will be new

Rev 0





### **Casing Design Load Cases**

			Casing String	
				4-1/2"
		9-5/8"	7"	Production
	Description	Surface	Intermediate	Liner
Collapse	Full internal evacuation <sup>1</sup>	✓	✓	$\checkmark$
	Cementing	✓	<b>~</b>	~
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 <sup>6</sup>	✓	✓	~
Axial	Overpull <sup>7</sup>	✓	✓	$\checkmark$

### Note #

1 Fluid level at shoe, air column to surface, pore pressure outside

2 3 Tested to 80% of minimum internal yield with freshwater inside, pore pressure outside

50 bbl kick at TD, 0.50 ppg intensity, 4" drill pipe, 9.0 ppg mud, fracture gradient at shoe 2060 psi BHP, 687 psi surface pressure, 12.5 ppg EMW shoe integrity

4 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**

<u>9-5/8" Surface Casing</u>	Lead
Name	Redi-Mix
Туре	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
Туре	III	Poz/G
Planned top	Surface	3824-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	371	228
Volume (bbls)	155	61
Volume (cu.ft.)	868	340
Excess %	55	55

Rev 0

### 4-1/2" Production Liner

BJ Services
Poz/G
4967-ft
13.3
1.56
7.71
510
142
797
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% KCI LSND drilling fluid will be used, with KCI 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% KCI Low solids, non- dispersed	350 – 5245	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5245 – 11038	8.8 – 9.2	34 – 38	6 – 8	6 – 8

### Cores, tests and logs

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

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

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

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

### **Cuttings and drilling fluids management**

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

### Completion

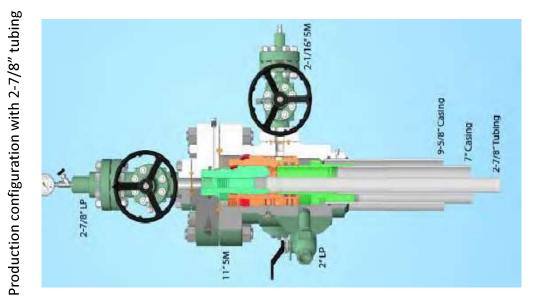
It is envisioned that this well will be completed with a multi-stage sand frac, using the plug and perf technique. After drilling out the plugs, the current plan is to install a 2-7/8" plunger-assisted gas lift tubing string. The stimulation and completion plan will be sundried at a later date.

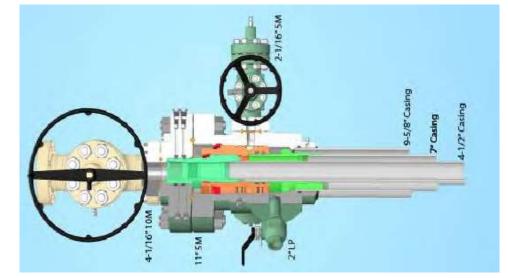




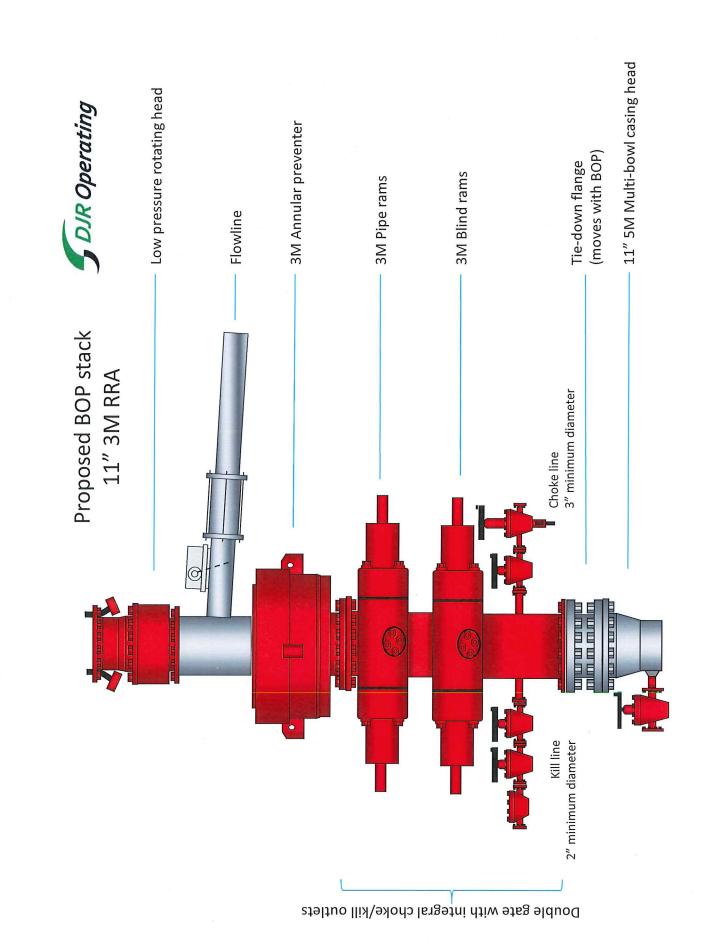
# Proposed Wellhead 11" 5M Multi-bowl

Frac configuration with 4-1/2" tieback



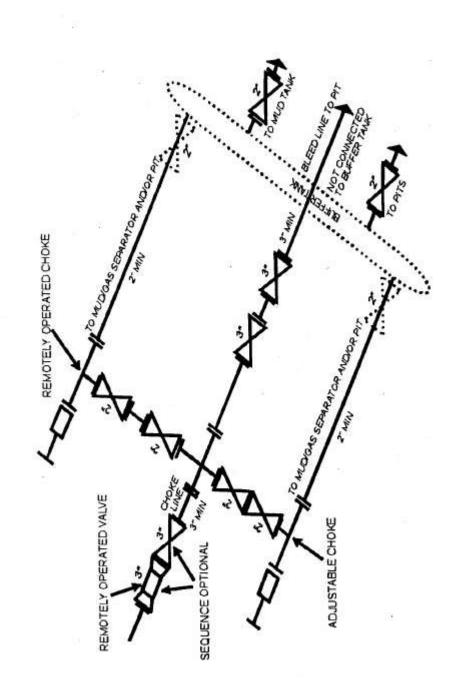


1



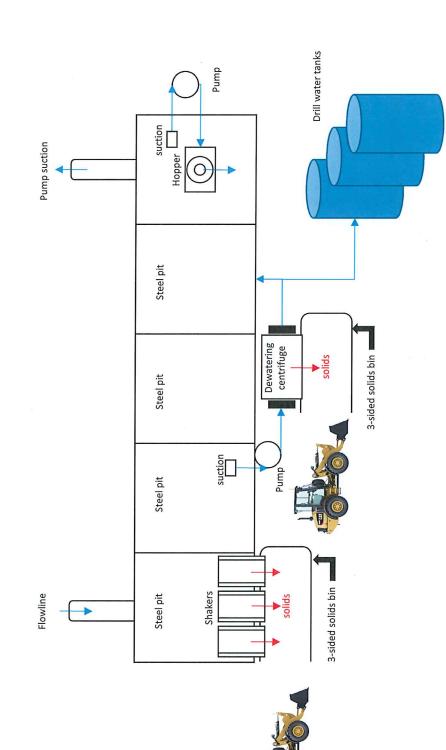
Received by OCD: 12/11/2023 12:27:03 PM





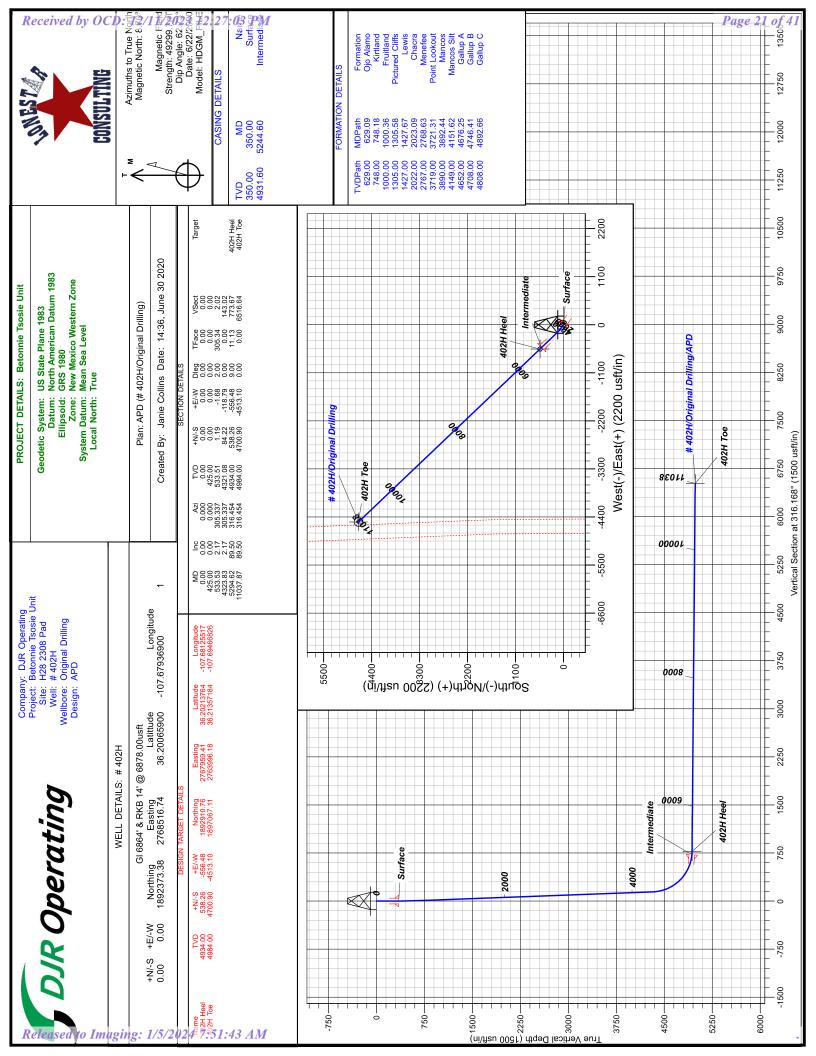
Closed Loop Mud System





Page 20 of 41

Received by OCD: 12/11/2023 12:27:03 PM





# **DJR Operating**

Betonnie Tsosie Unit H28 2308 Pad # 402H - Slot 1

**Original Drilling** 

Plan: APD

# **Standard Planning Report**

30 June, 2020





### Lonestar Consulting, LLC

**Planning Report** 



Database: Company: Project: Site: Well: Wellbore: Design:	Betonn H28 23 # 402H	perating iie Tsosie Unit 808 Pad I I Drilling			TVD Refer MD Refere North Refe	ence:		Well # 402H - S GI 6864' & RKE GI 6864' & RKE True Minimum Curva	8 14' @ 6878.00 8 14' @ 6878.00	
Project	Betonnie	e Tsosie Unit								
Map System: Geo Datum: Map Zone:	North Am	Plane 1983 erican Datum ico Western Zo			System Dat	um:	N	lean Sea Level		
Site	H28 230	)8 Pad								
Site Position: From: Position Uncertainty	Lat/L	-	North Eastir ) usft Slot R	-		386.18 usft 554.49 usft 13.20 in	Latitude: Longitude: Grid Conver	gence:		36.20069400 -107.67924100 0.09 °
Well	# 402H -	Slot 1								
Well Position Position Uncertainty	+N/-S +E/-W	-37.7	76 usft Ea	orthing: asting: ellhead Eleva	ition:	1,892,373.38 2,768,516.74	4 usft Lo	titude: ongitude: ound Level:		36.20065900 -107.67936900 6,864.00 usft
Wellbore	Origina	l Drilling								
Magnetics		del Name	Sampl	e Date	Declina (°)	tion		Angle (°)		trength T)
		HDGM_FILE		6/22/2020		8.70		62.73	49,2	99.70000000
Design	APD									
Audit Notes:						-	0.5.4		0.00	
Version: Vertical Section:		n	Phas epth From (T		PLAN +N/-S		e On Depth: E/-W	Di.	0.00	
Ventical Section.		J	(usft)	,	(usft)	_	isft)	Di	(°)	
			0.00		0.00	0	0.00	31	16.168	
Plan Survey Tool Pr Depth From (usft) 1 0.00	Depth (usf		6/26/2020 <b>(Wellbore)</b> riginal Drilling)		Tool Name MWD+HDGM OWSG MWD -	+ HDGM	Remarks			
-	nation (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00 425.00 533.53 4,323.83 5,294.62	0.00 0.00 2.17 2.17 89.50	0.000 0.000 305.337 305.337 316.453	0.00 425.00 533.51 4,321.08 4,934.00	0.00 0.00 1.19 84.22 538.26	0.00 0.00 -1.68 -118.79 -556.48	0.00 0.00 2.00 0.00 9.00	0.00 0.00 2.00 9.00	0         0.00           0         0.00           0         0.00           0         0.00           0         1.15		402H Heel
11,037.87	89.50	316.453	4,984.00	4,700.90	-4,513.10	0.00	0.00	0.00	0.00	402H Toe

