

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	3b. Phone No. (include area code)	9. API Well No. 30-045-38426
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		12. County or Parish
16. No of acres in lease		13. State
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: SENE / 2371 FNL / 1252 FEL / TWSP: 24N / RANGE: 8W / SECTION: 25 / LAT: 36.285848 / LONG: -107.628708 (TVD: 0 feet, MD: 0 feet)
PPP: SENE / 2363 FNL / 737 FEL / TWSP: 24N / RANGE: 8W / SECTION: 25 / LAT: 36.28585 / LONG: -107.626961 (TVD: 5568 feet, MD: 5836 feet)
PPP: NENE / 2180 FSL / 1 FEL / TWSP: 24N / RANGE: 8W / SECTION: 23 / LAT: 36.304111 / LONG: -107.654621 (TVD: 5728 feet, MD: 16649 feet)
PPP: SESW / 1 FSL / 2137 FWL / TWSP: 24N / RANGE: 8W / SECTION: 24 / LAT: 36.292428 / LONG: -107.635053 (TVD: 5728 feet, MD: 16649 feet)
PPP: NESE / 2180 FSL / 1 FEL / TWSP: 24N / RANGE: 8W / SECTION: 23 / LAT: 36.298491 / LONG: -107.642512 (TVD: 5728 feet, MD: 16649 feet)
BHL: NENW / 231 FNL / 2522 FWL / TWSP: 24N / RANGE: 8W / SECTION: 23 / LAT: 36.306219 / LONG: -107.652024 (TVD: 5728 feet, MD: 16649 feet)

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 30-045-38426	Pool Code 42289	Pool Name LYBROOK GALLUP
Property Code 336777	Property Name RIDGE UNIT	Well Number 127H
OGRID No. 372286	Operator Name ENDURING RESOURCES, LLC	Ground Level Elevation 6923'
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 H	Section 25	Township 24N	Range 8W	Lot	Feet from N/S Line 2371' NORTH	Feet from E/W Line 1252' EAST	Latitude 36.285848 °N	Longitude -107.628708 °W	County SAN JUAN
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Bottom Hole Location

UL C	Section 23	Township 24N	Range 8W	Lot	Feet from N/S Line 231' NORTH	Feet from E/W Line 2522' WEST	Latitude 36.306219 °N	Longitude -107.652024 °W	County SAN JUAN
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Penetrated Spacing Unit:

Dedicated Acres 600.00	NE/4 NW/4, NE/4 NE/4 SE/4 - Section 23 SW/4 NW/4, SW/4 - Section 24 NE/4 NW/4, NW/4 NE/4, S/2 NE/4 - Section 25	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit <input type="checkbox"/> Yes <input type="checkbox"/> No	Consolidation Code UNIT
Order Numbers R-20594		Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Kick Off Point (KOP)

UL H	Section 25	Township 24N	Range 8W	Lot	Feet from N/S Line 2371' NORTH	Feet from E/W Line 1252' EAST	Latitude 36.285848 °N	Longitude -107.628708 °W	County SAN JUAN
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First Take Point (FTP)

UL H	Section 25	Township 24N	Range 8W	Lot	Feet from N/S Line 2363' NORTH	Feet from E/W Line 737' EAST	Latitude 36.285850 °N	Longitude -107.626961 °W	County SAN JUAN
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Last Take Point (LTP)

UL C	Section 23	Township 24N	Range 8W	Lot	Feet from N/S Line 231' NORTH	Feet from E/W Line 2522' WEST	Latitude 36.306219 °N	Longitude -107.652024 °W	County SAN JUAN
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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
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OPERATOR CERTIFICATION

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

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

Shaw-Marie Ford
Signature

1/13/2025
Date

Shaw-Marie Ford
Printed Name

sford@enduringresources.com
E-mail Address

SURVEYOR CERTIFICATION

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



JASON C. EDWARDS

Signature and Seal of Professional Surveyor

Certificate Number 15269 Date of Survey OCTOBER 29, 2021

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

LAST TAKE POINT (LTP)
231' FNL 2522' FWL
SECTION 23, T24N, R8W

BOTTOM HOLE LOCATION (BHL)
231' FNL 2522' FWL
SECTION 23, T24N, R8W

LAT 36.306219°N
LONG -107.652024°W
DATUM: NAD1983

LAT 36.306219°N
LONG -107.652024°W
DATUM: NAD1983

SURFACE LOCATION (SHL)
2371' FNL 1252' FEL
SECTION 25, T24N, R8W

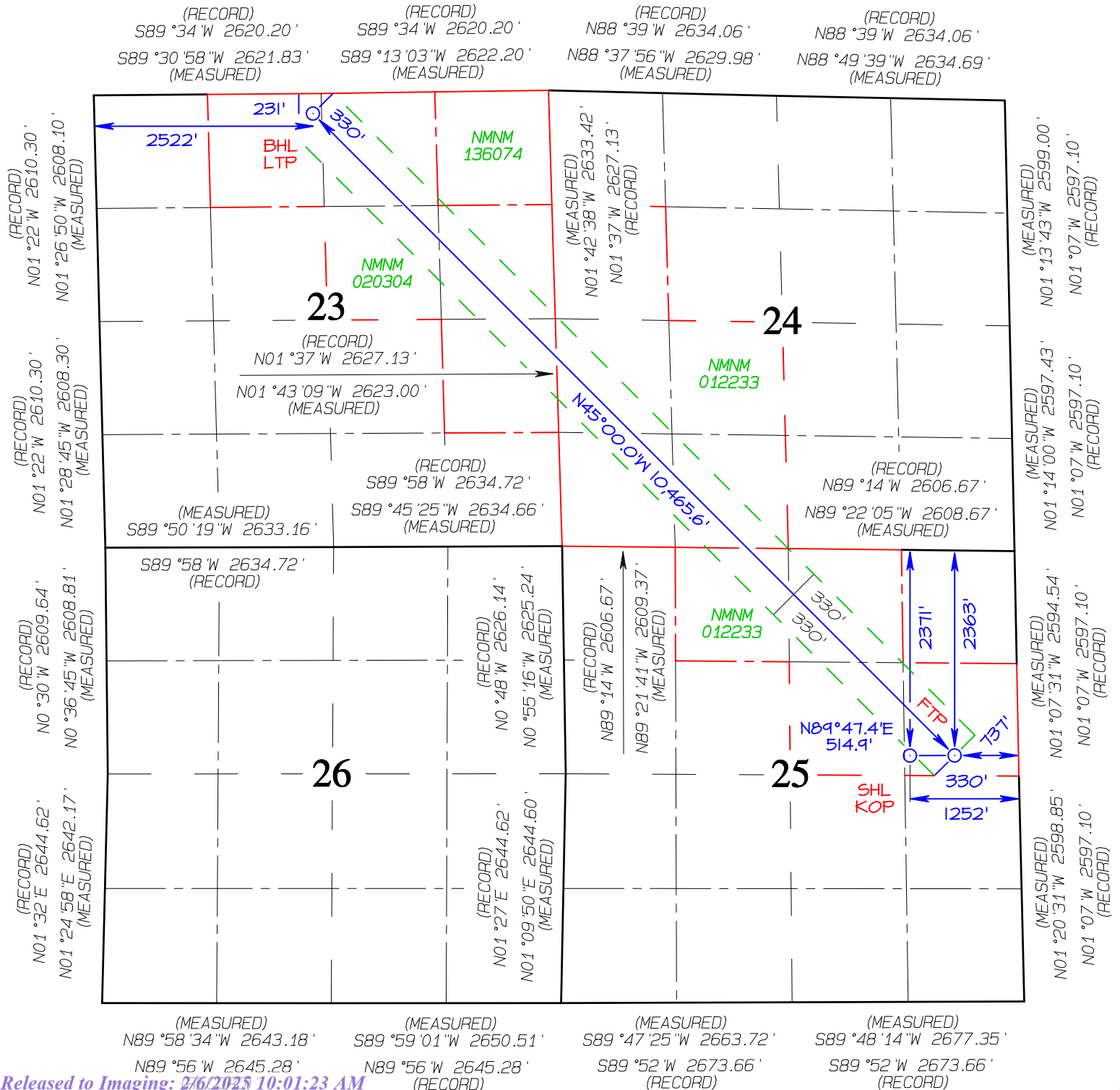
KICK OFF POINT (KOP)
2371' FNL 1252' FEL
SECTION 25, T24N, R8W

FIRST TAKE POINT (FTP)
2363' FNL 737' FEL
SECTION 25, T24N, R8W

LAT 36.285848°N
LONG -107.628708°W
DATUM: NAD1983

LAT 36.285848°N
LONG -107.628708°W
DATUM: NAD1983

LAT 36.285850°N
LONG -107.626961°W
DATUM: NAD1983



State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Enduring Resources, LLC **OGRID:** 372286 **Date:** 1/14/2025

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Ridge Unit 124H	TBD	H-25-24N-8W	2371 FNL x 1232 FEL	595	2381	238
Ridge Unit 127H	TBD	H-25-24N-8W	2371 FNL x 1252 FEL	608	2432	243
Ridge Unit 128H	TBD	H-25-24N-8W	2371 FNL x 1272 FEL	544	2177	218
Ridge Unit 129H	TBD	H-25-24N-8W	2371 FNL x 1292 FEL	510	2041	204
				3-year Decline	3-year Decline	3-year Decline
Ridge Unit 124H	TBD	H-25-24N-8W	2371 FNL x 1232 FEL	134	538	54
Ridge Unit 127H	TBD	H-25-24N-8W	2371 FNL x 1252 FEL	137	549	55
Ridge Unit 128H	TBD	H-25-24N-8W	2371 FNL x 1272 FEL	123	492	49
Ridge Unit 129H	TBD	H-25-24N-8W	2371 FNL x 1292 FEL	115	461	46

IV. Central Delivery Point Name: Ridge Unit CDP [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 124H	TBD	9/22/2025	10/2/2025	11/5/2025	11/20/2025	11/22/2025
Ridge Unit 127H	TBD	10/3/2025	10/13/2025	11/5/2025	11/25/2025	11/27/2025
Ridge Unit 128H	TBD	10/14/2025	10/23/2025	11/5/2025	11/30/2025	12/2/2025
Ridge Unit 129H	TBD	10/24/2025	11/2/2025	11/5/2025	12/5/2025	12/7/2025

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: 1/14/2025
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 124H 127H 128H and 129H

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 124H 127H 128H and 129H

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 124H 127H 128H and 129H

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 124H 127H 128H and 129H

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, CO 80111

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

WELL INFORMATION:

Name: RIDGE UNIT 127H

API Number: Not yet assigned

State: New Mexico

County: San Juan

Surface Elevation: 6,923 ft ASL (GL)

6,948 ft ASL (KB)

Surface Location: 25-24N-08W Sec-Twn-Rng

2,371 ft FNL

1,252 ft FEL

36.285848 ° N latitude

107.628708 ° W longitude

(NAD 83)

BH Location: 23-24N-08W Sec-Twn-Rng

231 ft FNL

2,522 ft FWL

36.306219 ° N latitude

107.652024 ° 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 43.5 miles to County Road 7998, Left (North) on CR 7998 for 1.0 miles to fork in road, Left (North-West) on lease road for 0.2 miles to fork in road, Right (Straight)(West) for 0.4 miles to fork, Right (North-East) for 0.6 miles to access road, right on access road for 0.4 miles to Ridge Unit 127H Pad. The 127H well is the 2nd furthest from the East as well as from the location entrance.

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	5,590	1,358	1,359	W	normal
	Kirtland	5,475	1,473	1,475	W	normal
	Fruitland	5,230	1,718	1,729	G, W	sub
	Pictured Cliffs	4,935	2,013	2,040	G, W	sub
	Lewis	4,810	2,138	2,172	G, W	normal
	Chacra	4,500	2,448	2,490	G, W	normal
	Cliff House	3,400	3,548	3,659	G, W	sub
	Menefee	3,385	3,563	3,674	G, W	normal
	Point Lookout	2,555	4,393	4,548	G, W	normal
	Mancos	2,330	4,618	4,777	O,G	sub (~0.38)
	Gallup (MNCS_A)	1,960	4,988	5,148	O,G	sub (~0.38)
	MNCS_B	1,880	5,068	5,228	O,G	sub (~0.38)
	MNCS_C	1,755	5,193	5,354	O,G	sub (~0.38)
	MNCS_Cms	1,670	5,278	5,443	O,G	sub (~0.38)
	MNCS_D	1,600	5,348	5,521	O,G	sub (~0.38)
	MNCS_E	1,520	5,428	5,614	O,G	sub (~0.38)
	MNCS_F	1,465	5,483	5,692	O,G	sub (~0.38)
	MNCS_G	1,380	5,568	5,836	O,G	sub (~0.38)
	MNCS_H	1,340	5,608	5,918	O,G	sub (~0.38)
	MNCS_I	1,290	5,658	6,069	O,G	sub (~0.38)
	P.O.E. TARGET	1,380	5,568	5,836	O,G	sub (~0.38)
	PROJECTED TD	1,220	5,728	16,649	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: 2,470 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,210 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 single & double gate rams (13-5/8", 3,000 psi)

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

Choke 3", 5,000 psi

KB-GL (ft): 25

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

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 intalled on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when the there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement:

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

Closed-Loop System:

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

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

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

Fluid Program: See "Detailed Drilling Plan" section for additional details. Sufficient barite will be on location to weight up mud system to balance maximum anticipated pressure gradient.

DETAILED DRILLING PLAN:

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

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

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

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

Hole Size: 17-1/2"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, deviation survey

Logging: None

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	800	116,634	116,634
Min. S.F.					7.39	3.41	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

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

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

350 ft (MD)	to	3,832 ft (MD)	Hole Section Length:	3,482 ft
350 ft (TVD)	to	3,713 ft (TVD)	Casing Required:	3,832 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					1,622	1,422	220,301	220,301
Min. S.F.					1.25	2.47	2.56	2.06

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Stage 1 Spacer	D-Mud Breaker	8.5				0	10 bbls	
Lead	90:10 Type III:POZ	12.5	2.140	12.05	70%	0	801	1,715
Tail	Type III	14.6	1.380	6.61	20%	3,332	150	207
Displacement	293 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.

