

Form 3160-3
(October 2024)FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2027UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. 30-043-21542
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 09/25/2025

Additional Operator Remarks

Location of Well

0. SHL: NENE / 935 FNL / 1149 FEL / TWSP: 23N / RANGE: 7W / SECTION: 19 / LAT: 36.217217 / LONG: -107.610456 (TVD: 0 feet, MD: 0 feet)
PPP: SESE / 370 FSL / 592 FEL / TWSP: 23N / RANGE: 7W / SECTION: 18 / LAT: 36.220796 / LONG: -107.608554 (TVD: 5216 feet, MD: 5468 feet)
PPP: NENE / 330 FNL / 294 FEL / TWSP: 23N / RANGE: 8W / SECTION: 13 / LAT: 36.233471 / LONG: -107.625256 (TVD: 5398 feet, MD: 16912 feet)
PPP: LOT 1 / 332 FNL / 1 FWL / TWSP: 23N / RANGE: 7W / SECTION: 18 / LAT: 36.233473 / LONG: -107.62426 (TVD: 5398 feet, MD: 16912 feet)
PPP: NENW / 330 FNL / 1458 FWL / TWSP: 23N / RANGE: 7W / SECTION: 18 / LAT: 36.233478 / LONG: -107.619316 (TVD: 5398 feet, MD: 16912 feet)
BHL: NESE / 1748 FSL / 330 FEL / TWSP: 23N / RANGE: 7W / SECTION: 18 / LAT: 36.22458 / LONG: -107.607592 (TVD: 5398 feet, MD: 16912 feet)

BLM Point of Contact

Name: CHRISTOPHER P WENMAN
Title: Natural Resource Specialist
Phone: (505) 564-7727
Email: cwenman@blm.gov

CONFIDENTIAL

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

WELL LOCATION INFORMATION

API Number 30-043-21542	Pool Code 98175	Pool Name BETONNIE TSOSIE WASH UNIT MANCOS OIL POOL
Property Code 325179	Property Name BETONNIE TSOSIE WASH UNIT	Well Number 101H
OGRID No. 371838	Operator Name DJR OPERATING, LLC	Ground Level Elevation 6962'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location (SHL)

UL A	Section 19	Township 23N	Range 7W	Lot	Ft from the N/S 935' NORTH	Ft from the E/W 1149' EAST	Latitude 36.217217° N	Longitude 107.610456° W	County SANDOVAL
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Bottom Hole Location (BHL)

UL I	Section 18	Township 23N	Range 7W	Lot	Ft from the N/S 1748' SOUTH	Ft from the E/W 330' EAST	Latitude 36.224580° N	Longitude 107.607592° W	County RIO ARRIBA
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Dedicated Acres SEC 18: SE/4, NE/SW, NW/4, NW/NE, SW/NE & SE/NE (481.38 AC.); SEC 13: NE/NE (40 AC.) = 521.38 ACRES	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N) N	Consolidation Code UNIT
Order Numbers: R-13930 R-13930A		Well Setbacks are under Common Ownership: ☒ Yes ☐ No		

Kick Off Point (KOP)

UL P	Section 18	Township 23N	Range 7W	Lot	Ft from the N/S 370' SOUTH	Ft from the E/W 592' EAST	Latitude 36.220796° N	Longitude 107.608554° W	County RIO ARRIBA
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First Take Point (FTP)

UL P	Section 18	Township 23N	Range 7W	Lot	Ft from the N/S 370' SOUTH	Ft from the E/W 592' EAST	Latitude 36.220796° N	Longitude 107.608554° W	County RIO ARRIBA
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Last Take Point (LTP)

UL I	Section 18	Township 23N	Range 7W	Lot	Ft from the N/S 1748' SOUTH	Ft from the E/W 330' EAST	Latitude 36.224580° N	Longitude 107.607592° W	County RIO ARRIBA
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Unitized Area or Area of Uniform Interest BETONNIE TSOSIE WASH	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation
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OPERATOR CERTIFICATIONS

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

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

Shaw-Marie Ford

Signature

4/21/2025

Date

Shaw-Marie Ford

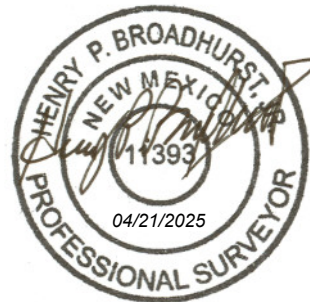
Printed Name

sford@enduringresources.com

E-mail Address

SURVEYOR CERTIFICATIONS

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



Signature and Seal of Professional Surveyor:

Certificate Number

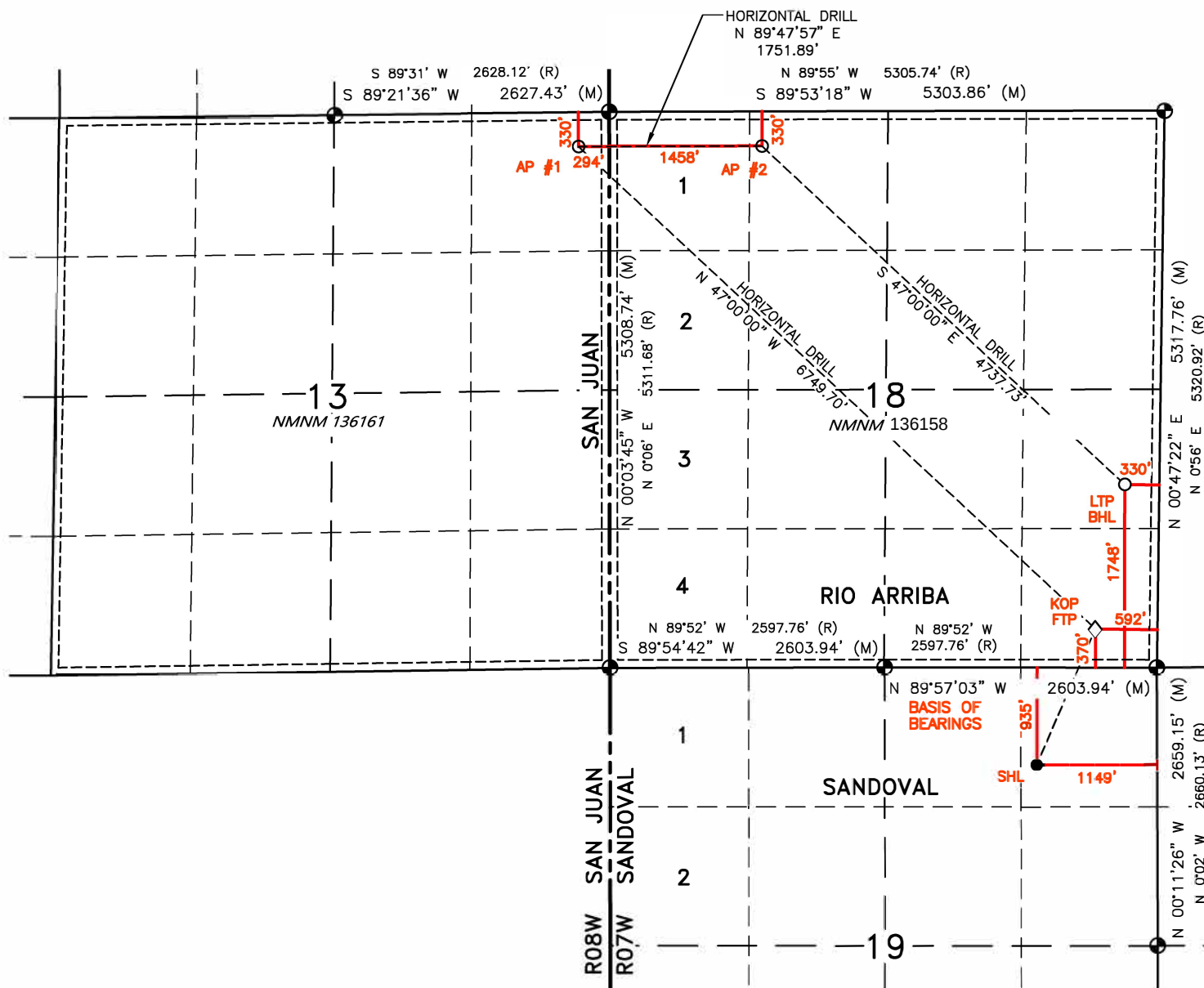
11393

Date of Survey

NOVEMBER 8, 2024

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

FND 2 1/2" BC
GLO 1948



SURFACE LOCATION (SHL) ●
935' FNL 1149' FEL
SEC. 19, T23N, R7W
LAT. 36.217217° N (NAD83)
LONG. 107.610456° W (NAD83)

KICK OFF POINT (KOP) ▲
370' FSL 592' FEL
SEC. 18, T23N, R7W
LAT. 36.220796° N (NAD83)
LONG. 107.608554° W (NAD83)

FIRST TAKE POINT (FTP) ◇
370' FSL 592' FEL
SEC. 18, T23N, R7W
LAT. 36.220796° N (NAD83)
LONG. 107.608554° W (NAD83)

ANGLE POINT #1 (AP #1) ○
330' FNL 294' FEL
SEC. 13, T23N, R8W
LAT. 36.233471° N (NAD83)
LONG. 107.625256° W (NAD83)

ANGLE POINT #2 (AP #2) ○
330' FNL 1458' FWL
SEC. 18, T23N, R7W
LAT. 36.233478° N (NAD83)
LONG. 107.619316° W (NAD83)

LAST TAKE POINT (LTP) □
1748' FSL 330' FEL
SEC. 18, T23N, R7W
LAT. 36.224580° N (NAD83)
LONG. 107.607592° W (NAD83)

BOTTOM HOLE LOCATION (BHL) ○
1748' FSL 330' FEL
SEC. 18, T23N, R7W
LAT. 36.224580° N (NAD83)
LONG. 107.607592° W (NAD83)

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: _DJR Operating, LLC_ **OGRID:** _371838_ **Date:** _6/9/2025_

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Betonne Tsoie Wash Unit 101H	A-19-23N-7W	935 FNL 1149 FEL	563	1278	225
Betonne Tsoie Wash Unit 103H	A-19-23N-7W	954 FNL 1144 FEL	298	675	119
Betonne Tsoie Wash Unit 105H	A-19-23N-7W	974 FNL 1140 FEL	587	1331	235
Betonne Tsoie Wash Unit 107H	A-19-23N-7W	993 FNL 1135 FEL	238	540	95
			3-year Decline	3-year Decline	3-year Decline
Betonne Tsoie Wash Unit 101H	A-19-23N-7W	935 FNL 1149 FEL	127	509	51
Betonne Tsoie Wash Unit 103H	A-19-23N-7W	954 FNL 1144 FEL	67	269	27
Betonne Tsoie Wash Unit 105H	A-19-23N-7W	974 FNL 1140 FEL	133	530	53
Betonne Tsoie Wash Unit 107H	A-19-23N-7W	993 FNL 1135 FEL	54	215	22

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

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

Well Name	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Betonne Tsoie Wash Unit 101H	9/19/2027	9/29/2027	11/18/2027	11/28/2027	1/2/2028
Betonne Tsoie Wash Unit 103H	9/20/2027	9/30/2027	11/18/2027	11/29/2027	1/4/2028
Betonne Tsoie Wash Unit 105H	9/21/2027	10/1/2027	11/18/2027	11/30/2027	1/6/2028
Betonne Tsoie Wash Unit 107H	9/22/2027	10/2/2027	11/18/2027	12/1/2027	1/8/2028

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

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

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

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

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature: <i>Shaw-Marie Ford</i>
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@enduringresources.com
Date: 6/9/2025
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
BETONNIE TSOSIE WASH UNIT 101H 103H 105H and 107H

SEPARATION EQUIPMENT

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

Separation equipment will be set as follows:

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

Heater treaters will be set as follows:

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

Vapor Recovery Equipment will be set as follows:

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

Production storage tanks will be set as follows:

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



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
BETONNIE TSOSIE WASH UNIT 101H 103H 105H and 107H

VENTING and FLARING

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

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

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

DJR will only flare gas during the following times:

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



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
BETONNIE TSOSIE WASH UNIT 101H 103H 105H and 107H

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

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

19.15.27.8 B. Venting and flaring during drilling operations

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

19.15.27.8 E. Venting and flaring during completion or recompletion operations

During Completion Operations, DJR utilizes the following:

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



19.15.27.8 D. Venting and flaring during production operations

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

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

19.15.27.8 E. Performance standards

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



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

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

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



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
BETONNIE TSOSIE WASH UNIT 101H 103H 105H and 107H

BEST MANAGEMENT PRACTICES

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

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

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

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

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

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

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

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



ENDURING RESOURCES IV, LLC
6300 S SYRACUSE WAY, SUITE 525
CENTENNIAL, COLORADO 80211

DRILLING PLAN: *Drill, complete, and equip single lateral in the Mancos-Gallup formation*

WELL INFORMATION:

Name: Betonnie Tsosie Wash Unit 101H

State: New Mexico

County: Sandoval

Surface Elevation: 6,962 ft ASL (GL) 6,986 ft ASL (KB)
Surface Location: 19-23-7 Sec-Twn-Rng 935 ft FNL 1,149 ft FEL
 36.217217 ° N latitude 107.610456 ° W longitude (NAD 83)
BH Location: 18-23-7 Sec-Twn-Rng 1,748 ft FSL 330 ft FEL
 36.22458 ° N latitude 107.607592 ° W longitude (NAD 83)

Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM:

South on US Hwy 550 for 39.0 miles to MM 112.7, Right (South) on CR #7900 / IR #7061 for 5.1 miles to Y (just passed 4-way), Left (East) leaving CR #7900 for 4.0 miles to lease road; Left (NorthEast) for 1.8 miles to new access; Right (North) for 1.5 miles to NAU A19-2307 pad entrance on left. There are two existing wells on this location and 4 proposed wells. From South (location entrance) to North: BTWU 107H, 105H, 103H, 101H, N Alamito 102H (existing), N Alamito 106H (existing).

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	5,920	1,066	1,066	W	normal
	Kirtland	5,800	1,186	1,186	W	normal
	Fruitland	5,630	1,356	1,358	G, W	sub
	Pictured Cliffs	5,295	1,691	1,706	G, W	sub
	Lewis	5,140	1,846	1,869	G, W	normal
	Chacra	4,890	2,096	2,131	G, W	normal
	Cliff House	3,800	3,186	3,275	G, W	sub
	Menefee	3,230	3,756	3,873	G, W	normal
	Point Lookout	2,925	4,061	4,193	G, W	normal
	Mancos	2,710	4,276	4,419	O,G	sub (~0.38)
	Gallup (MNCS_A)	2,370	4,616	4,776	O,G	sub (~0.38)
	MNCS_B	2,275	4,711	4,876	O,G	sub (~0.38)
	MNCS_C	2,180	4,806	4,975	O,G	sub (~0.38)
	MNCS_Cms	2,140	4,846	5,017	O,G	sub (~0.38)
	MNCS_D	2,010	4,976	5,157	O,G	sub (~0.38)
	MNCS_E	1,895	5,091	5,292	O,G	sub (~0.38)
	MNCS_F	1,845	5,141	5,357	O,G	sub (~0.38)
	MNCS_G	1,770	5,216	5,468	O,G	sub (~0.38)
	MNCS_H	1,710	5,276	5,581	O,G	sub (~0.38)
	MNCS_I	1,660	5,326	5,730	O,G	sub (~0.38)
	FTP TARGET	1,770	5,216	5,468	O,G	sub (~0.38)
	PROJECTED TD	1,616	5,370	16,912	O,G	sub (~0.38)

Surface: Nacimiento

Oil & Gas Zones: Several gas bearing zones will be encountered; target formation is the Gallup

Pressure: Normal (0.43 psi/ft) or sub-normal pressure gradients anticipated in all formations
 Max. pressure gradient: 0.43 psi/ft Evacuated hole gradient: 0.22 psi/ft
Maximum anticipated BH pressure, assuming maximum pressure gradient: 2,310 psi
Maximum anticipated surface pressure, assuming partially evacuated hole: 1,130 psi

Temperature: Maximum anticipated BHT is 125° F or less

H₂S INFORMATION:

H₂S Zones: Encountering hydrogen-sulfide bearing zones is **NOT** anticipated.

Safety: Sensors and alarms will be placed in the substructure, on the rig floor, above the pits, and at the shakers.

LOGGING, CORING, AND TESTING:

Mud Logs: None planned; remote geo-steering from drill out of 7" casing to TD; gas detection from drillout of 9-5/8" casing to TD.

MWD / LWD: Gamma Ray from drillout of 9-5/8" casing to TD

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

Cased Hole Logs: CBL on 7" casing from deepest free-fall depth to surface

DRILLING RIG INFORMATION:

Contractor: Ensign

Rig No.: 140

Draw Works: Pacific Rim 1500AC (1,500 hp)

Mast: Process MFG Corp Swing Up Triple (136 ft, 750,000 lbs)

Top Drive: Tesco 400-EXI-600 (400 ton)

Prime Movers: 3 - CAT 3512C (1,350 hp)

Pumps: 2 - Gardner Denver PZ-11 (7,500 psi)

BOPE 1: T3 Annular & Shaffer double gate ram (11", 5,000 psi)

BOPE 2: T3 annular(11", 5,000 psi)

Choke 3", 5,000 psi

KB-GL (ft): 23.5

Note: Actual drilling rig may vary depending on availability at time the well is scheduled to be drilled.

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

- 1) Rig will be equipped with upper and lower kelly cocks with handles available.
- 2) Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well.
- 3) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.
- 4) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.

- 5) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- 6) Manual locking devices (hand wheels) shall be intalled on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when the there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement: Pumps shall be equipped with stroke counters with displays in the dog-house. Slow pump speed shall be recorded daily and after mudding up, at a minimum, on the drilling report. A Pit Volume Totalizer will be installed and the readout will be displayed in the dog-house. Gas-detecting equipment will be installed at the shakers, and readouts will be available in the dog-house and the in the geologist's work-station (if geologist or mud-logger is on-site).

Closed-Loop System: A fully, closed-loop system will be utilized. The system will consist of above-ground piping and above-ground storage tanks and bins. The system will not entail any earthen pits, below-grade storage, or drying pads. All equipment will be disassembled and removed from the site when drilling operations cease. The system will be capable of storing all fluids and generated cuttings and of preventing uncontrolled releases of the same. The system will be operated in an efficient manner to allow the recycling and reuse of as much fluid as possible and to minimize the amount of fluids and solids that require disposal.

Fluid Disposal: Fluids that cannot be reused, recycled, or returned to the supplier will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).

Solids Disposal: Drilling solids will be stored (until haul-off) on-site in separate containers with no other waste, debris, or garbage products. Waste solids will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).

Fluid Program: See "Detailed Drilling Plan" section and attached Newpark mud program for additional details.

DETAILED DRILLING PLAN:

SURFACE: *Drill vertically to casing setting depth (plus necessary rathole), run casing, cement casing to surface.*

0 ft (MD)	to	350 ft (MD)	Hole Section Length:	350 ft
0 ft (TVD)	to	350 ft (TVD)	Casing Required:	350 ft

Note: Surface hole may be drilled, cased, and cemented with a smaller rig in advance of the drilling rig.

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	Fresh Water	8.4	N/C	2 - 8	2 - 12	9.0	Spud mud

Hole Size: 12-1/4"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, deviation survey

Logging: None

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	9.625	36.0	K-55	STC	2,020	3,520	564,000	423,000
Loading					153	1,142	110,988	110,988
Min. S.F.					13.21	3.08	5.08	3.81

Assumptions: Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient

Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling intermediate hole and 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minumum: 3,400 Optimum: 4,530 Maximum: 5,660

Casing Summary: Float shoe, 1 jt casing, float collar, casing to surface

Centralizers: 2 centralizers per jt stop-banded 10' from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	Hole Cap. (cuft/ft)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Redi-Mix	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114	184

Calculated cement volumes assume gauge hole and the excess noted in table Csg ID 8.921

Mesa Ready Mix or first available

Shoe Track L 44

Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.

INTERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.

350 ft (MD)	to	5,834 ft (MD)	Hole Section Length:	5,484 ft
350 ft (TVD)	to	5,343 ft (TVD)	Casing Required:	5,834 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCI)	8.8 - 9.2	15	8 - 14	6 - 12	10.8 - 11.2	No OBM

Hole Size (inches): 8.75

Bit / Motor: 8-3/4" PDC bit w/mud motor

MWD / Survey: MWD Survey with inclination and azimuth survey (every 100' at a minimum), GR optional

Logging: None

Pressure Test: NU BOPE and test (as noted above); pressure test 9-5/8" casing to 1,500 psi for 30 minutes.

Casing Specs: Specs Loading Min. S.F.		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
	7	26.0	K-55	LTC	4,320	4,980	415,000	367,000
					2,334	1,436	232,276	232,276
					1.85	3.47	1.79	1.58

Assumptions: Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient

Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minimum: 3,400 Optimum: 4,530 Maximum: 5,660

Centralizers: 1 per joint in non-vertical hole; 1 per 2-joints in vertical hole

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Lead	III:POZ Blend	12.5	2.150	12.05	70%	0	499	1,073
Tail	Type III	13.5	1.710	8.88	30%	4,319	179	306

Annular Capacity	0.16681	cuft/ft	7" casing x 9-5/8" casing annulus	Shoe Track L	44
	0.1503	cuft/ft	7" casing x 8-3/4" hole annulus	Casing ID	6.276
	0.2148	cuft/ft	7" casing casing volume		

Calculated cement volumes assume gauge hole and the excess noted in table

10 bbls D-Mud

Breaker (SAPP)

Spacer	10 bbls water f/b	f/b	10 bbls water f/b					
			D-MPA-2 .4%					
		D-CSE 1 5.0%	BWOC Fluid Loss & Control	D-SA 1 1.4%				
ASTM Type III		BWOC Strength Enhancer	Gas Migration Control	BWOC Na Metasilicate	D-CD 2 .4%	Cello Flace LCM .25 lb/sx	D-FP 1 .5%	D-R1 1.2%
Lead	90/10 Poz				BWOC Dispersant		BWOC Defoamer	Retarder
			D-MPA-2 1.2%					
		D-CSE 1 5.0%	BWOC Fluid Loss & Control					
ASTM Type III		BWOC Strength Enhancer	Gas Migration Control	Cello Flace LCM .25 lb/sx	D-FP 1 .5%	D-R1 0.3%		
Tail	90/10 Poz				BWOC Defoamer	Retarder		

Drake Intermediate Cementing Program

Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.

PRODUCTION: Drill to TD following directional plan, run casing, cement casing to surface.

5,834 ft (MD)	to	16,912 ft (MD)	Hole Section Length:	11,078 ft
5,343 ft (TVD)	to	5,370 ft (TVD)	Casing Required:	11,260 ft
Estimated KOP:		4,999 ft (MD)	4,828 ft (TVD)	
Estimated Liner Top:		5,652 ft (MD)	5,304 ft (TVD)	
Estimated Landing Point (FTP):		5,468 ft (MD)	5,216 ft (TVD)	
Estimated Lateral Length:		11,444 ft (MD)		

Fluid:	Type	MW (ppg)	FL (mL/30')	PV (cp)	YP (lb/100 sqft)	pH	Comments	Comments
	WBM	8.7 - 9.0	NC	+20	±2	9-9.5	prod water	OBM as contingency

Hole Size: 6.125

Bit / Motor: 6-1/8" PDC bit w/mud motor

MWD / Survey: MWD with GR, inclination, and azimuth (survey every joint from KOP to Landing Point and survey every 100' minimum before KOP and after Landing Point)

Logging: GR MWD for entire section, no mud-log or cuttings sampling, no OH WL logs

Pressure Test: NU BOPE and test (as noted above); pressure test 9-5/8" casing to 1,500 psi for 30 minutes.

Liner/Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	4.500	11.6	P-110	BTC	7,560	10,690	367,000	385,000
Loading					2,653	8,807	269,285	269,285
Min. S.F.					2.85	1.21	1.36	1.43

Assumptions: Collapse: fully evacuated casing with 9.5 ppg fluid in the annulus (floating casing during running)

Burst: 8,500 psi maximum surface treating pressure with 10.2 ppg equivalent mud weight sand laden fluid with 8.4 ppg equivalent external pressure gradient.

Tension: buoyed weight in 9.0 ppg fluid with 100,000 lbs over-pull. Tension calculations assume vertical hole to approximate drag in lateral.

MU Torque (ft lbs): Minimum: BTC Optimum: BTC Maximum: BTC

Centralizers: Centralizer count and placement may be adjusted based on well conditions and as-drilled surveys.