6/30/2020 2:32:40PM



**Planning Report** 



Database:	DJR	Local Co-ordinate Reference:	Well # 402H - Slot 1
Company:	DJR Operating	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Project:	Betonnie Tsosie Unit	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site:	H28 2308 Pad	North Reference:	True
Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00		0.00		0.00	
					0.00		0.00		0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
425.00	0.00	0.000	425.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	1.50	305.337	499.99	0.57	-0.80	0.96	2.00	2.00	0.00
533.53	2.17	305.337	533.51	1.19	-1.68	2.02	2.00	2.00	0.00
600.00	2.17	305.337	599.93	2.65	-3.73	4.49	0.00	0.00	0.00
700.00	2.17	305.337	699.85	4.84	-6.82	8.21	0.00	0.00	0.00
800.00	2.17	305.337	799.78	7.03	-9.91	11.93	0.00	0.00	0.00
900.00	2.17	305.337	899.71	9.22	-13.00	15.65	0.00	0.00	0.00
1,000.00	2.17	305.337	999.64	11.41	-16.09	19.37	0.00	0.00	0.00
1,100.00 1,200.00	2.17 2.17	305.337 305.337	1,099.57 1,199.50	13.60 15.79	-19.18 -22.27	23.09 26.81	0.00 0.00	0.00 0.00	0.00 0.00
1,300.00	2.17	305.337	1,299.42	17.98	-25.36	30.53	0.00	0.00	0.00
1,400.00	2.17	305.337	1,399.35	20.17	-28.45	34.25	0.00	0.00	0.00
1,500.00	2.17	305.337	1,499.28	22.36	-31.54	37.97	0.00	0.00	0.00
1,600.00	2.17	305.337	1,599.21	24.55	-34.63	41.69	0.00	0.00	0.00
1,700.00	2.17	305.337	1,699.14	26.74	-37.72	45.41	0.00	0.00	0.00
1,800.00	2.17	305.337	1,799.07	28.93	-40.81	49.13	0.00	0.00	0.00
1,900.00	2.17	305.337	1,898.99	31.12	-43.90	52.85	0.00	0.00	0.00
2,000.00	2.17	305.337	1,998.92	33.32	-46.99	56.57	0.00	0.00	0.00
2,100.00	2.17	305.337	2,098.85	35.51	-50.08	60.29	0.00	0.00	0.00
2,200.00	2.17	305.337	2,198.78	37.70	-53.17	64.01	0.00	0.00	0.00
2,300.00	2.17	305.337	2,298.71	39.89	-56.26	67.73	0.00	0.00	0.00
2,400.00	2.17	305.337	2,398.63	42.08	-59.35	71.45	0.00	0.00	0.00
2,500.00	2.17	305.337	2,498.56	44.27	-62.44	75.17	0.00	0.00	0.00
2,600.00	2.17	305.337	2,598.49	46.46	-65.53	78.89	0.00	0.00	0.00
2,000.00	2.17	305.337	2,698.42	48.65	-68.62	82.62	0.00	0.00	0.00
									0.00
2,800.00	2.17	305.337	2,798.35	50.84	-71.71	86.34	0.00	0.00	
2,900.00	2.17	305.337	2,898.28	53.03	-74.80	90.06	0.00	0.00	0.00
3,000.00	2.17	305.337	2,998.20	55.22	-77.89	93.78	0.00	0.00	0.00
3,100.00	2.17	305.337	3,098.13	57.41	-80.98	97.50	0.00	0.00	0.00
3,200.00	2.17	305.337	3,198.06	59.60	-84.07	101.22	0.00	0.00	0.00
3,300.00	2.17	305.337	3,297.99	61.79	-87.15	104.94	0.00	0.00	0.00
3,400.00	2.17	305.337	3,397.92	63.99	-90.24	108.66	0.00	0.00	0.00
3,500.00	2.17	305.337	3,497.85	66.18	-93.33	112.38	0.00	0.00	0.00
3,600.00	2.17	305.337	3,597.77	68.37	-96.42	116.10	0.00	0.00	0.00
3,700.00	2.17	305.337	3,697.70	70.56	-99.51	119.82	0.00	0.00	0.00
3,800.00	2.17	305.337	3,797.63	72.75	-102.60	123.54	0.00	0.00	0.00
3,900.00	2.17	305.337	3,897.56	74.94	-105.69	127.26	0.00	0.00	0.00
4,000.00	2.17	305.337	3,997.49	77.13	-108.78	130.98	0.00	0.00	0.00
4,000.00	2.17	305.337	4,097.41	79.32	-111.87	134.70	0.00	0.00	0.00
4,100.00	2.17	305.337	4,197.34	81.51	-114.96	134.70	0.00	0.00	0.00
4,300.00 4,323.83	2.17 2.17	305.337 305.337	4,297.27 4,321.08	83.70 84.22	-118.05 -118.79	142.14 143.02	0.00 0.00	0.00 0.00	0.00 0.00
4,400.00	9.00	313.810	4,396.85	89.19	-124.27	150.40	9.00	8.96	11.12
4,500.00	17.99	315.167	4,493.99	105.58	-140.83	173.70	9.00	9.00	1.36
4,600.00	26.99	315.635	4,586.29	132.81	-167.64	211.91	9.00	9.00	0.47
4,700.00	35.99	315.880	4,671.48	170.20	-204.04	264.08	9.00	9.00	0.25
4,800.00	44.99	316.038	4,747.45	216.83	-249.12	328.94	9.00	9.00	0.16
4,900.00	53.99	316.153	4,812.35	271.56	-301.78	404.89	9.00	9.00	0.11
5,000.00	62.99	316.244	4,864.57	333.03	-360.73	490.06	9.00	9.00	0.09

6/30/2020 2:32:40PM

COMPASS 5000.15 Build 91D

.



**Planning Report** 



Database:	DJR	Local Co-ordinate Reference:	Well # 402H - Slot 1
Company:	DJR Operating	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Project:	Betonnie Tsosie Unit	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site:	H28 2308 Pad	North Reference:	True
Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,100.00	71.99	316.321	4,902.82	399.73	-424.50	582.34	9.00	9.00	0.08
5,200.00	80.99	316.391	4,926.16	470.01	-491.54	679.47	9.00	9.00	0.07
5,294.62	89.50	316.453	4,934.00	538.26	-556.48	773.67	9.00	9.00	0.07
5,300.00	89.50	316.453	4,934.05	542.16	-560.19	779.06	0.00	0.00	0.00
5,400.00	89.50	316.453	4,934.92	614.64	-629.08	879.05	0.00	0.00	0.00
5,500.00	89.50	316.453	4,935.79	687.12	-697.97	979.05	0.00	0.00	0.00
5,600.00	89.50	316.453	4,936.66	759.60	-766.86	1,079.04	0.00	0.00	0.00
5,700.00	89.50	316.453	4,937.53	832.08	-835.75	1,179.04	0.00	0.00	0.00
5,800.00	89.50	316.453	4,938.40	904.56	-904.65	1,279.03	0.00	0.00	0.00
5,900.00	89.50	316.453	4,939.27	977.03	-973.54	1,379.03	0.00	0.00	0.00
6,000.00	89.50	316.453	4,940.14	1,049.51	-1,042.43	1,479.02	0.00	0.00	0.00
6,100.00	89.50	316.453	4,941.01	1,121.99	-1,111.32	1,579.02	0.00	0.00	0.00
6,200.00	89.50	316.453	4,941.88	1,194.47	-1,180.21	1,679.01	0.00	0.00	0.00
6,300.00	89.50	316.453	4,942.75	1,266.95	-1,249.10	1,779.01	0.00	0.00	0.00
6,400.00	89.50	316.453	4,943.62	1,339.43	-1,318.00	1,879.00	0.00	0.00	0.00
6,500.00	89.50	316.453	4,944.49	1,411.91	-1,386.89	1,979.00	0.00	0.00	0.00
6,600.00	89.50	316.453	4,945.36	1,484.39	-1,455.78	2,078.99	0.00	0.00	0.00
6,700.00	89.50	316.453	4,946.24	1,556.86	-1,524.67	2,178.99	0.00	0.00	0.00
6,800.00	89.50	316.453	4,947.11	1,629.34	-1,593.56	2,278.98	0.00	0.00	0.00
6,900.00	89.50	316.453	4,947.98	1,701.82	-1,662.45	2,378.98	0.00	0.00	0.00
7,000.00	89.50	316.453	4,948.85	1,774.30	-1,731.35	2,478.97	0.00	0.00	0.00
7,100.00	89.50	316.453	4,949.72	1,846.78	-1,800.24	2,578.97	0.00	0.00	0.00
7,200.00	89.50	316.453	4,950.59	1,919.26	-1,869.13	2,678.96	0.00	0.00	0.00
7,300.00	89.50	316.453	4,951.46	1,991.74	-1,938.02	2,778.96	0.00	0.00	0.00
7,400.00	89.50	316.453	4,952.33	2,064.22	-2,006.91	2,878.95	0.00	0.00	0.00
7,500.00	89.50	316.453	4,953.20	2,136.69	-2,075.80	2,978.95	0.00	0.00	0.00
7,600.00	89.50	316.453	4,954.07	2,209.17	-2,144.70	3,078.94	0.00	0.00	0.00
7,700.00	89.50	316.453	4,954.94	2,281.65	-2,213.59	3,178.94	0.00	0.00	0.00
7,800.00	89.50	316.453	4,955.81	2,354.13	-2,282.48	3,278.93	0.00	0.00	0.00
7,900.00	89.50	316.453	4,956.68	2,426.61	-2,351.37	3,378.93	0.00	0.00	0.00
8,000.00	89.50	316.453	4,957.55	2,499.09	-2,420.26	3,478.92	0.00	0.00	0.00
8,100.00	89.50	316.453	4,958.42	2,571.57	-2,489.16	3,578.92	0.00	0.00	0.00
			4,959.29				0.00	0.00	0.00
8,200.00	89.50	316.453		2,644.05	-2,558.05	3,678.91			
8,300.00	89.50	316.453	4,960.16	2,716.53	-2,626.94	3,778.91	0.00	0.00	0.00
8,400.00	89.50	316.453	4,961.04	2,789.00	-2,695.83	3,878.90	0.00	0.00	0.00
8,500.00	89.50	316.453	4,961.91	2,861.48	-2,764.72	3,978.90	0.00	0.00	0.00
8,600.00	89.50	316.453	4,962.78	2,933.96	-2,833.61	4,078.89	0.00	0.00	0.00
8,700.00	89.50	316.453	4,963.65	3,006.44	-2,902.51	4,178.89	0.00	0.00	0.00
8,800.00	89.50	316.453	4,964.52	3,078.92	-2,971.40	4,278.88	0.00	0.00	0.00
8,900.00	89.50	316.453	4,965.39	3,151.40	-3,040.29	4,378.88	0.00	0.00	0.00
9,000.00	89.50	316.453	4,966.26	3,223.88	-3,109.18	4,478.87	0.00	0.00	0.00
9,100.00	89.50	316.453	4,967.13	3,296.36	-3,178.07	4,578.87	0.00	0.00	0.00
9,200.00	89.50	316.453	4,968.00	3,368.83	-3,178.07	4,578.87	0.00	0.00	0.00
9,200.00			4,968.00 4,968.87						
	89.50	316.453		3,441.31	-3,315.86	4,778.86	0.00	0.00	0.00
9,400.00	89.50	316.453	4,969.74	3,513.79	-3,384.75	4,878.85	0.00	0.00	0.00
9,500.00	89.50	316.453	4,970.61	3,586.27	-3,453.64	4,978.85	0.00	0.00	0.00
9,600.00	89.50	316.453	4,971.48	3,658.75	-3,522.53	5,078.84	0.00	0.00	0.00
9,700.00	89.50	316.453	4,972.35	3,731.23	-3,591.42	5,178.84	0.00	0.00	0.00
9,800.00	89.50	316.453	4,973.22	3,803.71	-3,660.31	5,278.83	0.00	0.00	0.00
9,900.00	89.50	316.453	4,974.09	3,876.19	-3,729.21	5,378.83	0.00	0.00	0.00
10,000.00	89.50	316.453	4,974.96	3,948.67	-3,798.10	5,478.82	0.00	0.00	0.00
10,100.00	89.50	316.453	4,975.84	4,021.14	-3,866.99	5,578.82	0.00	0.00	0.00
10,200.00	89.50	316.453	4,976.71	4,093.62	-3,935.88	5,678.81	0.00	0.00	0.00
10,200.00	89.50	316.453	4,977.58	4,166.10	-4,004.77	5,778.81	0.00	0.00	0.00
10,300.00									

6/30/2020 2:32:40PM

.



