

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. 30-045-38416
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: 11/22/2024

Additional Operator Remarks

Location of Well

0. SHL: SENW / 1815 FNL / 2327 FWL / TWSP: 24N / RANGE: 8W / SECTION: 26 / LAT: 36.287502 / LONG: -107.652231 (TVD: 0 feet, MD: 0 feet)
PPP: SENE / 2390 FNL / 440 FEL / TWSP: 24N / RANGE: 8W / SECTION: 26 / LAT: 36.285937 / LONG: -107.643682 (TVD: 5447 feet, MD: 6624 feet)
PPP: SESW / 1 FSL / 2486 FWL / TWSP: 24N / RANGE: 8W / SECTION: 23 / LAT: 36.292488 / LONG: -107.651743 (TVD: 5615 feet, MD: 17411 feet)
PPP: NESE / 2560 FSL / 1 FEL / TWSP: 24N / RANGE: 8W / SECTION: 22 / LAT: 36.299513 / LONG: -107.660389 (TVD: 5615 feet, MD: 17411 feet)
BHL: NWNE / 237 FNL / 2389 FEL / TWSP: 24N / RANGE: 8W / SECTION: 22 / LAT: 36.306259 / LONG: -107.668694 (TVD: 5615 feet, MD: 17411 feet)

BLM Point of Contact

Name: JEFFREY J TAFOYA
Title: Assistant Field Manager
Phone: (505) 564-7672
Email: JTAFOYA@BLM.GOV

CONFIDENTIAL

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type	<input type="checkbox"/> Initial Submittal
			<input checked="" type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

WELL LOCATION INFORMATION

API Number 30-045-38416	Pool Code 42289	Pool Name LYBROOK GALLUP
Property Code 336777	Property Name RIDGE UNIT	Well Number 130H
OGRID No. 372286	Operator Name ENDURING RESOURCES, LLC	Ground Level Elevation 6832'
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

Surface Location

UL F	Section 26	Township 24N	Range 8W	Lot	Feet from N/S Line 1815' NORTH	Feet from E/W Line 2327' WEST	Latitude 36.287502 °N	Longitude -107.652231 °W	County SAN JUAN
---------	---------------	-----------------	-------------	-----	-----------------------------------	----------------------------------	--------------------------	-----------------------------	--------------------

Bottom Hole Location

UL B	Section 22	Township 24N	Range 8W	Lot	Feet from N/S Line 237' NORTH	Feet from E/W Line 2389' EAST	Latitude 36.306259 °N	Longitude -107.668694 °W	County SAN JUAN
---------	---------------	-----------------	-------------	-----	----------------------------------	----------------------------------	--------------------------	-----------------------------	--------------------

Penetrated Spacing Unit:

Dedicated Acres 680.00	NE/4 NW/4, NE/4, NE/4 SE/4 - Section 22 SW/4 NW/4, SW/4, SW/4 SE/4- Section 23 NE/4 NW/4, NE/4 - Section 26	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit <input type="checkbox"/> Yes <input type="checkbox"/> No	Consolidation Code
Order Numbers R-20594		Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> No			

Kick Off Point (KOP)

UL F	Section 26	Township 24N	Range 8W	Lot	Feet from N/S Line 1815' NORTH	Feet from E/W Line 2327' WEST	Latitude 36.287502 °N	Longitude -107.652231 °W	County SAN JUAN
---------	---------------	-----------------	-------------	-----	-----------------------------------	----------------------------------	--------------------------	-----------------------------	--------------------


First Take Point (FTP)

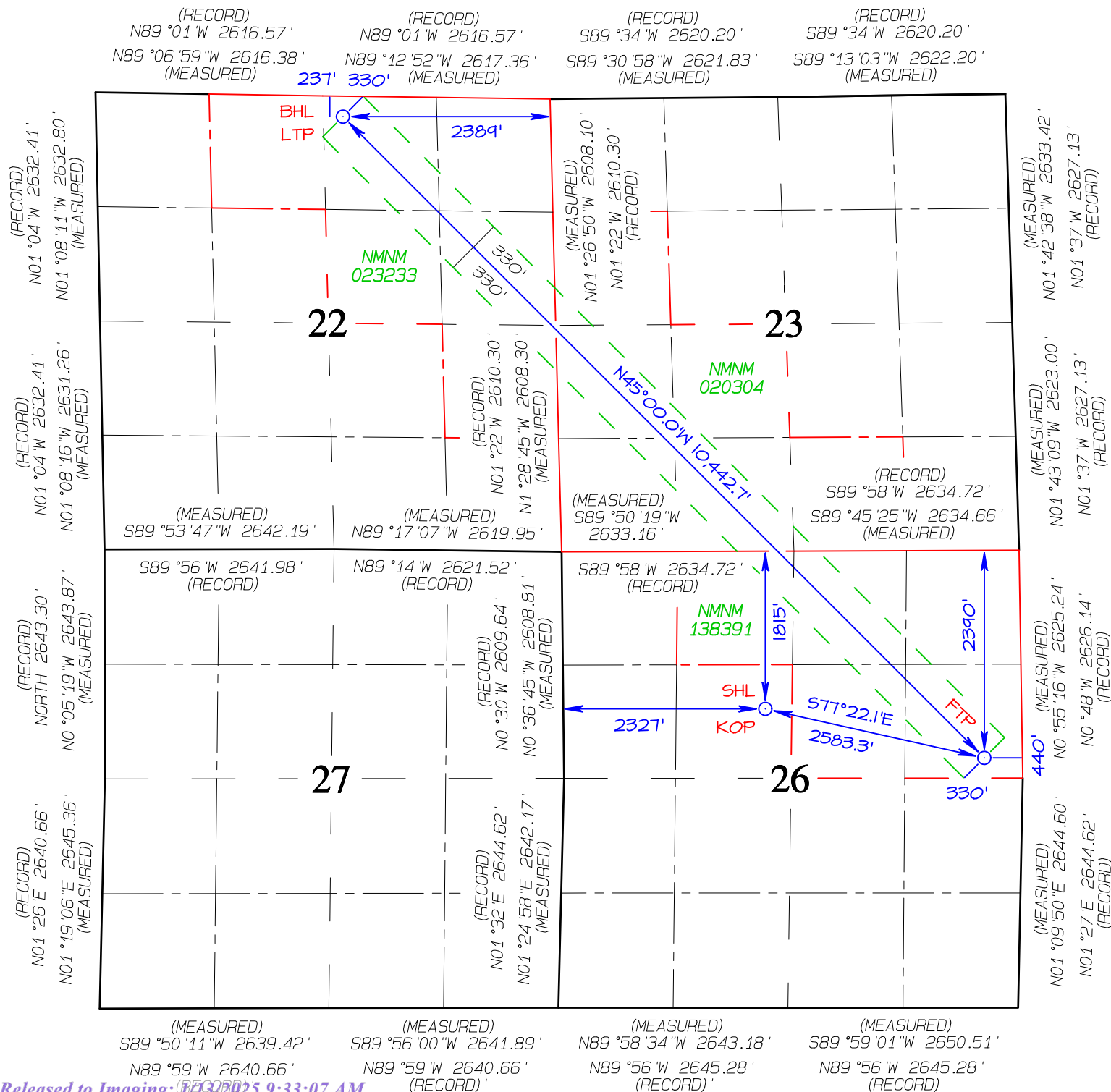
UL H	Section 26	Township 24N	Range 8W	Lot	Feet from N/S Line 2390' NORTH	Feet from E/W Line 440' EAST	Latitude 36.285937 °N	Longitude -107.643682 °W	County SAN JUAN
---------	---------------	-----------------	-------------	-----	-----------------------------------	---------------------------------	--------------------------	-----------------------------	--------------------

Last Take Point (LTP)

UL B	Section 22	Township 24N	Range 8W	Lot	Feet from N/S Line 237' NORTH	Feet from E/W Line 2389' EAST	Latitude 36.306259 °N	Longitude -107.668694 °W	County SAN JUAN
---------	---------------	-----------------	-------------	-----	----------------------------------	----------------------------------	--------------------------	-----------------------------	--------------------

Unitized Area or Area of Uniform Interest RIDGE UNIT	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input type="checkbox"/> Directional	Ground Floor Elevation
---	--	------------------------

<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</p> <p><u>Shaw-Marie Ford</u> Signature</p> <p><u>12/16/2024</u> Date</p> <p>Shaw-Marie Ford Printed Name</p> <p><u>sford@enduringresources.com</u> E-mail Address</p>	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <div></div> <p>JASON C. EDWARDS</p> <p>Signature and Seal of Professional Surveyor</p> <p>Certificate Number <u>15269</u> Date of Survey <u>NOVEMBER 30, 2021</u></p>
--	---



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:** 12 / 17 / 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
Ridge Unit 130H	TBD	F-26-24N-8W	1815 FNL x 2327 FWL	519	2075	208
Ridge Unit 135H	TBD	F-26-24N-8W	1822 FNL x 2308 FWL	510	2041	204
Ridge Unit 136H	TBD	F-26-24N-8W	1829 FNL x 2289 FWL	446	1786	179
Ridge Unit 137H	TBD	F-26-24N-8W	1835 FNL x 2270 FWL	349	1395	139
				3-year Decline	3-year Decline	3-year Decline
Ridge Unit 130H	TBD	F-26-24N-8W	1815 FNL x 2327 FWL	117	469	47
Ridge Unit 135H	TBD	F-26-24N-8W	1822 FNL x 2308 FWL	115	461	46
Ridge Unit 136H	TBD	F-26-24N-8W	1829 FNL x 2289 FWL	101	403	40
Ridge Unit 137H	TBD	F-26-24N-8W	1835 FNL x 2270 FWL	79	315	32

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
Ridge Unit 130H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Ridge Unit 135H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Ridge Unit 136H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Ridge Unit 137H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 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: 12/17/2024
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.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Ridge Unit 130H, 135H, 136H and 137H

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.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Ridge Unit 130H, 135H, 136H and 137H

VENTING and FLARING

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



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Ridge Unit 130H, 135H, 136H and 137H

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

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.
- 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:
 - 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.
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.



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Ridge Unit 130H, 135H, 136H and 137H

BEST MANAGEMENT PRACTICES

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 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 80111

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

WELL INFORMATION:

Name: RIDGE UNIT 130H

API Number: Not yet assigned

AFE Number: Not yet assigned

ER Well Number: Not yet assigned

State: New Mexico

County: San Juan

Surface Elevation: 6,832 ft ASL (GL)

6,857 ft ASL (KB)

Surface Location: 26-24N-08W Sec-Twn-Rng

1,815 ft FNL

2,327 ft FWL

36.287502 ° N latitude

107.652231 ° W longitude

(NAD 83)

BH Location: 22-24N-08W Sec-Twn-Rng

237 ft FNL

2,389 ft FEL

36.306259 ° N latitude

107.668694 ° W longitude

(NAD 83)

Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM: South on US Hwy 550 for 42.8 miles to MM 109.0, Left (North) on CR 7997 for 1.8 miles to fork in road, Right (North-East) for 0.6 miles to fork in road, Right (Straight)(North-East) for 0.1 miles to access road, Left on access road to Ridge Unit 130H Pad. The 130H well is the furthest well to the East and closest to the location entrance. From East to West: RU 130H, 135H, 136H and 137H.

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	5,623	1,234	1,253	W	normal
	Kirtland	5,500	1,357	1,389	W	normal
	Fruitland	5,280	1,577	1,644	G, W	sub
	Pictured Cliffs	4,960	1,897	2,055	G, W	sub
	Lewis	4,860	1,997	2,186	G, W	normal
	Chacra	4,545	2,312	2,598	G, W	normal
	Cliff House	3,445	3,412	4,037	G, W	sub
	Menefee	3,440	3,417	4,043	G, W	normal
	Point Lookout	2,605	4,252	5,136	G, W	normal
	Mancos	2,365	4,492	5,449	O,G	sub (~0.38)
	Gallup (MNCS_A)	1,990	4,867	5,906	O,G	sub (~0.38)
	MNCS_B	1,910	4,947	5,990	O,G	sub (~0.38)
	MNCS_C	1,790	5,067	6,117	O,G	sub (~0.38)
	MNCS_Cms	1,705	5,152	6,209	O,G	sub (~0.38)
	MNCS_D	1,635	5,222	6,289	O,G	sub (~0.38)
	MNCS_E	1,555	5,302	6,389	O,G	sub (~0.38)
	MNCS_F	1,500	5,357	6,466	O,G	sub (~0.38)
	MNCS_G	1,410	5,447	6,624	O,G	sub (~0.38)
	MNCS_H	1,370	5,487	6,708	O,G	sub (~0.38)
	MNCS_I	1,315	5,542	6,923	O,G	sub (~0.38)
	P.O.E. TARGET	1,410	5,447	6,624	O,G	sub (~0.38)
	PROJECTED TD	1,242	5,615	17,411	O,G	sub (~0.38)

Surface: Nacimiento

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

Pressure: Normal (0.43 psi/ft) or sub-normal pressure gradients anticipated in all formations

Max. pressure gradient: 0.43 psi/ft Evacuated hole gradient: 0.22 psi/ft

Maximum anticipated BH pressure, assuming maximum pressure gradient: 2,420 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,190 psi

Temperature: Maximum anticipated BHT is 140° 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; gas detection from drill out of 13-3/8" casing to TD; remote geo-steering from drill out of 9-5/8" casing to TD.

MWD / LWD: MWD surveys with inclination and azimuth in 100' stations (minimum) from drill out of 13-3/8" casing to TD; Gamma Ray from drill out of 9-5/8" casing to TD; Gamma Ray optional in 12-1/4" intermediate hole

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 double gate ram (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.

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 specifics.

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

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	769	116,634	116,634
Min. S.F.					7.39	3.55	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 Details: 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

Tail					Cu Ft Slurry
ASTM Type III Blend	Calcium Chloride 2% BWOC Accelerator	D-CD2 .3% BWOC Dispersant/Friction reducer	.25 lbs/sx Cello Flake - seepage		505.3

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

350 ft (MD)	to	4,239 ft (MD)	Hole Section Length:	3,889 ft
350 ft (TVD)	to	3,567 ft (TVD)	Casing Required:	4,239 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND	8.8 - 9.5	20	8 - 14	8 - 14	9.0 - 9.5	

Hole Size: 12-1/4"**Bit / Motor:** PDC w/mud motor**MWD / Survey:** MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional**Logging:** None

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					1,558	1,394	233,078	233,078
Min. S.F.					1.30	2.53	2.42	1.94

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

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

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

Stage 1

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	D-Mud Breaker	8.5				0	10 bbls	
Lead	90:10 Type III:POZ	12.5	2.140	12.05	70%	0	903	1,931
Tail	Type III	14.6	1.380	6.61	20%	3,739	150	207
Displacement	324	est bbls						

Annular Capacity	0.3627	cuft/ft	9-5/8" casing x 13-3/8" casing annulus	
	0.3132	cuft/ft	9-5/8" casing x 12-1/4" hole annulus	9-5/8" 36# ID 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

Spacer	D-Mud Breaker	SAPP						
Lead	ASTM Type III 90/10 Poz	D-CSE 1 5.0% BWOC Strength Enhancer	D-MPA-1 .4% BWOC Fluid Loss & Gas Migration Control	D-SA 1 1.4% BWOC Na Metasilicate	D-CD 2 .4% BWOC Dispersant	Cello Flace LCM .25 lb/sx	D-FP1 0.5% BWOC Defoamer	D-R1 .5% Retarder
Tail	ASTM Type III Blend		BWOC Fluid Loss & Gas Migration Control		D-CD 2 .5% BWOC Dispersant	Cello Flace LCM .25 lb/sx		D-R1 .2% Retarder

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

4,239 ft (MD)	to	17,411 ft (MD)	Hole Section Length:	13,172 ft
3,567 ft (TVD)	to	5,615 ft (TVD)	Casing Required:	17,411 ft

Estimated KOP:	5,650 ft (MD)	4,645 ft (TVD)
Estimated Landing Point (P.O.E.):	6,624 ft (MD)	5,447 ft (TVD)
Estimated Lateral Length:	10,787 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

Hole Size: 8-1/2"

Bit / Motor: PDC w/mud motor

MWD / Survey: MWD surveys with inclination and azimuth in 100' stations (minimum) before KOP, every joint from KOP to POE, every 100' (minimum) from POE to TD; Gamma Ray from drill out of 9-5/8" shoe to TD

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

Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	5.500	17.0	P-110	LTC	7,460	10,640	546,000	445,000
Loading					2,774	9,026	355,410	355,410
Min. S.F.					2.69	1.18	1.54	1.25

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% 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	50%	0	657	1,557
Tail	G:POZ blend	13.3	1.570	7.70	10%	5,449	1,928	3,027

Displacement 384 est bbls

Annular Capacity 0.2691 cuft/ft 5-1/2" casing x 9-5/8" casing annulus
0.2291 cuft/ft 5-1/2" casing x 8-1/2" hole annulus
0.1245 cuft/ft 5-1/2" casing vol est shoe jt ft 100

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

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

FINISH WELL: ND BOP, NU WH, RDMO.

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 10,687

Est Frac Inform: 45 Frac Stages 171,000 bbls slick water 13,900,000 lbs proppant

Flowback: Well will be flowed back through production tubing. An ESP may be used to assist in load water recovery.

Production: Well will produce up production tubing via gas-lift into permanent production and storage facilities.

ESTIMATED START DATES:

Drilling: 11/3/2023

Completion: 12/18/2023

Production: 1/17/2024

Prepared by: G Olson 7/15/2022
G Olson 8/16/2023

WELL NAME: RIDGE UNIT 130H

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

API Number: Not yet assigned

State: New Mexico

County: San Juan

Surface Elev.: 6,832 ft ASL (GL) 6,857 ft ASL (KB)

Surface Location: 26-24N-08W Sec-Twn- Rng 1,815 ft FNL 2,327 ft FWL

BH Location: 22-24N-08W Sec-Twn- Rng 237 ft FNL 2389 ft FEL

Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM: South on US Hwy 550 for 42.8 miles to MM 109.0, Left (North) on CR 7997 for 1.8 miles to fork in road, Right (North-East) for 0.6 miles to fork in road, Right (Straight)(North-East) for 0.1 miles to access road, Left on access road to Ridge Unit 130H Pad. The 130H well is the furthest well to the East and closest to the location entrance. From East to West: RU 130H, 135H, 136H and 137H.

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	4,239 ft
KOP (MD)	5,650 ft
KOP (TVD)	4,645 ft
Target (TVD)	5,447 ft
Curve BUR	10 °/100 ft
POE (MD)	6,624 ft
TD (MD)	17,411 ft
Lat Len (ft)	10,787 ft

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	4,239	9.625	36.0	J-55	LTC	0	4,239
Production	8.500	17,411	5.500	17.0	P-110	LTC	0	17,411

CEMENT PROPERTIES SUMMARY:

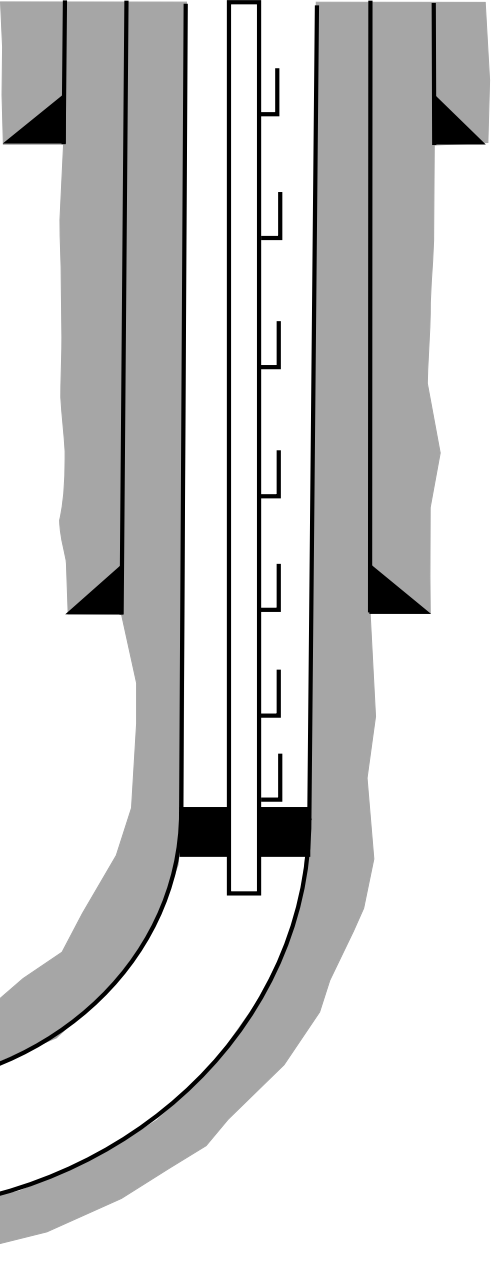
	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)	Total Cu Ft
Surface	TYPE III	14.6	1.39	6.686	0.6946	100%	0	364	505
Inter. (Lead)	90:10 Type III:POZ	12.5	2.14	12.05	0.3132	70%	0	903	1,931
Inter. (Tail)	Type III	12.5	2.14	12.05	0.3132	20%	3,739	150	321
Prod. (Lead)	ASTM type I/II	12.4	2.37	13.40	0.2291	50%	0	657	1,557
Prod. (Tail)	G:POZ blend	13.3	1.57	7.70	0.2291	10%	5,449	1,928	3,027

COMPLETION / PRODUCTION SUMMARY:

Frac: 30-stage (+/-) plug-and-perf frac with slick water and 10,000,000 lbs (+/-) proppant

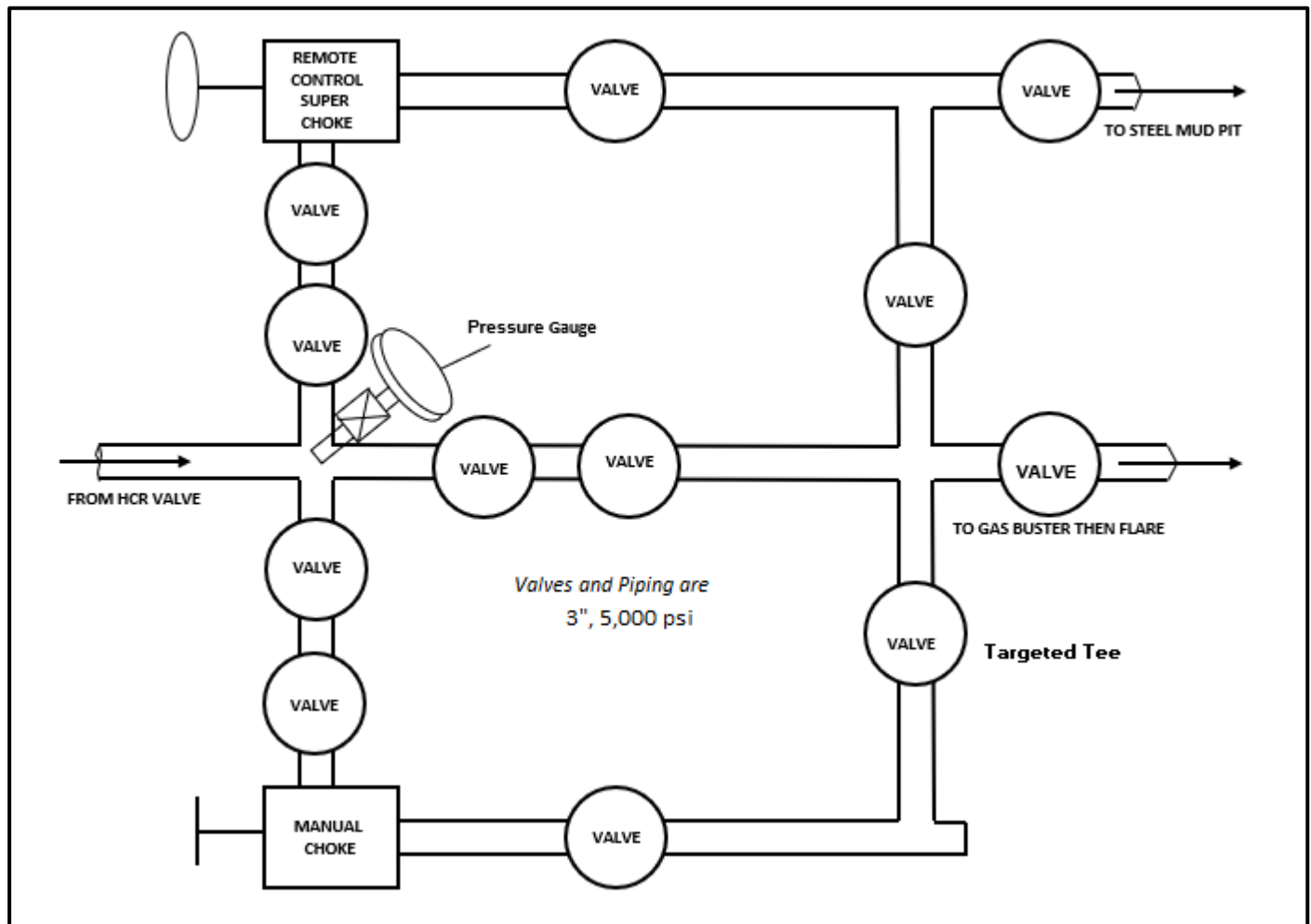
Flowback: Flow up production tubing as pressures allow (an ESP may be used to assist in load-water recovery)