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	Water	8.4				0	10 bbls	
Spacer	IntegraGuard Star	10		35.7		0	20 bbls	
Tail	G:POZ blend	13.3	1.520	7.50	25%	5,652	873	1,327
Displacement	232	est bbls						

Annular Capacities	0.1044	cuft/ft	4-1/2" casing x 7" casing annulus	
	0.09417	cuft/ft	4-1/2" casing x 6-1/8" hole annulus	
	0.0873	cuft/ft	4-1/2" casing volume	est shoe jt ft 42
	0.0102	bbls/ft	4" DP capacity	

Calculated cement volumes assume gauge hole and the excess noted in table
American Cementing Liner & Production Blend

S-8 Silica Flour	Avis 616 viscosifier	Xcem-311	SS201 Surfactant				
Spacer 113.2 lbs/bbl	4.0 lb/bbl	Defoamer .8 lb/bbl	0.5 gal/bbl				
		Bentonite	IntegraGuard	Xcem-311			
Lead/Tail	Pozzolan Fly Ash	Viscosifier 4%	FL24 Fluid Loss .4%	GW86 Viscosifier	R3 Retarder .2%	Defoamer 0.3%	
Type G 50%	Extender 50%	BWOB	BWOB	.1% BWOB	BWOB	BWOB	

Notify NMOCD & BLM if cement is not circulated to surface.

Note: This well will not be considered an unorthodox well location as defined by NMAC 19.15.16.15.C.5. As defined in NMAC 19.15.16.15.C.1.a and 19.15.16.15.C.1.b, no point in the completed interval shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth well. The boundaries of the completed interval, as defined by NMAC 19.15.16.7.B, are the last take point and first take point, as defined by NMAC 19.15.16.7.E and NMAC 19.15.16.7.J, respectively. In the case of this well, the last take point will be the bottom toe-initiation sleeve, and the first take point will be the top perforation. **Neither the toe-initiation sleeve nor the top perforation shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth of the well.**

FINISH WELL: ND BOP, cap well, RDMO.

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 11,344
Est Frac Inform: 47 Frac Stages 182,000 bbls slick water 14,750,000 lbs proppant
Flowback: Flow back through production tubing as pressures allow
Production: Produce through production tubing via gas-lift into permanent production and storage facilities

ESTIMATED START DATES:

Drilling: 9/19/2027
Completion: 11/18/2027
Production: 1/2/2028

Prepared by: Greg Olson 7/18/2024
Updated: Greg Olson 4/3/2025
 Greg Olson 5/29/2025

WELL NAME: Betonnie Tsosie Wash Unit 101H

OBJECTIVE: Drill, complete, and equip single lateral in the Mancos-Gallup formation

API Number: Not yet assigned

AFE Number: Not yet assigned

ER Well Number: Not yet assigned

State: New Mexico

County: Sandoval

Surface Elev.: 6,962 ft ASL (GL) 6,986 ft ASL (KB)

Surface Location: 19-23-7 Sec-Twn- Rng 935 ft FNL 1,149 ft FEL

BH Location: 18-23-7 Sec-Twn- Rng 1748 ft FSL 330 ft FEL

Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM:

South on US Hwy 550 for 39.0 miles to MM 112.7, Right (South) on CR #7900 / IR #7061 for 5.1 miles to Y (just passed 4-way), Left (East) leaving CR #7900 for 4.0 miles to lease road; Left (NorthEast) for 1.8 miles to new access; Right (North) for 1.5 miles to NAU A19-2307 pad entrance on left. There are two existing wells on this location and 4 proposed wells. From South (location entrance) to North: BTWU 107H, 105H, 103H, 101H, N Alamito 102H (existing), N Alamito 106H (existing).

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	5,834 ft
KOP (MD)	4,999 ft
KOP (TVD)	4,828 ft
Target (TVD)	5,216 ft
Curve BUR	10 °/100 ft
POE (MD)	5,468 ft
TD (MD)	16,912 ft
Lat Len (ft)	11,444 ft

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	12.250	350	9.625	36	K-55	STC	0	350
Intermediate	8.750	5,834	7	26.0	K-55	LTC	0	5,834
Production	6.125	16,912	4.500	11.6	P-110	BTC	5,652	16,912

CEMENT PROPERTIES SUMMARY:

	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)
Surface	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114
Inter. (Lead)	III:POZ Blend	12.5	2.15	12.05	0.1668	70%	0	499
Inter. (Tail)	Type III	13.5	1.71	8.88	0.1503	30%	4,319	179
Prod. (Lead)	LegraGuard S	10	0.000	35.7	0.1044	0%	0	20 bbls
Prod. (Tail)	G:POZ blend	13.3	1.520	7.5	0.0873	25%	5,652	873

COMPLETION / PRODUCTION SUMMARY:

Flowback: Flow back through production tubing as pressures allow

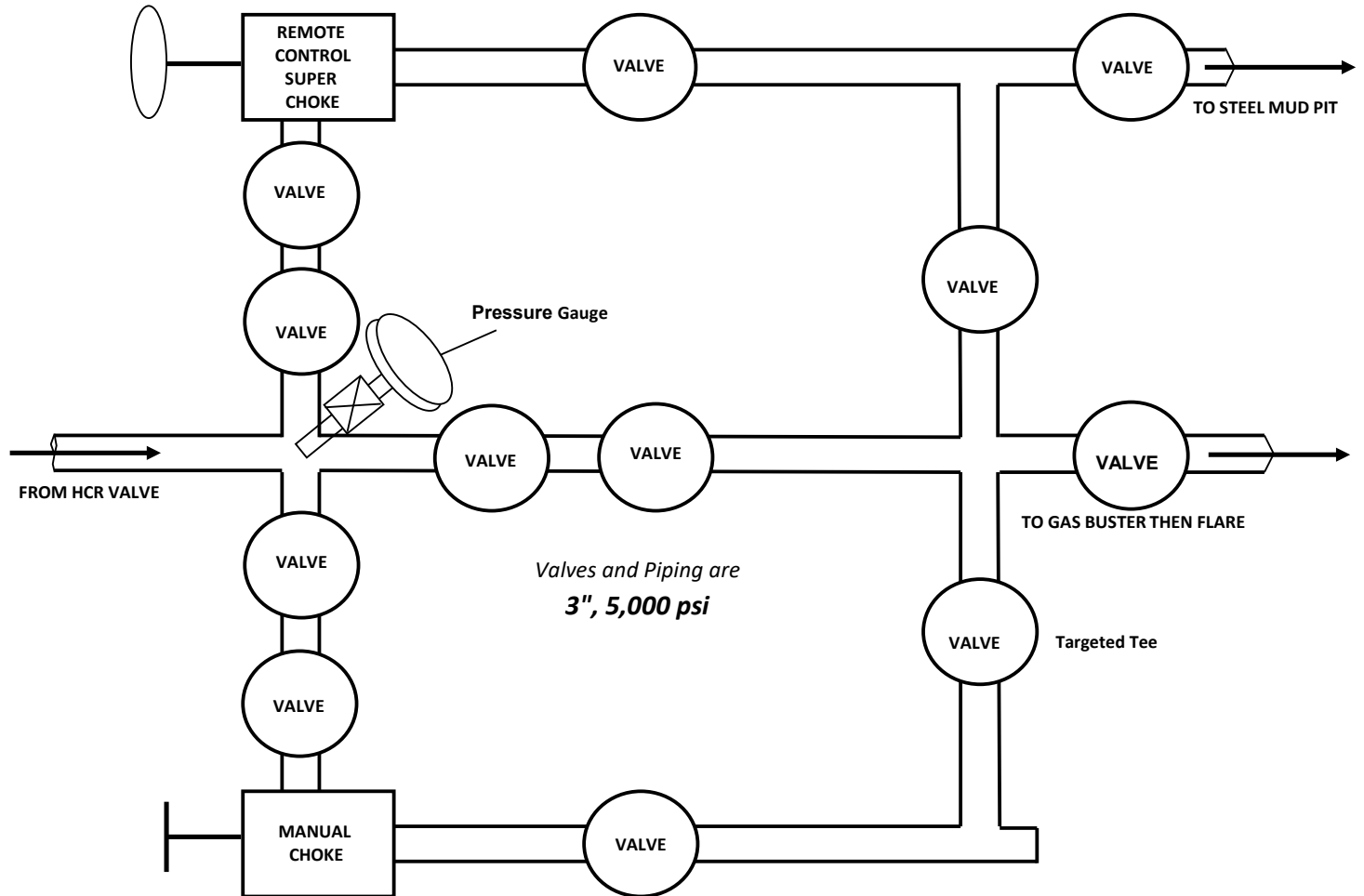
Production: Produce through production tubing via gas-lift into permanent production and storage facilities

Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	1,066	1,066
Kirtland	1,186	1,186
Fruitland	1,356	1,358
Pictured Cliffs	1,691	1,706
Lewis	1,846	1,869
Chacra	2,096	2,131
Cliff House	3,186	3,275
Menefee	3,756	3,873
Point Lookout	4,061	4,193
Mancos	4,276	4,419
Gallup (MNCS_A)	4,616	4,776
MNCS_B	4,711	4,876
MNCS_C	4,806	4,975
MNCS_Cms	4,846	5,017
MNCS_D	4,976	5,157
MNCS_E	5,091	5,292
MNCS_F	5,141	5,357
MNCS_G	5,216	5,468
MNCS_H	5,276	5,581
MNCS_J	5,326	5,730
FTP TARGET	5,216	5,468
PROJECTED TD	5,370	16,912

CHOKE MANIFOLD DIAGRAMS

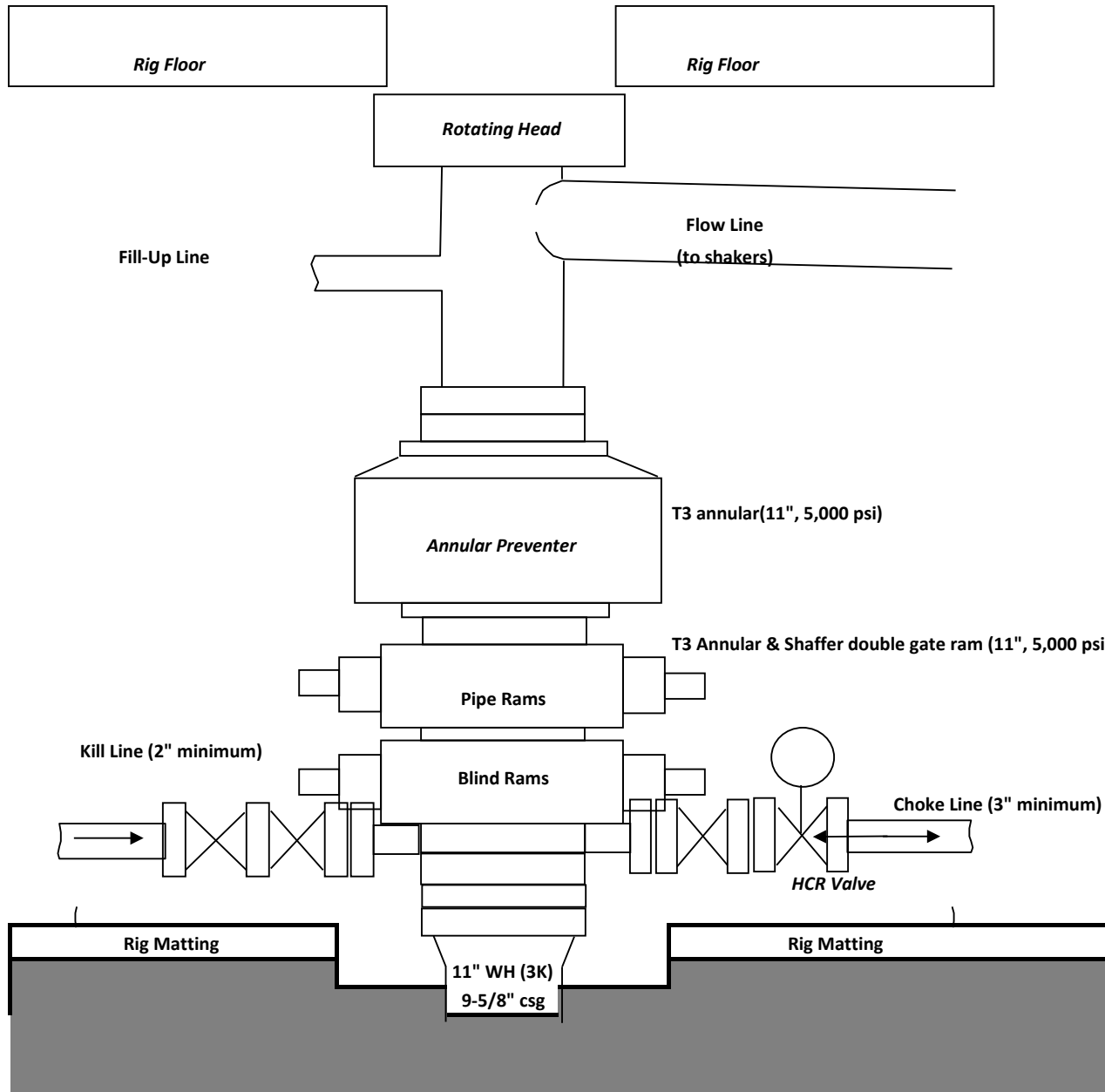
NOTE: EXACT BOPE AND CHOKE CONFIGURATION AND COMPONENTS MAY DIFFER FROM WHAT IS DEPICTED IN THE DIGRAMS BELOW DEPENDING ON THE RIG AND ITS ASSOCIATED EQUIPMENT. RAM PREVENTERS, ANNULAR PREVENTERS, AND CHOKE MANIFOLD AND COMPONENTS WILL BE RATED TO 3,000 PSI MINIMUM.

CHOKE MANIFOLD



BOPE DIAGRAM

NOTE: EXACT BOPE AND CHOKE CONFIGURATION AND COMPONENTS MAY DIFFER FROM WHAT IS DEPICTED IN THE DIGRAMS BELOW DEPENDING ON THE RIG AND ITS ASSOCIATED EQUIPMENT. RAM PREVENTERS, ANNULAR PREVENTERS, AND CHOKE MANIFOLD AND COMPONENTS WILL BE RATED TO 3,000 PSI MINIMUM.

BOPE



Well: **Betonnies Tsosie Wash Unit 101 H**
Site: **Betonnies Tsosie Wash (101,103,105 & 107)**
Project: **Rio Arriba, Sandoval & San Juan Counties, NM NAD83**
Design: **rev0**
Rig:

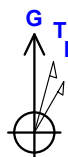
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BTW 101 FTP 370 FSL 592 FEL	5345.00	1295.06	579.34	1902443.52	1239691.92	36.22079600	-107.60855400
BTW 101 AP1 330 FNL 294 FEL	5370.00	5978.83	-4281.98	1907127.29	1234830.61	36.23347100	-107.62525600
BTW 101 LTP 1748 FSL 330 FEL	5370.00	2668.63	882.40	1903817.10	1239994.98	36.22458000	-107.60759200
BTW 101 AP2 330 FNL 1458 FWL	5395.00	5956.57	-2530.03	1907105.03	1236582.55	36.23347800	-107.61931600

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6962+23.5 @ 6985.50ft

Surface location:
Northing 1901148.47 Easting 1239112.58 Latitude 36.21721700 Longitude -107.61045600

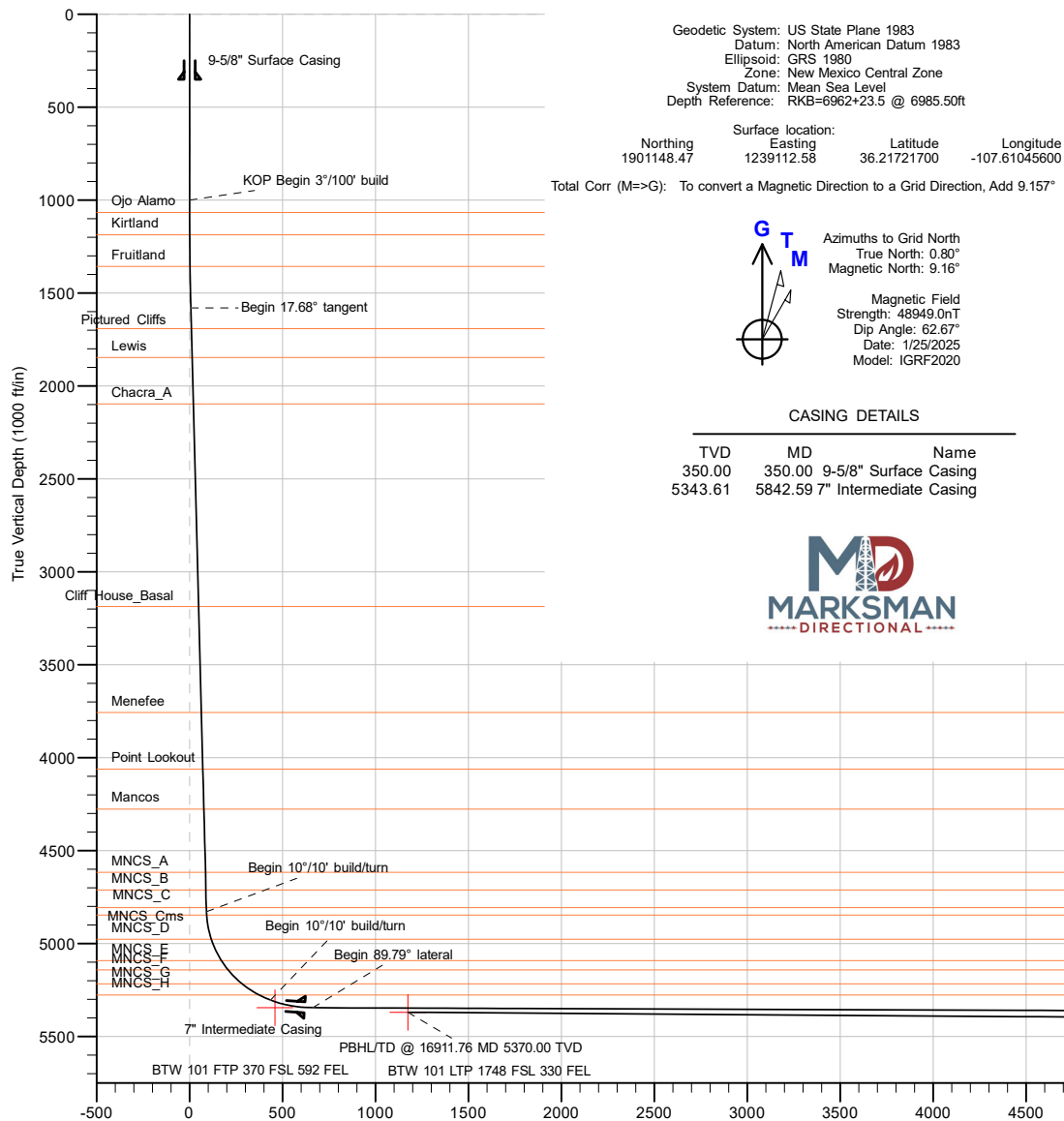
Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 9.157°



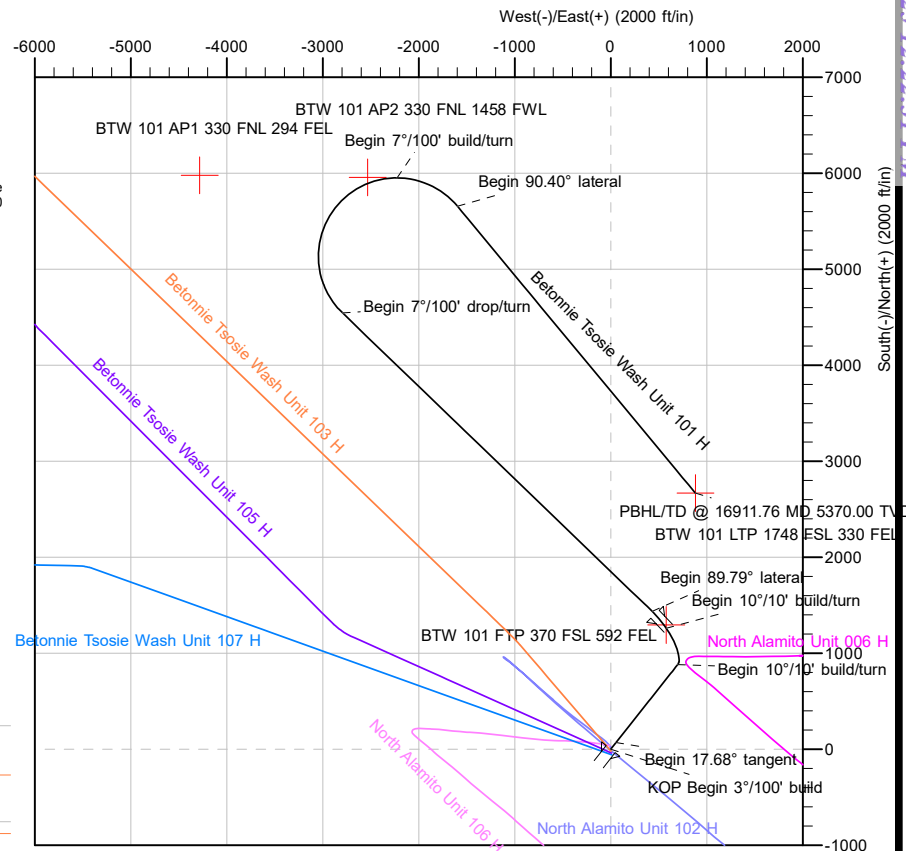
Azimuths to Grid North
True North: 0.80°
Magnetic North: 9.16°
Magnetic Field
Strength: 48949.0nT
Dip Angle: 62.67°
Date: 1/25/2025
Model: IGRF2020

CASING DETAILS

TVD	MD	Name
350.00	350.00	9-5/8" Surface Casing
5343.61	5842.59	7" Intermediate Casing

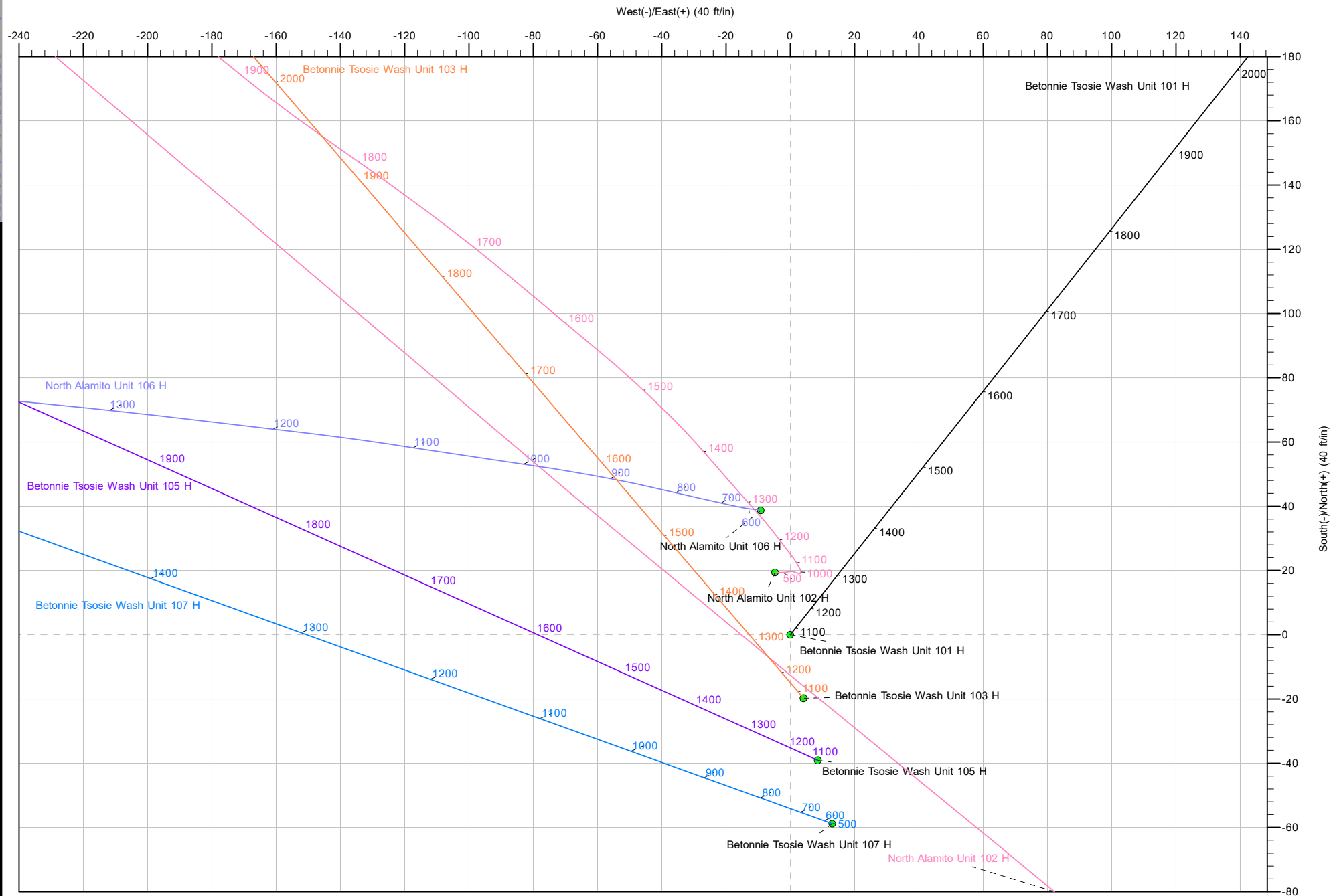


Section Details										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V/Sect	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.000	0.00	
2	1000.00	0.00	0.000	1000.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 3°/100' build
3	1589.46	17.68	38.345	1580.14	70.78	55.99	3.00	38.345	7.32	Begin 17.68° tangent
4	4998.51	17.68	38.345	4828.11	882.94	698.43	0.00	0.000	91.36	Begin 10°/10' build/turn
5	5652.11	70.00	326.930	5304.00	1260.00	579.34	10.00	-78.466	435.62	Begin 10°/10' build/turn
6	5887.45	89.79	313.934	5345.27	1436.82	432.22	10.00	-34.335	663.80	Begin 89.79° lateral
7	10367.01	89.79	313.934	5362.01	4544.86	-2793.65	0.00	0.000	5142.73	Begin 7°/100' drop/turn
8	12310.71	89.28	90.002	5395.09	5952.48	-2225.99	7.00	91.260	5687.57	Begin 7°/100' build/turn
9	13029.77	90.40	140.325	5397.23	5656.46	-1595.90	7.00	88.881	5024.86	Begin 90.40° lateral
10	16911.76	90.40	140.325	5370.00	2668.63	882.40	0.00	0.000	1174.66	PBHL/TD