**Planning Report** 



Database:	DJR	Local Co-ordinate Reference:	Well # 402H - Slot 1
Company:	DJR Operating	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Project:	Betonnie Tsosie Unit	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site:	H28 2308 Pad	North Reference:	True
Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Section (usft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)
10,400.00	89.50	316.453	4,978.45	4,238.58	-4,073.66	5,878.80	0.00	0.00	0.00
10,500.00	89.50	316.453	4,979.32	4,311.06	-4,142.56	5,978.80	0.00	0.00	0.00
10,600.00	89.50	316.453	4,980.19	4,383.54	-4,211.45	6,078.79	0.00	0.00	0.00
10,700.00	89.50	316.453	4,981.06	4,456.02	-4,280.34	6,178.79	0.00	0.00	0.00
10,800.00	89.50	316.453	4,981.93	4,528.50	-4,349.23	6,278.78	0.00	0.00	0.00
10,900.00	89.50	316.453	4,982.80	4,600.97	-4,418.12	6,378.78	0.00	0.00	0.00
11,000.00	89.50	316.453	4,983.67	4,673.45	-4,487.01	6,478.77	0.00	0.00	0.00
11.037.87	89.50	316.453	4.984.00	4.700.90	-4.513.10	6.516.64	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
402H Heel - plan hits target cent - Circle (radius 50.00		0.000	4,934.00	538.26	-556.48	1,892,910.76	2,767,959.41	36.20213764	-107.68125518
402H Toe - plan hits target cent - Circle (radius 100.0		0.000	4,984.00	4,700.90	-4,513.10	1,897,067.12	2,763,996.18	36.21357184	-107.69466826

### Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Na	Casing Diameter (in)	Ho Diam (in	eter
350.00	350.00	Surface	9.0	62	12.25
5,244.60	4,931.60	Intermediate	7.0	00	8.75

	rm			

Measu Depti (usft	n Depth	Name	Litholog	Dip Iy (°)	Dip Direction (°)
62	9.09 629.0	) Ojo Alamo		0.00	0.000
74	8.18 748.0	) Kirtland		0.00	0.000
1,00	0.36 1,000.0	) Fruitland		0.00	0.000
1,30	5.58 1,305.0	) Pictured Cliffs		0.00	0.000
1,42	7.67 1,427.0	) Lewis		0.00	0.000
2,02	3.09 2,022.0	) Chacra		0.00	0.000
2,76	8.63 2,767.0	) Menefee		0.00	0.000
3,72	1.31 3,719.0	) Point Lookout		0.00	0.000
3,89	2.44 3,890.0	) Mancos		0.00	0.000
4,15	1.62 4,149.0	) Mancos Silt		0.00	0.000
4,67	6.25 4,652.0	) Gallup A		0.00	0.000
4,74	6.41 4,708.0	) Gallup B		0.00	0.000
4,89	2.66 4,808.0	) Gallup C		0.00	0.000

6/30/2020 2:32:40PM



# **DJR Operating**

Betonnie Tsosie Unit H28 2308 Pad # 402H

Original Drilling APD

# **Anticollision Report**

30 June, 2020





Г

## Lonestar Consulting, LLC



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
Project:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Reference Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum
Reference	APD		

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

s	urvey Tool Program		Date 6/30/2020		
	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	0.00	11,037.87	7 APD (Original Drilling)	MWD+HDGM	OWSG MWD + HDGM

	Reference	Offset	Dista	nce		
	Measured	Measured	Between	Between	Separation	Warning
Site Name	Depth	Depth	Centres	Ellipses	Factor	
Offset Well - Wellbore - Design	(usft)	(usft)	(usft)	(usft)		
H28 2308 Pad						
# 401H - Original Drilling - APD	400.00	400.00	19.99	17.53	8.128 CC	
# 401H - Original Drilling - APD	425.00	424.87	20.07	17.43	7.609 ES	
# 401H - Original Drilling - APD	11,037.87	11,098.83	1,248.97	928.03	3.892 SF	
# 732H - Original Drilling - APD	702.07	703.78	37.56	32.98	8.214 CC, ES	
# 732H - Original Drilling - APD	9,700.00	10,283.37	1,321.08	1,054.10	4.948 SF	

Offset De	sign	H28 230	08 Pad - #	# 401H - Ori	ginal Dril	ing - APD							Offset Site Error:	0.00 usft
Survey Prog	-	WD+HDGM				, in the second se							Offset Well Error:	0.00 usft
Refer	ence	Offse	ət	Semi Major	Axis				Dista	ance				
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbor		Between	Between	Minimum	Separation	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
0.00	0.00	0.00	0.00	0.00	0.00	70.86	6.55	18.88	19.99					
100.00	100.00	100.00	100.00	0.15	0.15	70.86	6.55	18.88	19.99	19.68	0.31	64.832		
200.00	200.00	200.00	200.00	0.51	0.51	70.86	6.55	18.88	19.99	18.96	1.03	19.495		
300.00	300.00	300.00	300.00	0.87	0.87	70.86	6.55	18.88	19.99	18.24	1.74	11.472		
400.00	400.00	400.00	400.00	1.23	1.23	70.86	6.55	18.88	19.99	17.53	2.46	8.128 CC		
425.00	425.00	424.87	424.87	1.32	1.32	70.66	6.65	18.94	20.07	17.43	2.64	7.609 ES		
500.00	499.99	499.43	499.41	1.59	1.59	124.65	8.04	19.76	21.88	18.71	3.17	6.899		
533.53	533.51	532.71	532.67	1.71	1.71	124.66	9.20	20.44	23.54	20.13	3.41	6.902		
600.00	599.93	598.58	598.42	1.94	1.94	123.89	12.48	22.37	27.93	24.05	3.88	7.197		
700.00	699.85	697.27	696.74	2.30	2.30	120.37	19.84	26.69	36.85	32.26	4.59	8.032		
800.00	799.78	795.29	794.03	2.66	2.66	116.04	30.03	32.68	48.74	43.45	5.29	9.213		
900.00	899.71	892.40	889.98	3.01	3.03	112.00	42.94	40.27	63.80	57.81	5.99	10.654		
1,000.00	999.64	988.40	984.28	3.37	3.41	108.56	58.46	49.39	82.09	75.41	6.68	12.295		
1,100.00	1,099.57	1,083.11	1,076.65	3.73	3.81	105.73	76.43	59.95	103.61	96.26	7.36	14.086		
1,200.00	1,199.50	1,176.34	1,166.87	4.09	4.22	103.42	96.69	71.86	128.33	120.31	8.02	16.003		
1,300.00	1,299.42	1,267.93	1,254.71	4.45	4.65	101.54	119.04	84.99	156.17	147.49	8.68	18.001		
1,400.00	1,399.35	1,363.07	1,345.47	4.82	5.11	100.02	143.65	99.46	185.77	176.38	9.39	19.791		
1,500.00	1,499.28	1,458.49	1,436.50	5.18	5.59	98.91	168.34	113.97	215.46	205.35	10.11	21.319		
1,600.00	1,599.21	1,553.91	1,527.52	5.54	6.07	98.07	193.02	128.48	245.20	234.37	10.83	22.642		
1,700.00	1,699.14	1,649.33	1,618.54	5.90	6.56	97.42	217.71	142.99	274.99	263.43	11.56	23.795		
1,800.00	1,799.07	1,744.75	1,709.56	6.26	7.06	96.89	242.40	157.49	304.80	292.51	12.29	24.810		
1,900.00	1,898.99	1,840.17	1,800.58	6.62	7.56	96.45	267.08	172.00	334.63	321.61	13.02	25.707		





Comp	any:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
Projec	ct:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Refere	ence Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site E	irror:	0.00 usft	North Reference:	True
Refere	ence Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Well E	Error:	0.00 usft	Output errors are at	2.00 sigma
Refere	ence Wellbore	Original Drilling	Database:	DJR
Refere	ence Design:	APD	Offset TVD Reference:	Offset Datum