Production: 2-7/8" tubing, ESP will be replaced with gas lift as well conditions dictate



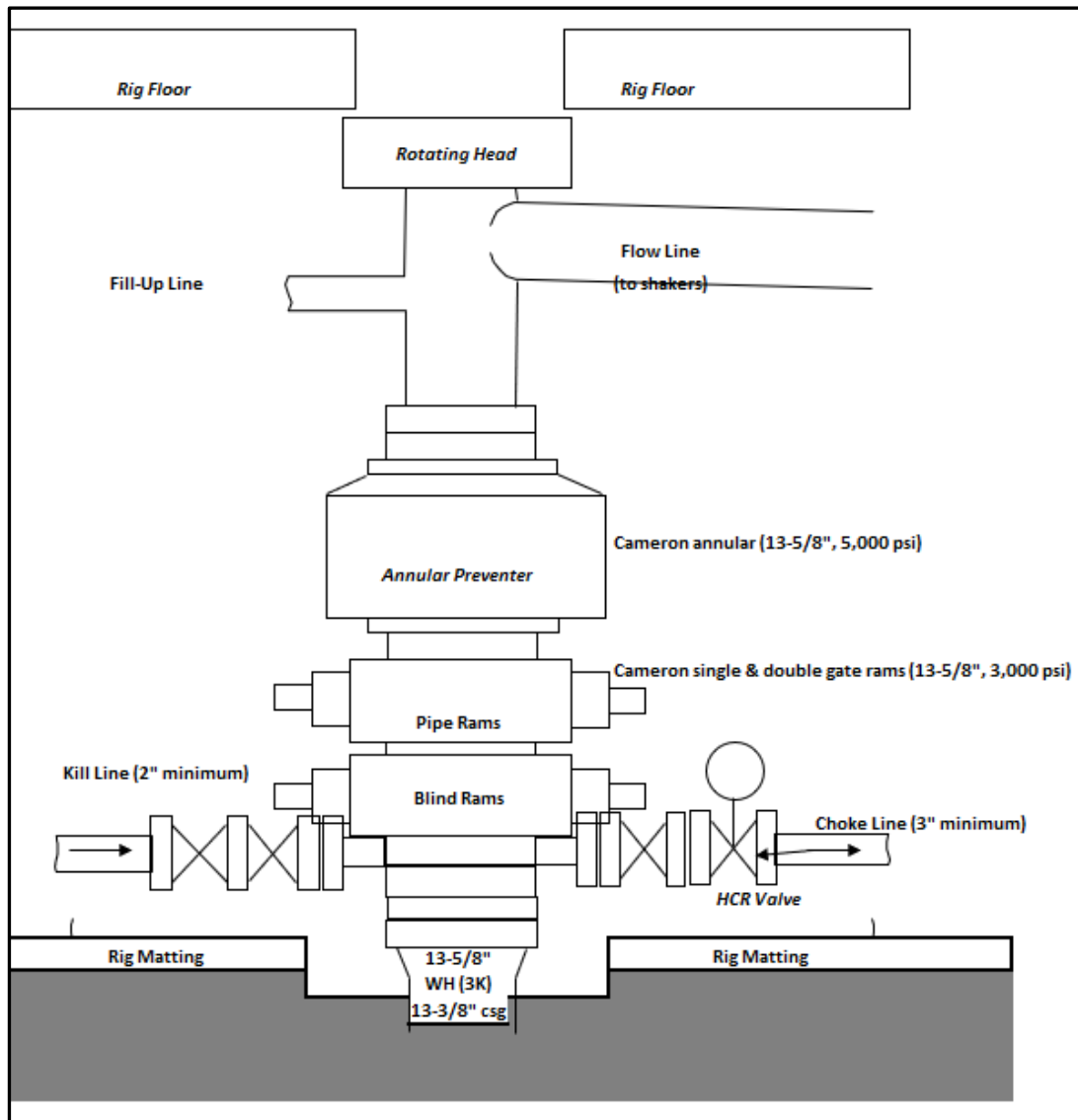


Enduring Resources IV, LLC CHOKE MANIFOLD





Enduring Resources IV, LLC BOPE Diagram





Well: Ridge Unit No. 130H
Site: Ridge Unit (130, 135, 136 & 137)
Project: San Juan County, New Mexico NAD83 NM W
Design: rev1
Rig:

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Ridge 130H FTP 2390 FNL 440 FEL r1	5544.00	-564.88	2520.60	1923435.188	2778984.966	36.285937000	-107.643682000
Ridge 130H LTP 237 FNL 2389 FEL 330 perp r1	5615.00	6819.39	-4863.44	1930819.439	2771600.937	36.306259000	-107.668694000

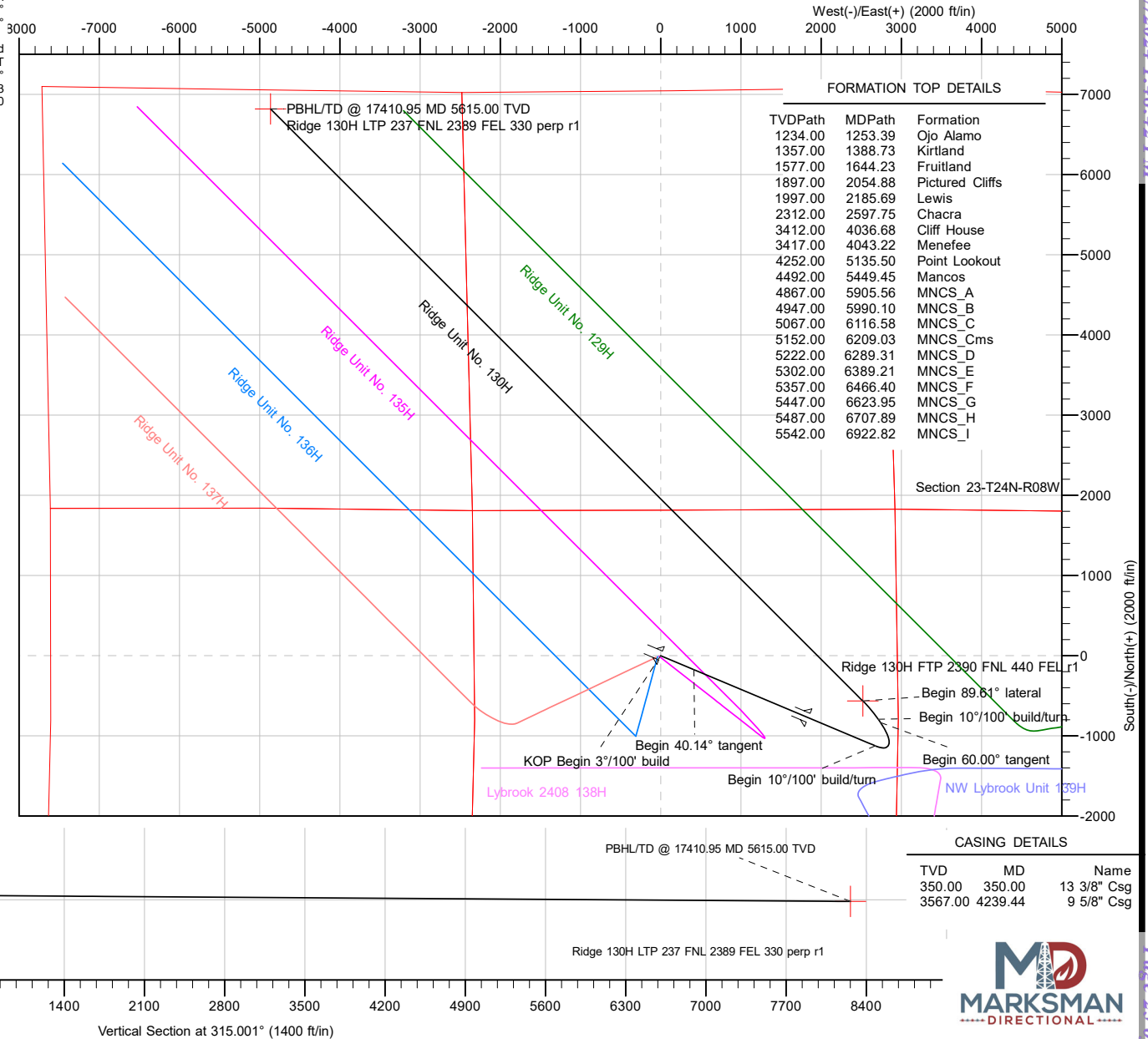
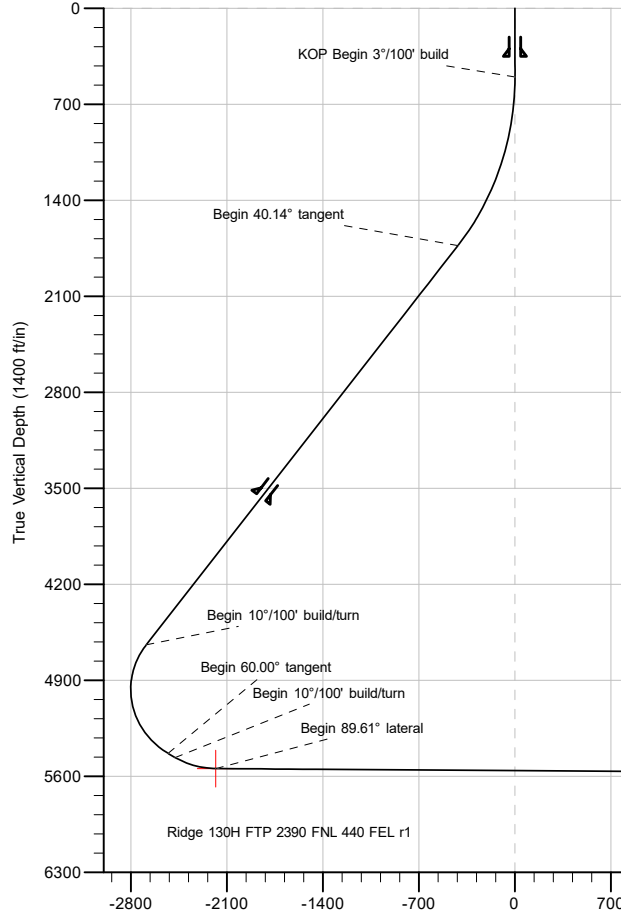


Azimuths to Grid North
 True North: -0.11°
 Magnetic North: 8.43°
 Magnetic Field
 Strength: 49131.9nT
 Dip Angle: 62.77°
 Date: 8/15/2023
 Model: IGRF2020

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=6832+25 @ 6857.00ft

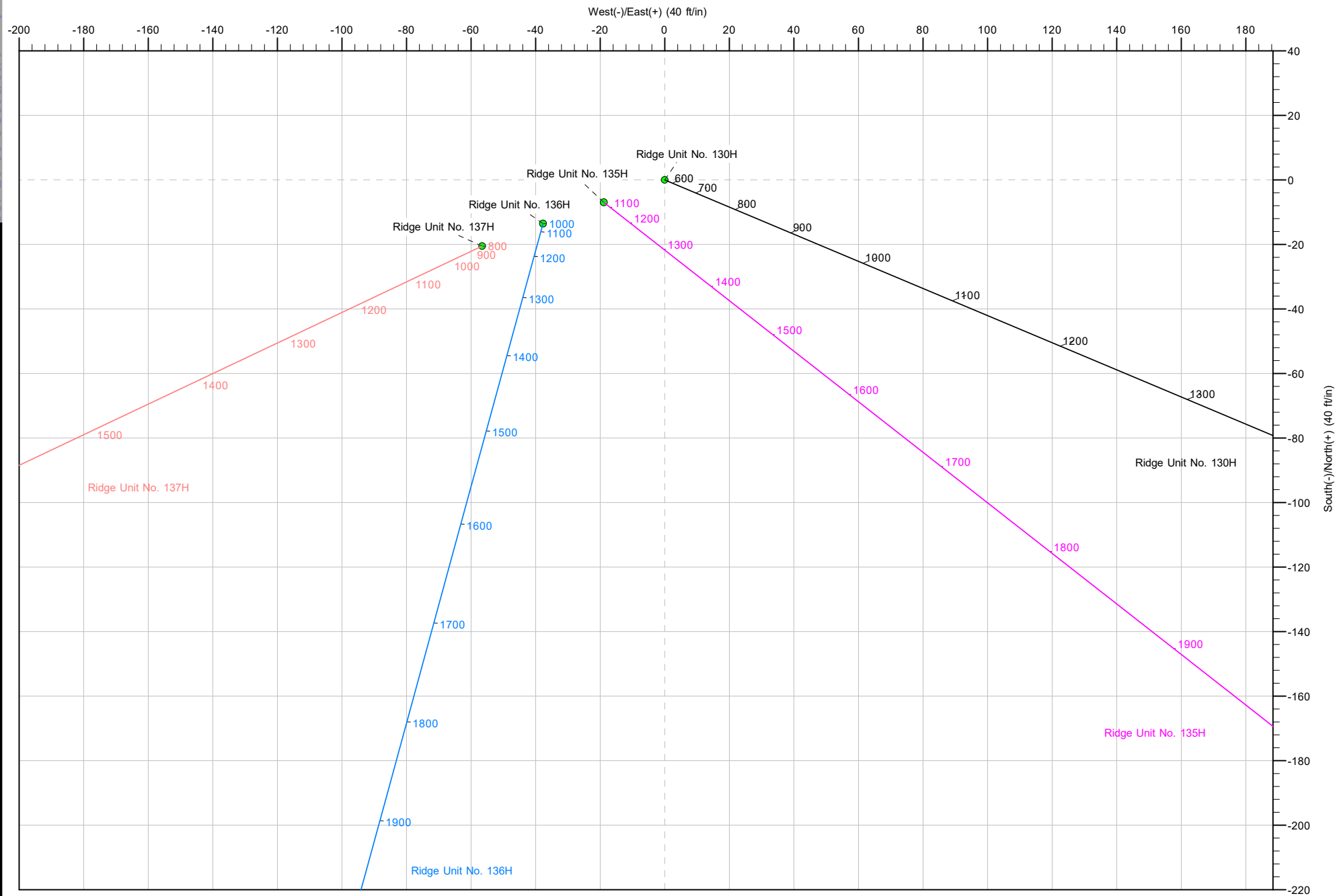
Surface location:
 Northing 1924000.064 Easting 2776464.369 Latitude 36.287502000 Longitude -107.652231000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.43°





Well: Ridge Unit No. 130H
Site: Ridge Unit (130, 135, 136 & 137)
Project: San Juan County, New Mexico NAD83 NM W
Design: rev1
Rig:





Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Project	San Juan 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	Ridge Unit (130, 135, 136 & 137)				
Site Position:		Northing:	1,924,000.063 usft	Latitude:	36.287502000
From:	Lat/Long	Easting:	2,776,464.370 usft	Longitude:	-107.652231000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Ridge Unit No. 130H, Surf loc: 1815 FNL 2327 FWL Section 26--+T24N-R08W						
Well Position	+N/-S	0.00 ft	Northing:	1,924,000.063	usft	Latitude:	36.287502000
	+E/-W	0.00 ft	Easting:	2,776,464.370	usft	Longitude:	-107.652231000
Position Uncertainty		0.00 ft	Wellhead Elevation:		ft	Ground Level:	6,832.00 ft
Grid Convergence:		0.11 °					

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/15/2023	8.54	62.77	49,131.87708904

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	315.001	

Plan Survey Tool Program	Date	8/16/2023			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,410.95 rev1 (Original Hole)	MWD		
			OWSG MWD - Standard		

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	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,838.04	40.14	112.793	1,731.24	-174.28	414.72	3.00	3.00	0.00	112.79	
5,645.23	40.14	112.793	4,641.67	-1,125.12	2,677.45	0.00	0.00	0.00	0.00	
6,595.61	60.00	325.449	5,432.83	-835.10	2,742.01	10.00	2.09	-15.50	-152.02	
6,655.61	60.00	325.449	5,462.83	-792.30	2,712.54	0.00	0.00	0.00	0.00	
6,967.96	89.61	315.000	5,544.00	-564.81	2,520.63	10.00	9.48	-3.35	-20.47	
17,410.95	89.61	315.000	5,615.00	6,819.39	-4,863.44	0.00	0.00	0.00	0.00	Ridge 130H LTP 237



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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
KOP Begin 3°/100' build									
600.00	3.00	112.793	599.95	-1.01	2.41	-2.42	3.00	3.00	0.00
700.00	6.00	112.793	699.63	-4.05	9.65	-9.69	3.00	3.00	0.00
800.00	9.00	112.793	798.77	-9.11	21.68	-21.77	3.00	3.00	0.00
900.00	12.00	112.793	897.08	-16.17	38.48	-38.64	3.00	3.00	0.00
1,000.00	15.00	112.793	994.31	-25.21	59.99	-60.25	3.00	3.00	0.00
1,100.00	18.00	112.793	1,090.18	-36.21	86.18	-86.54	3.00	3.00	0.00
1,200.00	21.00	112.793	1,184.43	-49.14	116.95	-117.44	3.00	3.00	0.00
1,253.39	22.60	112.793	1,234.00	-56.82	135.22	-135.80	3.00	3.00	0.00
Ojo Alamo									
1,300.00	24.00	112.793	1,276.81	-63.97	152.22	-152.87	3.00	3.00	0.00
1,388.73	26.66	112.793	1,357.00	-78.67	187.22	-188.01	3.00	3.00	0.00
Kirtland									
1,400.00	27.00	112.793	1,367.06	-80.64	191.91	-192.72	3.00	3.00	0.00
1,500.00	30.00	112.793	1,454.93	-99.13	235.89	-236.89	3.00	3.00	0.00
1,600.00	33.00	112.793	1,540.18	-119.37	284.06	-285.26	3.00	3.00	0.00
1,644.23	34.33	112.793	1,577.00	-128.87	306.66	-307.96	3.00	3.00	0.00
Fruitland									
1,700.00	36.00	112.793	1,622.59	-141.31	336.27	-337.69	3.00	3.00	0.00
1,800.00	39.00	112.793	1,701.91	-164.89	392.38	-394.05	3.00	3.00	0.00
1,838.04	40.14	112.793	1,731.24	-174.28	414.72	-416.48	3.00	3.00	0.00
Begin 40.14° tangent									
1,900.00	40.14	112.793	1,778.60	-189.75	451.55	-453.46	0.00	0.00	0.00
2,000.00	40.14	112.793	1,855.05	-214.72	510.98	-513.15	0.00	0.00	0.00
2,054.88	40.14	112.793	1,897.00	-228.43	543.60	-545.90	0.00	0.00	0.00
Pictured Cliffs									
2,100.00	40.14	112.793	1,931.49	-239.70	570.41	-572.83	0.00	0.00	0.00
2,185.69	40.14	112.793	1,997.00	-261.10	621.34	-623.98	0.00	0.00	0.00
Lewis									
2,200.00	40.14	112.793	2,007.94	-264.68	629.85	-632.52	0.00	0.00	0.00
2,300.00	40.14	112.793	2,084.38	-289.65	689.28	-692.20	0.00	0.00	0.00
2,400.00	40.14	112.793	2,160.83	-314.63	748.71	-751.89	0.00	0.00	0.00
2,500.00	40.14	112.793	2,237.28	-339.60	808.15	-811.57	0.00	0.00	0.00
2,597.75	40.14	112.793	2,312.00	-364.01	866.24	-869.91	0.00	0.00	0.00
Chacra									
2,600.00	40.14	112.793	2,313.72	-364.58	867.58	-871.26	0.00	0.00	0.00
2,700.00	40.14	112.793	2,390.17	-389.55	927.01	-930.94	0.00	0.00	0.00
2,800.00	40.14	112.793	2,466.61	-414.53	986.45	-990.63	0.00	0.00	0.00
2,900.00	40.14	112.793	2,543.06	-439.50	1,045.88	-1,050.31	0.00	0.00	0.00
3,000.00	40.14	112.793	2,619.50	-464.48	1,105.31	-1,110.00	0.00	0.00	0.00
3,100.00	40.14	112.793	2,695.95	-489.45	1,164.75	-1,169.68	0.00	0.00	0.00
3,200.00	40.14	112.793	2,772.40	-514.43	1,224.18	-1,229.37	0.00	0.00	0.00
3,300.00	40.14	112.793	2,848.84	-539.40	1,283.61	-1,289.06	0.00	0.00	0.00
3,400.00	40.14	112.793	2,925.29	-564.38	1,343.04	-1,348.74	0.00	0.00	0.00
3,500.00	40.14	112.793	3,001.73	-589.35	1,402.48	-1,408.43	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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)
3,600.00	40.14	112.793	3,078.18	-614.33	1,461.91	-1,468.11	0.00	0.00	0.00
3,700.00	40.14	112.793	3,154.62	-639.30	1,521.34	-1,527.80	0.00	0.00	0.00
3,800.00	40.14	112.793	3,231.07	-664.28	1,580.78	-1,587.48	0.00	0.00	0.00
3,900.00	40.14	112.793	3,307.52	-689.25	1,640.21	-1,647.17	0.00	0.00	0.00
4,000.00	40.14	112.793	3,383.96	-714.23	1,699.64	-1,706.85	0.00	0.00	0.00
4,036.68	40.14	112.793	3,412.00	-723.39	1,721.44	-1,728.74	0.00	0.00	0.00
Cliff House									
4,043.22	40.14	112.793	3,417.00	-725.02	1,725.33	-1,732.65	0.00	0.00	0.00
Menefee									
4,100.00	40.14	112.793	3,460.41	-739.20	1,759.08	-1,766.54	0.00	0.00	0.00
4,200.00	40.14	112.793	3,536.85	-764.18	1,818.51	-1,826.22	0.00	0.00	0.00
4,239.44	40.14	112.793	3,567.00	-774.03	1,841.95	-1,849.76	0.00	0.00	0.00
9 5/8" Csg									
4,300.00	40.14	112.793	3,613.30	-789.15	1,877.94	-1,885.91	0.00	0.00	0.00
4,400.00	40.14	112.793	3,689.74	-814.13	1,937.38	-1,945.59	0.00	0.00	0.00
4,500.00	40.14	112.793	3,766.19	-839.10	1,996.81	-2,005.28	0.00	0.00	0.00
4,600.00	40.14	112.793	3,842.64	-864.08	2,056.24	-2,064.96	0.00	0.00	0.00
4,700.00	40.14	112.793	3,919.08	-889.05	2,115.68	-2,124.65	0.00	0.00	0.00
4,800.00	40.14	112.793	3,995.53	-914.03	2,175.11	-2,184.33	0.00	0.00	0.00
4,900.00	40.14	112.793	4,071.97	-939.00	2,234.54	-2,244.02	0.00	0.00	0.00
5,000.00	40.14	112.793	4,148.42	-963.98	2,293.98	-2,303.70	0.00	0.00	0.00
5,100.00	40.14	112.793	4,224.86	-988.95	2,353.41	-2,363.39	0.00	0.00	0.00
5,135.50	40.14	112.793	4,252.00	-997.82	2,374.51	-2,384.58	0.00	0.00	0.00
Point Lookout									
5,200.00	40.14	112.793	4,301.31	-1,013.93	2,412.84	-2,423.07	0.00	0.00	0.00
5,300.00	40.14	112.793	4,377.76	-1,038.90	2,472.27	-2,482.76	0.00	0.00	0.00
5,400.00	40.14	112.793	4,454.20	-1,063.88	2,531.71	-2,542.44	0.00	0.00	0.00
5,449.45	40.14	112.793	4,492.00	-1,076.23	2,561.10	-2,571.96	0.00	0.00	0.00
Mancos									
5,500.00	40.14	112.793	4,530.65	-1,088.85	2,591.14	-2,602.13	0.00	0.00	0.00
5,600.00	40.14	112.793	4,607.09	-1,113.83	2,650.57	-2,661.82	0.00	0.00	0.00
5,645.23	40.14	112.793	4,641.67	-1,125.12	2,677.45	-2,688.81	0.00	0.00	0.00
Begin 10°/100' build/turn									
5,650.00	39.72	112.443	4,645.33	-1,126.30	2,680.28	-2,691.64	10.00	-8.82	-7.34
5,700.00	35.38	108.358	4,684.96	-1,136.97	2,708.81	-2,719.35	10.00	-8.68	-8.17
5,750.00	31.21	103.318	4,726.75	-1,144.51	2,735.17	-2,743.33	10.00	-8.34	-10.08
5,800.00	27.29	96.950	4,770.38	-1,148.89	2,759.17	-2,763.40	10.00	-7.84	-12.74
5,850.00	23.75	88.744	4,815.51	-1,150.06	2,780.63	-2,779.39	10.00	-7.09	-16.41
5,900.00	20.77	78.107	4,861.80	-1,148.01	2,799.38	-2,791.20	10.00	-5.96	-21.27
5,905.56	20.48	76.752	4,867.00	-1,147.58	2,801.29	-2,792.25	10.00	-5.13	-24.37
MNCS_A									
5,950.00	18.63	64.652	4,908.89	-1,142.76	2,815.28	-2,798.74	10.00	-4.17	-27.23
5,990.10	17.73	52.102	4,947.00	-1,136.26	2,825.89	-2,801.65	10.00	-2.23	-31.30
MNCS_B									
6,000.00	17.64	48.856	4,956.44	-1,134.35	2,828.21	-2,801.93	10.00	-0.93	-32.77
6,050.00	18.00	32.507	5,004.07	-1,122.84	2,838.08	-2,800.77	10.00	0.71	-32.70
6,100.00	19.62	17.786	5,051.42	-1,108.33	2,844.80	-2,795.26	10.00	3.24	-29.44
6,116.58	20.39	13.497	5,067.00	-1,102.87	2,846.32	-2,792.48	10.00	4.66	-25.87
MNCS_C									
6,150.00	22.23	5.811	5,098.14	-1,090.91	2,848.32	-2,785.44	10.00	5.51	-23.00
6,200.00	25.54	356.510	5,143.87	-1,070.73	2,848.62	-2,771.38	10.00	6.61	-18.60
6,209.03	26.19	355.074	5,152.00	-1,066.80	2,848.33	-2,768.40	10.00	7.21	-15.90