Well: **Betonnies Tsosie Wash Unit 101 H**
Site: **Betonnies Tsosie Wash (101,103,105 & 107)**
Project: **Rio Arriba, Sandoval & San Juan Counties, NM NAD83**
Design: **rev0**
Rig:





Planning Report

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Project	Rio Arriba, Sandoval & San Juan Counties, NM NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Betonnie Tsosie Wash (101,103,105 & 107)				
Site Position:		Northing:	1,901,148.47 usft	Latitude:	36.21721700
From:	Lat/Long	Easting:	1,239,112.58 usft	Longitude:	-107.61045600
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Betonnie Tsosie Wash Unit 101 H, Surf loc: 935 FNL 1149 FEL Section 19-T23N-R07W					
Well Position	+N/-S	0.00 ft	Northing:	1,901,148.47 usft	Latitude:	36.21721700
	+E/-W	0.00 ft	Easting:	1,239,112.58 usft	Longitude:	-107.61045600
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,962.00 ft
Grid Convergence:		-0.804 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/25/2025	8.353	62.674	48,949.02834751

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	313.000

Plan Survey Tool Program	Date	1/26/2025		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,911.76 rev0 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,589.46	17.68	38.345	1,580.14	70.78	55.99	3.00	3.00	0.00	38.345	
4,998.51	17.68	38.345	4,828.11	882.94	698.43	0.00	0.00	0.00	0.000	
5,652.11	70.00	326.950	5,304.00	1,260.00	579.34	10.00	8.00	-10.92	-78.466	
5,887.45	89.79	313.934	5,345.27	1,436.82	432.22	10.00	8.41	-5.53	-34.335	
10,367.01	89.79	313.934	5,362.01	4,544.86	-2,793.65	0.00	0.00	0.00	0.000	
12,310.71	89.28	90.002	5,395.09	5,952.48	-2,225.99	7.00	-0.03	7.00	91.260	
13,029.77	90.40	140.325	5,397.23	5,656.46	-1,595.90	7.00	0.16	7.00	88.881	
16,911.76	90.40	140.325	5,370.00	2,668.63	882.40	0.00	0.00	0.00	0.000	BTW 101 LTP 1748 F



Planning Report

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
350.00	0.00	0.000	350.00	0.00	0.00	0.00	0.00	0.00	0.00
9-5/8" Surface Casing									
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3°/100' build									
1,066.01	1.98	38.345	1,066.00	0.89	0.71	0.09	3.00	3.00	0.00
Ojo Alamo									
1,100.00	3.00	38.345	1,099.95	2.05	1.62	0.21	3.00	3.00	0.00
1,186.30	5.59	38.345	1,186.00	7.12	5.63	0.74	3.00	3.00	0.00
Kirtland									
1,200.00	6.00	38.345	1,199.63	8.21	6.49	0.85	3.00	3.00	0.00
1,300.00	9.00	38.345	1,298.77	18.44	14.59	1.91	3.00	3.00	0.00
1,358.09	10.74	38.345	1,356.00	26.25	20.77	2.72	3.00	3.00	0.00
Fruitland									
1,400.00	12.00	38.345	1,397.08	32.73	25.89	3.39	3.00	3.00	0.00
1,500.00	15.00	38.345	1,494.31	51.04	40.37	5.28	3.00	3.00	0.00
1,589.46	17.68	38.345	1,580.14	70.78	55.99	7.32	3.00	3.00	0.00
Begin 17.68° tangent									
1,600.00	17.68	38.345	1,590.19	73.29	57.97	7.58	0.00	0.00	0.00
1,700.00	17.68	38.345	1,685.46	97.11	76.82	10.05	0.00	0.00	0.00
1,705.81	17.68	38.345	1,691.00	98.50	77.91	10.19	0.00	0.00	0.00
Pictured Cliffs									
1,800.00	17.68	38.345	1,780.74	120.94	95.66	12.51	0.00	0.00	0.00
1,868.50	17.68	38.345	1,846.00	137.26	108.57	14.20	0.00	0.00	0.00
Lewis									
1,900.00	17.68	38.345	1,876.01	144.76	114.51	14.98	0.00	0.00	0.00
2,000.00	17.68	38.345	1,971.29	168.58	133.36	17.44	0.00	0.00	0.00
2,100.00	17.68	38.345	2,066.56	192.41	152.20	19.91	0.00	0.00	0.00
2,130.90	17.68	38.345	2,096.00	199.77	158.02	20.67	0.00	0.00	0.00
Chacra_A									
2,200.00	17.68	38.345	2,161.84	216.23	171.05	22.37	0.00	0.00	0.00
2,300.00	17.68	38.345	2,257.11	240.06	189.89	24.84	0.00	0.00	0.00
2,400.00	17.68	38.345	2,352.39	263.88	208.74	27.31	0.00	0.00	0.00
2,500.00	17.68	38.345	2,447.66	287.70	227.58	29.77	0.00	0.00	0.00
2,600.00	17.68	38.345	2,542.94	311.53	246.43	32.24	0.00	0.00	0.00
2,700.00	17.68	38.345	2,638.21	335.35	265.27	34.70	0.00	0.00	0.00
2,800.00	17.68	38.345	2,733.49	359.17	284.12	37.17	0.00	0.00	0.00
2,900.00	17.68	38.345	2,828.76	383.00	302.96	39.63	0.00	0.00	0.00
3,000.00	17.68	38.345	2,924.04	406.82	321.81	42.10	0.00	0.00	0.00
3,100.00	17.68	38.345	3,019.31	430.65	340.65	44.56	0.00	0.00	0.00
3,200.00	17.68	38.345	3,114.58	454.47	359.50	47.03	0.00	0.00	0.00
3,274.96	17.68	38.345	3,186.00	472.33	373.62	48.87	0.00	0.00	0.00
Cliff House_Basal									



Planning Report

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Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
3,300.00	17.68	38.345	3,209.86	478.29	378.34	49.49	0.00	0.00	0.00	
3,400.00	17.68	38.345	3,305.13	502.12	397.19	51.96	0.00	0.00	0.00	
3,500.00	17.68	38.345	3,400.41	525.94	416.03	54.42	0.00	0.00	0.00	
3,600.00	17.68	38.345	3,495.68	549.76	434.88	56.89	0.00	0.00	0.00	
3,700.00	17.68	38.345	3,590.96	573.59	453.73	59.35	0.00	0.00	0.00	
3,800.00	17.68	38.345	3,686.23	597.41	472.57	61.82	0.00	0.00	0.00	
3,873.23	17.68	38.345	3,756.00	614.86	486.37	63.62	0.00	0.00	0.00	
Menefee										
3,900.00	17.68	38.345	3,781.51	621.24	491.42	64.28	0.00	0.00	0.00	
4,000.00	17.68	38.345	3,876.78	645.06	510.26	66.75	0.00	0.00	0.00	
4,100.00	17.68	38.345	3,972.06	668.88	529.11	69.21	0.00	0.00	0.00	
4,193.35	17.68	38.345	4,061.00	691.12	546.70	71.51	0.00	0.00	0.00	
Point Lookout										
4,200.00	17.68	38.345	4,067.33	692.71	547.95	71.68	0.00	0.00	0.00	
4,300.00	17.68	38.345	4,162.61	716.53	566.80	74.14	0.00	0.00	0.00	
4,400.00	17.68	38.345	4,257.88	740.35	585.64	76.61	0.00	0.00	0.00	
4,419.02	17.68	38.345	4,276.00	744.88	589.23	77.08	0.00	0.00	0.00	
Mancos										
4,500.00	17.68	38.345	4,353.16	764.18	604.49	79.07	0.00	0.00	0.00	
4,600.00	17.68	38.345	4,448.43	788.00	623.33	81.54	0.00	0.00	0.00	
4,700.00	17.68	38.345	4,543.71	811.83	642.18	84.00	0.00	0.00	0.00	
4,775.88	17.68	38.345	4,616.00	829.90	656.48	85.87	0.00	0.00	0.00	
MNCS_A										
4,800.00	17.68	38.345	4,638.98	835.65	661.02	86.47	0.00	0.00	0.00	
4,875.59	17.68	38.345	4,711.00	853.66	675.27	88.33	0.00	0.00	0.00	
MNCS_B										
4,900.00	17.68	38.345	4,734.26	859.47	679.87	88.93	0.00	0.00	0.00	
4,975.30	17.68	38.345	4,806.00	877.41	694.06	90.79	0.00	0.00	0.00	
MNCS_C										
4,998.51	17.68	38.345	4,828.11	882.94	698.43	91.36	0.00	0.00	0.00	
Begin 10°/10' build/turn										
5,000.00	17.71	37.866	4,829.53	883.30	698.71	91.40	10.00	2.04	-32.20	
5,017.31	18.15	32.424	4,846.00	887.65	701.77	92.13	10.00	2.52	-31.44	
MNCS_Cms										
5,050.00	19.36	22.964	4,876.96	896.94	706.62	94.92	10.00	3.70	-28.94	
5,100.00	22.01	10.911	4,923.76	913.78	711.63	102.75	10.00	5.29	-24.11	
5,150.00	25.34	1.603	4,969.56	933.69	713.70	114.81	10.00	6.67	-18.62	
5,157.14	25.86	0.464	4,976.00	936.78	713.76	116.87	10.00	7.25	-15.94	
MNCS_D										
5,200.00	29.13	354.451	5,014.02	956.51	712.83	131.01	10.00	7.63	-14.03	
5,250.00	33.21	348.869	5,056.80	982.08	709.00	151.24	10.00	8.17	-11.17	
5,291.75	36.78	345.081	5,091.00	1,005.39	703.57	171.11	10.00	8.54	-9.07	
MNCS_E										
5,300.00	37.50	344.407	5,097.58	1,010.19	702.26	175.35	10.00	8.70	-8.17	
5,350.00	41.92	340.750	5,136.03	1,040.64	692.66	203.13	10.00	8.84	-7.31	
5,356.70	42.52	340.308	5,141.00	1,044.89	691.16	207.13	10.00	8.97	-6.59	
MNCS_F										
5,400.00	46.44	337.679	5,171.89	1,073.19	680.26	234.40	10.00	9.05	-6.07	
5,450.00	51.03	335.040	5,204.86	1,107.59	665.17	268.90	10.00	9.18	-5.28	
5,468.05	52.70	334.172	5,216.00	1,120.41	659.08	282.10	10.00	9.26	-4.81	
MNCS_G										
5,500.00	55.67	332.725	5,234.70	1,143.59	647.50	306.37	10.00	9.30	-4.53	



Planning Report

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,550.00	60.36	330.654	5,261.17	1,180.90	627.38	346.54	10.00	9.36	-4.14	
5,581.41	63.31	329.450	5,276.00	1,204.89	613.55	373.01	10.00	9.41	-3.83	
MNCS_H										
5,600.00	65.07	328.768	5,284.09	1,219.25	604.96	389.09	10.00	9.44	-3.67	
5,652.11	70.00	326.950	5,304.00	1,260.00	579.34	435.62	10.00	9.47	-3.49	
Begin 10°/10' build/turn										
5,700.00	73.98	324.142	5,318.81	1,297.54	553.57	480.06	10.00	8.30	-5.86	
5,750.00	78.16	321.327	5,330.85	1,336.14	524.18	527.88	10.00	8.38	-5.63	
5,800.00	82.38	318.597	5,339.29	1,373.85	492.49	576.78	10.00	8.43	-5.46	
5,842.59	85.98	316.316	5,343.61	1,405.06	463.84	619.02	10.00	8.46	-5.36	
7" Intermediate Casing										
5,850.00	86.61	315.922	5,344.09	1,410.39	458.72	626.40	10.00	8.47	-5.32	
5,887.45	89.79	313.934	5,345.27	1,436.82	432.22	663.80	10.00	8.48	-5.31	
Begin 89.79° lateral										
5,900.00	89.79	313.934	5,345.31	1,445.53	423.18	676.35	0.00	0.00	0.00	
6,000.00	89.79	313.934	5,345.69	1,514.91	351.17	776.34	0.00	0.00	0.00	
6,100.00	89.79	313.934	5,346.06	1,584.29	279.16	876.32	0.00	0.00	0.00	
6,200.00	89.79	313.934	5,346.44	1,653.68	207.14	976.31	0.00	0.00	0.00	
6,300.00	89.79	313.934	5,346.81	1,723.06	135.13	1,076.30	0.00	0.00	0.00	
6,400.00	89.79	313.934	5,347.18	1,792.44	63.12	1,176.28	0.00	0.00	0.00	
6,500.00	89.79	313.934	5,347.56	1,861.82	-8.90	1,276.27	0.00	0.00	0.00	
6,600.00	89.79	313.934	5,347.93	1,931.21	-80.91	1,376.25	0.00	0.00	0.00	
6,700.00	89.79	313.934	5,348.30	2,000.59	-152.92	1,476.24	0.00	0.00	0.00	
6,800.00	89.79	313.934	5,348.68	2,069.97	-224.94	1,576.23	0.00	0.00	0.00	
6,900.00	89.79	313.934	5,349.05	2,139.36	-296.95	1,676.21	0.00	0.00	0.00	
7,000.00	89.79	313.934	5,349.43	2,208.74	-368.96	1,776.20	0.00	0.00	0.00	
7,100.00	89.79	313.934	5,349.80	2,278.12	-440.98	1,876.18	0.00	0.00	0.00	
7,200.00	89.79	313.934	5,350.17	2,347.50	-512.99	1,976.17	0.00	0.00	0.00	
7,300.00	89.79	313.934	5,350.55	2,416.89	-585.00	2,076.16	0.00	0.00	0.00	
7,400.00	89.79	313.934	5,350.92	2,486.27	-657.01	2,176.14	0.00	0.00	0.00	
7,500.00	89.79	313.934	5,351.29	2,555.65	-729.03	2,276.13	0.00	0.00	0.00	
7,600.00	89.79	313.934	5,351.67	2,625.03	-801.04	2,376.11	0.00	0.00	0.00	
7,700.00	89.79	313.934	5,352.04	2,694.42	-873.05	2,476.10	0.00	0.00	0.00	
7,800.00	89.79	313.934	5,352.42	2,763.80	-945.07	2,576.09	0.00	0.00	0.00	
7,900.00	89.79	313.934	5,352.79	2,833.18	-1,017.08	2,676.07	0.00	0.00	0.00	
8,000.00	89.79	313.934	5,353.16	2,902.57	-1,089.09	2,776.06	0.00	0.00	0.00	
8,100.00	89.79	313.934	5,353.54	2,971.95	-1,161.11	2,876.04	0.00	0.00	0.00	
8,200.00	89.79	313.934	5,353.91	3,041.33	-1,233.12	2,976.03	0.00	0.00	0.00	
8,300.00	89.79	313.934	5,354.28	3,110.71	-1,305.13	3,076.02	0.00	0.00	0.00	
8,400.00	89.79	313.934	5,354.66	3,180.10	-1,377.15	3,176.00	0.00	0.00	0.00	
8,500.00	89.79	313.934	5,355.03	3,249.48	-1,449.16	3,275.99	0.00	0.00	0.00	
8,600.00	89.79	313.934	5,355.41	3,318.86	-1,521.17	3,375.97	0.00	0.00	0.00	
8,700.00	89.79	313.934	5,355.78	3,388.25	-1,593.19	3,475.96	0.00	0.00	0.00	
8,800.00	89.79	313.934	5,356.15	3,457.63	-1,665.20	3,575.95	0.00	0.00	0.00	
8,900.00	89.79	313.934	5,356.53	3,527.01	-1,737.21	3,675.93	0.00	0.00	0.00	
9,000.00	89.79	313.934	5,356.90	3,596.39	-1,809.23	3,775.92	0.00	0.00	0.00	
9,100.00	89.79	313.934	5,357.27	3,665.78	-1,881.24	3,875.90	0.00	0.00	0.00	
9,200.00	89.79	313.934	5,357.65	3,735.16	-1,953.25	3,975.89	0.00	0.00	0.00	
9,300.00	89.79	313.934	5,358.02	3,804.54	-2,025.26	4,075.88	0.00	0.00	0.00	
9,400.00	89.79	313.934	5,358.40	3,873.92	-2,097.28	4,175.86	0.00	0.00	0.00	
9,500.00	89.79	313.934	5,358.77	3,943.31	-2,169.29	4,275.85	0.00	0.00	0.00	
9,600.00	89.79	313.934	5,359.14	4,012.69	-2,241.30	4,375.83	0.00	0.00	0.00	



Planning Report

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,700.00	89.79	313.934	5,359.52	4,082.07	-2,313.32	4,475.82	0.00	0.00	0.00	
9,800.00	89.79	313.934	5,359.89	4,151.46	-2,385.33	4,575.81	0.00	0.00	0.00	
9,900.00	89.79	313.934	5,360.26	4,220.84	-2,457.34	4,675.79	0.00	0.00	0.00	
10,000.00	89.79	313.934	5,360.64	4,290.22	-2,529.36	4,775.78	0.00	0.00	0.00	
10,100.00	89.79	313.934	5,361.01	4,359.60	-2,601.37	4,875.76	0.00	0.00	0.00	
10,200.00	89.79	313.934	5,361.39	4,428.99	-2,673.38	4,975.75	0.00	0.00	0.00	
10,300.00	89.79	313.934	5,361.76	4,498.37	-2,745.40	5,075.74	0.00	0.00	0.00	
10,367.01	89.79	313.934	5,362.01	4,544.86	-2,793.65	5,142.73	0.00	0.00	0.00	
Begin 7°/100' drop/turn										
10,400.00	89.74	316.243	5,362.15	4,568.22	-2,816.94	5,175.70	7.00	-0.15	7.00	
10,450.00	89.66	319.742	5,362.41	4,605.37	-2,850.40	5,225.50	7.00	-0.15	7.00	
10,500.00	89.58	323.242	5,362.74	4,644.49	-2,881.52	5,274.95	7.00	-0.15	7.00	
10,550.00	89.51	326.741	5,363.14	4,685.44	-2,910.20	5,323.85	7.00	-0.15	7.00	
10,600.00	89.44	330.241	5,363.59	4,728.06	-2,936.33	5,372.02	7.00	-0.14	7.00	
10,650.00	89.37	333.740	5,364.11	4,772.19	-2,959.81	5,419.29	7.00	-0.14	7.00	
10,700.00	89.30	337.240	5,364.69	4,817.67	-2,980.54	5,465.48	7.00	-0.13	7.00	
10,750.00	89.24	340.739	5,365.32	4,864.34	-2,998.47	5,510.41	7.00	-0.13	7.00	
10,800.00	89.18	344.239	5,366.01	4,912.01	-3,013.51	5,553.92	7.00	-0.12	7.00	
10,850.00	89.12	347.739	5,366.76	4,960.51	-3,025.61	5,595.85	7.00	-0.12	7.00	
10,900.00	89.07	351.239	5,367.55	5,009.66	-3,034.73	5,636.04	7.00	-0.11	7.00	
10,950.00	89.01	354.739	5,368.39	5,059.27	-3,040.83	5,674.33	7.00	-0.10	7.00	
11,000.00	88.97	358.239	5,369.27	5,109.16	-3,043.89	5,710.60	7.00	-0.10	7.00	
11,050.00	88.92	1.740	5,370.19	5,159.14	-3,043.90	5,744.69	7.00	-0.09	7.00	
11,100.00	88.88	5.240	5,371.15	5,209.03	-3,040.86	5,776.49	7.00	-0.08	7.00	
11,150.00	88.85	8.741	5,372.14	5,258.64	-3,034.77	5,805.88	7.00	-0.07	7.00	
11,200.00	88.82	12.241	5,373.16	5,307.79	-3,025.67	5,832.74	7.00	-0.06	7.00	
11,250.00	88.79	15.742	5,374.20	5,356.29	-3,013.59	5,856.98	7.00	-0.05	7.00	
11,300.00	88.77	19.243	5,375.27	5,403.96	-2,998.57	5,878.50	7.00	-0.05	7.00	
11,350.00	88.75	22.743	5,376.36	5,450.62	-2,980.66	5,897.23	7.00	-0.04	7.00	
11,400.00	88.73	26.244	5,377.45	5,496.10	-2,959.94	5,913.09	7.00	-0.03	7.00	
11,450.00	88.73	29.745	5,378.56	5,540.23	-2,936.48	5,926.04	7.00	-0.02	7.00	
11,500.00	88.72	33.246	5,379.68	5,582.85	-2,910.37	5,936.00	7.00	-0.01	7.00	
11,550.00	88.72	36.747	5,380.79	5,623.79	-2,881.70	5,942.96	7.00	0.00	7.00	
11,600.00	88.73	40.248	5,381.90	5,662.91	-2,850.59	5,946.89	7.00	0.01	7.00	
11,650.00	88.74	43.748	5,383.01	5,700.05	-2,817.15	5,947.76	7.00	0.02	7.00	
11,700.00	88.75	47.249	5,384.10	5,735.09	-2,781.50	5,945.58	7.00	0.03	7.00	
11,750.00	88.77	50.750	5,385.18	5,767.88	-2,743.78	5,940.36	7.00	0.04	7.00	
11,800.00	88.80	54.251	5,386.24	5,798.30	-2,704.13	5,932.11	7.00	0.05	7.00	
11,850.00	88.83	57.751	5,387.28	5,826.25	-2,662.69	5,920.86	7.00	0.06	7.00	
11,900.00	88.86	61.252	5,388.28	5,851.62	-2,619.62	5,906.67	7.00	0.07	7.00	
11,950.00	88.90	64.752	5,389.26	5,874.31	-2,575.09	5,889.57	7.00	0.07	7.00	
12,000.00	88.94	68.253	5,390.21	5,894.24	-2,529.25	5,869.64	7.00	0.08	7.00	
12,050.00	88.99	71.753	5,391.11	5,911.33	-2,482.28	5,846.94	7.00	0.09	7.00	
12,100.00	89.03	75.253	5,391.98	5,925.52	-2,434.35	5,821.57	7.00	0.10	7.00	
12,150.00	89.09	78.753	5,392.79	5,936.77	-2,385.65	5,793.62	7.00	0.11	7.00	
12,200.00	89.14	82.253	5,393.57	5,945.01	-2,336.35	5,763.18	7.00	0.11	7.00	
12,250.00	89.20	85.753	5,394.29	5,950.24	-2,286.63	5,730.39	7.00	0.12	7.00	
12,300.00	89.27	89.253	5,394.96	5,952.41	-2,236.69	5,695.35	7.00	0.13	7.00	
12,310.71	89.28	90.002	5,395.09	5,952.48	-2,225.99	5,687.57	7.00	0.13	7.00	
Begin 7°/100' build/turn										
12,350.00	89.33	92.752	5,395.57	5,951.54	-2,186.71	5,658.20	7.00	0.14	7.00	
12,400.00	89.41	96.252	5,396.12	5,947.61	-2,136.88	5,619.08	7.00	0.14	7.00	
12,450.00	89.48	99.751	5,396.60	5,940.66	-2,087.37	5,578.13	7.00	0.15	7.00	