	sign		001 44 - 7	# 401H - Ori	gina Din									
urvey Prog		WD+HDGM											Offset Well Error:	0.00 u
Refer		Offs		Semi Major					Dista					
leasured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbor +N/-S	e Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
2,000.00	1,998.92	1,935.59	1,891.60	6.98	8.06	96.09	291.77	186.51	364.47	350.72	13.75	26.507		
2,100.00	2,098.85	2,031.01	1,982.62	7.34	8.56	95.78	316.46	201.02	394.33	379.84	14.48	27.224		
2,200.00	2,198.78	2,126.43	2,073.65	7.71	9.07	95.52	341.14	215.53	424.19	408.97	15.22	27.870		
2,300.00	2,298.71	2,221.85	2,164.67	8.07	9.58	95.29	365.83	230.04	454.06	438.10	15.96	28.455		
2,400.00	2,398.63	2,317.27	2,255.69	8.43	10.09	95.08	390.52	244.55	483.94	467.24	16.69	28.987		
2,500.00	2,498.56	2,412.69	2,346.71	8.79	10.60	94.91	415.20	259.06	513.82	496.39	17.43	29.473		
2,600.00	2,598.49	2,508.11	2,437.73	9.15	11.12	94.75	439.89	273.57	543.71	525.53	18.17	29.918		
2,700.00	2,698.42	2,603.53	2,528.75	9.51	11.63	94.60	464.58	288.08	573.59	554.68	18.91	30.328		
2,800.00	2,798.35	2,698.95	2,619.78	9.87	12.15	94.48	489.26	302.59	603.49	583.83	19.65	30.706		
2,900.00	2,898.28	2,794.37	2,710.80	10.24	12.66	94.36	513.95	317.09	633.38	612.99	20.39	31.056		
3,000.00	2,998.20	2,889.79	2,801.82	10.60	13.18	94.26	538.64	331.60	663.28	642.14	21.14	31.381		
3,100.00	3,098.13	2,985.21	2,892.84	10.96	13.70	94.16	563.32	346.11	693.18	671.30	21.88	31.683		
3,200.00	3,198.06	3,080.63	2,983.86	11.32	14.21	94.07	588.01	360.62	723.08	700.46	22.62	31.964		
3,300.00	3,297.99	3,176.04	3,074.88	11.68	14.73	93.99	612.70	375.13	752.98	729.62	23.36	32.228		
3,400.00	3,397.92	3,271.46	3,165.91	12.04	15.25	93.91	637.39	389.64	782.88	758.78	24.11	32.475		
3,500.00	3,497.85	3,366.88	3,256.93	12.41	15.77	93.84	662.07	404.15	812.79	787.94	24.85	32.706		
2 000 00	0 507 77	0.400.00	0.047.05	40.77	40.00	00 70	000 70	140.00	0.40.00	047.40	05 50	20.004		
3,600.00	3,597.77	3,462.30	3,347.95	12.77	16.29	93.78	686.76	418.66	842.69	817.10	25.59	32.924		
3,700.00	3,697.70	3,557.72	3,438.97	13.13	16.81	93.72	711.45	433.17	872.60	846.26	26.34	33.130		
3,800.00	3,797.63	3,653.14	3,529.99	13.49	17.33	93.66	736.13	447.68	902.51	875.42	27.08	33.323		
3,900.00	3,897.56	3,748.56	3,621.01	13.85	17.85	93.61	760.82	462.19	932.41	904.59	27.83	33.506		
4,000.00	3,997.49	3,843.98	3,712.03	14.22	18.37	93.56	785.51	476.69	962.32	933.75	28.57	33.679		
4,100.00	4,097.41	3,939.40	3,803.06	14.58	18.89	93.51	810.19	491.20	992.23	962.91	29.32	33.844		
4,200.00	4,197.34	4,034.82	3,894.08	14.94	19.41	93.47	834.88	505.71	1,022.14	992.08	30.06	34.000		
4,300.00	4,297.27	4,130.24	3,985.10	15.30	19.93	93.43	859.57	520.22	1,052.05	1,021.24	30.81	34.148		
4,323.83	4,321.08	4,152.98	4,006.79	15.39	20.06	93.42	865.45	523.68	1,059.18	1,028.19	30.99	34.182		
4,350.00	4,347.21	4,177.97	4,030.63	15.48	20.19	86.93	871.91	527.48	1,066.94	1,035.75	31.18	34.215		
4,400.00	4,396.85	4,225.70	4,076.16	15.67	20.45	83.13	884.26	534.74	1,081.33	1,049.77	31.57	34.257		
4,450.00	4,445.88	4,273.17	4,121.44	15.86	20.71	81.37	896.55	541.96	1,095.14	1,063.18	31.96	34.269		
4,500.00	4,493.99	4,320.09	4,166.20	16.06	20.97	80.31	908.68	549.09	1,108.34	1,075.98	32.36	34.253		
4,550.00	4,540.89	4,366.16	4,210.15	16.26	21.22	79.64	920.60	556.09	1,120.96	1,088.20	32.77	34.211		
4,600.00	4,586.29	4,411.10	4,253.02	16.48	21.47	79.25	932.23	562.93	1,133.08	1,099.89	33.19	34.142		
4,650.00	4,629.91	4,454.64	4,294.55	16.70	21.71	79.07	943.50	569.55	1,144.78	1,111.16	33.62	34.048		
4,700.00	4,671.48	4,496.50	4,334.48	16.94	21.94	79.04	954.33	575.91	1,156.17	1,122.10	34.08	33.929		
4,750.00	4,710.74	4,536.43	4,372.57	17.21	22.15	79.11	964.66	581.99	1,167.40	1,132.84	34.55	33.785		
4,800.00	4,747.45	4,575.09	4,409.43	17.50	22.37	79.26	974.77	587.74	1,178.59	1,143.52	35.07	33.608		
4,850.00	4,781.39	4,615.76	4,447.99	17.83	22.59	79.51	986.84	592.33	1,189.79	1,154.13	35.66	33.366		
4,900.00	4,812.35	4,658.52	4,488.08	18.21	22.83	79.84	1,001.42	595.13	1,200.96	1,164.63	36.33	33.059		
4,950.00	4,840.13	4,056.52	4,400.00	18.64	22.03	80.26	1,018.90	595.13	1,200.96	1,174.96	30.33	32.684		
4,950.00 5,000.00	4,840.13	4,703.82	4,529.86 4,573.48	18.64	23.08	80.26 80.78	1,018.90	595.82 593.97	1,212.04	1,174.96	37.08	32.684		
5,050.00	4,885.50	4,752.25	4,573.48	19.12	23.54	81.42	1,059.80	593.97 588.99	1,223.00	1,194.87	37.93	32.242 31.741		
5,100.00	4,005.50	4,804.50 4,861.54	4,619.09	20.27	23.03	82.19	1,004.80	580.99 580.05	1,233.74	1,194.87	39.90	31.741		
5,150.00	4,916.40	4,924.53	4,716.41	20.93	24.26	83.13	1,130.87	566.01	1,254.16	1,213.15	41.01	30.581		
5,200.00	4,926.16	4,994.98	4,767.63	21.64	24.62	84.25	1,174.52	545.31	1,263.54	1,221.33	42.20	29.940		
5,250.00	4,932.05	5,074.69	4,819.35	22.40	25.03	85.57	1,227.45	515.82	1,272.06	1,228.58	43.48	29.253		
5,294.62	4,934.00 4,934.05	5,155.30 5,165.73	4,864.13 4,869.33	23.11 23.20	25.45 25.50	86.91 87.14	1,283.97 1,291.46	479.91 474.84	1,278.69 1,279.42	1,233.98 1,234.55	44.71 44.87	28.597 28.512		
5,300.00	4,504.05	5,105.73	4,009.33	23.20	20.00	07.14	1,291.40	414.04	1,279.42	1,204.00	44.07	20.312		
5,400.00	4,934.92	5,393.92	4,946.01	24.90	26.94	90.52	1,460.06	343.67	1,288.84	1,240.47	48.37	26.646		
5,500.00	4,935.79	5,561.11	4,956.56	26.75	28.46	90.92	1,581.84	229.99	1,289.21	1,237.11	52.10	24.744		
5,600.00	4,936.66	5,661.11	4,957.52	28.70	29.65	90.92	1,653.81	160.58	1,288.48	1,232.72	55.76	23.106		
5,700.00	4,937.53	5,761.10	4,958.48	30.74	31.05	90.93	1,725.78	91.16	1,287.76	1,228.18	59.58	21.614		
5,800.00	4,938.40	5,861.10	4,959.45	32.85	32.63	90.93	1,797.75	21.75	1,287.03	1,223.46	63.57	20.246		
5 000 00	4 020 27	5 061 10	1 060 44	25.00	24.96	00.04	1 960 70	17 67	1 206 20	1 040 50	67 74	10 000		
5,900.00	4,939.27	5,961.10	4,960.41	35.03	34.36	90.94	1,869.72	-47.67	1,286.30	1,218.59	67.71	18.998		





Comp	pany:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
Projec	ect:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Refere	rence Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site E	Error:	0.00 usft	North Reference:	True
Refere	rence Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Well E	Error:	0.00 usft	Output errors are at	2.00 sigma
Refer	rence Wellbore	Original Drilling	Database:	DJR
Refer	rence Design:	APD	Offset TVD Reference:	Offset Datum