3,832 ft (MD)	to	16,649 ft (MD)	Hole Section Length:	12,817 ft
3,713 ft (TVD)	to	5,728 ft (TVD)	Casing Required:	16,649 ft

Estimated KOP:	5,228 ft (MD)	5,068 ft (TVD)
Estimated Landing Point (P.O.E.):	5,836 ft (MD)	5,568 ft (TVD)
Estimated Lateral Length:	10,813 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					2,830	9,036	344,232	344,232
Min. S.F.					2.64	1.18	1.59	1.29

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	572	1,356
Tail	G:POZ blend	13.3	1.570	7.70	10%	4,777	1,914	3,004

Displacement 367 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	FP24 Defoamer .3% BWOB, IntegraSeal 0.25 lb/sx

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

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 10,713
Est Frac Inform: 45 Frac Stages 172,000 bbls slick water 13,930,000 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: 11/23/2023
Completion: 1/7/2024
Production: 2/6/2024

Prepared by: Alec Bridge 2/22/2019
Updated by: Greg Olson 7/15/2022 - updated directional plans to reflect updated development plan & well placement
G Olson 8/17/2023

WELL NAME: RIDGE UNIT 127H
OBJECTIVE: Drill, complete, and equip single lateral in the Mancos-I formation
API Number: Not yet assigned
State: New Mexico
County: San Juan

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	3,832 ft
KOP (MD)	5,228 ft
KOP (TVD)	5,068 ft
Target (TVD)	5,568 ft
Curve BUR	10 °/100 ft
POE (MD)	5,836 ft
TD (MD)	16,649 ft
Lat Len (ft)	10,813 ft

Surface Elev.: 6,923 ft ASL (GL) 6,948 ft ASL (KB)
Surface Location: 25-24N-08W Sec-Twn- Rng 2,371 ft FNL 1,252 ft FEL
BH Location: 23-24N-08W Sec-Twn- Rng 231 ft FNL 2522 ft FWL
Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM: South on US Hwy 550 for 43.5 miles to County Road 7998, Left (North) on CR 7998 for 1.0 miles to fork in road, Left (North-West) on lease road for 0.2 miles to fork in road, Right (Straight)(West) for 0.4 miles to fork, Right (North-East) for 0.6 miles to access road, right on access road for 0.4 miles to Ridge Unit 127H Pad. The 127H well is the 2nd furthest form the East as well as from the location entrance.

WELL CONSTRUCTION SUMMARY:

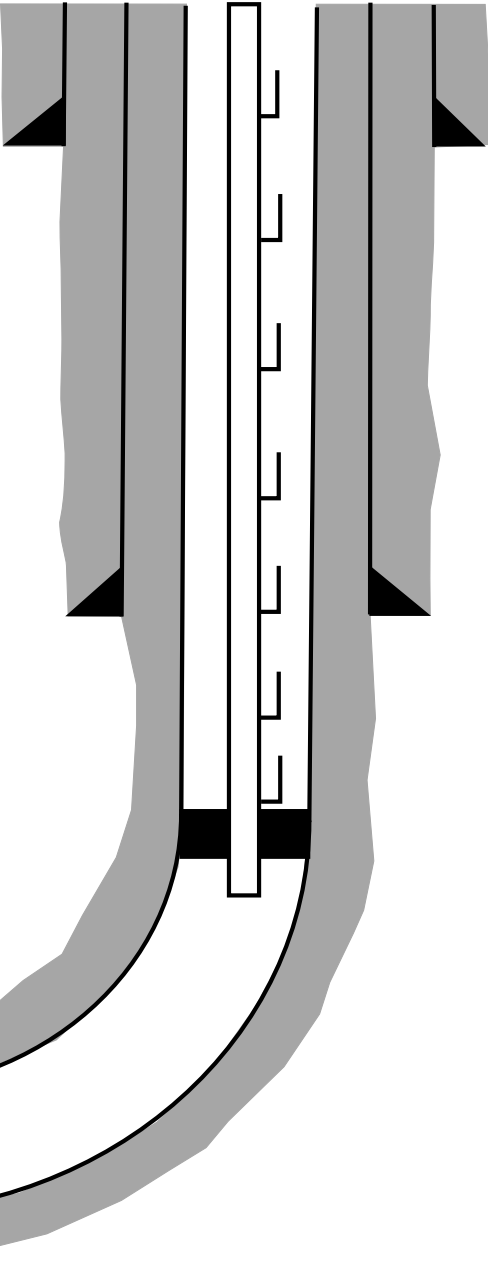
	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	3,832	9.625	36.0	J-55	LTC	0	3,832
Production	8.500	16,649	5.500	17.0	P-110	LTC	0	16,649

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	801	1,715
Inter. (Tail)	Type III	14.6	1.38	6.61	0.3132	20%	3,332	150	207
Prod. (Lead)	ASTM type I/II	12.4	2.37	13.4	0.2291	50%	0	572	1,356
Prod. (Tail)	G:POZ blend	13.3	1.57	7.7	0.2291	10%	4,777	1,914	3,004

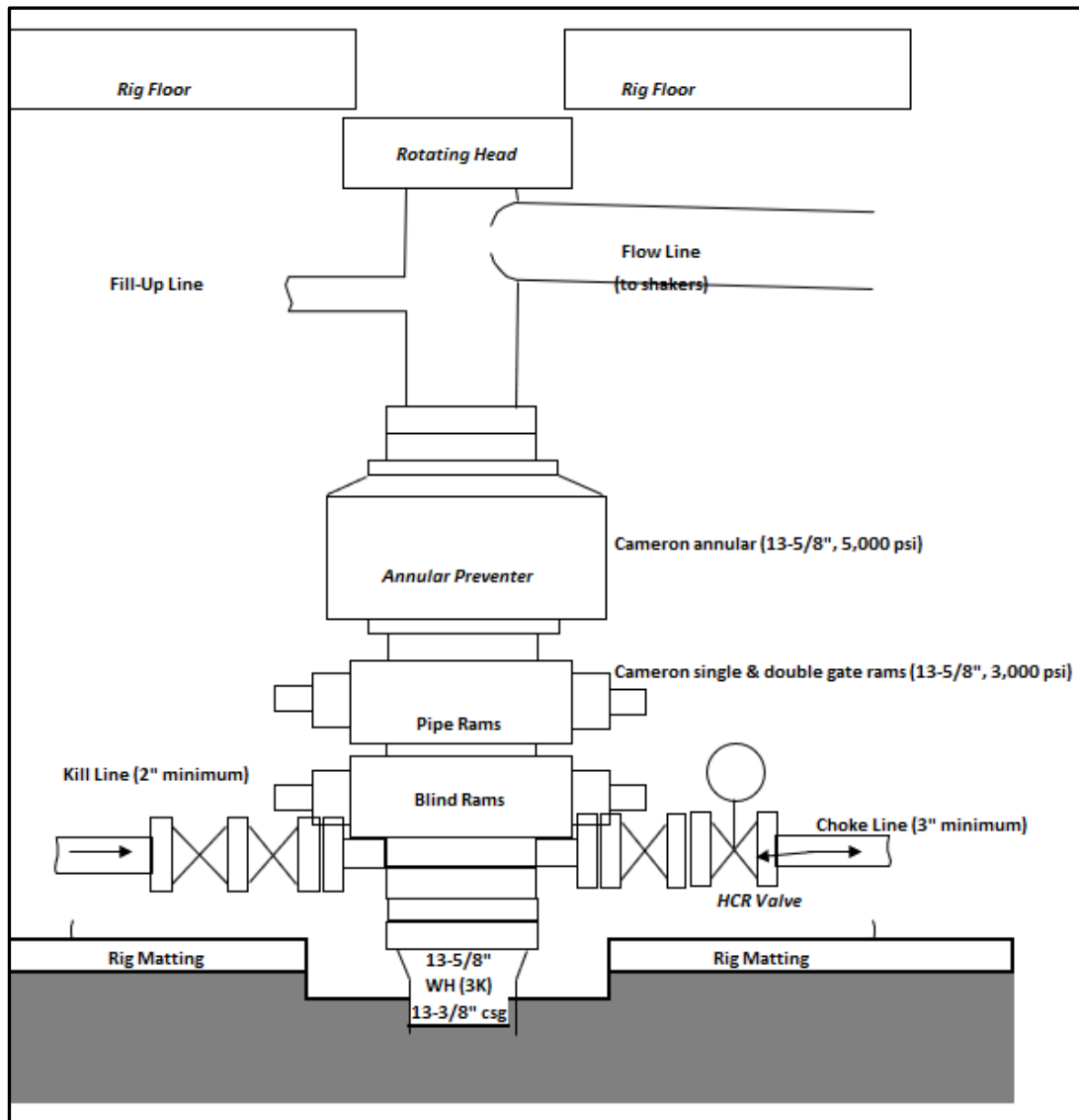
COMPLETION / PRODUCTION SUMMARY:

Frac: 55-stage (+/-) plug-and-perf frac with slick water and 18,000,000 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



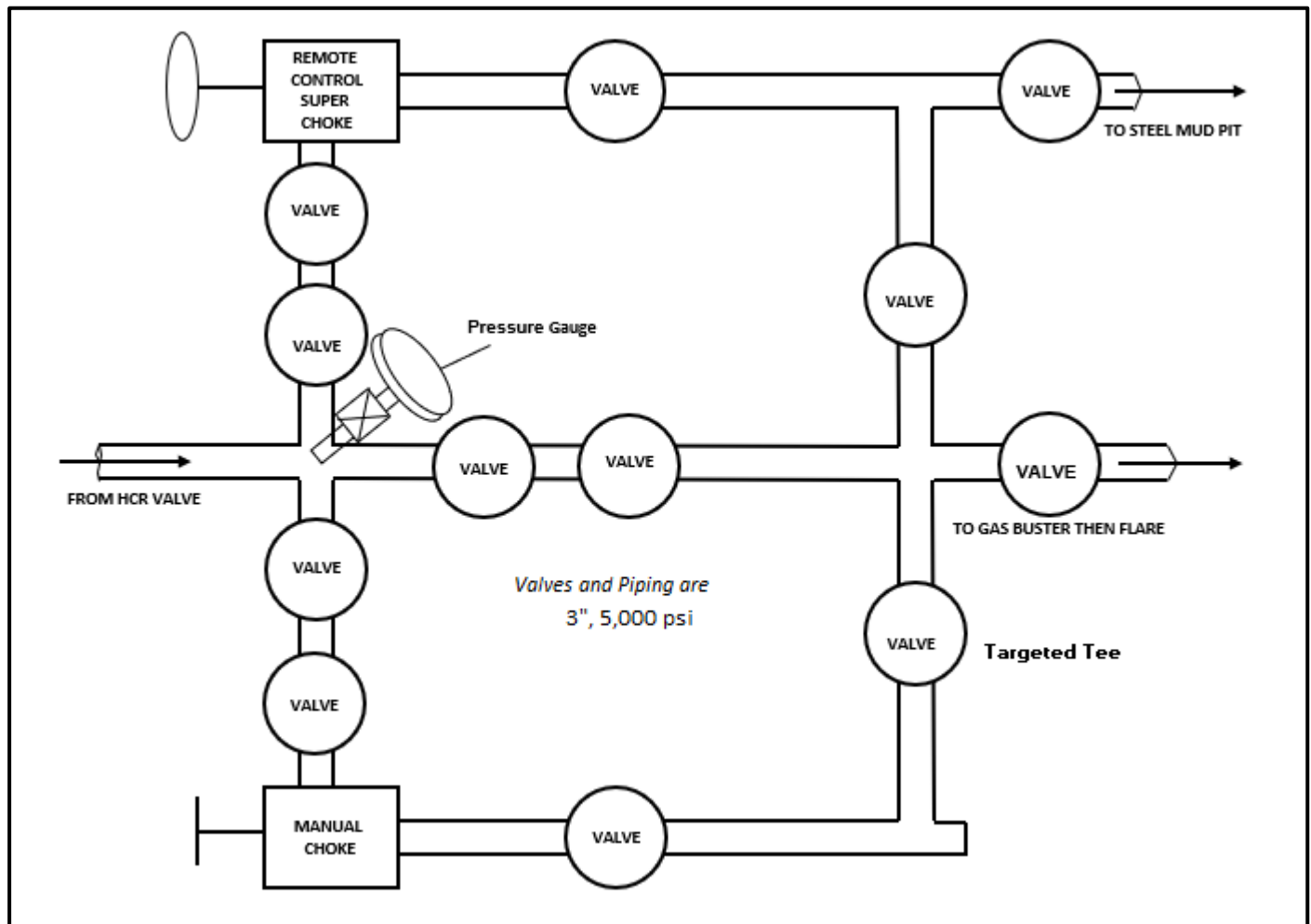


Enduring Resources IV, LLC BOPE Diagram





Enduring Resources IV, LLC CHOKE MANIFOLD





Well: Ridge Unit No. 127H
Site: Ridge Unit (124, 127, 128 & 129)
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 127H FTP 2363 FNL 737 FEL r1	5670.00	1.82	514.87	1923413.597	2783912.987	36.285850000	-107.626961000
Ridge 127H LTP 231 FNL 2522 FWL 330 perp r1	5728.00	7401.90	-6885.52	1930813.658	2776512.611	36.306219000	-107.652024000