Planning Report

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,500.00	89.56	103.251	5,397.02	5,930.69	-2,038.39	5,535.50	7.00	0.15	7.00	
12,550.00	89.63	106.750	5,397.38	5,917.75	-1,990.10	5,491.36	7.00	0.15	7.00	
12,600.00	89.71	110.249	5,397.66	5,901.89	-1,942.69	5,445.87	7.00	0.16	7.00	
12,650.00	89.79	113.748	5,397.88	5,883.16	-1,896.34	5,399.20	7.00	0.16	7.00	
12,700.00	89.87	117.247	5,398.03	5,861.64	-1,851.22	5,351.52	7.00	0.16	7.00	
12,750.00	89.95	120.746	5,398.10	5,837.41	-1,807.49	5,303.02	7.00	0.16	7.00	
12,800.00	90.03	124.245	5,398.11	5,810.55	-1,765.33	5,253.86	7.00	0.16	7.00	
12,850.00	90.12	127.744	5,398.04	5,781.17	-1,724.88	5,204.24	7.00	0.16	7.00	
12,900.00	90.20	131.243	5,397.91	5,749.37	-1,686.30	5,154.35	7.00	0.16	7.00	
12,950.00	90.28	134.743	5,397.70	5,715.28	-1,649.73	5,104.35	7.00	0.16	7.00	
13,000.00	90.36	138.242	5,397.42	5,679.03	-1,615.32	5,054.45	7.00	0.16	7.00	
13,029.77	90.40	140.325	5,397.23	5,656.46	-1,595.90	5,024.86	7.00	0.16	7.00	
Begin 90.40° lateral										
13,100.00	90.40	140.325	5,396.73	5,602.41	-1,551.06	4,955.21	0.00	0.00	0.00	
13,200.00	90.40	140.325	5,396.03	5,525.44	-1,487.22	4,856.03	0.00	0.00	0.00	
13,300.00	90.40	140.325	5,395.33	5,448.48	-1,423.38	4,756.85	0.00	0.00	0.00	
13,400.00	90.40	140.325	5,394.63	5,371.51	-1,359.54	4,657.67	0.00	0.00	0.00	
13,500.00	90.40	140.325	5,393.93	5,294.54	-1,295.70	4,558.49	0.00	0.00	0.00	
13,600.00	90.40	140.325	5,393.23	5,217.58	-1,231.86	4,459.30	0.00	0.00	0.00	
13,700.00	90.40	140.325	5,392.53	5,140.61	-1,168.02	4,360.12	0.00	0.00	0.00	
13,800.00	90.40	140.325	5,391.83	5,063.65	-1,104.18	4,260.94	0.00	0.00	0.00	
13,900.00	90.40	140.325	5,391.12	4,986.68	-1,040.34	4,161.76	0.00	0.00	0.00	
14,000.00	90.40	140.325	5,390.42	4,909.71	-976.49	4,062.58	0.00	0.00	0.00	
14,100.00	90.40	140.325	5,389.72	4,832.75	-912.65	3,963.40	0.00	0.00	0.00	
14,200.00	90.40	140.325	5,389.02	4,755.78	-848.81	3,864.22	0.00	0.00	0.00	
14,300.00	90.40	140.325	5,388.32	4,678.81	-784.97	3,765.03	0.00	0.00	0.00	
14,400.00	90.40	140.325	5,387.62	4,601.85	-721.13	3,665.85	0.00	0.00	0.00	
14,500.00	90.40	140.325	5,386.92	4,524.88	-657.29	3,566.67	0.00	0.00	0.00	
14,600.00	90.40	140.325	5,386.21	4,447.91	-593.45	3,467.49	0.00	0.00	0.00	
14,700.00	90.40	140.325	5,385.51	4,370.95	-529.61	3,368.31	0.00	0.00	0.00	
14,800.00	90.40	140.325	5,384.81	4,293.98	-465.77	3,269.13	0.00	0.00	0.00	
14,900.00	90.40	140.325	5,384.11	4,217.01	-401.93	3,169.95	0.00	0.00	0.00	
15,000.00	90.40	140.325	5,383.41	4,140.05	-338.08	3,070.77	0.00	0.00	0.00	
15,100.00	90.40	140.325	5,382.71	4,063.08	-274.24	2,971.58	0.00	0.00	0.00	
15,200.00	90.40	140.325	5,382.01	3,986.11	-210.40	2,872.40	0.00	0.00	0.00	
15,300.00	90.40	140.325	5,381.30	3,909.15	-146.56	2,773.22	0.00	0.00	0.00	
15,400.00	90.40	140.325	5,380.60	3,832.18	-82.72	2,674.04	0.00	0.00	0.00	
15,500.00	90.40	140.325	5,379.90	3,755.22	-18.88	2,574.86	0.00	0.00	0.00	
15,600.00	90.40	140.325	5,379.20	3,678.25	44.96	2,475.68	0.00	0.00	0.00	
15,700.00	90.40	140.325	5,378.50	3,601.28	108.80	2,376.50	0.00	0.00	0.00	
15,800.00	90.40	140.325	5,377.80	3,524.32	172.64	2,277.31	0.00	0.00	0.00	
15,900.00	90.40	140.325	5,377.10	3,447.35	236.48	2,178.13	0.00	0.00	0.00	
16,000.00	90.40	140.325	5,376.39	3,370.38	300.33	2,078.95	0.00	0.00	0.00	
16,100.00	90.40	140.325	5,375.69	3,293.42	364.17	1,979.77	0.00	0.00	0.00	
16,200.00	90.40	140.325	5,374.99	3,216.45	428.01	1,880.59	0.00	0.00	0.00	
16,300.00	90.40	140.325	5,374.29	3,139.48	491.85	1,781.41	0.00	0.00	0.00	
16,400.00	90.40	140.325	5,373.59	3,062.52	555.69	1,682.23	0.00	0.00	0.00	
16,500.00	90.40	140.325	5,372.89	2,985.55	619.53	1,583.04	0.00	0.00	0.00	
16,600.00	90.40	140.325	5,372.19	2,908.58	683.37	1,483.86	0.00	0.00	0.00	
16,700.00	90.40	140.325	5,371.49	2,831.62	747.21	1,384.68	0.00	0.00	0.00	
16,800.00	90.40	140.325	5,370.78	2,754.65	811.05	1,285.50	0.00	0.00	0.00	
16,900.00	90.40	140.325	5,370.08	2,677.69	874.89	1,186.32	0.00	0.00	0.00	
16,911.76	90.40	140.325	5,370.00	2,668.63	882.40	1,174.66	0.00	0.00	0.00	



Planning Report

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Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
PBHL/TD @ 16911.76 MD 5370.00 TVD									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	9-5/8" Surface Casing	9-5/8	12-1/4	
5,842.59	5,343.61	7" Intermediate Casing	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,066.01	1,066.00	Ojo Alamo				
1,186.30	1,186.00	Kirtland				
1,358.09	1,356.00	Fruitland				
1,705.81	1,691.00	Pictured Cliffs				
1,868.50	1,846.00	Lewis				
2,130.90	2,096.00	Chacra_A				
3,274.96	3,186.00	Cliff House_Basal				
3,873.23	3,756.00	Menefee				
4,193.35	4,061.00	Point Lookout				
4,419.02	4,276.00	Mancos				
4,775.88	4,616.00	MNCS_A				
4,875.59	4,711.00	MNCS_B				
4,975.30	4,806.00	MNCS_C				
5,017.31	4,846.00	MNCS_Cms				
5,157.14	4,976.00	MNCS_D				
5,291.75	5,091.00	MNCS_E				
5,356.70	5,141.00	MNCS_F				
5,468.05	5,216.00	MNCS_G				
5,581.41	5,276.00	MNCS_H				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,589.46	1,580.14	70.78	55.99	Begin 17.68° tangent	
4,998.51	4,828.11	882.94	698.43	Begin 10°/10' build/turn	
5,652.11	5,304.00	1,260.00	579.34	Begin 10°/10' build/turn	
5,887.45	5,345.27	1,436.82	432.22	Begin 89.79° lateral	
10,367.01	5,362.01	4,544.86	-2,793.65	Begin 7°/100' drop/turn	
12,310.71	5,395.09	5,952.48	-2,225.99	Begin 7°/100' build/turn	
13,029.77	5,397.23	5,656.46	-1,595.90	Begin 90.40° lateral	
16,911.76	5,370.00	2,668.63	882.40	PBHL/TD @ 16911.76 MD 5370.00 TVD	



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Project	Rio Arriba, Sandoval & San Juan Counties, NM NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Betonnie Tsosie Wash (101,103,105 & 107)		
Site Position:		Northing:	1,901,148.47 usft
From:	Lat/Long	Easting:	1,239,112.58 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.21721700
		Longitude:	-107.61045600

Well	Betonnie Tsosie Wash Unit 101 H, Surf loc: 935 FNL 1149 FEL Section 19-T23N-R07W						
Well Position	+N/-S	0.00 ft	Northing:	1,901,148.47	usft	Latitude:	36.21721700
	+E/-W	0.00 ft	Easting:	1,239,112.58	usft	Longitude:	-107.61045600
Position Uncertainty		0.00 ft	Wellhead Elevation:		ft	Ground Level:	6,962.00 ft
Grid Convergence:		-0.804 °					

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/25/2025	8.353	62.674	48,949.02834751

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	313.000

Plan Survey Tool Program	Date	1/26/2025		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,911.76 rev0 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,589.46	17.68	38.345	1,580.14	70.78	55.99	3.00	3.00	0.00	38.345	
4,998.51	17.68	38.345	4,828.11	882.94	698.43	0.00	0.00	0.00	0.000	
5,652.11	70.00	326.950	5,304.00	1,260.00	579.34	10.00	8.00	-10.92	-78.466	
5,887.45	89.79	313.934	5,345.27	1,436.82	432.22	10.00	8.41	-5.53	-34.335	
10,367.01	89.79	313.934	5,362.01	4,544.86	-2,793.65	0.00	0.00	0.00	0.000	
12,310.71	89.28	90.002	5,395.09	5,952.48	-2,225.99	7.00	-0.03	7.00	91.260	
13,029.77	90.40	140.325	5,397.23	5,656.46	-1,595.90	7.00	0.16	7.00	88.881	
16,911.76	90.40	140.325	5,370.00	2,668.63	882.40	0.00	0.00	0.00	0.000	BTW 101 LTP 1748 F



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.000	0.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
100.00	0.00	0.000	100.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
200.00	0.00	0.000	200.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
300.00	0.00	0.000	300.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
350.00	0.00	0.000	350.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
9-5/8" Surface Casing										
400.00	0.00	0.000	400.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
500.00	0.00	0.000	500.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
600.00	0.00	0.000	600.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
700.00	0.00	0.000	700.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
800.00	0.00	0.000	800.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
900.00	0.00	0.000	900.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	1,901,148.47	1,239,112.58	36.21721700	-107.61045600	
KOP Begin 3°/100' build										
1,066.01	1.98	38.345	1,066.00	0.89	0.71	1,901,149.36	1,239,113.29	36.21721948	-107.61045365	
Ojo Alamo										
1,100.00	3.00	38.345	1,099.95	2.05	1.62	1,901,150.52	1,239,114.20	36.21722270	-107.61045060	
1,186.30	5.59	38.345	1,186.00	7.12	5.63	1,901,155.59	1,239,118.21	36.21723677	-107.61043725	
Kirtland										
1,200.00	6.00	38.345	1,199.63	8.21	6.49	1,901,156.68	1,239,119.07	36.21723979	-107.61043440	
1,300.00	9.00	38.345	1,298.77	18.44	14.59	1,901,166.91	1,239,127.17	36.21726821	-107.61040744	
1,358.09	10.74	38.345	1,356.00	26.25	20.77	1,901,174.72	1,239,133.34	36.21728990	-107.61038687	
Fruitland										
1,400.00	12.00	38.345	1,397.08	32.73	25.89	1,901,181.20	1,239,138.47	36.21730789	-107.61036981	
1,500.00	15.00	38.345	1,494.31	51.04	40.37	1,901,199.51	1,239,152.95	36.21735873	-107.61032160	
1,589.46	17.68	38.345	1,580.14	70.78	55.99	1,901,219.25	1,239,168.57	36.21741354	-107.61026962	
Begin 17.68° tangent										
1,600.00	17.68	38.345	1,590.19	73.29	57.97	1,901,221.76	1,239,170.55	36.21742051	-107.61026300	
1,700.00	17.68	38.345	1,685.46	97.11	76.82	1,901,245.58	1,239,189.40	36.21748667	-107.61020026	
1,705.81	17.68	38.345	1,691.00	98.50	77.91	1,901,246.97	1,239,190.49	36.21749051	-107.61019662	
Pictured Cliffs										
1,800.00	17.68	38.345	1,780.74	120.94	95.66	1,901,269.41	1,239,208.24	36.21755282	-107.61013752	
1,868.50	17.68	38.345	1,846.00	137.26	108.57	1,901,285.73	1,239,221.15	36.21759814	-107.61009455	
Lewis										
1,900.00	17.68	38.345	1,876.01	144.76	114.51	1,901,293.23	1,239,227.09	36.21761898	-107.61007479	
2,000.00	17.68	38.345	1,971.29	168.58	133.36	1,901,317.05	1,239,245.93	36.21768513	-107.61001205	
2,100.00	17.68	38.345	2,066.56	192.41	152.20	1,901,340.88	1,239,264.78	36.21775129	-107.60994931	
2,130.90	17.68	38.345	2,096.00	199.77	158.02	1,901,348.24	1,239,270.60	36.21777173	-107.60992992	
Chacra_A										
2,200.00	17.68	38.345	2,161.84	216.23	171.05	1,901,364.70	1,239,283.62	36.21781744	-107.60988657	
2,300.00	17.68	38.345	2,257.11	240.06	189.89	1,901,388.53	1,239,302.47	36.21788360	-107.60982383	
2,400.00	17.68	38.345	2,352.39	263.88	208.74	1,901,412.35	1,239,321.31	36.21794975	-107.60976109	
2,500.00	17.68	38.345	2,447.66	287.70	227.58	1,901,436.17	1,239,340.16	36.21801590	-107.60969835	
2,600.00	17.68	38.345	2,542.94	311.53	246.43	1,901,460.00	1,239,359.00	36.21808206	-107.60963562	
2,700.00	17.68	38.345	2,638.21	335.35	265.27	1,901,483.82	1,239,377.85	36.21814821	-107.60957288	
2,800.00	17.68	38.345	2,733.49	359.17	284.12	1,901,507.64	1,239,396.70	36.21821437	-107.60951014	
2,900.00	17.68	38.345	2,828.76	383.00	302.96	1,901,531.47	1,239,415.54	36.21828052	-107.60944740	
3,000.00	17.68	38.345	2,924.04	406.82	321.81	1,901,555.29	1,239,434.39	36.21834668	-107.60938466	
3,100.00	17.68	38.345	3,019.31	430.65	340.65	1,901,579.11	1,239,453.23	36.21841283	-107.60932192	
3,200.00	17.68	38.345	3,114.58	454.47	359.50	1,901,602.94	1,239,472.08	36.21847898	-107.60925918	
3,274.96	17.68	38.345	3,186.00	472.33	373.62	1,901,620.80	1,239,486.20	36.21852857	-107.60921215	
Cliff House Basal										



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,300.00	17.68	38.345	3,209.86	478.29	378.34	1,901,626.76	1,239,490.92	36.21854514	-107.60919644
3,400.00	17.68	38.345	3,305.13	502.12	397.19	1,901,650.59	1,239,509.77	36.21861129	-107.60913370
3,500.00	17.68	38.345	3,400.41	525.94	416.03	1,901,674.41	1,239,528.61	36.21867745	-107.60907096
3,600.00	17.68	38.345	3,495.68	549.76	434.88	1,901,698.23	1,239,547.46	36.21874360	-107.60900822
3,700.00	17.68	38.345	3,590.96	573.59	453.73	1,901,722.06	1,239,566.30	36.21880975	-107.60894548
3,800.00	17.68	38.345	3,686.23	597.41	472.57	1,901,745.88	1,239,585.15	36.21887591	-107.60888274
3,873.23	17.68	38.345	3,756.00	614.86	486.37	1,901,763.33	1,239,598.95	36.21892435	-107.60883680
Menefee									
3,900.00	17.68	38.345	3,781.51	621.24	491.42	1,901,769.70	1,239,603.99	36.21894206	-107.60882000
4,000.00	17.68	38.345	3,876.78	645.06	510.26	1,901,793.53	1,239,622.84	36.21900822	-107.60875726
4,100.00	17.68	38.345	3,972.06	668.88	529.11	1,901,817.35	1,239,641.68	36.21907437	-107.60869452
4,193.35	17.68	38.345	4,061.00	691.12	546.70	1,901,839.59	1,239,659.28	36.21913613	-107.60863595
Point Lookout									
4,200.00	17.68	38.345	4,067.33	692.71	547.95	1,901,841.18	1,239,660.53	36.21914052	-107.60863178
4,300.00	17.68	38.345	4,162.61	716.53	566.80	1,901,865.00	1,239,679.37	36.21920668	-107.60856903
4,400.00	17.68	38.345	4,257.88	740.35	585.64	1,901,888.82	1,239,698.22	36.21927283	-107.60850629
4,419.02	17.68	38.345	4,276.00	744.88	589.23	1,901,893.35	1,239,701.80	36.21928541	-107.60849436
Mancos									
4,500.00	17.68	38.345	4,353.16	764.18	604.49	1,901,912.65	1,239,717.06	36.21933899	-107.60844355
4,600.00	17.68	38.345	4,448.43	788.00	623.33	1,901,936.47	1,239,735.91	36.21940514	-107.60838081
4,700.00	17.68	38.345	4,543.71	811.83	642.18	1,901,960.29	1,239,754.75	36.21947129	-107.60831807
4,775.88	17.68	38.345	4,616.00	829.90	656.48	1,901,978.37	1,239,769.05	36.21952149	-107.60827046
MNCS_A									
4,800.00	17.68	38.345	4,638.98	835.65	661.02	1,901,984.12	1,239,773.60	36.21953745	-107.60825533
4,875.59	17.68	38.345	4,711.00	853.66	675.27	1,902,002.13	1,239,787.84	36.21958745	-107.60820790
MNCS_B									
4,900.00	17.68	38.345	4,734.26	859.47	679.87	1,902,007.94	1,239,792.44	36.21960360	-107.60819259
4,975.30	17.68	38.345	4,806.00	877.41	694.06	1,902,025.88	1,239,806.64	36.21965341	-107.60814534
MNCS_C									
4,998.51	17.68	38.345	4,828.11	882.94	698.43	1,902,031.41	1,239,811.01	36.21966877	-107.60813078
Begin 10°/10' build/turn									
5,000.00	17.71	37.866	4,829.53	883.30	698.71	1,902,031.77	1,239,811.29	36.21966976	-107.60812985
5,017.31	18.15	32.424	4,846.00	887.65	701.77	1,902,036.12	1,239,814.35	36.21968183	-107.60811968
MNCS_Cms									
5,050.00	19.36	22.964	4,876.96	896.94	706.62	1,902,045.41	1,239,819.20	36.21970753	-107.60810370
5,100.00	22.01	10.911	4,923.76	913.78	711.63	1,902,062.25	1,239,824.21	36.21975398	-107.60808752
5,150.00	25.34	1.603	4,969.56	933.69	713.70	1,902,082.16	1,239,826.28	36.21980873	-107.60808143
5,157.14	25.86	0.464	4,976.00	936.78	713.76	1,902,085.24	1,239,826.34	36.21981721	-107.60808139
MNCS_D									
5,200.00	29.13	354.451	5,014.02	956.51	712.83	1,902,104.98	1,239,825.40	36.21987138	-107.60808549
5,250.00	33.21	348.869	5,056.80	982.08	709.00	1,902,130.55	1,239,821.58	36.21994144	-107.60809966
5,291.75	36.78	345.081	5,091.00	1,005.39	703.57	1,902,153.86	1,239,816.15	36.22000525	-107.60811917
MNCS_E									
5,300.00	37.50	344.407	5,097.58	1,010.19	702.26	1,902,158.66	1,239,814.84	36.22001839	-107.60812384
5,350.00	41.92	340.750	5,136.03	1,040.64	692.66	1,902,189.11	1,239,805.24	36.22010164	-107.60815783
5,356.70	42.52	340.308	5,141.00	1,044.89	691.16	1,902,193.36	1,239,803.73	36.22011325	-107.60816313
MNCS_F									
5,400.00	46.44	337.679	5,171.89	1,073.19	680.26	1,902,221.66	1,239,792.84	36.22019056	-107.60820139
5,450.00	51.03	335.040	5,204.86	1,107.59	665.17	1,902,256.06	1,239,777.75	36.22028446	-107.60825418
5,468.05	52.70	334.172	5,216.00	1,120.41	659.08	1,902,268.88	1,239,771.66	36.22031944	-107.60827542
MNCS_G									
5,500.00	55.67	332.725	5,234.70	1,143.59	647.50	1,902,292.06	1,239,760.07	36.22038264	-107.60831579