(usft)         (us           6,000.00         4,5           6,100.00         4,5           6,200.00         4,5           6,300.00         4,5           6,500.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,800.00         4,5           7,000.00         4,5           7,000.00         4,5           7,100.00         4,5           7,300.00         4,5           7,400.00         4,5	0-MWD+H rtical Measure sft) 2000 (u 940.14 6, 941.01 6, 941.02 6, 944.49 6, 944.49 6, 944.49 6, 944.49 6, 944.49 6, 944.49 6, 944.49 6, 944.49 6, 944.49 7, 947.91 6, 947.91 6, 947.91 6, 947.91 7, 947.92 7, 950.59 7, 955.59 7, 955.50 7, 955.	HDGM Offset asured epth isft) (061.10 (161.09 (261.09 (3661.08 (3661.08 (3661.08 (3661.08 (3661.08 (3661.07 (366	Vertical Depth (usft) 4,961.37 4,962.34 4,963.30 4,964.26 4,965.23 4,966.19 4,967.15 4,968.12 4,969.08 4,970.04 4,971.01 4,971.97 4,972.93	# 401H - Ori Semi Major. Reference (usft) 37.25 39.51 41.80 44.13 46.47 48.84 51.23 53.63 56.05 58.47 60.91 63.36	-	Highside Toolface (*) 90.94 90.95 90.95 90.96 90.96 90.97 90.97 90.98 90.98 90.98 90.99	Offset Wellbor +N/-S (usft) 1,941.70 2,013.67 2,085.64 2,157.61 2,229.59 2,301.56 2,373.53 2,445.50 2,517.48 2,589.45	e Centre +E/-W (usft) -117.09 -186.50 -255.92 -325.33 -394.75 -464.16 -533.58 -602.99 -672.41	Dista Between Centres (usft) 1,285.58 1,284.85 1,284.85 1,284.12 1,283.40 1,282.67 1,281.94 1,281.21 1,280.49	nce Between Ellipses (usft) 1,213.60 1,208.51 1,203.32 1,198.06 1,192.74 1,187.37 1,181.94 1,176.48	Minimum Separation (usft) 71.97 76.34 80.80 85.33 89.93 94.58 99.27	Separation Factor 17.862 16.830 15.893 15.040 14.264 13.555 12.906 12.312	Offset Well Error: Warning	0.00 usft
Measured Depth (usft)         Verti Dep (usft)           6,000.00         4,5           6,100.00         4,5           6,200.00         4,5           6,300.00         4,5           6,400.00         4,5           6,500.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           7,000.00         4,5           7,100.00         4,5           7,300.00         4,5           7,400.00         4,5	rtical spth         Mear De (u           ,940.14         6, ,941.01         6, ,941.88           ,942.75         6, ,942.75         6, ,942.75           ,943.62         6, ,944.49         6, ,946.24         6, ,946.24           ,947.11         6, ,947.98         6, ,947.98         7, ,957.99           ,949.72         7, ,950.59         7, ,955.33         7,	sured         N           epth	Depth (usft)           4,961.37           4,962.34           4,963.30           4,964.26           4,965.23           4,966.19           4,967.15           4,968.12           4,960.81           4,971.01           4,971.97	Reference (usft) 37.25 39.51 41.80 44.13 46.47 48.84 51.23 53.63 56.05 58.47 60.91	Offset           (usft)           36.22           38.18           40.22           42.32           44.48           46.69           48.93           51.21           53.51           55.85	Toolface (*) 90.94 90.95 90.95 90.96 90.96 90.97 90.97 90.97 90.98 90.98 90.98	+N/-S (usft) 1,941.70 2,013.67 2,085.64 2,157.61 2,229.59 2,301.56 2,373.53 2,445.50 2,517.48	+E/-W (usft) -117.09 -186.50 -255.92 -325.33 -394.75 -464.16 -533.58 -602.99	Between Centres (usft)           1,285.58           1,284.85           1,284.42           1,283.40           1,283.40           1,281.94           1,281.21	Between Ellipses (usft) 1,213.60 1,208.51 1,203.32 1,198.06 1,192.74 1,187.37 1,181.94	Separation (usft) 71.97 76.34 80.80 85.33 89.93 94.58 99.27	Factor 17.862 16.830 15.893 15.040 14.264 13.555 12.906	Warning	
Depth (usft)         Deg (usft)           6,000.00         4,9           6,100.00         4,9           6,300.00         4,9           6,300.00         4,9           6,400.00         4,9           6,400.00         4,9           6,500.00         4,9           6,600.00         4,9           6,600.00         4,9           6,700.00         4,9           6,800.00         4,9           7,000.00         4,9           7,000.00         4,9           7,200.00         4,9           7,300.00         4,9           7,400.00         4,9	Det sft)         De (u           ,940.14         6, ,941.01         6, ,941.01           ,941.01         6, ,942.75         6,           ,942.75         6,           ,943.62         6,           ,944.49         6,           ,945.36         6,           ,947.11         6,           ,947.98         6,           ,947.98         6,           ,947.98         7,           ,950.59         7,           ,950.59         7,           ,951.46         7,           ,952.33         7,	epth           ssft)           0.061.10           .,161.09           .,261.09           .,361.09           .,361.09           .,361.08           .,761.08           .,761.08           .,761.08           .,761.08           .,761.08           .,761.08           .,761.08           .,761.08           .,361.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.07           .,961.06	Depth (usft)           4,961.37           4,962.34           4,963.30           4,964.26           4,965.23           4,966.19           4,967.15           4,968.12           4,960.81           4,971.01           4,971.97	(usft) 37.25 39.51 41.80 44.13 46.47 48.84 51.23 53.63 56.05 58.47 60.91	(usft) 36.22 38.18 40.22 42.32 44.48 46.69 48.93 51.21 53.51 55.85	Toolface (*) 90.94 90.95 90.95 90.96 90.96 90.97 90.97 90.97 90.98 90.98 90.98	+N/-S (usft) 1,941.70 2,013.67 2,085.64 2,157.61 2,229.59 2,301.56 2,373.53 2,445.50 2,517.48	+E/-W (usft) -117.09 -186.50 -255.92 -325.33 -394.75 -464.16 -533.58 -602.99	Centres (usft) 1,285.58 1,284.85 1,284.12 1,283.40 1,283.40 1,281.94 1,281.94	Ellipses (usft) 1,213.60 1,208.51 1,203.32 1,198.06 1,192.74 1,187.37	Separation (usft) 71.97 76.34 80.80 85.33 89.93 94.58 99.27	Factor 17.862 16.830 15.893 15.040 14.264 13.555 12.906	Warning	
(usft)         (us           6,000.00         4,5           6,100.00         4,5           6,200.00         4,5           6,300.00         4,5           6,500.00         4,5           6,500.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,800.00         4,5           6,800.00         4,5           7,000.00         4,5           7,000.00         4,5           7,100.00         4,5           7,300.00         4,5           7,400.00         4,5	sft)         (u           .940.14         6,           .941.01         6,           .941.01         6,           .941.02         6,           .942.75         6,           .943.62         6,           .944.49         6,           .945.36         6,           .946.24         6,           .947.18         6,           .947.88         6,           .948.85         7,           .950.59         7,           .950.59         7,           .951.46         7,           .952.33         7,	stft)           3,061.10           3,161.09           3,261.09           3,261.09           3,361.09           3,661.08           3,661.08           3,661.07           3,661.07           3,661.07           3,661.07           3,661.07           3,661.07           3,661.07           3,661.07           3,661.06	(usft)           4,961.37           4,962.34           4,963.30           4,964.26           4,965.23           4,966.19           4,967.15           4,969.08           4,971.01           4,971.97	37.25 39.51 41.80 44.13 46.47 48.84 51.23 53.63 56.05 58.47 60.91	36.22 38.18 40.22 42.32 44.48 46.69 48.93 51.21 53.51 55.85	(°) 90.94 90.95 90.95 90.96 90.97 90.97 90.98 90.98 90.98	(usft) 1,941.70 2,013.67 2,085.64 2,157.61 2,229.59 2,301.56 2,373.53 2,445.50 2,517.48	(usft) -117.09 -186.50 -255.92 -325.33 -394.75 -464.16 -533.58 -602.99	(usft) 1,285.58 1,284.85 1,284.12 1,283.40 1,282.67 1,281.94 1,281.21	(usft) 1,213.60 1,208.51 1,203.32 1,198.06 1,192.74 1,187.37 1,181.94	(usft) 71.97 76.34 80.80 85.33 89.93 94.58 99.27	17.862 16.830 15.893 15.040 14.264 13.555 12.906		
6,100.00         4,9,000           6,200.00         4,9           6,300.00         4,9           6,400.00         4,9           6,500.00         4,9           6,600.00         4,9           6,600.00         4,9           6,600.00         4,9           6,600.00         4,9           6,900.00         4,9           7,000.00         4,9           7,100.00         4,9           7,200.00         4,9           7,300.00         4,9	.941.01         6,           .941.01         6,           .941.88         6,           .942.75         6,           .943.62         6,           .944.49         6,           .945.36         6,           .946.24         6,           .947.16         6,           .947.88         7,           .949.72         7,           .950.59         7,           .951.46         7,           .952.33         7,	161.09           ,261.09           ,361.09           ,361.09           ,561.08           ,561.08           ,661.08           ,661.07           ,961.07           ,961.07           ,161.07           ,261.06           ,361.06	4,962.34 4,963.30 4,964.26 4,965.23 4,966.19 4,967.15 4,968.12 4,969.08 4,970.04 4,971.01	39.51 41.80 44.13 46.47 48.84 51.23 53.63 56.05 58.47 60.91	38.18 40.22 42.32 44.48 46.69 48.93 51.21 53.51 55.85	90.94 90.95 90.95 90.96 90.97 90.97 90.98 90.98 90.98	1,941.70 2,013.67 2,085.64 2,157.61 2,229.59 2,301.56 2,373.53 2,445.50 2,517.48	-117.09 -186.50 -255.92 -325.33 -394.75 -464.16 -533.58 -602.99	1,284.85 1,284.12 1,283.40 1,282.67 1,281.94 1,281.21	1,208.51 1,203.32 1,198.06 1,192.74 1,187.37 1,181.94	76.34 80.80 85.33 89.93 94.58 99.27	16.830 15.893 15.040 14.264 13.555 12.906		
6,100.00         4,9           6,200.00         4,9           6,300.00         4,9           6,400.00         4,9           6,500.00         4,9           6,600.00         4,9           6,600.00         4,9           6,600.00         4,9           6,800.00         4,9           6,900.00         4,9           7,000.00         4,9           7,100.00         4,9           7,200.00         4,9           7,300.00         4,9	.941.01         6,           .941.01         6,           .941.88         6,           .942.75         6,           .943.62         6,           .944.49         6,           .945.36         6,           .946.24         6,           .947.16         6,           .947.88         7,           .949.72         7,           .950.59         7,           .951.46         7,           .952.33         7,	161.09           ,261.09           ,361.09           ,361.09           ,561.08           ,561.08           ,661.08           ,661.07           ,961.07           ,961.07           ,161.07           ,261.06           ,361.06	4,962.34 4,963.30 4,964.26 4,965.23 4,966.19 4,967.15 4,968.12 4,969.08 4,970.04 4,971.01	39.51 41.80 44.13 46.47 48.84 51.23 53.63 56.05 58.47 60.91	38.18 40.22 42.32 44.48 46.69 48.93 51.21 53.51 55.85	90.95 90.95 90.96 90.96 90.97 90.97 90.98 90.98 90.98	2,013.67 2,085.64 2,157.61 2,229.59 2,301.56 2,373.53 2,445.50 2,517.48	-186.50 -255.92 -325.33 -394.75 -464.16 -533.58 -602.99	1,284.85 1,284.12 1,283.40 1,282.67 1,281.94 1,281.21	1,208.51 1,203.32 1,198.06 1,192.74 1,187.37 1,181.94	76.34 80.80 85.33 89.93 94.58 99.27	16.830 15.893 15.040 14.264 13.555 12.906		
6,200.00         4,5           6,300.00         4,5           6,400.00         4,5           6,500.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,600.00         4,5           6,700.00         4,5           6,800.00         4,5           7,000.00         4,5           7,100.00         4,5           7,300.00         4,5           7,400.00         4,5	.941.88         6,           .942.75         6,           .943.62         6,           .944.49         6,           .945.36         6,           .944.24         6,           .947.11         6,           .948.85         7,           .949.72         7,           .950.59         7,           .951.46         7,           .952.33         7,	3,261.09         3,361.09           3,361.09         3,361.09           3,361.09         3,361.08           3,561.08         3,361.08           3,761.08         3,361.07           3,961.07         3,961.07           7,161.07         7,261.06           7,361.06         3,361.06	4,963.30 4,964.26 4,965.23 4,966.19 4,967.15 4,968.12 4,969.08 4,970.04 4,971.01 4,971.97	41.80 44.13 46.47 48.84 51.23 53.63 56.05 58.47 60.91	40.22 42.32 44.48 46.69 48.93 51.21 53.51 55.85	90.95 90.96 90.97 90.97 90.97 90.98 90.98 90.98	2,085.64 2,157.61 2,229.59 2,301.56 2,373.53 2,445.50 2,517.48	-255.92 -325.33 -394.75 -464.16 -533.58 -602.99	1,284.12 1,283.40 1,282.67 1,281.94 1,281.21	1,203.32 1,198.06 1,192.74 1,187.37 1,181.94	80.80 85.33 89.93 94.58 99.27	15.893 15.040 14.264 13.555 12.906		
6,400.00         4,5           6,500.00         4,5           6,600.00         4,5           6,700.00         4,5           6,800.00         4,5           6,900.00         4,5           7,000.00         4,5           7,000.00         4,5           7,100.00         4,5           7,300.00         4,5           7,300.00         4,5	.943.62         6,           .944.49         6,           .945.36         6,           .946.24         6,           .947.11         6,           .947.98         6,           .948.85         7,           .949.72         7,           .950.59         7,           .951.46         7,           .952.33         7,	5,461.09 5,561.08 5,661.08 5,761.08 5,861.07 5,961.07 7,061.07 7,161.07 7,261.06 7,361.06	4,965.23 4,966.19 4,967.15 4,968.12 4,969.08 4,970.04 4,971.01 4,971.97	46.47 48.84 51.23 53.63 56.05 58.47 60.91	44.48 46.69 48.93 51.21 53.51 55.85	90.96 90.97 90.97 90.98 90.98 90.98	2,229.59 2,301.56 2,373.53 2,445.50 2,517.48	-394.75 -464.16 -533.58 -602.99	1,282.67 1,281.94 1,281.21	1,192.74 1,187.37 1,181.94	89.93 94.58 99.27	14.264 13.555 12.906		
6,500.00         4,5           6,600.00         4,9           6,700.00         4,5           6,800.00         4,5           6,900.00         4,5           7,000.00         4,5           7,100.00         4,5           7,200.00         4,5           7,300.00         4,5           7,300.00         4,5           7,400.00         4,5	.944.49 6, .945.36 6, .946.24 6, .947.11 6, .947.98 6, .948.85 7, .949.72 7, .950.59 7, .951.46 7, .952.33 7,	5,561.08 6,661.08 6,761.08 6,861.07 6,961.07 7,061.07 7,161.07 7,261.06 7,361.06	4,966.19 4,967.15 4,968.12 4,969.08 4,970.04 4,971.01 4,971.97	48.84 51.23 53.63 56.05 58.47 60.91	46.69 48.93 51.21 53.51 55.85	90.97 90.97 90.98 90.98 90.98	2,301.56 2,373.53 2,445.50 2,517.48	-464.16 -533.58 -602.99	1,281.94 1,281.21	1,187.37 1,181.94	94.58 99.27	13.555 12.906		
6,600.00 4,5 6,700.00 4,5 6,800.00 4,5 7,000.00 4,5 7,000.00 4,5 7,100.00 4,5 7,200.00 4,5 7,300.00 4,5 7,400.00 4,5	,945.36 6, ,946.24 6, ,947.11 6, ,947.98 6, ,948.85 7, ,949.72 7, ,950.59 7, ,951.46 7, ,952.33 7,	6,661.08 6,761.08 6,861.07 7,061.07 7,161.07 7,261.06 7,361.06	4,967.15 4,968.12 4,969.08 4,970.04 4,971.01 4,971.97	51.23 53.63 56.05 58.47 60.91	48.93 51.21 53.51 55.85	90.97 90.98 90.98 90.98	2,373.53 2,445.50 2,517.48	-533.58 -602.99	1,281.21	1,181.94	99.27	12.906		
6,700.00 4,5 6,800.00 4,5 7,000.00 4,5 7,100.00 4,5 7,200.00 4,5 7,200.00 4,5 7,300.00 4,5 7,300.00 4,5	,946.24 6, ,947.11 6, ,947.98 6, ,948.85 7, ,949.72 7, ,950.59 7, ,951.46 7, ,952.33 7,	5,761.08 5,861.07 5,961.07 7,061.07 7,161.07 7,261.06 7,361.06	4,968.12 4,969.08 4,970.04 4,971.01 4,971.97	53.63 56.05 58.47 60.91	51.21 53.51 55.85	90.98 90.98 90.98	2,445.50 2,517.48	-602.99						
6,700.00 4,5 6,800.00 4,5 7,000.00 4,5 7,100.00 4,5 7,200.00 4,5 7,200.00 4,5 7,300.00 4,5 7,300.00 4,5	,946.24 6, ,947.11 6, ,947.98 6, ,948.85 7, ,949.72 7, ,950.59 7, ,951.46 7, ,952.33 7,	5,761.08 5,861.07 5,961.07 7,061.07 7,161.07 7,261.06 7,361.06	4,968.12 4,969.08 4,970.04 4,971.01 4,971.97	53.63 56.05 58.47 60.91	51.21 53.51 55.85	90.98 90.98 90.98	2,445.50 2,517.48	-602.99						
6,800.00 4,5 6,900.00 4,5 7,000.00 4,5 7,100.00 4,5 7,200.00 4,5 7,300.00 4,5 7,400.00 4,5	,947.11 6, ,947.98 6, ,948.85 7, ,949.72 7, ,950.59 7, ,951.46 7, ,952.33 7,	5,861.07 5,961.07 7,061.07 7,161.07 7,261.06 7,361.06	4,969.08 4,970.04 4,971.01 4,971.97	56.05 58.47 60.91	53.51 55.85	90.98 90.98	2,517.48		1,200.49			12.312		
6,900.00 4,5 7,000.00 4,5 7,100.00 4,5 7,200.00 4,5 7,300.00 4,5 7,400.00 4,5	,947.98 6, ,948.85 7, ,949.72 7, ,950.59 7, ,951.46 7, ,952.33 7,	5,961.07 7,061.07 7,161.07 7,261.06 7,361.06	4,970.04 4,971.01 4,971.97	58.47 60.91	55.85	90.98		-072.41	1,279.76	1,170.98	104.01 108.78	11.765		
7,000.00 4,9 7,100.00 4,9 7,200.00 4,9 7,300.00 4,9 7,400.00 4,9	,948.85 7, ,949.72 7, ,950.59 7, ,951.46 7, ,952.33 7,	7,061.07 7,161.07 7,261.06 7,361.06	4,971.01 4,971.97	60.91			2,000.40	-741.82	1,279.70	1,165.46	113.58	11.261		
7,100.00 4,9 7,200.00 4,9 7,300.00 4,9 7,400.00 4,9	,949.72 7, ,950.59 7, ,951.46 7, ,952.33 7,	7,161.07 7,261.06 7,361.06	4,971.97				2,661.42	-811.24	1,278.31	1,159.90	118.40	10.796		
7,200.00 4,9 7,300.00 4,9 7,400.00 4,9	,950.59 7, ,951.46 7, ,952.33 7,	,261.06 ,361.06		63.36			2,001112	011.21	1,210.01	1,100.00	110.10	10.100		
7,300.00 4,9 7,400.00 4,9	,951.46 7, ,952.33 7,	,361.06	4,972.93		60.57	90.99	2,733.39	-880.66	1,277.58	1,154.33	123.26	10.365		
7,400.00 4,9	,952.33 7,			65.81	62.95	91.00	2,805.37	-950.07	1,276.85	1,148.73	128.13	9.966		
		464.06	4,973.89	68.28	65.35	91.00	2,877.34	-1,019.49	1,276.13	1,143.11	133.02	9.594		
1 7 FOC ···	,953.20 7,		4,974.86	70.75	67.77	91.01	2,949.31	-1,088.90	1,275.40	1,137.48	137.92	9.247		
7,500.00 4,9		,561.06	4,975.82	73.22	70.19	91.01	3,021.28	-1,158.32	1,274.67	1,131.83	142.85	8.923		
7,600.00 4,9	,954.07 7,	,661.05	4,976.78	75.70	72.63	91.02	3,093.26	-1,227.73	1,273.95	1,126.17	147.78	8.620		
			4,977.75	78.19	75.07	91.02	3,165.23	-1,297.15	1,273.22	1,120.49	152.73	8.336		
			4,978.71	80.68	77.52	91.03	3,237.20	-1,366.56	1,272.49	1,114.81	157.69	8.070		
7,900.00 4,9	,956.68 7,	,961.05	4,979.67	83.17	79.98	91.03	3,309.17	-1,435.98	1,271.77	1,109.11	162.65	7.819		
8,000.00 4,9	,957.55 8,	8,061.04	4,980.64	85.67	82.45	91.04	3,381.15	-1,505.39	1,271.04	1,103.41	167.63	7.582		
			4,981.60	88.17	84.92	91.04	3,453.12	-1,574.81	1,270.31	1,097.70	172.62	7.359		
			4,982.56	90.67	87.40	91.05	3,525.09	-1,644.23	1,269.59	1,091.98	177.61	7.148		
			4,983.53	93.18	89.88	91.05	3,597.06	-1,713.64	1,268.86	1,086.25	182.61	6.948		
			4,984.49 4,985.45	95.68 98.20	92.37 94.86	91.06 91.06	3,669.04 3,741.01	-1,783.06 -1,852.47	1,268.13 1,267.41	1,080.52 1,074.78	187.62 192.63	6.759 6.580		
0,000.00 4,8	,301.31 0,	,501.05	4,303.43	30.20	34.00	31.00	3,741.01	-1,052.47	1,207.41	1,074.70	132.05	0.000		
8,600.00 4,9	,962.78 8,	661.03	4,986.41	100.71	97.35	91.07	3,812.98	-1,921.89	1,266.68	1,069.04	197.64	6.409		
8,700.00 4,9	,963.65 8,	3,761.02	4,987.38	103.22	99.85	91.07	3,884.95	-1,991.30	1,265.95	1,063.29	202.67	6.246		
8,800.00 4,9	,964.52 8,	8,861.02	4,988.34	105.74	102.35	91.08	3,956.93	-2,060.72	1,265.23	1,057.53	207.69	6.092		
8,900.00 4,9	,965.39 8,	8,961.02	4,989.30	108.26	104.86	91.08	4,028.90	-2,130.13	1,264.50	1,051.77	212.73	5.944		
9,000.00 4,9	,966.26 9,	,061.02	4,990.27	110.78	107.37	91.08	4,100.87	-2,199.55	1,263.77	1,046.01	217.76	5.803		
9,100.00 4,9	067.12 0	161.01	4 004 00	112.20	109.88	91.09	4 170 94	2 269 06	1 262 05	1 0 4 0 2 5	222.80	E 660		
			4,991.23 4,992.19	113.30 115.83	109.88	91.09	4,172.84 4,244.82	-2,268.96 -2,338.38	1,263.05 1,262.32	1,040.25 1,034.48	222.80	5.669 5.540		
			4,993.16	118.35	114.91	91.10	4,316.79	-2,407.79	1,261.59	1,028.71	232.89	5.417		
			4,994.12	120.88	117.42	91.10	4,388.76	-2,477.21	1,260.87	1,022.93	237.94	5.299		
			4,995.08	123.40	119.94	91.11	4,460.73	-2,546.63	1,260.14	1,017.15	242.99	5.186		
			4,996.05	125.93	122.46	91.11	4,532.71	-2,616.04	1,259.41	1,011.37	248.04	5.077		
			4,997.01	128.46	124.99	91.12	4,604.68	-2,685.46	1,258.69	1,005.59	253.10	4.973		
			4,997.97	130.99	127.51	91.12	4,676.65	-2,754.87	1,257.96	999.80	258.16	4.873		
			4,998.93	133.52	130.04	91.13 01.12	4,748.62	-2,824.29	1,257.23	994.01	263.22	4.776		
10,000.00 4,9	,974.96 10,	,060.99	4,999.90	136.06	132.57	91.13	4,820.59	-2,893.70	1,256.51	988.22	268.28	4.683		
10,100.00 4,9	,975.84 10,	,160.99	5,000.86	138.59	135.10	91.14	4,892.57	-2,963.12	1,255.78	982.43	273.35	4.594		
			5,001.82	141.12	137.63	91.14	4,964.54	-3,032.53	1,255.05	976.64	278.42	4.508		
10,300.00 4,9	,977.58 10,	,360.98	5,002.79	143.66	140.16	91.15	5,036.51	-3,101.95	1,254.33	970.84	283.49	4.425		
10,400.00 4,9	,978.45 10,	,460.98	5,003.75	146.19	142.69	91.15	5,108.48	-3,171.36	1,253.60	965.04	288.56	4.344		
10,500.00 4,9	,979.32 10,	,560.98	5,004.71	148.73	145.23	91.16	5,180.46	-3,240.78	1,252.88	959.25	293.63	4.267		
10,600,000	090.40 40	660.07	E 005 00	454.07	147 70	04.40	E 050 40	0.040.00	1 050 45	050.44	000 70	4.400		
			5,005.68 5,006.64	151.27	147.76	91.16	5,252.43	-3,310.20 -3,379.61	1,252.15	953.44	298.70	4.192		
			5,006.64 5,007.60	153.80 156.34	150.30 152.84	91.17 91.17	5,324.40 5,396.37	-3,379.61 -3,449.03	1,251.42	947.64 941.84	303.78 308.86	4.120 4.049		
			5,007.60	156.34	152.84 155.37	91.17 91.18	5,396.37 5,468.35	-3,449.03 -3,518.44	1,250.70 1,249.97	941.84 936.04	308.86	4.049 3.982		
			5,008.57	161.42	155.57	91.18	5,5408.33	-3,518.44	1,249.97	930.04 930.23	319.01	3.902		
	,	,	2,000.00	101.72		01.10	0,040.02	0,001.00	.,	000.20	510.01	5.010		
11,037.87 4,9	,984.00 11,	,098.83	5,009.89	162.38	158.87	91.18	5,567.58	-3,614.15	1,248.97	928.03	320.94	3.892 S	F	





