

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> 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. 30-039-31463
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: 06/07/2024

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

☐ AMENDED REPORT

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

Signature Date
Heather Huntington 10/26/23

Printed Name
Heather Huntington

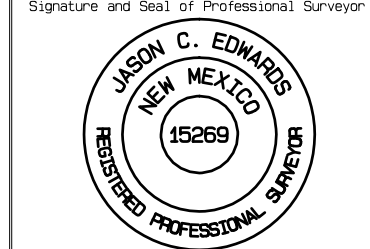
E-mail Address
hhuntington@enduringresources.com

18 SURVEYOR CERTIFICATION

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

Date Revised: JULY 31, 2023
Date of Survey: JUNE 17, 2018

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31463	² Pool Code 97232	³ Pool Name BASIN MANCOS
⁴ Property Code 319957	⁵ Property Name RINCON UNIT	⁶ Well Number 815H
⁷ OGRID No. 372286	⁸ Operator Name ENDURING RESOURCES, LLC	⁹ Elevation 6538'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	21	27N	6W		1164	NORTH	1289	EAST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	27N	6W		710	NORTH	330	EAST	RIO ARriba

¹² Dedicated Acres 960.00	N/2 - Section 21 N/2 - Section 22 N/2 - Section 23	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-87
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION
1164' FNL 1289' FEL
SECTION 21, T27N, R6W

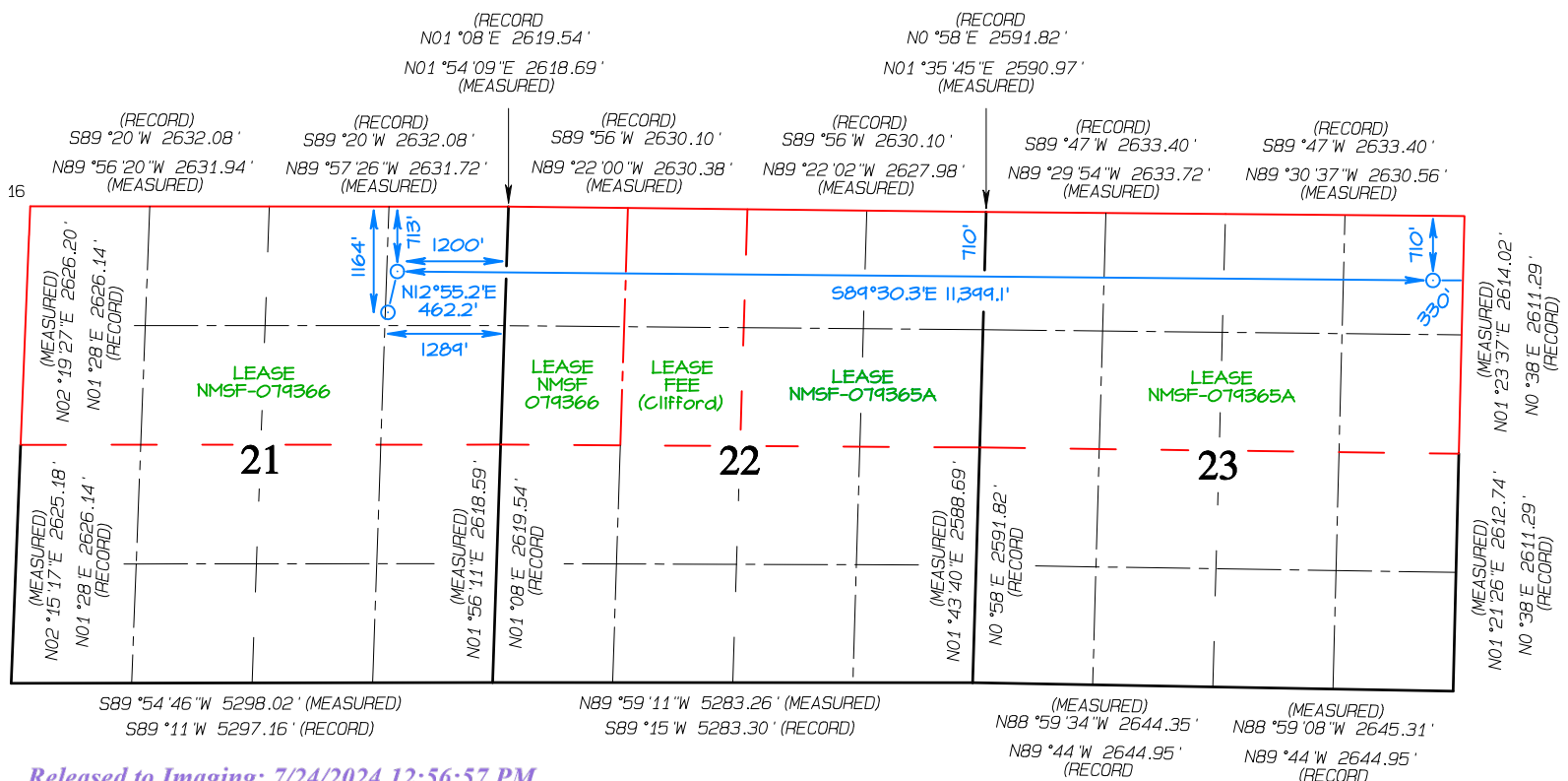
LAT 36.563896°N
LONG -107.467943°W
DATUM: NAD1983

FIRST TAKE POINT
713' FNL 1200' FEL
SECTION 21, T27N, R6W

LAT 36.565137°N
LONG -107.467610°W
DATUM: NAD1983

END-OF-LATERAL
710' FNL 330' FEL
SECTION 23, T27N, R6W

LAT 36.565257°N
LONG -107.428798°W
DATUM: NAD1983



State of New Mexico
Energy, Minerals and Natural Resources DepartmentSubmit Electronically
Via E-permittingOil 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:** Enduring Resources, LLC **OGRID:** 372286 **Date:** 06 / 26 / 2024**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
RINCON UNIT 815H	TBD	A-21-27N-6W	1164 FNL x 1289 FEL	30	5000	300
RINCON UNIT 817H	TBD	B-21-27N-6W	1187 FNL x 1320 DEL	30	5000	300
RINCON UNIT 915H	TBD	A-21-27N-6W	1175 FNL x 1304 FEL	30	5000	300
RINCON UNIT 917H	TBD	B-21-27N-6W	1199 FNL x 1336 FEL	30	5000	300

IV. Central Delivery Point Name: Chaco Processing Plant [See 19.15.27.9(D)(1) NMAC]**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
RINCON UNIT 815H	TBD	2/1/2025	2/11/2025	3/1/2025	3/13/2025	3/23/2025
RINCON UNIT 817H	TBD	2/2/2025	2/12/2025	3/1/2025	3/13/2025	3/23/2025
RINCON UNIT 915H	TBD	2/3/2025	2/13/2025	3/1/2025	3/13/2025	3/23/2025
RINCON UNIT 917H	TBD	2/4/2025	2/14/2025	3/1/2025	3/13/2025	3/23/2025

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: 06/26/2024
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



ENDURING RESOURCES, LLC.
OGRID NO: 372286
NATURAL GAS MANAGEMENT PLAN
Rincon Unit 815H, 817H, 915H, 917H

SEPARATION EQUIPMENT

Enduring Resources, LLC (Enduring) has pulled representative pressurized samples from wells in the same producing formation. Enduring 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.



ENDURING RESOURCES, LLC.
OGRID NO: 372286
NATURAL GAS MANAGEMENT PLAN
Rincon Unit 815H, 817H, 915H, 917H

VENTING and FLARING

Enduring Resources, LLC (Enduring) has a natural gas system available prior to startup of completion operations. Enduring 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, Enduring utilizes the following from list A-I of Section 3 for its operations to minimize flaring:

- a) Enduring 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) Enduring'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.

Enduring 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

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

Enduring Resources, LLC (Enduring) 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

- Enduring shall capture or combust natural gas if technically feasible during drilling operations using best industry practices.



ENDURING RESOURCES, LLC.
OGRID NO: 372286
NATURAL GAS MANAGEMENT PLAN
Rincon Unit 815H, 817H, 915H, 917H

- 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, Enduring will vent natural gas in order to avoid substantial impact. Enduring 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, Enduring utilizes the following:

- Enduring 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) Enduring analyzes the natural gas samples twice per week.
 - 3) Enduring routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met.
 - 4) Enduring provides the NMOCD with pipeline specifications and natural gas data.

19.15.27.8 D. Venting and flaring during production operations

During Production Operations Enduring 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. Enduring does not vent after the well achieves a stabilized rate and pressure.
 - b. Enduring 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. Enduring 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:



ENDURING RESOURCES, LLC.
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NATURAL GAS MANAGEMENT PLAN
Rincon Unit 815H, 817H, 915H, 917H

- a. Enduring receives approval from the NMOCD.
- b. Enduring remains in compliance with the NM gas capture requirements.
- c. Enduring 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. Enduring 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. Enduring will install a flare that designed to handle the full volume of vapors from the facility in case of the VRU failure and it its designed with an auto ignition system.
3. Flare stacks will appropriately sized and designed to ensure proper combustion efficiency.
 - 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 ENDURING 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.



ENDURING RESOURCES, LLC.
OGRID NO: 372286
NATURAL GAS MANAGEMENT PLAN
Rincon Unit 815H, 817H, 915H, 917H

4. Enduring will conduct an AVO inspection on all components for leaks and defects on a weekly basis.
5. Enduring will make and keep records of AVO inspections which will be available to the NMOCD for at least 5 years.
6. Enduring 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. Enduring will resolve emergencies as promptly as possible.

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

1. Enduring will have meters on both the low- and high-pressure sides of the flares and the volumes will be recorded in Enduring's SCADA system.
2. Enduring 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. Enduring'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. Enduring 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. Enduring 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. Enduring will install measuring equipment whenever the NMOCD determines that metering is necessary.

BEST MANAGEMENT PRACTICES

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

Enduring 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.



ENDURING RESOURCES, LLC.
OGRID NO: 372286
NATURAL GAS MANAGEMENT PLAN
Rincon Unit 815H, 817H, 915H, 917H

Enduring 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.

Enduring 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.

Enduring 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.

Enduring 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.

Enduring'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.

Enduring 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-G formation.*

WELL INFORMATION:

Name: Rincon Unit 815H
API Number: Not yet assigned
AFE Number: Not yet assigned
ER Well Number: Not yet assigned
State: New Mexico
County: Rio Arriba
Surface Elevation: 6,538 ft ASL (GL) 6,563 ft ASL (KB)
Surface Location: 21-27-6 Sec-Twn-Rng 1,164 ft FNL 1,289 ft FEL
 36.563896 ° N latitude 107.467943 ° W longitude (NAD 83)
BH Location: 23-27-6 Sec-Twn-Rng 710 ft FNL 330 ft FEL
 36.565257 ° N latitude 107.428798 ° W longitude (NAD 83)

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

East on Hwy 64 for 36.8 miles to General American Road (GAR/Cty Rd 366) just past MM 101, right (S) on GAR for 1.2 miles to fork, continue right (SW) on GAR/366 for 3.4 miles to 4-way intersection, straight (S) on GAR/366 for 1.2 miles to fork, right (SW) leaving 366 follow along Munoz Wash for 4.3 miles to 4-way intersection, straight (SW) across Carrizo Wash for 0.3 mile to fork, left (SE) onto CR #492 for 1.8 miles to three way, right (N) uphill on existing

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	4,016	2,547	2,561	W	normal
	Kirtland	3,921	2,642	2,657	W	normal
	Fruitland	3,641	2,922	2,940	G, W	sub
	Pictured Cliffs	3,386	3,177	3,198	G, W	sub
	Lewis	3,121	3,442	3,465	G, W	normal
	Chacra_A	2,821	3,742	3,768	G, W	normal
	Cliff House	1,716	4,847	4,884	G, W	sub
	Menefee	1,586	4,977	5,015	G, W	sub
	Point Lookout	1,157	5,406	5,450	G, W	sub
	Mancos	747	5,816	5,864	O,G	sub
	Gallup (MNCS_A)	194	6,369	6,419	O,G	sub (~.41)
	MNCS_B	80	6,483	6,538	O,G	sub (~.41)
	MNCS_C	11	6,552	6,619	O,G	sub (~.41)
	MNCS_Cms	0	NA	0	0	0
	MNCS_D	0	NA	0	0	0
	MNCS_E	-67	6,630	6,719	O,G	sub (~.41)
	MNCS_F	-139	6,702	6,829	O,G	sub (~.41)
	MNCS_G	-209	6,772	6,966	O,G	sub (~.41)
	MNCS_G_Ash	-240	6,803	7,040	O,G	sub (~.41)
	MNCS_H	0	6,818	7,090	O,G	sub (~.41)
	G_Ash @ OVS	-241	6,804	0	O,G	sub (~.41)
	G_Ash @ BHL	-315	6,878	0	O,G	sub (~.41)
	FTP Target	-255	6,818	7,090	O,G	sub (~.41)
	PROJECTED TD (BHL)	-315	6,878	18,640	O,G	sub (~.41)

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: 2,960 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,450 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 9-5/8" casing to TD; gas detection from drillout of 13-3/8" casing to TD.

MWD / LWD: Gamma Ray from drillout of 13-3/8" casing to TD

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

Cased Hole Logs: CBL on 5-1/2" casing from deepest free-fall depth to surface

DRILLING RIG INFORMATION:

Contractor: Aztec

Rig No.: 1000

Draw Works: E80 AC 1,500 hp

Mast: Hyduke Triple (136 ft, 600,000 lbs, 10 lines)

Top Drive: NOV IDS-350PE (350 ton)

Prime Movers: 4 - GE Jenbacher Natural Gas Generator

Pumps: 2 - RS F-1600 (7,500 psi)

BOPE 1: Cameron single & double gate rams (13-5/8", 3,000 psi)

BOPE 2: Cameron annular (13-5/8", 5,000 psi)

Choke 3", 5,000 psi

KB-GL (ft): 25

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

STATE AND FEDERAL NOTIFICATIONS

BLM

State

Construction and Reclamation:

BLM is to be notified minimum of 48 hours prior to start of construction or reclamation. Grazing permittee is to be notified 10 days in advance.

(505) 564-7600

Spud

BLM and state are to be notified minimum of 24 hours prior to spud.

(505) 564-7750

(505) 334-6178

BOP

BLM is to be notified minimum of 24 hours prior to BOPE testing.

(505) 564-7750

see note

Casing / cementing

BLM and state are to be notified minimum of 24 hours prior to running casing and cementing.

(505) 564-7750

(505) 334-6178

Plugging

BLM and state are to be notified minimum of 24 hours prior to plugging ops.

(505) 564-7750

see note

All notifications are to be recorded in the WellView report with time, date, name or number that notifications were made to.

Note: Monica Keuhling with the OCD requests state notifications 24 hrs in advance for spud, BOP tests, casing & cementing and any plugging be given to her in both phone message and email: (505) 320-0243, monica.keuhling@emnrd.nm.gov

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.
- 2) 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.

- 3) 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 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 4) 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.
- 5) Manual locking devices (hand wheels) shall be installed 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 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 for additional details. Sufficient barite will be on location to weight up mud system to balance maximum anticipated pressure gradient.

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: 17-1/2"**Bit / Motor:** Mill Tooth or PDC, no motor**MWD / Survey:** No MWD, deviation survey**Logging:** None

Procedure: Drill to TD. Use 12-1/4" bit and open to 17-1/2" if unable to drill with 17-1/2" bit. Run inclination survey in 100' stations from TD to surface. Condition hole and fluid for casing running as required. TOOH. Run casing. Pump cement as detailed below. Monitor returns during cement job and note cement volume to surface. Install cellar and wellhead.

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	13.375	54.5	J-55	BTC	1,130	2,730	853,000	909,000
Loading					153	1,520	116,634	116,634
Min. S.F.					7.39	1.80	7.31	7.79

*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):** Minimum: N/A Optimum: N/A Maximum: N/A*Make-up as per API Buttress Connection running procedure.***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)
	TYPE III	14.6	1.39	6.686	0.6946	100%	0	364

Annular Capacity 0.6946 cuft/ft 13-3/8" casing x 17-1/2" hole annulus Csg capacity 0.8680 ft3/ft

Drake Energy Services: Calculated cement volumes assume gauge hole and the excess noted in table

								Cu Ft Slurry
								505.3

ASTM Type III Calcium Chloride D-CD2 .3% BWOC

2% BWOC Dispersant/Friction .25 lbs/sx Cello

Blend Accelerator reducer Flake - seepage

Notify COGCC & 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	5,964 ft (MD)	Hole Section Length:	5,614 ft
350 ft (TVD)	to	5,916 ft (TVD)	Casing Required:	5,964 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (5% KCl)	8.8 - 9.5	20	8 - 14	8 - 14	9.0 - 9.5	No OBM

Interm Hole Mud:

Losses may occur around 5,400' TVD. Maintain minimum mud weights. Pre-treat with gilsonite and medium LCM products, 60% fibrous, 20% platey, 20% granular. If needed, reduce gpm. Losses occurred in the RINU 615H offset at 4,974' MD with completed loss of returns, but was cured by shutting in the direct producing well and spotting 30 ppb LCM. Losses occurred on the RINU 715H at 5,020' MD and were cured with 20 ppb LCM. Pretreat the mud system prior to drilling into the loss zones with constant additions of 15 ppb LCM and by-passing shakers if full losses occur. Rent a large premix pit prior to drill out of surface pipe. Have 30 ppb pill mixed and ready prior to drilling the loss zones and immediately pump once losses occur.

Hole Size: 12-1/4"

Bit / Motor: 12-1/4" PDC bit w/mud motor

Bit / Motor: MOTOR: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG

Bit / Motor: BIT: 6-BLADE PDC w/16 mm or 19 mm cutters, TFA = 0.67 sq-in (range 0.65 - 0.90 max), **jet with 6 - 12s**

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 13-3/8" casing to **1,500** psi for 30 minutes.

Procedure: Drill to TD following directional plan (**20' rat-hole past casing setting depth**). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimum. Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At TD, condition hole and fluid for casing running. TOO H. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well. Perform off-line cement job. Pump cement as detailed below. Monitor returns during cement job and note cement volume to surface.

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	9.625	36.0	J-55	LTC	2,020	3,520	564,000	453,000
Loading					1,283	1,788	285,725	285,725
Min. S.F.					1.57	1.97	1.97	1.59

Assumptions:

*Collapse: evacuated casing with 8.4 ppg equivalent external pressure gradient and .22 psi/ft backup
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

Casing Summary: Float shoe, 1 jt casing, float collar, casing to 4,800' MD, 9-5/8" casing packer, 10' casing pup, DV stage tool, casing to surface (**FLOAT EQUIPMENT FROM WEATHERFORD**)

Centralizers: 1 per joint in non-vertical hole; 1 per 3-joints in vertical hole

Centralizers: 1 centralizers jt stop-banded 10' from float shoe on bottom 1 jt & 1 centralizer floating on bottom joint, 1 centralizer per jt (floating) to KOP ; 1 centralizer per 3 jts (floating) to surface (**Centralizers from Scepter Supply - SLIP'N'SLIDE 9-5/8" x 11.75" SOLID BODY POLYMER**)

Casing Contingency:

Hole conditions encountered during the drilling of the 12-1/4" intermediate hole section may warrant the use of an ECP and/or a DV Tool to ensure that cement can be successfully circulated to surface. Anticipated placement tool placement is ~650' above the Point Lookout top (Lead slurry top depth is depth of DV stage cementing tool). Actual drilling conditions will determine if a tools are needed and their exact placement.

Cement:		Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)	
Stage 1	Spacer	IntegraGuard EZ II	11		32.2		3,904	50 bbls		
	Lead	ASTM type I/II	12.5	2.220	12.5	70%	4,800	159	353.5	
	Tail	Type III	14.6	1.37	6.6	20%	5,464	151	207.0	
	Displacement	458	est bbls							
Stage 2	Spacer	IntegraGuard EZ II	11		32.2		0	50 bbls		
	Tail	ASTM type I/II	12.5	2.210	12.4	70%	0	1,130	2496.3	
	Displacement	371	est bbls							
	Annular Capacity	0.3627	cuft/ft	9-5/8" casing x 13-3/8" casing annulus						9-5/8" 36# ID
		0.3132	cuft/ft	9-5/8" casing x 12-1/4" hole annulus						8.921
		0.4341	cuft/ft	9-5/8" casing vol est shoe jt ft 44						
Calculated cement volumes assume gauge hole and the excess (open hole only) noted in table										

Stage 1	Spacer	Fly Ash 187.355 lb/bbl	IntegraGuard GW86 viscosifier 0.9 lb/bbl	FP24 Defoamer .5 lb/bbl	ResCare CS2 Clay Inhibitor 0.1 gal/bbl	SS201 Surfactant 0.5 gal/bbl			
	Lead	ASTM Type I/II	BA90 Bonding Agent 5.0 lb/sx	IntegraSeal POLI LCM 0.13 lb/sx	FL66 Fluid Loss .2% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R3 Retarder .3% BWOB	FP24 Defoamer 0.3% BWOB	KCI Clay Inhibition 3.0% BWOW
	Tail	ASTM Type III	Dipersant CD32A 0.0% BWOB						
Stage 2	Spacer	Fly Ash 187.355 lb/bbl	IntegraGuard GW86 viscosifier 0.9 lb/bbl	FP24 Defoamer .5 lb/bbl	ResCare CS2 Clay Inhibitor 0.1 gal/bbl	SS201 Surfactant 0.5 gal/bbl			
	Lead	ASTM Type I/II	BA90 Bonding Agent 5.0 lb/sx	IntegraSeal POLI LCM 0.13 lb/sx	FL66 Fluid Loss .2% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R3 Retarder .3% BWOB	FP24 Defoamer 0.3% BWOB	KCI Clay Inhibition 3.0% BWOW
	Tail	ASTM Type III	Dipersant CD32A 0.0% BWOB						

American Cementing Liner & Production Blend

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.

5,964 ft (MD)	to	18,640 ft (MD)	Hole Section Length:	12,676 ft
5,916 ft (TVD)	to	6,878 ft (TVD)	Casing Required:	18,640 ft

Estimated KOP:	5,650 ft (MD)	4,635 ft (TVD)
Estimated Landing Point (FTP):	7,090 ft (MD)	6,804 ft (TVD)
Estimated Lateral Length:	11,550 ft (MD)	

Fluid:	Type	MW (ppg)	WPS ppm	HTHP	YP (lb/100 sqft)	ES	OWR	Comment
	OBM	8.0 - 9.0	120,000 CaCl	NC	±6	+300	80:20	WBM as contingency

Fluids / Solids Notes: Newpark OptiDrill OBM system. Ensure that drying shakers are rigged up after the rig (2nd set) of shakers. Solids control will burn retorts on cuttings samples one per tour to check % ROC. Add diesel and products as required to maintain mud in program specs. Reference Newpark's mud program for additional details. No asphalt products are to be added to the OBM system. **Any changes to the mud systems are to be discussed with engineering prior to application.**

Hole Size: 8-1/2"

Bit / Motor: 8-1/2" PDC bit w/mud motor

Bit / Motor: **MOTOR:** NOV 077857 - 6.5" 7/8, 5.0 stage, 0.23 rev/gal, 1.83 or 1.5 deg, 750 GPM, 1,580 DIFF PSIG (or similar); on demand friction breaking device(s) as required, bottom tool spaced ~3,000' behind the bit.

BIT: 5-BLADE PDC w/16 mm - 19 mm cutters, matrix body, target TFA = 1.0 - 1.5 sq-in

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.

Procedure: Drill to KOP following directional plan. Target flow-rate is 650 - 700 GPM. Target differential is pressure is 700 - 1,000 psig. Target ROP 500 - 600 ft/hr. Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10' until KOP, when feasible. Take surveys every stand, at a minimum. Confirm landing target, planned BUR for curve, and KOP with Geology and Engineering. Drill curve following directional plan and updated landing target. Take survey every joint during curve. Land curve. Continue drilling in lateral section, steering as needed to keep well on plan and in the target window. Keep DLS < 2 deg/100' and keep slide length < 20', when feasible. Take surveys every stand, at a minimum. **Target rotating parameters / performance: flow-rate is 650 - 700 GPM, differential is pressure is 700 - 1,000 psig, ROP 500 - 600 ft/hr, torque 38K ft-lbs (MAX drill pipe MUT).** After reaching TD, perform no more than one clean-up cycle to condition hole for casing running unless shakers indicate additional cleaning needed. TOO & LD drill pipe (ROOH, if required; should NOT be required with OBM system). When pumping hole cleaning sweeps, fine LCM product is to be used -**Do not use barite for sweeps.** Run casing as described below. Use CRT for casing running only if necessary (should NOT be required with OBM but check drill pipe drag at or close to TD and please **log drag daily in WellView reports**). Verify make up torque when running casing. Space out casing getting the toe sleeve as close to LTP as possible. Land casing and test pack-off. Open floatation sub, fill casing, and circulate as required. Pump cement as detailed below. Note cement volume circulated to surface. Nipple down BOPE. Clean pits. RDMO to next pad.

Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	5.500	20.0	HCP-110	LTC	12,200	12,640	641,000	548,000
Loading					3,398	9,144	421,693	421,693
Min. S.F.					3.59	1.38	1.52	1.30

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

MU Torque (ft lbs): Minimum: 4,270 Optimum: 5,690 Maximum: 7,110

Casing Summary: Float shoe, 1 jt casing, float collar, 20' marker joint, toe-initiation sleeve, casing to KOP with 20' marker joints spaced evenly in lateral every 2,000', floatation sub at KOP, casing to surface. The toe-initiation sleeve (last-take-point) cannot be placed closer than 330' to the unit boundary when measured perpendicular to the well path.

Casing Summary: Float shoe, 1 jt casing, float collar w/debris catcher (**Weatherford (WFT) float equipment**), 20' marker joint, toe-initiation sleeve (**WFT RD 10,500 psi**), casing to KOP with 20' marker joints spaced evenly in lateral every ~2,000', floatation sub (**NCS Air-Lock 5,500 psi from WFT**), casing to surface. The toe-initiation sleeve shall be placed no closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the the azimuth of the well. Note: the LTP is the maximum depth of the toe sleeve and is noted on the Well Plan. Drill past the LTP as required for necessary rat-hole and shoe-track length to place the toe sleeve as close to (but not past) the planned LTP as possible.

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

Lateral: 1 centralizer per 3 joints (purchase centralizers from Scepter Supply)

Top of curve to 9-5/8" shoe: 1 centralizer per 5 joints

9-5/8" shoe to surface: 1 centralizer per 5 joints

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	Open hole % Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	IntegraGuard Star	11		31.6		0	60 bbls	
Lead	ASTM type I/II	12.4	2.370	13.40	0%	0	668	1,582
Tail	G:POZ blend	13.3	1.570	7.70	10%	5,864	2,056	3,228

Displacement 412 est bbls

Annular Capacity 0.2691 cuft/ft 5-1/2" casing x 9-5/8" casing annulus 5-1/2" 20# ID
 0.2291 cuft/ft 5-1/2" casing x 8-1/2" hole annulus 4.778
 0.1245 cuft/ft 5-1/2" casing vol est shoe jt ft 65

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

American Cementing Liner & Production Blend

Spacer	S-8 Silica Flour 163.7 lbs/bbl	Avis 616 viscosifier 11.6 lb/bbl	FP24 Defoamer .5 lb/bbl	IntegraGuard Star Plus 3K LCM 15 lb/bbl	SS201 Surfactant 1 gal/bbl		
Lead	ASTM Type I/II	BA90 Bonding Agent 5.0 lb/sx	Bentonite Viscosifier 8% BWOB	FL24 Fluid Loss .5% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R7C Retarder .2% BWOB	FP24 Defoamer 0.3% BWOB, Anti- Static .01 lb/sx
Tail	Type G 50%	Pozzolan Fly Ash Extender 50%	BA90 Bonding Agent 3.0 lb/sx	Bentonite Viscosifier 4% BWOB	FL24 Fluid Loss .4% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R3 Retarder .5% BWOB FP24 Defoamer .3% BWOB, IntegraSeal 0.25 lb/sx

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

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

Note: This well will not be considered an unorthodox well location as definted by NMAC19.15.16.15.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.

Procedure: ND BOP. Install BPV in WH if available. Install cap with pressure gauge on WH. Frac stack to be installed at later date. RDMO.

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 18,540
Est Frac Inform: 77 Frac Stages 297,000 bbls slick water 24,110,000 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: 11/1/2023
Completion: 12/31/2023
Production: 2/14/2024

Prepared by: Alec Bridge 12/20/2021
Updated: Greg Olson 2/20/2023
Greg Olson 3/27/2023
G Olson 8/17/2023

WELL NAME: Rincon Unit 815H

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

API Number: Not yet assigned

AFE Number: Not yet assigned

ER Well Number: Not yet assigned

State: New Mexico

County: Rio Arriba

Surface Elev.: 6,538 ft ASL (GL) 6,563 ft ASL (KB)

Surface Location: 21-27-6 Sec-Twn- Rng 1,164 ft FNL 1,289 ft FEL

BH Location: 23-27-6 Sec-Twn- Rng 710 ft FNL 330 ft FEL

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

East on Hwy 64 for 36.8 miles to General American Road (GAR/Cty Rd 366) just past MM 101, right (S) on GAR for 1.2 miles to fork, continue right (SW) on GAR/366 for 3.4 miles to 4-way intersection, straight (S) on GAR/366 for 1.2 miles to fork, right (SW) leaving 366 follow along Munoz Wash for 4.3 miles to 4-way intersection, straight (SW) across Carrizo Wash for 0.3 mile to fork, left (SE) onto CR #492 for 1.8 miles to three way, right (N) uphill on existing road for 0.6 miles to three way, left (SW) for 0.8 miles to fork, left (SE) for 0.1 miles to location to staked location which overlaps existing roadway. There are 2 existing wells on this location. From South West to North East: Rincon Unit 917H (proposed), 817H (proposed), 915H (proposed), 815H (proposed), 715H (existing), 615H (existing), 713H (existing), 613H (existing)

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	5,964	9.625	36.0	J-55	LTC	0	5,964
Production	8.500	18,640	5.500	20.0	HCP-110	LTC	0	18,640

CEMENT PROPERTIES SUMMARY:

	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	% Excess	TOC (ft MD)	Total (sx)	Slurry Vol Cu ft
Surface	TYPE III	14.6	1.39	6.686	100%	0	364	505
Inter. (Lead Stg 1)	ASTM type I/II	12.5	2.22	12.5	70%	4800	159	354
Inter. (Tail Stg 1)	Type III	14.6	1.37	6.6	20%	5464	151	207
Inter. (Tail Stg 2)	ASTM type I/II	12.5	2.21	12.4	70%	0	1130	2496
Prod. (Lead)	ASTM type I/II	12.4	2.37	13.4	0%	0	668	1582
Prod. (Tail)	G:POZ blend	13.3	1.57	7.7	10%	5864	2056	3228

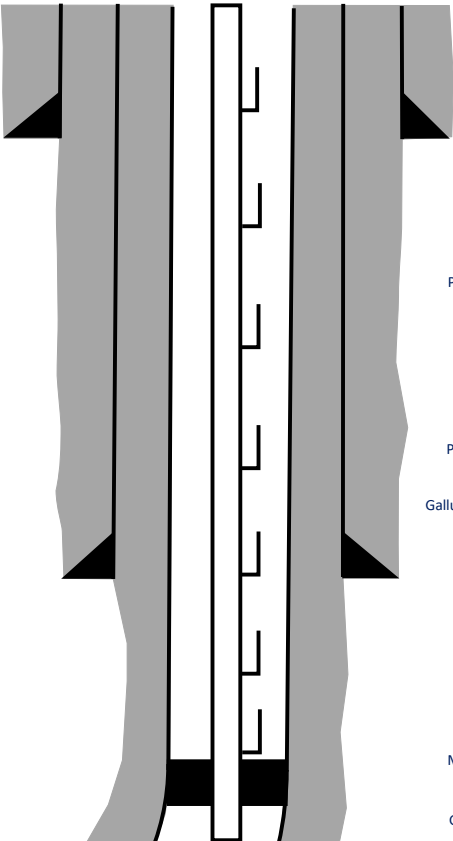
COMPLETION / PRODUCTION SUMMARY:

Frac: 18540

Flowback: Flow back through production tubing as pressures allow

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

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	5,964 ft
KOP (MD)	5,650 ft
KOP (TVD)	4,635 ft
Target (TVD)	6,804 ft
Curve BUR	10 °/100 ft
POE (MD)	7,090 ft
TD (MD)	18,640 ft
Lat Len (ft)	11,550 ft



	Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	2,547	2,561	
Kirtland	2,642	2,657	
Fruitland	2,922	2,940	
Pictured Cliffs	3,177	3,198	
Lewis	3,442	3,465	
Chacra_A	3,742	3,768	
Cliff House	4,847	4,884	
Menefee	4,977	5,015	
Point Lookout	5,406	5,450	
Mancos	5,816	5,864	
Gallup (MNCS_A)	6,369	6,419	
MNCS_B	6,483	6,538	
MNCS_C	6,552	6,619	
MNCS_Cms	NA	0	
MNCS_D	NA	0	
MNCS_E	6,630	6,719	
MNCS_F	6,702	6,829	
MNCS_G	6,772	6,966	
MNCS_G_Ash	6,803	7,040	
MNCS_H	6,818	7,090	
G_Ash @ OVS	6,804	0	
G_Ash @ BHL	6,878	0	
FTP Target	6,818	7,090	
PROJECTED TD (BHL)	6,878	18,640	



Well: Rincon Unit 815H
Site: Rincon pad (613, 615, 713, 715, 815, 817, 915 & 917)
Project: Rio Arriba County, New Mexico NAD83 NM W
Design: rev1
Rig:

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6538+25 @ 6563.00ft
Surface location:

Northing: 2024770.673
Easting: 2830395.076
Latitude: 36.563896000
Longitude: -107.467943000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.28°



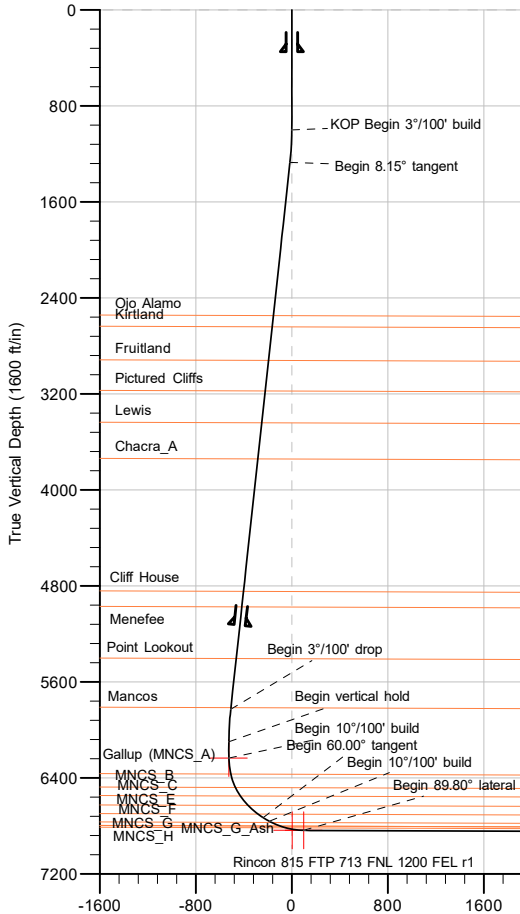
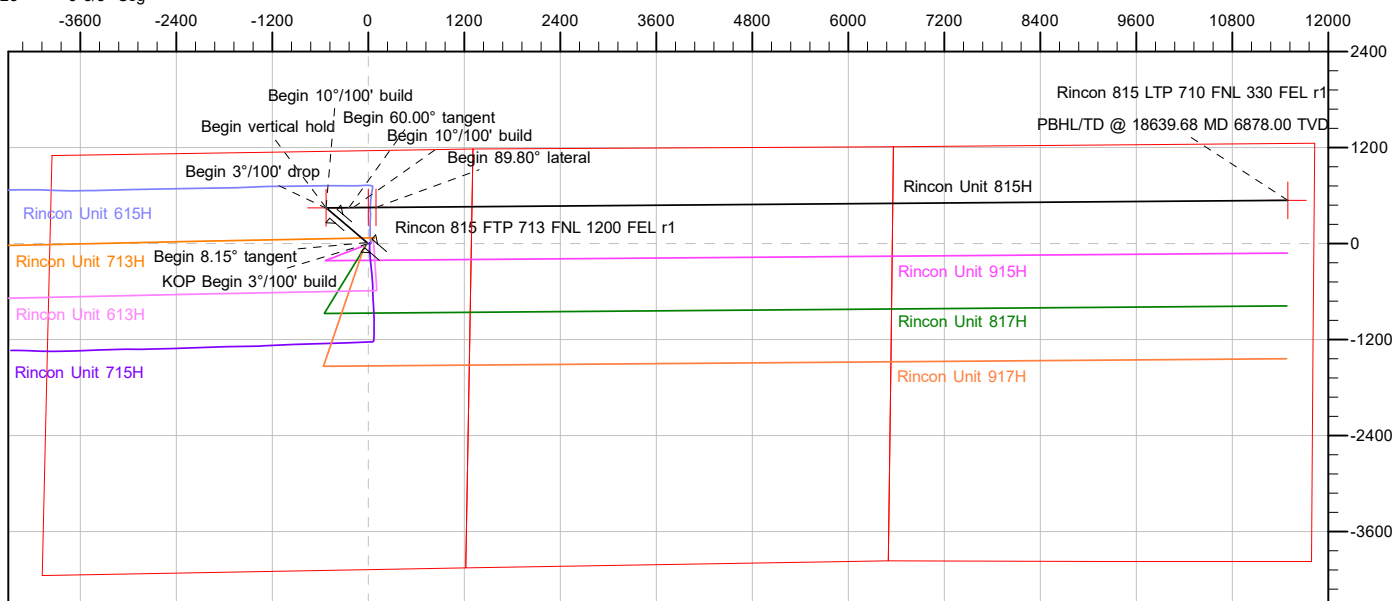
Azimuths to Grid North
True North: -0.22°
Magnetic North: 8.28°
Magnetic Field
Strength: 49320.3nT
Dip Angle: 63.03°
Date: 7/21/2023
Model: IGRF2020



CASING DETAILS

TVD	MD	Name
350.00	350.00	13 3/8" Csg
5128.00	5168.23	9 5/8" Csg

West(-)/East(+) (2400 ft/in)



6:25, July 21 2023

Vertical Section at 89.551° (1600 ft/in)

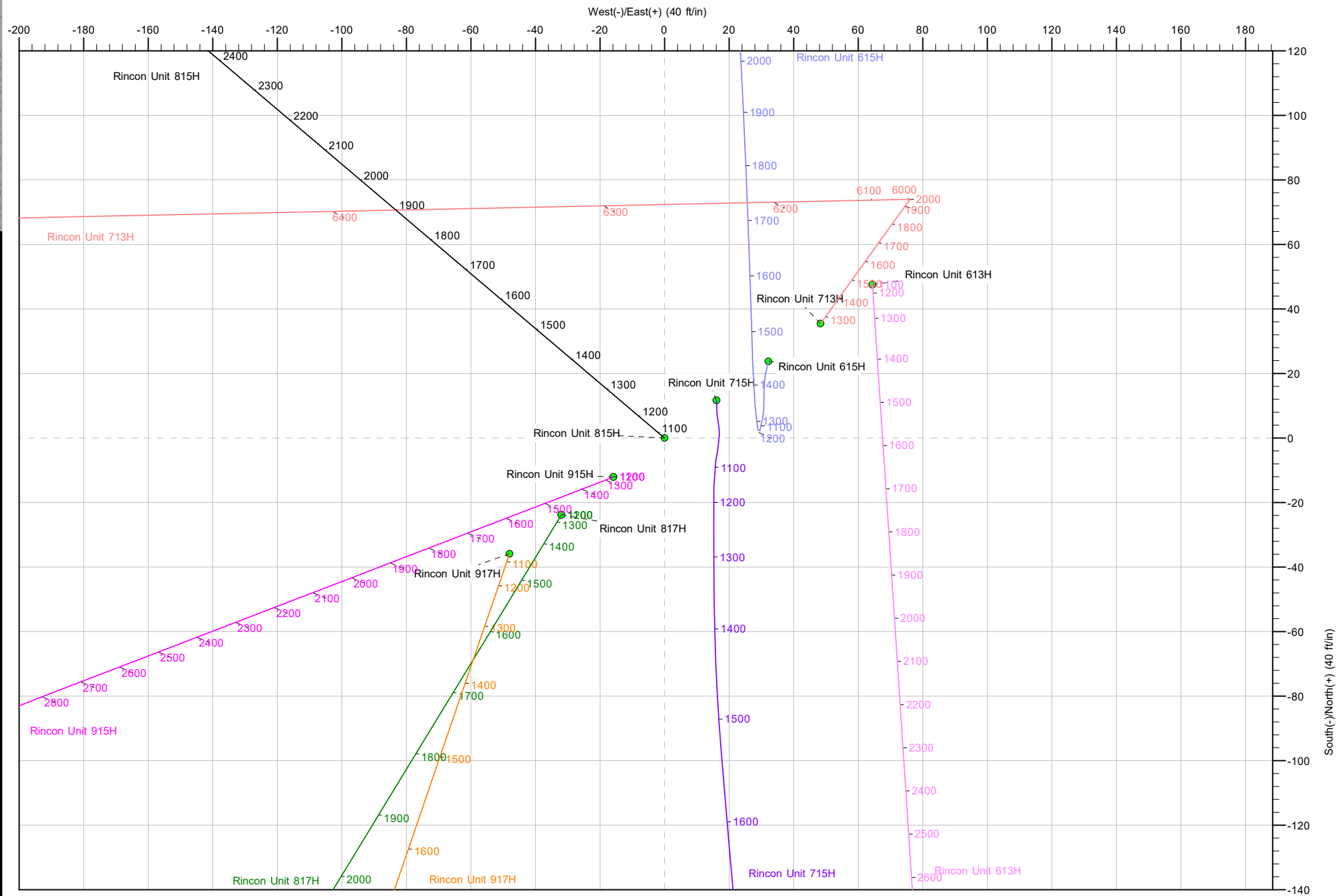
Section Details										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	1000.00	0.00	0.000	1000.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	1271.54	8.15	310.330	1270.62	12.47	-14.69	3.00	310.33	-14.59	Begin 8.15° tangent
4	5876.76	8.15	310.330	5829.38	434.80	-512.15	0.00	0.00	-508.73	Begin 3°/100' drop
5	6148.30	0.00	0.000	6100.00	447.27	-526.84	3.00	180.00	-523.32	Begin vertical hold
6	6283.70	0.00	0.000	6235.40	447.27	-526.84	0.00	0.00	-523.32	Begin 10°/100' build
7	6883.70	60.00	89.551	6731.60	449.51	-240.37	10.00	89.55	-236.84	Begin 60.00° tangent
8	6943.70	60.00	89.551	6761.60	449.92	-188.41	0.00	0.00	-184.88	Begin 10°/100' build
9	7241.70	89.80	89.551	6838.35	452.15	96.07	10.00	0.00	99.61	Begin 89.80° lateral
10	18639.68	89.80	89.551	6878.00	541.48	11493.62	0.00	0.00	11497.51	PBHL/TD @ 18639.68 MD 6878.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Rincon 815 FTP 713 FNL 1200 FEL r1	6838.35	452.15	96.07	2025222.824	2830491.150	36.565137000	-107.467610000
Rincon 815 LTP 710 FNL 330 FEL r1	6878.00	541.48	11493.62	2025312.151	2841888.675	36.565257000	-107.428798000
Rincon 815 vert r1	6235.40	447.27	-526.84	2025217.942	2829868.237	36.565130079	-107.469731205
Rincon 815 VS=0 r1	6838.00	451.40	0.00	2025222.072	2830395.076	36.565135939	-107.467937160



Well: Rincon Unit 815H
 Site: Rincon pad (613, 615, 713, 715, 815, 817, 915 & 917)
 Project: Rio Arriba County, New Mexico NAD83 NM W
 Design: rev1
 Rig:





Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Project	Rio Arriba County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Rincon pad (613, 615, 713, 715,815,817,915 & 917)				
Site Position:		Northing:	2,024,818.244 usft	Latitude:	36.564026000
From:	Lat/Long	Easting:	2,830,459.503 usft	Longitude:	-107.467723000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Rincon Unit 815H, Surf loc: 1164 FNL 1289 FEL Section 21-T27N-R06W						
Well Position	+N/-S	0.00 ft	Northing:	2,024,770.673	usft	Latitude:	36.563896000
	+E/-W	0.00 ft	Easting:	2,830,395.075	usft	Longitude:	-107.467943000
Position Uncertainty		0.00 ft	Wellhead Elevation:		ft	Ground Level:	6,538.00 ft
Grid Convergence:		0.22 °					

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	7/21/2023	8.50	63.03	49,320.27685886

Design	rev1			
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	89.551

Plan Survey Tool Program	Date	7/21/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,639.65 rev1 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,271.54	8.15	310.330	1,270.62	12.47	-14.69	3.00	3.00	0.00	310.33	
5,876.76	8.15	310.330	5,829.38	434.80	-512.15	0.00	0.00	0.00	0.00	
6,148.30	0.00	0.000	6,100.00	447.27	-526.84	3.00	-3.00	0.00	180.00	
6,283.70	0.00	0.000	6,235.40	447.27	-526.84	0.00	0.00	0.00	0.00	Rincon 815 vert r1
6,883.70	60.00	89.551	6,731.60	449.51	-240.37	10.00	10.00	0.00	89.55	
6,943.70	60.00	89.551	6,761.60	449.92	-188.41	0.00	0.00	0.00	0.00	
7,241.70	89.80	89.551	6,838.35	452.15	96.07	10.00	10.00	0.00	0.00	
18,639.68	89.80	89.551	6,878.00	541.48	11,493.62	0.00	0.00	0.00	0.00	Rincon 815 LTP 710 f



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	
13 3/8" Csg										
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										
1,100.00	3.00	310.330	1,099.95	1.69	-2.00	-1.98	3.00	3.00	0.00	
1,200.00	6.00	310.330	1,199.63	6.77	-7.98	-7.92	3.00	3.00	0.00	
1,271.54	8.15	310.330	1,270.62	12.47	-14.69	-14.59	3.00	3.00	0.00	
Begin 8.15° tangent										
1,300.00	8.15	310.330	1,298.80	15.08	-17.77	-17.65	0.00	0.00	0.00	
1,400.00	8.15	310.330	1,397.79	24.25	-28.57	-28.38	0.00	0.00	0.00	
1,500.00	8.15	310.330	1,496.78	33.42	-39.37	-39.11	0.00	0.00	0.00	
1,600.00	8.15	310.330	1,595.77	42.59	-50.17	-49.84	0.00	0.00	0.00	
1,700.00	8.15	310.330	1,694.76	51.76	-60.97	-60.57	0.00	0.00	0.00	
1,800.00	8.15	310.330	1,793.75	60.93	-71.78	-71.30	0.00	0.00	0.00	
1,900.00	8.15	310.330	1,892.74	70.11	-82.58	-82.03	0.00	0.00	0.00	
2,000.00	8.15	310.330	1,991.74	79.28	-93.38	-92.76	0.00	0.00	0.00	
2,100.00	8.15	310.330	2,090.73	88.45	-104.18	-103.49	0.00	0.00	0.00	
2,200.00	8.15	310.330	2,189.72	97.62	-114.98	-114.22	0.00	0.00	0.00	
2,300.00	8.15	310.330	2,288.71	106.79	-125.79	-124.95	0.00	0.00	0.00	
2,400.00	8.15	310.330	2,387.70	115.96	-136.59	-135.67	0.00	0.00	0.00	
2,500.00	8.15	310.330	2,486.69	125.13	-147.39	-146.40	0.00	0.00	0.00	
2,561.42	8.15	310.330	2,547.49	130.76	-154.02	-153.00	0.00	0.00	0.00	
Ojo Alamo										
2,600.00	8.15	310.330	2,585.68	134.30	-158.19	-157.13	0.00	0.00	0.00	
2,657.36	8.15	310.330	2,642.46	139.56	-164.39	-163.29	0.00	0.00	0.00	
Kirtland										
2,700.00	8.15	310.330	2,684.67	143.47	-168.99	-167.86	0.00	0.00	0.00	
2,800.00	8.15	310.330	2,783.66	152.64	-179.80	-178.59	0.00	0.00	0.00	
2,900.00	8.15	310.330	2,882.65	161.81	-190.60	-189.32	0.00	0.00	0.00	
2,940.11	8.15	310.330	2,922.36	165.49	-194.93	-193.63	0.00	0.00	0.00	
Fruitland										
3,000.00	8.15	310.330	2,981.65	170.98	-201.40	-200.05	0.00	0.00	0.00	
3,100.00	8.15	310.330	3,080.64	180.15	-212.20	-210.78	0.00	0.00	0.00	
3,197.61	8.15	310.330	3,177.27	189.10	-222.75	-221.26	0.00	0.00	0.00	
Pictured Cliffs										
3,200.00	8.15	310.330	3,179.63	189.32	-223.00	-221.51	0.00	0.00	0.00	
3,300.00	8.15	310.330	3,278.62	198.49	-233.81	-232.24	0.00	0.00	0.00	
3,400.00	8.15	310.330	3,377.61	207.66	-244.61	-242.97	0.00	0.00	0.00	
3,465.22	8.15	310.330	3,442.17	213.65	-251.65	-249.97	0.00	0.00	0.00	
Lewis										
3,500.00	8.15	310.330	3,476.60	216.84	-255.41	-253.70	0.00	0.00	0.00	
3,600.00	8.15	310.330	3,575.59	226.01	-266.21	-264.43	0.00	0.00	0.00	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)	
3,700.00	8.15	310.330	3,674.58	235.18	-277.01	-275.16	0.00	0.00	0.00	
3,768.17	8.15	310.330	3,742.06	241.43	-284.38	-282.48	0.00	0.00	0.00	
Chacra_A										
3,800.00	8.15	310.330	3,773.57	244.35	-287.82	-285.89	0.00	0.00	0.00	
3,900.00	8.15	310.330	3,872.56	253.52	-298.62	-296.62	0.00	0.00	0.00	
4,000.00	8.15	310.330	3,971.56	262.69	-309.42	-307.35	0.00	0.00	0.00	
4,100.00	8.15	310.330	4,070.55	271.86	-320.22	-318.08	0.00	0.00	0.00	
4,200.00	8.15	310.330	4,169.54	281.03	-331.03	-328.81	0.00	0.00	0.00	
4,300.00	8.15	310.330	4,268.53	290.20	-341.83	-339.54	0.00	0.00	0.00	
4,400.00	8.15	310.330	4,367.52	299.37	-352.63	-350.27	0.00	0.00	0.00	
4,500.00	8.15	310.330	4,466.51	308.54	-363.43	-361.00	0.00	0.00	0.00	
4,600.00	8.15	310.330	4,565.50	317.71	-374.23	-371.73	0.00	0.00	0.00	
4,700.00	8.15	310.330	4,664.49	326.88	-385.04	-382.46	0.00	0.00	0.00	
4,800.00	8.15	310.330	4,763.48	336.05	-395.84	-393.19	0.00	0.00	0.00	
4,884.03	8.15	310.330	4,846.67	343.76	-404.91	-402.21	0.00	0.00	0.00	
Cliff House										
4,900.00	8.15	310.330	4,862.47	345.22	-406.64	-403.92	0.00	0.00	0.00	
5,000.00	8.15	310.330	4,961.47	354.39	-417.44	-414.65	0.00	0.00	0.00	
5,015.31	8.15	310.330	4,976.62	355.80	-419.10	-416.29	0.00	0.00	0.00	
Menefee										
5,100.00	8.15	310.330	5,060.46	363.56	-428.24	-425.38	0.00	0.00	0.00	
5,168.23	8.15	310.330	5,128.00	369.82	-435.61	-432.70	0.00	0.00	0.00	
9 5/8" Csg										
5,200.00	8.15	310.330	5,159.45	372.74	-439.05	-436.11	0.00	0.00	0.00	
5,300.00	8.15	310.330	5,258.44	381.91	-449.85	-446.84	0.00	0.00	0.00	
5,400.00	8.15	310.330	5,357.43	391.08	-460.65	-457.57	0.00	0.00	0.00	
5,449.53	8.15	310.330	5,406.46	395.62	-466.00	-462.89	0.00	0.00	0.00	
Point Lookout										
5,500.00	8.15	310.330	5,456.42	400.25	-471.45	-468.30	0.00	0.00	0.00	
5,600.00	8.15	310.330	5,555.41	409.42	-482.25	-479.03	0.00	0.00	0.00	
5,700.00	8.15	310.330	5,654.40	418.59	-493.06	-489.76	0.00	0.00	0.00	
5,800.00	8.15	310.330	5,753.39	427.76	-503.86	-500.49	0.00	0.00	0.00	
5,863.57	8.15	310.330	5,816.32	433.59	-510.72	-507.31	0.00	0.00	0.00	
Mancos										
5,876.76	8.15	310.330	5,829.38	434.80	-512.15	-508.73	0.00	0.00	0.00	
Begin 3°/100' drop										
5,900.00	7.45	310.330	5,852.40	436.84	-514.55	-511.11	3.00	-3.00	0.00	
6,000.00	4.45	310.330	5,951.85	443.55	-522.45	-518.96	3.00	-3.00	0.00	
6,100.00	1.45	310.330	6,051.71	446.87	-526.37	-522.86	3.00	-3.00	0.00	
6,148.30	0.00	0.000	6,100.00	447.27	-526.84	-523.32	3.00	-3.00	0.00	
Begin vertical hold										
6,200.00	0.00	0.000	6,151.71	447.27	-526.84	-523.32	0.00	0.00	0.00	
6,283.70	0.00	0.000	6,235.40	447.27	-526.84	-523.32	0.00	0.00	0.00	
Begin 10°/100' build										
6,300.00	1.63	89.551	6,251.70	447.27	-526.61	-523.09	10.00	10.00	0.00	
6,350.00	6.63	89.551	6,301.56	447.30	-523.01	-519.49	10.00	10.00	0.00	
6,400.00	11.63	89.551	6,350.91	447.36	-515.08	-511.55	10.00	10.00	0.00	
6,418.86	13.52	89.551	6,369.32	447.39	-510.97	-507.45	10.00	10.00	0.00	
Gallup (MNCS_A)										
6,450.00	16.63	89.551	6,399.38	447.46	-502.87	-499.35	10.00	10.00	0.00	
6,500.00	21.63	89.551	6,446.60	447.59	-486.49	-482.97	10.00	10.00	0.00	
6,538.01	25.43	89.551	6,481.45	447.71	-471.32	-467.80	10.00	10.00	0.00	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
MNCS_B									
6,550.00	26.63	89.551	6,492.22	447.75	-466.06	-462.54	10.00	10.00	0.00
6,600.00	31.63	89.551	6,535.88	447.94	-441.73	-438.20	10.00	10.00	0.00
6,618.63	33.49	89.551	6,551.58	448.02	-431.70	-428.18	10.00	10.00	0.00
MNCS_C									
6,650.00	36.63	89.551	6,577.26	448.16	-413.68	-410.16	10.00	10.00	0.00
6,700.00	41.63	89.551	6,616.03	448.40	-382.14	-378.62	10.00	10.00	0.00
6,718.68	43.50	89.551	6,629.79	448.50	-369.51	-365.98	10.00	10.00	0.00
MNCS_E									
6,750.00	46.63	89.551	6,651.91	448.68	-347.34	-343.81	10.00	10.00	0.00
6,800.00	51.63	89.551	6,684.61	448.97	-309.54	-306.01	10.00	10.00	0.00
6,829.05	54.54	89.551	6,702.06	449.15	-286.32	-282.79	10.00	10.00	0.00
MNCS_F									
6,850.00	56.63	89.551	6,713.90	449.29	-269.04	-265.51	10.00	10.00	0.00
6,883.70	60.00	89.551	6,731.60	449.51	-240.37	-236.84	10.00	10.00	0.00
Begin 60.00° tangent									
6,900.00	60.00	89.551	6,739.75	449.63	-226.25	-222.72	0.00	0.00	0.00
6,943.70	60.00	89.551	6,761.60	449.92	-188.41	-184.88	0.00	0.00	0.00
Begin 10°/100' build									
6,950.00	60.63	89.551	6,764.72	449.97	-182.93	-179.40	10.00	10.00	0.00
6,966.18	62.25	89.551	6,772.45	450.08	-168.73	-165.19	10.00	10.00	0.00
MNCS_G									
7,000.00	65.63	89.551	6,787.31	450.31	-138.35	-134.81	10.00	10.00	0.00
7,040.42	69.67	89.551	6,802.68	450.61	-100.97	-97.43	10.00	10.00	0.00
MNCS_G_Ash - G_Ash @ OVS									
7,050.00	70.63	89.551	6,805.93	450.68	-91.96	-88.43	10.00	10.00	0.00
7,089.87	74.62	89.551	6,817.83	450.98	-53.92	-50.38	10.00	10.00	0.00
MNCS_H									
7,100.00	75.63	89.551	6,820.43	451.05	-44.13	-40.59	10.00	10.00	0.00
7,150.00	80.63	89.551	6,830.71	451.44	4.78	8.32	10.00	10.00	0.00
7,200.00	85.63	89.551	6,836.69	451.83	54.41	57.95	10.00	10.00	0.00
7,241.70	89.80	89.551	6,838.35	452.15	96.07	99.61	10.00	10.00	0.00
Begin 89.80° lateral									
7,300.00	89.80	89.551	6,838.56	452.61	154.36	157.91	0.00	0.00	0.00
7,400.00	89.80	89.551	6,838.91	453.39	254.36	257.90	0.00	0.00	0.00
7,500.00	89.80	89.551	6,839.25	454.18	354.36	357.90	0.00	0.00	0.00
7,600.00	89.80	89.551	6,839.60	454.96	454.35	457.90	0.00	0.00	0.00
7,700.00	89.80	89.551	6,839.95	455.74	554.35	557.90	0.00	0.00	0.00
7,800.00	89.80	89.551	6,840.30	456.53	654.34	657.90	0.00	0.00	0.00
7,900.00	89.80	89.551	6,840.64	457.31	754.34	757.90	0.00	0.00	0.00
8,000.00	89.80	89.551	6,840.99	458.09	854.34	857.90	0.00	0.00	0.00
8,100.00	89.80	89.551	6,841.34	458.88	954.33	957.90	0.00	0.00	0.00
8,200.00	89.80	89.551	6,841.69	459.66	1,054.33	1,057.90	0.00	0.00	0.00
8,300.00	89.80	89.551	6,842.04	460.45	1,154.33	1,157.90	0.00	0.00	0.00
8,400.00	89.80	89.551	6,842.38	461.23	1,254.32	1,257.90	0.00	0.00	0.00
8,500.00	89.80	89.551	6,842.73	462.01	1,354.32	1,357.90	0.00	0.00	0.00
8,600.00	89.80	89.551	6,843.08	462.80	1,454.32	1,457.90	0.00	0.00	0.00
8,700.00	89.80	89.551	6,843.43	463.58	1,554.31	1,557.90	0.00	0.00	0.00
8,800.00	89.80	89.551	6,843.77	464.36	1,654.31	1,657.90	0.00	0.00	0.00
8,900.00	89.80	89.551	6,844.12	465.15	1,754.30	1,757.90	0.00	0.00	0.00
9,000.00	89.80	89.551	6,844.47	465.93	1,854.30	1,857.89	0.00	0.00	0.00
9,100.00	89.80	89.551	6,844.82	466.72	1,954.30	1,957.89	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)	
9,200.00	89.80	89.551	6,845.17	467.50	2,054.29	2,057.89	0.00	0.00	0.00	
9,300.00	89.80	89.551	6,845.51	468.28	2,154.29	2,157.89	0.00	0.00	0.00	
9,400.00	89.80	89.551	6,845.86	469.07	2,254.29	2,257.89	0.00	0.00	0.00	
9,500.00	89.80	89.551	6,846.21	469.85	2,354.28	2,357.89	0.00	0.00	0.00	
9,600.00	89.80	89.551	6,846.56	470.63	2,454.28	2,457.89	0.00	0.00	0.00	
9,700.00	89.80	89.551	6,846.91	471.42	2,554.27	2,557.89	0.00	0.00	0.00	
9,800.00	89.80	89.551	6,847.25	472.20	2,654.27	2,657.89	0.00	0.00	0.00	
9,900.00	89.80	89.551	6,847.60	472.99	2,754.27	2,757.89	0.00	0.00	0.00	
10,000.00	89.80	89.551	6,847.95	473.77	2,854.26	2,857.89	0.00	0.00	0.00	
10,100.00	89.80	89.551	6,848.30	474.55	2,954.26	2,957.89	0.00	0.00	0.00	
10,200.00	89.80	89.551	6,848.64	475.34	3,054.26	3,057.89	0.00	0.00	0.00	
10,300.00	89.80	89.551	6,848.99	476.12	3,154.25	3,157.89	0.00	0.00	0.00	
10,400.00	89.80	89.551	6,849.34	476.90	3,254.25	3,257.89	0.00	0.00	0.00	
10,500.00	89.80	89.551	6,849.69	477.69	3,354.25	3,357.89	0.00	0.00	0.00	
10,600.00	89.80	89.551	6,850.04	478.47	3,454.24	3,457.89	0.00	0.00	0.00	
10,700.00	89.80	89.551	6,850.38	479.25	3,554.24	3,557.88	0.00	0.00	0.00	
10,800.00	89.80	89.551	6,850.73	480.04	3,654.23	3,657.88	0.00	0.00	0.00	
10,900.00	89.80	89.551	6,851.08	480.82	3,754.23	3,757.88	0.00	0.00	0.00	
11,000.00	89.80	89.551	6,851.43	481.61	3,854.23	3,857.88	0.00	0.00	0.00	
11,100.00	89.80	89.551	6,851.77	482.39	3,954.22	3,957.88	0.00	0.00	0.00	
11,200.00	89.80	89.551	6,852.12	483.17	4,054.22	4,057.88	0.00	0.00	0.00	
11,300.00	89.80	89.551	6,852.47	483.96	4,154.22	4,157.88	0.00	0.00	0.00	
11,400.00	89.80	89.551	6,852.82	484.74	4,254.21	4,257.88	0.00	0.00	0.00	
11,500.00	89.80	89.551	6,853.17	485.52	4,354.21	4,357.88	0.00	0.00	0.00	
11,600.00	89.80	89.551	6,853.51	486.31	4,454.21	4,457.88	0.00	0.00	0.00	
11,700.00	89.80	89.551	6,853.86	487.09	4,554.20	4,557.88	0.00	0.00	0.00	
11,800.00	89.80	89.551	6,854.21	487.88	4,654.20	4,657.88	0.00	0.00	0.00	
11,900.00	89.80	89.551	6,854.56	488.66	4,754.19	4,757.88	0.00	0.00	0.00	
12,000.00	89.80	89.551	6,854.91	489.44	4,854.19	4,857.88	0.00	0.00	0.00	
12,100.00	89.80	89.551	6,855.25	490.23	4,954.19	4,957.88	0.00	0.00	0.00	
12,200.00	89.80	89.551	6,855.60	491.01	5,054.18	5,057.88	0.00	0.00	0.00	
12,300.00	89.80	89.551	6,855.95	491.79	5,154.18	5,157.87	0.00	0.00	0.00	
12,400.00	89.80	89.551	6,856.30	492.58	5,254.18	5,257.87	0.00	0.00	0.00	
12,500.00	89.80	89.551	6,856.64	493.36	5,354.17	5,357.87	0.00	0.00	0.00	
12,600.00	89.80	89.551	6,856.99	494.15	5,454.17	5,457.87	0.00	0.00	0.00	
12,700.00	89.80	89.551	6,857.34	494.93	5,554.16	5,557.87	0.00	0.00	0.00	
12,800.00	89.80	89.551	6,857.69	495.71	5,654.16	5,657.87	0.00	0.00	0.00	
12,900.00	89.80	89.551	6,858.04	496.50	5,754.16	5,757.87	0.00	0.00	0.00	
13,000.00	89.80	89.551	6,858.38	497.28	5,854.15	5,857.87	0.00	0.00	0.00	
13,100.00	89.80	89.551	6,858.73	498.06	5,954.15	5,957.87	0.00	0.00	0.00	
13,200.00	89.80	89.551	6,859.08	498.85	6,054.15	6,057.87	0.00	0.00	0.00	
13,300.00	89.80	89.551	6,859.43	499.63	6,154.14	6,157.87	0.00	0.00	0.00	
13,400.00	89.80	89.551	6,859.77	500.41	6,254.14	6,257.87	0.00	0.00	0.00	
13,500.00	89.80	89.551	6,860.12	501.20	6,354.14	6,357.87	0.00	0.00	0.00	
13,600.00	89.80	89.551	6,860.47	501.98	6,454.13	6,457.87	0.00	0.00	0.00	
13,700.00	89.80	89.551	6,860.82	502.77	6,554.13	6,557.87	0.00	0.00	0.00	
13,800.00	89.80	89.551	6,861.17	503.55	6,654.12	6,657.87	0.00	0.00	0.00	
13,900.00	89.80	89.551	6,861.51	504.33	6,754.12	6,757.87	0.00	0.00	0.00	
14,000.00	89.80	89.551	6,861.86	505.12	6,854.12	6,857.86	0.00	0.00	0.00	
14,100.00	89.80	89.551	6,862.21	505.90	6,954.11	6,957.86	0.00	0.00	0.00	
14,200.00	89.80	89.551	6,862.56	506.68	7,054.11	7,057.86	0.00	0.00	0.00	
14,300.00	89.80	89.551	6,862.91	507.47	7,154.11	7,157.86	0.00	0.00	0.00	
14,400.00	89.80	89.551	6,863.25	508.25	7,254.10	7,257.86	0.00	0.00	0.00	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
14,500.00	89.80	89.551	6,863.60	509.04	7,354.10	7,357.86	0.00	0.00	0.00
14,600.00	89.80	89.551	6,863.95	509.82	7,454.09	7,457.86	0.00	0.00	0.00
14,700.00	89.80	89.551	6,864.30	510.60	7,554.09	7,557.86	0.00	0.00	0.00
14,800.00	89.80	89.551	6,864.64	511.39	7,654.09	7,657.86	0.00	0.00	0.00
14,900.00	89.80	89.551	6,864.99	512.17	7,754.08	7,757.86	0.00	0.00	0.00
15,000.00	89.80	89.551	6,865.34	512.95	7,854.08	7,857.86	0.00	0.00	0.00
15,100.00	89.80	89.551	6,865.69	513.74	7,954.08	7,957.86	0.00	0.00	0.00
15,200.00	89.80	89.551	6,866.04	514.52	8,054.07	8,057.86	0.00	0.00	0.00
15,300.00	89.80	89.551	6,866.38	515.31	8,154.07	8,157.86	0.00	0.00	0.00
15,400.00	89.80	89.551	6,866.73	516.09	8,254.07	8,257.86	0.00	0.00	0.00
15,500.00	89.80	89.551	6,867.08	516.87	8,354.06	8,357.86	0.00	0.00	0.00
15,600.00	89.80	89.551	6,867.43	517.66	8,454.06	8,457.86	0.00	0.00	0.00
15,700.00	89.80	89.551	6,867.78	518.44	8,554.05	8,557.85	0.00	0.00	0.00
15,800.00	89.80	89.551	6,868.12	519.22	8,654.05	8,657.85	0.00	0.00	0.00
15,900.00	89.80	89.551	6,868.47	520.01	8,754.05	8,757.85	0.00	0.00	0.00
16,000.00	89.80	89.551	6,868.82	520.79	8,854.04	8,857.85	0.00	0.00	0.00
16,100.00	89.80	89.551	6,869.17	521.58	8,954.04	8,957.85	0.00	0.00	0.00
16,200.00	89.80	89.551	6,869.51	522.36	9,054.04	9,057.85	0.00	0.00	0.00
16,300.00	89.80	89.551	6,869.86	523.14	9,154.03	9,157.85	0.00	0.00	0.00
16,400.00	89.80	89.551	6,870.21	523.93	9,254.03	9,257.85	0.00	0.00	0.00
16,500.00	89.80	89.551	6,870.56	524.71	9,354.02	9,357.85	0.00	0.00	0.00
16,600.00	89.80	89.551	6,870.91	525.49	9,454.02	9,457.85	0.00	0.00	0.00
16,700.00	89.80	89.551	6,871.25	526.28	9,554.02	9,557.85	0.00	0.00	0.00
16,800.00	89.80	89.551	6,871.60	527.06	9,654.01	9,657.85	0.00	0.00	0.00
16,900.00	89.80	89.551	6,871.95	527.84	9,754.01	9,757.85	0.00	0.00	0.00
17,000.00	89.80	89.551	6,872.30	528.63	9,854.01	9,857.85	0.00	0.00	0.00
17,100.00	89.80	89.551	6,872.64	529.41	9,954.00	9,957.85	0.00	0.00	0.00
17,200.00	89.80	89.551	6,872.99	530.20	10,054.00	10,057.85	0.00	0.00	0.00
17,300.00	89.80	89.551	6,873.34	530.98	10,154.00	10,157.84	0.00	0.00	0.00
17,400.00	89.80	89.551	6,873.69	531.76	10,253.99	10,257.84	0.00	0.00	0.00
17,500.00	89.80	89.551	6,874.04	532.55	10,353.99	10,357.84	0.00	0.00	0.00
17,600.00	89.80	89.551	6,874.38	533.33	10,453.98	10,457.84	0.00	0.00	0.00
17,700.00	89.80	89.551	6,874.73	534.11	10,553.98	10,557.84	0.00	0.00	0.00
17,800.00	89.80	89.551	6,875.08	534.90	10,653.98	10,657.84	0.00	0.00	0.00
17,900.00	89.80	89.551	6,875.43	535.68	10,753.97	10,757.84	0.00	0.00	0.00
18,000.00	89.80	89.551	6,875.78	536.47	10,853.97	10,857.84	0.00	0.00	0.00
18,100.00	89.80	89.551	6,876.12	537.25	10,953.97	10,957.84	0.00	0.00	0.00
18,200.00	89.80	89.551	6,876.47	538.03	11,053.96	11,057.84	0.00	0.00	0.00
18,300.00	89.80	89.551	6,876.82	538.82	11,153.96	11,157.84	0.00	0.00	0.00
18,400.00	89.80	89.551	6,877.17	539.60	11,253.96	11,257.84	0.00	0.00	0.00
18,500.00	89.80	89.551	6,877.51	540.38	11,353.95	11,357.84	0.00	0.00	0.00
18,600.00	89.80	89.551	6,877.86	541.17	11,453.95	11,457.84	0.00	0.00	0.00
18,639.68	89.80	89.551	6,878.00	541.48	11,493.62	11,497.51	0.00	0.00	0.00
PBHL/TD @ 18639.68 MD 6878.00 TVD									