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,550.00	60.36	330.654	5,261.17	1,180.90	627.38	1,902,329.37	1,239,739.95	36.22048434	-107.60838577
5,581.41	63.31	329.450	5,276.00	1,204.89	613.55	1,902,353.36	1,239,726.13	36.22054969	-107.60843377
MNCS_H									
5,600.00	65.07	328.768	5,284.09	1,219.25	604.96	1,902,367.72	1,239,717.53	36.22058880	-107.60846357
5,652.11	70.00	326.950	5,304.00	1,260.00	579.34	1,902,408.47	1,239,691.92	36.22069972	-107.60855234
Begin 10°/10' build/turn									
5,700.00	73.98	324.142	5,318.81	1,297.54	553.57	1,902,446.01	1,239,666.15	36.22080182	-107.60864147
5,750.00	78.16	321.327	5,330.85	1,336.14	524.18	1,902,484.61	1,239,636.76	36.22090671	-107.60874289
5,800.00	82.38	318.597	5,339.29	1,373.85	492.49	1,902,522.32	1,239,605.06	36.22100906	-107.60885212
5,842.59	85.98	316.316	5,343.61	1,405.06	463.84	1,902,553.53	1,239,576.42	36.22109367	-107.60895069
7" Intermediate Casing									
5,850.00	86.61	315.922	5,344.09	1,410.39	458.72	1,902,558.86	1,239,571.29	36.22110811	-107.60896831
5,887.45	89.79	313.934	5,345.27	1,436.82	432.22	1,902,585.29	1,239,544.80	36.22117967	-107.60905937
Begin 89.79° lateral									
5,900.00	89.79	313.934	5,345.31	1,445.53	423.18	1,902,594.00	1,239,535.76	36.22120324	-107.60909043
6,000.00	89.79	313.934	5,345.69	1,514.91	351.17	1,902,663.38	1,239,463.75	36.22139102	-107.60933780
6,100.00	89.79	313.934	5,346.06	1,584.29	279.16	1,902,732.76	1,239,391.73	36.22157879	-107.60958518
6,200.00	89.79	313.934	5,346.44	1,653.68	207.14	1,902,802.14	1,239,319.72	36.22176657	-107.60983256
6,300.00	89.79	313.934	5,346.81	1,723.06	135.13	1,902,871.53	1,239,247.71	36.22195434	-107.61007995
6,400.00	89.79	313.934	5,347.18	1,792.44	63.12	1,902,940.91	1,239,175.69	36.22214212	-107.61032733
6,500.00	89.79	313.934	5,347.56	1,861.82	-8.90	1,903,010.29	1,239,103.68	36.22232989	-107.61057471
6,600.00	89.79	313.934	5,347.93	1,931.21	-80.91	1,903,079.67	1,239,031.67	36.22251767	-107.61082210
6,700.00	89.79	313.934	5,348.30	2,000.59	-152.92	1,903,149.06	1,238,959.66	36.22270544	-107.61106948
6,800.00	89.79	313.934	5,348.68	2,069.97	-224.94	1,903,218.44	1,238,887.64	36.22289321	-107.61131687
6,900.00	89.79	313.934	5,349.05	2,139.36	-296.95	1,903,287.82	1,238,815.63	36.22308099	-107.61156426
7,000.00	89.79	313.934	5,349.43	2,208.74	-368.96	1,903,357.20	1,238,743.62	36.22326876	-107.61181165
7,100.00	89.79	313.934	5,349.80	2,278.12	-440.98	1,903,426.59	1,238,671.60	36.22345653	-107.61205904
7,200.00	89.79	313.934	5,350.17	2,347.50	-512.99	1,903,495.97	1,238,599.59	36.22364430	-107.61230644
7,300.00	89.79	313.934	5,350.55	2,416.89	-585.00	1,903,565.35	1,238,527.58	36.22383207	-107.61255383
7,400.00	89.79	313.934	5,350.92	2,486.27	-657.01	1,903,634.73	1,238,455.56	36.22401984	-107.61280122
7,500.00	89.79	313.934	5,351.29	2,555.65	-729.03	1,903,704.12	1,238,383.55	36.22420761	-107.61304862
7,600.00	89.79	313.934	5,351.67	2,625.03	-801.04	1,903,773.50	1,238,311.54	36.22439537	-107.61329602
7,700.00	89.79	313.934	5,352.04	2,694.42	-873.05	1,903,842.88	1,238,239.53	36.22458314	-107.61354342
7,800.00	89.79	313.934	5,352.42	2,763.80	-945.07	1,903,912.26	1,238,167.51	36.22477091	-107.61379082
7,900.00	89.79	313.934	5,352.79	2,833.18	-1,017.08	1,903,981.65	1,238,095.50	36.22495868	-107.61403822
8,000.00	89.79	313.934	5,353.16	2,902.57	-1,089.09	1,904,051.03	1,238,023.49	36.22514644	-107.61428562
8,100.00	89.79	313.934	5,353.54	2,971.95	-1,161.11	1,904,120.41	1,237,951.47	36.22533421	-107.61453302
8,200.00	89.79	313.934	5,353.91	3,041.33	-1,233.12	1,904,189.80	1,237,879.46	36.22552197	-107.61478043
8,300.00	89.79	313.934	5,354.28	3,110.71	-1,305.13	1,904,259.18	1,237,807.45	36.22570974	-107.61502783
8,400.00	89.79	313.934	5,354.66	3,180.10	-1,377.15	1,904,328.56	1,237,735.43	36.22589750	-107.61527524
8,500.00	89.79	313.934	5,355.03	3,249.48	-1,449.16	1,904,397.94	1,237,663.42	36.22608527	-107.61552265
8,600.00	89.79	313.934	5,355.41	3,318.86	-1,521.17	1,904,467.33	1,237,591.41	36.22627303	-107.61577006
8,700.00	89.79	313.934	5,355.78	3,388.25	-1,593.19	1,904,536.71	1,237,519.40	36.22646079	-107.61601747
8,800.00	89.79	313.934	5,356.15	3,457.63	-1,665.20	1,904,606.09	1,237,447.38	36.22664855	-107.61626488
8,900.00	89.79	313.934	5,356.53	3,527.01	-1,737.21	1,904,675.47	1,237,375.37	36.22683631	-107.61651229
9,000.00	89.79	313.934	5,356.90	3,596.39	-1,809.23	1,904,744.86	1,237,303.36	36.22702407	-107.61675970
9,100.00	89.79	313.934	5,357.27	3,665.78	-1,881.24	1,904,814.24	1,237,231.34	36.22721183	-107.61700712
9,200.00	89.79	313.934	5,357.65	3,735.16	-1,953.25	1,904,883.62	1,237,159.33	36.22739959	-107.61725453
9,300.00	89.79	313.934	5,358.02	3,804.54	-2,025.26	1,904,953.00	1,237,087.32	36.22758735	-107.61750195
9,400.00	89.79	313.934	5,358.40	3,873.92	-2,097.28	1,905,022.39	1,237,015.30	36.22777511	-107.61774937
9,500.00	89.79	313.934	5,358.77	3,943.31	-2,169.29	1,905,091.77	1,236,943.29	36.22796287	-107.61799679
9,600.00	89.79	313.934	5,359.14	4,012.69	-2,241.30	1,905,161.15	1,236,871.28	36.22815063	-107.61824421
9,700.00	89.79	313.934	5,359.52	4,082.07	-2,313.32	1,905,230.53	1,236,799.27	36.22833838	-107.61849163



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,800.00	89.79	313.934	5,359.89	4,151.46	-2,385.33	1,905,299.92	1,236,727.25	36.22852614	-107.61873906
9,900.00	89.79	313.934	5,360.26	4,220.84	-2,457.34	1,905,369.30	1,236,655.24	36.22871390	-107.61898648
10,000.00	89.79	313.934	5,360.64	4,290.22	-2,529.36	1,905,438.68	1,236,583.23	36.22890165	-107.61923391
10,100.00	89.79	313.934	5,361.01	4,359.60	-2,601.37	1,905,508.06	1,236,511.21	36.22908941	-107.61948133
10,200.00	89.79	313.934	5,361.39	4,428.99	-2,673.38	1,905,577.45	1,236,439.20	36.22927716	-107.61972876
10,300.00	89.79	313.934	5,361.76	4,498.37	-2,745.40	1,905,646.83	1,236,367.19	36.22946491	-107.61997619
10,367.01	89.79	313.934	5,362.01	4,544.86	-2,793.65	1,905,693.32	1,236,318.93	36.22959072	-107.62014198
Begin 7°/100' drop/turn									
10,400.00	89.74	316.243	5,362.15	4,568.22	-2,816.94	1,905,716.69	1,236,295.64	36.22965398	-107.62022206
10,450.00	89.66	319.742	5,362.41	4,605.37	-2,850.40	1,905,753.83	1,236,262.19	36.22975470	-107.62033724
10,500.00	89.58	323.242	5,362.74	4,644.49	-2,881.52	1,905,792.95	1,236,231.06	36.22986093	-107.62044463
10,550.00	89.51	326.741	5,363.14	4,685.44	-2,910.20	1,905,833.90	1,236,202.38	36.22997226	-107.62054381
10,600.00	89.44	330.241	5,363.59	4,728.06	-2,936.33	1,905,876.52	1,236,176.25	36.23008830	-107.62063441
10,650.00	89.37	333.740	5,364.11	4,772.19	-2,959.81	1,905,920.65	1,236,152.78	36.23020859	-107.62071611
10,700.00	89.30	337.240	5,364.69	4,817.67	-2,980.54	1,905,966.13	1,236,132.04	36.23033270	-107.62078858
10,750.00	89.24	340.739	5,365.32	4,864.34	-2,998.47	1,906,012.80	1,236,114.12	36.23046016	-107.62085158
10,800.00	89.18	344.239	5,366.01	4,912.01	-3,013.51	1,906,060.47	1,236,099.08	36.23059050	-107.62090484
10,850.00	89.12	347.739	5,366.76	4,960.51	-3,025.61	1,906,108.97	1,236,086.98	36.23072323	-107.62094819
10,900.00	89.07	351.239	5,367.55	5,009.66	-3,034.73	1,906,158.12	1,236,077.86	36.23085785	-107.62098146
10,950.00	89.01	354.739	5,368.39	5,059.27	-3,040.83	1,906,207.73	1,236,071.76	36.23099386	-107.62100452
11,000.00	88.97	358.239	5,369.27	5,109.16	-3,043.89	1,906,257.62	1,236,068.69	36.23113076	-107.62101729
11,050.00	88.92	1.740	5,370.19	5,159.14	-3,043.90	1,906,307.60	1,236,068.69	36.23126803	-107.62101972
11,100.00	88.88	5.240	5,371.15	5,209.03	-3,040.86	1,906,357.49	1,236,071.73	36.23140516	-107.62101180
11,150.00	88.85	8.741	5,372.14	5,258.64	-3,034.77	1,906,407.10	1,236,077.81	36.23154165	-107.62099355
11,200.00	88.82	12.241	5,373.16	5,307.79	-3,025.67	1,906,456.25	1,236,086.91	36.23167698	-107.62096506
11,250.00	88.79	15.742	5,374.20	5,356.29	-3,013.59	1,906,504.75	1,236,099.00	36.23181064	-107.62092642
11,300.00	88.77	19.243	5,375.27	5,403.96	-2,998.57	1,906,552.42	1,236,114.02	36.23194214	-107.62087778
11,350.00	88.75	22.743	5,376.36	5,450.62	-2,980.66	1,906,599.08	1,236,131.92	36.23207099	-107.62081932
11,400.00	88.73	26.244	5,377.45	5,496.10	-2,959.94	1,906,644.56	1,236,152.65	36.23219670	-107.62075126
11,450.00	88.73	29.745	5,378.56	5,540.23	-2,936.48	1,906,688.69	1,236,176.11	36.23231881	-107.62067385
11,500.00	88.72	33.246	5,379.68	5,582.85	-2,910.37	1,906,731.31	1,236,202.22	36.23243687	-107.62058738
11,550.00	88.72	36.747	5,380.79	5,623.79	-2,881.70	1,906,772.25	1,236,230.88	36.23255042	-107.62049217
11,600.00	88.73	40.248	5,381.90	5,662.91	-2,850.59	1,906,811.37	1,236,261.99	36.23265906	-107.62038859
11,650.00	88.74	43.748	5,383.01	5,700.05	-2,817.15	1,906,848.51	1,236,295.43	36.23276237	-107.62027700
11,700.00	88.75	47.249	5,384.10	5,735.09	-2,781.50	1,906,883.55	1,236,331.08	36.23285996	-107.62015784
11,750.00	88.77	50.750	5,385.18	5,767.88	-2,743.78	1,906,916.34	1,236,368.80	36.23295148	-107.62003154
11,800.00	88.80	54.251	5,386.24	5,798.30	-2,704.13	1,906,946.76	1,236,408.46	36.23303658	-107.61989858
11,850.00	88.83	57.751	5,387.28	5,826.25	-2,662.69	1,906,974.71	1,236,449.89	36.23311494	-107.61975946
11,900.00	88.86	61.252	5,388.28	5,851.62	-2,619.62	1,907,000.08	1,236,492.96	36.23318628	-107.61961468
11,950.00	88.90	64.752	5,389.26	5,874.31	-2,575.09	1,907,022.77	1,236,537.49	36.23325032	-107.61946479
12,000.00	88.94	68.253	5,390.21	5,894.24	-2,529.25	1,907,042.70	1,236,583.33	36.23330683	-107.61931036
12,050.00	88.99	71.753	5,391.11	5,911.33	-2,482.28	1,907,059.79	1,236,630.30	36.23335560	-107.61915195
12,100.00	89.03	75.253	5,391.98	5,925.52	-2,434.35	1,907,073.98	1,236,678.23	36.23339644	-107.61899017
12,150.00	89.09	78.753	5,392.79	5,936.77	-2,385.65	1,907,085.22	1,236,726.94	36.23342920	-107.61882560
12,200.00	89.14	82.253	5,393.57	5,945.01	-2,336.35	1,907,093.47	1,236,776.24	36.23345377	-107.61865887
12,250.00	89.20	85.753	5,394.29	5,950.24	-2,286.63	1,907,098.69	1,236,825.95	36.23347004	-107.61849059
12,300.00	89.27	89.253	5,394.96	5,952.41	-2,236.69	1,907,100.87	1,236,875.89	36.23347795	-107.61832140
12,310.71	89.28	90.002	5,395.09	5,952.48	-2,225.99	1,907,100.94	1,236,886.60	36.23347856	-107.61828512
Begin 7°/100' build/turn									
12,350.00	89.33	92.752	5,395.57	5,951.54	-2,186.71	1,907,100.00	1,236,925.87	36.23347749	-107.61815193
12,400.00	89.41	96.252	5,396.12	5,947.61	-2,136.88	1,907,096.07	1,236,975.71	36.23346864	-107.61798281
12,450.00	89.48	99.751	5,396.60	5,940.66	-2,087.37	1,907,089.11	1,237,025.21	36.23345145	-107.61781466
12,500.00	89.56	103.251	5,397.02	5,930.69	-2,038.39	1,907,079.15	1,237,074.20	36.23342598	-107.61764813



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,550.00	89.63	106.750	5,397.38	5,917.75	-1,990.10	1,907,066.21	1,237,122.48	36.23339231	-107.61748382
12,600.00	89.71	110.249	5,397.66	5,901.89	-1,942.69	1,907,050.35	1,237,169.89	36.23335059	-107.61732235
12,650.00	89.79	113.748	5,397.88	5,883.16	-1,896.34	1,907,031.62	1,237,216.24	36.23330096	-107.61716432
12,700.00	89.87	117.247	5,398.03	5,861.64	-1,851.22	1,907,010.10	1,237,261.37	36.23324360	-107.61701033
12,750.00	89.95	120.746	5,398.10	5,837.41	-1,807.49	1,906,985.87	1,237,305.09	36.23317874	-107.61686095
12,800.00	90.03	124.245	5,398.11	5,810.55	-1,765.33	1,906,959.01	1,237,347.26	36.23310661	-107.61671673
12,850.00	90.12	127.744	5,398.04	5,781.17	-1,724.88	1,906,929.63	1,237,387.70	36.23302749	-107.61657821
12,900.00	90.20	131.243	5,397.91	5,749.37	-1,686.30	1,906,897.83	1,237,426.28	36.23294166	-107.61644592
12,950.00	90.28	134.743	5,397.70	5,715.28	-1,649.73	1,906,863.74	1,237,462.85	36.23284946	-107.61632033
13,000.00	90.36	138.242	5,397.42	5,679.03	-1,615.32	1,906,827.48	1,237,497.26	36.23275121	-107.61620193
13,029.77	90.40	140.325	5,397.23	5,656.46	-1,595.90	1,906,804.92	1,237,516.68	36.23268999	-107.61613502
Begin 90.40° lateral									
13,100.00	90.40	140.325	5,396.73	5,602.41	-1,551.06	1,906,750.87	1,237,561.52	36.23254329	-107.61598046
13,200.00	90.40	140.325	5,396.03	5,525.44	-1,487.22	1,906,673.90	1,237,625.36	36.23233438	-107.61576037
13,300.00	90.40	140.325	5,395.33	5,448.48	-1,423.38	1,906,596.94	1,237,689.20	36.23212547	-107.61554028
13,400.00	90.40	140.325	5,394.63	5,371.51	-1,359.54	1,906,519.97	1,237,753.04	36.23191657	-107.61532019
13,500.00	90.40	140.325	5,393.93	5,294.54	-1,295.70	1,906,443.00	1,237,816.88	36.23170766	-107.61510011
13,600.00	90.40	140.325	5,393.23	5,217.58	-1,231.86	1,906,366.04	1,237,880.72	36.23149875	-107.61488002
13,700.00	90.40	140.325	5,392.53	5,140.61	-1,168.02	1,906,289.07	1,237,944.56	36.23128985	-107.61465994
13,800.00	90.40	140.325	5,391.83	5,063.65	-1,104.18	1,906,212.10	1,238,008.40	36.23108094	-107.61443986
13,900.00	90.40	140.325	5,391.12	4,986.68	-1,040.34	1,906,135.14	1,238,072.24	36.23087203	-107.61421978
14,000.00	90.40	140.325	5,390.42	4,909.71	-976.49	1,906,058.17	1,238,136.09	36.23066312	-107.61399970
14,100.00	90.40	140.325	5,389.72	4,832.75	-912.65	1,905,981.21	1,238,199.93	36.23045421	-107.61377962
14,200.00	90.40	140.325	5,389.02	4,755.78	-848.81	1,905,904.24	1,238,263.77	36.23024530	-107.61355954
14,300.00	90.40	140.325	5,388.32	4,678.81	-784.97	1,905,827.27	1,238,327.61	36.23003639	-107.61333946
14,400.00	90.40	140.325	5,387.62	4,601.85	-721.13	1,905,750.31	1,238,391.45	36.22982748	-107.61311939
14,500.00	90.40	140.325	5,386.92	4,524.88	-657.29	1,905,673.34	1,238,455.29	36.22961857	-107.61289931
14,600.00	90.40	140.325	5,386.21	4,447.91	-593.45	1,905,596.37	1,238,519.13	36.22940966	-107.61267924
14,700.00	90.40	140.325	5,385.51	4,370.95	-529.61	1,905,519.41	1,238,582.97	36.22920075	-107.61245917
14,800.00	90.40	140.325	5,384.81	4,293.98	-465.77	1,905,442.44	1,238,646.81	36.22899183	-107.61223910
14,900.00	90.40	140.325	5,384.11	4,217.01	-401.93	1,905,365.48	1,238,710.65	36.22878292	-107.61201903
15,000.00	90.40	140.325	5,383.41	4,140.05	-338.08	1,905,288.51	1,238,774.49	36.22857401	-107.61179896
15,100.00	90.40	140.325	5,382.71	4,063.08	-274.24	1,905,211.54	1,238,838.34	36.22836509	-107.61157889
15,200.00	90.40	140.325	5,382.01	3,986.11	-210.40	1,905,134.58	1,238,902.18	36.22815618	-107.61135882
15,300.00	90.40	140.325	5,381.30	3,909.15	-146.56	1,905,057.61	1,238,966.02	36.22794726	-107.61113876
15,400.00	90.40	140.325	5,380.60	3,832.18	-82.72	1,904,980.64	1,239,029.86	36.22773835	-107.61091870
15,500.00	90.40	140.325	5,379.90	3,755.22	-18.88	1,904,903.68	1,239,093.70	36.22752943	-107.61069863
15,600.00	90.40	140.325	5,379.20	3,678.25	44.96	1,904,826.71	1,239,157.54	36.22732052	-107.61047857
15,700.00	90.40	140.325	5,378.50	3,601.28	108.80	1,904,749.75	1,239,221.38	36.22711160	-107.61025851
15,800.00	90.40	140.325	5,377.80	3,524.32	172.64	1,904,672.78	1,239,285.22	36.22690268	-107.61003845
15,900.00	90.40	140.325	5,377.10	3,447.35	236.48	1,904,595.81	1,239,349.06	36.22669377	-107.60981839
16,000.00	90.40	140.325	5,376.39	3,370.38	300.33	1,904,518.85	1,239,412.90	36.22648485	-107.60959834
16,100.00	90.40	140.325	5,375.69	3,293.42	364.17	1,904,441.88	1,239,476.74	36.22627593	-107.60937828
16,200.00	90.40	140.325	5,374.99	3,216.45	428.01	1,904,364.91	1,239,540.58	36.22606701	-107.60915823
16,300.00	90.40	140.325	5,374.29	3,139.48	491.85	1,904,287.95	1,239,604.43	36.22585809	-107.60893818
16,400.00	90.40	140.325	5,373.59	3,062.52	555.69	1,904,210.98	1,239,668.27	36.22564917	-107.60871812
16,500.00	90.40	140.325	5,372.89	2,985.55	619.53	1,904,134.02	1,239,732.11	36.22544025	-107.60849807
16,600.00	90.40	140.325	5,372.19	2,908.58	683.37	1,904,057.05	1,239,795.95	36.22523133	-107.60827802
16,700.00	90.40	140.325	5,371.49	2,831.62	747.21	1,903,980.08	1,239,859.79	36.22502241	-107.60805797
16,800.00	90.40	140.325	5,370.78	2,754.65	811.05	1,903,903.12	1,239,923.63	36.22481349	-107.60783793
16,900.00	90.40	140.325	5,370.08	2,677.69	874.89	1,903,826.15	1,239,987.47	36.22460457	-107.60761788
16,911.76	90.40	140.325	5,370.00	2,668.63	882.40	1,903,817.10	1,239,994.98	36.22458000	-107.60759200
PBHL/TD @ 16911.76 MD 5370.00 TVD									



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BTW 101 FTP 370 FSL ! - plan misses target center by 35.74ft at 5692.28ft MD (5316.64 TVD, 1291.52 N, 557.88 E) - Point	0.00	0.000	5,345.00	1,295.06	579.34	1,902,443.52	1,239,691.92	36.22079600	-107.60855400
BTW 101 AP1 330 FNL ! - plan misses target center by 1404.45ft at 11350.00ft MD (5376.35 TVD, 5450.62 N, -2980.66 E) - Point	0.00	0.000	5,370.00	5,978.83	-4,281.98	1,907,127.29	1,234,830.61	36.23347100	-107.62525600
BTW 101 LTP 1748 FSL - plan hits target center - Point	0.00	0.000	5,370.00	2,668.63	882.40	1,903,817.10	1,239,994.98	36.22458000	-107.60759200
BTW 101 AP2 330 FNL - plan misses target center by 58.64ft at 12020.67ft MD (5390.58 TVD, 5901.65 N, -2509.96 E) - Point	0.00	0.000	5,395.00	5,956.57	-2,530.03	1,907,105.03	1,236,582.55	36.23347800	-107.61931600

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	9-5/8" Surface Casing	9-5/8	12-1/4	
5,842.59	5,343.61	7" Intermediate Casing	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,066.01	1,066.00	Ojo Alamo				
1,186.30	1,186.00	Kirtland				
1,358.09	1,356.00	Fruitland				
1,705.81	1,691.00	Pictured Cliffs				
1,868.50	1,846.00	Lewis				
2,130.90	2,096.00	Chacra_A				
3,274.96	3,186.00	Cliff House_Basal				
3,873.23	3,756.00	Menefee				
4,193.35	4,061.00	Point Lookout				
4,419.02	4,276.00	Mancos				
4,775.88	4,616.00	MNCS_A				
4,875.59	4,711.00	MNCS_B				
4,975.30	4,806.00	MNCS_C				
5,017.31	4,846.00	MNCS_Cms				
5,157.14	4,976.00	MNCS_D				
5,291.75	5,091.00	MNCS_E				
5,356.70	5,141.00	MNCS_F				
5,468.05	5,216.00	MNCS_G				
5,581.41	5,276.00	MNCS_H				



Planning Report - Geographic

Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site:	Betonnie Tsosie Wash (101,103,105 & 107)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,589.46	1,580.14	70.78	55.99	Begin 17.68° tangent	
4,998.51	4,828.11	882.94	698.43	Begin 10°/10' build/turn	
5,652.11	5,304.00	1,260.00	579.34	Begin 10°/10' build/turn	
5,887.45	5,345.27	1,436.82	432.22	Begin 89.79° lateral	
10,367.01	5,362.01	4,544.86	-2,793.65	Begin 7°/100' drop/turn	
12,310.71	5,395.09	5,952.48	-2,225.99	Begin 7°/100' build/turn	
13,029.77	5,397.23	5,656.46	-1,595.90	Begin 90.40° lateral	
16,911.76	5,370.00	2,668.63	882.40	PBHL/TD @ 16911.76 MD 5370.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Betonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference	rev0		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,891.18ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	1/26/2025		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	16,911.76	rev0 (Original Hole)	MWD	OWSG MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Betonnie Tsosie Wash (101,103,105 & 107)						
Betonnie Tsosie Wash Unit 103 H - Original Hole - rev0	1,107.26	1,108.12	19.78	12.02	2.548	CC, ES, SF
Betonnie Tsosie Wash Unit 105 H - Original Hole - rev0	1,000.00	1,000.00	40.02	33.02	5.716	CC
Betonnie Tsosie Wash Unit 105 H - Original Hole - rev0	1,100.00	1,101.09	40.31	32.60	5.226	ES
Betonnie Tsosie Wash Unit 105 H - Original Hole - rev0	1,200.00	1,201.14	43.63	35.20	5.178	SF
Betonnie Tsosie Wash Unit 107 H - Original Hole - rev0	1,000.00	1,000.00	60.24	53.23	8.604	CC
Betonnie Tsosie Wash Unit 107 H - Original Hole - rev0	1,100.00	1,101.53	60.62	52.91	7.858	ES
Betonnie Tsosie Wash Unit 107 H - Original Hole - rev0	1,200.00	1,201.94	63.53	55.11	7.540	SF
North Alamito Unit (05 & 06)						
North Alamito Unit 006 H - Original Hole - MWD surveys	5,035.83	5,599.88	84.98	43.14	2.031	CC, ES, SF
North Alamito Unit (102 & 106)						
North Alamito Unit 102 H - Original Hole - MWD surveys	898.29	898.33	19.12	13.67	3.512	CC
North Alamito Unit 102 H - Original Hole - MWD surveys	1,100.00	1,099.09	20.32	13.47	2.964	ES, SF
North Alamito Unit 106 H - Original Hole - MWD surveys	0.00	0.00	39.80			
North Alamito Unit 106 H - Original Hole - MWD surveys	500.00	499.89	40.21	37.54	15.063	ES
North Alamito Unit 106 H - Original Hole - MWD surveys	700.00	697.04	46.22	42.12	11.262	SF