Anticollision Report



DJR Operating Well # 402H - Slot 1 Company: Local Co-ordinate Reference: TVD Reference: Project: Betonnie Tsosie Unit GI 6864' & RKB 14' @ 6878.00usft H28 2308 Pad GI 6864' & RKB 14' @ 6878.00usft Reference Site: MD Reference: 0.00 usft Site Error: North Reference: True Reference Well: # 402H Survey Calculation Method: Minimum Curvature Well Error: 0.00 usft Output errors are at 2.00 sigma Original Drilling **Reference Wellbore** Database: DJR Reference Design: APD Offset TVD Reference: Offset Datum



Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
Project:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Reference Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

ffset De	-		08 Pad - 7	# 732H - Ori	ginal Dri	ling - APD							Offset Site Error:	0.00 u
rvey Prog		WD+HDGM											Offset Well Error:	0.00 u
Refere easured	ence Vertical	Offs Measured	et Vertical	Semi Major Reference	Axis Offset	Highside	Offset Wellbor	o Contro	Dista Between	nce Between	Minimum	Separation		
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
0.00	0.00	0.00	0.00	0.00	0.00	71.36	12.74	37.76	39.86	00.55	0.04	400.000		
100.00 200.00	100.00 200.00	100.00 200.00	100.00 200.00	0.15 0.51	0.15 0.51	71.36 71.36	12.74 12.74	37.76 37.76	39.86 39.86	39.55 38.83	0.31 1.03	129.283 38.875		
300.00	300.00	300.00	300.00	0.87	0.87	71.36	12.74	37.76	39.86	38.11	1.03	22.877		
400.00	400.00	400.00	400.00	1.23	1.23	71.36	12.74	37.76	39.86	37.40	2.46	16.207		
400.00	400.00	400.00	400.00	1.23	1.23	71.30	12.74	37.70	39.80	37.40	2.40	15.092		
425.00	425.00	420.20	425.20	1.52	1.52	11.41	12.04	57.71	33.10	57.14	2.04	15.052		
500.00	499.99	500.97	500.95	1.59	1.58	128.97	11.18	36.92	39.19	36.03	3.16	12.399		
533.53	533.51	534.77	534.72	1.71	1.69	131.69	9.95	36.26	38.95	35.56	3.39	11.482		
600.00	599.93	601.61	601.44	1.94	1.92	138.92	6.50	34.39	38.35	34.50	3.85	9.956		
700.00	699.85	701.71	701.15	2.30	2.27	153.97	-1.22	30.22	37.56	33.00	4.56	8.241		
702.07	701.93	703.78	703.21	2.30	2.28	154.34	-1.42	30.12	37.56	32.98	4.57	8.214 C	C, ES	
800.00	799.78	801.04	799.74	2.66	2.63	173.53	-11.92	24.44	39.23	33.95	5.28	7.430		
900.00	899.71	899.39	896.86	3.01	3.01	-166.28	-25.46	17.13	46.02	40.02	6.01	7.663		
1,000.00	999.64	996.52	992.22	3.37	3.40	-149.89	-41.70	8.35	58.94	52.22	6.71	8.780		
1,100.00	1,099.57	1,092.26	1,085.54	3.73	3.81	-138.26	-60.49	-1.80	77.38	69.99	7.40	10.464		
1,200.00	1,199.50	1,186.41	1,176.57	4.09	4.24	-130.24	-81.63	-13.22	100.49	92.43	8.06	12.470		
1,300.00	1,299.42	1,278.82	1,265.10	4.45	4.68	-124.61	-104.93	-25.80	127.61	118.90	8.71	14.652		
1,400.00	1,399.35	1,372.93	1,354.64	4.82	5.16	-120.54	-130.43	-39.58	157.49	148.09	9.40	16.758		
1,500.00	1,499.28	1,467.84	1,444.91	5.18	5.66	-117.73	-156.20	-53.50	187.94	177.84	10.11	18.594		
1,600.00	1,599.21	1,562.75	1,535.19	5.54	6.16	-115.70	-181.97	-67.42	218.70	207.87	10.82	20.205		
1,700.00	1,699.14	1,657.65	1,625.46	5.90	6.67	-114.17	-207.75	-81.35	249.64	238.09	11.54	21.625		
1,800.00	1,799.07	1,752.56	1,715.73	6.26	7.18	-112.98	-233.52	-95.27	280.70	268.43	12.27	22.881		
1,900.00	1,898.99	1,847.47	1,806.01	6.62	7.70	-112.02	-259.29	-109.19	311.85	298.86	12.99	23.998		
2,000.00	1,998.92	1,942.38	1,896.28	6.98	8.23	-111.24	-285.07	-123.12	343.07	329.35	13.72	24.998		
2,100.00	2,098.85	2,037.28	1,986.55	7.34	8.75	-110.59	-310.84	-137.04	374.34	359.88	14.46	25.896		
2,200.00	2,198.78	2,132.19	2,076.83	7.71	9.28	-110.04	-336.61	-150.96	405.64	390.45	15.19	26.708		
2,300.00	2,298.71	2,227.10	2,167.10	8.07	9.81	-109.57	-362.39	-164.89	436.97	421.05	15.92	27.444		
2,400.00	2,398.63	2,322.01	2,257.37	8.43	10.34	-109.16	-388.16	-178.81	468.33	451.67	16.66	28.115		
2,500.00	2,498.56	2,416.91	2,347.65	8.79	10.88	-108.80	-413.93	-192.73	499.70	482.31	17.39	28.728		
2,600.00	2,598.49	2,511.82	2,437.92	9.15	11.41	-108.48	-439.71	-206.66	531.09	512.96	18.13	29.291		
2,700.00	2,698.42	2,606.73	2,528.19	9.51	11.94	-108.20	-465.48	-220.58	562.50	543.63	18.87	29.809		
2,800.00	2,798.35	2,701.64	2,618.47	9.87	12.48	-107.95	-491.25	-234.50	593.91	574.30	19.61	30.288		
2,800.00	2,798.33	2,701.04	2,018.47	10.24	12.48	-107.93	-517.03	-234.30	625.33	604.98	20.35	30.288		
3,000.00	2,098.20	2,796.54	2,708.74	10.24	13.02	-107.73	-517.03	-246.43	625.33	635.67	20.35	31.143		
3,100.00	2,998.20	2,891.45	2,799.02	10.80	13.56	-107.32	-542.60	-262.35 -276.27	688.20	666.37	21.09	31.143		
3,200.00	3,198.06	2,986.36 3,081.27	2,009.29 2,979.56	10.96	14.09	-107.34	-506.56	-276.27	719.64	697.07	21.63	31.884		
3,300.00 3,400.00	3,297.99 3,397.92	3,176.17 3,271.08	3,069.84 3,160.11	11.68 12.04	15.17 15.71	-107.01 -106.87	-620.12 -645.90	-304.12	751.09 782.54	727.78 758.49	23.31 24.05	32.218 32.532		
3,400.00	3,397.92 3,497.85	3,271.08	3,160.11	12.04	15.71	-106.87	-645.90 -671.67	-318.04 -331.97	782.54 814.00	758.49	24.05 24.80	32.532 32.826		
3,500.00	3,497.85 3,597.77	3,365.99 3,460.90	3,250.38 3,340.66	12.41	16.25	-106.74	-671.67 -697.44	-331.97 -345.89	814.00	789.20 819.92	24.80 25.54	32.826 33.103		
3,700.00	3,697.70	3,460.90 3,555.80	3,430.93	12.77	17.34	-106.62	-097.44 -723.22	-345.89 -359.81	876.93	850.64	25.54 26.28	33.365		
3,800.00	3,797.63	3,650.71	3,521.20	13.49	17.88	-106.40	-748.99	-373.74	908.39	881.37	27.03	33.611		
3,900.00	3,897.56	3,745.62	3,611.48	13.85	18.42	-106.30	-774.76	-387.66	939.86	912.09	27.77	33.844		
4,000.00	3,997.49	3,840.53	3,701.75	14.22	18.96	-106.21	-800.54	-401.58	971.33	942.82	28.51	34.065		
4,100.00 4,200.00	4,097.41 4,197.34	3,935.43 4,030.34	3,792.02 3,882.30	14.58 14.94	19.50 20.05	-106.12 -106.04	-826.31 -852.08	-415.51 -429.43	1,002.81 1,034.28	973.55 1,004.28	29.26 30.00	34.274 34.472		
4,300.00	4,297.27	4,125.25	3,972.57	15.30	20.59	-105.97	-877.86	-443.35	1,065.76	1,035.01	30.75	34.661		
4,323.83	4,321.08	4,147.86	3,994.08	15.39	20.72	-105.95	-884.00	-446.67	1,073.26	1,042.33	30.93	34.705		
4,350.00	4,347.21	4,172.63	4,017.63	15.48	20.86	-111.03	-890.72	-450.30	1,081.73	1,050.61	31.12	34.757		
4,400.00 4,450.00	4,396.85 4,445.88	4,219.39 4,265.19	4,062.11 4,105.68	15.67 15.86	21.13 21.39	-112.34 -111.89	-903.42 -915.86	-457.16 -463.88	1,099.15 1,118.14	1,067.65 1,086.25	31.50 31.89	34.889 35.061		
-,-00.00	7,740.00	7,200.19	-, 100.00	15.00	21.08	-111.09	-910.00	-403.00	1,110.14	1,000.25	51.09	55.001		
4,500.00	4,493.99	4,309.76	4,148.07	16.06	21.64	-110.99	-927.96	-470.42	1,138.64	1,106.36	32.28	35.272		