CASING DETAILS

TVD	MD	Name
350.00	350.00	13 3/8" Csg
3713.00	3832.49	9 5/8" Csg

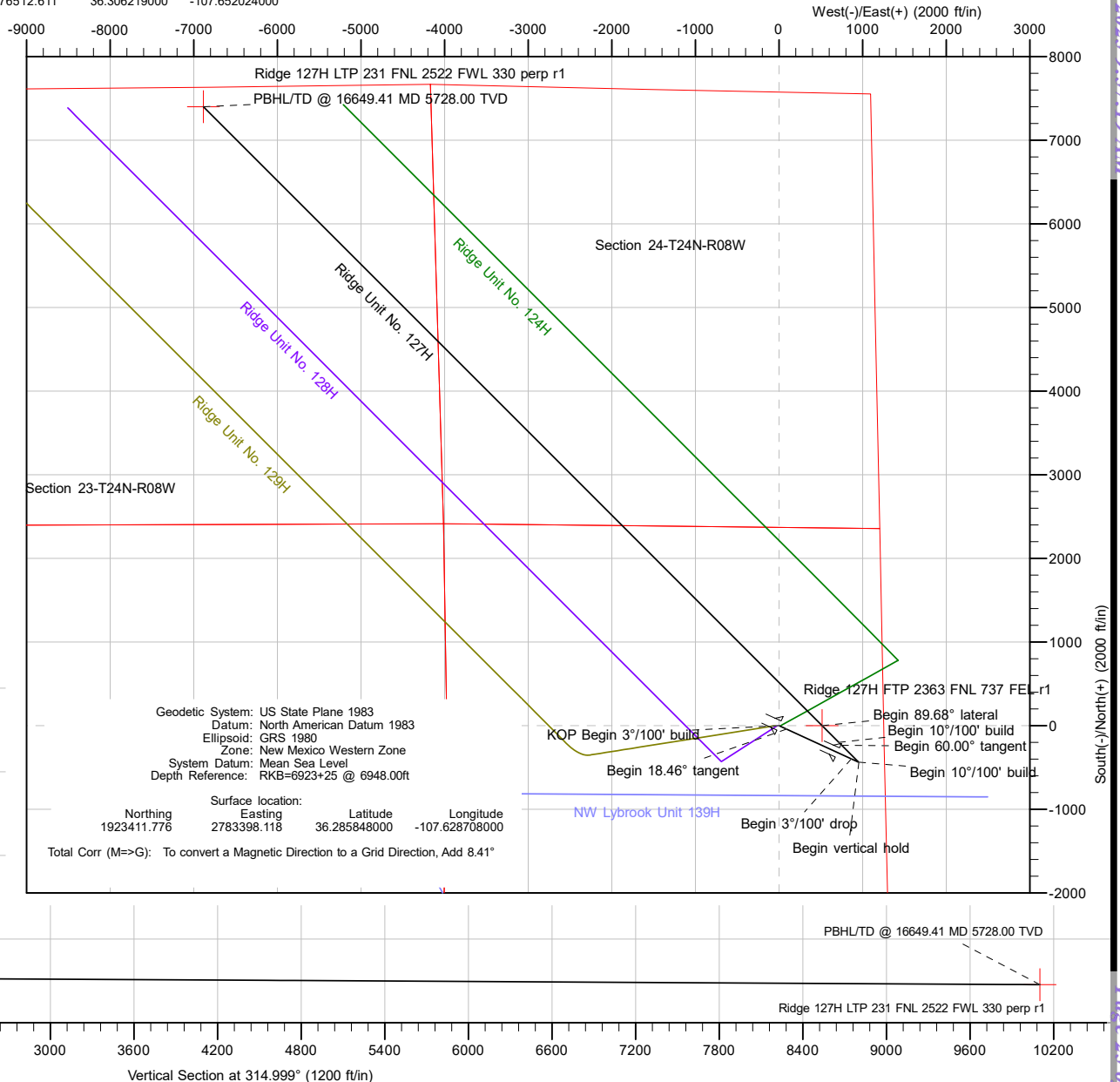
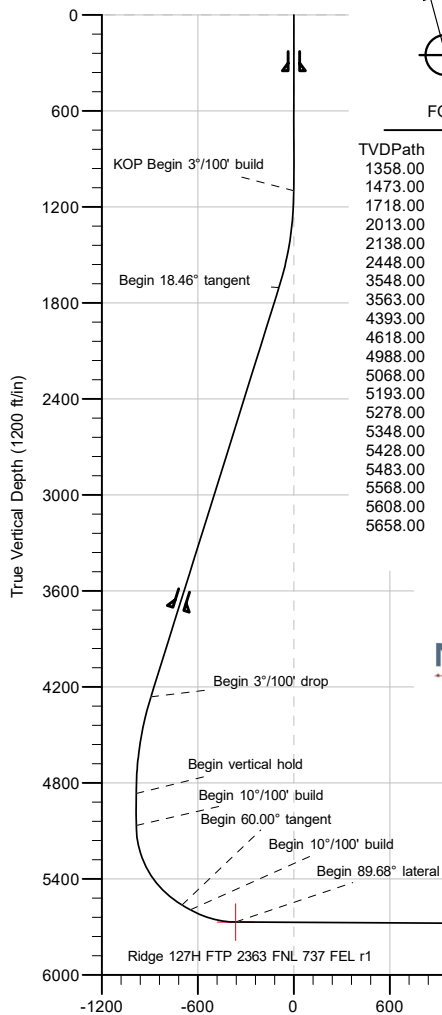


Azimuths to Grid North
True North: -0.12°
Magnetic North: 8.41°

Magnetic Field
Strength: 49133.2nT
Dip Angle: 62.77°
Date: 8/15/2023
Model: IGRF2020

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1358.00	1358.79	Ojo Alamo
1473.00	1475.41	Kirtland
1718.00	1729.31	Fruitland
2013.00	2040.31	Pictured Cliffs
2138.00	2172.08	Lewis
2448.00	2498.89	Chacra
3548.00	3658.54	Cliff House
3563.00	3674.35	Menefee
4393.00	4547.86	Point Lookout
4618.00	4777.15	Mancos
4988.00	5147.87	MNCS_A
5068.00	5227.87	MNCS_B
5193.00	5353.90	MNCS_C
5278.00	5442.95	MNCS_Cms
5348.00	5520.55	MNCS_D
5428.00	5617.40	MNCS_E
5483.00	5692.41	MNCS_F
5568.00	5836.42	MNCS_G
5608.00	5917.89	MNCS_H
5658.00	6069.41	MNCS_I



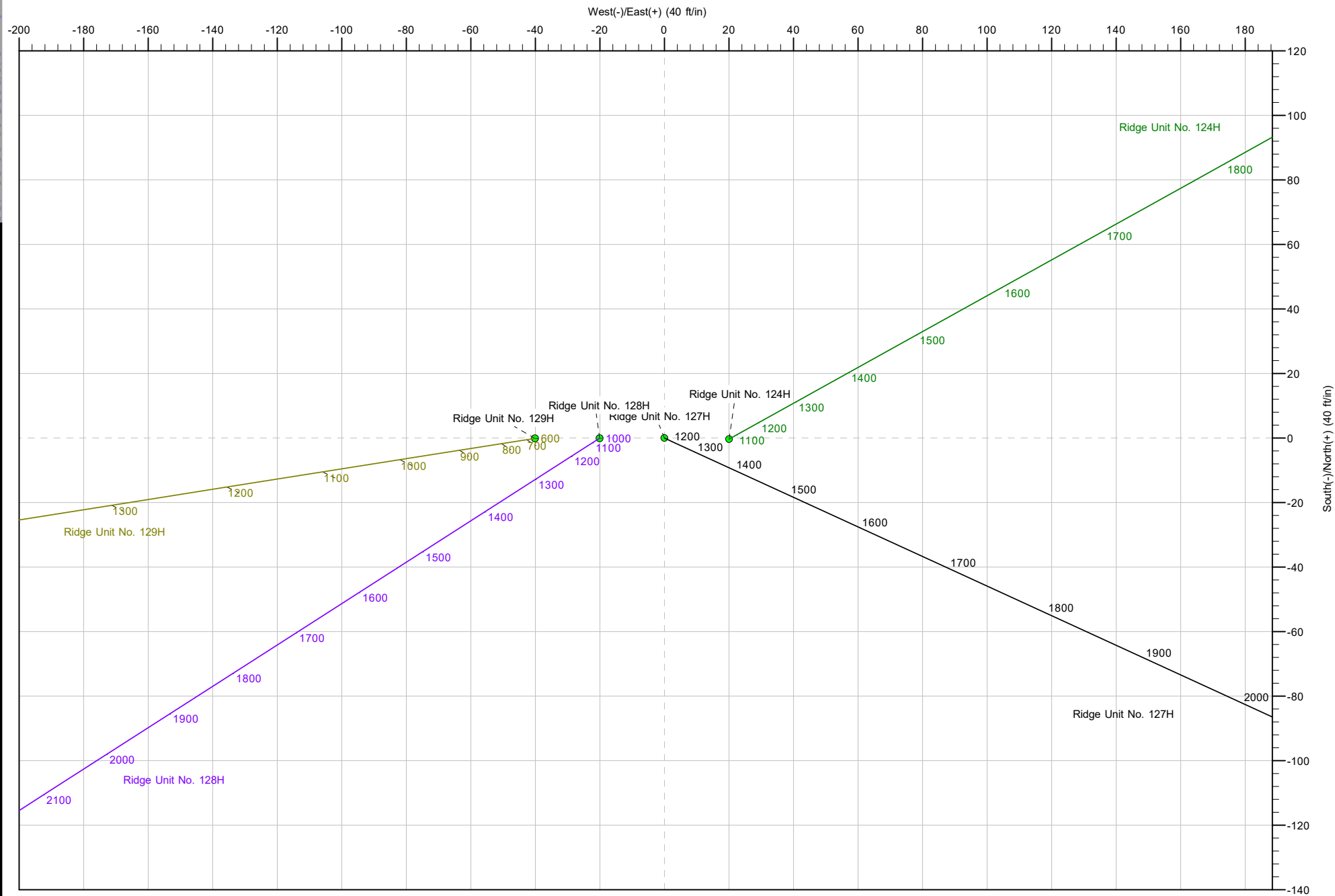
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6923+25 @ 6948.00ft

Surface location:
Northing 1923411.776 Easting 2783398.118 Latitude 36.285848000 Longitude -107.628708000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.41°



Well: Ridge Unit No. 127H
Site: Ridge Unit (124, 127, 128 & 129)
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. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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 (124, 127, 128 & 129)			
Site Position:		Northing:	1,923,411.454 usft	Latitude:	36.285847000
From:	Lat/Long	Easting:	2,783,418.160 usft	Longitude:	-107.628640000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Ridge Unit No. 127H, Surf loc: 2371 FNL 1252 FEL Section 25-T24N-R08W					
Well Position	+N/-S	0.00 ft	Northing:	1,923,411.776 usft	Latitude:	36.285848000
	+E/-W	0.00 ft	Easting:	2,783,398.118 usft	Longitude:	-107.628708000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,923.00 ft
Grid Convergence:		0.12 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/15/2023	8.53	62.77	49,133.21792487

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	314.999	

Plan Survey Tool Program	Date	8/16/2023			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,649.41	rev1 (Original Hole)	MWD	
				OWSG MWD - Standard	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,715.22	18.46	114.640	1,704.63	-40.96	89.29	3.00	3.00	0.00	114.64	
4,411.70	18.46	114.640	4,262.42	-396.85	865.23	0.00	0.00	0.00	0.00	
5,026.92	0.00	0.000	4,867.05	-437.81	954.52	3.00	-3.00	0.00	180.00	
5,226.92	0.00	0.000	5,067.05	-437.81	954.52	0.00	0.00	0.00	0.00	
5,826.92	60.00	314.999	5,563.25	-235.24	751.95	10.00	10.00	0.00	315.00	
5,886.92	60.00	314.999	5,593.25	-198.50	715.20	0.00	0.00	0.00	0.00	
6,183.74	89.68	314.999	5,670.00	1.82	514.87	10.00	10.00	0.00	0.00	
16,649.41	89.68	314.999	5,728.00	7,401.90	-6,885.52	0.00	0.00	0.00	0.00	Ridge 127H LTP 231



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
350.00	0.00	0.000	350.00	0.00	0.00	0.00	0.00	0.00	0.00	
13 3/8" Csg										
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP Begin 3°/100' build										
1,200.00	3.00	114.640	1,199.95	-1.09	2.38	-2.45	3.00	3.00	0.00	
1,300.00	6.00	114.640	1,299.63	-4.36	9.51	-9.81	3.00	3.00	0.00	
1,358.79	7.76	114.640	1,358.00	-7.30	15.91	-16.41	3.00	3.00	0.00	
Ojo Alamo										
1,400.00	9.00	114.640	1,398.77	-9.80	21.37	-22.04	3.00	3.00	0.00	
1,475.41	11.26	114.640	1,473.00	-15.33	33.43	-34.48	3.00	3.00	0.00	
Kirtland										
1,500.00	12.00	114.640	1,497.08	-17.40	37.93	-39.13	3.00	3.00	0.00	
1,600.00	15.00	114.640	1,594.31	-27.13	59.15	-61.01	3.00	3.00	0.00	
1,700.00	18.00	114.640	1,690.18	-38.97	84.96	-87.64	3.00	3.00	0.00	
1,715.22	18.46	114.640	1,704.63	-40.96	89.29	-92.10	3.00	3.00	0.00	
Begin 18.46° tangent										
1,729.31	18.46	114.640	1,718.00	-42.82	93.35	-96.28	0.00	0.00	0.00	
Fruitland										
1,800.00	18.46	114.640	1,785.05	-52.15	113.69	-117.26	0.00	0.00	0.00	
1,900.00	18.46	114.640	1,879.91	-65.34	142.46	-146.94	0.00	0.00	0.00	
2,000.00	18.46	114.640	1,974.77	-78.54	171.24	-176.62	0.00	0.00	0.00	
2,040.31	18.46	114.640	2,013.00	-83.86	182.84	-188.59	0.00	0.00	0.00	
Pictured Cliffs										
2,100.00	18.46	114.640	2,069.62	-91.74	200.02	-206.30	0.00	0.00	0.00	
2,172.08	18.46	114.640	2,138.00	-101.26	220.76	-227.70	0.00	0.00	0.00	
Lewis										
2,200.00	18.46	114.640	2,164.48	-104.94	228.79	-235.99	0.00	0.00	0.00	
2,300.00	18.46	114.640	2,259.34	-118.14	257.57	-265.67	0.00	0.00	0.00	
2,400.00	18.46	114.640	2,354.19	-131.34	286.34	-295.35	0.00	0.00	0.00	
2,498.89	18.46	114.640	2,448.00	-144.39	314.80	-324.70	0.00	0.00	0.00	
Chacra										
2,500.00	18.46	114.640	2,449.05	-144.54	315.12	-325.03	0.00	0.00	0.00	
2,600.00	18.46	114.640	2,543.91	-157.73	343.90	-354.71	0.00	0.00	0.00	
2,700.00	18.46	114.640	2,638.76	-170.93	372.67	-384.39	0.00	0.00	0.00	
2,800.00	18.46	114.640	2,733.62	-184.13	401.45	-414.07	0.00	0.00	0.00	
2,900.00	18.46	114.640	2,828.47	-197.33	430.22	-443.75	0.00	0.00	0.00	
3,000.00	18.46	114.640	2,923.33	-210.53	459.00	-473.43	0.00	0.00	0.00	
3,100.00	18.46	114.640	3,018.19	-223.73	487.78	-503.11	0.00	0.00	0.00	
3,200.00	18.46	114.640	3,113.04	-236.93	516.55	-532.79	0.00	0.00	0.00	
3,300.00	18.46	114.640	3,207.90	-250.13	545.33	-562.47	0.00	0.00	0.00	
3,400.00	18.46	114.640	3,302.76	-263.32	574.10	-592.15	0.00	0.00	0.00	
3,500.00	18.46	114.640	3,397.61	-276.52	602.88	-621.84	0.00	0.00	0.00	