Offset Design:	Betonnie Tsosie Wash (101,103,105 & 107) - Betonnie Tsosie Wash Unit 103 H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program:	0-MWD												Offset Well Error:	0.00 ft
Reference	Offset				Semi Major Axis		Offset Wellbore Centre			Rule Assigned:				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	168.119	-19.72	4.15	20.15					
100.00	100.00	100.00	100.00	0.27	0.27	168.119	-19.72	4.15	20.15	19.60	0.55	36.743		
200.00	200.00	200.00	200.00	0.63	0.63	168.119	-19.72	4.15	20.15	18.89	1.27	15.926		
300.00	300.00	300.00	300.00	0.99	0.99	168.119	-19.72	4.15	20.15	18.17	1.98	10.166		
400.00	400.00	400.00	400.00	1.35	1.35	168.119	-19.72	4.15	20.15	17.45	2.70	7.466		
500.00	500.00	500.00	500.00	1.71	1.71	168.119	-19.72	4.15	20.15	16.74	3.42	5.899		
600.00	600.00	600.00	600.00	2.07	2.07	168.119	-19.72	4.15	20.15	16.02	4.13	4.876		
700.00	700.00	700.00	700.00	2.43	2.43	168.119	-19.72	4.15	20.15	15.30	4.85	4.155		
800.00	800.00	800.00	800.00	2.78	2.78	168.119	-19.72	4.15	20.15	14.59	5.57	3.620		
900.00	900.00	900.00	900.00	3.14	3.14	168.119	-19.72	4.15	20.15	13.87	6.28	3.207		
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.50	168.119	-19.72	4.15	20.15	13.15	7.00	2.879		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Bettonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Bettonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design:		Bettonnie Tsosie Wash (101,103,105 & 107) - Bettonnie Tsosie Wash Unit 103 H - Original Hole - rev0											Offset Site Error:		0.00 ft	
Survey Program:		0-MWD								Rule Assigned:				Offset Well Error:		0.00 ft
Measured Depth (ft)	Vertical Reference Depth (ft)	Measured Depth (ft)	Vertical Offset Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning			
1,100.00	1,099.95	1,100.82	1,100.77	3.86	3.86	139.394	-17.70	2.42	19.79	12.07	7.71	2.566	2.548 CC, ES, SF			
1,107.26	1,107.20	1,108.12	1,108.06	3.88	3.89	140.857	-17.40	2.16	19.78	12.02	7.76					
1,200.00	1,199.63	1,200.97	1,200.60	4.22	4.22	166.487	-11.70	-2.72	21.95	13.53	8.42	2.606				
1,300.00	1,298.77	1,299.79	1,298.56	4.58	4.58	-166.501	-1.89	-11.13	32.78	23.63	9.15	3.582				
1,400.00	1,397.08	1,396.69	1,393.84	4.96	4.95	-151.171	11.45	-22.56	53.02	43.15	9.87	5.374				
1,500.00	1,494.31	1,491.12	1,485.73	5.36	5.33	-143.096	27.97	-36.71	80.92	70.34	10.58	7.650				
1,600.00	1,590.19	1,582.63	1,573.63	5.80	5.74	-138.445	47.25	-53.22	115.40	104.09	11.30	10.208				
1,700.00	1,685.46	1,671.55	1,657.80	6.27	6.17	-135.369	69.02	-71.88	153.83	141.80	12.03	12.787				
1,800.00	1,780.74	1,759.96	1,740.18	6.77	6.64	-132.479	93.37	-92.74	194.68	181.89	12.79	15.218				
1,900.00	1,876.01	1,850.61	1,824.38	7.28	7.15	-130.361	118.89	-114.59	236.27	222.64	13.64	17.327				
2,000.00	1,971.29	1,941.26	1,908.58	7.81	7.69	-128.876	144.40	-136.45	278.05	263.54	14.51	19.162				
2,100.00	2,066.56	2,031.92	1,992.77	8.34	8.24	-127.778	169.91	-158.31	319.95	304.54	15.41	20.763				
2,200.00	2,161.84	2,122.57	2,076.97	8.89	8.81	-126.934	195.42	-180.16	361.92	345.59	16.33	22.164				
2,300.00	2,257.11	2,213.22	2,161.17	9.44	9.39	-126.265	220.94	-202.02	403.94	386.67	17.26	23.397				
2,400.00	2,352.39	2,303.87	2,245.37	10.01	9.98	-125.722	246.45	-223.88	446.00	427.78	18.21	24.486				
2,500.00	2,447.66	2,394.52	2,329.56	10.57	10.58	-125.272	271.96	-245.73	488.08	468.90	19.18	25.452				
2,600.00	2,542.94	2,485.18	2,413.76	11.14	11.19	-124.894	297.47	-267.59	530.19	510.04	20.15	26.315				
2,700.00	2,638.21	2,575.83	2,497.96	11.72	11.80	-124.571	322.99	-289.45	572.31	551.18	21.13	27.088				
2,800.00	2,733.49	2,666.48	2,582.16	12.29	12.42	-124.293	348.50	-311.30	614.44	592.33	22.11	27.784				
2,900.00	2,828.76	2,757.13	2,666.35	12.87	13.04	-124.050	374.01	-333.16	656.59	633.48	23.11	28.413				
3,000.00	2,924.04	2,847.78	2,750.55	13.46	13.66	-123.836	399.53	-355.02	698.74	674.64	24.11	28.984				
3,100.00	3,019.31	2,938.44	2,834.75	14.04	14.29	-123.647	425.04	-376.87	740.91	715.79	25.11	29.504				
3,200.00	3,114.58	3,029.09	2,918.94	14.63	14.92	-123.478	450.55	-398.73	783.07	756.95	26.12	29.980				
3,300.00	3,209.86	3,119.74	3,003.14	15.22	15.55	-123.327	476.06	-420.59	825.24	798.11	27.13	30.416				
3,400.00	3,305.13	3,210.39	3,087.34	15.81	16.19	-123.190	501.58	-442.44	867.42	839.27	28.15	30.817				
3,500.00	3,400.41	3,301.04	3,171.54	16.40	16.82	-123.066	527.09	-464.30	909.60	880.43	29.17	31.187				
3,600.00	3,495.68	3,391.70	3,255.73	16.99	17.46	-122.953	552.60	-486.16	951.78	921.60	30.19	31.529				
3,700.00	3,590.96	3,482.35	3,339.93	17.59	18.10	-122.849	578.11	-508.01	993.97	962.76	31.21	31.846				
3,800.00	3,686.23	3,573.00	3,424.13	18.18	18.75	-122.754	603.63	-529.87	1,036.16	1,003.92	32.24	32.141				
3,900.00	3,781.51	3,663.65	3,508.32	18.78	19.39	-122.666	629.14	-551.73	1,078.35	1,045.08	33.27	32.416				
4,000.00	3,876.78	3,754.30	3,592.52	19.38	20.03	-122.585	654.65	-573.58	1,120.54	1,086.25	34.30	32.672				
4,100.00	3,972.06	3,844.96	3,676.72	19.97	20.68	-122.510	680.17	-595.44	1,162.74	1,127.41	35.33	32.912				
4,200.00	4,067.33	3,935.61	3,760.92	20.57	21.32	-122.440	705.68	-617.30	1,204.93	1,168.57	36.36	33.137				
4,300.00	4,162.61	4,026.26	3,845.11	21.17	21.97	-122.375	731.19	-639.15	1,247.13	1,209.73	37.40	33.348				
4,400.00	4,257.88	4,116.91	3,929.31	21.77	22.62	-122.314	756.70	-661.01	1,289.33	1,250.90	38.43	33.547				
4,500.00	4,353.16	4,207.56	4,013.51	22.37	23.27	-122.257	782.22	-682.87	1,331.53	1,292.06	39.47	33.734				
4,600.00	4,448.43	4,298.22	4,097.71	22.97	23.91	-122.203	807.73	-704.72	1,373.73	1,333.22	40.51	33.911				
4,700.00	4,543.71	4,388.87	4,181.90	23.57	24.56	-122.153	833.24	-726.58	1,415.93	1,374.38	41.55	34.078				
4,800.00	4,638.98	4,479.52	4,266.10	24.17	25.21	-122.105	858.75	-748.44	1,458.13	1,415.54	42.59	34.236				
4,900.00	4,734.26	4,570.17	4,350.30	24.77	25.86	-122.061	884.27	-770.29	1,500.34	1,456.70	43.63	34.385				
5,000.00	4,829.53	4,660.82	4,434.49	25.38	26.52	-121.515	909.78	-792.15	1,542.54	1,497.86	44.68	34.527				
5,100.00	4,923.76	4,753.81	4,520.86	25.98	27.18	-93.681	935.95	-814.57	1,578.64	1,532.85	45.79	34.474				
5,200.00	5,014.02	4,849.38	4,609.62	26.59	27.87	-77.807	962.85	-837.61	1,602.32	1,555.29	47.03	34.067				
5,300.00	5,097.58	4,944.64	4,698.10	27.18	28.56	-69.637	989.66	-860.58	1,613.22	1,564.85	48.37	33.352				
5,400.00	5,171.89	5,036.69	4,783.60	27.76	29.22	-65.993	1,015.56	-882.77	1,611.58	1,561.80	49.77	32.379				
5,500.00	5,234.70	5,122.74	4,863.52	28.33	29.84	-65.322	1,039.78	-903.52	1,598.19	1,546.95	51.23	31.194				
5,600.00	5,284.09	5,200.17	4,935.44	28.90	30.40	-66.856	1,061.57	-922.19	1,574.36	1,521.61	52.75	29.847				
5,700.00	5,318.81	5,250.00	4,981.66	29.49	30.76	-68.917	1,075.70	-934.32	1,541.65	1,487.57	54.08	28.505				
5,800.00	5,339.29	5,268.93	4,998.94	30.09	30.91	-71.103	1,081.49	-939.40	1,500.54	1,445.40	55.15	27.210				
5,900.00	5,345.31	5,300.00	5,026.74	30.71	31.17	-75.086	1,091.83	-948.67	1,452.09	1,395.55	56.54	25.683				
6,000.00	5,345.69	5,300.00	5,026.74	31.42	31.17	-75.086	1,091.83	-948.67	1,403.68	1,346.14	57.54	24.395				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Betonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Betonnie Tsosie Wash (101,103,105 & 107) - Betonnie Tsosie Wash Unit 103 H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,100.00	5,346.06	5,329.97	5,052.80	32.28	31.45	-76.235	1,102.74	-958.66	1,360.18	1,301.01	59.18	22.985	
6,200.00	5,346.44	5,350.00	5,069.77	33.30	31.64	-76.991	1,110.53	-965.90	1,321.97	1,261.25	60.71	21.774	
6,300.00	5,346.81	5,385.08	5,098.57	34.47	32.01	-78.285	1,125.10	-979.65	1,289.15	1,226.50	62.65	20.576	
6,400.00	5,347.18	5,419.33	5,125.45	35.78	32.40	-79.506	1,140.42	-994.31	1,261.93	1,197.29	64.64	19.523	
6,500.00	5,347.56	5,450.00	5,148.42	37.21	32.76	-80.557	1,155.01	-1,008.46	1,240.31	1,173.75	66.56	18.635	
6,600.00	5,347.93	5,500.00	5,183.43	38.75	33.40	-82.175	1,180.46	-1,033.46	1,223.94	1,154.97	68.97	17.746	
6,700.00	5,348.30	5,560.03	5,221.17	40.38	34.26	-83.936	1,213.49	-1,066.40	1,212.49	1,140.83	71.67	16.918	
6,800.00	5,348.68	5,622.82	5,255.20	42.09	35.22	-85.534	1,250.54	-1,103.91	1,205.32	1,130.87	74.45	16.190	
6,900.00	5,349.05	5,694.44	5,286.72	43.87	36.40	-87.021	1,295.39	-1,149.93	1,201.56	1,124.06	77.50	15.505	
7,000.00	5,349.43	5,779.23	5,313.35	45.71	37.90	-88.276	1,351.21	-1,207.82	1,200.14	1,119.17	80.97	14.822	
7,100.00	5,349.80	5,873.27	5,328.65	47.60	39.63	-88.990	1,415.52	-1,274.56	1,199.75	1,115.01	84.74	14.158	
7,165.41	5,350.04	5,937.06	5,330.61	48.86	40.82	-89.072	1,459.74	-1,320.46	1,199.71	1,112.44	87.27	13.747	
7,200.00	5,350.17	5,971.65	5,330.71	49.53	41.47	-89.070	1,483.75	-1,345.36	1,199.71	1,111.08	88.64	13.535	
7,300.00	5,350.55	6,071.65	5,331.01	51.49	43.38	-89.067	1,553.13	-1,417.37	1,199.71	1,107.08	92.63	12.951	
7,400.00	5,350.92	6,171.65	5,331.31	53.49	45.33	-89.063	1,622.52	-1,489.38	1,199.70	1,103.02	96.68	12.409	
7,500.00	5,351.29	6,271.65	5,331.60	55.52	47.31	-89.059	1,691.91	-1,561.39	1,199.70	1,098.91	100.79	11.903	
7,600.00	5,351.67	6,371.65	5,331.90	57.57	49.32	-89.056	1,761.29	-1,633.40	1,199.70	1,094.76	104.94	11.433	
7,700.00	5,352.04	6,471.65	5,332.20	59.64	51.36	-89.052	1,830.68	-1,705.41	1,199.69	1,090.57	109.13	10.994	
7,800.00	5,352.42	6,571.65	5,332.50	61.74	53.42	-89.049	1,900.07	-1,777.42	1,199.69	1,086.34	113.35	10.584	
7,900.00	5,352.79	6,671.65	5,332.79	63.85	55.50	-89.045	1,969.45	-1,849.43	1,199.68	1,082.08	117.61	10.201	
8,000.00	5,353.16	6,771.65	5,333.09	65.97	57.60	-89.041	2,038.84	-1,921.44	1,199.68	1,077.79	121.89	9.842	
8,100.00	5,353.54	6,871.65	5,333.39	68.11	59.71	-89.038	2,108.23	-1,993.45	1,199.68	1,073.48	126.20	9.506	
8,200.00	5,353.91	6,971.65	5,333.69	70.26	61.84	-89.034	2,177.61	-2,065.46	1,199.67	1,069.14	130.53	9.191	
8,300.00	5,354.28	7,071.65	5,333.98	72.42	63.98	-89.030	2,247.00	-2,137.47	1,199.67	1,064.79	134.88	8.894	
8,400.00	5,354.66	7,171.65	5,334.28	74.59	66.14	-89.027	2,316.39	-2,209.48	1,199.66	1,060.41	139.25	8.615	
8,500.00	5,355.03	7,271.65	5,334.58	76.78	68.30	-89.023	2,385.77	-2,281.49	1,199.66	1,056.02	143.64	8.352	
8,600.00	5,355.41	7,371.65	5,334.88	78.97	70.48	-89.019	2,455.16	-2,353.50	1,199.66	1,051.61	148.04	8.103	
8,700.00	5,355.78	7,471.65	5,335.17	81.16	72.66	-89.016	2,524.55	-2,425.51	1,199.65	1,047.19	152.46	7.869	
8,800.00	5,356.15	7,571.65	5,335.47	83.37	74.86	-89.012	2,593.93	-2,497.52	1,199.65	1,042.76	156.89	7.646	
8,900.00	5,356.53	7,671.65	5,335.77	85.58	77.06	-89.009	2,663.32	-2,569.53	1,199.64	1,038.31	161.33	7.436	
9,000.00	5,356.90	7,771.65	5,336.07	87.79	79.26	-89.005	2,732.71	-2,641.54	1,199.64	1,033.86	165.78	7.236	
9,100.00	5,357.27	7,871.65	5,336.37	90.02	81.48	-89.001	2,802.09	-2,713.55	1,199.64	1,029.39	170.24	7.047	
9,200.00	5,357.65	7,971.65	5,336.66	92.24	83.69	-88.998	2,871.48	-2,785.56	1,199.63	1,024.92	174.71	6.866	
9,300.00	5,358.02	8,071.65	5,336.96	94.47	85.92	-88.994	2,940.87	-2,857.57	1,199.63	1,020.43	179.19	6.695	
9,400.00	5,358.40	8,171.65	5,337.26	96.71	88.15	-88.990	3,010.25	-2,929.58	1,199.62	1,015.94	183.68	6.531	
9,500.00	5,358.77	8,271.65	5,337.56	98.95	90.38	-88.987	3,079.64	-3,001.59	1,199.62	1,011.44	188.18	6.375	
9,600.00	5,359.14	8,371.65	5,337.85	101.19	92.62	-88.983	3,149.03	-3,073.60	1,199.62	1,006.94	192.68	6.226	
9,700.00	5,359.52	8,471.65	5,338.15	103.44	94.86	-88.979	3,218.41	-3,145.61	1,199.61	1,002.43	197.18	6.084	
9,800.00	5,359.89	8,571.65	5,338.45	105.69	97.10	-88.976	3,287.80	-3,217.62	1,199.61	997.91	201.70	5.948	
9,900.00	5,360.26	8,671.65	5,338.75	107.94	99.35	-88.972	3,357.19	-3,289.63	1,199.60	993.39	206.22	5.817	
10,000.00	5,360.64	8,771.65	5,339.04	110.20	101.60	-88.969	3,426.57	-3,361.64	1,199.60	988.86	210.74	5.692	
10,100.00	5,361.01	8,871.65	5,339.34	112.46	103.86	-88.965	3,495.96	-3,433.65	1,199.60	984.33	215.27	5.573	
10,200.00	5,361.39	8,971.65	5,339.64	114.72	106.12	-88.961	3,565.35	-3,505.65	1,199.59	979.79	219.80	5.458	
10,300.00	5,361.76	9,071.65	5,339.94	116.98	108.38	-88.958	3,634.73	-3,577.66	1,199.59	975.25	224.34	5.347	
10,300.10	5,361.76	9,071.75	5,339.94	116.98	108.38	-88.958	3,634.80	-3,577.74	1,199.59	975.24	224.34	5.347	
10,400.00	5,362.15	9,171.64	5,340.23	119.24	110.64	-88.964	3,704.11	-3,649.67	1,200.25	971.38	228.87	5.244	
10,500.00	5,362.74	9,271.07	5,340.53	121.45	112.89	-89.002	3,773.10	-3,721.26	1,210.36	977.05	233.31	5.188	
10,600.00	5,363.59	9,368.52	5,340.82	123.53	115.10	-89.061	3,840.72	-3,791.44	1,232.51	994.96	237.56	5.188	
10,700.00	5,364.69	9,462.54	5,341.10	125.45	117.23	-89.137	3,905.96	-3,859.14	1,266.38	1,024.84	241.54	5.243	
10,800.00	5,366.01	9,551.74	5,341.37	127.19	119.26	-89.232	3,967.85	-3,923.38	1,311.45	1,066.26	245.19	5.349	
10,900.00	5,367.55	9,634.78	5,341.61	128.70	121.14	-89.345	4,025.47	-3,983.17	1,367.06	1,118.59	248.47	5.502	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Betonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Betonnie Tsosie Wash (101,103,105 & 107) - Betonnie Tsosie Wash Unit 103 H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (ft)		Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,000.00	5,369.27	9,710.42	5,341.84	129.99	122.86	-89.475	4,077.96	-4,037.64	1,432.37	1,181.03	251.33	5.699		
11,100.00	5,371.15	9,777.54	5,342.04	131.05	124.39	-89.624	4,124.53	-4,085.98	1,506.41	1,252.64	253.77	5.936		
11,200.00	5,373.16	9,835.14	5,342.21	131.90	125.70	-89.793	4,164.49	-4,127.45	1,588.08	1,332.32	255.76	6.209		
11,300.00	5,375.27	9,882.35	5,342.35	132.54	126.78	-89.990	4,197.25	-4,161.45	1,676.16	1,418.84	257.32	6.514		
11,400.00	5,377.45	9,918.48	5,342.46	133.00	127.60	-90.238	4,222.32	-4,187.47	1,769.34	1,510.89	258.45	6.846		
11,500.00	5,379.68	9,942.98	5,342.53	133.30	128.16	-90.621	4,239.32	-4,205.11	1,866.23	1,607.04	259.19	7.200		