Planning Report

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Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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
Rincon 815 vert r1 - plan hits target center - Point	0.00	0.000	6,235.40	447.27	-526.84	2,025,217.942	2,829,868.236	36.565130079	-107.469731206
Rincon 815 VS=0 r1 - plan misses target center by 7.98ft at 7146.81ft MD (6830.19 TVD, 451.41 N, 1.64 E) - Point	0.00	0.000	6,838.00	451.40	0.00	2,025,222.072	2,830,395.075	36.565135939	-107.467937161
Rincon 815 FTP 713 FN - plan hits target center - Point	0.00	0.000	6,838.35	452.15	96.07	2,025,222.824	2,830,491.149	36.565137000	-107.467610000
Rincon 815 LTP 710 FNI - plan hits target center - Point	0.00	0.000	6,878.00	541.48	11,493.62	2,025,312.151	2,841,888.675	36.565257000	-107.428798000

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	13 3/8" Csg	13-3/8	17-1/2	
5,168.23	5,128.00	9 5/8" Csg	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,561.42	2,547.49	Ojo Alamo		0.19	89.579	
2,657.36	2,642.46	Kirtland		0.19	89.579	
2,940.11	2,922.36	Fruitland		0.19	89.579	
3,197.61	3,177.27	Pictured Cliffs		0.19	89.579	
3,465.22	3,442.17	Lewis		0.19	89.579	
3,768.17	3,742.06	Chacra_A		0.19	89.579	
4,884.03	4,846.67	Cliff House		0.19	89.579	
5,015.31	4,976.62	Menefee		0.19	89.579	
5,449.53	5,406.46	Point Lookout		0.19	89.579	
5,863.57	5,816.32	Mancos		0.19	89.579	
6,418.86	6,369.32	Gallup (MNCS_A)		0.19	89.579	
6,538.01	6,481.45	MNCS_B		0.19	89.579	
6,618.63	6,551.58	MNCS_C		0.19	89.579	
6,718.68	6,629.79	MNCS_E		0.19	89.579	
6,829.05	6,702.06	MNCS_F		0.19	89.579	
6,966.18	6,772.45	MNCS_G		0.19	89.579	
7,040.42	6,802.68	MNCS_G_Ash		0.19	89.579	
7,040.42	6,802.68	G_Ash @ 0VS		0.19	89.579	
7,089.87	6,817.83	MNCS_H		0.19	89.579	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build
1,271.54	1,270.62	12.47	-14.69	Begin 8.15° tangent
5,876.76	5,829.38	434.80	-512.15	Begin 3°/100' drop
6,148.30	6,100.00	447.27	-526.84	Begin vertical hold
6,283.70	6,235.40	447.27	-526.84	Begin 10°/100' build
6,883.70	6,731.60	449.51	-240.37	Begin 60.00° tangent
6,943.70	6,761.60	449.92	-188.41	Begin 10°/100' build
7,241.70	6,838.35	452.15	96.07	Begin 89.80° lateral
18,639.68	6,878.00	541.48	11,493.62	PBHL/TD @ 18639.68 MD 6878.00 TVD



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Project	Rio Arriba County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Rincon pad (613, 615, 713, 715,815,817,915 & 917)				
Site Position:		Northing:	2,024,818.244 usft	Latitude:	36.564026000
From:	Lat/Long	Easting:	2,830,459.503 usft	Longitude:	-107.467723000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Rincon Unit 815H, Surf loc: 1164 FNL 1289 FEL Section 21-T27N-R06W					
Well Position	+N/-S	0.00 ft	Northing:	2,024,770.673 usft	Latitude:	36.563896000
	+E/-W	0.00 ft	Easting:	2,830,395.075 usft	Longitude:	-107.467943000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,538.00 ft
Grid Convergence:		0.22 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	7/21/2023	8.50	63.03	49,320.27685886

Design	rev1				
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	89.551	

Plan Survey Tool Program	Date	7/21/2023			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	18,639.65 rev1 (Original Hole)	MWD		
			OWSG MWD - Standard		



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,271.54	8.15	310.330	1,270.62	12.47	-14.69	3.00	3.00	0.00	310.33	
5,876.76	8.15	310.330	5,829.38	434.80	-512.15	0.00	0.00	0.00	0.00	
6,148.30	0.00	0.000	6,100.00	447.27	-526.84	3.00	-3.00	0.00	180.00	
6,283.70	0.00	0.000	6,235.40	447.27	-526.84	0.00	0.00	0.00	0.00	Rincon 815 vert r1
6,883.70	60.00	89.551	6,731.60	449.51	-240.37	10.00	10.00	0.00	89.55	
6,943.70	60.00	89.551	6,761.60	449.92	-188.41	0.00	0.00	0.00	0.00	
7,241.70	89.80	89.551	6,838.35	452.15	96.07	10.00	10.00	0.00	0.00	
18,639.68	89.80	89.551	6,878.00	541.48	11,493.62	0.00	0.00	0.00	0.00	Rincon 815 LTP 710 f



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
100.00	0.00	0.000	100.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
200.00	0.00	0.000	200.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
300.00	0.00	0.000	300.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
350.00	0.00	0.000	350.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
13 3/8" Csg									
400.00	0.00	0.000	400.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
500.00	0.00	0.000	500.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
600.00	0.00	0.000	600.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
700.00	0.00	0.000	700.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
800.00	0.00	0.000	800.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
900.00	0.00	0.000	900.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
1,000.00	0.00	0.000	1,000.00	0.00	0.00	2,024,770.673	2,830,395.075	36.563896000	-107.467943000
KOP Begin 3°/100' build									
1,100.00	3.00	310.330	1,099.95	1.69	-2.00	2,024,772.367	2,830,393.080	36.563900674	-107.467949773
1,200.00	6.00	310.330	1,199.63	6.77	-7.98	2,024,777.444	2,830,387.099	36.563914683	-107.467970071
1,271.54	8.15	310.330	1,270.62	12.47	-14.69	2,024,783.145	2,830,380.385	36.563930412	-107.467992863
Begin 8.15° tangent									
1,300.00	8.15	310.330	1,298.80	15.08	-17.77	2,024,785.755	2,830,377.310	36.563937614	-107.468003298
1,400.00	8.15	310.330	1,397.79	24.25	-28.57	2,024,794.926	2,830,366.508	36.563962917	-107.468039962
1,500.00	8.15	310.330	1,496.78	33.42	-39.37	2,024,804.096	2,830,355.706	36.563988220	-107.468076626
1,600.00	8.15	310.330	1,595.77	42.59	-50.17	2,024,813.267	2,830,344.904	36.564013523	-107.468113290
1,700.00	8.15	310.330	1,694.76	51.76	-60.97	2,024,822.437	2,830,334.102	36.564038826	-107.468149954
1,800.00	8.15	310.330	1,793.75	60.93	-71.78	2,024,831.608	2,830,323.300	36.564064130	-107.468186618
1,900.00	8.15	310.330	1,892.74	70.11	-82.58	2,024,840.779	2,830,312.498	36.564089433	-107.468223282
2,000.00	8.15	310.330	1,991.74	79.28	-93.38	2,024,849.949	2,830,301.696	36.564114736	-107.468259946
2,100.00	8.15	310.330	2,090.73	88.45	-104.18	2,024,859.120	2,830,290.894	36.564140039	-107.468296610
2,200.00	8.15	310.330	2,189.72	97.62	-114.98	2,024,868.290	2,830,280.092	36.564165342	-107.468333274
2,300.00	8.15	310.330	2,288.71	106.79	-125.79	2,024,877.461	2,830,269.290	36.564190645	-107.468369938
2,400.00	8.15	310.330	2,387.70	115.96	-136.59	2,024,886.631	2,830,258.488	36.564215948	-107.468406603
2,500.00	8.15	310.330	2,486.69	125.13	-147.39	2,024,895.802	2,830,247.686	36.564241251	-107.468443267
2,561.42	8.15	310.330	2,547.49	130.76	-154.02	2,024,901.435	2,830,241.051	36.564256793	-107.468465786
Ojo Alamo									
2,600.00	8.15	310.330	2,585.68	134.30	-158.19	2,024,904.973	2,830,236.884	36.564266554	-107.468479931
2,657.36	8.15	310.330	2,642.46	139.56	-164.39	2,024,910.232	2,830,230.688	36.564281067	-107.468500960
Kirtland									
2,700.00	8.15	310.330	2,684.67	143.47	-168.99	2,024,914.143	2,830,226.082	36.564291857	-107.468516595
2,800.00	8.15	310.330	2,783.66	152.64	-179.80	2,024,923.314	2,830,215.280	36.564317160	-107.468553259
2,900.00	8.15	310.330	2,882.65	161.81	-190.60	2,024,932.484	2,830,204.477	36.564342463	-107.468589924
2,940.11	8.15	310.330	2,922.36	165.49	-194.93	2,024,936.163	2,830,200.145	36.564352612	-107.468604629
Fruitland									
3,000.00	8.15	310.330	2,981.65	170.98	-201.40	2,024,941.655	2,830,193.675	36.564367766	-107.468626588
3,100.00	8.15	310.330	3,080.64	180.15	-212.20	2,024,950.826	2,830,182.873	36.564393069	-107.468663252
3,197.61	8.15	310.330	3,177.27	189.10	-222.75	2,024,959.777	2,830,172.329	36.564417769	-107.468699042
Pictured Cliffs									
3,200.00	8.15	310.330	3,179.63	189.32	-223.00	2,024,959.996	2,830,172.071	36.564418372	-107.468699917
3,300.00	8.15	310.330	3,278.62	198.49	-233.81	2,024,969.167	2,830,161.269	36.564443675	-107.468736581
3,400.00	8.15	310.330	3,377.61	207.66	-244.61	2,024,978.337	2,830,150.467	36.564468978	-107.468773246
3,465.22	8.15	310.330	3,442.17	213.65	-251.65	2,024,984.318	2,830,143.422	36.564485481	-107.468797158
Lewis									
3,500.00	8.15	310.330	3,476.60	216.84	-255.41	2,024,987.508	2,830,139.665	36.564494281	-107.468809910
3,600.00	8.15	310.330	3,575.59	226.01	-266.21	2,024,996.678	2,830,128.863	36.564519584	-107.468846575
3,700.00	8.15	310.330	3,674.58	235.18	-277.01	2,025,005.849	2,830,118.061	36.564544887	-107.468883239



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
3,768.17	8.15	310.330	3,742.06	241.43	-284.38	2,025,012.100	2,830,110.698	36.564562136	-107.468908233	
Chacra_A										
3,800.00	8.15	310.330	3,773.57	244.35	-287.82	2,025,015.020	2,830,107.259	36.564570190	-107.468919904	
3,900.00	8.15	310.330	3,872.56	253.52	-298.62	2,025,024.190	2,830,096.457	36.564595493	-107.468956568	
4,000.00	8.15	310.330	3,971.56	262.69	-309.42	2,025,033.361	2,830,085.655	36.564620796	-107.468993233	
4,100.00	8.15	310.330	4,070.55	271.86	-320.22	2,025,042.531	2,830,074.853	36.564646099	-107.469029897	
4,200.00	8.15	310.330	4,169.54	281.03	-331.03	2,025,051.702	2,830,064.051	36.564671402	-107.469066562	
4,300.00	8.15	310.330	4,268.53	290.20	-341.83	2,025,060.873	2,830,053.249	36.564696705	-107.469103226	
4,400.00	8.15	310.330	4,367.52	299.37	-352.63	2,025,070.043	2,830,042.447	36.564722007	-107.469139891	
4,500.00	8.15	310.330	4,466.51	308.54	-363.43	2,025,079.214	2,830,031.645	36.564747310	-107.469176556	
4,600.00	8.15	310.330	4,565.50	317.71	-374.23	2,025,088.384	2,830,020.843	36.564772613	-107.469213220	
4,700.00	8.15	310.330	4,664.49	326.88	-385.04	2,025,097.555	2,830,010.041	36.564797916	-107.469249885	
4,800.00	8.15	310.330	4,763.48	336.05	-395.84	2,025,106.725	2,829,999.239	36.564823219	-107.469286550	
4,884.03	8.15	310.330	4,846.67	343.76	-404.91	2,025,114.432	2,829,990.162	36.564844481	-107.469317359	
Cliff House										
4,900.00	8.15	310.330	4,862.47	345.22	-406.64	2,025,115.896	2,829,988.437	36.564848522	-107.469323215	
5,000.00	8.15	310.330	4,961.47	354.39	-417.44	2,025,125.067	2,829,977.635	36.564873824	-107.469359880	
5,015.31	8.15	310.330	4,976.62	355.80	-419.10	2,025,126.470	2,829,975.981	36.564877698	-107.469365492	
Menefee										
5,100.00	8.15	310.330	5,060.46	363.56	-428.24	2,025,134.237	2,829,966.833	36.564899127	-107.469396544	
5,168.23	8.15	310.330	5,128.00	369.82	-435.61	2,025,140.495	2,829,959.462	36.564916392	-107.469421562	
9 5/8" Csg										
5,200.00	8.15	310.330	5,159.45	372.74	-439.05	2,025,143.408	2,829,956.030	36.564924430	-107.469433209	
5,300.00	8.15	310.330	5,258.44	381.91	-449.85	2,025,152.578	2,829,945.228	36.564949733	-107.469469874	
5,400.00	8.15	310.330	5,357.43	391.08	-460.65	2,025,161.749	2,829,934.426	36.564975035	-107.469506539	
5,449.53	8.15	310.330	5,406.46	395.62	-466.00	2,025,166.292	2,829,929.076	36.564987569	-107.469524701	
Point Lookout										
5,500.00	8.15	310.330	5,456.42	400.25	-471.45	2,025,170.920	2,829,923.624	36.565000338	-107.469543204	
5,600.00	8.15	310.330	5,555.41	409.42	-482.25	2,025,180.090	2,829,912.822	36.565025641	-107.469579869	
5,700.00	8.15	310.330	5,654.40	418.59	-493.06	2,025,189.261	2,829,902.020	36.565050943	-107.469616534	
5,800.00	8.15	310.330	5,753.39	427.76	-503.86	2,025,198.431	2,829,891.218	36.565076246	-107.469653199	
5,863.57	8.15	310.330	5,816.32	433.59	-510.72	2,025,204.261	2,829,884.352	36.565092330	-107.469676505	
Mancos										
5,876.76	8.15	310.330	5,829.38	434.80	-512.15	2,025,205.470	2,829,882.927	36.565095668	-107.469681342	
Begin 3°/100' drop										
5,900.00	7.45	310.330	5,852.40	436.84	-514.55	2,025,207.511	2,829,880.523	36.565101299	-107.469689501	
6,000.00	4.45	310.330	5,951.85	443.55	-522.45	2,025,214.218	2,829,872.623	36.565119803	-107.469716316	
6,100.00	1.45	310.330	6,051.71	446.87	-526.37	2,025,217.547	2,829,868.702	36.565128989	-107.469729626	
6,148.30	0.00	0.000	6,100.00	447.27	-526.84	2,025,217.942	2,829,868.236	36.565130079	-107.469731206	
Begin vertical hold										
6,200.00	0.00	0.000	6,151.71	447.27	-526.84	2,025,217.942	2,829,868.236	36.565130079	-107.469731206	
6,283.70	0.00	0.000	6,235.40	447.27	-526.84	2,025,217.942	2,829,868.236	36.565130079	-107.469731206	
Begin 10°/100' build										
6,300.00	1.63	89.551	6,251.70	447.27	-526.61	2,025,217.944	2,829,868.468	36.565130082	-107.469730416	
6,350.00	6.63	89.551	6,301.56	447.30	-523.01	2,025,217.972	2,829,872.068	36.565130122	-107.469718156	
6,400.00	11.63	89.551	6,350.91	447.36	-515.08	2,025,218.034	2,829,880.000	36.565130210	-107.469691147	
6,418.86	13.52	89.551	6,369.32	447.39	-510.97	2,025,218.067	2,829,884.106	36.565130256	-107.469677166	
Gallup (MNCS_A)										
6,450.00	16.63	89.551	6,399.38	447.46	-502.87	2,025,218.130	2,829,892.202	36.565130346	-107.469649595	
6,500.00	21.63	89.551	6,446.60	447.59	-486.49	2,025,218.258	2,829,908.582	36.565130528	-107.469593815	
6,538.01	25.43	89.551	6,481.45	447.71	-471.32	2,025,218.377	2,829,923.755	36.565130697	-107.469542147	
MNCS_B										



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
6,550.00	26.63	89.551	6,492.22	447.75	-466.06	2,025,218.419	2,829,929.016	36.565130756	-107.469524232	
6,600.00	31.63	89.551	6,535.88	447.94	-441.73	2,025,218.609	2,829,953.348	36.565131027	-107.469441376	
6,618.63	33.49	89.551	6,551.58	448.02	-431.70	2,025,218.688	2,829,963.372	36.565131138	-107.469407241	
MNCS_C										
6,650.00	36.63	89.551	6,577.26	448.16	-413.68	2,025,218.829	2,829,981.392	36.565131339	-107.469345877	
6,700.00	41.63	89.551	6,616.03	448.40	-382.14	2,025,219.076	2,830,012.935	36.565131690	-107.469238463	
6,718.68	43.50	89.551	6,629.79	448.50	-369.51	2,025,219.175	2,830,025.568	36.565131831	-107.469195443	
MNCS_E										
6,750.00	46.63	89.551	6,651.91	448.68	-347.34	2,025,219.349	2,830,047.738	36.565132077	-107.469119949	
6,800.00	51.63	89.551	6,684.61	448.97	-309.54	2,025,219.645	2,830,085.535	36.565132498	-107.468991240	
6,829.05	54.54	89.551	6,702.06	449.15	-286.32	2,025,219.827	2,830,108.759	36.565132756	-107.468912153	
MNCS_F										
6,850.00	56.63	89.551	6,713.90	449.29	-269.04	2,025,219.963	2,830,126.038	36.565132948	-107.468853313	
6,883.70	60.00	89.551	6,731.60	449.51	-240.37	2,025,220.187	2,830,154.706	36.565133267	-107.468755691	
Begin 60.00° tangent										
6,900.00	60.00	89.551	6,739.75	449.63	-226.25	2,025,220.298	2,830,168.826	36.565133424	-107.468707608	
6,943.70	60.00	89.551	6,761.60	449.92	-188.41	2,025,220.594	2,830,206.666	36.565133844	-107.468578752	
Begin 10°/100' build										
6,950.00	60.63	89.551	6,764.72	449.97	-182.93	2,025,220.637	2,830,212.143	36.565133905	-107.468560100	
6,966.18	62.25	89.551	6,772.45	450.08	-168.73	2,025,220.749	2,830,226.349	36.565134063	-107.468511724	
MNCS_G										
7,000.00	65.63	89.551	6,787.31	450.31	-138.35	2,025,220.987	2,830,256.729	36.565134400	-107.468408270	
7,040.42	69.67	89.551	6,802.68	450.61	-100.97	2,025,221.280	2,830,294.107	36.565134815	-107.468280989	
MNCS_G_Ash - G_Ash @ 0VS										
7,050.00	70.63	89.551	6,805.93	450.68	-91.96	2,025,221.350	2,830,303.115	36.565134915	-107.468250314	
7,089.87	74.62	89.551	6,817.83	450.98	-53.92	2,025,221.648	2,830,341.156	36.565135337	-107.468120773	
MNCS_H										
7,100.00	75.63	89.551	6,820.43	451.05	-44.13	2,025,221.725	2,830,350.946	36.565135446	-107.468087433	
7,150.00	80.63	89.551	6,830.71	451.44	4.78	2,025,222.108	2,830,399.860	36.565135988	-107.467920867	
7,200.00	85.63	89.551	6,836.69	451.83	54.41	2,025,222.497	2,830,449.484	36.565136539	-107.467751883	
7,241.70	89.80	89.551	6,838.35	452.15	96.07	2,025,222.824	2,830,491.142	36.565137001	-107.467610023	
Begin 89.80° lateral										
7,300.00	89.80	89.551	6,838.56	452.61	154.36	2,025,223.281	2,830,549.438	36.565137646	-107.467411509	
7,400.00	89.80	89.551	6,838.91	453.39	254.36	2,025,224.064	2,830,649.434	36.565138754	-107.467070993	
7,500.00	89.80	89.551	6,839.25	454.18	354.36	2,025,224.848	2,830,749.430	36.565139860	-107.466730476	
7,600.00	89.80	89.551	6,839.60	454.96	454.35	2,025,225.632	2,830,849.426	36.565140965	-107.466389959	
7,700.00	89.80	89.551	6,839.95	455.74	554.35	2,025,226.416	2,830,949.422	36.565142069	-107.466049442	
7,800.00	89.80	89.551	6,840.30	456.53	654.34	2,025,227.199	2,831,049.418	36.565143173	-107.465708925	
7,900.00	89.80	89.551	6,840.64	457.31	754.34	2,025,227.983	2,831,149.415	36.565144275	-107.465368408	
8,000.00	89.80	89.551	6,840.99	458.09	854.34	2,025,228.767	2,831,249.411	36.565145376	-107.465027892	
8,100.00	89.80	89.551	6,841.34	458.88	954.33	2,025,229.550	2,831,349.407	36.565146477	-107.464687375	
8,200.00	89.80	89.551	6,841.69	459.66	1,054.33	2,025,230.334	2,831,449.403	36.565147576	-107.464346858	
8,300.00	89.80	89.551	6,842.04	460.45	1,154.33	2,025,231.118	2,831,549.399	36.565148675	-107.464006341	
8,400.00	89.80	89.551	6,842.38	461.23	1,254.32	2,025,231.902	2,831,649.395	36.565149772	-107.463665824	
8,500.00	89.80	89.551	6,842.73	462.01	1,354.32	2,025,232.685	2,831,749.392	36.565150869	-107.463325307	
8,600.00	89.80	89.551	6,843.08	462.80	1,454.32	2,025,233.469	2,831,849.388	36.565151964	-107.462984790	
8,700.00	89.80	89.551	6,843.43	463.58	1,554.31	2,025,234.253	2,831,949.385	36.565153059	-107.462644274	
8,800.00	89.80	89.551	6,843.77	464.36	1,654.31	2,025,235.036	2,832,049.381	36.565154152	-107.462303757	
8,900.00	89.80	89.551	6,844.12	465.15	1,754.30	2,025,235.820	2,832,149.377	36.565155245	-107.461963240	
9,000.00	89.80	89.551	6,844.47	465.93	1,854.30	2,025,236.604	2,832,249.373	36.565156336	-107.461622723	
9,100.00	89.80	89.551	6,844.82	466.72	1,954.30	2,025,237.387	2,832,349.369	36.565157427	-107.461282206	
9,200.00	89.80	89.551	6,845.17	467.50	2,054.29	2,025,238.171	2,832,449.365	36.565158517	-107.460941689	
9,300.00	89.80	89.551	6,845.51	468.28	2,154.29	2,025,238.955	2,832,549.361	36.565159605	-107.460601172	



Planning Report - Geographic

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Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,400.00	89.80	89.551	6,845.86	469.07	2,254.29	2,025,239.739	2,832,649.357	36.565160693	-107.460260656
9,500.00	89.80	89.551	6,846.21	469.85	2,354.28	2,025,240.522	2,832,749.354	36.565161780	-107.459920139
9,600.00	89.80	89.551	6,846.56	470.63	2,454.28	2,025,241.306	2,832,849.350	36.565162866	-107.459579622
9,700.00	89.80	89.551	6,846.91	471.42	2,554.27	2,025,242.090	2,832,949.346	36.565163951	-107.459239105
9,800.00	89.80	89.551	6,847.25	472.20	2,654.27	2,025,242.873	2,833,049.342	36.565165034	-107.458898588
9,900.00	89.80	89.551	6,847.60	472.99	2,754.27	2,025,243.657	2,833,149.338	36.565166117	-107.458558071
10,000.00	89.80	89.551	6,847.95	473.77	2,854.26	2,025,244.441	2,833,249.334	36.565167199	-107.458217554
10,100.00	89.80	89.551	6,848.30	474.55	2,954.26	2,025,245.225	2,833,349.330	36.565168280	-107.457877038
10,200.00	89.80	89.551	6,848.64	475.34	3,054.26	2,025,246.008	2,833,449.326	36.565169360	-107.457536521
10,300.00	89.80	89.551	6,848.99	476.12	3,154.25	2,025,246.792	2,833,549.322	36.565170439	-107.457196004
10,400.00	89.80	89.551	6,849.34	476.90	3,254.25	2,025,247.576	2,833,649.319	36.565171517	-107.456855487
10,500.00	89.80	89.551	6,849.69	477.69	3,354.25	2,025,248.359	2,833,749.315	36.565172594	-107.456514970
10,600.00	89.80	89.551	6,850.04	478.47	3,454.24	2,025,249.143	2,833,849.311	36.565173670	-107.456174453
10,700.00	89.80	89.551	6,850.38	479.25	3,554.24	2,025,249.927	2,833,949.307	36.565174745	-107.455833936
10,800.00	89.80	89.551	6,850.73	480.04	3,654.23	2,025,250.711	2,834,049.303	36.565175819	-107.455493419
10,900.00	89.80	89.551	6,851.08	480.82	3,754.23	2,025,251.494	2,834,149.299	36.565176893	-107.455152903
11,000.00	89.80	89.551	6,851.43	481.61	3,854.23	2,025,252.278	2,834,249.295	36.565177965	-107.454812386
11,100.00	89.80	89.551	6,851.77	482.39	3,954.22	2,025,253.062	2,834,349.291	36.565179036	-107.454471869
11,200.00	89.80	89.551	6,852.12	483.17	4,054.22	2,025,253.845	2,834,449.288	36.565180106	-107.454131352
11,300.00	89.80	89.551	6,852.47	483.96	4,154.22	2,025,254.629	2,834,549.284	36.565181175	-107.453790835
11,400.00	89.80	89.551	6,852.82	484.74	4,254.21	2,025,255.413	2,834,649.280	36.565182244	-107.453450318
11,500.00	89.80	89.551	6,853.17	485.52	4,354.21	2,025,256.197	2,834,749.276	36.565183311	-107.453109801
11,600.00	89.80	89.551	6,853.51	486.31	4,454.21	2,025,256.980	2,834,849.272	36.565184377	-107.452769284
11,700.00	89.80	89.551	6,853.86	487.09	4,554.20	2,025,257.764	2,834,949.268	36.565185443	-107.452428767
11,800.00	89.80	89.551	6,854.21	487.88	4,654.20	2,025,258.548	2,835,049.264	36.565186507	-107.452088251
11,900.00	89.80	89.551	6,854.56	488.66	4,754.19	2,025,259.331	2,835,149.260	36.565187571	-107.451747734
12,000.00	89.80	89.551	6,854.91	489.44	4,854.19	2,025,260.115	2,835,249.257	36.565188633	-107.451407217
12,100.00	89.80	89.551	6,855.25	490.23	4,954.19	2,025,260.899	2,835,349.253	36.565189695	-107.451066700
12,200.00	89.80	89.551	6,855.60	491.01	5,054.18	2,025,261.682	2,835,449.249	36.565190755	-107.450726183
12,300.00	89.80	89.551	6,855.95	491.79	5,154.18	2,025,262.466	2,835,549.245	36.565191815	-107.450385666
12,400.00	89.80	89.551	6,856.30	492.58	5,254.18	2,025,263.250	2,835,649.241	36.565192873	-107.450045149
12,500.00	89.80	89.551	6,856.64	493.36	5,354.17	2,025,264.034	2,835,749.237	36.565193931	-107.449704632
12,600.00	89.80	89.551	6,856.99	494.15	5,454.17	2,025,264.817	2,835,849.233	36.565194987	-107.449364115
12,700.00	89.80	89.551	6,857.34	494.93	5,554.16	2,025,265.601	2,835,949.229	36.565196043	-107.449023599
12,800.00	89.80	89.551	6,857.69	495.71	5,654.16	2,025,266.385	2,836,049.225	36.565197098	-107.448683082
12,900.00	89.80	89.551	6,858.04	496.50	5,754.16	2,025,267.168	2,836,149.222	36.565198151	-107.448342565
13,000.00	89.80	89.551	6,858.38	497.28	5,854.15	2,025,267.952	2,836,249.218	36.565199204	-107.448002048
13,100.00	89.80	89.551	6,858.73	498.06	5,954.15	2,025,268.736	2,836,349.214	36.565200256	-107.447661531
13,200.00	89.80	89.551	6,859.08	498.85	6,054.15	2,025,269.520	2,836,449.210	36.565201307	-107.447321014
13,300.00	89.80	89.551	6,859.43	499.63	6,154.14	2,025,270.303	2,836,549.206	36.565202356	-107.446980497
13,400.00	89.80	89.551	6,859.77	500.41	6,254.14	2,025,271.087	2,836,649.202	36.565203405	-107.446639980
13,500.00	89.80	89.551	6,860.12	501.20	6,354.14	2,025,271.871	2,836,749.198	36.565204453	-107.446299463
13,600.00	89.80	89.551	6,860.47	501.98	6,454.13	2,025,272.654	2,836,849.194	36.565205500	-107.445958947
13,700.00	89.80	89.551	6,860.82	502.77	6,554.13	2,025,273.438	2,836,949.191	36.565206546	-107.445618430
13,800.00	89.80	89.551	6,861.17	503.55	6,654.12	2,025,274.222	2,837,049.187	36.565207591	-107.445277913
13,900.00	89.80	89.551	6,861.51	504.33	6,754.12	2,025,275.006	2,837,149.183	36.565208635	-107.444937396
14,000.00	89.80	89.551	6,861.86	505.12	6,854.12	2,025,275.789	2,837,249.179	36.565209678	-107.444596879
14,100.00	89.80	89.551	6,862.21	505.90	6,954.11	2,025,276.573	2,837,349.175	36.565210720	-107.444256362
14,200.00	89.80	89.551	6,862.56	506.68	7,054.11	2,025,277.357	2,837,449.171	36.565211761	-107.443915845
14,300.00	89.80	89.551	6,862.91	507.47	7,154.11	2,025,278.140	2,837,549.167	36.565212801	-107.443575328
14,400.00	89.80	89.551	6,863.25	508.25	7,254.10	2,025,278.924	2,837,649.163	36.565213840	-107.443234811
14,500.00	89.80	89.551	6,863.60	509.04	7,354.10	2,025,279.708	2,837,749.159	36.565214878	-107.442894295
14,600.00	89.80	89.551	6,863.95	509.82	7,454.09	2,025,280.492	2,837,849.156	36.565215915	-107.442553778
14,700.00	89.80	89.551	6,864.30	510.60	7,554.09	2,025,281.275	2,837,949.152	36.565216952	-107.442213261