Planning Report

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Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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	18.46	114.640	3,492.47	-289.72	631.66	-651.52	0.00	0.00	0.00
3,658.54	18.46	114.640	3,548.00	-297.45	648.50	-668.89	0.00	0.00	0.00
Cliff House									
3,674.35	18.46	114.640	3,563.00	-299.54	653.05	-673.59	0.00	0.00	0.00
Menefee									
3,700.00	18.46	114.640	3,587.33	-302.92	660.43	-681.20	0.00	0.00	0.00
3,800.00	18.46	114.640	3,682.18	-316.12	689.21	-710.88	0.00	0.00	0.00
3,832.49	18.46	114.640	3,713.00	-320.41	698.56	-720.52	0.00	0.00	0.00
9 5/8" Csg									
3,900.00	18.46	114.640	3,777.04	-329.32	717.98	-740.56	0.00	0.00	0.00
4,000.00	18.46	114.640	3,871.90	-342.52	746.76	-770.24	0.00	0.00	0.00
4,100.00	18.46	114.640	3,966.75	-355.71	775.54	-799.92	0.00	0.00	0.00
4,200.00	18.46	114.640	4,061.61	-368.91	804.31	-829.60	0.00	0.00	0.00
4,300.00	18.46	114.640	4,156.46	-382.11	833.09	-859.28	0.00	0.00	0.00
4,400.00	18.46	114.640	4,251.32	-395.31	861.86	-888.96	0.00	0.00	0.00
4,411.70	18.46	114.640	4,262.42	-396.85	865.23	-892.43	0.00	0.00	0.00
Begin 3°/100' drop									
4,500.00	15.81	114.640	4,346.79	-407.70	888.87	-916.82	3.00	-3.00	0.00
4,547.86	14.37	114.640	4,393.00	-412.89	900.19	-928.50	3.00	-3.00	0.00
Point Lookout									
4,600.00	12.81	114.640	4,443.68	-418.00	911.33	-939.98	3.00	-3.00	0.00
4,700.00	9.81	114.640	4,541.73	-426.17	929.15	-958.36	3.00	-3.00	0.00
4,777.15	7.49	114.640	4,618.00	-431.01	939.70	-969.24	3.00	-3.00	0.00
Mancos									
4,800.00	6.81	114.640	4,640.67	-432.20	942.28	-971.91	3.00	-3.00	0.00
4,900.00	3.81	114.640	4,740.23	-436.05	950.69	-980.58	3.00	-3.00	0.00
5,000.00	0.81	114.640	4,840.14	-437.73	954.35	-984.35	3.00	-3.00	0.00
5,026.92	0.00	0.000	4,867.05	-437.81	954.52	-984.53	3.00	-3.00	0.00
Begin vertical hold									
5,100.00	0.00	0.000	4,940.13	-437.81	954.52	-984.53	0.00	0.00	0.00
5,147.87	0.00	0.000	4,988.00	-437.81	954.52	-984.53	0.00	0.00	0.00
MNCS_A									
5,200.00	0.00	0.000	5,040.13	-437.81	954.52	-984.53	0.00	0.00	0.00
5,226.92	0.00	0.000	5,067.05	-437.81	954.52	-984.53	0.00	0.00	0.00
Begin 10°/100' build									
5,227.87	0.10	314.999	5,068.00	-437.81	954.52	-984.53	10.00	10.00	0.00
MNCS_B									
5,250.00	2.31	314.999	5,090.13	-437.48	954.19	-984.07	10.00	10.00	0.00
5,300.00	7.31	314.999	5,139.94	-434.52	951.23	-979.88	10.00	10.00	0.00
5,350.00	12.31	314.999	5,189.19	-428.50	945.21	-971.36	10.00	10.00	0.00
5,353.90	12.70	314.999	5,193.00	-427.90	944.61	-970.52	10.00	10.00	0.00
MNCS_C									
5,400.00	17.31	314.999	5,237.51	-419.46	936.17	-958.59	10.00	10.00	0.00
5,442.95	21.60	314.999	5,278.00	-409.35	926.06	-944.29	10.00	10.00	0.00
MNCS_Cms									
5,450.00	22.31	314.999	5,284.54	-407.49	924.20	-941.65	10.00	10.00	0.00
5,500.00	27.31	314.999	5,329.91	-392.66	909.37	-920.68	10.00	10.00	0.00
5,520.55	29.36	314.999	5,348.00	-385.76	902.47	-910.92	10.00	10.00	0.00
MNCS_D									
5,550.00	32.31	314.999	5,373.28	-375.09	891.80	-895.83	10.00	10.00	0.00
5,600.00	37.31	314.999	5,414.32	-354.91	871.62	-867.30	10.00	10.00	0.00
5,617.40	39.05	314.999	5,428.00	-347.31	864.02	-856.54	10.00	10.00	0.00



Planning Report

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Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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_E									
5,650.00	42.31	314.999	5,452.72	-332.29	848.99	-835.30	10.00	10.00	0.00
5,692.41	46.55	314.999	5,483.00	-311.30	828.00	-805.61	10.00	10.00	0.00
MNCS_F									
5,700.00	47.31	314.999	5,488.18	-307.38	824.08	-800.07	10.00	10.00	0.00
5,750.00	52.31	314.999	5,520.44	-280.38	797.08	-761.89	10.00	10.00	0.00
5,800.00	57.31	314.999	5,549.25	-251.49	768.20	-721.04	10.00	10.00	0.00
5,826.92	60.00	314.999	5,563.25	-235.24	751.95	-698.05	10.00	10.00	0.00
Begin 60.00° tangent									
5,836.42	60.00	314.999	5,568.00	-229.42	746.12	-689.82	0.00	0.00	0.00
MNCS_G									
5,886.92	60.00	314.999	5,593.25	-198.50	715.20	-646.09	0.00	0.00	0.00
Begin 10°/100' build									
5,900.00	61.31	314.999	5,599.66	-190.44	707.14	-634.69	10.00	10.00	0.00
5,917.89	63.10	314.999	5,608.00	-179.25	695.95	-618.86	10.00	10.00	0.00
MNCS_H									
5,950.00	66.31	314.999	5,621.72	-158.72	675.42	-589.83	10.00	10.00	0.00
6,000.00	71.31	314.999	5,639.79	-125.77	642.47	-543.23	10.00	10.00	0.00
6,050.00	76.31	314.999	5,653.73	-91.83	608.52	-495.23	10.00	10.00	0.00
6,069.41	78.25	314.999	5,658.00	-78.44	595.14	-476.30	10.00	10.00	0.00
MNCS_I									
6,100.00	81.31	314.999	5,663.43	-57.16	573.85	-446.20	10.00	10.00	0.00
6,150.00	86.31	314.999	5,668.82	-22.02	538.71	-396.50	10.00	10.00	0.00
6,183.74	89.68	314.999	5,670.00	1.82	514.87	-362.79	10.00	10.00	0.00
Begin 89.68° lateral									
6,200.00	89.68	314.999	5,670.09	13.32	503.37	-346.53	0.00	0.00	0.00
6,300.00	89.68	314.999	5,670.64	84.03	432.66	-246.53	0.00	0.00	0.00
6,400.00	89.68	314.999	5,671.20	154.73	361.95	-146.53	0.00	0.00	0.00
6,500.00	89.68	314.999	5,671.75	225.44	291.24	-46.53	0.00	0.00	0.00
6,600.00	89.68	314.999	5,672.31	296.15	220.53	53.47	0.00	0.00	0.00
6,700.00	89.68	314.999	5,672.86	366.86	149.82	153.46	0.00	0.00	0.00
6,800.00	89.68	314.999	5,673.41	437.57	79.11	253.46	0.00	0.00	0.00
6,900.00	89.68	314.999	5,673.97	508.27	8.40	353.46	0.00	0.00	0.00
7,000.00	89.68	314.999	5,674.52	578.98	-62.31	453.46	0.00	0.00	0.00
7,100.00	89.68	314.999	5,675.08	649.69	-133.03	553.46	0.00	0.00	0.00
7,200.00	89.68	314.999	5,675.63	720.40	-203.74	653.46	0.00	0.00	0.00
7,300.00	89.68	314.999	5,676.19	791.11	-274.45	753.45	0.00	0.00	0.00
7,400.00	89.68	314.999	5,676.74	861.82	-345.16	853.45	0.00	0.00	0.00
7,500.00	89.68	314.999	5,677.29	932.52	-415.87	953.45	0.00	0.00	0.00
7,600.00	89.68	314.999	5,677.85	1,003.23	-486.58	1,053.45	0.00	0.00	0.00
7,700.00	89.68	314.999	5,678.40	1,073.94	-557.29	1,153.45	0.00	0.00	0.00
7,800.00	89.68	314.999	5,678.96	1,144.65	-628.00	1,253.45	0.00	0.00	0.00
7,900.00	89.68	314.999	5,679.51	1,215.36	-698.71	1,353.45	0.00	0.00	0.00
8,000.00	89.68	314.999	5,680.06	1,286.06	-769.43	1,453.44	0.00	0.00	0.00
8,100.00	89.68	314.999	5,680.62	1,356.77	-840.14	1,553.44	0.00	0.00	0.00
8,200.00	89.68	314.999	5,681.17	1,427.48	-910.85	1,653.44	0.00	0.00	0.00
8,300.00	89.68	314.999	5,681.73	1,498.19	-981.56	1,753.44	0.00	0.00	0.00
8,400.00	89.68	314.999	5,682.28	1,568.90	-1,052.27	1,853.44	0.00	0.00	0.00
8,500.00	89.68	314.999	5,682.84	1,639.60	-1,122.98	1,953.44	0.00	0.00	0.00
8,600.00	89.68	314.999	5,683.39	1,710.31	-1,193.69	2,053.43	0.00	0.00	0.00
8,700.00	89.68	314.999	5,683.94	1,781.02	-1,264.40	2,153.43	0.00	0.00	0.00
8,800.00	89.68	314.999	5,684.50	1,851.73	-1,335.11	2,253.43	0.00	0.00	0.00
8,900.00	89.68	314.999	5,685.05	1,922.44	-1,405.83	2,353.43	0.00	0.00	0.00