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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_Cms									
6,250.00	29.29	349.332	5,188.26	-1,047.94	2,845.70	-2,753.20	10.00	7.59	-14.02
6,289.31	32.47	344.804	5,222.00	-1,028.30	2,841.15	-2,736.09	10.00	8.07	-11.52
MNCS_D									
6,300.00	33.36	343.709	5,230.97	-1,022.71	2,839.58	-2,731.03	10.00	8.31	-10.25
6,350.00	37.62	339.205	5,271.68	-995.23	2,830.30	-2,705.03	10.00	8.53	-9.01
6,389.21	41.07	336.249	5,302.00	-972.25	2,820.86	-2,682.11	10.00	8.79	-7.54
MNCS_E									
6,400.00	42.03	335.507	5,310.08	-965.72	2,817.93	-2,675.42	10.00	8.90	-6.88
6,450.00	46.53	332.397	5,345.87	-934.39	2,802.58	-2,642.41	10.00	9.01	-6.22
6,466.40	48.03	331.478	5,357.00	-923.75	2,796.91	-2,630.88	10.00	9.11	-5.60
MNCS_F									
6,500.00	51.11	329.723	5,378.79	-901.48	2,784.35	-2,606.25	10.00	9.18	-5.22
6,550.00	55.74	327.374	5,408.58	-867.25	2,763.38	-2,567.23	10.00	9.26	-4.70
6,595.61	60.00	325.449	5,432.83	-835.10	2,742.01	-2,529.37	10.00	9.34	-4.22
Begin 60.00° tangent									
6,600.00	60.00	325.449	5,435.02	-831.97	2,739.85	-2,525.63	0.00	0.00	0.00
6,623.95	60.00	325.449	5,447.00	-814.88	2,728.09	-2,505.24	0.00	0.00	0.00
MNCS_G									
6,655.61	60.00	325.449	5,462.83	-792.30	2,712.54	-2,478.27	0.00	0.00	0.00
Begin 10°/100' build/turn									
6,700.00	64.17	323.726	5,483.61	-760.35	2,689.81	-2,439.60	10.00	9.39	-3.88
6,707.89	64.91	323.433	5,487.00	-754.61	2,685.58	-2,432.56	10.00	9.42	-3.72
MNCS_H									
6,750.00	68.89	321.924	5,503.52	-723.82	2,662.09	-2,394.18	10.00	9.44	-3.58
6,800.00	73.63	320.234	5,519.58	-687.00	2,632.35	-2,347.11	10.00	9.47	-3.38
6,850.00	78.38	318.625	5,531.67	-650.17	2,600.80	-2,298.76	10.00	9.50	-3.22
6,900.00	83.13	317.069	5,539.70	-613.60	2,567.69	-2,249.48	10.00	9.52	-3.11
6,922.82	85.31	316.371	5,542.00	-597.07	2,552.12	-2,226.79	10.00	9.53	-3.06
MNCS_I									
6,950.00	87.90	315.545	5,543.61	-577.57	2,533.26	-2,199.67	10.00	9.53	-3.04
6,967.96	89.61	315.000	5,544.00	-564.81	2,520.63	-2,181.71	10.00	9.53	-3.03
Begin 89.61° lateral									
7,000.00	89.61	315.000	5,544.22	-542.16	2,497.97	-2,149.67	0.00	0.00	0.00
7,100.00	89.61	315.000	5,544.90	-471.45	2,427.27	-2,049.67	0.00	0.00	0.00
7,200.00	89.61	315.000	5,545.58	-400.74	2,356.56	-1,949.68	0.00	0.00	0.00
7,300.00	89.61	315.000	5,546.26	-330.03	2,285.85	-1,849.68	0.00	0.00	0.00
7,400.00	89.61	315.000	5,546.94	-259.32	2,215.14	-1,749.68	0.00	0.00	0.00
7,500.00	89.61	315.000	5,547.62	-188.61	2,144.43	-1,649.68	0.00	0.00	0.00
7,600.00	89.61	315.000	5,548.30	-117.90	2,073.72	-1,549.69	0.00	0.00	0.00
7,700.00	89.61	315.000	5,548.98	-47.19	2,003.01	-1,449.69	0.00	0.00	0.00
7,800.00	89.61	315.000	5,549.66	23.52	1,932.31	-1,349.69	0.00	0.00	0.00
7,900.00	89.61	315.000	5,550.34	94.23	1,861.60	-1,249.69	0.00	0.00	0.00
8,000.00	89.61	315.000	5,551.02	164.94	1,790.89	-1,149.70	0.00	0.00	0.00
8,100.00	89.61	315.000	5,551.70	235.65	1,720.18	-1,049.70	0.00	0.00	0.00
8,200.00	89.61	315.000	5,552.38	306.36	1,649.47	-949.70	0.00	0.00	0.00
8,300.00	89.61	315.000	5,553.06	377.07	1,578.76	-849.70	0.00	0.00	0.00
8,400.00	89.61	315.000	5,553.74	447.78	1,508.06	-749.70	0.00	0.00	0.00
8,500.00	89.61	315.000	5,554.42	518.49	1,437.35	-649.71	0.00	0.00	0.00
8,600.00	89.61	315.000	5,555.10	589.20	1,366.64	-549.71	0.00	0.00	0.00
8,700.00	89.61	315.000	5,555.78	659.91	1,295.93	-449.71	0.00	0.00	0.00
8,800.00	89.61	315.000	5,556.46	730.62	1,225.22	-349.71	0.00	0.00	0.00
8,900.00	89.61	315.000	5,557.14	801.33	1,154.51	-249.72	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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)
9,000.00	89.61	315.000	5,557.82	872.04	1,083.81	-149.72	0.00	0.00	0.00
9,100.00	89.61	315.000	5,558.50	942.75	1,013.10	-49.72	0.00	0.00	0.00
9,200.00	89.61	315.000	5,559.18	1,013.46	942.39	50.28	0.00	0.00	0.00
9,300.00	89.61	315.000	5,559.86	1,084.17	871.68	150.27	0.00	0.00	0.00
9,400.00	89.61	315.000	5,560.54	1,154.88	800.97	250.27	0.00	0.00	0.00
9,500.00	89.61	315.000	5,561.22	1,225.59	730.26	350.27	0.00	0.00	0.00
9,600.00	89.61	315.000	5,561.90	1,296.30	659.55	450.27	0.00	0.00	0.00
9,700.00	89.61	315.000	5,562.58	1,367.01	588.85	550.27	0.00	0.00	0.00
9,800.00	89.61	315.000	5,563.25	1,437.71	518.14	650.26	0.00	0.00	0.00
9,900.00	89.61	315.000	5,563.93	1,508.42	447.43	750.26	0.00	0.00	0.00
10,000.00	89.61	315.000	5,564.61	1,579.13	376.72	850.26	0.00	0.00	0.00
10,100.00	89.61	315.000	5,565.29	1,649.84	306.01	950.26	0.00	0.00	0.00
10,200.00	89.61	315.000	5,565.97	1,720.55	235.30	1,050.25	0.00	0.00	0.00
10,300.00	89.61	315.000	5,566.65	1,791.26	164.60	1,150.25	0.00	0.00	0.00
10,400.00	89.61	315.000	5,567.33	1,861.97	93.89	1,250.25	0.00	0.00	0.00
10,500.00	89.61	315.000	5,568.01	1,932.68	23.18	1,350.25	0.00	0.00	0.00
10,600.00	89.61	315.000	5,568.69	2,003.39	-47.53	1,450.24	0.00	0.00	0.00
10,700.00	89.61	315.000	5,569.37	2,074.10	-118.24	1,550.24	0.00	0.00	0.00
10,800.00	89.61	315.000	5,570.05	2,144.81	-188.95	1,650.24	0.00	0.00	0.00
10,900.00	89.61	315.000	5,570.73	2,215.52	-259.66	1,750.24	0.00	0.00	0.00
11,000.00	89.61	315.000	5,571.41	2,286.23	-330.36	1,850.24	0.00	0.00	0.00
11,100.00	89.61	315.000	5,572.09	2,356.94	-401.07	1,950.23	0.00	0.00	0.00
11,200.00	89.61	315.000	5,572.77	2,427.65	-471.78	2,050.23	0.00	0.00	0.00
11,300.00	89.61	315.000	5,573.45	2,498.36	-542.49	2,150.23	0.00	0.00	0.00
11,400.00	89.61	315.000	5,574.13	2,569.07	-613.20	2,250.23	0.00	0.00	0.00
11,500.00	89.61	315.000	5,574.81	2,639.78	-683.91	2,350.22	0.00	0.00	0.00
11,600.00	89.61	315.000	5,575.49	2,710.49	-754.61	2,450.22	0.00	0.00	0.00
11,700.00	89.61	315.000	5,576.17	2,781.20	-825.32	2,550.22	0.00	0.00	0.00
11,800.00	89.61	315.000	5,576.85	2,851.91	-896.03	2,650.22	0.00	0.00	0.00
11,900.00	89.61	315.000	5,577.53	2,922.62	-966.74	2,750.21	0.00	0.00	0.00
12,000.00	89.61	315.000	5,578.21	2,993.33	-1,037.45	2,850.21	0.00	0.00	0.00
12,100.00	89.61	315.000	5,578.89	3,064.04	-1,108.16	2,950.21	0.00	0.00	0.00
12,200.00	89.61	315.000	5,579.57	3,134.75	-1,178.86	3,050.21	0.00	0.00	0.00
12,300.00	89.61	315.000	5,580.25	3,205.46	-1,249.57	3,150.21	0.00	0.00	0.00
12,400.00	89.61	315.000	5,580.93	3,276.17	-1,320.28	3,250.20	0.00	0.00	0.00
12,500.00	89.61	315.000	5,581.61	3,346.88	-1,390.99	3,350.20	0.00	0.00	0.00
12,600.00	89.61	315.000	5,582.29	3,417.59	-1,461.70	3,450.20	0.00	0.00	0.00
12,700.00	89.61	315.000	5,582.97	3,488.30	-1,532.41	3,550.20	0.00	0.00	0.00
12,800.00	89.61	315.000	5,583.65	3,559.00	-1,603.12	3,650.19	0.00	0.00	0.00
12,900.00	89.61	315.000	5,584.33	3,629.71	-1,673.82	3,750.19	0.00	0.00	0.00
13,000.00	89.61	315.000	5,585.01	3,700.42	-1,744.53	3,850.19	0.00	0.00	0.00
13,100.00	89.61	315.000	5,585.69	3,771.13	-1,815.24	3,950.19	0.00	0.00	0.00
13,200.00	89.61	315.000	5,586.37	3,841.84	-1,885.95	4,050.18	0.00	0.00	0.00
13,300.00	89.61	315.000	5,587.05	3,912.55	-1,956.66	4,150.18	0.00	0.00	0.00
13,400.00	89.61	315.000	5,587.73	3,983.26	-2,027.37	4,250.18	0.00	0.00	0.00
13,500.00	89.61	315.000	5,588.41	4,053.97	-2,098.07	4,350.18	0.00	0.00	0.00
13,600.00	89.61	315.000	5,589.09	4,124.68	-2,168.78	4,450.18	0.00	0.00	0.00
13,700.00	89.61	315.000	5,589.77	4,195.39	-2,239.49	4,550.17	0.00	0.00	0.00
13,800.00	89.61	315.000	5,590.45	4,266.10	-2,310.20	4,650.17	0.00	0.00	0.00
13,900.00	89.61	315.000	5,591.13	4,336.81	-2,380.91	4,750.17	0.00	0.00	0.00
14,000.00	89.61	315.000	5,591.81	4,407.52	-2,451.62	4,850.17	0.00	0.00	0.00
14,100.00	89.61	315.000	5,592.49	4,478.23	-2,522.32	4,950.16	0.00	0.00	0.00
14,200.00	89.61	315.000	5,593.17	4,548.94	-2,593.03	5,050.16	0.00	0.00	0.00
14,300.00	89.61	315.000	5,593.85	4,619.65	-2,663.74	5,150.16	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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)
14,400.00	89.61	315.000	5,594.53	4,690.36	-2,734.45	5,250.16	0.00	0.00	0.00
14,500.00	89.61	315.000	5,595.21	4,761.07	-2,805.16	5,350.15	0.00	0.00	0.00
14,600.00	89.61	315.000	5,595.89	4,831.78	-2,875.87	5,450.15	0.00	0.00	0.00
14,700.00	89.61	315.000	5,596.57	4,902.49	-2,946.58	5,550.15	0.00	0.00	0.00
14,800.00	89.61	315.000	5,597.25	4,973.20	-3,017.28	5,650.15	0.00	0.00	0.00
14,900.00	89.61	315.000	5,597.93	5,043.91	-3,087.99	5,750.15	0.00	0.00	0.00
15,000.00	89.61	315.000	5,598.61	5,114.62	-3,158.70	5,850.14	0.00	0.00	0.00
15,100.00	89.61	315.000	5,599.29	5,185.33	-3,229.41	5,950.14	0.00	0.00	0.00
15,200.00	89.61	315.000	5,599.97	5,256.04	-3,300.12	6,050.14	0.00	0.00	0.00
15,300.00	89.61	315.000	5,600.65	5,326.75	-3,370.83	6,150.14	0.00	0.00	0.00
15,400.00	89.61	315.000	5,601.33	5,397.46	-3,441.53	6,250.13	0.00	0.00	0.00
15,500.00	89.61	315.000	5,602.01	5,468.17	-3,512.24	6,350.13	0.00	0.00	0.00
15,600.00	89.61	315.000	5,602.69	5,538.88	-3,582.95	6,450.13	0.00	0.00	0.00
15,700.00	89.61	315.000	5,603.37	5,609.59	-3,653.66	6,550.13	0.00	0.00	0.00
15,800.00	89.61	315.000	5,604.05	5,680.29	-3,724.37	6,650.12	0.00	0.00	0.00
15,900.00	89.61	315.000	5,604.73	5,751.00	-3,795.08	6,750.12	0.00	0.00	0.00
16,000.00	89.61	315.000	5,605.41	5,821.71	-3,865.78	6,850.12	0.00	0.00	0.00
16,100.00	89.61	315.000	5,606.09	5,892.42	-3,936.49	6,950.12	0.00	0.00	0.00
16,200.00	89.61	315.000	5,606.77	5,963.13	-4,007.20	7,050.12	0.00	0.00	0.00
16,300.00	89.61	315.000	5,607.45	6,033.84	-4,077.91	7,150.11	0.00	0.00	0.00
16,400.00	89.61	315.000	5,608.13	6,104.55	-4,148.62	7,250.11	0.00	0.00	0.00
16,500.00	89.61	315.000	5,608.81	6,175.26	-4,219.33	7,350.11	0.00	0.00	0.00
16,600.00	89.61	315.000	5,609.49	6,245.97	-4,290.04	7,450.11	0.00	0.00	0.00
16,700.00	89.61	315.000	5,610.17	6,316.68	-4,360.74	7,550.10	0.00	0.00	0.00
16,800.00	89.61	315.000	5,610.85	6,387.39	-4,431.45	7,650.10	0.00	0.00	0.00
16,900.00	89.61	315.000	5,611.53	6,458.10	-4,502.16	7,750.10	0.00	0.00	0.00
17,000.00	89.61	315.000	5,612.21	6,528.81	-4,572.87	7,850.10	0.00	0.00	0.00
17,100.00	89.61	315.000	5,612.89	6,599.52	-4,643.58	7,950.09	0.00	0.00	0.00
17,200.00	89.61	315.000	5,613.57	6,670.23	-4,714.29	8,050.09	0.00	0.00	0.00
17,300.00	89.61	315.000	5,614.25	6,740.94	-4,784.99	8,150.09	0.00	0.00	0.00
17,400.00	89.61	315.000	5,614.93	6,811.65	-4,855.70	8,250.09	0.00	0.00	0.00
17,410.95	89.61	315.000	5,615.00	6,819.39	-4,863.44	8,261.03	0.00	0.00	0.00
PBHL/TD @ 17410.95 MD 5615.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Ridge 130H FTP 2390 F	0.00	0.000	5,544.00	-564.88	2,520.60	1,923,435.188	2,778,984.966	36.285937000	-107.643682000
- plan misses target center by 0.07ft at 6967.93ft MD (5544.00 TVD, -564.83 N, 2520.65 E)									
- Point									
Ridge 130H LTP 237 FN	0.00	0.000	5,615.00	6,819.39	-4,863.44	1,930,819.440	2,771,600.937	36.306259000	-107.668694000
- plan hits target center									
- Point									



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	
4,239.44	3,567.00	9 5/8" Csg	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,253.39	1,234.00	Ojo Alamo				
1,388.73	1,357.00	Kirtland				
1,644.23	1,577.00	Fruitland				
2,054.88	1,897.00	Pictured Cliffs				
2,185.69	1,997.00	Lewis				
2,597.75	2,312.00	Chacra				
4,036.68	3,412.00	Cliff House				
4,043.22	3,417.00	Menefee				
5,135.50	4,252.00	Point Lookout				
5,449.45	4,492.00	Mancos				
5,905.56	4,867.00	MNCS_A				
5,990.10	4,947.00	MNCS_B				
6,116.58	5,067.00	MNCS_C				
6,209.03	5,152.00	MNCS_Cms				
6,289.31	5,222.00	MNCS_D				
6,389.21	5,302.00	MNCS_E				
6,466.40	5,357.00	MNCS_F				
6,623.95	5,447.00	MNCS_G				
6,707.89	5,487.00	MNCS_H				
6,922.82	5,542.00	MNCS_I				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
500.00	500.00	0.00	0.00	KOP Begin 3°/100' build	
1,838.04	1,731.24	-174.28	414.72	Begin 40.14° tangent	
5,645.23	4,641.67	-1,125.12	2,677.45	Begin 10°/100' build/turn	
6,595.61	5,432.83	-835.10	2,742.01	Begin 60.00° tangent	
6,655.61	5,462.83	-792.30	2,712.54	Begin 10°/100' build/turn	
6,967.96	5,544.00	-564.81	2,520.63	Begin 89.61° lateral	
17,410.95	5,615.00	6,819.39	-4,863.44	PBHL/TD @ 17410.95 MD 5615.00 TVD	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Project	San Juan 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		Ridge Unit (130, 135, 136 & 137)			
Site Position:		Northing:	1,924,000.063 usft	Latitude:	36.287502000
From:	Lat/Long	Easting:	2,776,464.370 usft	Longitude:	-107.652231000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well		Ridge Unit No. 130H, Surf loc: 1815 FNL 2327 FWL Section 26--T24N-R08W				
Well Position	+N/-S	0.00 ft	Northing:	1,924,000.063 usft	Latitude:	36.287502000
	+E/-W	0.00 ft	Easting:	2,776,464.370 usft	Longitude:	-107.652231000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,832.00 ft
Grid Convergence:		0.11 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/15/2023	8.54	62.77	49,131.87708904

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	315.001

Plan Survey Tool Program	Date	8/16/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,410.95 rev1 (Original Hole)	MWD	
			OWSG MWD - Standard	

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	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,838.04	40.14	112.793	1,731.24	-174.28	414.72	3.00	3.00	0.00	112.79	
5,645.23	40.14	112.793	4,641.67	-1,125.12	2,677.45	0.00	0.00	0.00	0.00	
6,595.61	60.00	325.449	5,432.83	-835.10	2,742.01	10.00	2.09	-15.50	-152.02	
6,655.61	60.00	325.449	5,462.83	-792.30	2,712.54	0.00	0.00	0.00	0.00	
6,967.96	89.61	315.000	5,544.00	-564.81	2,520.63	10.00	9.48	-3.35	-20.47	
17,410.95	89.61	315.000	5,615.00	6,819.39	-4,863.44	0.00	0.00	0.00	0.00	Ridge 130H LTP 237