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,800.00	89.80	89.551	6,864.64	511.39	7,654.09	2,025,282.059	2,838,049.148	36.565217987	-107.441872744
14,900.00	89.80	89.551	6,864.99	512.17	7,754.08	2,025,282.843	2,838,149.144	36.565219021	-107.441532227
15,000.00	89.80	89.551	6,865.34	512.95	7,854.08	2,025,283.626	2,838,249.140	36.565220054	-107.441191710
15,100.00	89.80	89.551	6,865.69	513.74	7,954.08	2,025,284.410	2,838,349.136	36.565221087	-107.440851193
15,200.00	89.80	89.551	6,866.04	514.52	8,054.07	2,025,285.194	2,838,449.132	36.565222118	-107.440510676
15,300.00	89.80	89.551	6,866.38	515.31	8,154.07	2,025,285.977	2,838,549.128	36.565223148	-107.440170159
15,400.00	89.80	89.551	6,866.73	516.09	8,254.07	2,025,286.761	2,838,649.125	36.565224178	-107.439829642
15,500.00	89.80	89.551	6,867.08	516.87	8,354.06	2,025,287.545	2,838,749.121	36.565225206	-107.439489126
15,600.00	89.80	89.551	6,867.43	517.66	8,454.06	2,025,288.329	2,838,849.117	36.565226234	-107.439148609
15,700.00	89.80	89.551	6,867.78	518.44	8,554.05	2,025,289.112	2,838,949.113	36.565227260	-107.438808092
15,800.00	89.80	89.551	6,868.12	519.22	8,654.05	2,025,289.896	2,839,049.109	36.565228285	-107.438467575
15,900.00	89.80	89.551	6,868.47	520.01	8,754.05	2,025,290.680	2,839,149.105	36.565229310	-107.438127058
16,000.00	89.80	89.551	6,868.82	520.79	8,854.04	2,025,291.463	2,839,249.101	36.565230334	-107.437786541
16,100.00	89.80	89.551	6,869.17	521.58	8,954.04	2,025,292.247	2,839,349.097	36.565231356	-107.437446024
16,200.00	89.80	89.551	6,869.51	522.36	9,054.04	2,025,293.031	2,839,449.094	36.565232378	-107.437105507
16,300.00	89.80	89.551	6,869.86	523.14	9,154.03	2,025,293.815	2,839,549.090	36.565233398	-107.436764990
16,400.00	89.80	89.551	6,870.21	523.93	9,254.03	2,025,294.598	2,839,649.086	36.565234418	-107.436424474
16,500.00	89.80	89.551	6,870.56	524.71	9,354.02	2,025,295.382	2,839,749.082	36.565235437	-107.436083957
16,600.00	89.80	89.551	6,870.91	525.49	9,454.02	2,025,296.166	2,839,849.078	36.565236454	-107.435743441
16,700.00	89.80	89.551	6,871.25	526.28	9,554.02	2,025,296.949	2,839,949.074	36.565237471	-107.435402924
16,800.00	89.80	89.551	6,871.60	527.06	9,654.01	2,025,297.733	2,840,049.070	36.565238487	-107.435062407
16,900.00	89.80	89.551	6,871.95	527.84	9,754.01	2,025,298.517	2,840,149.066	36.565239502	-107.434721890
17,000.00	89.80	89.551	6,872.30	528.63	9,854.01	2,025,299.301	2,840,249.062	36.565240515	-107.434381373
17,100.00	89.80	89.551	6,872.64	529.41	9,954.00	2,025,300.084	2,840,349.059	36.565241528	-107.434040856
17,200.00	89.80	89.551	6,872.99	530.20	10,054.00	2,025,300.868	2,840,449.055	36.565242540	-107.433700339
17,300.00	89.80	89.551	6,873.34	530.98	10,154.00	2,025,301.652	2,840,549.051	36.565243551	-107.433359823
17,400.00	89.80	89.551	6,873.69	531.76	10,253.99	2,025,302.435	2,840,649.047	36.565244561	-107.433019306
17,500.00	89.80	89.551	6,874.04	532.55	10,353.99	2,025,303.219	2,840,749.043	36.565245570	-107.432678789
17,600.00	89.80	89.551	6,874.38	533.33	10,453.98	2,025,304.003	2,840,849.039	36.565246578	-107.432338272
17,700.00	89.80	89.551	6,874.73	534.11	10,553.98	2,025,304.787	2,840,949.035	36.565247585	-107.431997755
17,800.00	89.80	89.551	6,875.08	534.90	10,653.98	2,025,305.570	2,841,049.031	36.565248591	-107.431657238
17,900.00	89.80	89.551	6,875.43	535.68	10,753.97	2,025,306.354	2,841,149.028	36.565249596	-107.431316721
18,000.00	89.80	89.551	6,875.78	536.47	10,853.97	2,025,307.138	2,841,249.024	36.565250600	-107.430976204
18,100.00	89.80	89.551	6,876.12	537.25	10,953.97	2,025,307.921	2,841,349.020	36.565251603	-107.430635687
18,200.00	89.80	89.551	6,876.47	538.03	11,053.96	2,025,308.705	2,841,449.016	36.565252605	-107.430295170
18,300.00	89.80	89.551	6,876.82	538.82	11,153.96	2,025,309.489	2,841,549.012	36.565253607	-107.429954654
18,400.00	89.80	89.551	6,877.17	539.60	11,253.96	2,025,310.272	2,841,649.008	36.565254607	-107.429614137
18,500.00	89.80	89.551	6,877.51	540.38	11,353.95	2,025,311.056	2,841,749.004	36.565255606	-107.429273620
18,600.00	89.80	89.551	6,877.86	541.17	11,453.95	2,025,311.840	2,841,849.000	36.565256604	-107.428933103
18,639.68	89.80	89.551	6,878.00	541.48	11,493.62	2,025,312.151	2,841,888.675	36.565257000	-107.428798000
PBHL/TD @ 18639.68 MD 6878.00 TVD									



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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
Rincon 815 vert r1 - plan hits target center - Point	0.00	0.000	6,235.40	447.27	-526.84	2,025,217.942	2,829,868.236	36.565130079	-107.469731206
Rincon 815 VS=0 r1 - plan misses target center by 7.98ft at 7146.81ft MD (6830.19 TVD, 451.41 N, 1.64 E) - Point	0.00	0.000	6,838.00	451.40	0.00	2,025,222.072	2,830,395.075	36.565135939	-107.467937161
Rincon 815 FTP 713 FN - plan hits target center - Point	0.00	0.000	6,838.35	452.15	96.07	2,025,222.824	2,830,491.149	36.565137000	-107.467610000
Rincon 815 LTP 710 FNI - plan hits target center - Point	0.00	0.000	6,878.00	541.48	11,493.62	2,025,312.151	2,841,888.675	36.565257000	-107.428798000

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	13 3/8" Csg	13-3/8	17-1/2	
5,168.23	5,128.00	9 5/8" Csg	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,561.42	2,547.49	Ojo Alamo		0.19	89.579	
2,657.36	2,642.46	Kirtland		0.19	89.579	
2,940.11	2,922.36	Fruitland		0.19	89.579	
3,197.61	3,177.27	Pictured Cliffs		0.19	89.579	
3,465.22	3,442.17	Lewis		0.19	89.579	
3,768.17	3,742.06	Chacra_A		0.19	89.579	
4,884.03	4,846.67	Cliff House		0.19	89.579	
5,015.31	4,976.62	Menefee		0.19	89.579	
5,449.53	5,406.46	Point Lookout		0.19	89.579	
5,863.57	5,816.32	Mancos		0.19	89.579	
6,418.86	6,369.32	Gallup (MNCS_A)		0.19	89.579	
6,538.01	6,481.45	MNCS_B		0.19	89.579	
6,618.63	6,551.58	MNCS_C		0.19	89.579	
6,718.68	6,629.79	MNCS_E		0.19	89.579	
6,829.05	6,702.06	MNCS_F		0.19	89.579	
6,966.18	6,772.45	MNCS_G		0.19	89.579	
7,040.42	6,802.68	MNCS_G_Ash		0.19	89.579	
7,040.42	6,802.68	G_Ash @ 0VS		0.19	89.579	
7,089.87	6,817.83	MNCS_H		0.19	89.579	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Rincon Unit 815H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	North Reference:	Grid
Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,271.54	1,270.62	12.47	-14.69	Begin 8.15° tangent	
5,876.76	5,829.38	434.80	-512.15	Begin 3°/100' drop	
6,148.30	6,100.00	447.27	-526.84	Begin vertical hold	
6,283.70	6,235.40	447.27	-526.84	Begin 10°/100' build	
6,883.70	6,731.60	449.51	-240.37	Begin 60.00° tangent	
6,943.70	6,761.60	449.92	-188.41	Begin 10°/100' build	
7,241.70	6,838.35	452.15	96.07	Begin 89.80° lateral	
18,639.68	6,878.00	541.48	11,493.62	PBHL/TD @ 18639.68 MD 6878.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Reference	rev1		
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 2,063.97ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	7/21/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,639.65	rev1 (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						
Rincon pad (613, 615, 713, 715,815,817,915 & 917)						
Rincon Unit 613H - Original Hole - rev0	1,000.00	1,000.00	80.09	73.37	11.915	CC
Rincon Unit 613H - Original Hole - rev0	1,100.00	1,099.95	80.73	73.29	10.857	ES
Rincon Unit 613H - Original Hole - rev0	1,300.00	1,300.91	85.76	76.94	9.724	SF
Rincon Unit 615H - Original Hole - Surveys Original Hole	1,026.95	1,015.42	30.88	24.48	4.824	CC, ES
Rincon Unit 615H - Original Hole - Surveys Original Hole	1,100.00	1,088.39	31.96	25.03	4.614	SF
Rincon Unit 713H - Original Hole - rev0	1,000.00	1,000.00	59.96	53.24	8.921	CC
Rincon Unit 713H - Original Hole - rev0	1,100.00	1,099.95	60.62	53.18	8.153	ES
Rincon Unit 713H - Original Hole - rev0	6,644.61	6,805.08	384.35	334.12	7.652	SF
Rincon Unit 715H - Original Hole - Surveys Original Hole	859.50	847.63	16.78	11.58	3.229	CC
Rincon Unit 715H - Original Hole - Surveys Original Hole	1,000.00	988.11	16.94	10.74	2.730	ES, SF
Rincon Unit 817H - Original Hole - rev1	1,184.87	1,184.59	38.79	30.75	4.824	CC
Rincon Unit 817H - Original Hole - rev1	1,200.00	1,199.63	38.82	30.67	4.764	ES
Rincon Unit 817H - Original Hole - rev1	18,639.68	18,698.72	1,320.18	715.82	2.184	SF
Rincon Unit 915H - Original Hole - rev1	1,127.29	1,127.20	19.44	11.81	2.548	CC, ES
Rincon Unit 915H - Original Hole - rev1	18,639.68	18,386.05	702.35	197.11	1.390	Level 2<1.50, SF
Rincon Unit 917H - Original Hole - rev1	1,000.00	1,000.00	59.94	53.22	8.917	CC, ES
Rincon Unit 917H - Original Hole - rev1	18,639.68	18,638.04	1,996.55	1,397.91	3.335	SF

Offset Design:	Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 613H - 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:				Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	0.00	53.56	47.57	64.43	80.09					
100.00	100.00	100.00	100.00	0.13	0.13	53.56	47.57	64.43	80.09	79.82	0.27	297.883		
200.00	200.00	200.00	200.00	0.49	0.49	53.56	47.57	64.43	80.09	79.10	0.99	81.241		
300.00	300.00	300.00	300.00	0.85	0.85	53.56	47.57	64.43	80.09	78.38	1.70	47.034		
400.00	400.00	400.00	400.00	1.21	1.21	53.56	47.57	64.43	80.09	77.67	2.42	33.098		
500.00	500.00	500.00	500.00	1.57	1.57	53.56	47.57	64.43	80.09	76.95	3.14	25.533		
600.00	600.00	600.00	600.00	1.93	1.93	53.56	47.57	64.43	80.09	76.23	3.85	20.783		
700.00	700.00	700.00	700.00	2.29	2.29	53.56	47.57	64.43	80.09	75.52	4.57	17.523		
800.00	800.00	800.00	800.00	2.64	2.64	53.56	47.57	64.43	80.09	74.80	5.29	15.147		
900.00	900.00	900.00	900.00	3.00	3.00	53.56	47.57	64.43	80.09	74.08	6.00	13.338		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 613H - 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 Major Axis Reference (ft)	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
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	53.56	47.57	64.43	80.09	73.37	6.72	11.915	CC
1,100.00	1,099.95	1,099.95	1,099.95	3.72	3.72	105.02	47.57	64.43	80.73	73.29	7.44	10.857	ES
1,200.00	1,199.63	1,201.45	1,201.40	4.07	4.07	111.98	44.88	64.60	82.00	73.86	8.13	10.081	
1,300.00	1,298.80	1,300.91	1,300.54	4.44	4.39	124.70	37.04	65.12	85.76	76.94	8.82	9.724	SF
1,400.00	1,397.79	1,398.18	1,397.04	4.81	4.72	138.96	24.88	65.92	94.49	84.98	9.51	9.936	
1,500.00	1,496.78	1,494.98	1,492.98	5.20	5.06	150.68	12.04	66.77	108.34	98.14	10.20	10.623	
1,600.00	1,595.77	1,591.78	1,588.92	5.59	5.41	159.55	-0.81	67.62	125.72	114.83	10.89	11.549	
1,700.00	1,694.76	1,688.58	1,684.86	5.98	5.77	166.22	-13.65	68.46	145.37	133.79	11.58	12.558	
1,800.00	1,793.75	1,785.38	1,780.80	6.38	6.13	171.27	-26.50	69.31	166.48	154.21	12.27	13.569	
1,900.00	1,892.74	1,882.18	1,876.74	6.78	6.50	175.19	-39.34	70.15	188.58	175.61	12.97	14.542	
2,000.00	1,991.74	1,978.98	1,972.68	7.18	6.87	178.28	-52.19	71.00	211.35	197.68	13.67	15.460	
2,100.00	2,090.73	2,075.78	2,068.63	7.59	7.25	-179.23	-65.03	71.85	234.59	220.21	14.38	16.318	
2,200.00	2,189.72	2,172.58	2,164.57	8.00	7.63	-177.18	-77.88	72.69	258.17	243.09	15.09	17.114	
2,300.00	2,288.71	2,269.39	2,260.51	8.41	8.02	-175.48	-90.72	73.54	282.02	266.22	15.80	17.852	
2,400.00	2,387.70	2,366.19	2,356.45	8.82	8.40	-174.05	-103.57	74.39	306.07	289.56	16.51	18.536	
2,500.00	2,486.69	2,462.99	2,452.39	9.23	8.79	-172.82	-116.41	75.23	330.27	313.04	17.23	19.170	
2,600.00	2,585.68	2,559.79	2,548.33	9.65	9.18	-171.76	-129.26	76.08	354.60	336.65	17.95	19.758	
2,700.00	2,684.67	2,656.59	2,644.27	10.06	9.57	-170.83	-142.10	76.93	379.03	360.36	18.67	20.304	
2,800.00	2,783.66	2,753.39	2,740.21	10.48	9.97	-170.02	-154.95	77.77	403.53	384.14	19.39	20.812	
2,900.00	2,882.65	2,850.19	2,836.15	10.89	10.36	-169.30	-167.79	78.62	428.11	408.00	20.11	21.286	
3,000.00	2,981.65	2,946.99	2,932.09	11.31	10.76	-168.66	-180.64	79.46	452.74	431.91	20.84	21.728	
3,100.00	3,080.64	3,043.79	3,028.03	11.73	11.15	-168.08	-193.48	80.31	477.42	455.86	21.56	22.142	
3,200.00	3,179.63	3,140.59	3,123.97	12.14	11.55	-167.57	-206.33	81.16	502.14	479.86	22.29	22.530	
3,300.00	3,278.62	3,237.39	3,219.91	12.56	11.95	-167.10	-219.17	82.00	526.90	503.89	23.02	22.894	
3,400.00	3,377.61	3,334.19	3,315.86	12.98	12.35	-166.67	-232.01	82.85	551.69	527.95	23.74	23.236	
3,500.00	3,476.60	3,430.99	3,411.80	13.40	12.74	-166.28	-244.86	83.70	576.50	552.03	24.47	23.558	
3,600.00	3,575.59	3,527.79	3,507.74	13.82	13.14	-165.92	-257.70	84.54	601.34	576.14	25.20	23.861	
3,700.00	3,674.58	3,624.59	3,603.68	14.24	13.55	-165.59	-270.55	85.39	626.20	600.27	25.93	24.148	
3,800.00	3,773.57	3,721.39	3,699.62	14.66	13.95	-165.28	-283.39	86.24	651.07	624.41	26.66	24.420	
3,900.00	3,872.56	3,818.19	3,795.56	15.08	14.35	-165.00	-296.24	87.08	675.96	648.57	27.39	24.677	
4,000.00	3,971.56	3,914.99	3,891.50	15.50	14.75	-164.73	-309.08	87.93	700.87	672.74	28.12	24.920	
4,100.00	4,070.55	4,011.79	3,987.44	15.92	15.15	-164.49	-321.93	88.77	725.79	696.93	28.86	25.152	
4,200.00	4,169.54	4,108.59	4,083.38	16.34	15.56	-164.26	-334.77	89.62	750.72	721.13	29.59	25.371	
4,300.00	4,268.53	4,205.40	4,179.32	16.76	15.96	-164.05	-347.62	90.47	775.66	745.34	30.32	25.581	
4,400.00	4,367.52	4,302.20	4,275.26	17.19	16.36	-163.85	-360.46	91.31	800.61	769.55	31.06	25.780	
4,500.00	4,466.51	4,399.00	4,371.20	17.61	16.76	-163.66	-373.31	92.16	825.57	793.78	31.79	25.970	
4,600.00	4,565.50	4,495.80	4,467.14	18.03	17.17	-163.48	-386.15	93.01	850.54	818.01	32.52	26.152	
4,700.00	4,664.49	4,592.60	4,563.09	18.45	17.57	-163.31	-399.00	93.85	875.51	842.25	33.26	26.325	
4,800.00	4,763.48	4,689.40	4,659.03	18.87	17.98	-163.16	-411.84	94.70	900.49	866.50	33.99	26.491	
4,900.00	4,862.47	4,786.20	4,754.97	19.30	18.38	-163.01	-424.69	95.55	925.48	890.75	34.73	26.650	
5,000.00	4,961.47	4,883.00	4,850.91	19.72	18.79	-162.86	-437.53	96.39	950.47	915.01	35.46	26.803	
5,100.00	5,060.46	4,979.80	4,946.85	20.14	19.19	-162.73	-450.38	97.24	975.47	939.27	36.20	26.949	
5,200.00	5,159.45	5,076.60	5,042.79	20.56	19.60	-162.60	-463.22	98.08	1,000.47	963.54	36.93	27.089	
5,300.00	5,258.44	5,173.40	5,138.73	20.99	20.00	-162.48	-476.06	98.93	1,025.48	987.81	37.67	27.224	
5,400.00	5,357.43	5,270.20	5,234.67	21.41	20.41	-162.36	-488.91	99.78	1,050.49	1,012.08	38.40	27.353	
5,500.00	5,456.42	5,367.00	5,330.61	21.83	20.81	-162.25	-501.75	100.62	1,075.50	1,036.36	39.14	27.478	
5,600.00	5,555.41	5,463.80	5,426.55	22.25	21.22	-162.15	-514.60	101.47	1,100.52	1,060.64	39.88	27.597	
5,700.00	5,654.40	5,560.60	5,522.49	22.68	21.62	-162.05	-527.44	102.32	1,125.54	1,084.93	40.61	27.713	
5,800.00	5,753.39	5,657.40	5,618.43	23.10	22.03	-161.95	-540.29	103.16	1,150.57	1,109.22	41.35	27.824	
5,900.00	5,852.40	5,754.24	5,714.41	23.52	22.44	-161.91	-553.14	104.01	1,175.46	1,133.38	42.09	27.929	
6,000.00	5,951.85	5,851.84	5,811.15	23.92	22.85	-161.97	-566.09	104.86	1,196.95	1,154.13	42.82	27.953	

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 613H - 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		Distance		Minimum Separation		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)	Separation Factor	
6,100.00	6,051.71	6,051.73	6,010.12	24.27	23.62	-161.83	-584.14	106.05	1,210.24	1,166.07	44.18	27.397
6,200.00	6,151.71	6,193.33	6,151.71	24.59	24.07	148.50	-585.58	106.15	1,211.38	1,166.36	45.02	26.908
6,300.00	6,251.70	6,983.60	6,751.89	24.90	26.51	80.02	-594.46	-320.56	1,173.82	1,128.56	45.26	25.936
6,400.00	6,350.91	7,080.89	6,777.63	25.15	27.27	89.74	-596.41	-414.24	1,132.13	1,084.86	47.27	23.948
6,500.00	6,446.60	7,055.26	6,772.40	25.33	27.05	92.04	-595.89	-389.17	1,097.48	1,048.97	48.50	22.626
6,600.00	6,535.88	7,015.33	6,762.03	25.46	26.73	92.63	-595.09	-350.62	1,071.14	1,021.82	49.32	21.718
6,700.00	6,616.03	6,970.90	6,747.36	25.54	26.43	92.11	-594.21	-308.70	1,053.42	1,003.65	49.77	21.165
6,800.00	6,684.61	6,924.47	6,728.62	25.62	26.18	90.70	-593.33	-266.25	1,044.13	994.19	49.94	20.907
6,869.40	6,724.86	6,892.20	6,713.59	25.71	26.04	89.27	-592.74	-237.70	1,042.32	992.35	49.97	20.858
6,900.00	6,739.75	6,876.58	6,705.81	25.75	25.98	88.55	-592.45	-224.16	1,042.63	992.68	49.95	20.874
7,000.00	6,787.31	6,825.89	6,680.47	26.02	25.81	85.79	-591.54	-180.27	1,048.16	998.25	49.90	21.003
7,100.00	6,820.43	6,776.59	6,654.01	26.51	25.66	82.57	-590.67	-138.70	1,059.17	1,009.21	49.96	21.201
7,200.00	6,836.69	6,728.29	6,624.72	27.24	25.54	79.17	-589.88	-100.31	1,074.25	1,024.07	50.18	21.409
7,300.00	6,838.56	6,680.98	6,592.99	28.17	25.42	76.76	-589.15	-65.25	1,092.60	1,042.02	50.58	21.601
7,400.00	6,838.91	6,650.00	6,570.70	29.31	25.35	75.59	-588.70	-43.75	1,116.58	1,065.34	51.24	21.791
7,500.00	6,839.25	6,600.00	6,532.36	30.64	25.23	73.61	-588.03	-11.68	1,146.46	1,094.68	51.77	22.143
7,600.00	6,839.60	6,573.94	6,511.30	32.11	25.16	72.55	-587.71	3.67	1,182.39	1,129.85	52.55	22.502
7,700.00	6,839.95	6,550.00	6,491.37	33.71	25.10	71.55	-587.44	16.92	1,224.16	1,170.84	53.32	22.960
7,800.00	6,840.30	6,524.49	6,469.53	35.43	25.03	70.46	-587.16	30.10	1,271.39	1,217.36	54.03	23.531
7,900.00	6,840.64	6,500.00	6,448.04	37.24	24.97	69.41	-586.92	41.83	1,323.71	1,269.03	54.68	24.209
8,000.00	6,840.99	6,500.00	6,448.04	39.13	24.97	69.41	-586.92	41.83	1,380.80	1,325.34	55.47	24.894
8,100.00	6,841.34	6,470.76	6,421.75	41.10	24.89	68.15	-586.65	54.63	1,441.76	1,385.83	55.93	25.777
8,200.00	6,841.69	6,450.00	6,402.71	43.12	24.83	67.25	-586.48	62.88	1,506.68	1,450.28	56.40	26.713
8,300.00	6,842.04	6,450.00	6,402.71	45.20	24.83	67.25	-586.48	62.88	1,574.90	1,517.95	56.95	27.652
8,400.00	6,842.38	6,450.00	6,402.71	47.33	24.83	67.25	-586.48	62.88	1,646.37	1,588.95	57.42	28.671
8,500.00	6,842.73	6,422.53	6,377.07	49.49	24.75	66.05	-586.27	72.74	1,719.94	1,662.28	57.66	29.829
8,600.00	6,843.08	6,400.00	6,355.71	51.69	24.69	65.07	-586.12	79.90	1,796.32	1,738.44	57.88	31.033
8,700.00	6,843.43	6,400.00	6,355.71	53.92	24.69	65.07	-586.12	79.90	1,874.47	1,816.27	58.20	32.206
8,800.00	6,843.77	6,400.00	6,355.71	56.18	24.69	65.07	-586.12	79.90	1,954.61	1,896.14	58.47	33.429
8,900.00	6,844.12	6,400.00	6,355.71	58.46	24.69	65.07	-586.12	79.90	2,036.50	1,977.80	58.70	34.694

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 615H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 385-MWD, 4923-MWD, 16695-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Reference Vertical Depth (ft)	Measured Depth (ft)	Offset Vertical Depth (ft)	Reference	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	53.56	23.79	32.21	41.80				
100.00	100.00	88.13	88.13	0.13	0.15	53.73	23.61	32.17	39.90	39.61	0.29	138.660	
200.00	200.00	188.27	188.27	0.49	0.33	54.33	22.98	32.01	39.40	38.58	0.82	48.040	
300.00	300.00	288.40	288.39	0.85	0.50	55.41	21.88	31.74	38.55	37.20	1.35	28.502	
400.00	400.00	388.52	388.50	1.21	0.68	57.03	20.33	31.35	37.37	35.48	1.89	19.755	
500.00	500.00	488.53	488.49	1.57	1.04	59.47	18.32	31.05	36.06	33.45	2.61	13.814	
600.00	600.00	588.49	588.41	1.93	1.40	62.84	15.84	30.87	34.70	31.37	3.33	10.423	
700.00	700.00	688.42	688.31	2.29	1.77	66.38	13.49	30.86	33.68	29.63	4.05	8.319	
800.00	800.00	788.40	788.27	2.64	2.13	70.10	11.16	30.84	32.80	28.03	4.77	6.879	
900.00	900.00	888.44	888.29	3.00	2.49	73.85	8.88	30.69	31.95	26.46	5.49	5.821	
1,000.00	1,000.00	988.48	988.29	3.36	2.85	78.07	6.41	30.34	31.01	24.80	6.21	4.995	
1,026.95	1,026.95	1,015.42	1,015.22	3.46	2.95	129.19	5.74	30.22	30.88	24.48	6.40	4.824 CC, ES	
1,100.00	1,099.95	1,088.39	1,088.17	3.72	3.21	135.76	3.86	29.89	31.96	25.03	6.93	4.614 SF	
1,200.00	1,199.63	1,188.13	1,187.88	4.07	3.56	147.32	1.68	29.31	37.63	30.00	7.63	4.929	
1,300.00	1,298.80	1,288.27	1,287.93	4.44	3.90	151.66	5.13	28.52	47.36	39.04	8.32	5.691	
1,400.00	1,397.79	1,388.37	1,387.38	4.81	4.22	147.54	16.34	27.66	56.80	47.80	9.00	6.308	
1,500.00	1,496.78	1,487.61	1,485.29	5.20	4.56	140.20	32.53	27.02	66.40	56.69	9.71	6.837	
1,600.00	1,595.77	1,586.81	1,583.04	5.59	4.91	134.21	49.45	26.54	77.02	66.58	10.44	7.378	
1,700.00	1,694.76	1,686.09	1,680.88	5.98	5.28	129.78	66.25	25.89	88.09	76.90	11.18	7.876	
1,800.00	1,793.75	1,785.32	1,778.70	6.38	5.65	126.45	82.86	25.23	99.50	87.56	11.94	8.331	
1,900.00	1,892.74	1,884.77	1,876.81	6.78	6.04	124.00	99.13	24.56	111.07	98.36	12.72	8.735	
2,000.00	1,991.74	1,984.42	1,975.22	7.18	6.43	122.27	114.83	23.77	122.51	109.01	13.50	9.077	
2,100.00	2,090.73	2,082.97	2,072.52	7.59	6.82	120.82	130.44	23.00	134.08	119.80	14.28	9.392	
2,200.00	2,189.72	2,182.04	2,170.26	8.00	7.22	119.45	146.59	22.52	146.16	131.09	15.07	9.701	
2,300.00	2,288.71	2,281.91	2,268.90	8.41	7.63	118.53	162.20	22.10	158.12	142.25	15.87	9.966	
2,400.00	2,387.70	2,378.90	2,364.67	8.82	8.02	117.75	177.56	22.12	170.60	153.96	16.64	10.252	
2,500.00	2,486.69	2,478.23	2,462.65	9.23	8.43	116.94	193.84	22.56	183.71	166.27	17.45	10.530	
2,600.00	2,585.68	2,578.04	2,561.19	9.65	8.85	116.36	209.72	22.91	196.58	178.32	18.26	10.768	
2,700.00	2,684.67	2,677.53	2,659.53	10.06	9.26	116.06	224.80	23.38	209.27	190.21	19.06	10.978	
2,800.00	2,783.66	2,778.00	2,758.93	10.48	9.67	115.93	239.40	23.71	221.59	201.71	19.88	11.149	
2,900.00	2,882.65	2,877.58	2,857.58	10.89	10.07	115.98	253.03	23.78	233.35	212.67	20.68	11.284	
3,000.00	2,981.65	2,975.87	2,954.84	11.31	10.48	115.89	267.19	24.14	245.65	224.18	21.47	11.440	
3,100.00	3,080.64	3,074.72	3,052.70	11.73	10.88	115.87	281.13	24.38	257.73	235.45	22.28	11.570	
3,200.00	3,179.63	3,171.46	3,148.26	12.14	11.29	115.61	296.19	25.09	270.82	247.76	23.06	11.743	
3,300.00	3,278.62	3,271.21	3,246.79	12.56	11.71	115.38	311.72	26.02	284.12	260.24	23.88	11.897	
3,400.00	3,377.61	3,372.45	3,346.89	12.98	12.13	115.27	326.82	26.75	296.96	272.25	24.71	12.017	
3,500.00	3,476.60	3,474.89	3,448.37	13.40	12.55	115.36	340.80	27.05	308.89	283.35	25.55	12.092	
3,600.00	3,575.59	3,572.68	3,545.34	13.82	12.95	115.54	353.43	27.07	320.29	293.95	26.34	12.161	
3,700.00	3,674.58	3,672.40	3,644.00	14.24	13.36	115.45	367.91	27.07	332.31	305.16	27.15	12.238	
3,800.00	3,773.57	3,774.33	3,744.92	14.66	13.78	115.40	382.23	26.57	343.70	315.71	27.99	12.280	
3,900.00	3,872.56	3,877.49	3,847.17	15.08	14.21	115.45	395.89	25.42	354.19	325.36	28.83	12.287	
4,000.00	3,971.56	3,969.06	3,937.85	15.50	14.59	115.42	408.51	24.60	365.11	335.53	29.58	12.344	
4,100.00	4,070.55	4,067.72	4,035.34	15.92	15.00	115.22	423.67	24.53	377.41	347.02	30.39	12.418	
4,200.00	4,169.54	4,161.53	4,127.94	16.34	15.41	114.99	438.69	24.82	390.33	359.16	31.17	12.524	
4,300.00	4,268.53	4,261.01	4,225.97	16.76	15.84	114.65	455.56	25.49	403.98	371.98	32.00	12.625	
4,400.00	4,367.52	4,361.60	4,325.20	17.19	16.27	114.39	472.05	26.06	417.31	384.47	32.84	12.707	
4,500.00	4,466.51	4,455.33	4,417.57	17.61	16.68	114.13	487.92	26.91	431.17	397.56	33.61	12.827	
4,600.00	4,565.50	4,555.81	4,516.52	18.03	17.12	113.83	505.34	28.08	445.46	411.00	34.46	12.927	
4,700.00	4,664.49	4,657.35	4,616.67	18.45	17.56	113.65	522.03	29.24	459.34	424.03	35.31	13.009	
4,800.00	4,763.48	4,759.50	4,717.67	18.87	18.00	113.63	537.34	30.22	472.42	436.27	36.16	13.066	
4,900.00	4,862.47	4,856.66	4,813.78	19.30	18.36	113.68	551.48	31.45	485.60	448.70	36.91	13.158	