Planning Report

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Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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	89.68	314.999	5,685.61	1,993.14	-1,476.54	2,453.43	0.00	0.00	0.00
9,100.00	89.68	314.999	5,686.16	2,063.85	-1,547.25	2,553.43	0.00	0.00	0.00
9,200.00	89.68	314.999	5,686.72	2,134.56	-1,617.96	2,653.43	0.00	0.00	0.00
9,300.00	89.68	314.999	5,687.27	2,205.27	-1,688.67	2,753.42	0.00	0.00	0.00
9,400.00	89.68	314.999	5,687.82	2,275.98	-1,759.38	2,853.42	0.00	0.00	0.00
9,500.00	89.68	314.999	5,688.38	2,346.68	-1,830.09	2,953.42	0.00	0.00	0.00
9,600.00	89.68	314.999	5,688.93	2,417.39	-1,900.80	3,053.42	0.00	0.00	0.00
9,700.00	89.68	314.999	5,689.49	2,488.10	-1,971.51	3,153.42	0.00	0.00	0.00
9,800.00	89.68	314.999	5,690.04	2,558.81	-2,042.23	3,253.42	0.00	0.00	0.00
9,900.00	89.68	314.999	5,690.59	2,629.52	-2,112.94	3,353.41	0.00	0.00	0.00
10,000.00	89.68	314.999	5,691.15	2,700.23	-2,183.65	3,453.41	0.00	0.00	0.00
10,100.00	89.68	314.999	5,691.70	2,770.93	-2,254.36	3,553.41	0.00	0.00	0.00
10,200.00	89.68	314.999	5,692.26	2,841.64	-2,325.07	3,653.41	0.00	0.00	0.00
10,300.00	89.68	314.999	5,692.81	2,912.35	-2,395.78	3,753.41	0.00	0.00	0.00
10,400.00	89.68	314.999	5,693.37	2,983.06	-2,466.49	3,853.41	0.00	0.00	0.00
10,500.00	89.68	314.999	5,693.92	3,053.77	-2,537.20	3,953.41	0.00	0.00	0.00
10,600.00	89.68	314.999	5,694.47	3,124.47	-2,607.91	4,053.40	0.00	0.00	0.00
10,700.00	89.68	314.999	5,695.03	3,195.18	-2,678.63	4,153.40	0.00	0.00	0.00
10,800.00	89.68	314.999	5,695.58	3,265.89	-2,749.34	4,253.40	0.00	0.00	0.00
10,900.00	89.68	314.999	5,696.14	3,336.60	-2,820.05	4,353.40	0.00	0.00	0.00
11,000.00	89.68	314.999	5,696.69	3,407.31	-2,890.76	4,453.40	0.00	0.00	0.00
11,100.00	89.68	314.999	5,697.25	3,478.01	-2,961.47	4,553.40	0.00	0.00	0.00
11,200.00	89.68	314.999	5,697.80	3,548.72	-3,032.18	4,653.39	0.00	0.00	0.00
11,300.00	89.68	314.999	5,698.35	3,619.43	-3,102.89	4,753.39	0.00	0.00	0.00
11,400.00	89.68	314.999	5,698.91	3,690.14	-3,173.60	4,853.39	0.00	0.00	0.00
11,500.00	89.68	314.999	5,699.46	3,760.85	-3,244.31	4,953.39	0.00	0.00	0.00
11,600.00	89.68	314.999	5,700.02	3,831.55	-3,315.03	5,053.39	0.00	0.00	0.00
11,700.00	89.68	314.999	5,700.57	3,902.26	-3,385.74	5,153.39	0.00	0.00	0.00
11,800.00	89.68	314.999	5,701.12	3,972.97	-3,456.45	5,253.39	0.00	0.00	0.00
11,900.00	89.68	314.999	5,701.68	4,043.68	-3,527.16	5,353.38	0.00	0.00	0.00
12,000.00	89.68	314.999	5,702.23	4,114.39	-3,597.87	5,453.38	0.00	0.00	0.00
12,100.00	89.68	314.999	5,702.79	4,185.09	-3,668.58	5,553.38	0.00	0.00	0.00
12,200.00	89.68	314.999	5,703.34	4,255.80	-3,739.29	5,653.38	0.00	0.00	0.00
12,300.00	89.68	314.999	5,703.90	4,326.51	-3,810.00	5,753.38	0.00	0.00	0.00
12,400.00	89.68	314.999	5,704.45	4,397.22	-3,880.71	5,853.38	0.00	0.00	0.00
12,500.00	89.68	314.999	5,705.00	4,467.93	-3,951.43	5,953.37	0.00	0.00	0.00
12,600.00	89.68	314.999	5,705.56	4,538.64	-4,022.14	6,053.37	0.00	0.00	0.00
12,700.00	89.68	314.999	5,706.11	4,609.34	-4,092.85	6,153.37	0.00	0.00	0.00
12,800.00	89.68	314.999	5,706.67	4,680.05	-4,163.56	6,253.37	0.00	0.00	0.00
12,900.00	89.68	314.999	5,707.22	4,750.76	-4,234.27	6,353.37	0.00	0.00	0.00
13,000.00	89.68	314.999	5,707.77	4,821.47	-4,304.98	6,453.37	0.00	0.00	0.00
13,100.00	89.68	314.999	5,708.33	4,892.18	-4,375.69	6,553.37	0.00	0.00	0.00
13,200.00	89.68	314.999	5,708.88	4,962.88	-4,446.40	6,653.36	0.00	0.00	0.00
13,300.00	89.68	314.999	5,709.44	5,033.59	-4,517.11	6,753.36	0.00	0.00	0.00
13,400.00	89.68	314.999	5,709.99	5,104.30	-4,587.83	6,853.36	0.00	0.00	0.00
13,500.00	89.68	314.999	5,710.55	5,175.01	-4,658.54	6,953.36	0.00	0.00	0.00
13,600.00	89.68	314.999	5,711.10	5,245.72	-4,729.25	7,053.36	0.00	0.00	0.00
13,700.00	89.68	314.999	5,711.65	5,316.42	-4,799.96	7,153.36	0.00	0.00	0.00
13,800.00	89.68	314.999	5,712.21	5,387.13	-4,870.67	7,253.35	0.00	0.00	0.00
13,900.00	89.68	314.999	5,712.76	5,457.84	-4,941.38	7,353.35	0.00	0.00	0.00
14,000.00	89.68	314.999	5,713.32	5,528.55	-5,012.09	7,453.35	0.00	0.00	0.00
14,100.00	89.68	314.999	5,713.87	5,599.26	-5,082.80	7,553.35	0.00	0.00	0.00
14,200.00	89.68	314.999	5,714.43	5,669.96	-5,153.51	7,653.35	0.00	0.00	0.00
14,300.00	89.68	314.999	5,714.98	5,740.67	-5,224.23	7,753.35	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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	89.68	314.999	5,715.53	5,811.38	-5,294.94	7,853.35	0.00	0.00	0.00
14,500.00	89.68	314.999	5,716.09	5,882.09	-5,365.65	7,953.34	0.00	0.00	0.00
14,600.00	89.68	314.999	5,716.64	5,952.80	-5,436.36	8,053.34	0.00	0.00	0.00
14,700.00	89.68	314.999	5,717.20	6,023.50	-5,507.07	8,153.34	0.00	0.00	0.00
14,800.00	89.68	314.999	5,717.75	6,094.21	-5,577.78	8,253.34	0.00	0.00	0.00
14,900.00	89.68	314.999	5,718.30	6,164.92	-5,648.49	8,353.34	0.00	0.00	0.00
15,000.00	89.68	314.999	5,718.86	6,235.63	-5,719.20	8,453.34	0.00	0.00	0.00
15,100.00	89.68	314.999	5,719.41	6,306.34	-5,789.91	8,553.33	0.00	0.00	0.00
15,200.00	89.68	314.999	5,719.97	6,377.05	-5,860.63	8,653.33	0.00	0.00	0.00
15,300.00	89.68	314.999	5,720.52	6,447.75	-5,931.34	8,753.33	0.00	0.00	0.00
15,400.00	89.68	314.999	5,721.08	6,518.46	-6,002.05	8,853.33	0.00	0.00	0.00
15,500.00	89.68	314.999	5,721.63	6,589.17	-6,072.76	8,953.33	0.00	0.00	0.00
15,600.00	89.68	314.999	5,722.18	6,659.88	-6,143.47	9,053.33	0.00	0.00	0.00
15,700.00	89.68	314.999	5,722.74	6,730.59	-6,214.18	9,153.33	0.00	0.00	0.00
15,800.00	89.68	314.999	5,723.29	6,801.29	-6,284.89	9,253.32	0.00	0.00	0.00
15,900.00	89.68	314.999	5,723.85	6,872.00	-6,355.60	9,353.32	0.00	0.00	0.00
16,000.00	89.68	314.999	5,724.40	6,942.71	-6,426.31	9,453.32	0.00	0.00	0.00
16,100.00	89.68	314.999	5,724.96	7,013.42	-6,497.03	9,553.32	0.00	0.00	0.00
16,200.00	89.68	314.999	5,725.51	7,084.13	-6,567.74	9,653.32	0.00	0.00	0.00
16,300.00	89.68	314.999	5,726.06	7,154.83	-6,638.45	9,753.32	0.00	0.00	0.00
16,400.00	89.68	314.999	5,726.62	7,225.54	-6,709.16	9,853.31	0.00	0.00	0.00
16,500.00	89.68	314.999	5,727.17	7,296.25	-6,779.87	9,953.31	0.00	0.00	0.00
16,600.00	89.68	314.999	5,727.73	7,366.96	-6,850.58	10,053.31	0.00	0.00	0.00
16,649.41	89.68	314.999	5,728.00	7,401.90	-6,885.52	10,102.72	0.00	0.00	0.00
PBHL/TD @ 16649.41 MD 5728.00 TVD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Ridge 127H FTP 2363 F - plan hits target center - Point	0.00	0.000	5,670.00	1.82	514.87	1,923,413.597	2,783,912.987	36.285850000	-107.626961000
Ridge 127H LTP 231 FN - plan hits target center - Point	0.00	0.000	5,728.00	7,401.90	-6,885.52	1,930,813.658	2,776,512.611	36.306219000	-107.652024000

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	
3,832.49	3,713.00	9 5/8" Csg	9-5/8	12-1/4	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,358.79	1,358.00	Ojo Alamo				
1,475.41	1,473.00	Kirtland				
1,729.31	1,718.00	Fruitland				
2,040.31	2,013.00	Pictured Cliffs				
2,172.08	2,138.00	Lewis				
2,498.89	2,448.00	Chacra				
3,658.54	3,548.00	Cliff House				
3,674.35	3,563.00	Menefee				
4,547.86	4,393.00	Point Lookout				
4,777.15	4,618.00	Mancos				
5,147.87	4,988.00	MNCS_A				
5,227.87	5,068.00	MNCS_B				
5,353.90	5,193.00	MNCS_C				
5,442.95	5,278.00	MNCS_Cms				
5,520.55	5,348.00	MNCS_D				
5,617.40	5,428.00	MNCS_E				
5,692.41	5,483.00	MNCS_F				
5,836.42	5,568.00	MNCS_G				
5,917.89	5,608.00	MNCS_H				
6,069.41	5,658.00	MNCS_I				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,100.00	1,100.00	0.00	0.00	KOP Begin 3°/100' build	
1,715.22	1,704.63	-40.96	89.29	Begin 18.46° tangent	
4,411.70	4,262.42	-396.85	865.23	Begin 3°/100' drop	
5,026.92	4,867.05	-437.81	954.52	Begin vertical hold	
5,226.92	5,067.05	-437.81	954.52	Begin 10°/100' build	
5,826.92	5,563.25	-235.24	751.95	Begin 60.00° tangent	
5,886.92	5,593.25	-198.50	715.20	Begin 10°/100' build	
6,183.74	5,670.00	1.82	514.87	Begin 89.68° lateral	
16,649.41	5,728.00	7,401.90	-6,885.52	PBHL/TD @ 16649.41 MD 5728.00 TVD	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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 (124, 127, 128 & 129)		
Site Position:		Northing:	1,923,411.454 usft
From:	Lat/Long	Easting:	2,783,418.160 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.285847000
		Longitude:	-107.628640000

Well	Ridge Unit No. 127H, Surf loc: 2371 FNL 1252 FEL Section 25-T24N-R08W		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
Grid Convergence:	0.12 °	Latitude:	36.285848000
		Longitude:	-107.628708000
		Ground Level:	6,923.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/15/2023	8.53	62.77	49,133.21792487

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	314.999

Plan Survey Tool Program	Date	8/16/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,649.41 rev1 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,715.22	18.46	114.640	1,704.63	-40.96	89.29	3.00	3.00	0.00	114.64	
4,411.70	18.46	114.640	4,262.42	-396.85	865.23	0.00	0.00	0.00	0.00	
5,026.92	0.00	0.000	4,867.05	-437.81	954.52	3.00	-3.00	0.00	180.00	
5,226.92	0.00	0.000	5,067.05	-437.81	954.52	0.00	0.00	0.00	0.00	
5,826.92	60.00	314.999	5,563.25	-235.24	751.95	10.00	10.00	0.00	315.00	
5,886.92	60.00	314.999	5,593.25	-198.50	715.20	0.00	0.00	0.00	0.00	
6,183.74	89.68	314.999	5,670.00	1.82	514.87	10.00	10.00	0.00	0.00	
16,649.41	89.68	314.999	5,728.00	7,401.90	-6,885.52	0.00	0.00	0.00	0.00	Ridge 127H LTP 231



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
100.00	0.00	0.000	100.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
200.00	0.00	0.000	200.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
300.00	0.00	0.000	300.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
350.00	0.00	0.000	350.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
13 3/8" Csg									
400.00	0.00	0.000	400.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
500.00	0.00	0.000	500.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
600.00	0.00	0.000	600.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
700.00	0.00	0.000	700.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
800.00	0.00	0.000	800.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
900.00	0.00	0.000	900.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
1,000.00	0.00	0.000	1,000.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
1,100.00	0.00	0.000	1,100.00	0.00	0.00	1,923,411.776	2,783,398.118	36.285848000	-107.628708000
KOP Begin 3°/100' build									
1,200.00	3.00	114.640	1,199.95	-1.09	2.38	1,923,410.684	2,783,400.497	36.285844989	-107.628699935
1,300.00	6.00	114.640	1,299.63	-4.36	9.51	1,923,407.414	2,783,407.628	36.285835963	-107.628675764
1,358.79	7.76	114.640	1,358.00	-7.30	15.91	1,923,404.477	2,783,414.031	36.285827858	-107.628654060
Ojo Alamo									
1,400.00	9.00	114.640	1,398.77	-9.80	21.37	1,923,401.973	2,783,419.491	36.285820947	-107.628635552
1,475.41	11.26	114.640	1,473.00	-15.33	33.43	1,923,396.443	2,783,431.547	36.285805686	-107.628594682
Kirtland									
1,500.00	12.00	114.640	1,497.08	-17.40	37.93	1,923,394.376	2,783,436.053	36.285799982	-107.628579409
1,600.00	15.00	114.640	1,594.31	-27.13	59.15	1,923,384.645	2,783,457.270	36.285773126	-107.628507490
1,700.00	18.00	114.640	1,690.18	-38.97	84.96	1,923,372.805	2,783,483.082	36.285740453	-107.628419991
1,715.22	18.46	114.640	1,704.63	-40.96	89.29	1,923,370.821	2,783,487.409	36.285734976	-107.628405324
Begin 18.46° tangent									
1,729.31	18.46	114.640	1,718.00	-42.82	93.35	1,923,368.961	2,783,491.464	36.285729843	-107.628391579
Fruitland									
1,800.00	18.46	114.640	1,785.05	-52.15	113.69	1,923,359.630	2,783,511.806	36.285704094	-107.628322624
1,900.00	18.46	114.640	1,879.91	-65.34	142.46	1,923,346.432	2,783,540.582	36.285667670	-107.628225081
2,000.00	18.46	114.640	1,974.77	-78.54	171.24	1,923,333.233	2,783,569.357	36.285631245	-107.628127537
2,040.31	18.46	114.640	2,013.00	-83.86	182.84	1,923,327.913	2,783,580.956	36.285616564	-107.628088221
Pictured Cliffs									
2,100.00	18.46	114.640	2,069.62	-91.74	200.02	1,923,320.035	2,783,598.133	36.285594820	-107.628029994
2,172.08	18.46	114.640	2,138.00	-101.26	220.76	1,923,310.520	2,783,618.876	36.285568563	-107.627959680
Lewis									
2,200.00	18.46	114.640	2,164.48	-104.94	228.79	1,923,306.836	2,783,626.909	36.285558395	-107.627932450
2,300.00	18.46	114.640	2,259.34	-118.14	257.57	1,923,293.637	2,783,655.685	36.285521970	-107.627834907
2,400.00	18.46	114.640	2,354.19	-131.34	286.34	1,923,280.439	2,783,684.461	36.285485545	-107.627737364
2,498.89	18.46	114.640	2,448.00	-144.39	314.80	1,923,267.386	2,783,712.919	36.285449522	-107.627640900
Chacra									
2,500.00	18.46	114.640	2,449.05	-144.54	315.12	1,923,267.240	2,783,713.237	36.285449120	-107.627639820
2,600.00	18.46	114.640	2,543.91	-157.73	343.90	1,923,254.041	2,783,742.013	36.285412694	-107.627542277
2,700.00	18.46	114.640	2,638.76	-170.93	372.67	1,923,240.843	2,783,770.789	36.285376269	-107.627444734
2,800.00	18.46	114.640	2,733.62	-184.13	401.45	1,923,227.644	2,783,799.565	36.285339843	-107.627347192
2,900.00	18.46	114.640	2,828.47	-197.33	430.22	1,923,214.445	2,783,828.341	36.285303418	-107.627249649
3,000.00	18.46	114.640	2,923.33	-210.53	459.00	1,923,201.247	2,783,857.117	36.285266992	-107.627152106
3,100.00	18.46	114.640	3,018.19	-223.73	487.78	1,923,188.048	2,783,885.892	36.285230567	-107.627054563
3,200.00	18.46	114.640	3,113.04	-236.93	516.55	1,923,174.849	2,783,914.668	36.285194141	-107.626957021
3,300.00	18.46	114.640	3,207.90	-250.13	545.33	1,923,161.651	2,783,943.444	36.285157715	-107.626859479
3,400.00	18.46	114.640	3,302.76	-263.32	574.10	1,923,148.452	2,783,972.220	36.285121289	-107.626761936
3,500.00	18.46	114.640	3,397.61	-276.52	602.88	1,923,135.253	2,784,000.996	36.285084863	-107.626664394