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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	1,924,000.063	2,776,464.370	36.287502000	-107.652231000
100.00	0.00	0.000	100.00	0.00	0.00	1,924,000.063	2,776,464.370	36.287502000	-107.652231000
200.00	0.00	0.000	200.00	0.00	0.00	1,924,000.063	2,776,464.370	36.287502000	-107.652231000
300.00	0.00	0.000	300.00	0.00	0.00	1,924,000.063	2,776,464.370	36.287502000	-107.652231000
350.00	0.00	0.000	350.00	0.00	0.00	1,924,000.063	2,776,464.370	36.287502000	-107.652231000
13 3/8" Csg									
400.00	0.00	0.000	400.00	0.00	0.00	1,924,000.063	2,776,464.370	36.287502000	-107.652231000
500.00	0.00	0.000	500.00	0.00	0.00	1,924,000.063	2,776,464.370	36.287502000	-107.652231000
KOP Begin 3°/100' build									
600.00	3.00	112.793	599.95	-1.01	2.41	1,923,999.049	2,776,466.783	36.287499202	-107.652222818
700.00	6.00	112.793	699.63	-4.05	9.65	1,923,996.010	2,776,474.015	36.287490816	-107.652198297
800.00	9.00	112.793	798.77	-9.11	21.68	1,923,990.954	2,776,486.047	36.287476865	-107.652157503
900.00	12.00	112.793	897.08	-16.17	38.48	1,923,983.895	2,776,502.845	36.287457387	-107.652100548
1,000.00	15.00	112.793	994.31	-25.21	59.99	1,923,974.852	2,776,524.364	36.287432436	-107.652027588
1,100.00	18.00	112.793	1,090.18	-36.21	86.18	1,923,963.851	2,776,550.545	36.287402079	-107.651938824
1,200.00	21.00	112.793	1,184.43	-49.14	116.95	1,923,950.920	2,776,581.315	36.287366400	-107.651834498
1,253.39	22.60	112.793	1,234.00	-56.82	135.22	1,923,943.239	2,776,599.594	36.287345206	-107.651772526
Ojo Alamo									
1,300.00	24.00	112.793	1,276.81	-63.97	152.22	1,923,936.097	2,776,616.591	36.287325497	-107.651714896
1,388.73	26.66	112.793	1,357.00	-78.67	187.22	1,923,921.391	2,776,651.586	36.287284920	-107.651596249
Kirtland									
1,400.00	27.00	112.793	1,367.06	-80.64	191.91	1,923,919.420	2,776,656.276	36.287279482	-107.651580347
1,500.00	30.00	112.793	1,454.93	-99.13	235.89	1,923,900.937	2,776,700.261	36.287228480	-107.651431219
1,600.00	33.00	112.793	1,540.18	-119.37	284.06	1,923,880.698	2,776,748.425	36.287172633	-107.651267921
1,644.23	34.33	112.793	1,577.00	-128.87	306.66	1,923,871.199	2,776,771.029	36.287146422	-107.651191281
Fruitland									
1,700.00	36.00	112.793	1,622.59	-141.31	336.27	1,923,858.757	2,776,800.636	36.287112092	-107.651090900
1,800.00	39.00	112.793	1,701.91	-164.89	392.38	1,923,835.176	2,776,856.752	36.287047023	-107.650900643
1,838.04	40.14	112.793	1,731.24	-174.28	414.72	1,923,825.788	2,776,879.093	36.287021117	-107.650824895
Begin 40.14° tangent									
1,900.00	40.14	112.793	1,778.60	-189.75	451.55	1,923,810.314	2,776,915.916	36.286978419	-107.650700049
2,000.00	40.14	112.793	1,855.05	-214.72	510.98	1,923,785.339	2,776,975.349	36.286909503	-107.650498546
2,054.88	40.14	112.793	1,897.00	-228.43	543.60	1,923,771.633	2,777,007.966	36.286871683	-107.650387962
Pictured Cliffs									
2,100.00	40.14	112.793	1,931.49	-239.70	570.41	1,923,760.364	2,777,034.782	36.286840587	-107.650297042
2,185.69	40.14	112.793	1,997.00	-261.10	621.34	1,923,738.963	2,777,085.711	36.286781532	-107.650124372
Lewis									
2,200.00	40.14	112.793	2,007.94	-264.68	629.85	1,923,735.389	2,777,094.215	36.286771671	-107.650095539
2,300.00	40.14	112.793	2,084.38	-289.65	689.28	1,923,710.414	2,777,153.648	36.286702754	-107.649894037
2,400.00	40.14	112.793	2,160.83	-314.63	748.71	1,923,685.439	2,777,213.081	36.286633837	-107.649692534
2,500.00	40.14	112.793	2,237.28	-339.60	808.15	1,923,660.464	2,777,272.514	36.286564919	-107.649491032
2,597.75	40.14	112.793	2,312.00	-364.01	866.24	1,923,636.051	2,777,330.609	36.286497553	-107.649294068
Chacra									
2,600.00	40.14	112.793	2,313.72	-364.58	867.58	1,923,635.489	2,777,331.948	36.286496001	-107.649289531
2,700.00	40.14	112.793	2,390.17	-389.55	927.01	1,923,610.514	2,777,391.381	36.286427083	-107.649088029
2,800.00	40.14	112.793	2,466.61	-414.53	986.45	1,923,585.539	2,777,450.814	36.286358165	-107.648886529
2,900.00	40.14	112.793	2,543.06	-439.50	1,045.88	1,923,560.564	2,777,510.247	36.286289246	-107.648685028
3,000.00	40.14	112.793	2,619.50	-464.48	1,105.31	1,923,535.589	2,777,569.680	36.286220327	-107.648483528
3,100.00	40.14	112.793	2,695.95	-489.45	1,164.75	1,923,510.614	2,777,629.113	36.286151407	-107.648282028
3,200.00	40.14	112.793	2,772.40	-514.43	1,224.18	1,923,485.639	2,777,688.546	36.286082487	-107.648080530
3,300.00	40.14	112.793	2,848.84	-539.40	1,283.61	1,923,460.664	2,777,747.979	36.286013567	-107.647879030
3,400.00	40.14	112.793	2,925.29	-564.38	1,343.04	1,923,435.689	2,777,807.412	36.285944647	-107.647677532
3,500.00	40.14	112.793	3,001.73	-589.35	1,402.48	1,923,410.714	2,777,866.845	36.285875726	-107.647476033



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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
3,600.00	40.14	112.793	3,078.18	-614.33	1,461.91	1,923,385.739	2,777,926.278	36.285806805	-107.647274535
3,700.00	40.14	112.793	3,154.62	-639.30	1,521.34	1,923,360.764	2,777,985.711	36.285737883	-107.647073038
3,800.00	40.14	112.793	3,231.07	-664.28	1,580.78	1,923,335.789	2,778,045.144	36.285668961	-107.646871540
3,900.00	40.14	112.793	3,307.52	-689.25	1,640.21	1,923,310.814	2,778,104.577	36.285600039	-107.646670043
4,000.00	40.14	112.793	3,383.96	-714.23	1,699.64	1,923,285.839	2,778,164.010	36.285531117	-107.646468547
4,036.68	40.14	112.793	3,412.00	-723.39	1,721.44	1,923,276.678	2,778,185.809	36.285505837	-107.646394642
Cliff House									
4,043.22	40.14	112.793	3,417.00	-725.02	1,725.33	1,923,275.045	2,778,189.696	36.285501329	-107.646381463
Menefee									
4,100.00	40.14	112.793	3,460.41	-739.20	1,759.08	1,923,260.864	2,778,223.443	36.285462194	-107.646267050
4,200.00	40.14	112.793	3,536.85	-764.18	1,818.51	1,923,235.889	2,778,282.876	36.285393270	-107.646065555
4,239.44	40.14	112.793	3,567.00	-774.03	1,841.95	1,923,226.039	2,778,306.314	36.285366090	-107.645986092
9 5/8" Csg									
4,300.00	40.14	112.793	3,613.30	-789.15	1,877.94	1,923,210.914	2,778,342.309	36.285324347	-107.645864059
4,400.00	40.14	112.793	3,689.74	-814.13	1,937.38	1,923,185.939	2,778,401.742	36.285255423	-107.645662564
4,500.00	40.14	112.793	3,766.19	-839.10	1,996.81	1,923,160.964	2,778,461.175	36.285186499	-107.645461069
4,600.00	40.14	112.793	3,842.64	-864.08	2,056.24	1,923,135.989	2,778,520.608	36.285117574	-107.645259574
4,700.00	40.14	112.793	3,919.08	-889.05	2,115.68	1,923,111.014	2,778,580.041	36.285048649	-107.645058080
4,800.00	40.14	112.793	3,995.53	-914.03	2,175.11	1,923,086.038	2,778,639.474	36.284979724	-107.644856587
4,900.00	40.14	112.793	4,071.97	-939.00	2,234.54	1,923,061.063	2,778,698.907	36.284910798	-107.644655093
5,000.00	40.14	112.793	4,148.42	-963.98	2,293.98	1,923,036.088	2,778,758.340	36.284841872	-107.644453600
5,100.00	40.14	112.793	4,224.86	-988.95	2,353.41	1,923,011.113	2,778,817.773	36.284772946	-107.644252107
5,135.50	40.14	112.793	4,252.00	-997.82	2,374.51	1,923,002.248	2,778,838.870	36.284748479	-107.644180583
Point Lookout									
5,200.00	40.14	112.793	4,301.31	-1,013.93	2,412.84	1,922,986.138	2,778,877.206	36.284704019	-107.644050615
5,300.00	40.14	112.793	4,377.76	-1,038.90	2,472.27	1,922,961.163	2,778,936.639	36.284635092	-107.643849123
5,400.00	40.14	112.793	4,454.20	-1,063.88	2,531.71	1,922,936.188	2,778,996.072	36.284566165	-107.643647631
5,449.45	40.14	112.793	4,492.00	-1,076.23	2,561.10	1,922,923.839	2,779,025.459	36.284532084	-107.643548003
Mancos									
5,500.00	40.14	112.793	4,530.65	-1,088.85	2,591.14	1,922,911.213	2,779,055.506	36.284497237	-107.643446140
5,600.00	40.14	112.793	4,607.09	-1,113.83	2,650.57	1,922,886.238	2,779,114.939	36.284428309	-107.643244649
5,645.23	40.14	112.793	4,641.67	-1,125.12	2,677.45	1,922,874.943	2,779,141.818	36.284397136	-107.643153522
Begin 10°/100' build/turn									
5,650.00	39.72	112.443	4,645.33	-1,126.30	2,680.28	1,922,873.765	2,779,144.646	36.284393883	-107.643143934
5,700.00	35.38	108.358	4,684.96	-1,136.97	2,708.81	1,922,863.100	2,779,173.169	36.284364433	-107.643047226
5,750.00	31.21	103.318	4,726.75	-1,144.51	2,735.17	1,922,855.551	2,779,199.532	36.284343554	-107.642957827
5,800.00	27.29	96.950	4,770.38	-1,148.89	2,759.17	1,922,851.177	2,779,223.534	36.284331408	-107.642876417
5,850.00	23.75	88.744	4,815.51	-1,150.06	2,780.63	1,922,850.010	2,779,244.993	36.284328085	-107.642803616
5,900.00	20.77	78.107	4,861.80	-1,148.01	2,799.38	1,922,852.059	2,779,263.744	36.284333612	-107.642739977
5,905.56	20.48	76.752	4,867.00	-1,147.58	2,801.29	1,922,852.485	2,779,265.656	36.284334772	-107.642733488
MNCS_A									
5,950.00	18.63	64.652	4,908.89	-1,142.76	2,815.28	1,922,857.308	2,779,279.647	36.284347946	-107.642685985
5,990.10	17.73	52.102	4,947.00	-1,136.26	2,825.89	1,922,863.804	2,779,290.258	36.284365733	-107.642649938
MNCS_B									
6,000.00	17.64	48.856	4,956.44	-1,134.35	2,828.21	1,922,865.718	2,779,292.579	36.284370978	-107.642642051
6,050.00	18.00	32.507	5,004.07	-1,122.84	2,838.08	1,922,877.224	2,779,302.441	36.284402534	-107.642608509
6,100.00	19.62	17.786	5,051.42	-1,108.33	2,844.80	1,922,891.739	2,779,309.160	36.284442372	-107.642585615
6,116.58	20.39	13.497	5,067.00	-1,102.87	2,846.32	1,922,897.197	2,779,310.685	36.284457357	-107.642580407
MNCS_C									
6,150.00	22.23	5.811	5,098.14	-1,090.91	2,848.32	1,922,909.153	2,779,312.684	36.284490189	-107.642573542
6,200.00	25.54	356.510	5,143.87	-1,070.73	2,848.62	1,922,929.333	2,779,312.986	36.284545623	-107.642572382
6,209.03	26.19	355.074	5,152.00	-1,066.80	2,848.33	1,922,933.262	2,779,312.697	36.284556418	-107.642573339
MNCS_Cms									



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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	
6,250.00	29.29	349.332	5,188.26	-1,047.94	2,845.70	1,922,952.125	2,779,310.064	36.284608250	-107.642582145	
6,289.31	32.47	344.804	5,222.00	-1,028.30	2,841.15	1,922,971.768	2,779,305.516	36.284662233	-107.642597446	
MNCS_D										
6,300.00	33.36	343.709	5,230.97	-1,022.71	2,839.58	1,922,977.356	2,779,303.940	36.284677594	-107.642602757	
6,350.00	37.62	339.205	5,271.68	-995.23	2,830.30	1,923,004.834	2,779,294.660	36.284753128	-107.642634059	
6,389.21	41.07	336.249	5,302.00	-972.25	2,820.86	1,923,027.817	2,779,285.222	36.284816312	-107.642665930	
MNCS_E										
6,400.00	42.03	335.507	5,310.08	-965.72	2,817.93	1,923,034.350	2,779,282.296	36.284834276	-107.642675815	
6,450.00	46.53	332.397	5,345.87	-934.39	2,802.58	1,923,065.679	2,779,266.940	36.284920421	-107.642727706	
6,466.40	48.03	331.478	5,357.00	-923.75	2,796.91	1,923,076.312	2,779,261.271	36.284949661	-107.642746873	
MNCS_F										
6,500.00	51.11	329.723	5,378.79	-901.48	2,784.35	1,923,098.583	2,779,248.712	36.285010908	-107.642789337	
6,550.00	55.74	327.374	5,408.58	-867.25	2,763.38	1,923,132.811	2,779,227.748	36.285105047	-107.642860240	
6,595.61	60.00	325.449	5,432.83	-835.10	2,742.01	1,923,164.968	2,779,206.373	36.285193501	-107.642932549	
Begin 60.00° tangent										
6,600.00	60.00	325.449	5,435.02	-831.97	2,739.85	1,923,168.099	2,779,204.217	36.285202114	-107.642939844	
6,623.95	60.00	325.449	5,447.00	-814.88	2,728.09	1,923,185.183	2,779,192.454	36.285249106	-107.642979644	
MNCS_G										
6,655.61	60.00	325.449	5,462.83	-792.30	2,712.54	1,923,207.765	2,779,176.904	36.285311225	-107.643032255	
Begin 10°/100' build/turn										
6,700.00	64.17	323.726	5,483.61	-760.35	2,689.81	1,923,239.718	2,779,154.172	36.285399122	-107.643109173	
6,707.89	64.91	323.433	5,487.00	-754.61	2,685.58	1,923,245.450	2,779,149.942	36.285414894	-107.643123487	
MNCS_H										
6,750.00	68.89	321.924	5,503.52	-723.82	2,662.09	1,923,276.241	2,779,126.458	36.285499604	-107.643202964	
6,800.00	73.63	320.234	5,519.58	-687.00	2,632.35	1,923,313.061	2,779,096.714	36.285600910	-107.643303643	
6,850.00	78.38	318.625	5,531.67	-650.17	2,600.80	1,923,349.896	2,779,065.165	36.285702269	-107.643410444	
6,900.00	83.13	317.069	5,539.70	-613.60	2,567.69	1,923,386.468	2,779,032.053	36.285802912	-107.643522553	
6,922.82	85.31	316.371	5,542.00	-597.07	2,552.12	1,923,402.997	2,779,016.487	36.285848402	-107.643575259	
MNCS_I										
6,950.00	87.90	315.545	5,543.61	-577.57	2,533.26	1,923,422.497	2,778,997.629	36.285902070	-107.643639119	
6,967.96	89.61	315.000	5,544.00	-564.81	2,520.63	1,923,435.256	2,778,984.991	36.285937188	-107.643681915	
Begin 89.61° lateral										
7,000.00	89.61	315.000	5,544.22	-542.16	2,497.97	1,923,457.909	2,778,962.338	36.285999538	-107.643758627	
7,100.00	89.61	315.000	5,544.90	-471.45	2,427.27	1,923,528.618	2,778,891.630	36.286194161	-107.643998076	
7,200.00	89.61	315.000	5,545.58	-400.74	2,356.56	1,923,599.328	2,778,820.921	36.286388783	-107.644237527	
7,300.00	89.61	315.000	5,546.26	-330.03	2,285.85	1,923,670.037	2,778,750.213	36.286583404	-107.644476980	
7,400.00	89.61	315.000	5,546.94	-259.32	2,215.14	1,923,740.747	2,778,679.505	36.286778025	-107.644716433	
7,500.00	89.61	315.000	5,547.62	-188.61	2,144.43	1,923,811.456	2,778,608.797	36.286972646	-107.644955888	
7,600.00	89.61	315.000	5,548.30	-117.90	2,073.72	1,923,882.166	2,778,538.088	36.287167266	-107.645195343	
7,700.00	89.61	315.000	5,548.98	-47.19	2,003.01	1,923,952.875	2,778,467.380	36.287361886	-107.645434800	
7,800.00	89.61	315.000	5,549.66	23.52	1,932.31	1,924,023.585	2,778,396.672	36.287556505	-107.645674258	
7,900.00	89.61	315.000	5,550.34	94.23	1,861.60	1,924,094.294	2,778,325.964	36.287751124	-107.645913718	
8,000.00	89.61	315.000	5,551.02	164.94	1,790.89	1,924,165.004	2,778,255.255	36.287945742	-107.646153178	
8,100.00	89.61	315.000	5,551.70	235.65	1,720.18	1,924,235.713	2,778,184.547	36.288140360	-107.646392640	
8,200.00	89.61	315.000	5,552.38	306.36	1,649.47	1,924,306.423	2,778,113.839	36.288334977	-107.646632103	
8,300.00	89.61	315.000	5,553.06	377.07	1,578.76	1,924,377.132	2,778,043.130	36.288529594	-107.646871567	
8,400.00	89.61	315.000	5,553.74	447.78	1,508.06	1,924,447.842	2,777,972.422	36.288724210	-107.647111032	
8,500.00	89.61	315.000	5,554.42	518.49	1,437.35	1,924,518.552	2,777,901.714	36.288918826	-107.647350499	
8,600.00	89.61	315.000	5,555.10	589.20	1,366.64	1,924,589.261	2,777,831.006	36.289113442	-107.647589966	
8,700.00	89.61	315.000	5,555.78	659.91	1,295.93	1,924,659.971	2,777,760.297	36.289308056	-107.647829435	
8,800.00	89.61	315.000	5,556.46	730.62	1,225.22	1,924,730.680	2,777,689.589	36.289502671	-107.648068905	
8,900.00	89.61	315.000	5,557.14	801.33	1,154.51	1,924,801.390	2,777,618.881	36.289697285	-107.648308375	
9,000.00	89.61	315.000	5,557.82	872.04	1,083.81	1,924,872.099	2,777,548.172	36.289891898	-107.648547848	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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	
9,100.00	89.61	315.000	5,558.50	942.75	1,013.10	1,924,942.809	2,777,477.464	36.290086511	-107.648787321	
9,200.00	89.61	315.000	5,559.18	1,013.46	942.39	1,925,013.518	2,777,406.756	36.290281124	-107.649026796	
9,300.00	89.61	315.000	5,559.86	1,084.17	871.68	1,925,084.228	2,777,336.048	36.290475736	-107.649266272	
9,400.00	89.61	315.000	5,560.54	1,154.88	800.97	1,925,154.937	2,777,265.339	36.290670347	-107.649505749	
9,500.00	89.61	315.000	5,561.22	1,225.59	730.26	1,925,225.647	2,777,194.631	36.290864958	-107.649745227	
9,600.00	89.61	315.000	5,561.90	1,296.30	659.55	1,925,296.356	2,777,123.923	36.291059569	-107.649984707	
9,700.00	89.61	315.000	5,562.58	1,367.01	588.85	1,925,367.066	2,777,053.214	36.291254179	-107.650224188	
9,800.00	89.61	315.000	5,563.25	1,437.71	518.14	1,925,437.775	2,776,982.506	36.291448788	-107.650463670	
9,900.00	89.61	315.000	5,563.93	1,508.42	447.43	1,925,508.485	2,776,911.798	36.291643397	-107.650703153	
10,000.00	89.61	315.000	5,564.61	1,579.13	376.72	1,925,579.194	2,776,841.090	36.291838006	-107.650942637	
10,100.00	89.61	315.000	5,565.29	1,649.84	306.01	1,925,649.904	2,776,770.381	36.292032614	-107.651182123	
10,200.00	89.61	315.000	5,565.97	1,720.55	235.30	1,925,720.613	2,776,699.673	36.292227222	-107.651421609	
10,300.00	89.61	315.000	5,566.65	1,791.26	164.60	1,925,791.323	2,776,628.965	36.292421829	-107.651661097	
10,400.00	89.61	315.000	5,567.33	1,861.97	93.89	1,925,862.032	2,776,558.257	36.292616436	-107.651900586	
10,500.00	89.61	315.000	5,568.01	1,932.68	23.18	1,925,932.742	2,776,487.548	36.292811042	-107.652140076	
10,600.00	89.61	315.000	5,568.69	2,003.39	-47.53	1,926,003.451	2,776,416.840	36.293005647	-107.652379568	
10,700.00	89.61	315.000	5,569.37	2,074.10	-118.24	1,926,074.161	2,776,346.132	36.293200253	-107.652619060	
10,800.00	89.61	315.000	5,570.05	2,144.81	-188.95	1,926,144.870	2,776,275.423	36.293394857	-107.652858554	
10,900.00	89.61	315.000	5,570.73	2,215.52	-259.66	1,926,215.580	2,776,204.715	36.293589462	-107.653098049	
11,000.00	89.61	315.000	5,571.41	2,286.23	-330.36	1,926,286.289	2,776,134.007	36.293784065	-107.653337545	
11,100.00	89.61	315.000	5,572.09	2,356.94	-401.07	1,926,356.999	2,776,063.299	36.293978669	-107.653577043	
11,200.00	89.61	315.000	5,572.77	2,427.65	-471.78	1,926,427.710	2,775,992.590	36.294173272	-107.653816541	
11,300.00	89.61	315.000	5,573.45	2,498.36	-542.49	1,926,498.419	2,775,921.882	36.294367874	-107.654056041	
11,400.00	89.61	315.000	5,574.13	2,569.07	-613.20	1,926,569.129	2,775,851.174	36.294562476	-107.654295542	
11,500.00	89.61	315.000	5,574.81	2,639.78	-683.91	1,926,639.838	2,775,780.465	36.294757077	-107.654535044	
11,600.00	89.61	315.000	5,575.49	2,710.49	-754.61	1,926,710.548	2,775,709.757	36.294951678	-107.654774547	
11,700.00	89.61	315.000	5,576.17	2,781.20	-825.32	1,926,781.257	2,775,639.049	36.295146278	-107.655014052	
11,800.00	89.61	315.000	5,576.85	2,851.91	-896.03	1,926,851.967	2,775,568.341	36.295340877	-107.655253558	
11,900.00	89.61	315.000	5,577.53	2,922.62	-966.74	1,926,922.676	2,775,497.632	36.295535477	-107.655493065	
12,000.00	89.61	315.000	5,578.21	2,993.33	-1,037.45	1,926,993.386	2,775,426.924	36.295730076	-107.655732573	
12,100.00	89.61	315.000	5,578.89	3,064.04	-1,108.16	1,927,064.095	2,775,356.216	36.295924674	-107.655972082	
12,200.00	89.61	315.000	5,579.57	3,134.75	-1,178.86	1,927,134.805	2,775,285.507	36.296119272	-107.656211592	
12,300.00	89.61	315.000	5,580.25	3,205.46	-1,249.57	1,927,205.514	2,775,214.799	36.296313870	-107.656451104	
12,400.00	89.61	315.000	5,580.93	3,276.17	-1,320.28	1,927,276.224	2,775,144.091	36.296508467	-107.656690617	
12,500.00	89.61	315.000	5,581.61	3,346.88	-1,390.99	1,927,346.933	2,775,073.383	36.296703063	-107.656930131	
12,600.00	89.61	315.000	5,582.29	3,417.59	-1,461.70	1,927,417.643	2,775,002.674	36.296897659	-107.657169646	
12,700.00	89.61	315.000	5,582.97	3,488.30	-1,532.41	1,927,488.352	2,774,931.966	36.297092255	-107.657409163	
12,800.00	89.61	315.000	5,583.65	3,559.00	-1,603.12	1,927,559.062	2,774,861.258	36.297286850	-107.657648680	
12,900.00	89.61	315.000	5,584.33	3,629.71	-1,673.82	1,927,629.771	2,774,790.550	36.297481444	-107.657888199	
13,000.00	89.61	315.000	5,585.01	3,700.42	-1,744.53	1,927,700.481	2,774,719.841	36.297676039	-107.658127719	
13,100.00	89.61	315.000	5,585.69	3,771.13	-1,815.24	1,927,771.190	2,774,649.133	36.297870632	-107.658367240	
13,200.00	89.61	315.000	5,586.37	3,841.84	-1,885.95	1,927,841.900	2,774,578.425	36.298065225	-107.658606762	
13,300.00	89.61	315.000	5,587.05	3,912.55	-1,956.66	1,927,912.609	2,774,507.716	36.298259818	-107.658846286	
13,400.00	89.61	315.000	5,587.73	3,983.26	-2,027.37	1,927,983.319	2,774,437.008	36.298454410	-107.659085811	
13,500.00	89.61	315.000	5,588.41	4,053.97	-2,098.07	1,928,054.028	2,774,366.300	36.298649002	-107.659325337	
13,600.00	89.61	315.000	5,589.09	4,124.68	-2,168.78	1,928,124.738	2,774,295.592	36.298843593	-107.659564864	
13,700.00	89.61	315.000	5,589.77	4,195.39	-2,239.49	1,928,195.447	2,774,224.883	36.299038184	-107.659804392	
13,800.00	89.61	315.000	5,590.45	4,266.10	-2,310.20	1,928,266.157	2,774,154.175	36.299232774	-107.660043922	
13,900.00	89.61	315.000	5,591.13	4,336.81	-2,380.91	1,928,336.866	2,774,083.467	36.299427364	-107.660283452	
14,000.00	89.61	315.000	5,591.81	4,407.52	-2,451.62	1,928,407.576	2,774,012.758	36.299621953	-107.660522984	
14,100.00	89.61	315.000	5,592.49	4,478.23	-2,522.32	1,928,478.286	2,773,942.050	36.299816542	-107.660762517	
14,200.00	89.61	315.000	5,593.17	4,548.94	-2,593.03	1,928,548.995	2,773,871.342	36.300011130	-107.661002051	
14,300.00	89.61	315.000	5,593.85	4,619.65	-2,663.74	1,928,619.705	2,773,800.634	36.300205718	-107.661241587	
14,400.00	89.61	315.000	5,594.53	4,690.36	-2,734.45	1,928,690.414	2,773,729.925	36.300400306	-107.661481124	
14,500.00	89.61	315.000	5,595.21	4,761.07	-2,805.16	1,928,761.124	2,773,659.217	36.300594892	-107.661720661	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	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
14,600.00	89.61	315.000	5,595.89	4,831.78	-2,875.87	1,928,831.833	2,773,588.509	36.300789479	-107.661960200
14,700.00	89.61	315.000	5,596.57	4,902.49	-2,946.58	1,928,902.543	2,773,517.800	36.300984065	-107.662199741
14,800.00	89.61	315.000	5,597.25	4,973.20	-3,017.28	1,928,973.252	2,773,447.092	36.301178650	-107.662439282
14,900.00	89.61	315.000	5,597.93	5,043.91	-3,087.99	1,929,043.962	2,773,376.384	36.301373235	-107.662678825
15,000.00	89.61	315.000	5,598.61	5,114.62	-3,158.70	1,929,114.671	2,773,305.676	36.301567820	-107.662918368
15,100.00	89.61	315.000	5,599.29	5,185.33	-3,229.41	1,929,185.381	2,773,234.967	36.301762404	-107.663157913
15,200.00	89.61	315.000	5,599.97	5,256.04	-3,300.12	1,929,256.090	2,773,164.259	36.301956987	-107.663397460
15,300.00	89.61	315.000	5,600.65	5,326.75	-3,370.83	1,929,326.800	2,773,093.551	36.302151570	-107.663637007
15,400.00	89.61	315.000	5,601.33	5,397.46	-3,441.53	1,929,397.509	2,773,022.843	36.302346153	-107.663876555
15,500.00	89.61	315.000	5,602.01	5,468.17	-3,512.24	1,929,468.219	2,772,952.134	36.302540735	-107.664116105
15,600.00	89.61	315.000	5,602.69	5,538.88	-3,582.95	1,929,538.928	2,772,881.426	36.302735316	-107.664355656
15,700.00	89.61	315.000	5,603.37	5,609.59	-3,653.66	1,929,609.638	2,772,810.718	36.302929897	-107.664595208
15,800.00	89.61	315.000	5,604.05	5,680.29	-3,724.37	1,929,680.347	2,772,740.009	36.303124478	-107.664834761
15,900.00	89.61	315.000	5,604.73	5,751.00	-3,795.08	1,929,751.057	2,772,669.301	36.303319058	-107.665074316
16,000.00	89.61	315.000	5,605.41	5,821.71	-3,865.78	1,929,821.766	2,772,598.593	36.303513638	-107.665313872
16,100.00	89.61	315.000	5,606.09	5,892.42	-3,936.49	1,929,892.476	2,772,527.885	36.303708217	-107.665553429
16,200.00	89.61	315.000	5,606.77	5,963.13	-4,007.20	1,929,963.185	2,772,457.176	36.303902795	-107.665792987
16,300.00	89.61	315.000	5,607.45	6,033.84	-4,077.91	1,930,033.895	2,772,386.468	36.304097374	-107.666032546
16,400.00	89.61	315.000	5,608.13	6,104.55	-4,148.62	1,930,104.604	2,772,315.760	36.304291951	-107.666272106
16,500.00	89.61	315.000	5,608.81	6,175.26	-4,219.33	1,930,175.314	2,772,245.051	36.304486528	-107.666511668
16,600.00	89.61	315.000	5,609.49	6,245.97	-4,290.04	1,930,246.023	2,772,174.343	36.304681105	-107.666751231
16,700.00	89.61	315.000	5,610.17	6,316.68	-4,360.74	1,930,316.733	2,772,103.635	36.304875681	-107.666990795
16,800.00	89.61	315.000	5,610.85	6,387.39	-4,431.45	1,930,387.443	2,772,032.927	36.305070257	-107.667230360
16,900.00	89.61	315.000	5,611.53	6,458.10	-4,502.16	1,930,458.152	2,771,962.218	36.305264833	-107.667469926
17,000.00	89.61	315.000	5,612.21	6,528.81	-4,572.87	1,930,528.862	2,771,891.510	36.305459407	-107.667709494
17,100.00	89.61	315.000	5,612.89	6,599.52	-4,643.58	1,930,599.571	2,771,820.802	36.305653982	-107.667949063
17,200.00	89.61	315.000	5,613.57	6,670.23	-4,714.29	1,930,670.281	2,771,750.093	36.305848555	-107.668188633
17,300.00	89.61	315.000	5,614.25	6,740.94	-4,784.99	1,930,740.990	2,771,679.385	36.306043129	-107.668428204
17,400.00	89.61	315.000	5,614.93	6,811.65	-4,855.70	1,930,811.700	2,771,608.677	36.306237702	-107.668667776
17,410.95	89.61	315.000	5,615.00	6,819.39	-4,863.44	1,930,819.440	2,771,600.937	36.306259000	-107.668694000
PBHL/TD @ 17410.95 MD 5615.00 TVD									