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 615H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 385-MWD, 4923-MWD, 16695-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
5,000.00	4,961.47	4,956.02	4,912.15	19.72	18.56	113.80	565.41	33.14	498.94	461.44	37.50	13.305	
5,100.00	5,060.46	5,054.99	5,010.20	20.14	18.66	113.97	578.76	34.92	512.15	474.16	37.99	13.482	
5,200.00	5,159.45	5,152.92	5,107.21	20.56	18.76	114.15	591.98	37.00	525.64	487.17	38.47	13.662	
5,300.00	5,258.44	5,250.98	5,204.36	20.99	18.87	114.33	605.12	39.16	539.19	500.22	38.97	13.836	
5,400.00	5,357.43	5,349.69	5,302.03	21.41	19.00	114.41	619.28	41.27	553.07	513.59	39.48	14.008	
5,500.00	5,456.42	5,446.71	5,398.01	21.83	19.13	114.48	633.28	43.20	566.86	526.87	39.99	14.173	
5,600.00	5,555.41	5,543.92	5,494.07	22.25	19.27	114.49	648.03	45.52	581.31	540.79	40.52	14.347	
5,700.00	5,654.40	5,648.55	5,597.56	22.68	19.43	114.55	663.24	47.92	595.42	554.33	41.09	14.489	
5,800.00	5,753.39	5,752.43	5,700.57	23.10	19.59	114.76	676.52	49.91	608.45	566.78	41.66	14.604	
5,900.00	5,852.40	5,854.83	5,802.25	23.52	19.74	115.11	688.49	51.73	620.86	578.63	42.22	14.705	
6,000.00	5,951.85	5,958.36	5,905.20	23.92	19.89	115.43	699.33	53.46	631.12	588.36	42.76	14.760	
6,100.00	6,051.71	6,066.91	6,013.30	24.27	20.04	115.36	708.91	55.27	638.50	595.22	43.28	14.753	
6,200.00	6,151.71	6,247.50	6,193.35	24.59	20.27	64.69	719.62	49.09	639.33	595.57	43.77	14.608	
6,300.00	6,251.70	6,707.31	6,603.73	24.90	20.88	-35.94	723.22	-141.80	597.28	559.94	37.34	15.996	
6,400.00	6,350.91	6,900.84	6,719.01	25.15	21.52	-63.07	724.77	-296.03	519.05	485.43	33.62	15.439	
6,500.00	6,446.60	6,923.73	6,730.46	25.33	21.64	-79.41	724.83	-315.86	439.90	404.41	35.49	12.396	
6,600.00	6,535.88	6,930.14	6,733.65	25.46	21.67	-91.19	724.84	-321.42	367.63	329.62	38.00	9.673	
6,700.00	6,616.03	6,917.32	6,727.26	25.54	21.60	-95.50	724.82	-310.31	311.05	269.86	41.19	7.552	
6,800.00	6,684.61	6,888.15	6,712.74	25.62	21.47	-93.09	724.71	-285.01	279.72	235.93	43.79	6.388	
6,855.37	6,717.19	6,864.06	6,700.86	25.69	21.36	-88.91	724.52	-264.05	275.23	230.89	44.34	6.207	
6,900.00	6,739.75	6,842.50	6,689.79	25.75	21.27	-84.95	724.26	-245.56	277.91	233.76	44.16	6.294	
7,000.00	6,787.31	6,803.34	6,667.76	26.02	21.13	-76.07	723.71	-213.19	303.18	260.48	42.69	7.101	
7,100.00	6,820.43	6,764.90	6,643.72	26.51	21.02	-65.32	723.21	-183.21	347.19	305.78	41.41	8.384	
7,200.00	6,836.69	6,723.00	6,615.05	27.24	20.91	-54.67	723.08	-152.67	400.51	359.46	41.05	9.756	
7,300.00	6,838.56	6,691.00	6,591.66	28.17	20.84	-49.42	723.47	-130.85	458.14	416.38	41.76	10.971	
7,400.00	6,838.91	6,651.00	6,560.74	29.31	20.77	-45.96	724.52	-105.50	523.31	481.00	42.31	12.368	
7,500.00	6,839.25	6,615.24	6,531.92	30.64	20.72	-43.09	725.55	-84.37	594.43	551.51	42.91	13.853	
7,600.00	6,839.60	6,583.02	6,505.01	32.11	20.68	-40.65	726.33	-66.67	670.20	626.72	43.49	15.412	
7,700.00	6,839.95	6,550.42	6,477.24	33.71	20.64	-38.37	727.03	-49.62	749.25	705.30	43.95	17.046	
7,800.00	6,840.30	6,524.05	6,454.35	35.43	20.61	-36.66	727.62	-36.52	831.04	786.60	44.43	18.703	
7,900.00	6,840.64	6,502.00	6,434.89	37.24	20.58	-35.30	728.07	-26.17	915.18	870.30	44.87	20.394	
8,000.00	6,840.99	6,480.48	6,415.62	39.13	20.56	-34.04	728.43	-16.61	1,001.25	956.01	45.24	22.131	
8,100.00	6,841.34	6,470.00	6,406.14	41.10	20.55	-33.44	728.56	-12.14	1,088.99	1,043.35	45.64	23.860	
8,200.00	6,841.69	6,439.00	6,377.73	43.12	20.52	-31.73	728.64	0.26	1,177.99	1,132.19	45.81	25.717	
8,300.00	6,842.04	6,439.00	6,377.73	45.20	20.52	-31.73	728.64	0.26	1,268.21	1,222.05	46.16	27.473	
8,400.00	6,842.38	6,418.58	6,358.72	47.33	20.49	-30.64	728.33	7.71	1,359.36	1,313.03	46.33	29.341	
8,500.00	6,842.73	6,408.00	6,348.78	49.49	20.48	-30.09	728.02	11.32	1,451.45	1,404.92	46.53	31.195	
8,600.00	6,843.08	6,395.11	6,336.60	51.69	20.46	-29.42	727.54	15.51	1,544.26	1,497.58	46.68	33.081	
8,700.00	6,843.43	6,376.00	6,318.44	53.92	20.44	-28.45	726.64	21.37	1,637.76	1,590.98	46.79	35.005	
8,800.00	6,843.77	6,376.00	6,318.44	56.18	20.44	-28.45	726.64	21.37	1,731.70	1,684.74	46.96	36.879	
8,900.00	6,844.12	6,363.32	6,306.32	58.46	20.42	-27.82	725.95	25.03	1,826.16	1,779.11	47.06	38.807	
9,000.00	6,844.47	6,345.00	6,288.73	60.77	20.40	-26.95	724.87	30.05	1,921.09	1,873.97	47.13	40.765	
9,100.00	6,844.82	6,345.00	6,288.73	63.09	20.40	-26.95	724.87	30.05	2,016.29	1,969.04	47.25	42.674	

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 713H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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	53.70	35.50	48.32	59.96				
100.00	100.00	100.00	100.00	0.13	0.13	53.70	35.50	48.32	59.96	59.69	0.27	223.013	
200.00	200.00	200.00	200.00	0.49	0.49	53.70	35.50	48.32	59.96	58.97	0.99	60.822	
300.00	300.00	300.00	300.00	0.85	0.85	53.70	35.50	48.32	59.96	58.26	1.70	35.213	
400.00	400.00	400.00	400.00	1.21	1.21	53.70	35.50	48.32	59.96	57.54	2.42	24.779	
500.00	500.00	500.00	500.00	1.57	1.57	53.70	35.50	48.32	59.96	56.82	3.14	19.115	
600.00	600.00	600.00	600.00	1.93	1.93	53.70	35.50	48.32	59.96	56.10	3.85	15.559	
700.00	700.00	700.00	700.00	2.29	2.29	53.70	35.50	48.32	59.96	55.39	4.57	13.118	
800.00	800.00	800.00	800.00	2.64	2.64	53.70	35.50	48.32	59.96	54.67	5.29	11.340	
900.00	900.00	900.00	900.00	3.00	3.00	53.70	35.50	48.32	59.96	53.95	6.00	9.986	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	53.70	35.50	48.32	59.96	53.24	6.72	8.921 CC	
1,100.00	1,099.95	1,099.95	1,099.95	3.72	3.72	105.76	35.50	48.32	60.62	53.18	7.44	8.153 ES	
1,200.00	1,199.63	1,199.63	1,199.63	4.07	4.08	112.53	35.50	48.32	63.20	55.05	8.15	7.757	
1,300.00	1,298.80	1,295.94	1,295.90	4.44	4.42	120.79	37.45	49.73	71.16	62.31	8.85	8.042	
1,400.00	1,397.79	1,393.55	1,393.29	4.81	4.77	126.34	42.75	53.55	84.29	74.74	9.55	8.823	
1,500.00	1,496.78	1,492.37	1,491.86	5.20	5.12	130.26	48.47	57.66	98.32	88.05	10.27	9.573	
1,600.00	1,595.77	1,591.19	1,590.42	5.59	5.48	133.19	54.18	61.78	112.68	101.69	10.99	10.252	
1,700.00	1,694.76	1,690.01	1,688.99	5.98	5.84	135.45	59.90	65.90	127.26	115.55	11.71	10.864	
1,800.00	1,793.75	1,788.83	1,787.56	6.38	6.20	137.25	65.61	70.01	142.00	129.56	12.44	11.414	
1,900.00	1,892.74	1,888.79	1,887.27	6.78	6.56	138.77	71.28	74.10	156.77	143.60	13.18	11.898	
2,000.00	1,991.74	1,992.88	1,991.30	7.18	6.93	141.17	73.96	76.03	169.49	155.56	13.93	12.168	
2,100.00	2,090.73	2,092.30	2,090.73	7.59	7.29	143.98	73.98	76.04	180.80	166.15	14.65	12.341	
2,200.00	2,189.72	2,191.29	2,189.72	8.00	7.64	146.46	73.98	76.04	192.48	177.11	15.37	12.525	
2,300.00	2,288.71	2,290.29	2,288.71	8.41	7.99	148.65	73.98	76.04	204.48	188.39	16.08	12.713	
2,400.00	2,387.70	2,389.28	2,387.70	8.82	8.35	150.59	73.98	76.04	216.73	199.93	16.80	12.900	
2,500.00	2,486.69	2,488.27	2,486.69	9.23	8.70	152.33	73.98	76.04	229.21	211.69	17.52	13.084	
2,600.00	2,585.68	2,587.26	2,585.68	9.65	9.05	153.88	73.98	76.04	241.88	223.64	18.23	13.265	
2,700.00	2,684.67	2,686.25	2,684.67	10.06	9.41	155.28	73.98	76.04	254.70	235.75	18.95	13.439	
2,800.00	2,783.66	2,785.24	2,783.66	10.48	9.76	156.55	73.98	76.04	267.66	247.99	19.67	13.608	
2,900.00	2,882.65	2,884.23	2,882.65	10.89	10.11	157.70	73.98	76.04	280.73	260.35	20.39	13.771	
3,000.00	2,981.65	2,983.22	2,981.65	11.31	10.47	158.75	73.98	76.04	293.91	272.81	21.10	13.922	
3,100.00	3,080.64	3,082.21	3,080.64	11.73	10.82	159.70	73.98	76.04	307.18	285.36	21.82	14.077	
3,200.00	3,179.63	3,181.20	3,179.63	12.14	11.18	160.58	73.98	76.04	320.52	297.98	22.54	14.220	
3,300.00	3,278.62	3,280.20	3,278.62	12.56	11.53	161.39	73.98	76.04	333.93	310.67	23.26	14.358	
3,400.00	3,377.61	3,379.19	3,377.61	12.98	11.88	162.13	73.98	76.04	347.40	323.43	23.98	14.489	
3,500.00	3,476.60	3,478.18	3,476.60	13.40	12.24	162.82	73.98	76.04	360.93	336.23	24.70	14.615	
3,600.00	3,575.59	3,577.17	3,575.59	13.82	12.59	163.46	73.98	76.04	374.50	349.09	25.41	14.736	
3,700.00	3,674.58	3,676.16	3,674.58	14.24	12.95	164.06	73.98	76.04	388.12	361.98	26.13	14.851	
3,800.00	3,773.57	3,775.15	3,773.57	14.66	13.30	164.61	73.98	76.04	401.77	374.92	26.85	14.962	
3,900.00	3,872.56	3,874.14	3,872.56	15.08	13.65	165.13	73.98	76.04	415.46	387.88	27.57	15.068	
4,000.00	3,971.56	3,973.13	3,971.56	15.50	14.01	165.62	73.98	76.04	429.18	400.88	28.29	15.169	
4,100.00	4,070.55	4,072.12	4,070.55	15.92	14.36	166.07	73.98	76.04	442.93	413.91	29.01	15.267	
4,200.00	4,169.54	4,171.11	4,169.54	16.34	14.72	166.50	73.98	76.04	456.70	426.97	29.73	15.360	
4,300.00	4,268.53	4,270.11	4,268.53	16.76	15.07	166.90	73.98	76.04	470.50	440.04	30.45	15.450	
4,400.00	4,367.52	4,369.10	4,367.52	17.19	15.43	167.28	73.98	76.04	484.31	453.14	31.17	15.536	
4,500.00	4,466.51	4,468.09	4,466.51	17.61	15.78	167.64	73.98	76.04	498.15	466.26	31.89	15.619	
4,600.00	4,565.50	4,567.08	4,565.50	18.03	16.13	167.98	73.98	76.04	512.01	479.39	32.62	15.698	
4,700.00	4,664.49	4,666.07	4,664.49	18.45	16.49	168.30	73.98	76.04	525.88	492.55	33.34	15.775	
4,800.00	4,763.48	4,765.06	4,763.48	18.87	16.84	168.61	73.98	76.04	539.77	505.71	34.06	15.849	
4,900.00	4,862.47	4,864.05	4,862.47	19.30	17.20	168.89	73.98	76.04	553.67	518.90	34.78	15.920	
5,000.00	4,961.47	4,963.04	4,961.47	19.72	17.55	169.17	73.98	76.04	567.59	532.09	35.50	15.988	

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 713H - 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)	Offset 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
5,100.00	5,060.46	5,062.03	5,060.46	20.14	17.91	169.43	73.98	76.04	581.52	545.30	36.22	16.054	
5,200.00	5,159.45	5,161.02	5,159.45	20.56	18.26	169.68	73.98	76.04	595.46	558.52	36.94	16.118	
5,300.00	5,258.44	5,260.02	5,258.44	20.99	18.62	169.92	73.98	76.04	609.41	571.74	37.67	16.180	
5,400.00	5,357.43	5,359.01	5,357.43	21.41	18.97	170.15	73.98	76.04	623.37	584.98	38.39	16.239	
5,500.00	5,456.42	5,458.00	5,456.42	21.83	19.33	170.37	73.98	76.04	637.34	598.23	39.11	16.297	
5,600.00	5,555.41	5,556.99	5,555.41	22.25	19.68	170.58	73.98	76.04	651.32	611.49	39.83	16.352	
5,700.00	5,654.40	5,655.98	5,654.40	22.68	20.03	170.77	73.98	76.04	665.30	624.75	40.55	16.406	
5,800.00	5,753.39	5,754.97	5,753.39	23.10	20.39	170.97	73.98	76.04	679.30	638.02	41.28	16.458	
5,900.00	5,852.40	5,853.98	5,852.40	23.52	20.74	171.16	73.98	76.04	693.16	651.16	42.00	16.505	
6,000.00	5,951.85	5,953.43	5,951.85	23.92	21.10	171.34	73.98	76.04	703.40	660.69	42.72	16.467	
6,100.00	6,051.71	6,053.29	6,051.71	24.34	21.45	171.51	67.06	-255.84	651.35	614.80	36.56	17.817	
6,200.00	6,151.71	6,153.29	6,151.71	24.76	21.80	171.68	64.23	-392.09	579.18	541.79	37.39	15.490	
6,300.00	6,251.70	6,253.28	6,251.70	25.18	22.15	171.85	62.47	-476.61	509.86	469.11	40.74	12.514	
6,400.00	6,351.69	6,353.27	6,351.69	25.60	22.50	172.02	62.43	-478.37	450.80	405.91	44.90	10.041	
6,500.00	6,451.68	6,453.26	6,451.68	26.02	22.85	172.19	62.88	-456.88	408.12	359.63	48.49	8.417	
6,600.00	6,551.67	6,553.25	6,551.67	26.44	23.20	172.36	63.53	-425.42	386.59	336.33	50.27	7.691	
6,700.00	6,651.66	6,653.24	6,651.66	26.86	23.55	172.53	63.86	-409.65	384.35	334.12	50.23	7.652 SF	
6,800.00	6,751.65	6,753.23	6,751.65	27.28	23.90	172.70	64.29	-389.15	387.65	338.12	49.53	7.827	
6,900.00	6,851.64	6,853.22	6,851.64	27.70	24.25	172.87	65.09	-350.59	408.34	361.27	47.06	8.676	
7,000.00	6,951.63	6,953.21	6,951.63	28.12	24.60	173.04	65.92	-310.64	442.96	398.64	44.32	9.996	
7,100.00	7,051.62	7,053.20	7,051.62	28.54	24.95	173.21	66.64	-276.14	488.62	446.47	42.15	11.593	
7,200.00	7,151.61	7,153.19	7,151.61	28.96	25.30	173.38	67.66	-227.04	538.27	497.95	40.32	13.350	
7,300.00	7,251.60	7,253.18	7,251.60	29.38	25.65	173.55	68.64	-180.12	585.34	545.75	39.59	14.784	
7,400.00	7,351.59	7,353.17	7,351.59	29.80	26.00	173.72	69.48	-139.72	631.28	591.59	39.69	15.904	
7,500.00	7,451.58	7,453.16	7,451.58	30.22	26.35	173.89	69.97	-116.43	682.91	642.35	40.56	16.836	
7,600.00	7,551.57	7,553.15	7,551.57	30.64	26.70	174.06	70.50	-90.82	740.80	699.58	41.22	17.971	
7,700.00	7,651.56	7,653.14	7,651.56	31.06	27.05	174.23	70.99	-67.36	804.08	762.24	41.84	19.217	
7,800.00	7,751.55	7,753.13	7,751.55	31.48	27.40	174.40	71.33	-51.26	871.98	829.37	42.61	20.466	
7,900.00	7,851.54	7,853.12	7,851.54	31.90	27.75	174.57	71.64	-35.96	943.85	900.60	43.25	21.823	
8,000.00	7,951.53	7,953.11	7,951.53	32.32	28.10	174.74	71.91	-23.18	1,019.10	975.26	43.84	23.246	
8,100.00	8,051.52	8,053.10	8,051.52	32.74	28.45	174.91	72.23	-8.05	1,097.32	1,053.08	44.23	24.807	
8,200.00	8,151.51	8,153.09	8,151.51	33.16	28.80	175.08	72.23	-8.05	1,177.95	1,132.95	45.00	26.178	
8,300.00	8,251.50	8,253.08	8,251.50	33.58	29.15	175.25	72.50	5.11	1,260.51	1,215.25	45.26	27.849	
8,400.00	8,351.49	8,353.07	8,351.49	34.00	29.50	175.42	72.73	16.13	1,345.10	1,299.59	45.52	29.553	
8,500.00	8,451.48	8,453.06	8,451.48	34.42	29.85	175.59	72.73	16.13	1,431.07	1,385.07	46.00	31.112	
8,600.00	8,551.47	8,553.05	8,551.47	34.84	30.20	175.76	72.73	16.13	1,518.76	1,472.36	46.40	32.732	
8,700.00	8,651.46	8,653.04	8,651.46	35.26	30.55	175.93	72.97	27.82	1,607.00	1,560.51	46.49	34.566	
8,800.00	8,751.45	8,753.03	8,751.45	35.68	30.90	176.10	73.15	36.40	1,696.74	1,650.13	46.61	36.401	
8,900.00	8,851.44	8,853.02	8,851.44	36.10	31.25	176.27	73.15	36.40	1,787.06	1,740.16	46.89	38.109	
9,000.00	8,951.43	8,953.01	8,951.43	36.52	31.60	176.44	73.15	36.40	1,878.35	1,831.22	47.13	39.851	
9,100.00	9,051.42	9,053.00	9,051.42	36.94	31.95	176.61	73.15	36.40	1,970.49	1,923.15	47.34	41.622	
9,200.00	9,151.41	9,153.00	9,151.41	37.36	32.30	176.78	73.31	43.87	2,062.86	2,015.46	47.40	43.522	

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 715H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 385-MWD, 6028-MWD, 16578-MWD												Offset Well Error:	0.00 ft
Reference	Vertical	Offset	Semi Major Axis	Reference	Offset	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Measured Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor	
0.00	0.00	0.00	0.00	0.00	0.00	53.98	11.71	16.11	23.25				
100.00	100.00	88.05	88.05	0.13	0.15	54.49	11.50	16.12	19.80	19.51	0.29	68.770	
200.00	200.00	188.11	188.10	0.49	0.33	56.35	10.75	16.15	19.40	18.58	0.82	23.638	
300.00	300.00	288.15	288.14	0.85	0.50	59.73	9.45	16.20	18.76	17.40	1.35	13.859	
400.00	400.00	388.17	388.14	1.21	0.68	64.92	7.62	16.27	17.97	16.08	1.89	9.496	
500.00	500.00	488.12	488.07	1.57	1.04	71.59	5.51	16.56	17.46	14.84	2.61	6.685	
600.00	600.00	588.11	588.03	1.93	1.40	79.28	3.19	16.87	17.17	13.84	3.33	5.154	
700.00	700.00	688.13	688.03	2.29	1.77	86.32	1.09	16.97	17.01	12.95	4.05	4.198	
800.00	800.00	788.15	788.03	2.64	2.13	92.79	-0.82	16.81	16.83	12.06	4.77	3.528	
859.50	859.50	847.63	847.50	2.86	2.34	96.34	-1.85	16.68	16.78	11.58	5.20	3.229 CC	
900.00	900.00	888.12	887.99	3.00	2.49	98.67	-2.53	16.61	16.80	11.31	5.49	3.062	
1,000.00	1,000.00	988.11	987.96	3.36	2.85	104.47	-4.23	16.40	16.94	10.74	6.21	2.730 ES, SF	
1,100.00	1,099.95	1,087.56	1,087.29	3.72	3.21	170.92	-8.99	15.59	20.58	13.66	6.92	2.974	
1,200.00	1,199.63	1,184.90	1,184.05	4.07	3.58	-171.85	-19.38	15.29	35.18	27.57	7.62	4.619	
1,300.00	1,298.80	1,279.41	1,277.28	4.44	3.96	-163.33	-34.77	15.27	60.56	52.26	8.30	7.300	
1,400.00	1,397.79	1,371.04	1,366.89	4.81	4.35	-158.89	-53.94	15.44	91.70	82.77	8.93	10.269	
1,500.00	1,496.78	1,459.44	1,452.34	5.20	4.76	-156.05	-76.54	16.19	127.40	117.87	9.53	13.367	
1,600.00	1,595.77	1,546.62	1,535.64	5.59	5.20	-154.25	-102.15	17.96	167.06	156.92	10.14	16.476	
1,700.00	1,694.76	1,637.54	1,622.19	5.98	5.68	-153.09	-129.93	20.34	208.07	197.24	10.83	19.209	
1,800.00	1,793.75	1,729.62	1,709.88	6.38	6.17	-152.31	-157.89	22.73	248.96	237.41	11.55	21.560	
1,900.00	1,892.74	1,821.89	1,797.86	6.78	6.68	-151.79	-185.58	25.15	289.57	277.30	12.27	23.600	
2,000.00	1,991.74	1,915.26	1,887.05	7.18	7.20	-151.43	-213.13	27.64	329.75	316.74	13.01	25.347	
2,100.00	2,090.73	2,008.91	1,976.66	7.59	7.73	-151.18	-240.23	30.11	369.43	355.68	13.75	26.861	
2,200.00	2,189.72	2,102.77	2,066.62	8.00	8.25	-151.03	-266.85	32.68	408.63	394.13	14.50	28.182	
2,300.00	2,288.71	2,196.05	2,156.14	8.41	8.77	-150.92	-292.97	35.24	447.52	432.28	15.24	29.363	
2,400.00	2,387.70	2,291.50	2,247.85	8.82	9.31	-150.83	-319.28	37.71	485.96	469.96	16.01	30.361	
2,500.00	2,486.69	2,387.12	2,339.91	9.23	9.84	-150.76	-345.05	40.04	523.80	507.03	16.77	31.231	
2,600.00	2,585.68	2,482.22	2,431.60	9.65	10.37	-150.74	-370.15	42.49	561.19	543.66	17.53	32.011	
2,700.00	2,684.67	2,578.77	2,524.86	10.06	10.90	-150.76	-394.99	45.16	598.04	579.74	18.30	32.676	
2,800.00	2,783.66	2,674.08	2,617.03	10.48	11.41	-150.79	-419.09	47.76	634.49	615.43	19.06	33.287	
2,900.00	2,882.65	2,771.30	2,711.18	10.89	11.94	-150.82	-443.23	50.33	670.49	650.65	19.84	33.801	
3,000.00	2,981.65	2,865.55	2,802.57	11.31	12.45	-150.84	-466.14	52.46	705.89	685.31	20.58	34.292	
3,100.00	3,080.64	2,945.26	2,879.59	11.73	12.88	-150.79	-486.67	53.80	742.40	721.19	21.21	35.010	
3,200.00	3,179.63	3,041.68	2,972.53	12.14	13.42	-150.66	-512.28	54.88	779.44	757.46	21.98	35.457	
3,300.00	3,278.62	3,124.51	3,052.24	12.56	13.89	-150.52	-534.80	55.43	816.90	794.27	22.64	36.086	
3,400.00	3,377.61	3,226.54	3,150.37	12.98	14.47	-150.34	-562.76	55.87	854.50	831.02	23.47	36.405	
3,500.00	3,476.60	3,297.72	3,218.69	13.40	14.88	-150.22	-582.69	56.23	892.66	868.63	24.02	37.159	
3,600.00	3,575.59	3,382.58	3,299.70	13.82	15.39	-150.06	-607.95	56.91	932.48	907.78	24.70	37.748	
3,700.00	3,674.58	3,485.90	3,398.44	14.24	16.00	-149.90	-638.34	57.90	972.09	946.53	25.56	38.031	
3,800.00	3,773.57	3,595.46	3,503.72	14.66	16.63	-149.80	-668.69	58.98	1,010.14	983.68	26.47	38.168	
3,900.00	3,872.56	3,669.83	3,575.19	15.08	17.06	-149.73	-689.19	59.76	1,048.13	1,021.08	27.05	38.744	
4,000.00	3,971.56	3,762.63	3,664.04	15.50	17.60	-149.64	-715.99	60.94	1,087.34	1,059.53	27.81	39.101	
4,100.00	4,070.55	3,874.58	3,771.66	15.92	18.25	-149.60	-746.73	62.86	1,125.43	1,096.70	28.73	39.170	
4,200.00	4,169.54	3,950.65	3,844.89	16.34	18.69	-149.59	-767.28	64.29	1,163.18	1,133.84	29.34	39.649	
4,300.00	4,268.53	4,039.12	3,929.69	16.76	19.20	-149.54	-792.46	65.77	1,202.12	1,172.07	30.05	40.000	
4,400.00	4,367.52	4,158.37	4,044.36	17.19	19.89	-149.52	-825.07	67.99	1,240.20	1,209.17	31.04	39.958	
4,500.00	4,466.51	4,237.24	4,120.42	17.61	20.34	-149.51	-845.89	69.50	1,277.40	1,245.73	31.67	40.336	
4,600.00	4,565.50	4,321.25	4,201.12	18.03	20.82	-149.47	-869.24	70.66	1,315.66	1,283.31	32.35	40.672	
4,700.00	4,664.49	4,416.80	4,292.80	18.45	21.38	-149.40	-896.12	71.49	1,354.08	1,320.95	33.13	40.872	
4,800.00	4,763.48	4,520.50	4,392.48	18.87	21.98	-149.34	-924.73	72.25	1,391.96	1,357.98	33.98	40.963	
4,900.00	4,862.47	4,625.74	4,493.87	19.30	22.57	-149.27	-952.93	72.67	1,429.02	1,394.18	34.84	41.016	