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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	18.46	114.640	3,492.47	-289.72	631.66	1,923,122.055	2,784,029.772	36.285048437	-107.626566852	
3,658.54	18.46	114.640	3,548.00	-297.45	648.50	1,923,114.328	2,784,046.618	36.285027112	-107.626509749	
Cliff House										
3,674.35	18.46	114.640	3,563.00	-299.54	653.05	1,923,112.241	2,784,051.168	36.285021352	-107.626494325	
Menefee										
3,700.00	18.46	114.640	3,587.33	-302.92	660.43	1,923,108.856	2,784,058.548	36.285012011	-107.626469310	
3,800.00	18.46	114.640	3,682.18	-316.12	689.21	1,923,095.657	2,784,087.324	36.284975584	-107.626371768	
3,832.49	18.46	114.640	3,713.00	-320.41	698.56	1,923,091.369	2,784,096.673	36.284963750	-107.626340078	
9 5/8" Csg										
3,900.00	18.46	114.640	3,777.04	-329.32	717.98	1,923,082.459	2,784,116.100	36.284939158	-107.626274226	
4,000.00	18.46	114.640	3,871.90	-342.52	746.76	1,923,069.260	2,784,144.876	36.284902732	-107.626176684	
4,100.00	18.46	114.640	3,966.75	-355.71	775.54	1,923,056.061	2,784,173.652	36.284866305	-107.626079142	
4,200.00	18.46	114.640	4,061.61	-368.91	804.31	1,923,042.863	2,784,202.428	36.284829878	-107.625981601	
4,300.00	18.46	114.640	4,156.46	-382.11	833.09	1,923,029.664	2,784,231.203	36.284793452	-107.625884059	
4,400.00	18.46	114.640	4,251.32	-395.31	861.86	1,923,016.465	2,784,259.979	36.284757025	-107.625786518	
4,411.70	18.46	114.640	4,262.42	-396.85	865.23	1,923,014.921	2,784,263.345	36.284752764	-107.625775108	
Begin 3°/100' drop										
4,500.00	15.81	114.640	4,346.79	-407.70	888.87	1,923,004.078	2,784,286.986	36.284722837	-107.625694972	
4,547.86	14.37	114.640	4,393.00	-412.89	900.19	1,922,998.884	2,784,298.311	36.284708502	-107.625656587	
Point Lookout										
4,600.00	12.81	114.640	4,443.68	-418.00	911.33	1,922,993.776	2,784,309.446	36.284694406	-107.625618840	
4,700.00	9.81	114.640	4,541.73	-426.17	929.15	1,922,985.603	2,784,327.266	36.284671848	-107.625558436	
4,777.15	7.49	114.640	4,618.00	-431.01	939.70	1,922,980.765	2,784,337.813	36.284658497	-107.625522686	
Mancos										
4,800.00	6.81	114.640	4,640.67	-432.20	942.28	1,922,979.580	2,784,340.398	36.284655225	-107.625513925	
4,900.00	3.81	114.640	4,740.23	-436.05	950.69	1,922,975.724	2,784,348.805	36.284644583	-107.625485428	
5,000.00	0.81	114.640	4,840.14	-437.73	954.35	1,922,974.046	2,784,352.464	36.284639951	-107.625473025	
5,026.92	0.00	0.000	4,867.05	-437.81	954.52	1,922,973.966	2,784,352.636	36.284639733	-107.625472441	
Begin vertical hold										
5,100.00	0.00	0.000	4,940.13	-437.81	954.52	1,922,973.966	2,784,352.636	36.284639733	-107.625472441	
5,147.87	0.00	0.000	4,988.00	-437.81	954.52	1,922,973.966	2,784,352.636	36.284639733	-107.625472441	
MNCS_A										
5,200.00	0.00	0.000	5,040.13	-437.81	954.52	1,922,973.966	2,784,352.636	36.284639733	-107.625472441	
5,226.92	0.00	0.000	5,067.05	-437.81	954.52	1,922,973.966	2,784,352.636	36.284639733	-107.625472441	
Begin 10°/100' build										
5,227.87	0.10	314.999	5,068.00	-437.81	954.52	1,922,973.967	2,784,352.636	36.284639734	-107.625472443	
MNCS_B										
5,250.00	2.31	314.999	5,090.13	-437.48	954.19	1,922,974.295	2,784,352.307	36.284640638	-107.625473554	
5,300.00	7.31	314.999	5,139.94	-434.52	951.23	1,922,977.258	2,784,349.345	36.284648794	-107.625483585	
5,350.00	12.31	314.999	5,189.19	-428.50	945.21	1,922,983.279	2,784,343.323	36.284665369	-107.625503971	
5,353.90	12.70	314.999	5,193.00	-427.90	944.61	1,922,983.876	2,784,342.726	36.284667014	-107.625505994	
MNCS_C										
5,400.00	17.31	314.999	5,237.51	-419.46	936.17	1,922,992.312	2,784,334.290	36.284690237	-107.625534557	
5,442.95	21.60	314.999	5,278.00	-409.35	926.06	1,923,002.425	2,784,324.177	36.284718077	-107.625568797	
MNCS_Cms										
5,450.00	22.31	314.999	5,284.54	-407.49	924.20	1,923,004.289	2,784,322.312	36.284723210	-107.625575110	
5,500.00	27.31	314.999	5,329.91	-392.66	909.37	1,923,019.119	2,784,307.482	36.284764035	-107.625625321	
5,520.55	29.36	314.999	5,348.00	-385.76	902.47	1,923,026.016	2,784,300.585	36.284783022	-107.625648673	
MNCS_D										
5,550.00	32.31	314.999	5,373.28	-375.09	891.80	1,923,036.688	2,784,289.912	36.284812402	-107.625684808	
5,600.00	37.31	314.999	5,414.32	-354.91	871.62	1,923,056.864	2,784,269.736	36.284867943	-107.625753119	
5,617.40	39.05	314.999	5,428.00	-347.31	864.02	1,923,064.468	2,784,262.132	36.284888877	-107.625778866	
MNCS_E										



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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
5,650.00	42.31	314.999	5,452.72	-332.29	848.99	1,923,079.491	2,784,247.108	36.284930236	-107.625829733
5,692.41	46.55	314.999	5,483.00	-311.30	828.00	1,923,100.479	2,784,226.119	36.284988014	-107.625900796
MNCS_F									
5,700.00	47.31	314.999	5,488.18	-307.38	824.08	1,923,104.399	2,784,222.199	36.284998805	-107.625914068
5,750.00	52.31	314.999	5,520.44	-280.38	797.08	1,923,131.398	2,784,195.199	36.285073131	-107.626005482
5,800.00	57.31	314.999	5,549.25	-251.49	768.20	1,923,160.281	2,784,166.315	36.285152645	-107.626103280
5,826.92	60.00	314.999	5,563.25	-235.24	751.95	1,923,176.534	2,784,150.062	36.285197387	-107.626158309
Begin 60.00° tangent									
5,836.42	60.00	314.999	5,568.00	-229.42	746.12	1,923,182.356	2,784,144.239	36.285213415	-107.626178022
MNCS_G									
5,886.92	60.00	314.999	5,593.25	-198.50	715.20	1,923,213.275	2,784,113.319	36.285298534	-107.626282712
Begin 10°/100' build									
5,900.00	61.31	314.999	5,599.66	-190.44	707.14	1,923,221.340	2,784,105.254	36.285320735	-107.626310018
5,917.89	63.10	314.999	5,608.00	-179.25	695.95	1,923,232.528	2,784,094.065	36.285351536	-107.626347902
MNCS_H									
5,950.00	66.31	314.999	5,621.72	-158.72	675.42	1,923,253.054	2,784,073.538	36.285408042	-107.626417401
6,000.00	71.31	314.999	5,639.79	-125.77	642.47	1,923,286.008	2,784,040.584	36.285498760	-107.626528979
6,050.00	76.31	314.999	5,653.73	-91.83	608.52	1,923,319.949	2,784,006.641	36.285592198	-107.626643903
6,069.41	78.25	314.999	5,658.00	-78.44	595.14	1,923,333.334	2,783,993.256	36.285629046	-107.626689224
MNCS_I									
6,100.00	81.31	314.999	5,663.43	-57.16	573.85	1,923,354.621	2,783,971.968	36.285687645	-107.626761298
6,150.00	86.31	314.999	5,668.82	-22.02	538.71	1,923,389.758	2,783,936.830	36.285784374	-107.626880272
6,183.74	89.68	314.999	5,670.00	1.82	514.87	1,923,413.597	2,783,912.990	36.285850001	-107.626960991
Begin 89.68° lateral									
6,200.00	89.68	314.999	5,670.09	13.32	503.37	1,923,425.094	2,783,901.492	36.285881652	-107.626999920
6,300.00	89.68	314.999	5,670.64	84.03	432.66	1,923,495.802	2,783,830.781	36.286076303	-107.627239337
6,400.00	89.68	314.999	5,671.20	154.73	361.95	1,923,566.510	2,783,760.070	36.286270954	-107.627478754
6,500.00	89.68	314.999	5,671.75	225.44	291.24	1,923,637.218	2,783,689.359	36.286466505	-107.627718174
6,600.00	89.68	314.999	5,672.31	296.15	220.53	1,923,707.926	2,783,618.648	36.286660255	-107.627975794
6,700.00	89.68	314.999	5,672.86	366.86	149.82	1,923,778.634	2,783,547.937	36.286854905	-107.628197016
6,800.00	89.68	314.999	5,673.41	437.57	79.11	1,923,849.342	2,783,477.226	36.287049554	-107.628436438
6,900.00	89.68	314.999	5,673.97	508.27	8.40	1,923,920.049	2,783,406.515	36.287244203	-107.628675862
7,000.00	89.68	314.999	5,674.52	578.98	-62.31	1,923,990.757	2,783,335.804	36.287438851	-107.628915287
7,100.00	89.68	314.999	5,675.08	649.69	-133.03	1,924,061.465	2,783,265.093	36.287633499	-107.629154714
7,200.00	89.68	314.999	5,675.63	720.40	-203.74	1,924,132.173	2,783,194.382	36.287828147	-107.629394141
7,300.00	89.68	314.999	5,676.19	791.11	-274.45	1,924,202.881	2,783,123.671	36.288022793	-107.629633570
7,400.00	89.68	314.999	5,676.74	861.82	-345.16	1,924,273.589	2,783,052.960	36.288217440	-107.629873000
7,500.00	89.68	314.999	5,677.29	932.52	-415.87	1,924,344.297	2,782,982.249	36.288412086	-107.630112431
7,600.00	89.68	314.999	5,677.85	1,003.23	-486.58	1,924,415.005	2,782,911.538	36.288606731	-107.630351863
7,700.00	89.68	314.999	5,678.40	1,073.94	-557.29	1,924,485.713	2,782,840.827	36.288801376	-107.630591296
7,800.00	89.68	314.999	5,678.96	1,144.65	-628.00	1,924,556.421	2,782,770.116	36.288996021	-107.630830731
7,900.00	89.68	314.999	5,679.51	1,215.36	-698.71	1,924,627.129	2,782,699.406	36.289190665	-107.631070167
8,000.00	89.68	314.999	5,680.06	1,286.06	-769.43	1,924,697.837	2,782,628.695	36.289385308	-107.631309604
8,100.00	89.68	314.999	5,680.62	1,356.77	-840.14	1,924,768.545	2,782,557.984	36.289579951	-107.631549042
8,200.00	89.68	314.999	5,681.17	1,427.48	-910.85	1,924,839.253	2,782,487.273	36.289774594	-107.631788482
8,300.00	89.68	314.999	5,681.73	1,498.19	-981.56	1,924,909.960	2,782,416.562	36.289969236	-107.632027922
8,400.00	89.68	314.999	5,682.28	1,568.90	-1,052.27	1,924,980.668	2,782,345.851	36.290163877	-107.632267364
8,500.00	89.68	314.999	5,682.84	1,639.60	-1,122.98	1,925,051.376	2,782,275.140	36.290358518	-107.632506807
8,600.00	89.68	314.999	5,683.39	1,710.31	-1,193.69	1,925,122.084	2,782,204.429	36.290553159	-107.632746251
8,700.00	89.68	314.999	5,683.94	1,781.02	-1,264.40	1,925,192.792	2,782,133.718	36.290747799	-107.632985696
8,800.00	89.68	314.999	5,684.50	1,851.73	-1,335.11	1,925,263.500	2,782,063.007	36.290942438	-107.633225143
8,900.00	89.68	314.999	5,685.05	1,922.44	-1,405.83	1,925,334.208	2,781,992.296	36.291137078	-107.633464591
9,000.00	89.68	314.999	5,685.61	1,993.14	-1,476.54	1,925,404.916	2,781,921.585	36.291331716	-107.633704039
9,100.00	89.68	314.999	5,686.16	2,063.85	-1,547.25	1,925,475.624	2,781,850.874	36.291526354	-107.633943490