# Lonestar Consulting, LLC



	Company:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
	Project:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
	Reference Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
:	Site Error:	0.00 usft	North Reference:	True
I	Reference Well:	# 402H	Survey Calculation Method:	Minimum Curvature
	Well Error:	0.00 usft	Output errors are at	2.00 sigma
	Reference Wellbore	Original Drilling	Database:	DJR
	Reference Design:	APD	Offset TVD Reference:	Offset Datum

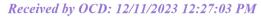
														0.00
urvey Prog Refer		WD+HDGM Offse	at	Semi Major	Avie				Dista	ince			Offset Well Error:	0.00 us
leasured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbor	e Centre	Between	Between	Minimum	Separation	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor	Harming	
										1,127.93		25 520		
4,550.00 4,600.00	4,540.89 4,586.29	4,352.82 4,394.09	4,189.03 4,228.29	16.26 16.48	21.89 22.13	-109.89 -108.64	-939.65 -950.86	-476.74 -482.79	1,160.60 1,183.99	1,127.93	32.67 33.07	35.520 35.802		
4,650.00	4,560.29	4,394.09 4,589.17	4,228.29	16.40	22.13	-108.64	-950.86 -987.30	-402.79 -527.84	1,183.99	1,150.92	34.52	35.802 34.983		
4,700.00	4,671.48	5,104.17	4,812.49	16.94	24.89	-106.71	-878.02	-811.01	1,219.46	1,183.54	35.92	33.952		
4,750.00	4,710.74	5,456.43	4,911.80	17.21	26.43	-97.32	-664.35	-1,066.82	1,217.47	1,178.70	38.77	31.403		
4,800.00	4,747.45	5,501.01	4,912.25	17.50	26.81	-96.28	-632.83	-1,098.34	1,212.54	1,172.58	39.96	30.341		
4,850.00	4,781.39	5,537.96	4,912.53	17.83	27.16	-95.45	-606.68	-1,124.45	1,209.08	1,167.86	41.22	29.335		
4,900.00	4,812.35	5,577.44	4,912.84	18.21	27.61	-94.54	-578.74	-1,152.34	1,206.88	1,164.48	42.40	28.461		
4,950.00	4,840.13	5,619.20	4,913.16	18.64	28.13	-93.58	-549.19	-1,181.84	1,205.72	1,162.12	43.60	27.654		
4,998.19	4,863.74	5,661.37	4,913.48	19.10	28.68	-92.66	-519.35	-1,211.64	1,205.40	1,160.67	44.73	26.949		
5,000.00	4,864.57	5,662.98	4,913.49	19.12	28.70	-92.62	-518.21	-1,212.78	1,205.40	1,160.62	44.78	26.918		
5,050.00	4,885.50	5,708.52	4,913.84	19.66	29.37	-91.72	-485.98	-1,244.95	1,205.70	1,159.26	46.45	25.959		
5,100.00	4,902.82	5,755.54	4,914.21	20.27	30.10	-90.91	-452.71	-1,278.17	1,206.45	1,158.48	47.98	25.147		
5,150.00	4,916.40	5,803.74	4,914.58	20.93	30.90	-90.22	-418.61	-1,312.22	1,207.49	1,157.86	49.63	24.332		
5,200.00	4,926.16	5,852.82	4,914.95	21.64	31.75	-89.69	-383.87	-1,346.90	1,208.67	1,157.35	51.32	23.551		
5,250.00	4,932.05	5,902.49	4,915.34	22.40	32.64	-89.32	-348.72	-1,381.99	1,209.92	1,156.82	53.09	22.788		
5,294.62	4,934.00	5,947.06	4,915.68	23.11	33.47	-89.15	-317.19	-1,413.48	1,211.02	1,156.31	54.71	22.135		
5,300.00	4,934.05	5,952.44	4,915.72	23.20	33.57	-89.14	-313.38	-1,417.28	1,211.16	1,156.25	54.91	22.058		
5,400.00	4,934.92	6,052.41	4,916.49	24.90	35.51	-89.14	-242.64	-1,487.91	1,213.61	1,154.91	58.70	20.674		
5,500.00	4,935.79	6,152.38	4,917.26	26.75	37.55	-89.14	-171.89	-1,558.55	1,216.07	1,153.38	62.70	19.397		
5,600.00	4,936.66	6,252.35	4,918.02	28.70	39.65	-89.14	-101.15	-1,629.18	1,218.53	1,151.68	66.85	18.228		
5,700.00	4,937.53	6,352.32	4,918.79	30.74	41.81	-89.13	-30.41	-1,699.81	1,220.99	1,149.85	71.14	17.163		
5,800.00	4,938.40	6,452.29	4,919.56	32.85	44.02	-89.13	40.34	-1,770.44	1,223.45	1,147.91	75.54	16.196		
5,900.00	4,939.27	6,552.25	4,920.33	35.03	46.27	-89.13	111.08	-1,841.07	1,225.91	1,145.88	80.03	15.318		
6,000.00	4,940.14	6,652.22	4,921.10	37.25	48.55	-89.12	181.82	-1,911.70	1,228.37	1,143.77	84.60	14.521		
6,100.00	4,941.01	6,752.19	4,921.86	39.51	50.87	-89.12	252.57	-1,982.33	1,230.82	1,141.60	89.23	13.795		
6,200.00	4,941.88	6,852.16	4,922.63	41.80	53.20	-89.12	323.31	-2,052.96	1,233.28	1,139.37	93.91	13.133		
6,300.00	4,942.75	6,952.13	4,923.40	44.13	55.57	-89.11	394.05	-2,123.60	1,235.74	1,137.10	98.64	12.528		
6,400.00	4,943.62	7,052.10	4,924.17	46.47	57.95	-89.11	464.80	-2,194.23	1,238.20	1,134.79	103.41	11.974		
6,500.00	4,944.49	7,152.07	4,924.94	48.84	60.34	-89.11	535.54	-2,264.86	1,240.66	1,132.44	108.22	11.465		
6,600.00	4,945.36	7,252.04	4,925.71	51.23	62.76	-89.11	606.28	-2,335.49	1,243.12	1,130.07	113.05	10.996		
6,700.00	4,946.24	7,352.01	4,926.47	53.63	65.18	-89.10	677.02	-2,406.12	1,245.58	1,127.66	117.91	10.564		
6,800.00	4,947.11	7,451.98	4,927.24	56.05	67.62	-89.10	747.77	-2,476.75	1,248.04	1,125.24	122.80	10.163		
6,900.00	4,947.98	7,551.95	4,928.01	58.47	70.07	-89.10	818.51	-2,547.38	1,250.49	1,122.79	127.70	9.792		
7,000.00	4,948.85	7,651.92	4,928.78	60.91	72.53	-89.09	889.25	-2,618.01	1,252.95	1,120.33	132.62	9.447		
7,100.00	4,949.72	7,751.89	4,929.55	63.36	74.99	-89.09	960.00	-2,688.65	1,255.41	1,117.85	137.56	9.126		
7,200.00	4,950.59	7,851.86	4,930.32	65.81	77.47	-89.09	1,030.74	-2,759.28	1,257.87	1,115.36	142.51	8.826		
7,300.00	4,951.46	7,951.83	4,931.08	68.28	79.95	-89.09	1,101.48	-2,829.91	1,260.33	1,112.85	147.48	8.546		
7,400.00	4,952.33	8,051.80	4,931.85	70.75	82.44	-89.08	1,172.23	-2,900.54	1,262.79	1,110.33	152.46	8.283		
7,500.00	4,953.20	8,151.77	4,932.62	73.22	84.93	-89.08	1,242.97	-2,971.17	1,265.25	1,107.80	157.44	8.036		
7,600.00	4,954.07	8,251.74	4,933.39	75.70	87.43	-89.08	1,313.71	-3,041.80	1,267.70	1,105.26	162.44	7.804		
7,700.00	4,954.94	8,351.71	4,934.16	78.19	89.93	-89.07	1,384.46	-3,112.43	1,270.16	1,102.72	167.45	7.585		
7,800.00	4,955.81	8,451.68	4,934.92	80.68	92.44	-89.07	1,455.20	-3,183.06	1,272.62	1,100.16	172.46	7.379		
7,900.00	4,956.68	8,551.65	4,935.69	83.17	94.95	-89.07	1,525.94	-3,253.70	1,275.08	1,097.60	177.48	7.184		
8,000.00	4,957.55	8,651.62	4,936.46	85.67	97.47	-89.07	1,596.69	-3,324.33	1,277.54	1,095.03	182.51	7.000		
8,100.00	4,958.42	8,751.59	4,937.23	88.17	99.99	-89.06	1,667.43	-3,394.96	1,280.00	1,092.46	187.54	6.825		
8,200.00	4,959.29	8,851.56	4,938.00	90.67	102.51	-89.06	1,738.17	-3,465.59	1,282.46	1,089.87	192.58	6.659		
8,300.00	4,960.16	8,951.53	4,938.77	93.18	105.04	-89.06	1,808.91	-3,536.22	1,284.92	1,087.29	197.63	6.502		
8,400.00	4,961.04	9,051.50	4,939.53	95.68	107.57	-89.05	1,879.66	-3,606.85	1,287.37	1,084.70	202.68	6.352		
8,500.00	4,961.91	9,151.47	4,940.30	98.20	110.10	-89.05	1,950.40	-3,677.48	1,289.83	1,082.10	207.73	6.209		
8,600.00	4,962.78	9,251.44	4,941.07	100.71	112.63	-89.05	2,021.14	-3,748.11	1,292.29	1,079.51	212.79	6.073		