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 715H - Original Hole - Surveys Original Hole													Offset Site Error: 0.00 ft	
Survey Program: 385-MWD, 6028-MWD, 16578-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	
5,000.00	4,961.47	4,700.18	4,565.56	19.72	23.00	-149.22	-972.92	72.89	1,466.14	1,430.70	35.44	41.367		
5,100.00	5,060.46	4,791.14	4,652.87	20.14	23.53	-149.15	-998.43	73.33	1,504.36	1,468.17	36.18	41.574		
5,200.00	5,159.45	4,914.00	4,771.24	20.56	24.23	-149.09	-1,031.36	73.95	1,541.48	1,504.29	37.19	41.447		
5,300.00	5,258.44	4,994.95	4,849.38	20.99	24.68	-149.05	-1,052.51	74.00	1,577.86	1,540.01	37.85	41.687		
5,400.00	5,357.43	5,102.98	4,953.52	21.41	25.29	-148.97	-1,081.21	73.57	1,614.50	1,575.77	38.73	41.686		
5,500.00	5,456.42	5,244.85	5,091.13	21.83	26.05	-148.89	-1,115.69	72.62	1,648.91	1,609.05	39.86	41.371		
5,600.00	5,555.41	5,369.22	5,212.46	22.25	26.69	-148.88	-1,142.99	72.17	1,681.33	1,640.50	40.82	41.184		
5,700.00	5,654.40	5,503.13	5,343.69	22.68	27.34	-148.90	-1,169.59	71.45	1,711.78	1,669.95	41.83	40.920		
5,800.00	5,753.39	5,710.51	5,548.16	23.10	28.27	-148.96	-1,203.75	69.37	1,740.04	1,696.84	43.20	40.279		
5,900.00	5,852.40	5,943.74	5,780.61	23.52	29.04	-149.24	-1,220.74	64.39	1,756.79	1,712.36	44.43	39.540		
6,000.00	5,951.85	6,072.67	5,909.42	23.92	29.20	-149.49	-1,225.27	61.16	1,768.18	1,723.24	44.94	39.346		
6,100.00	6,051.71	6,741.73	6,474.53	24.27	29.74	-140.43	-1,239.12	-232.76	1,765.75	1,721.18	44.56	39.623		
6,200.00	6,151.71	6,890.56	6,539.05	24.59	30.15	174.57	-1,241.83	-366.31	1,743.07	1,697.06	46.01	37.881		
6,300.00	6,251.70	6,933.04	6,549.88	24.90	30.31	86.71	-1,242.89	-407.37	1,722.52	1,675.31	47.21	36.483		
6,400.00	6,350.91	6,945.43	6,552.52	25.15	30.36	88.73	-1,243.25	-419.46	1,706.73	1,658.69	48.04	35.527		
6,500.00	6,446.60	6,937.14	6,550.78	25.33	30.33	89.50	-1,243.01	-411.37	1,696.25	1,647.76	48.49	34.982		
6,600.00	6,535.88	6,916.20	6,545.94	25.46	30.24	89.31	-1,242.44	-391.00	1,691.28	1,642.65	48.63	34.777		
6,644.14	6,572.54	6,904.58	6,542.97	25.49	30.20	88.99	-1,242.15	-379.77	1,690.78	1,642.15	48.63	34.767		
6,700.00	6,616.03	6,888.75	6,538.52	25.54	30.14	88.42	-1,241.79	-364.58	1,691.55	1,642.96	48.59	34.814		
6,800.00	6,684.61	6,856.21	6,527.81	25.62	30.03	86.94	-1,241.16	-333.87	1,696.50	1,648.03	48.46	35.006		
6,900.00	6,739.75	6,817.00	6,511.96	25.75	29.91	85.12	-1,240.47	-298.03	1,705.33	1,656.97	48.36	35.264		
7,000.00	6,787.31	6,780.28	6,494.44	26.02	29.82	83.32	-1,239.77	-265.77	1,718.00	1,669.58	48.42	35.482		
7,100.00	6,820.43	6,731.98	6,469.46	26.51	29.72	80.57	-1,238.99	-224.44	1,733.11	1,684.49	48.61	35.650		
7,200.00	6,836.69	6,679.58	6,440.83	27.24	29.62	77.84	-1,238.16	-180.59	1,748.89	1,699.86	49.03	35.668		
7,300.00	6,838.56	6,636.33	6,413.73	28.17	29.54	76.29	-1,237.07	-146.92	1,765.28	1,715.56	49.72	35.507		
7,400.00	6,838.91	6,596.00	6,386.04	29.31	29.49	75.39	-1,235.93	-117.62	1,785.09	1,734.49	50.60	35.275		
7,500.00	6,839.25	6,565.00	6,363.34	30.64	29.45	74.67	-1,235.24	-96.53	1,809.04	1,757.37	51.67	35.009		
7,600.00	6,839.60	6,544.96	6,348.08	32.11	29.43	74.18	-1,234.92	-83.54	1,837.11	1,784.23	52.88	34.739		
7,700.00	6,839.95	6,516.80	6,326.02	33.71	29.40	73.48	-1,234.49	-66.06	1,869.14	1,815.01	54.13	34.529		
7,800.00	6,840.30	6,502.00	6,314.12	35.43	29.39	73.11	-1,234.27	-57.25	1,905.14	1,849.68	55.45	34.357		
7,900.00	6,840.64	6,470.00	6,287.63	37.24	29.36	72.29	-1,233.88	-39.31	1,944.92	1,888.19	56.73	34.283		
8,000.00	6,840.99	6,454.03	6,274.04	39.13	29.35	71.86	-1,233.70	-30.93	1,988.43	1,930.40	58.03	34.264		
8,100.00	6,841.34	6,439.00	6,261.05	41.10	29.34	71.46	-1,233.50	-23.37	2,035.43	1,976.13	59.30	34.325		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 817H - Original Hole - rev1												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 Major Axis Reference (ft)	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	-126.69	-23.78	-31.92	39.81				
100.00	100.00	100.00	100.00	0.13	0.13	-126.69	-23.78	-31.92	39.81	39.54	0.27	148.062	
200.00	200.00	200.00	200.00	0.49	0.49	-126.69	-23.78	-31.92	39.81	38.82	0.99	40.381	
300.00	300.00	300.00	300.00	0.85	0.85	-126.69	-23.78	-31.92	39.81	38.10	1.70	23.378	
400.00	400.00	400.00	400.00	1.21	1.21	-126.69	-23.78	-31.92	39.81	37.39	2.42	16.451	
500.00	500.00	500.00	500.00	1.57	1.57	-126.69	-23.78	-31.92	39.81	36.67	3.14	12.691	
600.00	600.00	600.00	600.00	1.93	1.93	-126.69	-23.78	-31.92	39.81	35.95	3.85	10.330	
700.00	700.00	700.00	700.00	2.29	2.29	-126.69	-23.78	-31.92	39.81	35.24	4.57	8.710	
800.00	800.00	800.00	800.00	2.64	2.64	-126.69	-23.78	-31.92	39.81	34.52	5.29	7.529	
900.00	900.00	900.00	900.00	3.00	3.00	-126.69	-23.78	-31.92	39.81	33.80	6.00	6.630	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	-126.69	-23.78	-31.92	39.81	33.09	6.72	5.922	
1,100.00	1,099.95	1,099.95	1,099.95	3.72	3.72	-80.75	-23.78	-31.92	39.30	31.87	7.44	5.286	
1,184.87	1,184.59	1,184.59	1,184.59	4.02	4.02	-90.00	-23.78	-31.92	38.79	30.75	8.04	4.824 CC	
1,200.00	1,199.63	1,199.63	1,199.63	4.07	4.08	-92.23	-23.78	-31.92	38.82	30.67	8.15	4.764 ES	
1,300.00	1,298.80	1,296.66	1,296.62	4.44	4.41	-109.12	-25.87	-33.19	43.82	34.98	8.84	4.956	
1,400.00	1,397.79	1,392.80	1,392.47	4.81	4.73	-120.93	-32.09	-36.98	57.21	47.71	9.51	6.019	
1,500.00	1,496.78	1,487.75	1,486.67	5.20	5.05	-126.29	-42.26	-43.18	76.45	66.30	10.15	7.529	
1,600.00	1,595.77	1,581.09	1,578.56	5.59	5.38	-128.08	-56.15	-51.63	100.24	89.45	10.79	9.292	
1,700.00	1,694.76	1,675.62	1,670.92	5.98	5.74	-128.30	-73.35	-62.12	127.38	115.91	11.46	11.111	
1,800.00	1,793.75	1,771.78	1,764.80	6.38	6.12	-128.38	-91.15	-72.95	154.82	142.64	12.18	12.713	
1,900.00	1,892.74	1,867.94	1,858.67	6.78	6.52	-128.44	-108.94	-83.79	182.26	169.35	12.91	14.118	
2,000.00	1,991.74	1,964.10	1,952.55	7.18	6.93	-128.48	-126.73	-94.63	209.70	196.06	13.65	15.368	
2,100.00	2,090.73	2,060.26	2,046.43	7.59	7.35	-128.52	-144.52	-105.47	237.15	222.76	14.39	16.482	
2,200.00	2,189.72	2,156.42	2,140.30	8.00	7.77	-128.54	-162.31	-116.30	264.59	249.45	15.14	17.479	
2,300.00	2,288.71	2,252.58	2,234.18	8.41	8.21	-128.56	-180.11	-127.14	292.03	276.14	15.89	18.377	
2,400.00	2,387.70	2,348.74	2,328.06	8.82	8.65	-128.58	-197.90	-137.98	319.48	302.83	16.65	19.189	
2,500.00	2,486.69	2,444.90	2,421.93	9.23	9.09	-128.59	-215.69	-148.82	346.92	329.51	17.41	19.926	
2,600.00	2,585.68	2,541.06	2,515.81	9.65	9.54	-128.61	-233.48	-159.66	374.36	356.19	18.18	20.597	
2,700.00	2,684.67	2,637.22	2,609.69	10.06	9.99	-128.62	-251.27	-170.49	401.80	382.86	18.94	21.210	
2,800.00	2,783.66	2,733.38	2,703.56	10.48	10.45	-128.63	-269.06	-181.33	429.25	409.53	19.71	21.773	
2,900.00	2,882.65	2,829.54	2,797.44	10.89	10.91	-128.63	-286.86	-192.17	456.69	436.20	20.49	22.291	
3,000.00	2,981.65	2,925.70	2,891.32	11.31	11.37	-128.64	-304.65	-203.01	484.13	462.87	21.26	22.770	
3,100.00	3,080.64	3,021.86	2,985.19	11.73	11.84	-128.65	-322.44	-213.85	511.58	489.54	22.04	23.212	
3,200.00	3,179.63	3,118.03	3,079.07	12.14	12.30	-128.65	-340.23	-224.68	539.02	516.20	22.82	23.623	
3,300.00	3,278.62	3,214.19	3,172.95	12.56	12.77	-128.66	-358.02	-235.52	566.46	542.87	23.60	24.005	
3,400.00	3,377.61	3,310.35	3,266.82	12.98	13.24	-128.66	-375.82	-246.36	593.91	569.53	24.38	24.362	
3,500.00	3,476.60	3,406.51	3,360.70	13.40	13.71	-128.67	-393.61	-257.20	621.35	596.19	25.16	24.695	
3,600.00	3,575.59	3,502.67	3,454.58	13.82	14.18	-128.67	-411.40	-268.04	648.79	622.85	25.94	25.007	
3,700.00	3,674.58	3,598.83	3,548.46	14.24	14.66	-128.68	-429.19	-278.87	676.24	649.51	26.73	25.299	
3,800.00	3,773.57	3,694.99	3,642.33	14.66	15.13	-128.68	-446.98	-289.71	703.68	676.16	27.51	25.574	
3,900.00	3,872.56	3,791.15	3,736.21	15.08	15.61	-128.68	-464.77	-300.55	731.12	702.82	28.30	25.833	
4,000.00	3,971.56	3,887.31	3,830.09	15.50	16.08	-128.68	-482.57	-311.39	758.57	729.48	29.09	26.078	
4,100.00	4,070.55	3,983.47	3,923.96	15.92	16.56	-128.69	-500.36	-322.22	786.01	756.13	29.88	26.308	
4,200.00	4,169.54	4,079.63	4,017.84	16.34	17.04	-128.69	-518.15	-333.06	813.45	782.79	30.67	26.527	
4,300.00	4,268.53	4,175.79	4,111.72	16.76	17.52	-128.69	-535.94	-343.90	840.90	809.44	31.45	26.733	
4,400.00	4,367.52	4,271.95	4,205.59	17.19	18.00	-128.69	-553.73	-354.74	868.34	836.09	32.24	26.930	
4,500.00	4,466.51	4,368.11	4,299.47	17.61	18.47	-128.70	-571.53	-365.58	895.78	862.75	33.04	27.116	
4,600.00	4,565.50	4,464.27	4,393.35	18.03	18.96	-128.70	-589.32	-376.41	923.22	889.40	33.83	27.293	
4,700.00	4,664.49	4,560.44	4,487.22	18.45	19.44	-128.70	-607.11	-387.25	950.67	916.05	34.62	27.462	
4,800.00	4,763.48	4,656.60	4,581.10	18.87	19.92	-128.70	-624.90	-398.09	978.11	942.70	35.41	27.622	
4,900.00	4,862.47	4,752.76	4,674.98	19.30	20.40	-128.70	-642.69	-408.93	1,005.55	969.35	36.20	27.776	

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 817H - Original Hole - rev1													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 Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,000.00	4,961.47	4,848.92	4,768.85	19.72	20.88	-128.71	-660.48	-419.77	1,033.00	996.00	37.00	27.922		
5,100.00	5,060.46	4,945.08	4,862.73	20.14	21.36	-128.71	-678.28	-430.60	1,060.44	1,022.65	37.79	28.062		
5,200.00	5,159.45	5,041.24	4,956.61	20.56	21.85	-128.71	-696.07	-441.44	1,087.88	1,049.30	38.58	28.196		
5,300.00	5,258.44	5,137.40	5,050.48	20.99	22.33	-128.71	-713.86	-452.28	1,115.33	1,075.95	39.38	28.324		
5,400.00	5,357.43	5,233.56	5,144.36	21.41	22.81	-128.71	-731.65	-463.12	1,142.77	1,102.60	40.17	28.447		
5,500.00	5,456.42	5,329.72	5,238.24	21.83	23.30	-128.71	-749.44	-473.95	1,170.21	1,129.25	40.97	28.565		
5,600.00	5,555.41	5,425.88	5,332.12	22.25	23.78	-128.71	-767.24	-484.79	1,197.66	1,155.90	41.76	28.678		
5,700.00	5,654.40	5,522.04	5,425.99	22.68	24.26	-128.71	-785.03	-495.63	1,225.10	1,182.54	42.56	28.787		
5,800.00	5,753.39	5,618.20	5,519.87	23.10	24.75	-128.72	-802.82	-506.47	1,252.54	1,209.19	43.35	28.892		
5,900.00	5,852.40	5,714.39	5,613.77	23.52	25.23	-128.86	-820.62	-517.31	1,279.90	1,235.75	44.15	28.991		
6,000.00	5,951.85	5,845.15	5,741.60	23.92	25.88	-129.28	-844.08	-531.60	1,304.71	1,259.51	45.20	28.864		
6,100.00	6,051.71	6,087.99	5,982.40	24.27	26.87	-129.35	-869.82	-547.28	1,318.69	1,271.91	46.78	28.188		
6,200.00	6,151.71	6,257.36	6,151.71	24.59	27.37	-179.03	-872.85	-549.13	1,320.31	1,272.68	47.63	27.719		
6,300.00	6,251.70	6,358.94	6,253.27	24.90	27.63	91.40	-872.85	-548.45	1,320.30	1,272.05	48.26	27.361		
6,400.00	6,350.91	6,464.63	6,357.77	25.15	27.85	91.29	-872.73	-533.63	1,320.24	1,271.48	48.76	27.075		
6,500.00	6,446.60	6,569.72	6,457.22	25.33	28.00	91.14	-872.47	-500.14	1,320.17	1,271.04	49.13	26.868		
6,600.00	6,535.88	6,674.02	6,548.24	25.46	28.08	90.95	-872.07	-449.51	1,320.09	1,270.67	49.42	26.711		
6,700.00	6,616.03	6,777.42	6,627.96	25.54	28.11	90.74	-871.56	-383.88	1,320.02	1,270.31	49.70	26.558		
6,800.00	6,684.61	6,879.82	6,694.03	25.62	28.08	90.50	-870.95	-305.82	1,319.96	1,269.87	50.09	26.350		
6,900.00	6,739.75	6,980.62	6,746.37	25.75	28.03	90.33	-870.27	-219.73	1,319.93	1,269.23	50.70	26.033		
7,000.00	6,787.31	7,081.43	6,790.43	26.02	27.99	90.14	-869.56	-129.20	1,319.91	1,268.28	51.64	25.561		
7,055.09	6,807.60	7,136.58	6,807.65	26.27	27.96	90.00	-869.15	-76.82	1,319.91	1,267.59	52.32	25.225		
7,100.00	6,820.43	7,181.31	6,817.87	26.51	27.94	89.89	-868.81	-33.29	1,319.91	1,266.99	52.93	24.938		
7,200.00	6,836.69	7,280.18	6,828.24	27.24	27.96	89.63	-868.04	64.91	1,319.94	1,265.38	54.56	24.194		
7,300.00	6,838.56	7,380.02	6,828.66	28.17	28.43	89.57	-867.26	164.73	1,319.95	1,263.41	56.54	23.346		
7,400.00	6,838.91	7,480.02	6,829.01	29.31	29.56	89.57	-866.48	264.73	1,319.95	1,261.07	58.88	22.417		
7,500.00	6,839.25	7,580.02	6,829.36	30.64	30.94	89.57	-865.70	364.73	1,319.95	1,258.39	61.56	21.442		
7,600.00	6,839.60	7,680.02	6,829.70	32.11	32.48	89.57	-864.91	464.72	1,319.95	1,255.42	64.53	20.455		
7,700.00	6,839.95	7,780.02	6,830.05	33.71	34.13	89.57	-864.13	564.72	1,319.95	1,252.19	67.76	19.481		
7,800.00	6,840.30	7,880.02	6,830.40	35.43	35.89	89.57	-863.35	664.72	1,319.95	1,248.75	71.20	18.538		
7,900.00	6,840.64	7,980.02	6,830.75	37.24	37.74	89.57	-862.56	764.71	1,319.95	1,245.11	74.84	17.637		
8,000.00	6,840.99	8,080.02	6,831.09	39.13	39.67	89.57	-861.78	864.71	1,319.95	1,241.31	78.64	16.785		
8,100.00	6,841.34	8,180.02	6,831.44	41.10	41.66	89.57	-861.00	964.71	1,319.95	1,237.37	82.58	15.984		
8,200.00	6,841.69	8,280.02	6,831.79	43.12	43.71	89.57	-860.21	1,064.70	1,319.95	1,233.31	86.64	15.235		
8,300.00	6,842.04	8,380.02	6,832.14	45.20	45.80	89.57	-859.43	1,164.70	1,319.95	1,229.15	90.81	14.536		
8,400.00	6,842.38	8,480.02	6,832.48	47.33	47.94	89.57	-858.65	1,264.69	1,319.95	1,224.89	95.07	13.885		
8,500.00	6,842.73	8,580.02	6,832.83	49.49	50.12	89.57	-857.86	1,364.69	1,319.95	1,220.55	99.40	13.279		
8,600.00	6,843.08	8,680.02	6,833.18	51.69	52.33	89.57	-857.08	1,464.69	1,319.95	1,216.14	103.81	12.715		
8,700.00	6,843.43	8,780.02	6,833.53	53.92	54.57	89.57	-856.30	1,564.68	1,319.96	1,211.67	108.28	12.190		
8,800.00	6,843.77	8,880.02	6,833.87	56.18	56.84	89.57	-855.51	1,664.68	1,319.96	1,207.15	112.81	11.701		
8,900.00	6,844.12	8,980.02	6,834.22	58.46	59.13	89.57	-854.73	1,764.68	1,319.96	1,202.58	117.38	11.245		
9,000.00	6,844.47	9,080.02	6,834.57	60.77	61.44	89.57	-853.95	1,864.67	1,319.96	1,197.97	121.99	10.820		
9,100.00	6,844.82	9,180.02	6,834.92	63.09	63.76	89.57	-853.16	1,964.67	1,319.96	1,193.32	126.64	10.423		
9,200.00	6,845.17	9,280.02	6,835.26	65.43	66.11	89.57	-852.38	2,064.66	1,319.96	1,188.63	131.33	10.051		
9,300.00	6,845.51	9,380.02	6,835.61	67.79	68.46	89.57	-851.60	2,164.66	1,319.96	1,183.92	136.04	9.703		
9,400.00	6,845.86	9,480.02	6,835.96	70.15	70.84	89.57	-850.82	2,264.66	1,319.96	1,179.18	140.78	9.376		
9,500.00	6,846.21	9,580.02	6,836.31	72.53	73.22	89.57	-850.03	2,364.65	1,319.96	1,174.41	145.55	9.069		
9,600.00	6,846.56	9,680.02	6,836.65	74.93	75.61	89.57	-849.25	2,464.65	1,319.96	1,169.62	150.34	8.780		
9,700.00	6,846.91	9,780.02	6,837.00	77.33	78.02	89.57	-848.47	2,564.65	1,319.96	1,164.81	155.15	8.508		
9,800.00	6,847.25	9,880.02	6,837.35	79.74	80.43	89.57	-847.68	2,664.64	1,319.96	1,159.99	159.98	8.251		
9,900.00	6,847.60	9,980.02	6,837.70	82.16	82.85	89.57	-846.90	2,764.64	1,319.96	1,155.14	164.82	8.009		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design:		Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 817H - Original Hole - rev1											Offset Site Error:		0.00 ft	
Survey Program:		0-MWD						Rule Assigned:						Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
10,000.00	6,847.95	10,080.02	6,838.04	84.59	85.28	89.57	-846.12	2,864.64	1,319.96	1,150.28	169.68	7.779				
10,100.00	6,848.30	10,180.02	6,838.39	87.02	87.72	89.57	-845.33	2,964.63	1,319.96	1,145.41	174.55	7.562				
10,200.00	6,848.64	10,280.02	6,838.74	89.47	90.16	89.57	-844.55	3,064.63	1,319.96	1,140.53	179.44	7.356				
10,300.00	6,848.99	10,380.02	6,839.09	91.91	92.61	89.57	-843.77	3,164.62	1,319.96	1,135.63	184.34	7.161				
10,400.00	6,849.34	10,480.02	6,839.44	94.37	95.06	89.57	-842.98	3,264.62	1,319.96	1,130.72	189.25	6.975				
10,500.00	6,849.69	10,580.02	6,839.78	96.83	97.52	89.57	-842.20	3,364.62	1,319.97	1,125.80	194.16	6.798				
10,600.00	6,850.04	10,680.02	6,840.13	99.29	99.98	89.57	-841.42	3,464.61	1,319.97	1,120.87	199.09	6.630				
10,700.00	6,850.38	10,780.02	6,840.48	101.76	102.45	89.57	-840.63	3,564.61	1,319.97	1,115.94	204.03	6.469				
10,800.00	6,850.73	10,880.02	6,840.83	104.23	104.92	89.57	-839.85	3,664.61	1,319.97	1,110.99	208.97	6.316				
10,900.00	6,851.08	10,980.02	6,841.17	106.70	107.39	89.57	-839.07	3,764.60	1,319.97	1,106.04	213.93	6.170				
11,000.00	6,851.43	11,080.02	6,841.52	109.18	109.87	89.57	-838.28	3,864.60	1,319.97	1,101.08	218.89	6.030				
11,100.00	6,851.77	11,180.02	6,841.87	111.66	112.35	89.57	-837.50	3,964.60	1,319.97	1,096.12	223.85	5.897				
11,200.00	6,852.12	11,280.02	6,842.22	114.15	114.84	89.57	-836.72	4,064.59	1,319.97	1,091.14	228.83	5.768				
11,300.00	6,852.47	11,380.02	6,842.56	116.64	117.33	89.57	-835.93	4,164.59	1,319.97	1,086.17	233.80	5.646				
11,400.00	6,852.82	11,480.02	6,842.91	119.13	119.82	89.57	-835.15	4,264.58	1,319.97	1,081.18	238.79	5.528				
11,500.00	6,853.17	11,580.02	6,843.26	121.62	122.31	89.57	-834.37	4,364.58	1,319.97	1,076.20	243.77	5.415				
11,600.00	6,853.51	11,680.02	6,843.61	124.12	124.81	89.57	-833.59	4,464.58	1,319.97	1,071.20	248.77	5.306				
11,700.00	6,853.86	11,780.02	6,843.95	126.61	127.30	89.57	-832.80	4,564.57	1,319.97	1,066.21	253.76	5.202				
11,800.00	6,854.21	11,880.02	6,844.30	129.11	129.80	89.57	-832.02	4,664.57	1,319.97	1,061.21	258.77	5.101				
11,900.00	6,854.56	11,980.02	6,844.65	131.62	132.30	89.57	-831.24	4,764.57	1,319.97	1,056.20	263.77	5.004				
12,000.00	6,854.91	12,080.02	6,845.00	134.12	134.81	89.57	-830.45	4,864.56	1,319.97	1,051.19	268.78	4.911				
12,100.00	6,855.25	12,180.02	6,845.34	136.63	137.31	89.57	-829.67	4,964.56	1,319.97	1,046.18	273.79	4.821				
12,200.00	6,855.60	12,280.02	6,845.69	139.13	139.82	89.57	-828.89	5,064.55	1,319.97	1,041.17	278.81	4.734				
12,300.00	6,855.95	12,380.02	6,846.04	141.64	142.33	89.57	-828.10	5,164.55	1,319.98	1,036.15	283.83	4.651				
12,400.00	6,856.30	12,480.02	6,846.39	144.15	144.84	89.57	-827.32	5,264.55	1,319.98	1,031.13	288.85	4.570				
12,500.00	6,856.64	12,580.02	6,846.73	146.66	147.35	89.57	-826.54	5,364.54	1,319.98	1,026.10	293.88	4.492				
12,600.00	6,856.99	12,680.02	6,847.08	149.18	149.86	89.57	-825.75	5,464.54	1,319.98	1,021.07	298.90	4.416				
12,700.00	6,857.34	12,780.02	6,847.43	151.69	152.38	89.57	-824.97	5,564.54	1,319.98	1,016.04	303.93	4.343				
12,800.00	6,857.69	12,880.02	6,847.78	154.21	154.89	89.57	-824.19	5,664.53	1,319.98	1,011.01	308.97	4.272				
12,900.00	6,858.04	12,980.02	6,848.12	156.73	157.41	89.57	-823.40	5,764.53	1,319.98	1,005.98	314.00	4.204				
13,000.00	6,858.38	13,080.02	6,848.47	159.24	159.93	89.57	-822.62	5,864.53	1,319.98	1,000.94	319.04	4.137				
13,100.00	6,858.73	13,180.02	6,848.82	161.76	162.45	89.57	-821.84	5,964.52	1,319.98	995.90	324.08	4.073				
13,200.00	6,859.08	13,280.02	6,849.17	164.28	164.97	89.57	-821.05	6,064.52	1,319.98	990.86	329.12	4.011				
13,300.00	6,859.43	13,380.02	6,849.51	166.81	167.49	89.57	-820.27	6,164.51	1,319.98	985.82	334.16	3.950				
13,400.00	6,859.77	13,480.02	6,849.86	169.33	170.01	89.57	-819.49	6,264.51	1,319.98	980.77	339.21	3.891				
13,500.00	6,860.12	13,580.02	6,850.21	171.85	172.53	89.57	-818.71	6,364.51	1,319.98	975.73	344.25	3.834				
13,600.00	6,860.47	13,680.02	6,850.56	174.37	175.05	89.57	-817.92	6,464.50	1,319.98	970.68	349.30	3.779				
13,700.00	6,860.82	13,780.02	6,850.90	176.90	177.58	89.57	-817.14	6,564.50	1,319.98	965.63	354.35	3.725				
13,800.00	6,861.17	13,880.02	6,851.25	179.42	180.10	89.57	-816.36	6,664.50	1,319.98	960.58	359.40	3.673				
13,900.00	6,861.51	13,980.02	6,851.60	181.95	182.63	89.57	-815.57	6,764.49	1,319.98	955.53	364.46	3.622				
14,000.00	6,861.86	14,080.02	6,851.95	184.48	185.16	89.57	-814.79	6,864.49	1,319.98	950.47	369.51	3.572				
14,100.00	6,862.21	14,180.02	6,852.29	187.01	187.68	89.57	-814.01	6,964.48	1,319.99	945.42	374.57	3.524				
14,200.00	6,862.56	14,280.02	6,852.64	189.53	190.21	89.57	-813.22	7,064.48	1,319.99	940.36	379.62	3.477				
14,300.00	6,862.91	14,380.02	6,852.99	192.06	192.74	89.57	-812.44	7,164.48	1,319.99	935.30	384.68	3.431				
14,400.00	6,863.25	14,480.02	6,853.34	194.59	195.27	89.57	-811.66	7,264.47	1,319.99	930.25	389.74	3.387				
14,500.00	6,863.60	14,580.02	6,853.69	197.12	197.80	89.57	-810.87	7,364.47	1,319.99	925.18	394.80	3.343				
14,600.00	6,863.95	14,680.02	6,854.03	199.65	200.33	89.57	-810.09	7,464.47	1,319.99	920.12	399.86	3.301				
14,700.00	6,864.30	14,780.02	6,854.38	202.19	202.86	89.57	-809.31	7,564.46	1,319.99	915.06	404.93	3.260				
14,800.00	6,864.64	14,880.02	6,854.73	204.72	205.39	89.57	-808.52	7,664.46	1,319.99	910.00	409.99	3.220				
14,900.00	6,864.99	14,980.02	6,855.08	207.25	207.92	89.57	-807.74	7,764.46	1,319.99	904.93	415.06	3.180				
15,000.00	6,865.34	15,080.02	6,855.42	209.78	210.46	89.57	-806.96	7,864.45	1,319.99	899.87	420.12	3.142				

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 817H - Original Hole - rev1													Offset Site Error: 0.00 ft	
Survey Program: Reference		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	
15,100.00	6,865.69	15,180.02	6,855.77	212.32	212.99	89.57	-806.17	7,964.45	1,319.99	894.80	425.19	3.104		
15,200.00	6,866.04	15,280.02	6,856.12	214.85	215.52	89.57	-805.39	8,064.44	1,319.99	889.73	430.26	3.068		
15,300.00	6,866.38	15,380.02	6,856.47	217.38	218.06	89.57	-804.61	8,164.44	1,319.99	884.67	435.33	3.032		
15,400.00	6,866.73	15,480.02	6,856.81	219.92	220.59	89.57	-803.83	8,264.44	1,319.99	879.60	440.39	2.997		
15,500.00	6,867.08	15,580.02	6,857.16	222.45	223.12	89.57	-803.04	8,364.43	1,319.99	874.53	445.46	2.963		
15,600.00	6,867.43	15,680.02	6,857.51	224.99	225.66	89.57	-802.26	8,464.43	1,319.99	869.46	450.54	2.930		
15,700.00	6,867.78	15,780.02	6,857.86	227.52	228.19	89.57	-801.48	8,564.43	1,319.99	864.39	455.61	2.897		
15,800.00	6,868.12	15,880.02	6,858.20	230.06	230.73	89.57	-800.69	8,664.42	1,319.99	859.32	460.68	2.865		
15,900.00	6,868.47	15,980.02	6,858.55	232.60	233.27	89.57	-799.91	8,764.42	1,320.00	854.24	465.75	2.834		
16,000.00	6,868.82	16,080.02	6,858.90	235.13	235.80	89.57	-799.13	8,864.42	1,320.00	849.17	470.83	2.804		
16,100.00	6,869.17	16,180.02	6,859.25	237.67	238.34	89.57	-798.34	8,964.41	1,320.00	844.10	475.90	2.774		
16,200.00	6,869.51	16,280.02	6,859.59	240.21	240.88	89.57	-797.56	9,064.41	1,320.00	839.02	480.98	2.744		
16,300.00	6,869.86	16,380.02	6,859.94	242.75	243.41	89.57	-796.78	9,164.40	1,320.00	833.95	486.05	2.716		
16,400.00	6,870.21	16,480.02	6,860.29	245.28	245.95	89.57	-795.99	9,264.40	1,320.00	828.87	491.13	2.688		
16,500.00	6,870.56	16,580.02	6,860.64	247.82	248.49	89.57	-795.21	9,364.40	1,320.00	823.79	496.20	2.660		
16,600.00	6,870.91	16,680.02	6,860.98	250.36	251.03	89.57	-794.43	9,464.39	1,320.00	818.72	501.28	2.633		
16,700.00	6,871.25	16,780.02	6,861.33	252.90	253.57	89.57	-793.64	9,564.39	1,320.00	813.64	506.36	2.607		
16,800.00	6,871.60	16,880.02	6,861.68	255.44	256.11	89.57	-792.86	9,664.39	1,320.00	808.56	511.44	2.581		
16,900.00	6,871.95	16,980.02	6,862.03	257.98	258.65	89.57	-792.08	9,764.38	1,320.00	803.48	516.52	2.556		
17,000.00	6,872.30	17,080.02	6,862.37	260.52	261.18	89.57	-791.29	9,864.38	1,320.00	798.40	521.60	2.531		
17,100.00	6,872.64	17,180.02	6,862.72	263.06	263.72	89.57	-790.51	9,964.37	1,320.00	793.32	526.68	2.506		
17,200.00	6,872.99	17,280.02	6,863.07	265.60	266.26	89.57	-789.73	10,064.37	1,320.00	788.25	531.76	2.482		
17,300.00	6,873.34	17,380.02	6,863.42	268.14	268.80	89.57	-788.95	10,164.37	1,320.00	783.16	536.84	2.459		
17,400.00	6,873.69	17,480.02	6,863.76	270.68	271.34	89.57	-788.16	10,264.36	1,320.00	778.08	541.92	2.436		
17,500.00	6,874.04	17,580.02	6,864.11	273.22	273.89	89.57	-787.38	10,364.36	1,320.00	773.00	547.00	2.413		
17,600.00	6,874.38	17,680.02	6,864.46	275.76	276.43	89.57	-786.60	10,464.36	1,320.00	767.92	552.08	2.391		
17,700.00	6,874.73	17,780.02	6,864.81	278.30	278.97	89.57	-785.81	10,564.35	1,320.01	762.84	557.17	2.369		
17,800.00	6,875.08	17,880.02	6,865.15	280.85	281.51	89.57	-785.03	10,664.35	1,320.01	757.76	562.25	2.348		
17,900.00	6,875.43	17,980.02	6,865.50	283.39	284.05	89.57	-784.25	10,764.35	1,320.01	752.68	567.33	2.327		
18,000.00	6,875.78	18,080.02	6,865.85	285.93	286.59	89.57	-783.46	10,864.34	1,320.01	747.59	572.41	2.306		
18,100.00	6,876.12	18,180.02	6,866.20	288.47	289.13	89.57	-782.68	10,964.34	1,320.01	742.51	577.50	2.286		
18,200.00	6,876.47	18,280.02	6,866.54	291.01	291.67	89.57	-781.90	11,064.33	1,320.01	737.43	582.58	2.266		
18,300.00	6,876.82	18,380.02	6,866.89	293.56	294.22	89.57	-781.11	11,164.33	1,320.01	732.34	587.67	2.246		
18,400.00	6,877.17	18,480.02	6,867.24	296.10	296.76	89.57	-780.33	11,264.33	1,320.01	727.26	592.75	2.227		
18,500.00	6,877.51	18,580.02	6,867.59	298.64	299.30	89.57	-779.55	11,364.32	1,320.01	722.17	597.84	2.208		
18,600.00	6,877.86	18,680.02	6,867.94	301.18	301.84	89.57	-778.76	11,464.32	1,320.01	717.09	602.92	2.189		
18,601.47	6,877.87	18,681.48	6,867.94	301.22	301.88	89.57	-778.75	11,465.79	1,320.01	717.01	603.00	2.189		
18,639.68	6,878.00	18,698.72	6,868.00	302.19	302.32	89.57	-778.62	11,483.02	1,320.18	715.82	604.35	2.184 SF		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design:		Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 915H - Original Hole - rev1											Offset Site Error:		0.00 ft	
Survey Program:		0-MWD								Rule Assigned:				Offset Well Error:		0.00 ft
Reference	Offset	Reference	Offset	Reference	Offset	Highside	Offset Wellbore Centre		Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.00	0.00	0.00	0.00	0.00	0.00	-127.36	-12.07	-15.81	19.89							
100.00	100.00	100.00	100.00	0.13	0.13	-127.36	-12.07	-15.81	19.89	19.63	0.27	73.999				
200.00	200.00	200.00	200.00	0.49	0.49	-127.36	-12.07	-15.81	19.89	18.91	0.99	20.182				
300.00	300.00	300.00	300.00	0.85	0.85	-127.36	-12.07	-15.81	19.89	18.19	1.70	11.684				
400.00	400.00	400.00	400.00	1.21	1.21	-127.36	-12.07	-15.81	19.89	17.48	2.42	8.222				
500.00	500.00	500.00	500.00	1.57	1.57	-127.36	-12.07	-15.81	19.89	16.76	3.14	6.343				
600.00	600.00	600.00	600.00	1.93	1.93	-127.36	-12.07	-15.81	19.89	16.04	3.85	5.163				
700.00	700.00	700.00	700.00	2.29	2.29	-127.36	-12.07	-15.81	19.89	15.32	4.57	4.353				
800.00	800.00	800.00	800.00	2.64	2.64	-127.36	-12.07	-15.81	19.89	14.61	5.29	3.763				
900.00	900.00	900.00	900.00	3.00	3.00	-127.36	-12.07	-15.81	19.89	13.89	6.00	3.313				
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	-127.36	-12.07	-15.81	19.89	13.17	6.72	2.960				
1,100.00	1,099.95	1,099.95	1,099.95	3.72	3.72	-85.23	-12.07	-15.81	19.51	12.07	7.44	2.623				
1,127.29	1,127.20	1,127.20	1,127.20	3.81	3.82	-90.00	-12.07	-15.81	19.44	11.81	7.63	2.548	CC, ES			
1,200.00	1,199.63	1,199.63	1,199.63	4.07	4.08	-107.66	-12.07	-15.81	20.41	12.26	8.15	2.504				
1,300.00	1,298.80	1,298.30	1,298.26	4.44	4.42	-129.09	-12.98	-18.17	28.07	19.21	8.86	3.169				
1,400.00	1,397.79	1,396.97	1,396.62	4.81	4.76	-134.57	-15.72	-25.28	40.12	30.56	9.56	4.198				
1,500.00	1,496.78	1,495.75	1,494.66	5.20	5.10	-132.89	-20.03	-36.49	53.57	43.30	10.27	5.216				
1,600.00	1,595.77	1,594.80	1,592.91	5.59	5.46	-131.42	-24.55	-48.25	67.24	56.24	11.00	6.112				
1,700.00	1,694.76	1,693.85	1,691.15	5.98	5.82	-130.44	-29.08	-60.02	80.93	69.19	11.74	6.892				
1,800.00	1,793.75	1,792.90	1,789.40	6.38	6.19	-129.75	-33.61	-71.79	94.64	82.15	12.49	7.576				
1,900.00	1,892.74	1,891.95	1,887.64	6.78	6.57	-129.23	-38.14	-83.56	108.37	95.12	13.25	8.179				
2,000.00	1,991.74	1,991.00	1,985.88	7.18	6.95	-128.83	-42.66	-95.32	122.10	108.08	14.01	8.714				
2,100.00	2,090.73	2,090.05	2,084.13	7.59	7.33	-128.51	-47.19	-107.09	135.83	121.05	14.78	9.191				
2,200.00	2,189.72	2,189.10	2,182.37	8.00	7.72	-128.25	-51.72	-118.86	149.57	134.01	15.55	9.618				
2,300.00	2,288.71	2,288.15	2,280.62	8.41	8.11	-128.03	-56.24	-130.62	163.30	146.98	16.33	10.002				
2,400.00	2,387.70	2,387.20	2,378.86	8.82	8.50	-127.85	-60.77	-142.39	177.05	159.94	17.11	10.350				
2,500.00	2,486.69	2,486.25	2,477.11	9.23	8.89	-127.69	-65.30	-154.16	190.79	172.90	17.89	10.667				
2,600.00	2,585.68	2,585.30	2,575.35	9.65	9.29	-127.55	-69.83	-165.92	204.53	185.86	18.67	10.955				
2,700.00	2,684.67	2,684.35	2,673.59	10.06	9.68	-127.43	-74.35	-177.69	218.28	198.82	19.46	11.219				
2,800.00	2,783.66	2,783.40	2,771.84	10.48	10.08	-127.33	-78.88	-189.46	232.02	211.78	20.24	11.461				
2,900.00	2,882.65	2,882.45	2,870.08	10.89	10.48	-127.24	-83.41	-201.23	245.77	224.74	21.03	11.685				
3,000.00	2,981.65	2,981.50	2,968.33	11.31	10.88	-127.15	-87.93	-212.99	259.52	237.69	21.82	11.891				
3,100.00	3,080.64	3,080.55	3,066.57	11.73	11.28	-127.08	-92.46	-224.76	273.27	250.65	22.62	12.082				
3,200.00	3,179.63	3,179.60	3,164.81	12.14	11.68	-127.01	-96.99	-236.53	287.01	263.60	23.41	12.260				
3,300.00	3,278.62	3,278.65	3,263.06	12.56	12.08	-126.95	-101.52	-248.29	300.76	276.56	24.21	12.426				
3,400.00	3,377.61	3,377.70	3,361.30	12.98	12.49	-126.89	-106.04	-260.06	314.51	289.51	25.00	12.580				
3,500.00	3,476.60	3,476.75	3,459.55	13.40	12.89	-126.84	-110.57	-271.83	328.26	302.46	25.80	12.725				
3,600.00	3,575.59	3,575.80	3,557.79	13.82	13.30	-126.79	-115.10	-283.59	342.01	315.41	26.59	12.860				
3,700.00	3,674.58	3,674.85	3,656.04	14.24	13.70	-126.75	-119.62	-295.36	355.76	328.37	27.39	12.988				
3,800.00	3,773.57	3,773.90	3,754.28	14.66	14.11	-126.71	-124.15	-307.13	369.51	341.32	28.19	13.107				
3,900.00	3,872.56	3,872.95	3,852.52	15.08	14.51	-126.67	-128.68	-318.90	383.26	354.27	28.99	13.220				
4,000.00	3,971.56	3,971.99	3,950.77	15.50	14.92	-126.64	-133.21	-330.66	397.01	367.22	29.79	13.327				
4,100.00	4,070.55	4,071.04	4,049.01	15.92	15.32	-126.60	-137.73	-342.43	410.76	380.17	30.59	13.428				
4,200.00	4,169.54	4,170.09	4,147.26	16.34	15.73	-126.57	-142.26	-354.20	424.51	393.12	31.39	13.523				
4,300.00	4,268.53	4,269.14	4,245.50	16.76	16.14	-126.54	-146.79	-365.96	438.26	406.07	32.19	13.614				
4,400.00	4,367.52	4,368.19	4,343.75	17.19	16.54	-126.52	-151.31	-377.73	452.01	419.01	32.99	13.700				
4,500.00	4,466.51	4,467.24	4,441.99	17.61	16.95	-126.49	-155.84	-389.50	465.76	431.96	33.80	13.781				
4,600.00	4,565.50	4,566.29	4,540.23	18.03	17.36	-126.47	-160.37	-401.26	479.51	444.91	34.60	13.859				
4,700.00	4,664.49	4,665.34	4,638.48	18.45	17.77	-126.45	-164.89	-413.03	493.26	457.86	35.40	13.933				
4,800.00	4,763.48	4,764.39	4,736.72	18.87	18.18	-126.43	-169.42	-424.80	507.01	470.81	36.20	14.004				
4,900.00	4,862.47	4,863.44	4,834.97	19.30	18.59	-126.41	-173.95	-436.57	520.76	483.75	37.01	14.072				