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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	
9,200.00	89.68	314.999	5,686.72	2,134.56	-1,617.96	1,925,546.332	2,781,780.163	36.291720992	-107.634182941	
9,300.00	89.68	314.999	5,687.27	2,205.27	-1,688.67	1,925,617.040	2,781,709.452	36.291915629	-107.634422393	
9,400.00	89.68	314.999	5,687.82	2,275.98	-1,759.38	1,925,687.748	2,781,638.741	36.292110266	-107.634661847	
9,500.00	89.68	314.999	5,688.38	2,346.68	-1,830.09	1,925,758.456	2,781,568.030	36.292304902	-107.634901302	
9,600.00	89.68	314.999	5,688.93	2,417.39	-1,900.80	1,925,829.164	2,781,497.319	36.292499538	-107.635140758	
9,700.00	89.68	314.999	5,689.49	2,488.10	-1,971.51	1,925,899.871	2,781,426.608	36.292694173	-107.635380215	
9,800.00	89.68	314.999	5,690.04	2,558.81	-2,042.23	1,925,970.579	2,781,355.897	36.292888808	-107.635619674	
9,900.00	89.68	314.999	5,690.59	2,629.52	-2,112.94	1,926,041.287	2,781,285.186	36.293083443	-107.635859133	
10,000.00	89.68	314.999	5,691.15	2,700.23	-2,183.65	1,926,111.995	2,781,214.475	36.293278076	-107.636098594	
10,100.00	89.68	314.999	5,691.70	2,770.93	-2,254.36	1,926,182.703	2,781,143.764	36.293472710	-107.636338056	
10,200.00	89.68	314.999	5,692.26	2,841.64	-2,325.07	1,926,253.411	2,781,073.053	36.293667343	-107.636577519	
10,300.00	89.68	314.999	5,692.81	2,912.35	-2,395.78	1,926,324.119	2,781,002.342	36.293861975	-107.636816983	
10,400.00	89.68	314.999	5,693.37	2,983.06	-2,466.49	1,926,394.827	2,780,931.631	36.294056607	-107.637056449	
10,500.00	89.68	314.999	5,693.92	3,053.77	-2,537.20	1,926,465.536	2,780,860.920	36.294251238	-107.637295916	
10,600.00	89.68	314.999	5,694.47	3,124.47	-2,607.91	1,926,536.244	2,780,790.209	36.294445869	-107.637535384	
10,700.00	89.68	314.999	5,695.03	3,195.18	-2,678.63	1,926,606.952	2,780,719.498	36.294640500	-107.637774853	
10,800.00	89.68	314.999	5,695.58	3,265.89	-2,749.34	1,926,677.660	2,780,648.787	36.294835130	-107.638014323	
10,900.00	89.68	314.999	5,696.14	3,336.60	-2,820.05	1,926,748.368	2,780,578.077	36.295029759	-107.638253795	
11,000.00	89.68	314.999	5,696.69	3,407.31	-2,890.76	1,926,819.076	2,780,507.366	36.295224388	-107.638493267	
11,100.00	89.68	314.999	5,697.25	3,478.01	-2,961.47	1,926,889.783	2,780,436.655	36.295419016	-107.638732741	
11,200.00	89.68	314.999	5,697.80	3,548.72	-3,032.18	1,926,960.491	2,780,365.944	36.295613644	-107.638972216	
11,300.00	89.68	314.999	5,698.35	3,619.43	-3,102.89	1,927,031.199	2,780,295.233	36.295808271	-107.639211693	
11,400.00	89.68	314.999	5,698.91	3,690.14	-3,173.60	1,927,101.907	2,780,224.522	36.296002898	-107.639451170	
11,500.00	89.68	314.999	5,699.46	3,760.85	-3,244.31	1,927,172.615	2,780,153.811	36.296197525	-107.639690649	
11,600.00	89.68	314.999	5,700.02	3,831.55	-3,315.03	1,927,243.323	2,780,083.100	36.296392151	-107.639930128	
11,700.00	89.68	314.999	5,700.57	3,902.26	-3,385.74	1,927,314.031	2,780,012.389	36.296586777	-107.640169610	
11,800.00	89.68	314.999	5,701.12	3,972.97	-3,456.45	1,927,384.739	2,779,941.678	36.296781402	-107.640409092	
11,900.00	89.68	314.999	5,701.68	4,043.68	-3,527.16	1,927,455.447	2,779,870.967	36.296976027	-107.640648575	
12,000.00	89.68	314.999	5,702.23	4,114.39	-3,597.87	1,927,526.155	2,779,800.256	36.297170651	-107.640888060	
12,100.00	89.68	314.999	5,702.79	4,185.09	-3,668.58	1,927,596.863	2,779,729.545	36.297365275	-107.641127546	
12,200.00	89.68	314.999	5,703.34	4,255.80	-3,739.29	1,927,667.571	2,779,658.834	36.297559898	-107.641367032	
12,300.00	89.68	314.999	5,703.90	4,326.51	-3,810.00	1,927,738.279	2,779,588.123	36.297754521	-107.641606521	
12,400.00	89.68	314.999	5,704.45	4,397.22	-3,880.71	1,927,808.987	2,779,517.412	36.297949143	-107.641846010	
12,500.00	89.68	314.999	5,705.00	4,467.93	-3,951.43	1,927,879.694	2,779,446.701	36.298143765	-107.642085501	
12,600.00	89.68	314.999	5,705.56	4,538.64	-4,022.14	1,927,950.402	2,779,375.990	36.298338386	-107.642324992	
12,700.00	89.68	314.999	5,706.11	4,609.34	-4,092.85	1,928,021.110	2,779,305.279	36.298533007	-107.642564485	
12,800.00	89.68	314.999	5,706.67	4,680.05	-4,163.56	1,928,091.818	2,779,234.568	36.298727627	-107.642803979	
12,900.00	89.68	314.999	5,707.22	4,750.76	-4,234.27	1,928,162.526	2,779,163.857	36.298922247	-107.643043475	
13,000.00	89.68	314.999	5,707.77	4,821.47	-4,304.98	1,928,233.234	2,779,093.146	36.299116866	-107.643282971	
13,100.00	89.68	314.999	5,708.33	4,892.18	-4,375.69	1,928,303.942	2,779,022.435	36.299311485	-107.643522469	
13,200.00	89.68	314.999	5,708.88	4,962.88	-4,446.40	1,928,374.650	2,778,951.724	36.299506103	-107.643761968	
13,300.00	89.68	314.999	5,709.44	5,033.59	-4,517.11	1,928,445.358	2,778,881.013	36.299700721	-107.644001468	
13,400.00	89.68	314.999	5,709.99	5,104.30	-4,587.83	1,928,516.066	2,778,810.302	36.299895339	-107.644240969	
13,500.00	89.68	314.999	5,710.55	5,175.01	-4,658.54	1,928,586.774	2,778,739.591	36.300089956	-107.644480471	
13,600.00	89.68	314.999	5,711.10	5,245.72	-4,729.25	1,928,657.482	2,778,668.880	36.300284572	-107.644719975	
13,700.00	89.68	314.999	5,711.65	5,316.42	-4,799.96	1,928,728.190	2,778,598.169	36.300479188	-107.644959480	
13,800.00	89.68	314.999	5,712.21	5,387.13	-4,870.67	1,928,798.898	2,778,527.459	36.300673804	-107.645198986	
13,900.00	89.68	314.999	5,712.76	5,457.84	-4,941.38	1,928,869.605	2,778,456.748	36.300868419	-107.645438493	
14,000.00	89.68	314.999	5,713.32	5,528.55	-5,012.09	1,928,940.313	2,778,386.037	36.301063033	-107.645678001	
14,100.00	89.68	314.999	5,713.87	5,599.26	-5,082.80	1,929,011.021	2,778,315.326	36.301257647	-107.645917511	
14,200.00	89.68	314.999	5,714.43	5,669.96	-5,153.51	1,929,081.729	2,778,244.615	36.301452261	-107.646157022	
14,300.00	89.68	314.999	5,714.98	5,740.67	-5,224.23	1,929,152.437	2,778,173.904	36.301646874	-107.646396534	
14,400.00	89.68	314.999	5,715.53	5,811.38	-5,294.94	1,929,223.145	2,778,103.193	36.301841487	-107.646636047	
14,500.00	89.68	314.999	5,716.09	5,882.09	-5,365.65	1,929,293.853	2,778,032.482	36.302036099	-107.646875561	
14,600.00	89.68	314.999	5,716.64	5,952.80	-5,436.36	1,929,364.561	2,777,961.771	36.302230710	-107.647115077	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	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
14,700.00	89.68	314.999	5,717.20	6,023.50	-5,507.07	1,929,435.269	2,777,891.060	36.302425322	-107.647354593
14,800.00	89.68	314.999	5,717.75	6,094.21	-5,577.78	1,929,505.977	2,777,820.349	36.302619932	-107.647594111
14,900.00	89.68	314.999	5,718.30	6,164.92	-5,648.49	1,929,576.685	2,777,749.638	36.302814542	-107.647833631
15,000.00	89.68	314.999	5,718.86	6,235.63	-5,719.20	1,929,647.393	2,777,678.927	36.303009152	-107.648073151
15,100.00	89.68	314.999	5,719.41	6,306.34	-5,789.91	1,929,718.101	2,777,608.216	36.303203761	-107.648312671
15,200.00	89.68	314.999	5,719.97	6,377.05	-5,860.63	1,929,788.809	2,777,537.505	36.303398370	-107.648552194
15,300.00	89.68	314.999	5,720.52	6,447.75	-5,931.34	1,929,859.517	2,777,466.794	36.303592978	-107.648791718
15,400.00	89.68	314.999	5,721.08	6,518.46	-6,002.05	1,929,930.224	2,777,396.083	36.303787586	-107.649031243
15,500.00	89.68	314.999	5,721.63	6,589.17	-6,072.76	1,930,000.932	2,777,325.372	36.303982193	-107.649270769
15,600.00	89.68	314.999	5,722.18	6,659.88	-6,143.47	1,930,071.640	2,777,254.661	36.304176800	-107.649510297
15,700.00	89.68	314.999	5,722.74	6,730.59	-6,214.18	1,930,142.348	2,777,183.950	36.304371407	-107.649749825
15,800.00	89.68	314.999	5,723.29	6,801.29	-6,284.89	1,930,213.056	2,777,113.239	36.304566012	-107.649989355
15,900.00	89.68	314.999	5,723.85	6,872.00	-6,355.60	1,930,283.764	2,777,042.528	36.304760618	-107.650228886
16,000.00	89.68	314.999	5,724.40	6,942.71	-6,426.31	1,930,354.472	2,776,971.817	36.304955223	-107.650468418
16,100.00	89.68	314.999	5,724.96	7,013.42	-6,497.03	1,930,425.180	2,776,901.106	36.305149827	-107.650707952
16,200.00	89.68	314.999	5,725.51	7,084.13	-6,567.74	1,930,495.888	2,776,830.395	36.305344431	-107.650947486
16,300.00	89.68	314.999	5,726.06	7,154.83	-6,638.45	1,930,566.596	2,776,759.684	36.305539034	-107.651187022
16,400.00	89.68	314.999	5,726.62	7,225.54	-6,709.16	1,930,637.304	2,776,688.973	36.305733637	-107.651426559
16,500.00	89.68	314.999	5,727.17	7,296.25	-6,779.87	1,930,708.012	2,776,618.262	36.305928240	-107.651666097
16,600.00	89.68	314.999	5,727.73	7,366.96	-6,850.58	1,930,778.720	2,776,547.551	36.306122842	-107.651905636
16,649.41	89.68	314.999	5,728.00	7,401.90	-6,885.52	1,930,813.658	2,776,512.611	36.306219000	-107.652024000
PBHL/TD @ 16649.41 MD 5728.00 TVD									

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Ridge 127H FTP 2363 F - plan hits target center - Point	0.00	0.000	5,670.00	1.82	514.87	1,923,413.597	2,783,912.987	36.285850000	-107.626961000	
Ridge 127H LTP 231 FN - plan hits target center - Point	0.00	0.000	5,728.00	7,401.90	-6,885.52	1,930,813.658	2,776,512.611	36.306219000	-107.652024000	

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	
3,832.49	3,713.00	9 5/8" Csg	9-5/8	12-1/4	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6923+25 @ 6948.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6923+25 @ 6948.00ft
Site:	Ridge Unit (124, 127, 128 & 129)	North Reference:	Grid
Well:	Ridge Unit No. 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,358.79	1,358.00	Ojo Alamo				
1,475.41	1,473.00	Kirtland				
1,729.31	1,718.00	Fruitland				
2,040.31	2,013.00	Pictured Cliffs				
2,172.08	2,138.00	Lewis				
2,498.89	2,448.00	Chacra				
3,658.54	3,548.00	Cliff House				
3,674.35	3,563.00	Menefee				
4,547.86	4,393.00	Point Lookout				
4,777.15	4,618.00	Mancos				
5,147.87	4,988.00	MNCS_A				
5,227.87	5,068.00	MNCS_B				
5,353.90	5,193.00	MNCS_C				
5,442.95	5,278.00	MNCS_Cms				
5,520.55	5,348.00	MNCS_D				
5,617.40	5,428.00	MNCS_E				
5,692.41	5,483.00	MNCS_F				
5,836.42	5,568.00	MNCS_G				
5,917.89	5,608.00	MNCS_H				
6,069.41	5,658.00	MNCS_I				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,100.00	1,100.00	0.00	0.00	KOP Begin 3°/100' build	
1,715.22	1,704.63	-40.96	89.29	Begin 18.46° tangent	
4,411.70	4,262.42	-396.85	865.23	Begin 3°/100' drop	
5,026.92	4,867.05	-437.81	954.52	Begin vertical hold	
5,226.92	5,067.05	-437.81	954.52	Begin 10°/100' build	
5,826.92	5,563.25	-235.24	751.95	Begin 60.00° tangent	
5,886.92	5,593.25	-198.50	715.20	Begin 10°/100' build	
6,183.74	5,670.00	1.82	514.87	Begin 89.68° lateral	
16,649.41	5,728.00	7,401.90	-6,885.52	PBHL/TD @ 16649.41 MD 5728.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Ridge Unit No. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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 1,864.94ft	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	16,649.41	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)						
NW Lybrook Unit 139H - Original Hole - rev0	5,594.86	11,010.13	546.35	407.55	3.936	CC
NW Lybrook Unit 139H - Original Hole - rev0	5,600.00	11,007.95	546.39	407.00	3.920	ES
NW Lybrook Unit 139H - Original Hole - rev0	5,700.00	10,960.53	561.42	413.38	3.792	SF
Ridge Unit (124, 127, 128 & 129)						
Ridge Unit No. 124H - Original Hole - rev1	1,000.00	1,000.00	20.04	13.32	2.982	CC, ES
Ridge Unit No. 124H - Original Hole - rev1	15,500.00	15,173.32	1,200.70	765.09	2.756	SF
Ridge Unit No. 128H - Original Hole - rev1	1,000.00	1,000.00	20.04	13.32	2.982	CC, ES
Ridge Unit No. 128H - Original Hole - rev1	16,649.41	15,399.49	1,156.47	678.49	2.419	SF
Ridge Unit No. 129H - Original Hole - rev1	600.00	600.00	40.08	36.23	10.401	CC, ES
Ridge Unit No. 129H - Original Hole - rev1	700.00	697.88	42.62	38.06	9.361	SF