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Bettonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Bettonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Bettonnie Tsosie Wash (101,103,105 & 107) - Bettonnie Tsosie Wash Unit 105 H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Reference (ft)	Major Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	167.592	-39.08	8.60	40.02				
100.00	100.00	100.00	100.00	0.27	0.27	167.592	-39.08	8.60	40.02	39.47	0.55	72.960	
200.00	200.00	200.00	200.00	0.63	0.63	167.592	-39.08	8.60	40.02	38.75	1.27	31.623	
300.00	300.00	300.00	300.00	0.99	0.99	167.592	-39.08	8.60	40.02	38.03	1.98	20.186	
400.00	400.00	400.00	400.00	1.35	1.35	167.592	-39.08	8.60	40.02	37.32	2.70	14.825	
500.00	500.00	500.00	500.00	1.71	1.71	167.592	-39.08	8.60	40.02	36.60	3.42	11.713	
600.00	600.00	600.00	600.00	2.07	2.07	167.592	-39.08	8.60	40.02	35.88	4.13	9.682	
700.00	700.00	700.00	700.00	2.43	2.43	167.592	-39.08	8.60	40.02	35.17	4.85	8.251	
800.00	800.00	800.00	800.00	2.78	2.78	167.592	-39.08	8.60	40.02	34.45	5.57	7.188	
900.00	900.00	900.00	900.00	3.14	3.14	167.592	-39.08	8.60	40.02	33.73	6.28	6.368	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.50	167.592	-39.08	8.60	40.02	33.02	7.00	5.716 CC	
1,004.45	1,004.45	1,004.51	1,004.51	3.52	3.52	129.259	-39.08	8.59	40.02	32.98	7.03	5.690	
1,100.00	1,099.95	1,101.09	1,101.04	3.86	3.86	135.212	-37.99	6.16	40.31	32.60	7.71	5.226 ES	
1,200.00	1,199.63	1,201.14	1,200.77	4.22	4.21	151.562	-34.75	-1.06	43.63	35.20	8.43	5.178 SF	
1,300.00	1,298.77	1,299.15	1,297.93	4.58	4.57	171.201	-29.51	-12.73	55.20	46.05	9.15	6.035	
1,400.00	1,397.08	1,394.24	1,391.44	4.96	4.93	-173.596	-22.48	-28.39	77.64	67.80	9.84	7.888	
1,500.00	1,494.31	1,485.62	1,480.40	5.36	5.31	-163.799	-13.95	-47.43	110.12	99.60	10.51	10.475	
1,600.00	1,590.19	1,572.68	1,564.13	5.80	5.70	-157.578	-4.20	-69.15	151.14	139.98	11.17	13.532	
1,700.00	1,685.46	1,656.06	1,643.23	6.27	6.10	-153.573	6.59	-93.20	197.19	185.40	11.79	16.720	
1,800.00	1,780.74	1,736.30	1,718.19	6.77	6.54	-150.409	18.30	-119.30	246.29	233.88	12.41	19.846	
1,900.00	1,876.01	1,813.30	1,788.94	7.28	6.99	-147.794	30.74	-147.03	298.30	285.29	13.01	22.920	
2,000.00	1,971.29	1,887.03	1,855.49	7.81	7.47	-145.573	43.73	-175.99	353.12	339.51	13.61	25.947	
2,100.00	2,066.56	1,957.49	1,917.88	8.34	7.98	-143.653	57.12	-205.84	410.61	396.42	14.19	28.930	
2,200.00	2,161.84	2,024.70	1,976.24	8.89	8.51	-141.973	70.77	-236.25	470.63	455.88	14.76	31.889	
2,300.00	2,257.11	2,088.73	2,030.72	9.44	9.05	-140.488	84.54	-266.95	533.05	517.75	15.31	34.827	
2,400.00	2,352.39	2,149.68	2,081.49	10.01	9.61	-139.166	98.34	-297.70	597.72	581.88	15.84	37.734	
2,500.00	2,447.66	2,200.00	2,122.59	10.57	10.09	-138.134	110.22	-324.20	664.55	648.34	16.22	40.980	
2,600.00	2,542.94	2,262.70	2,172.70	11.14	10.76	-136.916	125.65	-358.58	733.25	716.40	16.85	43.522	
2,700.00	2,638.21	2,315.03	2,213.56	11.72	11.33	-135.952	139.03	-388.40	803.84	786.52	17.32	46.411	
2,800.00	2,733.49	2,364.74	2,251.52	12.29	11.91	-135.076	152.16	-417.67	876.16	858.38	17.78	49.286	
2,900.00	2,828.76	2,426.13	2,297.64	12.87	12.65	-134.073	168.75	-454.64	949.71	931.25	18.46	51.448	
3,000.00	2,924.04	2,492.74	2,347.65	13.46	13.48	-133.128	186.76	-494.79	1,023.47	1,004.22	19.25	53.175	
3,100.00	3,019.31	2,559.34	2,397.65	14.04	14.32	-132.308	204.77	-534.94	1,097.34	1,077.29	20.05	54.732	
3,200.00	3,114.58	2,625.95	2,447.65	14.63	15.18	-131.589	222.78	-575.09	1,171.29	1,150.44	20.86	56.151	
3,300.00	3,209.86	2,692.56	2,497.65	15.22	16.04	-130.953	240.79	-615.23	1,245.33	1,223.65	21.68	57.444	
3,400.00	3,305.13	2,759.16	2,547.65	15.81	16.92	-130.388	258.81	-655.38	1,319.43	1,296.92	22.51	58.621	
3,500.00	3,400.41	2,825.77	2,597.66	16.40	17.80	-129.883	276.82	-695.53	1,393.57	1,370.23	23.34	59.701	
3,600.00	3,495.68	2,892.38	2,647.66	16.99	18.69	-129.427	294.83	-735.68	1,467.77	1,443.58	24.18	60.693	
3,700.00	3,590.96	2,958.98	2,697.66	17.59	19.58	-129.015	312.84	-775.82	1,542.00	1,516.97	25.03	61.607	
3,800.00	3,686.23	3,025.59	2,747.66	18.18	20.48	-128.641	330.85	-815.97	1,616.26	1,590.38	25.88	62.453	
3,900.00	3,781.51	3,092.20	2,797.66	18.78	21.39	-128.299	348.86	-856.12	1,690.56	1,663.82	26.73	63.236	
4,000.00	3,876.78	3,158.80	2,847.67	19.38	22.29	-127.985	366.88	-896.27	1,764.88	1,737.28	27.59	63.960	
4,100.00	3,972.06	3,225.41	2,897.67	19.97	23.20	-127.697	384.89	-936.41	1,839.22	1,810.76	28.46	64.635	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Betonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Betonnie Tsosie Wash (101,103,105 & 107) - Betonnie Tsosie Wash Unit 107 H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	0.00	167.495	-58.81	13.04	60.24				
100.00	100.00	100.00	100.00	0.27	0.27	0.27	167.495	-58.81	13.04	60.24	59.69	0.55	109.825	
200.00	200.00	200.00	200.00	0.63	0.63	0.63	167.495	-58.81	13.04	60.24	58.97	1.27	47.601	
300.00	300.00	300.00	300.00	0.99	0.99	0.99	167.495	-58.81	13.04	60.24	58.25	1.98	30.386	
400.00	400.00	400.00	400.00	1.35	1.35	1.35	167.495	-58.81	13.04	60.24	57.54	2.70	22.315	
500.00	500.00	500.00	500.00	1.71	1.71	1.71	167.495	-58.81	13.04	60.24	56.82	3.42	17.632	
600.00	600.00	600.00	600.00	2.07	2.07	2.07	167.495	-58.81	13.04	60.24	56.10	4.13	14.574	
700.00	700.00	700.00	700.00	2.43	2.43	2.43	167.495	-58.81	13.04	60.24	55.38	4.85	12.419	
800.00	800.00	800.00	800.00	2.78	2.78	2.78	167.495	-58.81	13.04	60.24	54.67	5.57	10.820	
900.00	900.00	900.00	900.00	3.14	3.14	3.14	167.495	-58.81	13.04	60.24	53.95	6.28	9.585	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.50	3.50	167.495	-58.81	13.04	60.24	53.23	7.00	8.604 CC	
1,100.00	1,099.95	1,101.53	1,101.48	3.86	3.86	3.86	133.245	-57.89	10.50	60.62	52.91	7.71	7.858 ES	
1,200.00	1,199.63	1,201.94	1,201.56	4.22	4.21	4.21	144.759	-55.20	3.00	63.53	55.11	8.43	7.540 SF	
1,300.00	1,298.77	1,300.18	1,298.94	4.58	4.57	4.57	160.322	-50.85	-9.11	73.23	64.08	9.15	8.005	
1,400.00	1,397.08	1,395.30	1,392.48	4.96	4.93	4.93	174.860	-45.03	-25.32	93.22	83.36	9.86	9.454	
1,500.00	1,494.31	1,486.48	1,481.23	5.36	5.31	5.31	-174.202	-37.98	-44.95	124.00	113.46	10.54	11.764	
1,600.00	1,590.19	1,573.08	1,564.52	5.80	5.70	5.70	-166.595	-29.96	-67.27	164.33	153.14	11.20	14.677	
1,700.00	1,685.46	1,655.80	1,642.99	6.27	6.10	6.10	-161.396	-21.12	-91.88	210.34	198.53	11.81	17.810	
1,800.00	1,780.74	1,735.24	1,717.21	6.77	6.53	6.53	-157.423	-11.55	-118.51	259.73	247.32	12.41	20.927	
1,900.00	1,876.01	1,811.34	1,787.15	7.28	6.98	6.98	-154.241	-1.42	-146.72	312.26	299.26	13.00	24.023	
2,000.00	1,971.29	1,884.07	1,852.83	7.81	7.45	7.45	-151.613	9.14	-176.11	367.73	354.16	13.57	27.091	
2,100.00	2,066.56	1,953.46	1,914.34	8.34	7.96	7.96	-149.393	19.99	-206.33	425.96	411.83	14.14	30.131	
2,200.00	2,161.84	2,019.56	1,971.82	8.89	8.47	8.47	-147.488	31.02	-237.05	486.78	472.10	14.68	33.161	
2,300.00	2,257.11	2,082.46	2,025.43	9.44	9.00	9.00	-145.831	42.14	-268.01	550.02	534.81	15.21	36.172	
2,400.00	2,352.39	2,142.24	2,075.36	10.01	9.56	9.56	-144.376	53.26	-298.96	615.52	599.80	15.72	39.164	
2,500.00	2,447.66	2,200.00	2,122.59	10.57	10.11	10.11	-143.066	64.49	-330.24	683.12	666.91	16.22	42.124	
2,600.00	2,542.94	2,252.98	2,165.01	11.14	10.67	10.67	-141.939	75.22	-360.10	752.69	736.01	16.68	45.129	
2,700.00	2,638.21	2,300.00	2,201.91	11.72	11.18	11.18	-140.990	85.07	-387.52	824.10	807.04	17.06	48.316	
2,800.00	2,733.49	2,352.78	2,242.47	12.29	11.80	11.80	-139.979	96.49	-419.31	897.17	879.60	17.57	51.068	
2,900.00	2,828.76	2,400.00	2,277.95	12.87	12.36	12.36	-139.118	107.02	-448.64	971.83	953.84	18.00	53.993	
3,000.00	2,924.04	2,442.72	2,309.37	13.46	12.92	12.92	-138.372	116.80	-475.87	1,047.96	1,029.57	18.39	56.991	
3,100.00	3,019.31	2,500.00	2,350.47	14.04	13.66	13.66	-137.416	130.29	-513.41	1,125.60	1,106.57	19.03	59.135	
3,200.00	3,114.58	2,523.85	2,367.24	14.63	14.00	14.00	-137.032	136.02	-529.39	1,204.18	1,185.04	19.14	62.906	
3,300.00	3,209.86	2,561.42	2,393.20	15.22	14.53	14.53	-136.443	145.20	-554.94	1,284.09	1,264.59	19.50	65.852	
3,400.00	3,305.13	2,600.00	2,419.30	15.81	15.08	15.08	-135.858	154.81	-581.67	1,365.10	1,345.21	19.88	68.650	
3,500.00	3,400.41	2,631.15	2,439.96	16.40	15.56	15.56	-135.398	162.69	-603.62	1,447.11	1,426.93	20.17	71.744	
3,600.00	3,495.68	2,663.52	2,461.01	16.99	16.06	16.06	-134.933	171.00	-626.76	1,530.06	1,509.57	20.49	74.681	
3,700.00	3,590.96	2,700.00	2,484.24	17.59	16.62	16.62	-134.422	180.51	-653.23	1,613.90	1,593.02	20.88	77.276	
3,800.00	3,686.23	2,723.75	2,499.07	18.18	17.01	17.01	-134.098	186.78	-670.69	1,698.53	1,677.44	21.09	80.544	
3,900.00	3,781.51	2,751.79	2,516.28	18.78	17.47	17.47	-133.722	194.26	-691.52	1,783.94	1,762.56	21.38	83.456	
4,000.00	3,876.78	2,800.00	2,545.11	19.38	18.26	18.26	-133.093	207.32	-727.88	1,870.29	1,848.28	22.01	84.971	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Betonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: North Alamito Unit (05 & 06) - North Alamito Unit 006 H - Original Hole - MWD surveys												Offset Site Error:	0.00 ft
Survey Program: 396-MWD, 6327-MWD, 14030-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,400.00	2,352.39	3,815.75	3,387.06	10.01	32.43	32.373	966.93	1,630.00	1,859.68	1,833.20	26.48	70.219	
2,500.00	2,447.66	3,869.30	3,431.31	10.57	33.05	32.210	967.22	1,599.84	1,786.74	1,759.52	27.22	65.647	
2,600.00	2,542.94	3,924.00	3,476.88	11.14	33.68	32.054	967.30	1,569.60	1,714.46	1,686.50	27.96	61.320	
2,700.00	2,638.21	4,034.79	3,568.86	11.72	34.96	31.772	965.80	1,507.86	1,641.44	1,612.61	28.83	56.928	
2,800.00	2,733.49	4,107.66	3,628.84	12.29	35.82	31.563	964.43	1,466.50	1,567.54	1,537.92	29.61	52.934	
2,900.00	2,828.76	4,170.31	3,680.27	12.87	36.56	31.331	963.79	1,430.74	1,493.64	1,463.24	30.39	49.144	
3,000.00	2,924.04	4,224.35	3,724.71	13.46	37.19	31.093	963.66	1,399.97	1,420.09	1,388.92	31.18	45.549	
3,100.00	3,019.31	4,282.00	3,772.68	14.04	37.86	30.867	963.09	1,368.02	1,347.44	1,315.46	31.97	42.142	
3,200.00	3,114.58	4,347.24	3,827.08	14.63	38.61	30.566	962.85	1,332.01	1,275.18	1,242.39	32.79	38.887	
3,300.00	3,209.86	4,416.25	3,884.21	15.22	39.41	30.117	963.75	1,293.31	1,202.73	1,169.09	33.65	35.746	
3,400.00	3,305.13	4,478.14	3,935.54	15.81	40.12	29.678	964.46	1,258.75	1,130.49	1,095.97	34.52	32.748	
3,500.00	3,400.41	4,532.00	3,980.63	16.40	40.73	29.285	964.97	1,229.30	1,059.09	1,023.67	35.42	29.902	
3,600.00	3,495.68	4,614.49	4,049.94	16.99	41.67	28.617	965.70	1,184.56	988.11	951.82	36.29	27.229	
3,700.00	3,590.96	4,706.09	4,125.63	17.59	42.74	27.632	966.60	1,132.99	915.60	878.46	37.15	24.649	
3,800.00	3,686.23	4,782.47	4,187.90	18.18	43.66	26.596	967.08	1,088.77	841.89	803.83	38.07	22.117	
3,900.00	3,781.51	4,844.01	4,237.95	18.78	44.40	25.597	967.38	1,052.95	768.07	728.96	39.10	19.642	
4,000.00	3,876.78	4,897.01	4,281.64	19.38	45.02	24.652	967.57	1,022.96	695.51	655.25	40.26	17.274	
4,100.00	3,972.06	4,958.71	4,333.20	19.97	45.73	23.428	967.74	989.06	624.30	582.87	41.43	15.069	
4,200.00	4,067.33	5,023.98	4,388.08	20.57	46.46	21.885	967.93	953.74	553.93	511.27	42.66	12.984	
4,300.00	4,162.61	5,091.21	4,444.77	21.17	47.21	19.843	968.57	917.61	484.38	440.34	44.04	11.000	
4,400.00	4,257.88	5,167.35	4,509.35	21.77	48.03	17.103	967.69	877.28	415.03	369.68	45.35	9.152	
4,500.00	4,353.16	5,237.54	4,569.73	22.37	48.74	14.830	961.60	842.13	345.01	298.40	46.61	7.402	
4,600.00	4,448.43	5,288.11	4,615.31	22.97	49.15	13.964	954.40	821.52	278.86	230.39	48.46	5.754	
4,700.00	4,543.71	5,349.64	4,673.16	23.57	49.51	14.333	944.04	803.42	218.85	169.24	49.61	4.411	
4,800.00	4,638.98	5,421.66	4,742.23	24.17	49.78	17.904	928.93	789.86	164.07	114.72	49.35	3.325	
4,900.00	4,734.26	5,494.34	4,812.70	24.77	49.95	26.798	912.40	783.71	117.57	70.14	47.43	2.479	
5,000.00	4,829.53	5,572.18	4,888.43	25.38	50.01	45.461	894.76	786.10	88.23	45.16	43.07	2.049	
5,035.83	4,863.57	5,599.88	4,915.12	25.59	50.01	65.266	887.82	788.73	84.98	43.14	41.84	2.031 CC, ES, SF	
5,100.00	4,923.76	5,646.03	4,959.08	25.98	50.01	96.080	875.67	795.73	96.39	52.54	43.85	2.198	
5,200.00	5,014.02	5,707.95	5,016.72	26.59	49.98	126.073	858.70	810.52	150.82	97.44	53.38	2.825	
5,300.00	5,097.58	5,753.06	5,057.51	27.18	49.94	140.499	845.50	824.56	229.57	171.93	57.64	3.983	
5,400.00	5,171.89	5,782.18	5,083.19	27.76	49.92	147.033	836.26	834.69	320.93	261.74	59.19	5.422	
5,500.00	5,234.70	5,796.49	5,095.63	28.33	49.91	144.237	831.67	840.10	418.59	358.66	59.93	6.984	
5,600.00	5,284.09	5,804.00	5,102.10	28.90	49.90	2.651	829.26	843.04	518.46	457.55	60.90	8.513	
5,700.00	5,318.81	5,788.40	5,088.61	29.49	49.92	-17.474	834.27	837.01	617.19	556.16	61.02	10.114	
5,800.00	5,339.29	5,771.19	5,073.56	30.09	49.93	-22.265	839.76	830.74	712.55	651.07	61.49	11.589	
5,900.00	5,345.31	5,759.00	5,062.79	30.71	49.94	-24.129	843.63	826.54	802.72	740.37	62.35	12.875	
6,000.00	5,345.69	5,729.10	5,036.00	31.42	49.96	-22.580	852.72	816.87	891.22	828.75	62.47	14.266	
6,100.00	5,346.06	5,715.00	5,023.18	32.28	49.97	-21.906	856.73	812.58	981.22	918.18	63.04	15.565	
6,200.00	5,346.44	5,692.38	5,002.40	33.30	49.99	-20.861	863.01	806.23	1,072.26	1,009.02	63.24	16.956	
6,300.00	5,346.81	5,670.00	4,981.60	34.47	50.00	-19.846	869.17	800.73	1,164.27	1,100.88	63.39	18.367	
6,400.00	5,347.18	5,670.00	4,981.60	35.78	50.00	-19.846	869.17	800.73	1,257.06	1,193.06	64.00	19.643	
6,500.00	5,347.56	5,649.38	4,962.24	37.21	50.01	-18.926	874.77	796.37	1,350.45	1,286.38	64.07	21.078	
6,600.00	5,347.93	5,625.00	4,939.13	38.75	50.02	-17.856	881.28	792.12	1,444.68	1,380.62	64.06	22.551	
6,700.00	5,348.30	5,625.00	4,939.13	40.38	50.02	-17.856	881.28	792.12	1,539.12	1,474.66	64.46	23.877	
6,800.00	5,348.68	5,625.00	4,939.13	42.09	50.02	-17.856	881.28	792.12	1,634.22	1,569.43	64.79	25.222	
6,900.00	5,349.05	5,625.00	4,939.13	43.87	50.02	-17.856	881.28	792.12	1,729.87	1,664.80	65.07	26.584	
7,000.00	5,349.43	5,601.51	4,916.68	45.71	50.01	-16.850	887.40	788.92	1,825.48	1,760.48	65.00	28.084	
16,900.00	5,370.08	5,625.00	4,939.13	173.38	50.02	68.183	881.28	792.12	1,864.91	1,689.17	175.74	10.612	
16,911.76	5,370.00	5,632.97	4,946.71	173.55	50.01	68.500	879.17	793.40	1,856.50	1,680.16	176.34	10.528	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Betonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: North Alamito Unit (102 & 106) - North Alamito Unit 102 H - Original Hole - MWD surveys												Offset Site Error:	0.00 ft
Survey Program: 485-MWD, 5977-MWD, 15067-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-13.766	19.36	-4.74	19.94				
100.00	100.00	100.01	100.01	0.27	0.17	-13.484	19.37	-4.64	19.91	19.47	0.44	44.759	
200.00	200.00	200.02	200.02	0.63	0.34	-12.634	19.37	-4.34	19.85	18.87	0.97	20.375	
300.00	300.00	300.02	300.02	0.99	0.51	-11.206	19.37	-3.84	19.74	18.24	1.50	13.134	
400.00	400.00	400.03	400.02	1.35	0.68	-9.184	19.37	-3.13	19.62	17.59	2.03	9.654	
500.00	500.00	500.03	500.02	1.71	0.88	-6.547	19.37	-2.22	19.50	16.91	2.59	7.530	
542.68	542.68	542.69	542.68	1.86	1.04	-5.173	19.40	-1.76	19.48	16.59	2.90	6.728	
600.00	600.00	599.99	599.98	2.07	1.24	-3.080	19.49	-1.05	19.52	16.21	3.31	5.902	
700.00	700.00	700.00	699.97	2.43	1.60	0.586	19.69	0.20	19.69	15.66	4.02	4.892	
800.00	800.00	800.12	800.09	2.78	1.96	4.177	19.58	1.43	19.63	14.89	4.74	4.140	
898.29	898.29	898.33	898.29	3.14	2.31	8.114	18.93	2.70	19.12	13.67	5.44	3.512 CC	
900.00	900.00	900.04	900.00	3.14	2.32	8.167	18.93	2.72	19.12	13.66	5.46	3.504	
1,000.00	1,000.00	999.79	999.74	3.50	2.67	9.744	19.53	3.35	19.82	13.65	6.17	3.214	
1,100.00	1,099.95	1,099.09	1,098.99	3.86	3.01	-36.999	22.35	2.08	20.32	13.47	6.86	2.964 ES, SF	
1,200.00	1,199.63	1,197.49	1,196.98	4.22	3.34	-62.389	29.27	-3.12	23.31	15.80	7.51	3.104	
1,300.00	1,298.77	1,294.14	1,292.56	4.58	3.69	-87.637	40.23	-12.22	35.10	26.96	8.14	4.310	
1,400.00	1,397.08	1,389.44	1,385.92	4.96	4.05	-102.381	54.56	-24.81	56.32	47.49	8.83	6.377	
1,500.00	1,494.31	1,480.28	1,473.96	5.36	4.43	-110.343	70.85	-40.13	85.37	75.87	9.50	8.991	
1,600.00	1,590.19	1,567.88	1,557.70	5.80	4.84	-115.572	88.05	-59.19	122.47	112.28	10.19	12.019	
1,700.00	1,685.46	1,654.29	1,639.36	6.27	5.28	-119.269	106.15	-80.90	164.57	153.65	10.92	15.069	
1,800.00	1,780.74	1,733.88	1,713.50	6.77	5.73	-120.863	124.45	-103.30	210.04	198.49	11.56	18.175	
1,900.00	1,876.01	1,813.20	1,785.96	7.28	6.22	-121.678	143.66	-129.20	259.82	247.57	12.25	21.216	
2,000.00	1,971.29	1,901.52	1,866.23	7.81	6.81	-122.299	165.05	-159.21	310.88	297.75	13.13	23.676	
2,100.00	2,066.56	1,994.90	1,951.54	8.34	7.45	-122.562	188.76	-188.83	359.92	345.82	14.11	25.513	
2,200.00	2,161.84	2,081.64	2,031.40	8.89	8.04	-123.033	209.08	-215.92	408.42	393.43	14.99	27.244	
2,300.00	2,257.11	2,165.49	2,108.42	9.44	8.64	-123.379	228.79	-242.56	457.44	441.60	15.85	28.869	
2,400.00	2,352.39	2,250.44	2,185.93	10.01	9.26	-123.490	250.05	-270.06	507.10	490.36	16.73	30.306	
2,500.00	2,447.66	2,336.63	2,264.63	10.57	9.90	-123.608	271.41	-297.98	556.76	539.11	17.65	31.541	
2,600.00	2,542.94	2,422.19	2,342.54	11.14	10.55	-123.667	292.95	-326.04	606.81	588.24	18.57	32.676	
2,700.00	2,638.21	2,512.69	2,425.38	11.72	11.23	-123.838	314.60	-355.32	656.40	636.83	19.56	33.551	
2,800.00	2,733.49	2,596.11	2,501.57	12.29	11.87	-123.906	335.27	-382.28	706.01	685.54	20.47	34.496	
2,900.00	2,828.76	2,677.40	2,575.36	12.87	12.50	-123.880	356.30	-409.15	756.32	734.97	21.35	35.421	
3,000.00	2,924.04	2,769.62	2,659.25	13.46	13.23	-123.889	379.75	-439.41	806.41	784.02	22.39	36.009	
3,100.00	3,019.31	2,857.13	2,738.57	14.04	13.92	-123.802	403.20	-467.98	856.42	833.04	23.38	36.634	
3,200.00	3,114.58	2,964.35	2,836.54	14.63	14.76	-123.771	431.14	-501.38	904.97	880.35	24.62	36.760	
3,300.00	3,209.86	3,058.26	2,922.71	15.22	15.47	-123.749	455.62	-529.56	952.50	926.83	25.68	37.095	
3,400.00	3,305.13	3,145.31	3,002.91	15.81	16.13	-123.780	477.58	-555.33	999.62	972.96	26.65	37.503	
3,500.00	3,400.41	3,220.05	3,071.41	16.40	16.71	-123.761	497.09	-577.99	1,047.45	1,019.97	27.48	38.110	
3,600.00	3,495.68	3,289.00	3,133.79	16.99	17.26	-123.643	516.68	-599.86	1,096.70	1,068.45	28.25	38.820	
3,700.00	3,590.96	3,379.00	3,215.01	17.59	18.00	-123.487	542.48	-628.79	1,146.36	1,117.06	29.30	39.124	
3,800.00	3,686.23	3,454.90	3,283.48	18.18	18.63	-123.372	564.12	-653.37	1,196.26	1,166.10	30.17	39.652	
3,900.00	3,781.51	3,547.70	3,366.86	18.78	19.41	-123.212	591.13	-683.89	1,246.66	1,215.40	31.26	39.875	
4,000.00	3,876.78	3,634.51	3,445.22	19.38	20.13	-123.118	615.58	-712.11	1,296.65	1,264.37	32.28	40.171	
4,100.00	3,972.06	3,697.59	3,501.91	19.97	20.67	-123.035	633.69	-733.03	1,347.32	1,314.33	32.99	40.840	
4,200.00	4,067.33	3,795.63	3,589.07	20.57	21.51	-122.840	663.33	-766.73	1,399.28	1,365.11	34.17	40.950	
4,300.00	4,162.61	3,909.87	3,692.27	21.17	22.47	-122.737	695.73	-803.45	1,448.87	1,413.33	35.54	40.764	
4,400.00	4,257.88	4,042.94	3,811.17	21.77	23.86	-179.848	-5.57	-8.56	1,420.88	1,382.54	38.33	37.067	
4,500.00	4,353.16	4,141.41	3,911.18	22.37	24.84	-179.777	-4.61	-9.75	1,373.36	1,333.03	40.34	34.048	
4,600.00	4,448.43	4,239.83	4,011.19	22.97	25.83	-179.703	-3.61	-10.97	1,331.67	1,289.31	42.36	31.436	
4,700.00	4,543.71	4,338.21	4,111.21	23.57	26.81	-179.628	-2.59	-12.23	1,296.37	1,252.00	44.37	29.220	
4,800.00	4,638.98	4,436.54	4,211.22	24.17	27.80	-179.550	-1.53	-13.52	1,267.99	1,221.70	46.29	27.391	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Bettonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Bettonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: North Alamito Unit (102 & 106) - North Alamito Unit 102 H - Original Hole - MWD surveys													Offset Site Error: 0.00 ft	
Survey Program: Reference		485-MWD, 5977-MWD, 15067-MWD						Rule Assigned:					Offset Well Error: 0.00 ft	
Measured Depth (ft)	Vertical Depth (ft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning	
		Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.00	4,734.26	6,834.82	5,311.24	24.77	32.78	-179.470	-0.45	-14.86	1,247.00	1,198.92	48.08	25.935		
5,000.00	4,829.53	6,833.04	5,311.25	25.38	32.76	-178.944	0.68	-16.23	1,233.78	1,184.11	49.67	24.837		
5,081.11	4,906.18	6,823.23	5,311.34	25.87	32.67	-157.347	6.89	-23.83	1,230.07	1,179.36	50.71	24.257		
5,100.00	4,923.76	6,818.60	5,311.38	25.98	32.63	-153.200	9.82	-27.40	1,230.27	1,179.36	50.90	24.169		
5,200.00	5,014.02	6,779.20	5,311.76	26.59	32.26	-135.825	35.02	-57.70	1,237.54	1,185.94	51.60	23.981		
5,300.00	5,097.58	6,730.61	5,312.28	27.18	31.86	-123.729	66.41	-94.78	1,253.84	1,201.85	51.98	24.120		
5,400.00	5,171.89	6,671.84	5,312.99	27.76	31.40	-114.159	104.42	-139.60	1,276.94	1,224.86	52.08	24.519		
5,500.00	5,234.70	6,600.13	5,313.79	28.33	30.93	-106.017	150.82	-194.26	1,303.99	1,251.93	52.06	25.050		
5,600.00	5,284.09	6,520.39	5,314.54	28.90	30.51	-99.273	202.39	-255.09	1,332.14	1,280.07	52.08	25.579		
5,700.00	5,318.81	6,414.90	5,316.12	29.49	30.12	-93.609	270.87	-335.31	1,357.99	1,305.69	52.30	25.965		
5,800.00	5,339.29	6,315.48	5,317.89	30.09	29.95	-90.119	336.04	-410.37	1,375.75	1,322.83	52.92	25.998		
5,900.00	5,345.31	6,209.87	5,318.07	30.71	29.98	-88.881	405.35	-490.04	1,384.44	1,330.48	53.96	25.655		
6,000.00	5,345.69	6,083.76	5,318.38	31.42	30.26	-88.878	489.55	-583.93	1,387.99	1,332.40	55.59	24.969		
6,100.00	5,346.06	5,988.52	5,315.91	32.28	30.66	-88.764	553.72	-654.25	1,390.77	1,333.47	57.30	24.270		
6,200.00	5,346.44	5,899.65	5,308.41	33.30	30.78	-88.444	613.03	-719.98	1,394.26	1,335.47	58.79	23.716		
6,300.00	5,346.81	5,768.67	5,284.03	34.47	30.70	-87.429	699.60	-815.00	1,397.92	1,337.56	60.35	23.162		
6,400.00	5,347.18	5,681.43	5,254.75	35.78	30.59	-86.220	756.47	-874.22	1,400.14	1,338.53	61.61	22.727		
6,500.00	5,347.56	5,633.14	5,233.35	37.21	30.56	-85.341	786.18	-905.67	1,405.08	1,342.38	62.70	22.408		
6,600.00	5,347.93	5,589.19	5,210.21	38.75	30.56	-84.400	810.97	-933.61	1,414.56	1,350.85	63.71	22.202		
6,700.00	5,348.30	5,543.52	5,182.32	40.38	30.57	-83.274	834.61	-960.94	1,428.27	1,363.66	64.62	22.104		
6,800.00	5,348.68	5,492.01	5,146.60	42.09	30.60	-81.845	858.67	-989.16	1,446.42	1,381.03	65.39	22.121		
6,900.00	5,349.05	5,442.32	5,109.00	43.87	30.64	-80.351	880.10	-1,013.54	1,468.62	1,402.64	65.98	22.258		
7,000.00	5,349.43	5,407.13	5,080.70	45.71	30.67	-79.235	894.06	-1,029.09	1,495.44	1,429.05	66.39	22.525		
7,100.00	5,349.80	5,391.00	5,067.34	47.60	30.69	-78.711	900.10	-1,035.83	1,527.28	1,460.63	66.65	22.915		
7,200.00	5,350.17	5,346.00	5,028.97	49.53	30.73	-77.222	915.51	-1,053.56	1,563.97	1,497.21	66.76	23.428		
7,300.00	5,350.55	5,346.00	5,028.97	51.49	30.73	-77.222	915.51	-1,053.56	1,605.33	1,538.55	66.78	24.039		
7,400.00	5,350.92	5,316.83	5,003.32	53.49	30.76	-76.240	924.38	-1,064.25	1,651.11	1,584.44	66.67	24.765		
7,500.00	5,351.29	5,301.00	4,989.19	55.52	30.77	-75.703	928.86	-1,069.78	1,701.08	1,634.60	66.49	25.585		
7,600.00	5,351.67	5,283.33	4,973.21	57.57	30.79	-75.100	933.56	-1,075.71	1,754.92	1,688.69	66.23	26.497		
7,700.00	5,352.04	5,257.00	4,949.05	59.64	30.81	-74.197	939.94	-1,083.97	1,812.48	1,746.58	65.90	27.504		
7,800.00	5,352.42	5,257.00	4,949.05	61.74	30.81	-74.197	939.94	-1,083.97	1,873.09	1,807.51	65.58	28.564		