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Ridge 130H FTP 2390 F	0.00	0.000	5,544.00	-564.88	2,520.60	1,923,435.188	2,778,984.966	36.285937000	-107.643682000	
- hit/miss target										
- plan misses target center by 0.07ft at 6967.93ft MD (5544.00 TVD, -564.83 N, 2520.65 E)										
- Point										
Ridge 130H LTP 237 FN	0.00	0.000	5,615.00	6,819.39	-4,863.44	1,930,819.440	2,771,600.937	36.306259000	-107.668694000	
- plan hits target center										
- Point										

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	
4,239.44	3,567.00	9 5/8" Csg	9-5/8	12-1/4	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6832+25 @ 6857.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6832+25 @ 6857.00ft
Site:	Ridge Unit (130, 135, 136 & 137)	North Reference:	Grid
Well:	Ridge Unit No. 130H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,253.39	1,234.00	Ojo Alamo				
1,388.73	1,357.00	Kirtland				
1,644.23	1,577.00	Fruitland				
2,054.88	1,897.00	Pictured Cliffs				
2,185.69	1,997.00	Lewis				
2,597.75	2,312.00	Chacra				
4,036.68	3,412.00	Cliff House				
4,043.22	3,417.00	Menefee				
5,135.50	4,252.00	Point Lookout				
5,449.45	4,492.00	Mancos				
5,905.56	4,867.00	MNCS_A				
5,990.10	4,947.00	MNCS_B				
6,116.58	5,067.00	MNCS_C				
6,209.03	5,152.00	MNCS_Cms				
6,289.31	5,222.00	MNCS_D				
6,389.21	5,302.00	MNCS_E				
6,466.40	5,357.00	MNCS_F				
6,623.95	5,447.00	MNCS_G				
6,707.89	5,487.00	MNCS_H				
6,922.82	5,542.00	MNCS_I				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
500.00	500.00	0.00	0.00	KOP Begin 3°/100' build	
1,838.04	1,731.24	-174.28	414.72	Begin 40.14° tangent	
5,645.23	4,641.67	-1,125.12	2,677.45	Begin 10°/100' build/turn	
6,595.61	5,432.83	-835.10	2,742.01	Begin 60.00° tangent	
6,655.61	5,462.83	-792.30	2,712.54	Begin 10°/100' build/turn	
6,967.96	5,544.00	-564.81	2,520.63	Begin 89.61° lateral	
17,410.95	5,615.00	6,819.39	-4,863.44	PBHL/TD @ 17410.95 MD 5615.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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 1,941.09ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	8/16/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,410.95	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						
NW Lybrook (138, 139, 140 & 141)						
Lybrook 2408 138H - Original Hole - rev0	6,340.67	6,283.29	485.60	411.14	6.521	CC, ES
Lybrook 2408 138H - Original Hole - rev0	6,500.00	6,330.67	522.92	438.10	6.165	SF
NW Lybrook Unit 139H - Original Hole - rev0	6,272.75	6,019.37	575.36	498.30	7.466	CC, ES
NW Lybrook Unit 139H - Original Hole - rev0	6,300.00	6,037.72	576.29	498.97	7.453	SF
Ridge Unit (124, 127, 128 & 129)						
Ridge Unit No. 129H - Original Hole - rev1	16,222.14	17,001.07	1,156.44	651.86	2.292	CC, ES, SF
Ridge Unit (130, 135, 136 & 137)						
Ridge Unit No. 135H - Original Hole - rev1	500.00	500.00	20.09	16.95	6.405	CC, ES
Ridge Unit No. 135H - Original Hole - rev1	17,410.95	15,553.12	1,156.79	678.19	2.417	SF
Ridge Unit No. 136H - Original Hole - rev1	500.00	500.00	40.06	36.92	12.770	CC, ES
Ridge Unit No. 136H - Original Hole - rev1	700.00	699.63	48.28	43.74	10.616	SF
Ridge Unit No. 137H - Original Hole - rev1	500.00	500.00	60.14	57.01	19.175	CC, ES
Ridge Unit No. 137H - Original Hole - rev1	700.00	699.63	68.20	63.65	14.995	SF

Offset Design:	NW Lybrook (138, 139, 140 & 141) - Lybrook 2408 138H - 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	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Minimum	Separation	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)	Separation Factor	
4,400.00	3,689.74	4,284.65	4,037.57	44.91	25.49	19.90	-1,894.95	3,428.72	1,871.64	1,829.98	41.67	44.919
4,500.00	3,766.19	4,349.87	4,097.89	46.29	25.95	19.51	-1,870.51	3,432.97	1,796.29	1,753.79	42.50	42.262
4,600.00	3,842.64	4,415.08	4,158.21	47.66	26.40	19.09	-1,846.08	3,437.21	1,720.97	1,677.64	43.34	39.713
4,700.00	3,919.08	4,480.30	4,218.52	49.03	26.86	18.62	-1,821.65	3,441.46	1,645.70	1,601.55	44.16	37.268
4,800.00	3,995.53	4,545.51	4,278.84	50.40	27.32	18.12	-1,797.22	3,445.70	1,570.49	1,525.51	44.97	34.921
4,900.00	4,071.97	4,610.73	4,339.16	51.78	27.77	17.56	-1,772.79	3,449.95	1,495.33	1,449.55	45.78	32.665
5,000.00	4,148.42	4,675.95	4,399.48	53.15	28.23	16.95	-1,748.35	3,454.19	1,420.24	1,373.66	46.58	30.493
5,100.00	4,224.86	4,741.16	4,459.79	54.52	28.69	16.27	-1,723.92	3,458.44	1,345.23	1,297.86	47.37	28.401
5,200.00	4,301.31	4,806.38	4,520.11	55.90	29.14	15.52	-1,699.49	3,462.68	1,270.31	1,222.17	48.14	26.386
5,300.00	4,377.76	4,871.59	4,580.43	57.27	29.60	14.67	-1,675.06	3,466.93	1,195.51	1,146.60	48.91	24.442
5,400.00	4,454.20	4,936.81	4,640.74	58.64	30.05	13.71	-1,650.62	3,471.18	1,120.85	1,071.17	49.67	22.564
5,500.00	4,530.65	5,002.02	4,701.06	60.02	30.51	12.63	-1,626.19	3,475.42	1,046.35	995.91	50.43	20.748
5,600.00	4,607.09	5,067.24	4,761.38	61.39	30.97	11.38	-1,601.76	3,479.67	972.05	920.86	51.19	18.990

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: NW Lybrook (138, 139, 140 & 141) - Lybrook 2408 138H - Original Hole - rev0											Offset Site Error:	0.00 ft
Survey Program: 0-MWD											Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
5,700.00	4,684.96	6,409.25	5,557.88	62.72	35.65	150.09	-1,397.92	2,705.30	896.73	856.56	40.17	22.322
5,800.00	4,770.38	6,358.53	5,558.09	63.77	35.40	143.15	-1,397.90	2,756.01	811.85	771.03	40.82	19.890
5,900.00	4,861.80	6,317.94	5,558.26	64.50	35.24	140.16	-1,397.88	2,796.61	725.84	683.27	42.57	17.050
6,000.00	4,956.44	6,288.70	5,558.39	64.92	35.14	150.27	-1,397.87	2,825.85	643.40	597.38	46.02	13.981
6,100.00	5,051.42	6,271.70	5,558.46	65.09	35.08	168.50	-1,397.86	2,842.85	570.90	519.02	51.88	11.003
6,200.00	5,143.87	6,267.47	5,558.48	65.08	35.07	-177.37	-1,397.86	2,847.08	516.43	455.96	60.47	8.541
6,300.00	5,230.97	6,276.12	5,558.44	64.97	35.10	-167.31	-1,397.86	2,838.42	488.24	417.67	70.57	6.919
6,340.67	5,264.25	6,283.29	5,558.41	64.90	35.12	-163.61	-1,397.86	2,831.26	485.60	411.14	74.46	6.521 CC, ES
6,400.00	5,310.08	6,297.41	5,558.35	64.81	35.17	-158.13	-1,397.87	2,817.14	491.09	411.74	79.35	6.189
6,500.00	5,378.79	6,330.67	5,558.21	64.67	35.29	-147.73	-1,397.88	2,783.88	522.92	438.10	84.83	6.165 SF
6,600.00	5,435.02	6,374.90	5,558.02	64.59	35.48	-135.48	-1,397.90	2,739.65	576.15	488.74	87.41	6.591
6,700.00	5,483.61	6,424.70	5,557.81	64.56	35.73	-126.32	-1,397.93	2,689.84	640.32	551.75	88.57	7.229
6,800.00	5,519.58	6,481.98	5,557.57	64.62	36.07	-111.18	-1,397.95	2,632.57	711.32	622.00	89.32	7.964
6,900.00	5,539.70	6,546.52	5,557.30	64.77	36.54	-97.60	-1,397.98	2,568.03	784.39	694.16	90.23	8.693
7,000.00	5,544.22	6,616.18	5,557.00	65.00	37.14	-90.18	-1,398.01	2,498.37	855.86	764.42	91.44	9.360
7,100.00	5,544.90	6,686.86	5,556.70	65.31	37.86	-90.11	-1,398.04	2,427.69	926.60	833.79	92.81	9.984
7,200.00	5,545.58	6,757.53	5,556.41	65.68	38.69	-90.05	-1,398.08	2,357.02	997.35	903.06	94.28	10.578
7,300.00	5,546.26	6,828.20	5,556.11	66.13	39.63	-90.00	-1,398.11	2,286.35	1,068.09	972.26	95.83	11.145
7,400.00	5,546.94	6,898.88	5,555.81	66.64	40.65	-89.95	-1,398.14	2,215.68	1,138.84	1,041.38	97.46	11.685
7,500.00	5,547.62	6,969.55	5,555.51	67.23	41.76	-89.91	-1,398.17	2,145.00	1,209.58	1,110.41	99.18	12.196
7,600.00	5,548.30	7,040.22	5,555.21	67.88	42.93	-89.88	-1,398.20	2,074.33	1,280.33	1,179.37	100.96	12.682
7,700.00	5,548.98	7,110.90	5,554.91	68.60	44.17	-89.85	-1,398.23	2,003.66	1,351.08	1,248.27	102.80	13.142
7,800.00	5,549.66	7,181.57	5,554.61	69.40	45.46	-89.82	-1,398.27	1,932.99	1,421.82	1,317.11	104.72	13.578
7,900.00	5,550.34	7,252.24	5,554.31	70.25	46.80	-89.79	-1,398.30	1,862.31	1,492.57	1,385.87	106.70	13.989
8,000.00	5,551.02	7,322.92	5,554.01	71.18	48.18	-89.77	-1,398.33	1,791.64	1,563.32	1,454.59	108.73	14.379
8,100.00	5,551.70	7,393.59	5,553.72	72.16	49.59	-89.75	-1,398.36	1,720.97	1,634.06	1,523.25	110.81	14.747
8,200.00	5,552.38	7,464.26	5,553.42	73.21	51.04	-89.73	-1,398.39	1,650.30	1,704.81	1,591.86	112.95	15.093
8,300.00	5,553.06	7,534.93	5,553.12	74.32	52.51	-89.71	-1,398.42	1,579.62	1,775.56	1,660.42	115.14	15.421
8,400.00	5,553.74	7,605.61	5,552.82	75.48	54.00	-89.69	-1,398.46	1,508.95	1,846.30	1,728.93	117.37	15.730
8,500.00	5,554.42	7,676.28	5,552.52	76.70	55.52	-89.68	-1,398.49	1,438.28	1,917.05	1,797.40	119.66	16.021

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: NW Lybrook (138, 139, 140 & 141) - NW Lybrook Unit 139H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
3,900.00	3,307.52	4,274.78	4,036.64	38.06	25.40	53.78	-2,088.07	2,642.47	1,863.11	1,825.73	37.38	49.842	
4,000.00	3,383.96	4,325.96	4,083.86	39.43	25.77	55.19	-2,070.65	2,633.14	1,783.36	1,744.67	38.70	46.086	
4,100.00	3,460.41	4,377.15	4,131.08	40.80	26.15	56.69	-2,053.23	2,623.80	1,704.21	1,664.12	40.09	42.506	
4,200.00	3,536.85	4,428.33	4,178.29	42.17	26.52	58.29	-2,035.81	2,614.47	1,625.75	1,584.16	41.58	39.098	
4,300.00	3,613.30	4,479.52	4,225.51	43.54	26.90	60.00	-2,018.39	2,605.14	1,548.07	1,504.89	43.18	35.854	
4,400.00	3,689.74	4,530.70	4,272.73	44.91	27.27	61.83	-2,000.97	2,595.81	1,471.31	1,426.41	44.90	32.772	
4,500.00	3,766.19	4,581.89	4,319.94	46.29	27.65	63.78	-1,983.55	2,586.48	1,395.61	1,348.86	46.76	29.849	
4,600.00	3,842.64	4,633.07	4,367.16	47.66	28.02	65.85	-1,966.13	2,577.15	1,321.17	1,272.39	48.78	27.084	
4,700.00	3,919.08	4,684.26	4,414.38	49.03	28.40	68.07	-1,948.72	2,567.82	1,248.20	1,197.21	50.99	24.477	
4,800.00	3,995.53	4,735.44	4,461.59	50.40	28.77	70.42	-1,931.30	2,558.49	1,176.98	1,123.55	53.43	22.028	
4,900.00	4,071.97	4,786.63	4,508.81	51.78	29.15	72.93	-1,913.88	2,549.16	1,107.84	1,051.72	56.12	19.741	
5,000.00	4,148.42	4,837.81	4,556.02	53.15	29.52	75.60	-1,896.46	2,539.83	1,041.20	982.11	59.10	17.619	
5,100.00	4,224.86	4,889.00	4,603.24	54.52	29.90	78.42	-1,879.04	2,530.50	977.58	915.18	62.40	15.667	
5,200.00	4,301.31	4,940.18	4,650.46	55.90	30.27	81.39	-1,861.62	2,521.17	917.59	851.55	66.04	13.894	
5,300.00	4,377.76	4,991.37	4,697.67	57.27	30.65	84.52	-1,844.20	2,511.84	862.00	791.96	70.04	12.308	
5,400.00	4,454.20	5,042.55	4,744.89	58.64	31.02	87.79	-1,826.78	2,502.51	811.71	737.36	74.35	10.917	
5,500.00	4,530.65	5,093.74	4,792.11	60.02	31.40	91.19	-1,809.36	2,493.18	767.77	688.88	78.89	9.732	
5,600.00	4,607.09	5,144.92	4,839.32	61.39	31.77	94.70	-1,791.94	2,483.85	731.31	647.85	83.46	8.762	
5,700.00	4,684.96	5,198.27	4,888.53	62.72	32.17	100.63	-1,773.78	2,474.12	704.39	616.67	87.72	8.030	
5,800.00	4,770.38	5,249.45	4,937.74	63.99	32.58	106.99	-1,755.81	2,464.40	677.92	588.55	92.59	7.453	
5,900.00	4,861.80	5,298.63	4,986.96	65.20	33.00	113.83	-1,738.03	2,454.68	649.53	559.98	98.55	7.000	
6,000.00	4,958.44	5,346.81	5,036.24	66.36	33.43	121.13	-1,720.36	2,444.96	620.91	531.55	105.11	6.553	
6,100.00	5,051.42	5,393.99	5,085.46	67.48	33.87	128.89	-1,702.79	2,435.24	591.74	503.16	112.22	6.107	
6,200.00	5,143.87	5,441.17	5,134.64	68.56	34.31	137.11	-1,685.32	2,425.52	562.07	474.81	119.84	5.662	
6,272.75	5,207.93	5,490.35	5,184.82	69.59	34.75	145.80	-1,667.95	2,415.80	532.00	446.36	127.93	5.217	
6,300.00	5,230.97	5,520.01	5,210.00	70.67	35.19	154.99	-1,650.68	2,406.08	501.91	417.81	136.44	4.772	
6,400.00	5,310.08	5,567.19	5,257.18	71.70	35.63	164.68	-1,633.51	2,396.36	471.82	388.76	145.44	4.327	
6,500.00	5,378.79	5,614.37	5,304.36	72.69	36.07	174.87	-1,616.44	2,386.64	441.73	359.71	154.88	3.882	
6,600.00	5,435.02	5,661.55	5,351.54	73.64	36.51	185.56	-1,599.37	2,376.92	411.64	330.66	164.77	3.437	
6,700.00	5,483.61	5,708.73	5,398.72	74.56	36.95	196.75	-1,582.30	2,367.20	381.55	301.61	175.00	2.992	
6,800.00	5,519.58	5,755.91	5,445.89	75.44	37.39	208.44	-1,565.23	2,357.48	351.46	272.56	185.64	2.547	
6,900.00	5,539.70	5,800.00	5,493.07	76.28	37.83	220.63	-1,548.16	2,347.76	321.37	243.51	196.64	2.102	
7,000.00	5,544.22	5,846.18	5,539.25	77.09	38.27	233.32	-1,531.09	2,338.04	291.28	214.46	208.00	1.657	
7,100.00	5,544.90	5,891.36	5,585.43	77.96	38.71	246.51	-1,514.02	2,328.32	261.19	185.41	219.76	1.212	
7,200.00	5,545.58	5,936.54	5,630.61	78.79	39.15	260.10	-1,496.95	2,318.60	231.10	156.36	231.00	0.767	
7,300.00	5,546.26	5,981.72	5,675.79	79.58	39.59	274.19	-1,479.88	2,308.88	191.01	127.31	242.00	0.322	
7,400.00	5,546.94	6,026.90	5,720.97	80.33	40.03	288.78	-1,462.81	2,299.16	150.92	98.82	252.00	-0.133	
7,500.00	5,547.62	6,072.08	5,766.15	81.05	40.47	303.87	-1,445.74	2,289.44	110.83	70.33	262.00	-0.688	
7,600.00	5,548.30	6,117.26	5,811.33	81.74	40.91	319.46	-1,428.67	2,279.72	70.74	42.84	272.00	-1.243	
7,700.00	5,548.98	6,162.44	5,856.51	82.39	41.35	335.55	-1,411.60	2,269.99	30.65	15.35	282.00	-1.798	
7,800.00	5,549.66	6,207.62	5,901.69	83.01	41.79	352.14	-1,394.53	2,260.27	-9.44	-12.14	292.00	-2.353	
7,900.00	5,550.34	6,252.80	5,946.87	83.60	42.23	369.23	-1,377.46	2,250.55	-49.53	-62.63	302.00	-2.908	