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 915H - Original Hole - rev1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.00	4,961.47	4,962.49	4,933.21	19.72	18.99	-126.39	-178.48	-448.33	534.51	496.70	37.81	14.136		
5,100.00	5,060.46	5,061.54	5,031.46	20.14	19.40	-126.37	-183.00	-460.10	548.26	509.65	38.62	14.198		
5,200.00	5,159.45	5,160.59	5,129.70	20.56	19.81	-126.35	-187.53	-471.87	562.01	522.59	39.42	14.257		
5,300.00	5,258.44	5,259.64	5,227.94	20.99	20.22	-126.33	-192.06	-483.63	575.77	535.54	40.22	14.314		
5,400.00	5,357.43	5,358.69	5,326.19	21.41	20.63	-126.32	-196.58	-495.40	589.52	548.49	41.03	14.368		
5,500.00	5,456.42	5,457.74	5,424.43	21.83	21.04	-126.30	-201.11	-507.17	603.27	561.43	41.83	14.420		
5,600.00	5,555.41	5,556.79	5,522.68	22.25	21.45	-126.29	-205.64	-518.93	617.02	574.38	42.64	14.471		
5,700.00	5,654.40	5,656.12	5,631.28	22.68	21.89	-126.40	-210.11	-530.56	630.24	586.73	43.51	14.484		
5,800.00	5,753.39	5,754.88	5,728.08	23.10	22.31	-127.03	-212.52	-536.82	641.17	596.80	44.37	14.451		
5,900.00	5,852.40	5,854.00	5,826.40	23.52	22.65	-128.07	-212.79	-537.53	650.04	604.92	45.12	14.408		
6,000.00	5,951.85	5,953.50	5,925.85	23.92	22.96	-128.93	-212.79	-537.53	656.51	610.71	45.81	14.332		
6,100.00	6,051.71	6,053.42	6,025.71	24.27	23.26	-129.66	-212.77	-533.98	659.69	613.24	46.45	14.202		
6,200.00	6,151.71	6,153.42	6,125.71	24.59	23.48	-129.94	-212.61	-514.68	660.00	613.04	46.96	14.054		
6,300.00	6,251.70	6,253.41	6,225.70	24.90	23.62	-129.62	-212.37	-482.93	661.33	613.99	47.34	13.971		
6,400.00	6,350.91	6,352.62	6,325.91	25.15	23.74	-128.48	-212.05	-442.15	664.95	617.42	47.52	13.992		
6,500.00	6,446.60	6,448.31	6,420.60	25.33	23.84	-128.54	-211.67	-393.71	670.25	622.70	47.54	14.097		
6,600.00	6,535.88	6,537.59	6,510.88	25.46	23.95	-127.84	-211.24	-339.11	676.59	629.14	47.45	14.260		
6,700.00	6,616.03	6,617.74	6,590.03	25.54	24.11	-127.47	-210.77	-279.58	683.32	636.01	47.31	14.443		
6,800.00	6,684.61	6,686.32	6,657.61	25.62	24.38	-127.39	-210.19	-204.89	689.30	641.87	47.43	14.534		
6,900.00	6,739.75	6,741.46	6,712.75	25.75	24.71	-127.44	-209.68	-140.64	692.76	645.05	47.71	14.520		
7,000.00	6,787.31	6,789.02	6,759.31	26.02	25.16	-127.29	-209.14	-70.80	697.57	649.37	48.20	14.473		
7,100.00	6,820.43	6,822.14	6,791.43	26.51	25.73	-127.22	-208.56	3.17	701.56	652.55	49.02	14.312		
7,200.00	6,836.69	6,838.40	6,808.69	27.24	26.31	-127.67	-208.05	67.90	703.88	653.74	50.14	14.038		
7,300.00	6,838.56	6,840.27	6,809.56	28.17	27.28	-127.67	-207.32	160.52	704.27	652.34	51.93	13.562		
7,400.00	6,838.91	6,840.62	6,809.91	29.31	28.50	-127.67	-206.54	260.51	704.25	650.11	54.14	13.008		
7,500.00	6,839.25	6,840.96	6,809.25	30.64	29.89	-127.67	-205.76	360.51	704.23	647.57	56.66	12.429		
7,600.00	6,839.60	6,841.31	6,809.60	32.11	31.42	-127.67	-204.97	460.50	704.21	644.75	59.46	11.843		
7,700.00	6,839.95	6,841.66	6,809.95	33.71	33.09	-127.67	-204.19	560.50	704.20	641.70	62.50	11.267		
7,800.00	6,840.30	6,842.01	6,810.30	35.43	34.86	-127.67	-203.41	660.50	704.18	638.44	65.74	10.711		
7,900.00	6,840.64	6,842.35	6,810.64	37.24	36.72	-127.67	-202.62	760.49	704.16	635.00	69.16	10.182		
8,000.00	6,840.99	6,842.70	6,810.99	39.13	38.66	-127.67	-201.84	860.49	704.14	631.42	72.72	9.683		
8,100.00	6,841.34	6,843.05	6,811.34	41.10	40.67	-127.67	-201.06	960.49	704.12	627.71	76.41	9.215		
8,200.00	6,841.69	6,843.40	6,811.69	43.12	42.74	-127.67	-200.27	1,060.48	704.11	623.89	80.22	8.778		
8,300.00	6,842.04	6,843.75	6,812.04	45.20	44.86	-127.67	-199.49	1,160.48	704.09	619.98	84.11	8.371		
8,400.00	6,842.38	6,844.09	6,812.38	47.33	47.02	-127.67	-198.71	1,260.47	704.07	615.99	88.08	7.993		
8,500.00	6,842.73	6,844.44	6,812.73	49.49	49.22	-127.67	-197.92	1,360.47	704.05	611.92	92.13	7.642		
8,600.00	6,843.08	6,844.79	6,813.08	51.69	51.45	-127.67	-197.14	1,460.47	704.03	607.80	96.23	7.316		
8,700.00	6,843.43	6,845.14	6,813.43	53.92	53.71	-127.67	-196.36	1,560.46	704.02	603.63	100.39	7.013		
8,800.00	6,843.77	6,845.48	6,813.77	56.18	56.00	-127.67	-195.57	1,660.46	704.00	599.41	104.59	6.731		
8,900.00	6,844.12	6,845.83	6,814.12	58.46	58.30	-127.67	-194.79	1,760.45	703.98	595.15	108.83	6.469		
9,000.00	6,844.47	6,846.18	6,814.47	60.77	60.63	-127.67	-194.00	1,860.45	703.96	590.86	113.10	6.224		
9,100.00	6,844.82	6,846.53	6,814.82	63.09	62.98	-127.67	-193.22	1,960.45	703.94	586.54	117.40	5.996		
9,200.00	6,845.17	6,846.88	6,815.17	65.43	65.34	-127.67	-192.44	2,060.44	703.93	582.20	121.73	5.783		
9,300.00	6,845.51	6,847.22	6,815.51	67.79	67.71	-127.67	-191.65	2,160.44	703.91	577.83	126.08	5.583		
9,400.00	6,845.86	6,847.57	6,815.86	70.15	70.10	-127.67	-190.87	2,260.44	703.89	573.44	130.45	5.396		
9,500.00	6,846.21	6,847.92	6,816.21	72.53	72.49	-127.67	-190.09	2,360.43	703.87	569.04	134.83	5.220		
9,600.00	6,846.56	6,848.27	6,816.56	74.93	74.90	-127.67	-189.30	2,460.43	703.86	564.62	139.23	5.055		
9,700.00	6,846.91	6,848.62	6,816.91	77.33	77.32	-127.67	-188.52	2,560.42	703.84	560.19	143.65	4.900		
9,800.00	6,847.25	6,848.96	6,817.25	79.74	79.74	-127.67	-187.74	2,660.42	703.82	555.75	148.07	4.753		
9,900.00	6,847.60	6,849.31	6,817.60	82.16	82.18	-127.67	-186.95	2,760.42	703.80	551.30	152.50	4.615		
10,000.00	6,847.95	6,849.66	6,817.95	84.59	84.62	-127.67	-186.17	2,860.41	703.78	546.84	156.94	4.484		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 915H - Original Hole - rev1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Reference	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
10,100.00	6,848.30	9,857.66	6,603.90	87.02	87.06	69.68	-185.39	2,960.41	703.77	542.38	161.39	4.361		
10,200.00	6,848.64	9,957.66	6,604.30	89.47	89.52	69.68	-184.60	3,060.40	703.75	537.91	165.84	4.244		
10,300.00	6,848.99	10,057.66	6,604.70	91.91	91.97	69.69	-183.82	3,160.40	703.73	533.44	170.29	4.132		
10,400.00	6,849.34	10,157.66	6,605.10	94.37	94.44	69.69	-183.04	3,260.40	703.71	528.96	174.75	4.027		
10,500.00	6,849.69	10,257.66	6,605.50	96.83	96.91	69.70	-182.25	3,360.39	703.69	524.48	179.21	3.927		
10,600.00	6,850.04	10,357.66	6,605.90	99.29	99.38	69.70	-181.47	3,460.39	703.68	520.00	183.67	3.831		
10,700.00	6,850.38	10,457.66	6,606.30	101.76	101.85	69.70	-180.69	3,560.38	703.66	515.52	188.14	3.740		
10,800.00	6,850.73	10,557.66	6,606.70	104.23	104.33	69.71	-179.90	3,660.38	703.64	511.04	192.60	3.653		
10,900.00	6,851.08	10,657.66	6,607.10	106.70	106.82	69.71	-179.12	3,760.38	703.62	506.56	197.06	3.571		
11,000.00	6,851.43	10,757.66	6,607.50	109.18	109.30	69.72	-178.34	3,860.37	703.61	502.09	201.52	3.492		
11,100.00	6,851.77	10,857.66	6,607.90	111.66	111.79	69.72	-177.55	3,960.37	703.59	497.61	205.98	3.416		
11,200.00	6,852.12	10,957.66	6,608.30	114.15	114.28	69.72	-176.77	4,060.37	703.57	493.14	210.43	3.343		
11,300.00	6,852.47	11,057.66	6,608.70	116.64	116.78	69.73	-175.98	4,160.36	703.55	488.67	214.88	3.274		
11,400.00	6,852.82	11,157.66	6,609.10	119.13	119.27	69.73	-175.20	4,260.36	703.53	484.20	219.33	3.208		
11,500.00	6,853.17	11,257.66	6,609.50	121.62	121.77	69.74	-174.42	4,360.35	703.52	479.74	223.77	3.144		
11,600.00	6,853.51	11,357.66	6,609.90	124.12	124.28	69.74	-173.63	4,460.35	703.50	475.29	228.21	3.083		
11,700.00	6,853.86	11,457.66	6,610.30	126.61	126.78	69.74	-172.85	4,560.35	703.48	470.83	232.65	3.024		
11,800.00	6,854.21	11,557.66	6,610.70	129.11	129.28	69.75	-172.07	4,660.34	703.46	466.39	237.08	2.967		
11,900.00	6,854.56	11,657.66	6,611.10	131.62	131.79	69.75	-171.28	4,760.34	703.45	461.95	241.50	2.913		
12,000.00	6,854.91	11,757.66	6,611.50	134.12	134.30	69.76	-170.50	4,860.33	703.43	457.51	245.92	2.860		
12,100.00	6,855.25	11,857.66	6,611.90	136.63	136.81	69.76	-169.72	4,960.33	703.41	453.08	250.33	2.810		
12,200.00	6,855.60	11,957.66	6,612.30	139.13	139.32	69.76	-168.93	5,060.33	703.39	448.66	254.73	2.761		
12,300.00	6,855.95	12,057.66	6,612.70	141.64	141.84	69.77	-168.15	5,160.32	703.37	444.25	259.12	2.714		
12,400.00	6,856.30	12,157.66	6,613.10	144.15	144.35	69.77	-167.37	5,260.32	703.36	439.85	263.51	2.669		
12,500.00	6,856.64	12,257.66	6,613.50	146.66	146.87	69.77	-166.58	5,360.31	703.34	435.45	267.89	2.625		
12,600.00	6,856.99	12,357.66	6,613.90	149.18	149.38	69.78	-165.80	5,460.31	703.32	431.06	272.26	2.583		
12,700.00	6,857.34	12,457.66	6,614.30	151.69	151.90	69.78	-165.02	5,560.31	703.30	426.68	276.62	2.543		
12,800.00	6,857.69	12,557.66	6,614.70	154.21	154.42	69.79	-164.23	5,660.30	703.29	422.32	280.97	2.503		
12,900.00	6,858.04	12,657.66	6,615.10	156.73	156.94	69.79	-163.45	5,760.30	703.27	417.96	285.31	2.465		
13,000.00	6,858.38	12,757.66	6,615.50	159.24	159.47	69.79	-162.67	5,860.30	703.25	413.61	289.64	2.428		
13,100.00	6,858.73	12,857.66	6,615.90	161.76	161.99	69.80	-161.88	5,960.29	703.23	409.27	293.96	2.392		
13,200.00	6,859.08	12,957.66	6,616.30	164.28	164.51	69.80	-161.10	6,060.29	703.21	404.94	298.27	2.358		
13,300.00	6,859.43	13,057.66	6,616.70	166.81	167.04	69.81	-160.32	6,160.28	703.20	400.62	302.57	2.324		
13,400.00	6,859.77	13,157.66	6,617.10	169.33	169.56	69.81	-159.53	6,260.28	703.18	396.32	306.86	2.292		
13,500.00	6,860.12	13,257.66	6,617.49	171.85	172.09	69.81	-158.75	6,360.28	703.16	392.03	311.14	2.260		
13,600.00	6,860.47	13,357.66	6,617.89	174.37	174.61	69.82	-157.96	6,460.27	703.14	387.75	315.40	2.229		
13,700.00	6,860.82	13,457.66	6,618.29	176.90	177.14	69.82	-157.18	6,560.27	703.13	383.48	319.65	2.200		
13,800.00	6,861.17	13,557.66	6,618.69	179.42	179.67	69.83	-156.40	6,660.26	703.11	379.22	323.89	2.171		
13,900.00	6,861.51	13,657.66	6,619.09	181.95	182.20	69.83	-155.61	6,760.26	703.09	374.98	328.11	2.143		
14,000.00	6,861.86	13,757.66	6,619.49	184.48	184.73	69.83	-154.83	6,860.26	703.07	370.76	332.32	2.116		
14,100.00	6,862.21	13,857.66	6,619.89	187.01	187.26	69.84	-154.05	6,960.25	703.06	366.54	336.51	2.089		
14,200.00	6,862.56	13,957.66	6,620.29	189.53	189.79	69.84	-153.26	7,060.25	703.04	362.34	340.69	2.064		
14,300.00	6,862.91	14,057.66	6,620.69	192.06	192.32	69.85	-152.48	7,160.25	703.02	358.16	344.86	2.039		
14,400.00	6,863.25	14,157.66	6,621.09	194.59	194.85	69.85	-151.70	7,260.24	703.00	353.99	349.01	2.014		
14,500.00	6,863.60	14,257.66	6,621.49	197.12	197.38	69.85	-150.91	7,360.24	702.98	349.84	353.14	1.991 Level 3<2.00		
14,600.00	6,863.95	14,357.66	6,621.89	199.65	199.92	69.86	-150.13	7,460.23	702.97	345.71	357.26	1.968 Level 3<2.00		
14,700.00	6,864.30	14,457.66	6,622.29	202.19	202.45	69.86	-149.35	7,560.23	702.95	341.59	361.36	1.945 Level 3<2.00		
14,800.00	6,864.64	14,557.66	6,622.69	204.72	204.99	69.87	-148.56	7,660.23	702.93	337.49	365.44	1.924 Level 3<2.00		
14,900.00	6,864.99	14,657.66	6,623.09	207.25	207.52	69.87	-147.78	7,760.22	702.91	333.40	369.51	1.902 Level 3<2.00		
15,000.00	6,865.34	14,757.66	6,623.49	209.78	210.05	69.87	-147.00	7,860.22	702.90	329.34	373.56	1.882 Level 3<2.00		
15,100.00	6,865.69	14,857.66	6,623.89	212.32	212.59	69.88	-146.21	7,960.21	702.88	325.29	377.59	1.861 Level 3<2.00		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 915H - Original Hole - rev1													Offset Site Error:	0.00 ft
Survey Program: 0-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	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,200.00	6,866.04	14,957.66	6,624.29	214.85	215.13	69.88	-145.43	8,060.21	702.86	321.26	381.60	1.842 Level 3<2.00		
15,300.00	6,866.38	15,057.66	6,624.69	217.38	217.66	69.89	-144.65	8,160.21	702.84	317.25	385.59	1.823 Level 3<2.00		
15,400.00	6,866.73	15,157.66	6,625.09	219.92	220.20	69.89	-143.86	8,260.20	702.83	313.26	389.56	1.804 Level 3<2.00		
15,500.00	6,867.08	15,257.66	6,625.49	222.45	222.73	69.89	-143.08	8,360.20	702.81	309.29	393.52	1.786 Level 3<2.00		
15,600.00	6,867.43	15,357.66	6,625.89	224.99	225.27	69.90	-142.30	8,460.19	702.79	305.34	397.45	1.768 Level 3<2.00		
15,700.00	6,867.78	15,457.66	6,626.29	227.52	227.81	69.90	-141.51	8,560.19	702.77	301.41	401.36	1.751 Level 3<2.00		
15,800.00	6,868.12	15,557.66	6,626.69	230.06	230.35	69.91	-140.73	8,660.19	702.75	297.50	405.25	1.734 Level 3<2.00		
15,900.00	6,868.47	15,657.66	6,627.09	232.60	232.88	69.91	-139.95	8,760.18	702.74	293.62	409.12	1.718 Level 3<2.00		
16,000.00	6,868.82	15,757.66	6,627.49	235.13	235.42	69.91	-139.16	8,860.18	702.72	289.75	412.97	1.702 Level 3<2.00		
16,100.00	6,869.17	15,857.66	6,627.89	237.67	237.96	69.92	-138.38	8,960.18	702.70	285.91	416.79	1.686 Level 3<2.00		
16,200.00	6,869.51	15,957.66	6,628.29	240.21	240.50	69.92	-137.59	9,060.17	702.68	282.09	420.59	1.671 Level 3<2.00		
16,300.00	6,869.86	16,057.66	6,628.69	242.75	243.04	69.93	-136.81	9,160.17	702.67	278.30	424.37	1.656 Level 3<2.00		
16,400.00	6,870.21	16,157.66	6,629.09	245.28	245.58	69.93	-136.03	9,260.16	702.65	274.52	428.13	1.641 Level 3<2.00		
16,500.00	6,870.56	16,257.66	6,629.49	247.82	248.12	69.93	-135.24	9,360.16	702.63	270.77	431.86	1.627 Level 3<2.00		
16,600.00	6,870.91	16,357.66	6,629.89	250.36	250.66	69.94	-134.46	9,460.16	702.61	267.05	435.56	1.613 Level 3<2.00		
16,700.00	6,871.25	16,457.66	6,630.29	252.90	253.20	69.94	-133.68	9,560.15	702.60	263.35	439.25	1.600 Level 3<2.00		
16,800.00	6,871.60	16,557.66	6,630.69	255.44	255.74	69.95	-132.89	9,660.15	702.58	259.67	442.90	1.586 Level 3<2.00		
16,900.00	6,871.95	16,657.66	6,631.09	257.98	258.28	69.95	-132.11	9,760.14	702.56	256.02	446.54	1.573 Level 3<2.00		
17,000.00	6,872.30	16,757.66	6,631.49	260.52	260.82	69.95	-131.33	9,860.14	702.54	252.40	450.15	1.561 Level 3<2.00		
17,100.00	6,872.64	16,857.66	6,631.89	263.06	263.36	69.96	-130.54	9,960.14	702.53	248.80	453.73	1.548 Level 3<2.00		
17,200.00	6,872.99	16,957.66	6,632.29	265.60	265.90	69.96	-129.76	10,060.13	702.51	245.22	457.29	1.536 Level 3<2.00		
17,300.00	6,873.34	17,057.66	6,632.69	268.14	268.45	69.97	-128.98	10,160.13	702.49	241.68	460.82	1.524 Level 3<2.00		
17,400.00	6,873.69	17,157.66	6,633.09	270.68	270.99	69.97	-128.19	10,260.12	702.47	238.15	464.32	1.513 Level 3<2.00		
17,500.00	6,874.04	17,257.66	6,633.49	273.22	273.53	69.97	-127.41	10,360.12	702.46	234.66	467.80	1.502 Level 3<2.00		
17,600.00	6,874.38	17,357.66	6,633.89	275.76	276.07	69.98	-126.63	10,460.12	702.44	231.19	471.25	1.491 Level 2<1.50		
17,700.00	6,874.73	17,457.66	6,634.29	278.30	278.61	69.98	-125.84	10,560.11	702.42	227.75	474.67	1.480 Level 2<1.50		
17,800.00	6,875.08	17,557.66	6,634.69	280.85	281.16	69.99	-125.06	10,660.11	702.40	224.33	478.07	1.469 Level 2<1.50		
17,900.00	6,875.43	17,657.66	6,635.09	283.39	283.70	69.99	-124.28	10,760.11	702.39	220.94	481.44	1.459 Level 2<1.50		
18,000.00	6,875.78	17,757.66	6,635.49	285.93	286.24	69.99	-123.49	10,860.10	702.37	217.58	484.79	1.449 Level 2<1.50		
18,100.00	6,876.12	17,857.66	6,635.89	288.47	288.79	70.00	-122.71	10,960.10	702.35	214.25	488.10	1.439 Level 2<1.50		
18,200.00	6,876.47	17,957.66	6,636.29	291.01	291.33	70.00	-121.93	11,060.09	702.33	210.94	491.39	1.429 Level 2<1.50		
18,300.00	6,876.82	18,057.66	6,636.69	293.56	293.87	70.01	-121.14	11,160.09	702.31	207.66	494.66	1.420 Level 2<1.50		
18,400.00	6,877.17	18,157.66	6,637.09	296.10	296.42	70.01	-120.36	11,260.09	702.30	204.40	497.90	1.411 Level 2<1.50		
18,500.00	6,877.51	18,257.66	6,637.49	298.64	298.96	70.01	-119.57	11,360.08	702.28	201.17	501.11	1.401 Level 2<1.50		
18,600.00	6,877.86	18,357.66	6,637.89	301.18	301.50	70.02	-118.79	11,460.08	702.26	197.97	504.29	1.393 Level 2<1.50		
18,627.52	6,877.96	18,385.18	6,638.00	301.88	302.20	70.02	-118.58	11,487.59	702.26	197.10	505.16	1.390 Level 2<1.50		
18,639.68	6,878.00	18,386.05	6,638.00	302.19	302.23	70.02	-118.57	11,488.47	702.35	197.11	505.23	1.390 Level 2<1.50, SF		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design:		Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 917H - Original Hole - rev1											Offset Site Error:		0.00 ft
Survey Program:		0-MWD				Rule Assigned:				Offset Well Error:		0.00 ft			
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-126.75	-35.86	-48.03	59.94						
100.00	100.00	100.00	100.00	0.13	0.13	-126.75	-35.86	-48.03	59.94	59.67	0.27	222.934			
200.00	200.00	200.00	200.00	0.49	0.49	-126.75	-35.86	-48.03	59.94	58.95	0.99	60.800			
300.00	300.00	300.00	300.00	0.85	0.85	-126.75	-35.86	-48.03	59.94	58.23	1.70	35.200			
400.00	400.00	400.00	400.00	1.21	1.21	-126.75	-35.86	-48.03	59.94	57.52	2.42	24.771			
500.00	500.00	500.00	500.00	1.57	1.57	-126.75	-35.86	-48.03	59.94	56.80	3.14	19.109			
600.00	600.00	600.00	600.00	1.93	1.93	-126.75	-35.86	-48.03	59.94	56.08	3.85	15.554			
700.00	700.00	700.00	700.00	2.29	2.29	-126.75	-35.86	-48.03	59.94	55.37	4.57	13.114			
800.00	800.00	800.00	800.00	2.64	2.64	-126.75	-35.86	-48.03	59.94	54.65	5.29	11.336			
900.00	900.00	900.00	900.00	3.00	3.00	-126.75	-35.86	-48.03	59.94	53.93	6.00	9.982			
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	-126.75	-35.86	-48.03	59.94	53.22	6.72	8.917	CC, ES		
1,100.00	1,099.95	1,097.30	1,097.26	3.72	3.69	-80.64	-38.20	-48.83	61.58	54.18	7.40	8.318			
1,200.00	1,199.63	1,193.55	1,193.22	4.07	4.01	-89.97	-45.13	-51.20	67.85	59.79	8.06	8.422			
1,300.00	1,298.80	1,287.79	1,286.71	4.44	4.33	-101.45	-56.33	-55.04	81.46	72.76	8.70	9.368			
1,400.00	1,397.79	1,379.96	1,377.46	4.81	4.66	-110.29	-71.50	-60.23	102.88	93.56	9.32	11.043			
1,500.00	1,496.78	1,469.90	1,465.17	5.20	5.01	-115.82	-90.27	-66.66	130.56	120.64	9.92	13.166			
1,600.00	1,595.77	1,557.31	1,549.43	5.59	5.38	-119.15	-112.24	-74.18	163.40	152.90	10.49	15.571			
1,700.00	1,694.76	1,641.95	1,629.93	5.98	5.77	-121.13	-136.97	-82.65	200.73	189.69	11.05	18.171			
1,800.00	1,793.75	1,727.89	1,710.53	6.38	6.20	-122.35	-165.16	-92.30	241.79	230.14	11.65	20.749			
1,900.00	1,892.74	1,818.68	1,795.48	6.78	6.69	-123.24	-195.48	-102.68	283.55	271.19	12.36	22.938			
2,000.00	1,991.74	1,909.46	1,880.42	7.18	7.20	-123.90	-225.80	-113.06	325.35	312.27	13.08	24.875			
2,100.00	2,090.73	2,000.25	1,965.36	7.59	7.72	-124.41	-256.13	-123.45	367.18	353.37	13.81	26.597			
2,200.00	2,189.72	2,091.04	2,050.31	8.00	8.26	-124.81	-286.45	-133.83	409.02	394.48	14.54	28.132			
2,300.00	2,288.71	2,181.83	2,135.25	8.41	8.81	-125.15	-316.78	-144.21	450.88	435.60	15.28	29.508			
2,400.00	2,387.70	2,272.62	2,220.19	8.82	9.37	-125.42	-347.10	-154.60	492.75	476.73	16.03	30.748			
2,500.00	2,486.69	2,363.41	2,305.14	9.23	9.94	-125.65	-377.42	-164.98	534.63	517.85	16.78	31.868			
2,600.00	2,585.68	2,454.20	2,390.08	9.65	10.51	-125.85	-407.75	-175.36	576.51	558.98	17.53	32.885			
2,700.00	2,684.67	2,544.99	2,475.02	10.06	11.09	-126.02	-438.07	-185.74	618.40	600.11	18.29	33.812			
2,800.00	2,783.66	2,635.78	2,559.97	10.48	11.67	-126.17	-468.39	-196.13	660.29	641.24	19.05	34.658			
2,900.00	2,882.65	2,726.57	2,644.91	10.89	12.26	-126.30	-498.72	-206.51	702.19	682.37	19.82	35.434			
3,000.00	2,981.65	2,817.36	2,729.85	11.31	12.85	-126.42	-529.04	-216.89	744.09	723.51	20.58	36.148			
3,100.00	3,080.64	2,908.15	2,814.80	11.73	13.45	-126.52	-559.36	-227.28	785.99	764.64	21.35	36.807			
3,200.00	3,179.63	2,998.94	2,899.74	12.14	14.04	-126.62	-589.69	-237.66	827.89	805.77	22.13	37.416			
3,300.00	3,278.62	3,089.73	2,984.68	12.56	14.64	-126.70	-620.01	-248.04	869.80	846.90	22.90	37.981			
3,400.00	3,377.61	3,180.52	3,069.63	12.98	15.24	-126.78	-650.33	-258.43	911.70	888.03	23.68	38.506			
3,500.00	3,476.60	3,271.30	3,154.57	13.40	15.85	-126.85	-680.66	-268.81	953.61	929.16	24.45	38.995			
3,600.00	3,575.59	3,362.09	3,239.52	13.82	16.45	-126.91	-710.98	-279.19	995.52	970.29	25.23	39.452			
3,700.00	3,674.58	3,452.88	3,324.46	14.24	17.06	-126.97	-741.30	-289.57	1,037.43	1,011.41	26.01	39.879			
3,800.00	3,773.57	3,543.67	3,409.40	14.66	17.66	-127.03	-771.63	-299.96	1,079.34	1,052.54	26.80	40.280			
3,900.00	3,872.56	3,634.46	3,494.35	15.08	18.27	-127.08	-801.95	-310.34	1,121.25	1,093.67	27.58	40.656			
4,000.00	3,971.56	3,725.25	3,579.29	15.50	18.88	-127.12	-832.27	-320.72	1,163.16	1,134.80	28.36	41.010			
4,100.00	4,070.55	3,816.04	3,664.23	15.92	19.49	-127.17	-862.60	-331.11	1,205.07	1,175.93	29.15	41.344			
4,200.00	4,169.54	3,906.83	3,749.18	16.34	20.10	-127.21	-892.92	-341.49	1,246.99	1,217.05	29.93	41.659			
4,300.00	4,268.53	3,997.62	3,834.12	16.76	20.71	-127.25	-923.25	-351.87	1,288.90	1,258.18	30.72	41.957			
4,400.00	4,367.52	4,088.41	3,919.06	17.19	21.32	-127.28	-953.57	-362.25	1,330.81	1,299.31	31.51	42.239			
4,500.00	4,466.51	4,179.20	4,004.01	17.61	21.94	-127.32	-983.89	-372.64	1,372.73	1,340.43	32.29	42.506			
4,600.00	4,565.50	4,269.99	4,088.95	18.03	22.55	-127.35	-1,014.22	-383.02	1,414.64	1,381.56	33.08	42.759			
4,700.00	4,664.49	4,360.78	4,173.89	18.45	23.17	-127.38	-1,044.54	-393.40	1,456.56	1,422.68	33.87	43.000			
4,800.00	4,763.48	4,451.57	4,258.84	18.87	23.78	-127.40	-1,074.86	-403.79	1,498.47	1,463.81	34.66	43.229			
4,900.00	4,862.47	4,542.36	4,343.78	19.30	24.40	-127.43	-1,105.19	-414.17	1,540.39	1,504.93	35.45	43.447			
5,000.00	4,961.47	4,633.14	4,428.72	19.72	25.01	-127.46	-1,135.51	-424.55	1,582.30	1,546.06	36.25	43.655			