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Betonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Betonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: North Alamito Unit (102 & 106) - North Alamito Unit 106 H - Original Hole - MWD surveys													Offset Site Error:	0.00 ft	
Survey Program: Reference		440-MWD, 6091-MWD, 18454-MWD		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.00	0.00	0.00	0.00	0.00	0.00	-13.355	38.73	-9.19	39.80						
100.00	100.00	99.99	99.99	0.27	0.17	-13.389	38.74	-9.22	39.82	39.38	0.44	89.704			
200.00	200.00	199.97	199.97	0.63	0.34	-13.494	38.77	-9.30	39.87	38.90	0.97	41.019			
300.00	300.00	299.96	299.96	0.99	0.51	-13.666	38.83	-9.44	39.96	38.46	1.50	26.636			
400.00	400.00	399.94	399.94	1.35	0.68	-13.907	38.91	-9.63	40.08	38.05	2.03	19.761			
500.00	500.00	499.89	499.89	1.71	0.96	-14.214	38.98	-9.87	40.21	37.54	2.67	15.063 ES			
600.00	600.00	599.02	598.97	2.07	1.32	-18.133	39.26	-12.86	41.33	37.94	3.39	12.205			
700.00	700.00	697.04	696.60	2.43	1.69	-27.336	40.95	-21.17	46.22	42.12	4.10	11.262 SF			
800.00	800.00	794.03	792.63	2.78	2.06	-38.016	43.96	-34.37	56.28	51.47	4.82	11.684			
900.00	900.00	889.16	885.88	3.14	2.47	-47.667	47.97	-52.66	72.62	67.11	5.51	13.174			
1,000.00	1,000.00	982.18	975.88	3.50	2.92	-55.528	52.05	-75.81	95.07	88.89	6.18	15.392			
1,100.00	1,099.95	1,070.90	1,060.32	3.86	3.41	-99.983	56.00	-102.68	123.94	117.15	6.79	18.252			
1,200.00	1,199.63	1,153.94	1,137.64	4.22	3.94	-105.233	60.51	-132.60	161.02	153.67	7.35	21.911			
1,300.00	1,298.77	1,232.12	1,208.61	4.58	4.50	-109.573	64.56	-165.12	206.28	198.41	7.87	26.222			
1,400.00	1,397.08	1,308.46	1,276.57	4.96	5.11	-112.953	68.56	-199.66	258.23	249.80	8.44	30.610			
1,500.00	1,494.31	1,394.88	1,353.38	5.36	5.83	-116.244	72.60	-239.05	313.70	304.50	9.19	34.124			
1,600.00	1,590.19	1,468.68	1,419.08	5.80	6.47	-118.522	75.60	-272.52	372.17	362.32	9.84	37.814			
1,700.00	1,685.46	1,545.05	1,486.79	6.27	7.14	-121.929	78.60	-307.72	433.22	422.68	10.55	41.082			
1,800.00	1,780.74	1,625.63	1,558.39	6.77	7.85	-124.727	81.32	-344.58	494.79	483.48	11.31	43.732			
1,900.00	1,876.01	1,704.21	1,628.59	7.28	8.54	-126.969	83.16	-379.84	556.23	544.16	12.07	46.078			
2,000.00	1,971.29	1,764.00	1,681.86	7.81	9.07	-128.347	84.76	-406.96	618.66	606.03	12.63	48.996			
2,100.00	2,066.56	1,823.16	1,733.82	8.34	9.64	-129.474	86.48	-435.18	683.34	670.15	13.19	51.810			
2,200.00	2,161.84	1,882.36	1,784.68	8.89	10.22	-130.421	88.05	-465.42	750.85	737.09	13.76	54.567			
2,300.00	2,257.11	1,965.56	1,856.49	9.44	11.05	-131.675	88.94	-507.42	818.28	803.65	14.62	55.952			
2,400.00	2,352.39	2,043.32	1,923.94	10.01	11.81	-132.681	89.62	-546.11	885.28	869.85	15.42	57.394			
2,500.00	2,447.66	2,125.35	1,995.38	10.57	12.62	-133.589	90.40	-586.41	951.88	935.60	16.28	58.487			
2,600.00	2,542.94	2,209.19	2,068.74	11.14	13.43	-134.367	91.58	-627.00	1,017.89	1,000.75	17.15	59.363			
2,700.00	2,638.21	2,267.26	2,119.38	11.72	14.00	-134.778	93.28	-655.36	1,084.14	1,066.39	17.74	61.098			
2,800.00	2,733.49	2,326.34	2,170.23	12.29	14.60	-135.071	96.03	-685.33	1,151.66	1,133.31	18.36	62.740			
2,900.00	2,828.76	2,397.17	2,231.04	12.87	15.33	-135.414	98.82	-721.52	1,219.67	1,200.56	19.11	63.820			
3,000.00	2,924.04	2,500.19	2,319.91	13.46	16.38	-135.785	104.29	-773.33	1,286.79	1,266.56	20.23	63.602			
3,100.00	3,019.31	2,574.00	2,384.03	14.04	17.12	-136.007	108.66	-809.62	1,352.92	1,331.90	21.03	64.347			
3,200.00	3,114.58	2,639.13	2,440.53	14.63	17.78	-136.199	112.22	-841.80	1,419.37	1,397.64	21.73	65.333			
3,300.00	3,209.86	2,701.43	2,494.19	15.22	18.42	-136.355	115.72	-873.28	1,486.67	1,464.28	22.40	66.378			
3,400.00	3,305.13	2,772.02	2,554.86	15.81	19.15	-136.532	119.29	-909.18	1,554.37	1,531.21	23.16	67.101			
3,500.00	3,400.41	2,853.91	2,625.48	16.40	20.00	-136.749	122.93	-950.47	1,621.81	1,597.75	24.06	67.408			
3,600.00	3,495.68	2,917.62	2,680.26	16.99	20.66	-136.868	126.50	-982.81	1,689.35	1,664.60	24.76	68.239			
3,700.00	3,590.96	3,043.50	2,789.07	17.59	21.95	-137.033	135.03	-1,045.51	1,755.87	1,729.73	26.14	67.171			
3,800.00	3,686.23	3,110.00	2,847.04	18.18	22.61	-137.141	139.07	-1,077.85	1,821.57	1,794.71	26.87	67.797			
3,900.00	3,781.51	3,178.95	2,907.04	18.78	23.30	-137.255	142.96	-1,111.57	1,887.59	1,859.97	27.62	68.335			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Bettonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Bettonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6962+23.5 @ 6985.50ft

Offset Depths are relative to Offset Datum

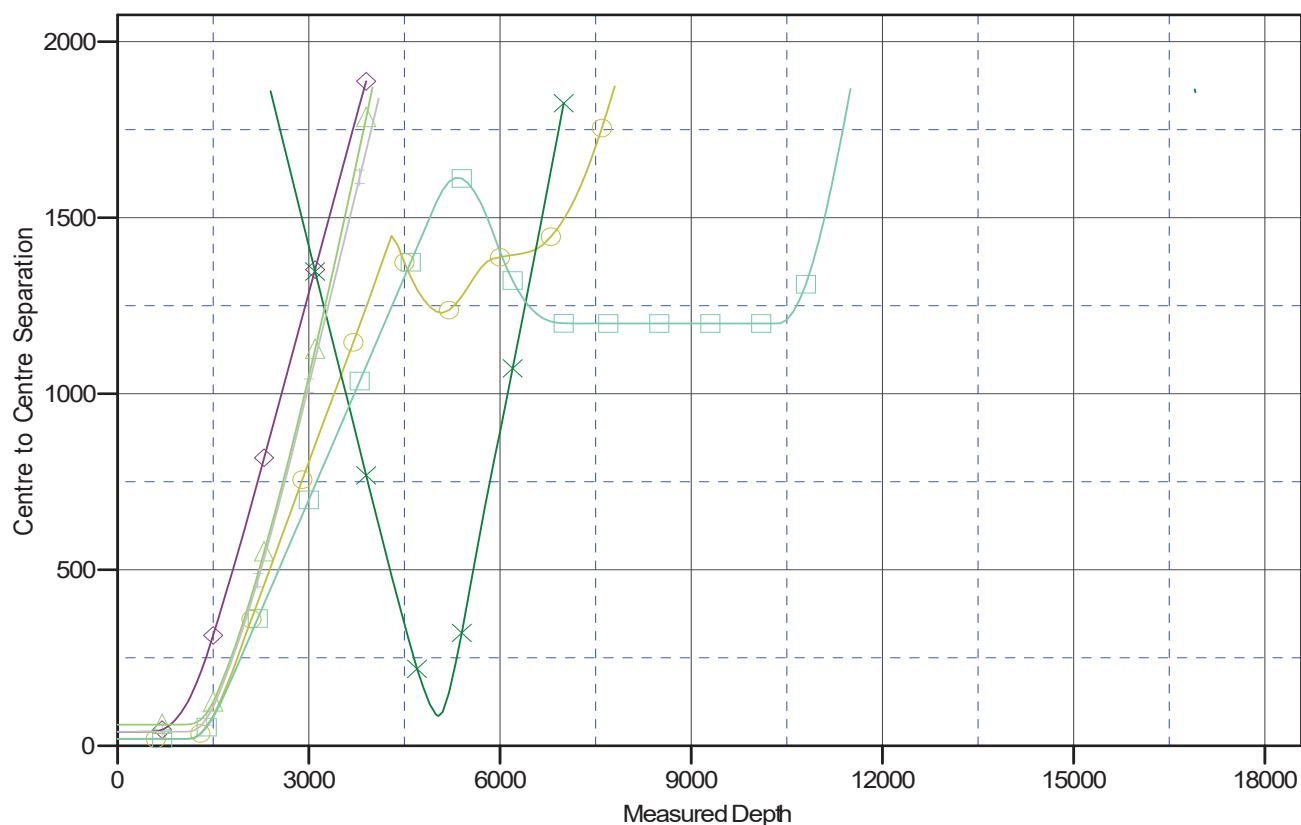
Central Meridian is -106.25000000

Coordinates are relative to: Bettonnie Tsosie Wash Unit 101 H

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

Grid Convergence at Surface is: -0.804°

Ladder Plot



LEGEND

- North Arriba Unit 102H Original Hole, MW Dauney V0
- ◆ North Arriba Unit 106H Original Hole, MW Dauney V0
- × North Arriba Unit 100H Original Hole, MW Dauney V0
- Bettonnie Tsosie Wash Unit 105H Original Hole, rev V0
- Bettonnie Tsosie Wash Unit 103H Original Hole, rev V0

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



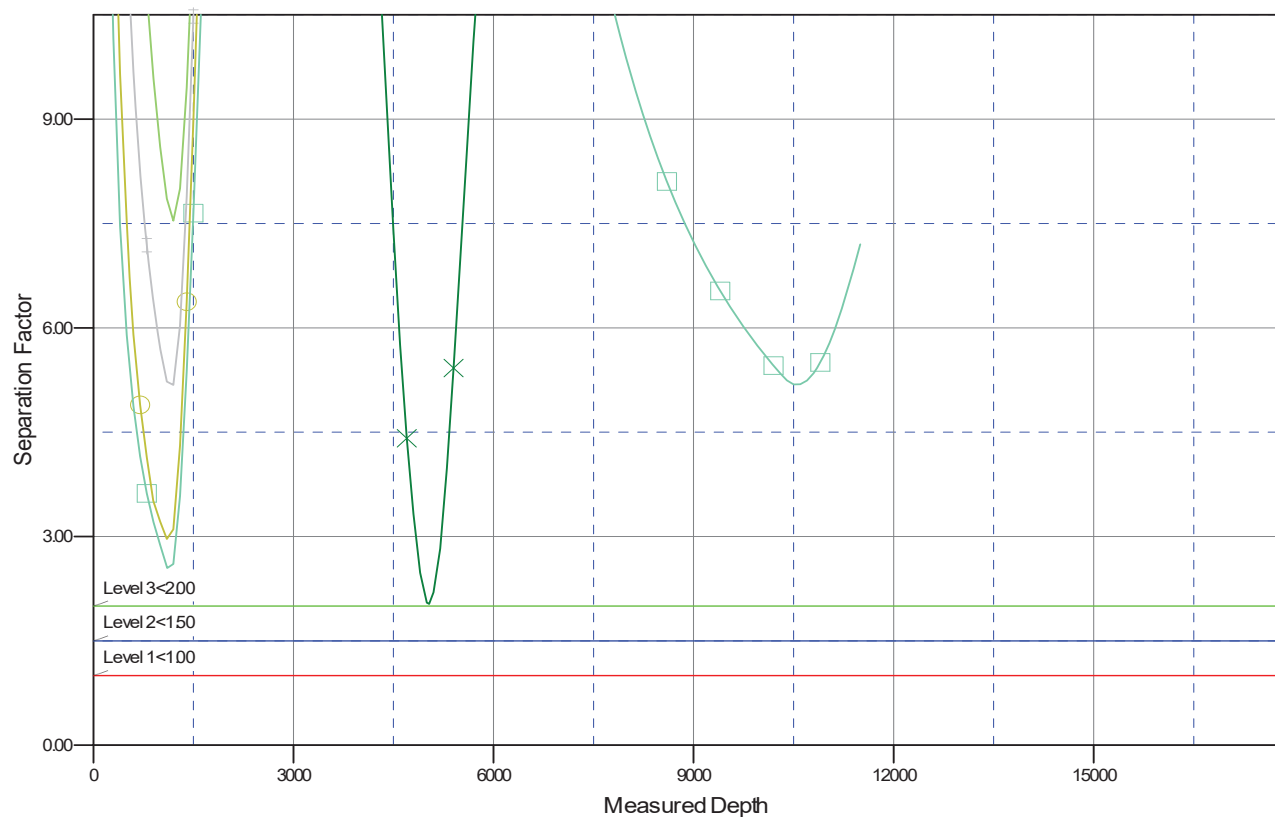
Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Bettonnie Tsosie Wash Unit 101 H
Project:	Rio Arriba, Sandoval & San Juan Counties, NM NAD83	TVD Reference:	RKB=6962+23.5 @ 6985.50ft
Reference Site:	Bettonnie Tsosie Wash (101,103,105 & 107)	MD Reference:	RKB=6962+23.5 @ 6985.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 101 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6962+23.5 @ 6985.50ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -106.25000000

Coordinates are relative to: Bettonnie Tsosie Wash Unit 101 H
 Coordinate System is US State Plane 1983, New Mexico Central Zone
 Grid Convergence at Surface is: -0.804°

Separation Factor Plot



LEGEND

North Arriba Unit 102H Original Hole, MW Dauney V0
 North Arriba Unit 106H Original Hole, MW Dauney V0
 North Arriba Unit 106H Original Hole, MW Dauney V0
 Bettonnie Tsosie Wash Unit 107 H Original Hole, rev0 V0
 Bettonnie Tsosie Wash Unit 105 H Original Hole, rev0 V0
 Bettonnie Tsosie Wash Unit 103 H Original Hole, rev0 V0

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



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)

* ENDURING RESOURCES LLC
#101H BETONNIE TSOSIE WASH UNIT
Lease: NMNM136158 Agreement: NMNM135219A

SH: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 19, T. 23N., R. 07W.
Sandoval County, New Mexico
BH: NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 18, T. 23N., R. 07W.
Rio Arriba County, New Mexico
***Above Data Required on Well Sign**

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

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

- A. ☒ Note all surface/drilling conditions of approval attached.
- B. ☒ The required wait on cement (WOC) time will be a minimum of 500 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated
- C. ☒ Test all casing strings below the conductor casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield (burst) for a minimum of 30 minutes. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.
- D. ☐ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, New Mexico State Office, Reservoir Management Group, 301 Dinosaur Trail, Santa Fe, New Mexico 87508.
The effective date of the agreement must be **prior** to any sales.
- E. ☐ The use of co-flex hose is authorized contingent upon the following:
 1. From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.
 2. From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.
 3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

I. GENERAL

- A. Full compliance with all applicable laws and regulations, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report is filed. The report should be on 8-1/2 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).
- F. BOP equipment (except the annular preventer) shall be tested utilizing a test plug to full working pressure for 10 minutes. No bleed-off of pressure is acceptable. (See 43 CFR 3172.6(b)(9)(ii)).
- G. The operator shall have sufficient weighting materials and lost circulation materials on location in the event of a pressure kick or in the event of lost circulation. (See 43 CFR 3172.8(a)).
- H. The flare line(s) discharge shall be located not less than 100 feet from the well head, having straight lines unless turns are targeted with running tees, and shall be positioned downwind of the prevailing wind direction and shall be anchored. The flare system shall have an effective method for ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare. (See 43 CFR 3172.8(b)(7)).
- I. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a Notice of Intent sundry within three business days. **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to Virgil Lucero at 505-793-1836.**
- J. **The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.**
- K. Unless drilling operations are commenced within four years according to 43 CFR 3171.14, approval of the Application for Permit to Drill will expire. No extensions will be granted.

- L. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all times, unless the well is secured with blowout preventers or cement plugs.
- M. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.
- N. **Commingling:** No production (oil, gas, and water) from the subject well should start until Sundry Notices (if necessary) granting variances from applicable regulations as related to commingling and off-lease measurement are approved by this office. (See 43 CFR 3173.14)

II. REPORTING REQUIREMENTS

- A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.
- B. The following reports shall be filed with the BLM-Authorized Officer online through AFMSS 2 within 30 days after the work is completed.
 - 1. Provide complete information concerning.
 - a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.
 - b. Intervals tested, perforated (include size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.
 - c. Subsequent Report of Abandonment, show the way the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.
 - 2. Well Completion Report will be submitted with 30 days after well has been completed.
 - a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.
 - 3. Submit a cement evaluation log if cement is not circulated to surface.
- C. Production Startup Notification is required no later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site or resumes production in the case of a well which has been off production for more than 90 days. The operator shall notify the Authorized Officer by letter or Sundry Notice, Form 3160-5, or orally to be followed by a letter or Sundry Notice, of the date on which such production has begun or resumed. CFR 43 3162.4-1(c).

III. DRILLER'S LOG

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

IV. GAS FLARING

Gas produced from this well may not be vented or flared beyond an initial, authorized test period of * Days, 20 MMCF following its (completion)(recompletion), or flowback has been routed to the production separator, whichever first occurs, without the prior, written approval of the authorized officer in accordance with 43 CFR 3179.81. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

**30 days, unless a longer test period is specifically approved by the authorized officer. The 30-day period will commence upon the beginning of flowback following completion or recompletion.*

V. SAFETY

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

VI. CHANGE OF PLANS OR ABANDONMENT

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

VII. PHONE NUMBERS

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

Virgil Lucero (505) 793-1836
Kenneth Rennick (505) 564-7742
Matthew Kade (505) 564-7736

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

General Information
Phone: (505) 629-6116

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

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

ACKNOWLEDGMENTS

Action 510206

ACKNOWLEDGMENTS

Operator: DJR OPERATING, LLC 200 Energy Court Farmington, NM 87401	OGRID: 371838
	Action Number: 510206
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☒	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
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Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 510206

CONDITIONS

Operator: DJR OPERATING, LLC 200 Energy Court Farmington, NM 87401	OGRID: 371838
	Action Number: 510206
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
scrues76	Cement is required to circulate on both surface and intermediate1 strings of casing.	9/29/2025
scrues76	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	9/29/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	10/8/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	10/8/2025
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	10/8/2025
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	10/8/2025