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (124, 127, 128 & 129) - Ridge Unit No. 129H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum	Separation	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)	Separation (ft)		
5,300.00	4,377.76	7,438.91	5,656.09	57.27	69.90	-102.77	34.96	3,556.15	1,933.32	1,839.70	93.62	20.650	
5,400.00	4,454.20	7,379.68	5,655.74	58.64	68.86	-101.31	-6.92	3,598.03	1,867.49	1,772.43	95.06	19.646	
5,500.00	4,530.65	7,320.45	5,655.39	60.02	67.84	-99.78	-48.80	3,639.91	1,802.84	1,706.29	96.56	18.671	
5,600.00	4,607.09	7,261.22	5,655.03	61.39	66.82	-98.19	-90.68	3,681.79	1,739.53	1,641.41	98.12	17.728	
5,700.00	4,684.96	7,204.15	5,654.69	62.72	65.86	-89.23	-131.04	3,722.15	1,676.58	1,576.81	99.77	16.804	
5,800.00	4,770.38	7,160.62	5,654.43	63.77	65.13	-69.70	-161.82	3,752.93	1,609.60	1,507.99	101.61	15.841	
5,900.00	4,861.80	7,133.35	5,654.27	64.50	64.68	-42.02	-181.10	3,772.21	1,540.58	1,436.98	103.60	14.871	
6,000.00	4,956.44	7,123.18	5,654.21	64.92	64.51	-4.53	-188.29	3,779.40	1,472.40	1,366.71	105.69	13.931	
6,100.00	5,051.42	7,130.42	5,654.25	65.09	64.63	33.06	-183.17	3,774.28	1,407.77	1,299.92	107.85	13.053	
6,200.00	5,143.87	7,154.85	5,654.40	65.08	65.03	58.72	-165.90	3,757.01	1,349.04	1,239.00	110.04	12.260	
6,300.00	5,230.97	7,195.72	5,654.64	64.97	65.71	73.85	-137.00	3,728.11	1,297.94	1,185.73	112.21	11.567	
6,400.00	5,310.08	7,251.80	5,654.98	64.81	66.66	82.63	-97.34	3,688.46	1,255.53	1,141.18	114.34	10.980	
6,500.00	5,378.79	7,321.37	5,655.39	64.67	67.85	87.67	-48.15	3,639.26	1,222.09	1,105.65	116.44	10.495	
6,600.00	5,435.02	7,402.33	5,655.87	64.59	69.26	90.24	9.09	3,582.02	1,197.28	1,078.73	118.55	10.099	
6,700.00	5,483.61	7,488.64	5,656.39	64.56	70.78	89.81	70.13	3,520.99	1,177.81	1,057.16	120.65	9.762	
6,800.00	5,519.58	7,581.35	5,656.94	64.62	72.44	90.72	135.68	3,455.44	1,164.66	1,041.82	122.83	9.482	
6,900.00	5,539.70	7,679.09	5,657.52	64.77	74.22	91.07	204.80	3,386.32	1,157.86	1,032.70	125.17	9.251	
7,000.00	5,544.22	7,778.93	5,658.11	65.00	76.06	91.13	275.39	3,315.73	1,156.56	1,028.94	127.62	9.062	
7,100.00	5,544.90	7,878.93	5,658.71	65.31	77.93	91.13	346.10	3,245.02	1,156.56	1,026.38	130.18	8.885	
7,200.00	5,545.58	7,978.93	5,659.30	65.68	79.83	91.13	416.81	3,174.31	1,156.56	1,023.73	132.83	8.707	
7,300.00	5,546.26	8,078.93	5,659.90	66.13	81.74	91.12	487.52	3,103.60	1,156.56	1,020.99	135.57	8.531	
7,400.00	5,546.94	8,178.93	5,660.49	66.64	83.68	91.12	558.23	3,032.89	1,156.55	1,018.16	138.40	8.357	
7,500.00	5,547.62	8,278.93	5,661.09	67.23	85.63	91.11	628.94	2,962.19	1,156.55	1,015.24	141.31	8.185	
7,600.00	5,548.30	8,378.93	5,661.68	67.88	87.60	91.11	699.65	2,891.48	1,156.55	1,012.24	144.31	8.015	
7,700.00	5,548.98	8,478.93	5,662.28	68.60	89.59	91.10	770.36	2,820.77	1,156.55	1,009.17	147.38	7.847	
7,800.00	5,549.66	8,578.93	5,662.87	69.40	91.59	91.10	841.07	2,750.06	1,156.55	1,006.02	150.53	7.683	
7,900.00	5,550.34	8,678.93	5,663.47	70.25	93.60	91.10	911.78	2,679.35	1,156.55	1,002.80	153.75	7.522	
8,000.00	5,551.02	8,778.93	5,664.07	71.18	95.63	91.09	982.49	2,608.64	1,156.54	999.51	157.04	7.365	
8,100.00	5,551.70	8,878.93	5,664.66	72.16	97.67	91.09	1,053.20	2,537.93	1,156.54	996.16	160.39	7.211	
8,200.00	5,552.38	8,978.93	5,665.26	73.21	99.73	91.08	1,123.91	2,467.23	1,156.54	992.74	163.80	7.061	
8,300.00	5,553.06	9,078.93	5,665.85	74.32	101.79	91.08	1,194.62	2,396.52	1,156.54	989.27	167.27	6.914	
8,400.00	5,553.74	9,178.93	5,666.45	75.48	103.86	91.08	1,265.33	2,325.81	1,156.54	985.75	170.79	6.772	
8,500.00	5,554.42	9,278.93	5,667.04	76.70	105.95	91.07	1,336.04	2,255.10	1,156.54	982.17	174.37	6.633	
8,600.00	5,555.10	9,378.93	5,667.64	77.97	108.04	91.07	1,406.75	2,184.39	1,156.54	978.54	177.99	6.498	
8,700.00	5,555.78	9,478.93	5,668.23	79.30	110.14	91.06	1,477.46	2,113.68	1,156.53	974.87	181.66	6.366	
8,800.00	5,556.46	9,578.93	5,668.83	80.67	112.25	91.06	1,548.17	2,042.97	1,156.53	971.16	185.38	6.239	
8,900.00	5,557.14	9,678.93	5,669.42	82.08	114.36	91.05	1,618.88	1,972.26	1,156.53	967.40	189.13	6.115	
9,000.00	5,557.82	9,778.93	5,670.02	83.54	116.49	91.05	1,689.59	1,901.56	1,156.53	963.61	192.92	5.995	
9,100.00	5,558.50	9,878.93	5,670.61	85.04	118.62	91.05	1,760.30	1,830.85	1,156.53	959.78	196.75	5.878	
9,200.00	5,559.18	9,978.93	5,671.21	86.58	120.75	91.04	1,831.01	1,760.14	1,156.53	955.92	200.61	5.765	
9,300.00	5,559.86	10,078.93	5,671.80	88.15	122.89	91.04	1,901.72	1,689.43	1,156.53	952.02	204.51	5.655	
9,400.00	5,560.54	10,178.93	5,672.40	89.76	125.04	91.03	1,972.43	1,618.72	1,156.52	948.09	208.43	5.549	
9,500.00	5,561.22	10,278.93	5,672.99	91.40	127.19	91.03	2,043.14	1,548.01	1,156.52	944.14	212.39	5.445	
9,600.00	5,561.90	10,378.93	5,673.59	93.07	129.35	91.03	2,113.85	1,477.30	1,156.52	940.15	216.37	5.345	
9,700.00	5,562.58	10,478.93	5,674.18	94.77	131.51	91.02	2,184.56	1,406.59	1,156.52	936.14	220.38	5.248	
9,800.00	5,563.25	10,578.93	5,674.78	96.50	133.68	91.02	2,255.27	1,335.89	1,156.52	932.11	224.41	5.154	
9,900.00	5,563.93	10,678.93	5,675.37	98.25	135.85	91.01	2,325.98	1,265.18	1,156.52	928.06	228.46	5.062	
10,000.00	5,564.61	10,778.93	5,675.97	100.03	138.03	91.01	2,396.69	1,194.47	1,156.52	923.98	232.54	4.973	
10,100.00	5,565.29	10,878.93	5,676.56	101.83	140.21	91.00	2,467.40	1,123.76	1,156.52	919.88	236.63	4.887	
10,200.00	5,565.97	10,978.93	5,677.16	103.65	142.39	91.00	2,538.11	1,053.05	1,156.51	915.76	240.75	4.804	
10,300.00	5,566.65	11,078.93	5,677.75	105.49	144.58	91.00	2,608.82	982.34	1,156.51	911.63	244.88	4.723	
10,400.00	5,567.33	11,178.93	5,678.35	107.35	146.77	90.99	2,679.53	911.63	1,156.51	907.47	249.04	4.644	

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (124, 127, 128 & 129) - Ridge Unit No. 129H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,500.00	5,568.01	11,278.93	5,678.94	109.23	148.96	90.99	2,750.24	840.93	1,156.51	903.31	253.20	4.567	
10,600.00	5,568.69	11,378.93	5,679.54	111.13	151.16	90.98	2,820.95	770.22	1,156.51	899.12	257.39	4.493	
10,700.00	5,569.37	11,478.93	5,680.13	113.04	153.36	90.98	2,891.67	699.51	1,156.51	894.92	261.59	4.421	
10,800.00	5,570.05	11,578.93	5,680.73	114.97	155.56	90.97	2,962.38	628.80	1,156.51	890.71	265.80	4.351	
10,900.00	5,570.73	11,678.93	5,681.32	116.91	157.77	90.97	3,033.09	558.09	1,156.50	886.48	270.02	4.283	
11,000.00	5,571.41	11,778.93	5,681.92	118.86	159.98	90.97	3,103.80	487.38	1,156.50	882.24	274.26	4.217	
11,100.00	5,572.09	11,878.93	5,682.52	120.83	162.19	90.96	3,174.51	416.67	1,156.50	877.99	278.51	4.152	
11,200.00	5,572.77	11,978.93	5,683.11	122.81	164.40	90.96	3,245.22	345.96	1,156.50	873.72	282.78	4.090	
11,300.00	5,573.45	12,078.93	5,683.71	124.80	166.62	90.95	3,315.93	275.26	1,156.50	869.45	287.05	4.029	
11,400.00	5,574.13	12,178.93	5,684.30	126.80	168.83	90.95	3,386.64	204.55	1,156.50	865.17	291.33	3.970	
11,500.00	5,574.81	12,278.93	5,684.90	128.82	171.05	90.95	3,457.35	133.84	1,156.50	860.87	295.63	3.912	
11,600.00	5,575.49	12,378.93	5,685.49	130.84	173.27	90.94	3,528.06	63.13	1,156.50	856.57	299.93	3.856	
11,700.00	5,576.17	12,478.93	5,686.09	132.87	175.50	90.94	3,598.77	-7.58	1,156.49	852.25	304.24	3.801	
11,800.00	5,576.85	12,578.93	5,686.68	134.91	177.72	90.93	3,669.48	-78.29	1,156.49	847.93	308.56	3.748	
11,900.00	5,577.53	12,678.93	5,687.28	136.96	179.95	90.93	3,740.19	-149.00	1,156.49	843.60	312.89	3.696	
12,000.00	5,578.21	12,778.93	5,687.87	139.02	182.18	90.92	3,810.90	-219.70	1,156.49	839.26	317.23	3.646	
12,100.00	5,578.89	12,878.93	5,688.47	141.08	184.41	90.92	3,881.61	-290.41	1,156.49	834.92	321.57	3.596	
12,200.00	5,579.57	12,978.93	5,689.06	143.16	186.64	90.92	3,952.32	-361.12	1,156.49	830.56	325.92	3.548	
12,300.00	5,580.25	13,078.93	5,689.66	145.24	188.88	90.91	4,023.03	-431.83	1,156.49	826.21	330.28	3.502	
12,400.00	5,580.93	13,178.93	5,690.25	147.32	191.11	90.91	4,093.74	-502.54	1,156.49	821.84	334.65	3.456	
12,500.00	5,581.61	13,278.93	5,690.85	149.41	193.35	90.90	4,164.45	-573.25	1,156.48	817.47	339.02	3.411	
12,600.00	5,582.29	13,378.93	5,691.44	151.51	195.58	90.90	4,235.16	-643.96	1,156.48	813.09	343.40	3.368	
12,700.00	5,582.97	13,478.93	5,692.04	153.62	197.82	90.90	4,305.87	-714.67	1,156.48	808.70	347.78	3.325	
12,800.00	5,583.65	13,578.93	5,692.63	155.73	200.06	90.89	4,376.58	-785.37	1,156.48	804.31	352.17	3.284	
12,900.00	5,584.33	13,678.93	5,693.23	157.84	202.31	90.89	4,447.29	-856.08	1,156.48	799.92	356.56	3.243	
13,000.00	5,585.01	13,778.93	5,693.82	159.96	204.55	90.88	4,518.00	-926.79	1,156.48	795.52	360.96	3.204	
13,100.00	5,585.69	13,878.93	5,694.42	162.09	206.79	90.88	4,588.71	-997.50	1,156.48	791.11	365.37	3.165	
13,200.00	5,586.37	13,978.93	5,695.01	164.22	209.04	90.87	4,659.42	-1,068.21	1,156.48	786.70	369.78	3.128	
13,300.00	5,587.05	14,078.93	5,695.61	166.36	211.29	90.87	4,730.13	-1,138.92	1,156.48	782.29	374.19	3.091	
13,400.00	5,587.73	14,178.93	5,696.20	168.49	213.53	90.87	4,800.84	-1,209.63	1,156.47	777.87	378.61	3.055	
13,500.00	5,588.41	14,278.93	5,696.80	170.64	215.78	90.86	4,871.55	-1,280.34	1,156.47	773.44	383.03	3.019	
13,600.00	5,589.09	14,378.93	5,697.39	172.79	218.03	90.86	4,942.26	-1,351.04	1,156.47	769.02	387.46	2.985	
13,700.00	5,589.77	14,478.93	5,697.99	174.94	220.28	90.85	5,012.97	-1,421.75	1,156.47	764.58	391.89	2.951	
13,800.00	5,590.45	14,578.93	5,698.58	177.09	222.53	90.85	5,083.68	-1,492.46	1,156.47	760.15	396.32	2.918	
13,900.00	5,591.13	14,678.93	5,699.18	179.25	224.78	90.84	5,154.39	-1,563.17	1,156.47	755.71	400.76	2.886	
14,000.00	5,591.81	14,778.93	5,699.77	181.41	227.04	90.84	5,225.10	-1,633.88	1,156.47	751.27	405.20	2.854	
14,100.00	5,592.49	14,878.93	5,700.37	183.58	229.29	90.84	5,295.81	-1,704.59	1,156.47	746.82	409.64	2.823	
14,200.00	5,593.17	14,978.93	5,700.96	185.75	231.55	90.83	5,366.52	-1,775.30	1,156.47	742.37	414.09	2.793	
14,300.00	5,593.85	15,078.93	5,701.56	187.92	233.80	90.83	5,437.23	-1,846.00	1,156.46	737.92	418.54	2.763	
14,400.00	5,594.53	15,178.93	5,702.16	190.09	236.06	90.82	5,507.94	-1,916.71	1,156.46	733.47	423.00	2.734	
14,500.00	5,595.21	15,278.93	5,702.75	192.27	238.32	90.82	5,578.65	-1,987.42	1,156.46	729.01	427.45	2.705	
14,600.00	5,595.89	15,378.93	5,703.35	194.45	240.57	90.82	5,649.36	-2,058.13	1,156.46	724.55	431.91	2.678	
14,700.00	5,596.57	15,478.93	5,703.94	196.63	242.83	90.81	5,720.07	-2,128.84	1,156.46	720.08	436.38	2.650	
14,800.00	5,597.25	15,578.93	5,704.54	198.82	245.09	90.81	5,790.78	-2,199.55	1,156.46	715.62	440.84	2.623	
14,900.00	5,597.93	15,678.93	5,705.13	201.01	247.35	90.80	5,861.49	-2,270.26	1,156.46	711.15	445.31	2.597	
15,000.00	5,598.61	15,778.93	5,705.73	203.20	249.61	90.80	5,932.20	-2,340.97	1,156.46	706.68	449.78	2.571	
15,100.00	5,599.29	15,878.93	5,706.32	205.39	251.87	90.79	6,002.91	-2,411.67	1,156.46	702.20	454.25	2.546	
15,200.00	5,599.97	15,978.93	5,706.92	207.59	254.13	90.79	6,073.62	-2,482.38	1,156.45	697.73	458.73	2.521	
15,300.00	5,600.65	16,078.93	5,707.51	209.78	256.40	90.79	6,144.33	-2,553.09	1,156.45	693.25	463.21	2.497	
15,400.00	5,601.33	16,178.93	5,708.11	211.98	258.66	90.78	6,215.04	-2,623.80	1,156.45	688.77	467.69	2.473	
15,500.00	5,602.01	16,278.93	5,708.70	214.19	260.92	90.78	6,285.75	-2,694.51	1,156.45	684.28	472.17	2.449	
15,600.00	5,602.69	16,378.93	5,709.30	216.39	263.19	90.77	6,356.46	-2,765.22	1,156.45	679.80	476.65	2.426	

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (124, 127, 128 & 129) - Ridge Unit No. 129H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	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
15,700.00	5,603.37	16,478.93	5,709.89	218.59	265.45	90.77	6,427.17	-2,835.93	1,156.45	675.31	481.14	2.404	
15,800.00	5,604.05	16,578.93	5,710.49	220.80	267.72	90.76	6,497.88	-2,906.63	1,156.45	670.82	485.62	2.381	
15,900.00	5,604.73	16,678.93	5,711.08	223.01	269.98	90.76	6,568.59	-2,977.34	1,156.45	666.33	490.11	2.360	
16,000.00	5,605.41	16,778.93	5,711.68	225.22	272.25	90.76	6,639.30	-3,048.05	1,156.45	661.84	494.61	2.338	
16,100.00	5,606.09	16,878.93	5,712.27	227.43	274.51	90.75	6,710.01	-3,118.76	1,156.45	657.35	499.10	2.317	
16,200.00	5,606.77	16,978.93	5,712.87	229.65	276.78	90.75	6,780.72	-3,189.47	1,156.44	652.85	503.59	2.296	
16,222.14	5,606.92	17,001.07	5,713.00	230.14	277.28	90.75	6,796.38	-3,205.13	1,156.44	651.86	504.59	2.292	CC, ES, SF
16,300.00	5,607.45	17,001.12	5,713.00	231.86	277.29	90.75	6,796.41	-3,205.16	1,159.06	658.66	500.39	2.316	
16,400.00	5,608.13	17,001.12	5,713.00	234.08	277.29	90.75	6,796.41	-3,205.16	1,170.03	680.30	489.73	2.389	
16,500.00	5,608.81	17,001.12	5,713.00	236.30	277.29	90.75	6,796.41	-3,205.16	1,189.34	715.17	474.18	2.508	
16,600.00	5,609.49	17,001.12	5,713.00	238.52	277.29	90.75	6,796.41	-3,205.16	1,216.59	761.44	455.15	2.673	
16,700.00	5,610.17	17,001.12	5,713.00	240.74	277.29	90.75	6,796.41	-3,205.16	1,251.26	817.18	434.08	2.883	
16,800.00	5,610.85	17,001.12	5,713.00	242.96	277.29	90.75	6,796.41	-3,205.16	1,292.75	880.59	412.17	3.136	
16,900.00	5,611.53	17,001.12	5,713.00	245.19	277.29	90.75	6,796.41	-3,205.16	1,340.44	950.13	390.31	3.434	
17,000.00	5,612.21	17,001.12	5,713.00	247.41	277.29	90.75	6,796.41	-3,205.16	1,393.68	1,024.55	369.13	3.776	
17,100.00	5,612.89	17,001.12	5,713.00	249.64	277.29	90.75	6,796.41	-3,205.16	1,451.86	1,102.86	348.99	4.160	
17,200.00	5,613.57	17,001.12	5,713.00	251.87	277.29	90.75	6,796.41	-3,205.16	1,514.41	1,184.30	330.12	4.587	
17,300.00	5,614.25	17,001.12	5,713.00	254.10	277.29	90.75	6,796.41	-3,205.16	1,580.83	1,268.24	312.58	5.057	
17,400.00	5,614.93	17,001.12	5,713.00	256.33	277.29	90.75	6,796.41	-3,205.16	1,650.63	1,354.24	296.39	5.569	
17,410.95	5,615.00	17,001.12	5,713.00	256.57	277.29	90.75	6,796.41	-3,205.16	1,658.46	1,363.76	294.70	5.628	