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 917H - Original Hole - rev1													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 Major Reference (ft)	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	
5,100.00	5,060.46	4,723.93	4,513.67	20.14	25.63	-127.48	-1,165.83	-434.93	1,624.22	1,587.18	37.04	43.853		
5,200.00	5,159.45	4,814.72	4,598.61	20.56	26.24	-127.50	-1,196.16	-445.32	1,666.13	1,628.30	37.83	44.042		
5,300.00	5,258.44	4,905.51	4,683.55	20.99	26.86	-127.52	-1,226.48	-455.70	1,708.05	1,669.43	38.62	44.223		
5,400.00	5,357.43	4,996.30	4,768.50	21.41	27.48	-127.54	-1,256.80	-466.08	1,749.97	1,710.55	39.42	44.396		
5,500.00	5,456.42	5,087.09	4,853.44	21.83	28.10	-127.56	-1,287.13	-476.47	1,791.88	1,751.67	40.21	44.562		
5,600.00	5,555.41	5,177.88	4,938.38	22.25	28.71	-127.58	-1,317.45	-486.85	1,833.80	1,792.79	41.01	44.720		
5,700.00	5,654.40	5,268.67	5,023.33	22.68	29.33	-127.60	-1,347.77	-497.23	1,875.72	1,833.92	41.80	44.873		
5,800.00	5,753.39	5,359.46	5,108.27	23.10	29.95	-127.62	-1,378.10	-507.61	1,917.63	1,875.04	42.60	45.019		
5,900.00	5,852.40	5,450.29	5,193.25	23.52	30.57	-127.88	-1,408.43	-518.00	1,959.47	1,916.08	43.39	45.158		
6,000.00	5,951.85	6,225.32	5,951.85	23.92	33.98	-129.14	-1,532.92	-560.63	1,976.83	1,929.29	47.55	41.575		
6,100.00	6,051.71	6,330.71	6,057.09	24.27	34.18	-129.45	-1,532.89	-556.72	1,980.00	1,931.82	48.18	41.094		
6,200.00	6,151.71	6,435.07	6,159.07	24.59	34.32	-179.76	-1,532.72	-535.21	1,980.02	1,931.27	48.76	40.611		
6,272.84	6,224.54	6,505.07	6,224.54	24.82	34.39	90.00	-1,532.53	-510.56	1,979.86	1,930.71	49.15	40.279		
6,300.00	6,251.70	6,529.14	6,246.29	24.90	34.40	89.68	-1,532.45	-500.26	1,979.90	1,930.60	49.30	40.159		
6,400.00	6,350.91	6,615.39	6,320.27	25.15	34.43	88.59	-1,532.10	-456.07	1,980.58	1,930.83	49.75	39.809		
6,500.00	6,446.60	6,700.00	6,385.60	25.33	34.43	87.51	-1,531.68	-402.43	1,981.99	1,931.88	50.11	39.551		
6,600.00	6,535.88	6,775.84	6,436.88	25.46	34.39	86.54	-1,531.24	-346.63	1,983.93	1,933.51	50.42	39.348		
6,700.00	6,616.03	6,851.76	6,480.39	25.54	34.34	85.62	-1,530.76	-284.48	1,986.20	1,935.47	50.74	39.146		
6,800.00	6,684.61	6,940.35	6,524.58	25.62	34.27	84.83	-1,530.15	-207.71	1,988.20	1,936.98	51.21	38.821		
6,900.00	6,739.75	7,014.56	6,555.49	25.75	34.20	84.38	-1,529.63	-140.30	1,989.67	1,937.84	51.82	38.393		
7,000.00	6,787.31	7,086.66	6,576.93	26.02	34.13	83.87	-1,529.09	-71.52	1,991.67	1,939.00	52.67	37.813		
7,100.00	6,820.43	7,157.53	6,589.43	26.51	34.07	83.36	-1,528.54	-1.81	1,993.48	1,939.69	53.78	37.066		
7,200.00	6,836.69	7,230.03	6,593.28	27.24	34.01	83.01	-1,527.97	70.54	1,994.77	1,939.59	55.18	36.149		
7,300.00	6,838.56	7,329.99	6,593.54	28.17	33.96	82.95	-1,527.19	170.50	1,994.97	1,937.81	57.16	34.903		
7,400.00	6,838.91	7,429.99	6,593.80	29.31	33.98	82.94	-1,526.41	270.50	1,994.98	1,935.49	59.49	33.535		
7,500.00	6,839.25	7,529.99	6,594.06	30.64	34.15	82.94	-1,525.63	370.49	1,994.99	1,932.85	62.15	32.102		
7,600.00	6,839.60	7,629.99	6,594.32	32.11	34.68	82.94	-1,524.84	470.49	1,995.00	1,929.91	65.09	30.650		
7,700.00	6,839.95	7,729.99	6,594.58	33.71	35.77	82.94	-1,524.06	570.49	1,995.02	1,926.73	68.28	29.217		
7,800.00	6,840.30	7,829.99	6,594.84	35.43	37.28	82.93	-1,523.28	670.48	1,995.03	1,923.34	71.69	27.828		
7,900.00	6,840.64	7,929.99	6,595.10	37.24	39.00	82.93	-1,522.49	770.48	1,995.04	1,919.75	75.29	26.498		
8,000.00	6,840.99	8,029.99	6,595.36	39.13	40.85	82.93	-1,521.71	870.48	1,995.05	1,916.00	79.05	25.239		
8,100.00	6,841.34	8,129.99	6,595.62	41.10	42.78	82.93	-1,520.93	970.47	1,995.06	1,912.12	82.94	24.053		
8,200.00	6,841.69	8,229.99	6,595.88	43.12	44.79	82.92	-1,520.15	1,070.47	1,995.07	1,908.11	86.96	22.942		
8,300.00	6,842.04	8,329.99	6,596.14	45.20	46.85	82.92	-1,519.36	1,170.47	1,995.09	1,904.00	91.08	21.904		
8,400.00	6,842.38	8,429.99	6,596.40	47.33	48.96	82.92	-1,518.58	1,270.46	1,995.10	1,899.80	95.29	20.936		
8,500.00	6,842.73	8,529.99	6,596.66	49.49	51.11	82.92	-1,517.80	1,370.46	1,995.11	1,895.52	99.59	20.034		
8,600.00	6,843.08	8,629.99	6,596.92	51.69	53.30	82.91	-1,517.01	1,470.46	1,995.12	1,891.17	103.95	19.193		
8,700.00	6,843.43	8,729.99	6,597.18	53.92	55.51	82.91	-1,516.23	1,570.45	1,995.13	1,886.76	108.37	18.410		
8,800.00	6,843.77	8,829.99	6,597.44	56.18	57.76	82.91	-1,515.45	1,670.45	1,995.14	1,882.30	112.85	17.680		
8,900.00	6,844.12	8,929.99	6,597.71	58.46	60.03	82.91	-1,514.67	1,770.45	1,995.16	1,877.78	117.37	16.998		
9,000.00	6,844.47	9,029.99	6,597.97	60.77	62.32	82.90	-1,513.88	1,870.44	1,995.17	1,873.23	121.94	16.362		
9,100.00	6,844.82	9,129.99	6,598.23	63.09	64.63	82.90	-1,513.10	1,970.44	1,995.18	1,868.64	126.54	15.767		
9,200.00	6,845.17	9,229.99	6,598.49	65.43	66.95	82.90	-1,512.32	2,070.44	1,995.19	1,864.01	131.18	15.209		
9,300.00	6,845.51	9,329.99	6,598.75	67.79	69.29	82.90	-1,511.53	2,170.43	1,995.20	1,859.35	135.85	14.687		
9,400.00	6,845.86	9,429.99	6,599.01	70.15	71.65	82.89	-1,510.75	2,270.43	1,995.21	1,854.67	140.54	14.196		
9,500.00	6,846.21	9,529.99	6,599.27	72.53	74.02	82.89	-1,509.97	2,370.43	1,995.22	1,849.96	145.26	13.735		
9,600.00	6,846.56	9,629.99	6,599.53	74.93	76.40	82.89	-1,509.19	2,470.42	1,995.24	1,845.23	150.01	13.301		
9,700.00	6,846.91	9,729.99	6,599.79	77.33	78.79	82.89	-1,508.40	2,570.42	1,995.25	1,840.48	154.77	12.892		
9,800.00	6,847.25	9,829.99	6,600.05	79.74	81.19	82.88	-1,507.62	2,670.42	1,995.26	1,835.71	159.55	12.506		
9,900.00	6,847.60	9,929.99	6,600.31	82.16	83.60	82.88	-1,506.84	2,770.41	1,995.27	1,830.92	164.35	12.141		
10,000.00	6,847.95	10,029.99	6,600.57	84.59	86.02	82.88	-1,506.05	2,870.41	1,995.28	1,826.12	169.16	11.795		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 917H - Original Hole - rev1													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 Major Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
10,100.00	6,848.30	10,129.99	6,600.83	87.02	88.44	82.88	-1,505.27	2,970.40	1,995.29	1,821.31	173.99	11.468		
10,200.00	6,848.64	10,229.99	6,601.09	89.47	90.87	82.87	-1,504.49	3,070.40	1,995.31	1,816.48	178.83	11.158		
10,300.00	6,848.99	10,329.99	6,601.35	91.91	93.31	82.87	-1,503.71	3,170.40	1,995.32	1,811.64	183.68	10.863		
10,400.00	6,849.34	10,429.99	6,601.61	94.37	95.75	82.87	-1,502.92	3,270.39	1,995.33	1,806.79	188.54	10.583		
10,500.00	6,849.69	10,529.99	6,601.87	96.83	98.20	82.87	-1,502.14	3,370.39	1,995.34	1,801.93	193.41	10.317		
10,600.00	6,850.04	10,629.99	6,602.13	99.29	100.66	82.86	-1,501.36	3,470.39	1,995.35	1,797.07	198.29	10.063		
10,700.00	6,850.38	10,729.99	6,602.40	101.76	103.12	82.86	-1,500.57	3,570.38	1,995.36	1,792.19	203.18	9.821		
10,800.00	6,850.73	10,829.99	6,602.66	104.23	105.58	82.86	-1,499.79	3,670.38	1,995.38	1,787.30	208.07	9.590		
10,900.00	6,851.08	10,929.99	6,602.92	106.70	108.05	82.86	-1,499.01	3,770.38	1,995.39	1,782.41	212.98	9.369		
11,000.00	6,851.43	11,029.99	6,603.18	109.18	110.52	82.85	-1,498.23	3,870.37	1,995.40	1,777.51	217.89	9.158		
11,100.00	6,851.77	11,129.99	6,603.44	111.66	112.99	82.85	-1,497.44	3,970.37	1,995.41	1,772.60	222.81	8.956		
11,200.00	6,852.12	11,229.99	6,603.70	114.15	115.47	82.85	-1,496.66	4,070.37	1,995.42	1,767.69	227.73	8.762		
11,300.00	6,852.47	11,329.99	6,603.96	116.64	117.95	82.85	-1,495.88	4,170.36	1,995.43	1,762.77	232.66	8.577		
11,400.00	6,852.82	11,429.99	6,604.22	119.13	120.43	82.84	-1,495.09	4,270.36	1,995.45	1,757.85	237.60	8.398		
11,500.00	6,853.17	11,529.99	6,604.48	121.62	122.92	82.84	-1,494.31	4,370.36	1,995.46	1,752.92	242.53	8.228		
11,600.00	6,853.51	11,629.99	6,604.74	124.12	125.41	82.84	-1,493.53	4,470.35	1,995.47	1,747.99	247.48	8.063		
11,700.00	6,853.86	11,729.99	6,605.00	126.61	127.90	82.84	-1,492.75	4,570.35	1,995.48	1,743.06	252.42	7.905		
11,800.00	6,854.21	11,829.99	6,605.26	129.11	130.39	82.83	-1,491.96	4,670.35	1,995.49	1,738.12	257.38	7.753		
11,900.00	6,854.56	11,929.99	6,605.52	131.62	132.89	82.83	-1,491.18	4,770.34	1,995.51	1,733.17	262.33	7.607		
12,000.00	6,854.91	12,029.99	6,605.78	134.12	135.39	82.83	-1,490.40	4,870.34	1,995.52	1,728.23	267.29	7.466		
12,100.00	6,855.25	12,129.99	6,606.04	136.63	137.89	82.83	-1,489.61	4,970.34	1,995.53	1,723.28	272.25	7.330		
12,200.00	6,855.60	12,229.99	6,606.30	139.13	140.39	82.82	-1,488.83	5,070.33	1,995.54	1,718.32	277.22	7.198		
12,300.00	6,855.95	12,329.99	6,606.56	141.64	142.89	82.82	-1,488.05	5,170.33	1,995.55	1,713.37	282.19	7.072		
12,400.00	6,856.30	12,429.99	6,606.82	144.15	145.40	82.82	-1,487.27	5,270.33	1,995.56	1,708.40	287.16	6.949		
12,500.00	6,856.64	12,529.99	6,607.09	146.66	147.90	82.82	-1,486.48	5,370.32	1,995.58	1,703.44	292.13	6.831		
12,600.00	6,856.99	12,629.99	6,607.35	149.18	150.41	82.81	-1,485.70	5,470.32	1,995.59	1,698.48	297.11	6.717		
12,700.00	6,857.34	12,729.99	6,607.61	151.69	152.92	82.81	-1,484.92	5,570.32	1,995.60	1,693.51	302.09	6.606		
12,800.00	6,857.69	12,829.99	6,607.87	154.21	155.43	82.81	-1,484.13	5,670.31	1,995.61	1,688.55	307.06	6.499		
12,900.00	6,858.04	12,929.99	6,608.13	156.73	157.94	82.81	-1,483.35	5,770.31	1,995.62	1,683.58	312.05	6.395		
13,000.00	6,858.38	13,029.99	6,608.39	159.24	160.46	82.80	-1,482.57	5,870.31	1,995.63	1,678.60	317.03	6.295		
13,100.00	6,858.73	13,129.99	6,608.65	161.76	162.97	82.80	-1,481.79	5,970.30	1,995.65	1,673.63	322.02	6.197		
13,200.00	6,859.08	13,229.99	6,608.91	164.28	165.49	82.80	-1,481.00	6,070.30	1,995.66	1,668.65	327.01	6.103		
13,300.00	6,859.43	13,329.99	6,609.17	166.81	168.01	82.80	-1,480.22	6,170.29	1,995.67	1,663.67	332.00	6.011		
13,400.00	6,859.77	13,429.99	6,609.43	169.33	170.52	82.79	-1,479.44	6,270.29	1,995.68	1,658.69	336.99	5.922		
13,500.00	6,860.12	13,529.99	6,609.69	171.85	173.04	82.79	-1,478.65	6,370.29	1,995.69	1,653.71	341.98	5.836		
13,600.00	6,860.47	13,629.99	6,609.95	174.37	175.56	82.79	-1,477.87	6,470.28	1,995.71	1,648.73	346.97	5.752		
13,700.00	6,860.82	13,729.99	6,610.21	176.90	178.08	82.79	-1,477.09	6,570.28	1,995.72	1,643.75	351.97	5.670		
13,800.00	6,861.17	13,829.99	6,610.47	179.42	180.61	82.78	-1,476.30	6,670.28	1,995.73	1,638.76	356.96	5.591		
13,900.00	6,861.51	13,929.99	6,610.73	181.95	183.13	82.78	-1,475.52	6,770.27	1,995.74	1,633.78	361.96	5.514		
14,000.00	6,861.86	14,029.99	6,610.99	184.48	185.65	82.78	-1,474.74	6,870.27	1,995.75	1,628.79	366.96	5.439		
14,100.00	6,862.21	14,129.99	6,611.25	187.01	188.17	82.78	-1,473.96	6,970.27	1,995.76	1,623.81	371.96	5.366		
14,200.00	6,862.56	14,229.99	6,611.51	189.53	190.70	82.77	-1,473.17	7,070.26	1,995.78	1,618.82	376.96	5.294		
14,300.00	6,862.91	14,329.99	6,611.78	192.06	193.23	82.77	-1,472.39	7,170.26	1,995.79	1,613.83	381.96	5.225		
14,400.00	6,863.25	14,429.99	6,612.04	194.59	195.75	82.77	-1,471.61	7,270.26	1,995.80	1,608.84	386.96	5.158		
14,500.00	6,863.60	14,529.99	6,612.30	197.12	198.28	82.77	-1,470.82	7,370.25	1,995.81	1,603.84	391.97	5.092		
14,600.00	6,863.95	14,629.99	6,612.56	199.65	200.81	82.76	-1,470.04	7,470.25	1,995.82	1,598.85	396.97	5.028		
14,700.00	6,864.30	14,729.99	6,612.82	202.19	203.33	82.76	-1,469.26	7,570.25	1,995.83	1,593.86	401.97	4.965		
14,800.00	6,864.64	14,829.99	6,613.08	204.72	205.86	82.76	-1,468.48	7,670.24	1,995.85	1,588.87	406.98	4.904		
14,900.00	6,864.99	14,929.99	6,613.34	207.25	208.39	82.76	-1,467.69	7,770.24	1,995.86	1,583.87	411.98	4.844		
15,000.00	6,865.34	15,029.99	6,613.60	209.78	210.92	82.75	-1,466.91	7,870.24	1,995.87	1,578.88	416.99	4.786		
15,100.00	6,865.69	15,129.99	6,613.86	212.32	213.45	82.75	-1,466.13	7,970.23	1,995.88	1,573.88	422.00	4.730		

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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Rincon pad (613, 615, 713, 715,815,817,915 & 917) - Rincon Unit 917H - Original Hole - rev1													Offset Site Error:	0.00 ft
Survey Program: 0-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		
15,200.00	6,866.04	15,229.99	6,614.12	214.85	215.98	82.75	-1,465.34	8,070.23	1,995.89	1,568.89	427.01	4.674		
15,300.00	6,866.38	15,329.99	6,614.38	217.38	218.51	82.75	-1,464.56	8,170.23	1,995.91	1,563.89	432.01	4.620		
15,400.00	6,866.73	15,429.99	6,614.64	219.92	221.05	82.74	-1,463.78	8,270.22	1,995.92	1,558.90	437.02	4.567		
15,500.00	6,867.08	15,529.99	6,614.90	222.45	223.58	82.74	-1,463.00	8,370.22	1,995.93	1,553.90	442.03	4.515		
15,600.00	6,867.43	15,629.99	6,615.16	224.99	226.11	82.74	-1,462.21	8,470.22	1,995.94	1,548.90	447.04	4.465		
15,700.00	6,867.78	15,729.99	6,615.42	227.52	228.64	82.74	-1,461.43	8,570.21	1,995.95	1,543.90	452.05	4.415		
15,800.00	6,868.12	15,829.99	6,615.68	230.06	231.18	82.73	-1,460.65	8,670.21	1,995.97	1,538.91	457.06	4.367		
15,900.00	6,868.47	15,929.99	6,615.94	232.60	233.71	82.73	-1,459.86	8,770.21	1,995.98	1,533.91	462.07	4.320		
16,000.00	6,868.82	16,029.99	6,616.20	235.13	236.25	82.73	-1,459.08	8,870.20	1,995.99	1,528.91	467.08	4.273		
16,100.00	6,869.17	16,129.99	6,616.47	237.67	238.78	82.73	-1,458.30	8,970.20	1,996.00	1,523.91	472.09	4.228		
16,200.00	6,869.51	16,229.99	6,616.73	240.21	241.32	82.72	-1,457.52	9,070.20	1,996.01	1,518.91	477.10	4.184		
16,300.00	6,869.86	16,329.99	6,616.99	242.75	243.85	82.72	-1,456.73	9,170.19	1,996.02	1,513.91	482.11	4.140		
16,400.00	6,870.21	16,429.99	6,617.25	245.28	246.39	82.72	-1,455.95	9,270.19	1,996.04	1,508.91	487.12	4.098		
16,500.00	6,870.56	16,529.99	6,617.51	247.82	248.92	82.72	-1,455.17	9,370.18	1,996.05	1,503.91	492.13	4.056		
16,600.00	6,870.91	16,629.99	6,617.77	250.36	251.46	82.71	-1,454.38	9,470.18	1,996.06	1,498.91	497.15	4.015		
16,700.00	6,871.25	16,729.99	6,618.03	252.90	254.00	82.71	-1,453.60	9,570.18	1,996.07	1,493.91	502.16	3.975		
16,800.00	6,871.60	16,829.99	6,618.29	255.44	256.53	82.71	-1,452.82	9,670.17	1,996.08	1,488.92	507.17	3.936		
16,900.00	6,871.95	16,929.99	6,618.55	257.98	259.07	82.71	-1,452.04	9,770.17	1,996.10	1,483.92	512.18	3.897		
17,000.00	6,872.30	17,029.99	6,618.81	260.52	261.61	82.70	-1,451.25	9,870.17	1,996.11	1,478.92	517.19	3.860		
17,100.00	6,872.64	17,129.99	6,619.07	263.06	264.15	82.70	-1,450.47	9,970.16	1,996.12	1,473.92	522.20	3.822		
17,200.00	6,872.99	17,229.99	6,619.33	265.60	266.69	82.70	-1,449.69	10,070.16	1,996.13	1,468.92	527.21	3.786		
17,300.00	6,873.34	17,329.99	6,619.59	268.14	269.22	82.70	-1,448.90	10,170.16	1,996.14	1,463.92	532.23	3.751		
17,400.00	6,873.69	17,429.99	6,619.85	270.68	271.76	82.69	-1,448.12	10,270.15	1,996.16	1,458.92	537.24	3.716		
17,500.00	6,874.04	17,529.99	6,620.11	273.22	274.30	82.69	-1,447.34	10,370.15	1,996.17	1,453.92	542.25	3.681		
17,600.00	6,874.38	17,629.99	6,620.37	275.76	276.84	82.69	-1,446.56	10,470.15	1,996.18	1,448.92	547.26	3.648		
17,700.00	6,874.73	17,729.99	6,620.63	278.30	279.38	82.69	-1,445.77	10,570.14	1,996.19	1,443.92	552.27	3.615		
17,800.00	6,875.08	17,829.99	6,620.89	280.85	281.92	82.68	-1,444.99	10,670.14	1,996.20	1,438.92	557.28	3.582		
17,900.00	6,875.43	17,929.99	6,621.16	283.39	284.46	82.68	-1,444.21	10,770.14	1,996.22	1,433.92	562.30	3.550		
18,000.00	6,875.78	18,029.99	6,621.42	285.93	287.00	82.68	-1,443.42	10,870.13	1,996.23	1,428.92	567.31	3.519		
18,100.00	6,876.12	18,129.99	6,621.68	288.47	289.54	82.68	-1,442.64	10,970.13	1,996.24	1,423.92	572.32	3.488		
18,200.00	6,876.47	18,229.99	6,621.94	291.01	292.08	82.67	-1,441.86	11,070.13	1,996.25	1,418.92	577.33	3.458		
18,300.00	6,876.82	18,329.99	6,622.20	293.56	294.62	82.67	-1,441.08	11,170.12	1,996.26	1,413.92	582.34	3.428		
18,400.00	6,877.17	18,429.99	6,622.46	296.10	297.16	82.67	-1,440.29	11,270.12	1,996.28	1,408.93	587.35	3.399		
18,500.00	6,877.51	18,529.99	6,622.72	298.64	299.70	82.67	-1,439.51	11,370.12	1,996.29	1,403.93	592.36	3.370		
18,600.00	6,877.86	18,629.99	6,622.98	301.18	302.24	82.66	-1,438.73	11,470.11	1,996.30	1,398.93	597.37	3.342		
18,639.68	6,878.00	18,638.04	6,623.00	302.19	302.45	82.66	-1,438.66	11,478.16	1,996.55	1,397.91	598.64	3.335 SF		



Anticollision Report

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Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6538+25 @ 6563.00ft

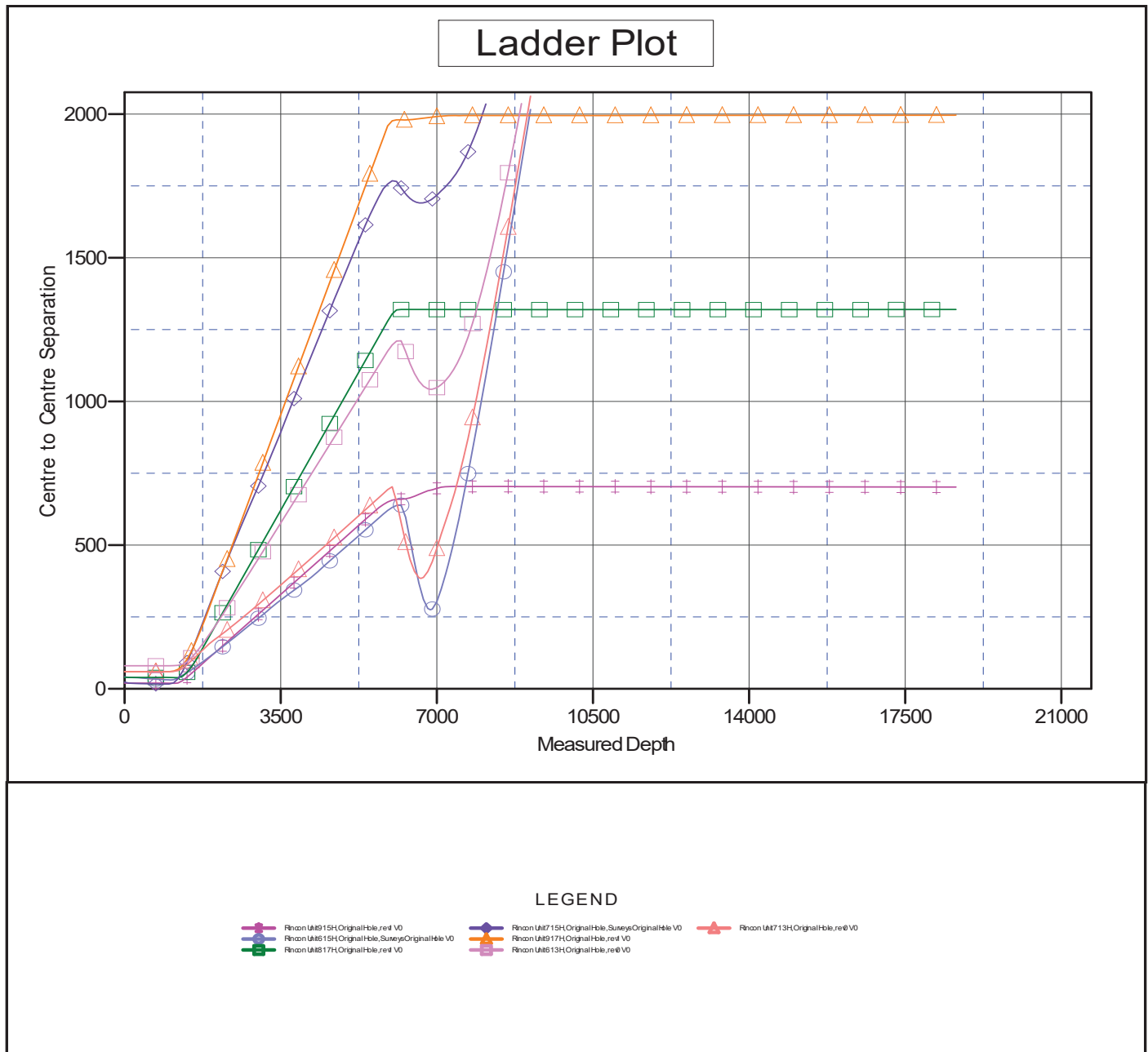
Offset Depths are relative to Offset Datum

Central Meridian is -107.833333333

Coordinates are relative to: Rincon Unit 815H

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

Grid Convergence at Surface is: 0.22°



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 Rincon Unit 815H
Project:	Rio Arriba County, New Mexico NAD83 NM W	TVD Reference:	RKB=6538+25 @ 6563.00ft
Reference Site:	Rincon pad (613, 615, 713, 715,815,817,915 & 917)	MD Reference:	RKB=6538+25 @ 6563.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Rincon Unit 815H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6538+25 @ 6563.00ft

Offset Depths are relative to Offset Datum

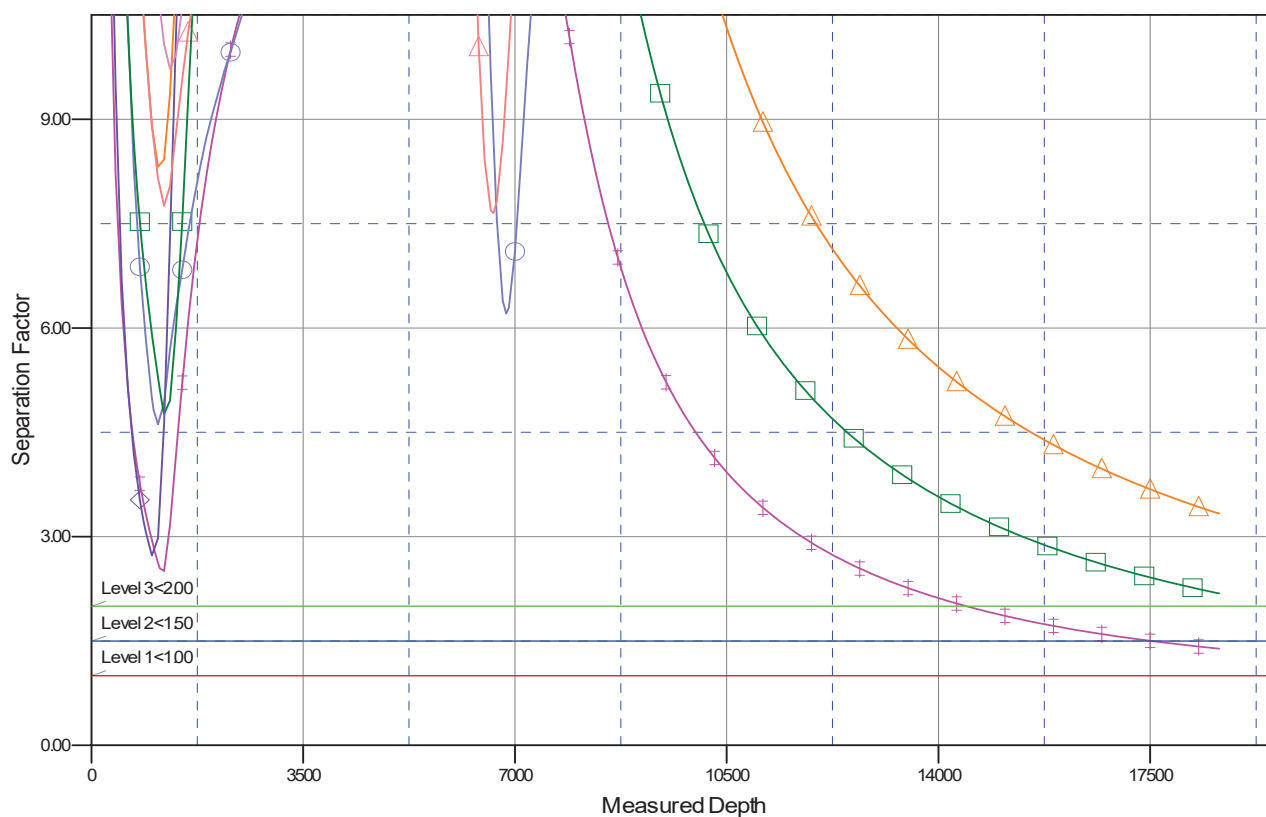
Central Meridian is -107.833333333

Coordinates are relative to: Rincon Unit 815H

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

Grid Convergence at Surface is: 0.22°

Separation Factor Plot



LEGEND

Rincon Unit 815H Original Hole, rev1 V0	Rincon Unit 815H Original Hole, Survey Original Hole V0	Rincon Unit 815H Original Hole, rev1 V0
Rincon Unit 815H Original Hole, Survey Original Hole V0	Rincon Unit 815H Original Hole, rev1 V0	Rincon Unit 815H Original Hole, rev1 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**

#815H RINCON UNIT

Lease: NMSF0079366 / Agreement: NMNM078406X

SH: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 21, T. 27N., R. 6W.

Rio Arriba County, New Mexico

BH: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 23, T. 27N., R. 6W.

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 two years, approval of the Application for Permit to Drill will expire. A written request for a two-year extension may be granted if submitted prior to expiration.
- 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.

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 or 50 MMCF following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

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

V. SAFETY

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

VI. CHANGE OF PLANS OR ABANDONMENT

- A. Any changes of plans required 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.

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

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

CONDITIONS

Action 357815

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 357815
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	7/24/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/24/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	7/24/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	7/24/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	7/24/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	7/24/2024