Company:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
Project:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Reference Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset De	sign	H28 230	)8 Pad - <i>‡</i>	# 732H - Ori	ginal Dril	ling - APD							Offset Site Error:	0.00 usft
Survey Prog	ram: 0-M	WD+HDGM											Offset Well Error:	0.00 usft
Refer		Offse		Semi Major					Dista	ince				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbor +N/-S (usft)	e Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
8,800.00	4,964.52	9,451.38	4,942.61	105.74	117.71	-89.04	2,162.63	-3,889.38	1,297.21	1,074.30	222.91	5.819		
8,900.00	4,965.39	9,551.35	4,943.37	108.26	120.25	-89.04	2,233.37	-3,960.01	1,299.67	1,071.69	227.98	5.701		
9,000.00	4,966.26	9,651.32	4,944.14	110.78	122.79	-89.04	2,304.12	-4,030.64	1,302.13	1,069.07	233.05	5.587		
9,100.00	4,967.13	9,751.29	4,944.91	113.30	125.33	-89.04	2,374.86	-4,101.27	1,304.59	1,066.46	238.13	5.479		
9,200.00	4,968.00	9,851.26	4,945.68	115.83	127.88	-89.03	2,445.60	-4,171.90	1,307.04	1,063.84	243.20	5.374		
9,300.00	4,968.87	9,951.23	4,946.45	118.35	130.42	-89.03	2,516.35	-4,242.53	1,309.50	1,061.22	248.28	5.274		
9,400.00	4,969.74	10,051.20	4,947.22	120.88	132.97	-89.03	2,587.09	-4,313.16	1,311.96	1,058.60	253.37	5.178		
9,500.00	4,970.61	10,151.17	4,947.98	123.40	135.52	-89.03	2,657.83	-4,383.79	1,314.42	1,055.97	258.45	5.086		
9,600.00	4,971.48	10,251.14	4,948.75	125.93	138.07	-89.02	2,728.58	-4,454.43	1,316.88	1,053.34	263.54	4.997		
9,700.00	4,972.35	10,283.37	4,949.00	128.46	138.90	-89.02	2,751.38	-4,477.20	1,321.08	1,054.10	266.97	4.948 SI	F	
9,800.00	4,973.22	10,283.37	4,949.00	130.99	138.90	-89.02	2,751.38	-4,477.20	1,332.39	1,064.03	268.37	4.965		
9,900.00	4,974.09	10,283.37	4,949.00	133.52	138.90	-89.02	2,751.38	-4,477.20	1,351.04	1,082.72	268.31	5.035		
10,000.00	4,974.96	10,283.37	4,949.00	136.06	138.90	-89.02	2,751.38	-4,477.20	1,376.71	1,109.78	266.93	5.158		
10,100.00	4,975.84	10,283.37	4,949.00	138.59	138.90	-89.02	2,751.38	-4,477.20	1,409.03	1,144.66	264.37	5.330		
10,200.00	4,976.71	10,283.37	4,949.00	141.12	138.90	-89.02	2,751.38	-4,477.20	1,447.55	1,186.70	260.84	5.549		
10,300.00	4,977.58	10,283.37	4,949.00	143.66	138.90	-89.02	2,751.38	-4,477.20	1,491.79	1,235.25	256.54	5.815		
10,400.00	4,978.45	10,283.37	4,949.00	146.19	138.90	-89.02	2,751.38	-4,477.20	1,541.25	1,289.59	251.66	6.124		
10,500.00	4,979.32	10,283.37	4,949.00	148.73	138.90	-89.02	2,751.38	-4,477.20	1,595.46	1,349.09	246.37	6.476		
10,600.00	4,980.19	10,283.37	4,949.00	151.27	138.90	-89.02	2,751.38	-4,477.20	1,653.94	1,413.11	240.83	6.868		
10,700.00	4,981.06	10,283.37	4,949.00	153.80	138.90	-89.02	2,751.38	-4,477.20	1,716.26	1,481.09	235.17	7.298		
10,800.00	4,981.93	10,283.37	4,949.00	156.34	138.90	-89.02	2,751.38	-4,477.20	1,782.02	1,552.54	229.48	7.765		
10,900.00	4,982.80	10,283.37	4,949.00	158.88	138.90	-89.02	2,751.38	-4,477.20	1,850.84	1,627.00	223.84	8.268		
11,000.00	4,983.67	10,283.37	4,949.00	161.42	138.90	-89.02	2,751.38	-4,477.20	1,922.41	1,704.08	218.32	8.805		
11,037.87	4,984.00	10,283.37	4,949.00	162.38	138.90	-89.02	2,751.38	-4,477.20	1,950.16	1,733.89	216.27	9.017		



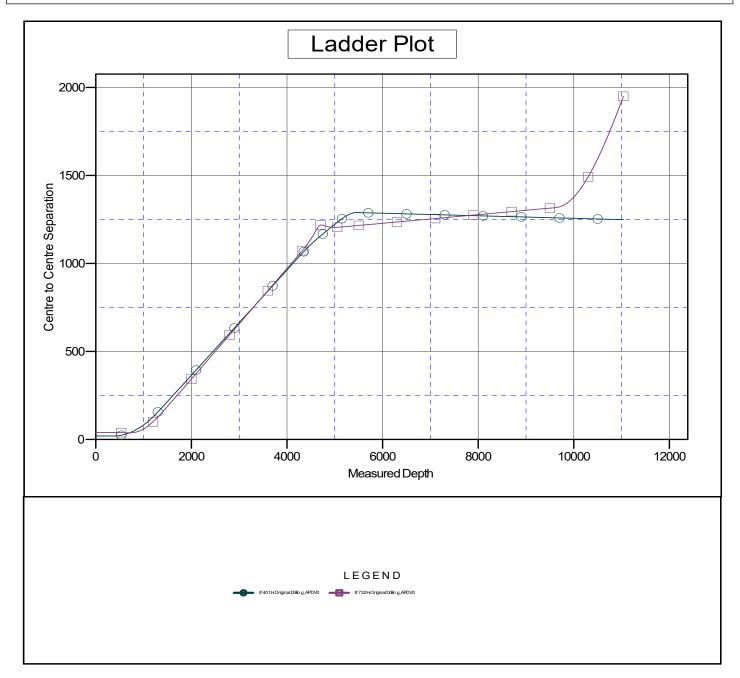


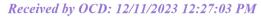
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
Project:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Reference Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GI 6864' & RKB 14' @ 6878.00usft Offset Depths are relative to Offset Datum Central Meridian is -107.833333333 Coordinates are relative to: # 402H - Slot 1 Coordinate System is US State Plane 1983, New Mexico Western Zone Grid Convergence at Surface is: 0.09°







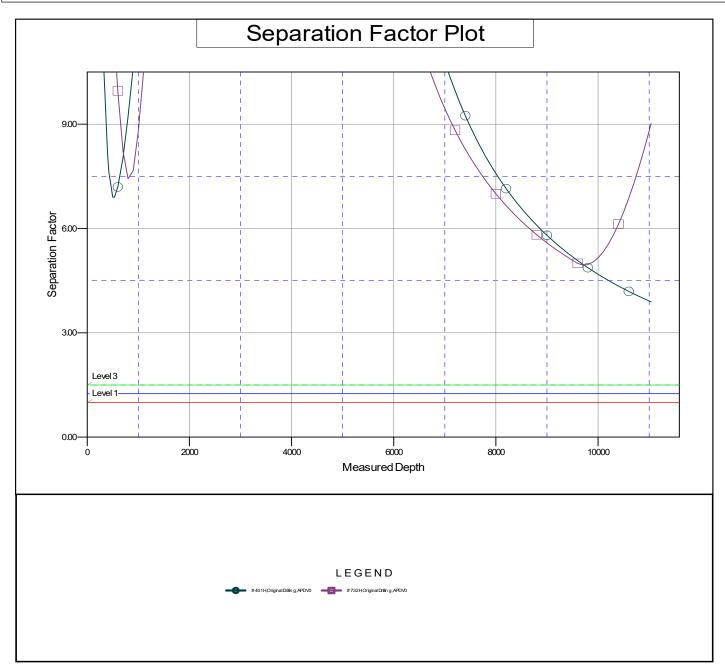
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well # 402H - Slot 1
Project:	Betonnie Tsosie Unit	TVD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Reference Site:	H28 2308 Pad	MD Reference:	GI 6864' & RKB 14' @ 6878.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	# 402H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	DJR
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GI 6864' & RKB 14' @ 6878.00usft Offset Depths are relative to Offset Datum Central Meridian is -107.83333333

Coordinates are relative to: # 402H - Slot 1 Coordinate System is US State Plane 1983, New Mexico Western Zone Grid Convergence at Surface is: 0.09°



Received by OCD: 12/11/2023 12:27:03 PM



# 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 #402H Betonnie Tsosie Wash Unit Lease: NMNM50999 Unit:NMNM135219A SH: SE<sup>1</sup>/4NE<sup>1</sup>/4 Section 28, T.23 N., R.8 W. BH: SW<sup>1</sup>/4NW<sup>1</sup>/4 Section 21, T.23 N., R.8 W. San Juan County, New Mexico

\*Above Data Required on Well Sign

# GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

# The following special requirements apply and are effective when checked:

- A.  $\boxtimes$  Note all surface/drilling conditions of approval attached.
- B. The required wait on cement (WOC) time will be a minimum of 500 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated
- C. Test the surface casing to a minimum of \_\_\_\_\_ psi for 30 minutes.
- D. ☐ Test all casing strings below the surface casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield burst) for a minimum of 30 minutes.
- E. Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, Farmington District Office, Branch of Reservoir Management, 6251 College Blvd. Suite A, Farmington, New Mexico 87402. The effective date of the agreement must be **prior** to any sales.

INTERIOR REGION 7 • UPPER COLORADO BASIN COLORADO, NEW MEXICO, UTAH, WYOMING F.  $\boxtimes$  The use of co-flex hose is authorized contingent upon the following:

**1.** From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.

**2.** From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.

3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

### I. <u>GENERAL</u>

- 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.
- 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. <u>REPORTING REQUIREMENTS</u>

A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.

- B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.
  - 1 .Original and three copies on Federal and an Original and five copies on Indian leases of Sundry Notice (Form 3150-5), giving complete information concerning.
    - a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.
    - b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.
    - c. Subsequent Report of Abandonment, show the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.
  - 2. Well Completion Report (Form 3160-4) will be submitted with 30 days after well has been completed.
    - a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.
  - 3. Submit a cement evaluation log, if cement is not circulated to surface.

### III. DRILLER'S LOG

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

# IV. GAS FLARING

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

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

### V. <u>SAFETY</u>

- 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. <u>CHANGE OF PLANS OR ABANDONMENT</u>

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

### VII. PHONE NUMBERS

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

Virgil Lucero (505) 793-1836 BLM 24 Hour Number (505) 564-7750

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

Page 41 of 41

CONDITIONS

Action 293135

CONDITIONS

Operator:	OGRID:
DJR OPERATING, LLC	371838
1 Road 3263	Action Number:
Aztec, NM 87410	293135
	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	1/5/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	1/5/2024
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	1/5/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	1/5/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	1/5/2024
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	1/5/2024