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (130, 135, 136 & 137) - Ridge Unit No. 135H - Original Hole - rev1													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)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-110.25	-6.95	-18.85	20.09					
100.00	100.00	100.00	100.00	0.13	0.13	-110.25	-6.95	-18.85	20.09	19.82	0.27	74.723		
200.00	200.00	200.00	200.00	0.49	0.49	-110.25	-6.95	-18.85	20.09	19.10	0.99	20.379		
300.00	300.00	300.00	300.00	0.85	0.85	-110.25	-6.95	-18.85	20.09	18.39	1.70	11.798		
400.00	400.00	400.00	400.00	1.21	1.21	-110.25	-6.95	-18.85	20.09	17.67	2.42	8.303		
500.00	500.00	500.00	500.00	1.57	1.57	-110.25	-6.95	-18.85	20.09	16.95	3.14	6.405 CC, ES		
600.00	599.95	599.95	599.95	1.92	1.93	141.56	-6.95	-18.85	22.08	18.23	3.84	5.745		
700.00	699.63	699.63	699.63	2.27	2.28	151.27	-6.95	-18.85	28.64	24.09	4.55	6.297		
800.00	798.77	798.77	798.77	2.63	2.64	160.03	-6.95	-18.85	40.58	35.32	5.26	7.713		
900.00	897.08	897.08	897.08	3.03	2.99	166.05	-6.95	-18.85	58.06	52.08	5.98	9.711		
1,000.00	994.31	994.31	994.31	3.48	3.34	169.91	-6.95	-18.85	80.93	74.23	6.70	12.085		
1,100.00	1,090.18	1,095.12	1,095.08	3.98	3.69	172.02	-8.41	-16.98	106.95	99.54	7.41	14.434		
1,200.00	1,184.43	1,197.52	1,197.17	4.55	4.04	172.67	-13.25	-10.82	133.32	125.20	8.12	16.423		
1,300.00	1,276.81	1,301.30	1,300.05	5.20	4.40	172.56	-21.58	-0.18	159.88	151.05	8.84	18.092		
1,400.00	1,367.06	1,406.48	1,403.42	5.94	4.79	171.98	-33.53	15.07	186.58	177.00	9.58	19.486		
1,500.00	1,454.93	1,513.08	1,506.93	6.77	5.23	171.11	-49.20	35.08	213.36	203.02	10.34	20.638		
1,600.00	1,540.18	1,621.09	1,610.20	7.71	5.73	170.02	-68.69	59.95	240.19	229.06	11.13	21.574		
1,700.00	1,622.59	1,730.55	1,712.86	8.75	6.30	168.77	-92.07	89.81	267.05	255.07	11.98	22.288		
1,800.00	1,701.91	1,841.43	1,814.48	9.90	6.96	167.40	-119.42	124.72	293.91	281.01	12.90	22.792		
1,900.00	1,778.60	1,943.11	1,905.71	11.15	7.65	166.21	-147.10	160.05	320.85	306.93	13.91	23.058		
2,000.00	1,855.05	2,039.24	1,991.80	12.42	8.34	165.32	-173.49	193.73	347.92	332.93	14.99	23.210		
2,100.00	1,931.49	2,135.38	2,077.88	13.72	9.06	164.55	-199.87	227.41	375.06	358.96	16.10	23.290		
2,200.00	2,007.94	2,231.51	2,163.97	15.03	9.80	163.88	-226.26	261.09	402.25	385.00	17.25	23.318		
2,300.00	2,084.38	2,327.64	2,250.06	16.36	10.55	163.30	-252.64	294.77	429.49	411.06	18.42	23.311		
2,400.00	2,160.83	2,423.78	2,336.15	17.69	11.32	162.79	-279.02	328.44	456.76	437.14	19.62	23.279		
2,500.00	2,237.28	2,519.91	2,422.24	19.03	12.10	162.34	-305.41	362.12	484.06	463.23	20.84	23.230		
2,600.00	2,313.72	2,616.05	2,508.33	20.37	12.89	161.93	-331.79	395.80	511.39	489.32	22.07	23.168		
2,700.00	2,390.17	2,712.18	2,594.42	21.72	13.69	161.57	-358.17	429.48	538.74	515.42	23.32	23.101		
2,800.00	2,466.61	2,808.31	2,680.51	23.07	14.49	161.24	-384.56	463.16	566.11	541.53	24.58	23.029		
2,900.00	2,543.06	2,904.45	2,766.60	24.43	15.30	160.94	-410.94	496.84	593.49	567.64	25.86	22.954		
3,000.00	2,619.50	3,000.58	2,852.69	25.78	16.11	160.67	-437.33	530.52	620.89	593.75	27.14	22.880		
3,100.00	2,695.95	3,096.72	2,938.78	27.14	16.93	160.42	-463.71	564.19	648.30	619.87	28.43	22.806		
3,200.00	2,772.40	3,192.85	3,024.87	28.50	17.75	160.19	-490.09	597.87	675.72	645.99	29.72	22.732		
3,300.00	2,848.84	3,288.98	3,110.96	29.86	18.57	159.98	-516.48	631.55	703.14	672.11	31.03	22.660		
3,400.00	2,925.29	3,385.12	3,197.04	31.23	19.40	159.79	-542.86	665.23	730.58	698.24	32.34	22.591		
3,500.00	3,001.73	3,481.25	3,283.13	32.59	20.22	159.60	-569.25	698.91	758.02	724.37	33.66	22.523		
3,600.00	3,078.18	3,577.38	3,369.22	33.96	21.05	159.44	-595.63	732.59	785.47	750.50	34.98	22.458		
3,700.00	3,154.62	3,673.52	3,455.31	35.33	21.88	159.28	-622.01	766.27	812.93	776.63	36.30	22.395		
3,800.00	3,231.07	3,769.65	3,541.40	36.69	22.72	159.13	-648.40	799.94	840.39	802.76	37.63	22.334		
3,900.00	3,307.52	3,865.79	3,627.49	38.06	23.55	158.99	-674.78	833.62	867.86	828.90	38.96	22.276		
4,000.00	3,383.96	3,961.92	3,713.58	39.43	24.38	158.86	-701.17	867.30	895.33	855.04	40.29	22.221		
4,100.00	3,460.41	4,058.05	3,799.67	40.80	25.22	158.74	-727.55	900.98	922.80	881.17	41.63	22.167		
4,200.00	3,536.85	4,154.19	3,885.76	42.17	26.06	158.63	-753.93	934.66	950.28	907.31	42.97	22.115		
4,300.00	3,613.30	4,250.32	3,971.85	43.54	26.89	158.52	-780.32	968.34	977.76	933.45	44.31	22.065		
4,400.00	3,689.74	4,346.46	4,057.94	44.91	27.73	158.42	-806.70	1,002.02	1,005.25	959.59	45.66	22.017		
4,500.00	3,766.19	4,442.59	4,144.03	46.29	28.57	158.32	-833.09	1,035.69	1,032.73	985.73	47.00	21.971		
4,600.00	3,842.64	4,538.72	4,230.12	47.66	29.41	158.23	-859.47	1,069.37	1,060.22	1,011.87	48.35	21.927		
4,700.00	3,919.08	4,634.86	4,316.21	49.03	30.25	158.14	-885.85	1,103.05	1,087.72	1,038.01	49.70	21.884		
4,800.00	3,995.53	4,730.99	4,402.29	50.40	31.09	158.06	-912.24	1,136.73	1,115.21	1,064.16	51.06	21.843		
4,900.00	4,071.97	4,827.12	4,488.38	51.78	31.93	157.98	-938.62	1,170.41	1,142.71	1,090.30	52.41	21.804		
5,000.00	4,148.42	4,923.26	4,574.47	53.15	32.78	157.91	-965.01	1,204.09	1,170.21	1,116.44	53.76	21.766		
5,100.00	4,224.86	5,019.39	4,660.56	54.52	33.62	157.83	-991.39	1,237.77	1,197.71	1,142.59	55.12	21.730		

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (130, 135, 136 & 137) - Ridge Unit No. 135H - 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		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.00	4,301.31	5,073.76	4,709.51	55.90	34.08	157.82	-1,005.90	1,256.43	1,226.37	1,170.44	55.94	21.924		
5,300.00	4,377.76	5,100.00	4,733.76	57.27	34.29	157.86	-1,011.90	1,264.48	1,259.46	1,203.21	56.25	22.390		
5,400.00	4,454.20	5,150.00	4,781.09	58.64	34.62	158.04	-1,021.07	1,277.65	1,296.67	1,240.01	56.66	22.885		
5,500.00	4,530.65	5,178.59	4,808.72	60.02	34.77	158.21	-1,024.96	1,283.88	1,338.03	1,281.37	56.66	23.616		
5,600.00	4,607.09	5,200.00	4,829.62	61.39	34.88	158.36	-1,027.22	1,287.91	1,383.43	1,326.98	56.44	24.510		
5,700.00	4,684.96	5,250.00	4,878.98	62.72	35.07	164.42	-1,030.32	1,295.18	1,430.86	1,374.39	56.47	25.339		
5,800.00	4,770.38	5,271.74	4,900.60	63.77	35.13	177.50	-1,030.70	1,297.39	1,472.32	1,416.12	56.20	26.198		
5,900.00	4,861.80	5,300.00	4,928.79	64.50	35.21	-162.83	-1,030.33	1,299.40	1,506.08	1,450.02	56.07	26.863		
6,000.00	4,956.44	5,350.00	4,978.66	64.92	35.29	-133.65	-1,027.26	1,300.53	1,531.59	1,475.37	56.23	27.240		
6,100.00	5,051.42	5,367.34	4,995.90	65.09	35.30	-103.22	-1,025.47	1,300.21	1,547.81	1,491.64	56.17	27.555		
6,200.00	5,143.87	5,400.00	5,028.23	65.08	35.32	-83.36	-1,021.12	1,298.58	1,555.14	1,498.68	56.46	27.544		
6,300.00	5,230.97	5,431.07	5,058.71	64.97	35.32	-72.66	-1,015.78	1,295.82	1,553.36	1,496.37	56.99	27.256		
6,400.00	5,310.08	5,450.00	5,077.11	64.81	35.33	-67.10	-1,011.97	1,293.55	1,542.77	1,484.98	57.79	26.694		
6,500.00	5,378.79	5,500.00	5,124.93	64.67	35.31	-65.28	-999.87	1,285.49	1,523.39	1,464.15	59.24	25.716		
6,600.00	5,435.02	5,522.00	5,145.55	64.59	35.29	-65.19	-993.64	1,280.99	1,496.07	1,435.05	61.02	24.518		
6,700.00	5,483.61	5,550.00	5,171.34	64.56	35.26	-66.01	-984.93	1,274.45	1,466.70	1,403.50	63.20	23.208		
6,800.00	5,519.58	5,580.15	5,198.48	64.62	35.23	-68.26	-974.58	1,266.38	1,432.36	1,366.50	65.86	21.748		
6,900.00	5,539.70	5,600.00	5,215.96	64.77	35.21	-71.67	-967.24	1,260.51	1,392.33	1,323.28	69.05	20.164		
7,000.00	5,544.22	5,630.81	5,242.43	65.00	35.17	-75.40	-955.03	1,250.53	1,348.20	1,275.56	72.64	18.560		
7,100.00	5,544.90	5,650.00	5,258.47	65.31	35.15	-76.12	-946.95	1,243.80	1,307.19	1,230.71	76.47	17.093		
7,200.00	5,545.58	5,686.57	5,288.04	65.68	35.10	-77.47	-930.54	1,229.88	1,271.39	1,191.10	80.28	15.836		
7,300.00	5,546.26	5,720.92	5,314.51	66.13	35.06	-78.68	-914.00	1,215.56	1,241.07	1,156.98	84.09	14.759		
7,400.00	5,546.94	5,760.63	5,343.43	66.64	35.02	-80.03	-893.59	1,197.58	1,216.21	1,128.47	87.73	13.863		
7,500.00	5,547.62	5,800.00	5,370.18	67.23	34.98	-81.29	-872.08	1,178.30	1,196.67	1,105.46	91.21	13.120		
7,600.00	5,548.30	5,859.62	5,406.76	67.88	34.95	-83.02	-837.32	1,146.60	1,182.01	1,087.83	94.18	12.550		
7,700.00	5,548.98	5,924.57	5,441.02	68.60	34.95	-84.66	-796.92	1,109.07	1,171.71	1,074.90	96.81	12.104		
7,800.00	5,549.66	6,000.00	5,477.99	69.40	35.00	-86.44	-748.92	1,064.15	1,164.26	1,065.13	99.13	11.745		
7,900.00	5,550.34	6,076.89	5,508.06	70.25	35.12	-87.90	-697.69	1,015.42	1,159.72	1,058.46	101.25	11.453		
8,000.00	5,551.02	6,158.68	5,529.38	71.18	35.32	-88.92	-641.04	960.52	1,157.40	1,054.23	103.17	11.219		
8,100.00	5,551.70	6,245.08	5,539.50	72.16	35.60	-89.39	-580.02	900.31	1,156.57	1,051.61	104.96	11.019		
8,123.42	5,551.86	6,265.63	5,540.00	72.41	35.68	-89.41	-565.48	885.80	1,156.54	1,051.16	105.38	10.975		
8,200.00	5,552.38	6,342.18	5,540.49	73.21	36.04	-89.41	-511.35	831.67	1,156.54	1,049.86	106.68	10.841		
8,300.00	5,553.06	6,442.18	5,541.13	74.32	36.61	-89.41	-440.64	760.96	1,156.54	1,048.02	108.53	10.657		
8,400.00	5,553.74	6,542.18	5,541.77	75.48	37.31	-89.41	-369.94	690.25	1,156.55	1,045.99	110.56	10.461		
8,500.00	5,554.42	6,642.18	5,542.41	76.70	38.14	-89.40	-299.23	619.54	1,156.55	1,043.79	112.76	10.257		
8,600.00	5,555.10	6,742.18	5,543.05	77.97	39.09	-89.40	-228.52	548.83	1,156.55	1,041.43	115.13	10.046		
8,700.00	5,555.78	6,842.18	5,543.68	79.30	40.14	-89.40	-157.81	478.12	1,156.56	1,038.91	117.64	9.831		
8,800.00	5,556.46	6,942.18	5,544.32	80.67	41.30	-89.40	-87.10	407.41	1,156.56	1,036.26	120.30	9.614		
8,900.00	5,557.14	7,042.18	5,544.96	82.08	42.55	-89.40	-16.39	336.70	1,156.56	1,033.48	123.08	9.397		
9,000.00	5,557.82	7,142.18	5,545.60	83.54	43.89	-89.39	54.31	265.99	1,156.56	1,030.58	125.99	9.180		
9,100.00	5,558.50	7,242.18	5,546.24	85.04	45.30	-89.39	125.02	195.28	1,156.57	1,027.56	129.00	8.965		
9,200.00	5,559.18	7,342.18	5,546.88	86.58	46.79	-89.39	195.73	124.57	1,156.57	1,024.45	132.12	8.754		
9,300.00	5,559.86	7,442.18	5,547.52	88.15	48.34	-89.39	266.44	53.86	1,156.57	1,021.24	135.33	8.546		
9,400.00	5,560.54	7,542.18	5,548.16	89.76	49.94	-89.39	337.15	-16.85	1,156.57	1,017.95	138.62	8.343		
9,500.00	5,561.22	7,642.18	5,548.80	91.40	51.60	-89.38	407.86	-87.56	1,156.58	1,014.58	142.00	8.145		
9,600.00	5,561.90	7,742.18	5,549.44	93.07	53.31	-89.38	478.56	-158.27	1,156.58	1,011.14	145.44	7.952		
9,700.00	5,562.58	7,842.18	5,550.08	94.77	55.06	-89.38	549.27	-228.98	1,156.58	1,007.63	148.95	7.765		
9,800.00	5,563.25	7,942.18	5,550.72	96.50	56.85	-89.38	619.98	-299.69	1,156.58	1,004.06	152.53	7.583		
9,900.00	5,563.93	8,042.18	5,551.36	98.25	58.67	-89.38	690.69	-370.40	1,156.59	1,000.43	156.16	7.407		
10,000.00	5,564.61	8,142.18	5,552.00	100.03	60.53	-89.37	761.40	-441.11	1,156.59	996.75	159.84	7.236		
10,100.00	5,565.29	8,242.18	5,552.64	101.83	62.41	-89.37	832.11	-511.82	1,156.59	993.02	163.57	7.071		
10,200.00	5,565.97	8,342.18	5,553.28	103.65	64.33	-89.37	902.81	-582.53	1,156.59	989.25	167.35	6.911		

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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:		Ridge Unit (130, 135, 136 & 137) - Ridge Unit No. 135H - 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		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)					
10,300.00	5,566.65	8,442.18	5,553.91	105.49	66.26	-89.37	973.52	-653.24	1,156.60	985.44	171.16	6.757				
10,400.00	5,567.33	8,542.18	5,554.55	107.35	68.22	-89.37	1,044.23	-723.95	1,156.60	981.58	175.02	6.609				
10,500.00	5,568.01	8,642.18	5,555.19	109.23	70.20	-89.36	1,114.94	-794.66	1,156.60	977.70	178.91	6.465				
10,600.00	5,568.69	8,742.18	5,555.83	111.13	72.20	-89.36	1,185.65	-865.37	1,156.61	973.78	182.83	6.326				
10,700.00	5,569.37	8,842.18	5,556.47	113.04	74.21	-89.36	1,256.36	-936.08	1,156.61	969.82	186.78	6.192				
10,800.00	5,570.05	8,942.18	5,557.11	114.97	76.25	-89.36	1,327.06	-1,006.79	1,156.61	965.84	190.77	6.063				
10,900.00	5,570.73	9,042.18	5,557.75	116.91	78.29	-89.36	1,397.77	-1,077.50	1,156.61	961.84	194.78	5.938				
11,000.00	5,571.41	9,142.18	5,558.39	118.86	80.35	-89.35	1,468.48	-1,148.21	1,156.62	957.81	198.81	5.818				
11,100.00	5,572.09	9,242.18	5,559.03	120.83	82.42	-89.35	1,539.19	-1,218.92	1,156.62	953.75	202.87	5.701				
11,200.00	5,572.77	9,342.18	5,559.67	122.81	84.51	-89.35	1,609.90	-1,289.63	1,156.62	949.67	206.95	5.589				
11,300.00	5,573.45	9,442.18	5,560.31	124.80	86.60	-89.35	1,680.60	-1,360.34	1,156.62	945.57	211.05	5.480				
11,400.00	5,574.13	9,542.18	5,560.95	126.80	88.70	-89.35	1,751.31	-1,431.05	1,156.63	941.45	215.17	5.375				
11,500.00	5,574.81	9,642.18	5,561.59	128.82	90.82	-89.34	1,822.02	-1,501.76	1,156.63	937.32	219.31	5.274				
11,600.00	5,575.49	9,742.18	5,562.23	130.84	92.94	-89.34	1,892.73	-1,572.47	1,156.63	933.16	223.47	5.176				
11,700.00	5,576.17	9,842.18	5,562.87	132.87	95.07	-89.34	1,963.44	-1,643.18	1,156.63	928.99	227.65	5.081				
11,800.00	5,576.85	9,942.18	5,563.51	134.91	97.21	-89.34	2,034.15	-1,713.89	1,156.64	924.80	231.83	4.989				
11,900.00	5,577.53	10,042.18	5,564.15	136.96	99.35	-89.34	2,104.85	-1,784.60	1,156.64	920.60	236.04	4.900				
12,000.00	5,578.21	10,142.18	5,564.78	139.02	101.50	-89.33	2,175.56	-1,855.31	1,156.64	916.39	240.26	4.814				
12,100.00	5,578.89	10,242.18	5,565.42	141.08	103.66	-89.33	2,246.27	-1,926.02	1,156.64	912.16	244.49	4.731				
12,200.00	5,579.57	10,342.18	5,566.06	143.16	105.82	-89.33	2,316.98	-1,996.73	1,156.65	907.92	248.73	4.650				
12,300.00	5,580.25	10,442.18	5,566.70	145.24	107.99	-89.33	2,387.69	-2,067.44	1,156.65	903.66	252.99	4.572				
12,400.00	5,580.93	10,542.18	5,567.34	147.32	110.16	-89.33	2,458.40	-2,138.15	1,156.65	899.40	257.25	4.496				
12,500.00	5,581.61	10,642.18	5,567.98	149.41	112.34	-89.32	2,529.10	-2,208.86	1,156.66	895.12	261.53	4.423				
12,600.00	5,582.29	10,742.18	5,568.62	151.51	114.53	-89.32	2,599.81	-2,279.57	1,156.66	890.84	265.82	4.351				
12,700.00	5,582.97	10,842.18	5,569.26	153.62	116.71	-89.32	2,670.52	-2,350.28	1,156.66	886.55	270.12	4.282				
12,800.00	5,583.65	10,942.18	5,569.90	155.73	118.90	-89.32	2,741.23	-2,420.99	1,156.66	882.24	274.42	4.215				
12,900.00	5,584.33	11,042.18	5,570.54	157.84	121.10	-89.32	2,811.94	-2,491.70	1,156.67	877.93	278.74	4.150				
13,000.00	5,585.01	11,142.18	5,571.18	159.96	123.30	-89.31	2,882.65	-2,562.41	1,156.67	873.61	283.06	4.086				
13,100.00	5,585.69	11,242.18	5,571.82	162.09	125.50	-89.31	2,953.35	-2,633.12	1,156.67	869.28	287.39	4.025				
13,200.00	5,586.37	11,342.18	5,572.46	164.22	127.71	-89.31	3,024.06	-2,703.83	1,156.67	864.94	291.73	3.965				
13,300.00	5,587.05	11,442.18	5,573.10	166.36	129.91	-89.31	3,094.77	-2,774.54	1,156.68	860.60	296.08	3.907				
13,400.00	5,587.73	11,542.18	5,573.74	168.49	132.13	-89.31	3,165.48	-2,845.25	1,156.68	856.25	300.43	3.850				
13,500.00	5,588.41	11,642.18	5,574.38	170.64	134.34	-89.30	3,236.19	-2,915.96	1,156.68	851.89	304.79	3.795				
13,600.00	5,589.09	11,742.18	5,575.02	172.79	136.56	-89.30	3,306.90	-2,986.67	1,156.68	847.53	309.16	3.741				
13,700.00	5,589.77	11,842.18	5,575.65	174.94	138.78	-89.30	3,377.60	-3,057.38	1,156.69	843.16	313.53	3.689				
13,800.00	5,590.45	11,942.18	5,576.29	177.09	141.00	-89.30	3,448.31	-3,128.09	1,156.69	838.78	317.91	3.638				
13,900.00	5,591.13	12,042.18	5,576.93	179.25	143.22	-89.30	3,519.02	-3,198.81	1,156.69	834.40	322.30	3.589				
14,000.00	5,591.81	12,142.18	5,577.57	181.41	145.45	-89.29	3,589.73	-3,269.52	1,156.70	830.01	326.68	3.541				
14,100.00	5,592.49	12,242.18	5,578.21	183.58	147.68	-89.29	3,660.44	-3,340.23	1,156.70	825.62	331.08	3.494				
14,200.00	5,593.17	12,342.18	5,578.85	185.75	149.91	-89.29	3,731.15	-3,410.94	1,156.70	821.22	335.48	3.448				
14,300.00	5,593.85	12,442.18	5,579.49	187.92	152.14	-89.29	3,801.85	-3,481.65	1,156.70	816.82	339.89	3.403				
14,400.00	5,594.53	12,542.18	5,580.13	190.09	154.37	-89.29	3,872.56	-3,552.36	1,156.71	812.41	344.29	3.360				
14,500.00	5,595.21	12,642.18	5,580.77	192.27	156.61	-89.28	3,943.27	-3,623.07	1,156.71	808.00	348.71	3.317				
14,600.00	5,595.89	12,742.18	5,581.41	194.45	158.85	-89.28	4,013.98	-3,693.78	1,156.71	803.58	353.13	3.276				
14,700.00	5,596.57	12,842.18	5,582.05	196.63	161.09	-89.28	4,084.69	-3,764.49	1,156.71	799.16	357.55	3.235				
14,800.00	5,597.25	12,942.18	5,582.69	198.82	163.33	-89.28	4,155.40	-3,835.20	1,156.72	794.74	361.98	3.196				
14,900.00	5,597.93	13,042.18	5,583.33	201.01	165.57	-89.28	4,226.10	-3,905.91	1,156.72	790.31	366.41	3.157				
15,000.00	5,598.61	13,142.18	5,583.97	203.20	167.81	-89.27	4,296.81	-3,976.62	1,156.72	785.88	370.84	3.119				
15,100.00	5,599.29	13,242.18	5,584.61	205.39	170.06	-89.27	4,367.52	-4,047.33	1,156.73	781.45	375.28	3.082				
15,200.00	5,599.97	13,342.18	5,585.25	207.59	172.31	-89.27	4,438.23	-4,118.04	1,156.73	777.01	379.72	3.046				
15,300.00	5,600.65	13,442.18	5,585.89	209.78	174.55	-89.27	4,508.94	-4,188.75	1,156.73	772.57	384.17	3.011				
15,400.00	5,601.33	13,542.18	5,586.52	211.98	176.80	-89.27	4,579.65	-4,259.46	1,156.73	768.12	388.61	2.977				

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (130, 135, 136 & 137) - Ridge Unit No. 135H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	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
15,500.00	5,602.01	13,642.18	5,587.16	214.19	179.05	-89.26	4,650.35	-4,330.17	1,156.74	763.67	393.06	2.943	
15,600.00	5,602.69	13,742.18	5,587.80	216.39	181.30	-89.26	4,721.06	-4,400.88	1,156.74	759.22	397.52	2.910	
15,700.00	5,603.37	13,842.18	5,588.44	218.59	183.56	-89.26	4,791.77	-4,471.59	1,156.74	754.77	401.98	2.878	
15,800.00	5,604.05	13,942.18	5,589.08	220.80	185.81	-89.26	4,862.48	-4,542.30	1,156.74	750.31	406.43	2.846	
15,900.00	5,604.73	14,042.18	5,589.72	223.01	188.06	-89.26	4,933.19	-4,613.01	1,156.75	745.85	410.90	2.815	
16,000.00	5,605.41	14,142.18	5,590.36	225.22	190.32	-89.25	5,003.90	-4,683.72	1,156.75	741.39	415.36	2.785	
16,100.00	5,606.09	14,242.18	5,591.00	227.43	192.57	-89.25	5,074.60	-4,754.43	1,156.75	736.92	419.83	2.755	
16,200.00	5,606.77	14,342.18	5,591.64	229.65	194.83	-89.25	5,145.31	-4,825.14	1,156.75	732.46	424.30	2.726	
16,300.00	5,607.45	14,442.18	5,592.28	231.86	197.09	-89.25	5,216.02	-4,895.85	1,156.76	727.99	428.77	2.698	
16,400.00	5,608.13	14,542.18	5,592.92	234.08	199.35	-89.25	5,286.73	-4,966.56	1,156.76	723.51	433.25	2.670	
16,500.00	5,608.81	14,642.18	5,593.56	236.30	201.61	-89.24	5,357.44	-5,037.27	1,156.76	719.04	437.72	2.643	
16,600.00	5,609.49	14,742.18	5,594.20	238.52	203.87	-89.24	5,428.14	-5,107.98	1,156.77	714.56	442.20	2.616	
16,700.00	5,610.17	14,842.18	5,594.84	240.74	206.13	-89.24	5,498.85	-5,178.69	1,156.77	710.09	446.68	2.590	
16,800.00	5,610.85	14,942.18	5,595.48	242.96	208.39	-89.24	5,569.56	-5,249.40	1,156.77	705.60	451.17	2.564	
16,900.00	5,611.53	15,042.18	5,596.12	245.19	210.65	-89.24	5,640.27	-5,320.11	1,156.77	701.12	455.65	2.539	
17,000.00	5,612.21	15,142.18	5,596.76	247.41	212.92	-89.23	5,710.98	-5,390.82	1,156.78	696.64	460.14	2.514	
17,100.00	5,612.89	15,242.18	5,597.39	249.64	215.18	-89.23	5,781.69	-5,461.53	1,156.78	692.15	464.63	2.490	
17,200.00	5,613.57	15,342.18	5,598.03	251.87	217.45	-89.23	5,852.39	-5,532.24	1,156.78	687.66	469.12	2.466	
17,300.00	5,614.25	15,442.18	5,598.67	254.10	219.71	-89.23	5,923.10	-5,602.95	1,156.78	683.17	473.61	2.442	
17,400.00	5,614.93	15,542.18	5,599.31	256.33	221.98	-89.23	5,993.81	-5,673.66	1,156.79	678.68	478.11	2.420	
17,410.95	5,615.00	15,553.12	5,599.38	256.57	222.23	-89.23	6,001.55	-5,681.40	1,156.79	678.19	478.60	2.417 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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (130, 135, 136 & 137) - Ridge Unit No. 136H - Original Hole - rev1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Rule Assigned:													Warning	
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-109.76	-13.54	-37.70	40.06					
100.00	100.00	100.00	100.00	0.13	0.13	-109.76	-13.54	-37.70	40.06	39.79	0.27	148.986		
200.00	200.00	200.00	200.00	0.49	0.49	-109.76	-13.54	-37.70	40.06	39.07	0.99	40.633		
300.00	300.00	300.00	300.00	0.85	0.85	-109.76	-13.54	-37.70	40.06	38.35	1.70	23.524		
400.00	400.00	400.00	400.00	1.21	1.21	-109.76	-13.54	-37.70	40.06	37.64	2.42	16.554		
500.00	500.00	500.00	500.00	1.57	1.57	-109.76	-13.54	-37.70	40.06	36.92	3.14	12.770 CC, ES		
600.00	599.95	599.95	599.95	1.92	1.93	139.83	-13.54	-37.70	42.02	38.18	3.84	10.935		
700.00	699.63	699.63	699.63	2.27	2.28	145.73	-13.54	-37.70	48.28	43.74	4.55	10.616 SF		
800.00	798.77	798.77	798.77	2.63	2.64	152.65	-13.54	-37.70	59.54	54.28	5.26	11.313		
900.00	897.08	897.08	897.08	3.03	2.99	158.76	-13.54	-37.70	76.22	70.24	5.98	12.740		
1,000.00	994.31	994.31	994.31	3.48	3.34	163.49	-13.54	-37.70	98.39	91.68	6.70	14.678		
1,100.00	1,090.18	1,089.61	1,089.58	3.98	3.67	165.94	-15.57	-38.25	126.13	118.72	7.41	17.030		
1,200.00	1,184.43	1,183.25	1,182.97	4.55	3.98	166.08	-22.01	-40.01	159.29	151.19	8.10	19.658		
1,300.00	1,276.81	1,274.70	1,273.75	5.20	4.29	165.01	-32.56	-42.89	197.65	188.84	8.81	22.425		
1,400.00	1,367.06	1,363.43	1,361.24	5.94	4.60	163.37	-46.80	-46.78	241.14	231.60	9.55	25.262		
1,500.00	1,454.93	1,448.99	1,444.86	6.77	4.93	161.47	-64.22	-51.54	289.71	279.41	10.30	28.120		
1,600.00	1,540.18	1,531.01	1,524.20	7.71	5.26	159.46	-84.30	-57.02	343.25	332.16	11.09	30.962		
1,700.00	1,622.59	1,610.09	1,599.81	8.75	5.61	157.43	-106.62	-63.11	401.53	389.63	11.90	33.734		
1,800.00	1,701.91	1,688.11	1,674.17	9.90	5.98	155.72	-129.39	-69.33	463.91	451.15	12.76	36.351		
1,900.00	1,778.60	1,763.74	1,746.26	11.15	6.35	154.98	-151.47	-75.36	529.29	515.65	13.63	38.820		
2,000.00	1,855.05	1,839.16	1,818.14	12.42	6.73	154.75	-173.49	-81.37	594.93	580.42	14.52	40.980		
2,100.00	1,931.49	1,914.57	1,890.01	13.72	7.12	154.55	-195.50	-87.39	660.59	645.16	15.43	42.825		
2,200.00	2,007.94	1,989.99	1,961.89	15.03	7.52	154.40	-217.52	-93.40	726.24	709.89	16.35	44.408		
2,300.00	2,084.38	2,065.40	2,033.77	16.36	7.93	154.27	-239.53	-99.41	791.90	774.60	17.30	45.775		
2,400.00	2,160.83	2,140.82	2,105.65	17.69	8.34	154.16	-261.55	-105.42	857.56	839.30	18.26	46.965		
2,500.00	2,237.28	2,216.23	2,177.53	19.03	8.76	154.06	-283.56	-111.43	923.22	903.99	19.23	48.006		
2,600.00	2,313.72	2,291.64	2,249.41	20.37	9.18	153.98	-305.58	-117.44	988.88	968.67	20.21	48.921		
2,700.00	2,390.17	2,367.06	2,321.29	21.72	9.61	153.91	-327.59	-123.46	1,054.55	1,033.34	21.21	49.728		
2,800.00	2,466.61	2,442.47	2,393.17	23.07	10.04	153.84	-349.61	-129.47	1,120.21	1,098.00	22.21	50.445		
2,900.00	2,543.06	2,517.89	2,465.05	24.43	10.47	153.78	-371.62	-135.48	1,185.87	1,162.66	23.21	51.087		
3,000.00	2,619.50	2,593.30	2,536.92	25.78	10.91	153.73	-393.64	-141.49	1,251.54	1,227.31	24.23	51.661		
3,100.00	2,695.95	2,668.72	2,608.80	27.14	11.35	153.69	-415.65	-147.50	1,317.21	1,291.96	25.24	52.178		
3,200.00	2,772.40	2,744.13	2,680.68	28.50	11.79	153.65	-437.67	-153.51	1,382.87	1,356.61	26.27	52.645		
3,300.00	2,848.84	2,819.55	2,752.56	29.86	12.23	153.61	-459.69	-159.52	1,448.54	1,421.24	27.30	53.069		
3,400.00	2,925.29	2,894.96	2,824.44	31.23	12.67	153.57	-481.70	-165.54	1,514.21	1,485.88	28.33	53.456		
3,500.00	3,001.73	2,970.38	2,896.32	32.59	13.12	153.54	-503.72	-171.55	1,579.87	1,550.51	29.36	53.808		
3,600.00	3,078.18	3,045.79	2,968.20	33.96	13.56	153.51	-525.73	-177.56	1,645.54	1,615.14	30.40	54.132		
3,700.00	3,154.62	3,121.21	3,040.08	35.33	14.01	153.49	-547.75	-183.57	1,711.21	1,679.77	31.44	54.429		
3,800.00	3,231.07	3,196.62	3,111.95	36.69	14.46	153.46	-569.76	-189.58	1,776.88	1,744.40	32.48	54.703		
3,900.00	3,307.52	3,272.03	3,183.83	38.06	14.91	153.44	-591.78	-195.59	1,842.55	1,809.02	33.53	54.956		
4,000.00	3,383.96	3,347.45	3,255.71	39.43	15.36	153.42	-613.79	-201.61	1,908.22	1,873.64	34.58	55.190		

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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: Ridge Unit (130, 135, 136 & 137) - Ridge Unit No. 137H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-109.92	-20.49	-56.55	60.14				
100.00	100.00	100.00	100.00	0.13	0.13	-109.92	-20.49	-56.55	60.14	59.88	0.27	223.708	
200.00	200.00	200.00	200.00	0.49	0.49	-109.92	-20.49	-56.55	60.14	59.16	0.99	61.011	
300.00	300.00	300.00	300.00	0.85	0.85	-109.92	-20.49	-56.55	60.14	58.44	1.70	35.322	
400.00	400.00	400.00	400.00	1.21	1.21	-109.92	-20.49	-56.55	60.14	57.73	2.42	24.856	
500.00	500.00	500.00	500.00	1.57	1.57	-109.92	-20.49	-56.55	60.14	57.01	3.14	19.175 CC, ES	
600.00	599.95	599.95	599.95	1.92	1.93	138.89	-20.49	-56.55	62.09	58.25	3.84	16.158	
700.00	699.63	699.63	699.63	2.27	2.28	143.11	-20.49	-56.55	68.20	63.65	4.55	14.995 SF	
800.00	798.77	798.77	798.77	2.63	2.64	148.61	-20.49	-56.55	79.05	73.78	5.26	15.017	
900.00	897.08	892.75	892.71	3.03	2.97	153.34	-21.46	-58.58	97.30	91.34	5.96	16.316	
1,000.00	994.31	983.77	983.48	3.48	3.28	156.40	-24.27	-64.53	125.00	118.36	6.64	18.817	
1,100.00	1,090.18	1,070.89	1,069.98	3.98	3.59	158.08	-28.70	-73.88	161.50	154.19	7.30	22.109	
1,200.00	1,184.43	1,153.30	1,151.29	4.55	3.89	158.84	-34.44	-86.00	206.15	198.21	7.95	25.942	
1,300.00	1,276.81	1,230.39	1,226.75	5.20	4.20	159.03	-41.16	-100.19	258.33	249.77	8.57	30.160	
1,400.00	1,367.06	1,300.00	1,294.31	5.94	4.49	158.83	-48.35	-115.36	317.41	308.27	9.14	34.725	
1,500.00	1,454.93	1,367.09	1,358.79	6.77	4.80	158.39	-56.27	-132.08	382.73	373.00	9.73	39.335	
1,600.00	1,540.18	1,426.38	1,415.21	7.71	5.10	157.70	-64.07	-148.55	453.68	443.42	10.26	44.214	
1,700.00	1,622.59	1,479.64	1,465.39	8.75	5.38	156.80	-71.71	-164.69	529.63	518.86	10.77	49.182	
1,800.00	1,701.91	1,527.01	1,509.58	9.90	5.65	155.64	-79.01	-180.10	610.00	598.76	11.25	54.239	
1,900.00	1,778.60	1,569.31	1,548.67	11.15	5.90	155.41	-85.92	-194.69	693.74	682.05	11.69	59.341	
2,000.00	1,855.05	1,600.00	1,576.81	12.42	6.08	155.68	-91.17	-205.77	778.73	766.73	11.99	64.922	
2,100.00	1,931.49	1,646.75	1,619.28	13.72	6.40	155.96	-99.53	-223.43	864.47	851.96	12.51	69.102	
2,200.00	2,007.94	1,689.77	1,657.93	15.03	6.69	156.11	-107.62	-240.50	951.14	938.15	12.99	73.213	
2,300.00	2,084.38	1,728.31	1,692.36	16.36	6.97	156.19	-115.03	-256.14	1,038.27	1,024.83	13.43	77.286	
2,400.00	2,160.83	1,777.28	1,736.12	17.69	7.33	156.29	-124.45	-276.03	1,125.45	1,111.43	14.02	80.291	
2,500.00	2,237.28	1,826.26	1,779.87	19.03	7.69	156.37	-133.86	-295.91	1,212.64	1,198.02	14.61	82.999	
2,600.00	2,313.72	1,875.23	1,823.62	20.37	8.07	156.44	-143.28	-315.79	1,299.82	1,284.61	15.21	85.446	
2,700.00	2,390.17	1,924.20	1,867.38	21.72	8.45	156.51	-152.70	-335.67	1,387.00	1,371.18	15.82	87.663	
2,800.00	2,466.61	1,973.17	1,911.13	23.07	8.83	156.56	-162.11	-355.55	1,474.19	1,457.75	16.44	89.676	
2,900.00	2,543.06	2,022.15	1,954.88	24.43	9.22	156.61	-171.53	-375.43	1,561.37	1,544.31	17.06	91.511	
3,000.00	2,619.50	2,071.12	1,998.64	25.78	9.61	156.65	-180.95	-395.32	1,648.56	1,630.87	17.69	93.184	
3,100.00	2,695.95	2,120.09	2,042.39	27.14	10.01	156.69	-190.36	-415.20	1,735.75	1,717.42	18.33	94.718	
3,200.00	2,772.40	2,169.06	2,086.14	28.50	10.41	156.73	-199.78	-435.08	1,822.93	1,803.97	18.96	96.123	
3,300.00	2,848.84	2,218.04	2,129.90	29.86	10.81	156.76	-209.20	-454.96	1,910.12	1,890.51	19.61	97.417	

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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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=6832+25 @ 6857.00ft

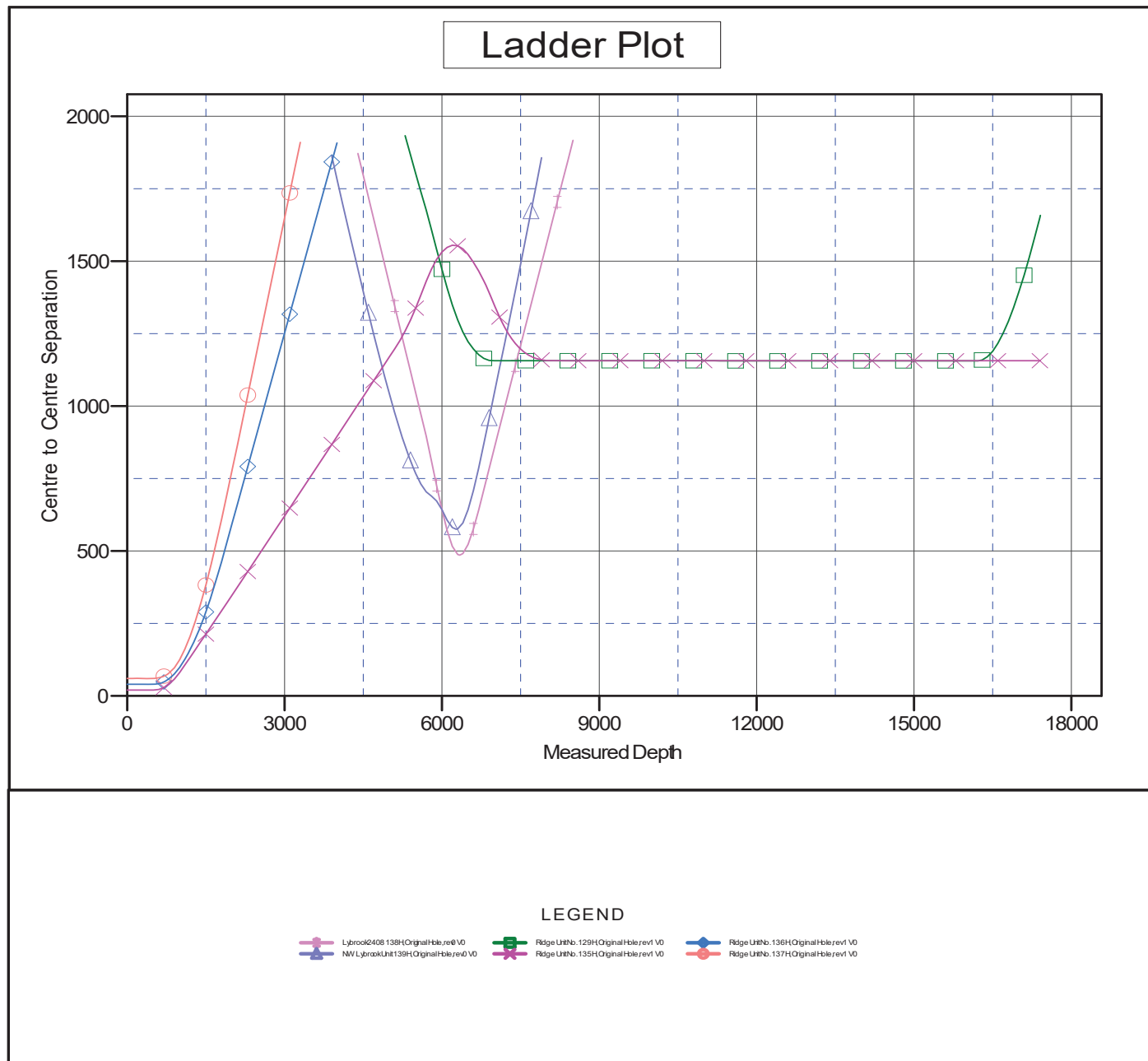
Offset Depths are relative to Offset Datum

Central Meridian is -107.833333333

Coordinates are relative to: Ridge Unit No. 130H

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

Grid Convergence at Surface is: 0.11°



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 Ridge Unit No. 130H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6832+25 @ 6857.00ft
Reference Site:	Ridge Unit (130, 135, 136 & 137)	MD Reference:	RKB=6832+25 @ 6857.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 130H	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=6832+25 @ 6857.00ft

Offset Depths are relative to Offset Datum

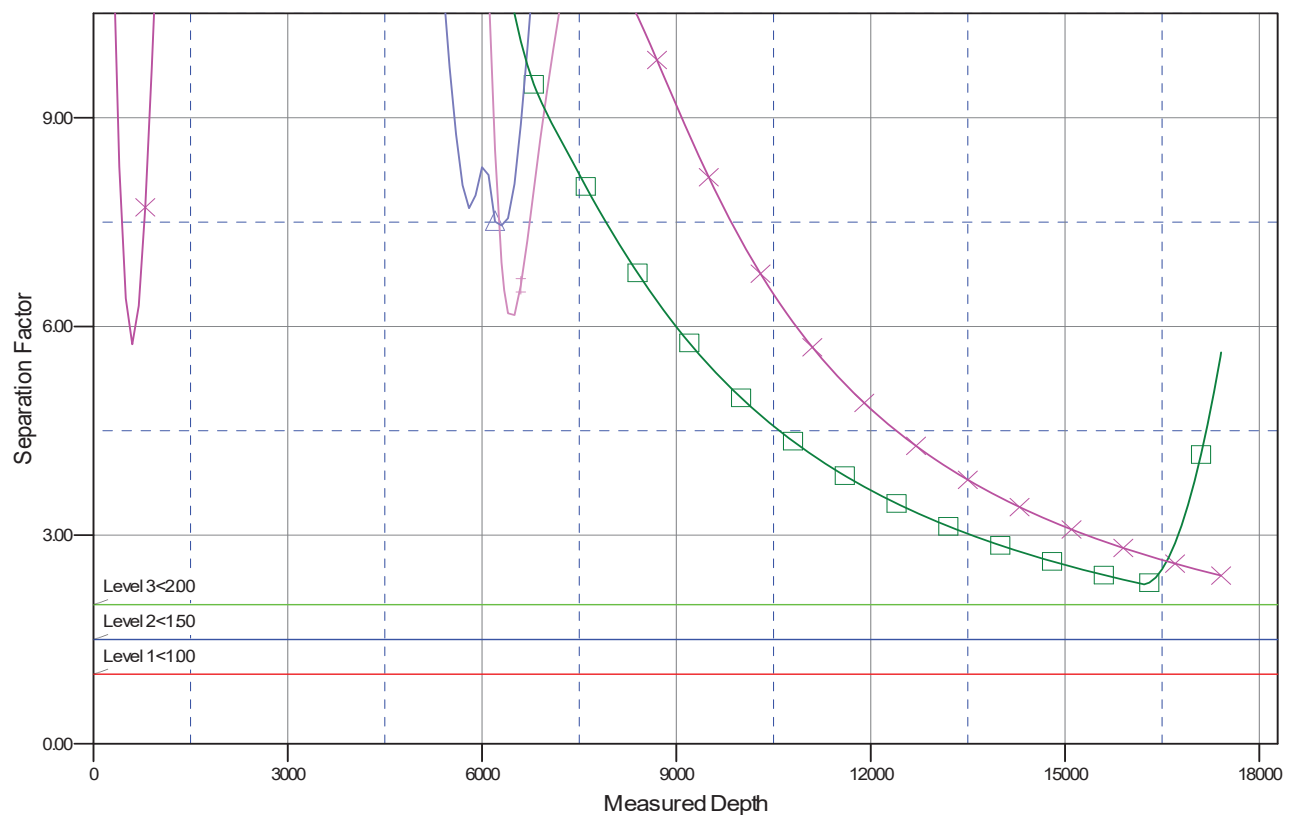
Central Meridian is -107.83333333

Coordinates are relative to: Ridge Unit No. 130H

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

Grid Convergence at Surface is: 0.11°

Separation Factor Plot



LEGEND

Ljbrook2408.138HOriginalHole.rev1 V0
 NW LjbrookUnit139HOriginalHole.rev1 V0
 Ridge UnitNo. 129HOriginalHole.rev1 V0
 Ridge UnitNo. 135HOriginalHole.rev1 V0
 Ridge UnitNo. 136HOriginalHole.rev1 V0
 Ridge UnitNo. 137HOriginalHole.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

#130H RIDGE UNIT

Lease: NMNM138391 Agreement: NMNM140471X

SH: SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 26, T. 24N., R. 8W.

San Juan County, New Mexico

BH: NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 22, T. 24N., R. 8W.

San Juan County, New Mexico

***Above Data Required on Well Sign**

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

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

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

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

I. GENERAL

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

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

II. REPORTING REQUIREMENTS

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

III. DRILLER'S LOG

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

IV. GAS FLARING

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

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

V. SAFETY

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

VI. CHANGE OF PLANS OR ABANDONMENT

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

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 413034

CONDITIONS

Operator: DJR OPERATING, LLC 200 Energy Court Farmington, NM 87401	OGRID: 371838
	Action Number: 413034
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
scrues76	Cement is required to circulate on both surface and intermediate1 strings of casing.	12/17/2024
scrues76	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	12/17/2024
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	1/13/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	1/13/2025
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	1/13/2025
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	1/13/2025