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		Offset Wellbore Centre		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	
4,000.00	3,871.90	10,874.31	5,587.05	19.91	128.74	129.82	-840.14	733.42	1,859.04	1,794.10	64.94	28.627		
4,100.00	3,966.75	10,903.70	5,587.22	20.55	129.47	128.64	-840.33	762.82	1,764.37	1,698.48	65.89	26.776		
4,200.00	4,061.61	10,933.10	5,587.38	21.20	130.20	127.35	-840.52	792.21	1,669.80	1,602.89	66.91	24.955		
4,300.00	4,156.46	10,962.49	5,587.55	21.85	130.93	125.94	-840.71	821.61	1,575.35	1,507.34	68.01	23.163		
4,400.00	4,251.32	10,991.89	5,587.71	22.49	131.67	124.39	-840.90	851.00	1,481.05	1,411.85	69.20	21.402		
4,500.00	4,346.79	11,019.52	5,587.87	23.11	132.35	115.96	-841.08	878.63	1,386.58	1,316.04	70.54	19.656		
4,600.00	4,443.68	11,042.59	5,588.00	23.67	132.93	105.39	-841.23	901.70	1,291.66	1,219.53	72.13	17.907		
4,700.00	4,541.73	11,061.01	5,588.10	24.15	133.39	94.31	-841.34	920.13	1,196.73	1,122.69	74.04	16.163		
4,800.00	4,640.67	11,074.74	5,588.18	24.56	133.73	83.85	-841.43	933.85	1,102.33	1,025.94	76.39	14.430		
4,900.00	4,740.23	11,083.74	5,588.23	24.91	133.95	74.92	-841.49	942.85	1,009.07	929.74	79.33	12.720		
5,000.00	4,840.14	11,087.97	5,588.26	25.20	134.06	67.92	-841.52	947.08	917.75	834.69	83.06	11.049		
5,100.00	4,940.13	11,088.71	5,588.26	25.44	134.08	-179.05	-841.52	947.82	829.09	741.27	87.82	9.441		
5,200.00	5,040.13	11,089.27	5,588.26	25.67	134.09	-179.13	-841.53	948.38	743.35	649.51	93.83	7.922		
5,300.00	5,139.94	11,086.52	5,588.25	25.88	134.02	-140.04	-841.51	945.63	663.76	561.92	101.84	6.518		
5,400.00	5,237.51	11,071.92	5,588.17	25.97	133.66	-143.51	-841.42	931.03	600.08	487.05	113.04	5.309		
5,500.00	5,329.91	11,045.46	5,588.02	25.99	133.00	-143.43	-841.24	904.58	559.36	432.80	126.56	4.420		
5,594.86	5,410.22	11,010.13	5,587.82	25.98	132.12	-140.79	-841.02	869.25	546.35	407.55	138.81	3.936 CC		

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Offset Well Error: 0.00 ft	
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	Warning	
5,600.00	5,414.32	11,007.95	5,587.80	25.98	132.06	-140.58	-841.00	867.07	546.39	407.00	139.39	3.920	ES	
5,700.00	5,488.18	10,960.53	5,587.54	25.97	130.88	-135.16	-840.69	819.64	561.42	413.38	148.04	3.792	SF	
5,800.00	5,549.25	10,904.63	5,587.22	26.00	129.49	-127.26	-840.33	763.74	599.78	448.12	151.66	3.955		
5,900.00	5,599.66	10,843.46	5,586.88	26.14	127.97	-120.68	-839.94	702.58	652.59	500.56	152.03	4.292		
6,000.00	5,639.79	10,778.60	5,586.51	26.40	126.36	-109.73	-839.52	637.72	714.13	563.25	150.88	4.733		
6,100.00	5,663.43	10,709.67	5,586.12	26.80	124.65	-98.35	-839.07	568.80	781.93	632.68	149.25	5.239		
6,200.00	5,670.09	10,638.78	5,585.72	27.33	122.89	-89.52	-838.61	497.91	851.99	704.30	147.68	5.769		
6,300.00	5,670.64	10,567.62	5,585.32	28.02	121.13	-89.50	-838.15	426.75	922.24	776.00	146.25	6.306		
6,400.00	5,671.20	10,496.46	5,584.92	28.88	119.36	-89.48	-837.69	355.59	992.50	847.59	144.91	6.849		
6,500.00	5,671.75	10,425.29	5,584.51	29.91	117.60	-89.46	-837.23	284.43	1,062.75	919.09	143.66	7.398		
6,600.00	5,672.31	10,354.13	5,584.11	31.08	115.84	-89.45	-836.77	213.27	1,133.01	990.51	142.50	7.951		
6,700.00	5,672.86	10,282.97	5,583.71	32.37	114.08	-89.43	-836.31	142.11	1,203.27	1,061.84	141.42	8.508		
6,800.00	5,673.41	10,211.80	5,583.31	33.78	112.33	-89.42	-835.85	70.95	1,273.52	1,133.10	140.42	9.069		
6,900.00	5,673.97	10,140.64	5,582.91	35.29	110.57	-89.41	-835.39	-0.21	1,343.78	1,204.28	139.49	9.633		
7,000.00	5,674.52	10,069.48	5,582.50	36.88	108.82	-89.40	-834.93	-71.37	1,414.03	1,275.41	138.63	10.200		
7,100.00	5,675.08	9,998.32	5,582.10	38.54	107.07	-89.39	-834.47	-142.53	1,484.29	1,346.47	137.82	10.770		
7,200.00	5,675.63	9,927.15	5,581.70	40.27	105.32	-89.38	-834.01	-213.69	1,554.54	1,417.48	137.07	11.341		
7,300.00	5,676.19	9,855.99	5,581.30	42.05	103.57	-89.38	-833.55	-284.85	1,624.80	1,488.43	136.36	11.915		
7,400.00	5,676.74	9,784.83	5,580.90	43.88	101.82	-89.37	-833.09	-356.01	1,695.05	1,559.35	135.71	12.491		
7,500.00	5,677.29	9,713.66	5,580.50	45.76	100.08	-89.36	-832.63	-427.17	1,765.31	1,630.22	135.09	13.068		
7,600.00	5,677.85	9,642.50	5,580.09	47.67	98.34	-89.36	-832.17	-498.33	1,835.56	1,701.05	134.51	13.646		

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 124H - 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)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.92	-0.32	20.04	20.04				
100.00	100.00	100.00	100.00	0.13	0.13	90.92	-0.32	20.04	20.04	19.78	0.27	74.554	
200.00	200.00	200.00	200.00	0.49	0.49	90.92	-0.32	20.04	20.04	19.06	0.99	20.333	
300.00	300.00	300.00	300.00	0.85	0.85	90.92	-0.32	20.04	20.04	18.34	1.70	11.772	
400.00	400.00	400.00	400.00	1.21	1.21	90.92	-0.32	20.04	20.04	17.62	2.42	8.284	
500.00	500.00	500.00	500.00	1.57	1.57	90.92	-0.32	20.04	20.04	16.91	3.14	6.390	
600.00	600.00	600.00	600.00	1.93	1.93	90.92	-0.32	20.04	20.04	16.19	3.85	5.201	
700.00	700.00	700.00	700.00	2.29	2.29	90.92	-0.32	20.04	20.04	15.47	4.57	4.386	
800.00	800.00	800.00	800.00	2.64	2.64	90.92	-0.32	20.04	20.04	14.76	5.29	3.791	
900.00	900.00	900.00	900.00	3.00	3.00	90.92	-0.32	20.04	20.04	14.04	6.00	3.338	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	90.92	-0.32	20.04	20.04	13.32	6.72	2.982 CC, ES	
1,100.00	1,100.00	1,099.01	1,098.97	3.72	3.71	87.62	0.92	22.28	22.33	14.90	7.42	3.007	
1,200.00	1,199.95	1,197.60	1,197.25	4.07	4.06	-36.66	4.64	28.97	27.33	19.25	8.09	3.380	
1,300.00	1,299.63	1,295.51	1,294.33	4.41	4.42	-50.46	10.76	39.99	34.43	25.72	8.72	3.951	
1,400.00	1,398.77	1,392.43	1,389.68	4.76	4.79	-63.89	19.19	55.16	45.44	36.09	9.35	4.861	
1,500.00	1,497.08	1,488.09	1,482.79	5.13	5.18	-74.57	29.81	74.26	61.26	51.24	10.02	6.113	
1,600.00	1,594.31	1,582.23	1,573.26	5.54	5.59	-82.31	42.45	97.02	81.97	71.22	10.74	7.629	
1,700.00	1,690.18	1,674.65	1,660.70	5.98	6.05	-87.74	56.95	123.12	107.36	95.82	11.54	9.302	
1,800.00	1,785.05	1,765.30	1,744.98	6.47	6.54	-91.58	73.16	152.29	137.10	124.71	12.39	11.065	
1,900.00	1,879.91	1,854.18	1,825.99	6.99	7.08	-93.12	90.92	184.25	170.50	157.25	13.25	12.866	
2,000.00	1,974.77	1,941.84	1,904.14	7.53	7.67	-93.33	110.19	218.94	207.08	192.95	14.13	14.655	
2,100.00	2,069.62	2,034.44	1,985.98	8.09	8.34	-93.22	131.24	256.82	244.83	229.66	15.18	16.134	
2,200.00	2,164.48	2,127.04	2,067.81	8.66	9.04	-93.13	152.28	294.70	282.58	266.33	16.25	17.388	
2,300.00	2,259.34	2,219.64	2,149.64	9.25	9.76	-93.06	173.33	332.58	320.34	302.98	17.35	18.458	
2,400.00	2,354.19	2,312.24	2,231.47	9.84	10.51	-93.01	194.38	370.47	358.09	339.61	18.48	19.377	
2,500.00	2,449.05	2,404.83	2,313.30	10.44	11.26	-92.97	215.43	408.35	395.85	376.22	19.62	20.172	
2,600.00	2,543.91	2,497.43	2,395.13	11.05	12.03	-92.94	236.48	446.23	433.60	412.82	20.78	20.863	
2,700.00	2,638.76	2,590.03	2,476.97	11.66	12.81	-92.91	257.53	484.11	471.35	449.40	21.96	21.468	
2,800.00	2,733.62	2,682.63	2,558.80	12.28	13.59	-92.88	278.57	522.00	509.11	485.97	23.14	22.003	
2,900.00	2,828.47	2,775.23	2,640.63	12.90	14.38	-92.86	299.62	559.88	546.86	522.53	24.33	22.476	
3,000.00	2,923.33	2,867.83	2,722.46	13.53	15.18	-92.84	320.67	597.76	584.62	559.09	25.53	22.899	
3,100.00	3,018.19	2,960.43	2,804.29	14.16	15.98	-92.83	341.72	635.64	622.37	595.63	26.74	23.277	
3,200.00	3,113.04	3,053.03	2,886.12	14.79	16.79	-92.81	362.77	673.53	660.13	632.18	27.95	23.618	
3,300.00	3,207.90	3,145.63	2,967.96	15.42	17.59	-92.80	383.82	711.41	697.88	668.71	29.17	23.926	
3,400.00	3,302.76	3,238.23	3,049.79	16.06	18.41	-92.79	404.86	749.29	735.64	705.24	30.39	24.205	
3,500.00	3,397.61	3,330.82	3,131.62	16.70	19.22	-92.78	425.91	787.18	773.39	741.77	31.62	24.460	
3,600.00	3,492.47	3,423.42	3,213.45	17.34	20.04	-92.77	446.96	825.06	811.14	778.30	32.85	24.693	
3,700.00	3,587.33	3,516.02	3,295.28	17.98	20.86	-92.76	468.01	862.94	848.90	814.82	34.08	24.907	
3,800.00	3,682.18	3,608.62	3,377.12	18.62	21.68	-92.75	489.06	900.82	886.65	851.33	35.32	25.103	
3,900.00	3,777.04	3,701.22	3,458.95	19.26	22.50	-92.74	510.11	938.71	924.41	887.85	36.56	25.285	
4,000.00	3,871.90	3,793.82	3,540.78	19.91	23.33	-92.74	531.15	976.59	962.16	924.36	37.80	25.453	
4,100.00	3,966.75	3,886.42	3,622.61	20.55	24.15	-92.73	552.20	1,014.47	999.92	960.87	39.05	25.608	
4,200.00	4,061.61	3,979.02	3,704.44	21.20	24.98	-92.72	573.25	1,052.35	1,037.67	997.38	40.29	25.753	
4,300.00	4,156.46	4,071.62	3,786.27	21.85	25.80	-92.72	594.30	1,090.24	1,075.43	1,033.89	41.54	25.888	
4,400.00	4,251.32	4,164.22	3,868.11	22.49	26.63	-92.71	615.35	1,128.12	1,113.18	1,070.39	42.79	26.015	
4,500.00	4,346.19	4,256.82	3,949.94	23.11	27.46	-93.67	636.40	1,166.00	1,150.84	1,106.84	44.00	26.156	
4,600.00	4,443.68	4,349.29	4,031.66	23.67	28.29	-94.50	657.41	1,203.83	1,188.21	1,143.11	45.10	26.348	
4,700.00	4,541.73	4,464.12	4,133.41	24.15	29.31	-94.93	683.26	1,250.36	1,225.05	1,178.65	46.40	26.400	
4,800.00	4,640.67	4,647.76	4,301.47	24.56	30.74	-94.76	719.14	1,314.92	1,256.78	1,208.39	48.39	25.971	
4,900.00	4,740.23	4,841.69	4,485.76	24.91	31.96	-94.47	748.33	1,367.46	1,281.10	1,231.06	50.04	25.602	
5,000.00	4,840.14	5,044.04	4,683.50	25.20	32.91	-94.08	768.95	1,404.58	1,297.43	1,246.17	51.26	25.310	
5,100.00	4,940.13	5,252.30	4,890.53	25.44	33.58	21.07	779.45	1,423.48	1,305.41	1,253.39	52.02	25.094	

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 124H - 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 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	5,040.13	5,401.94	5,040.13	25.67	33.89	21.14	780.59	1,425.52	1,306.27	1,253.78	52.49	24.885		
5,300.00	5,139.94	5,475.14	5,113.33	25.88	34.02	66.33	781.09	1,425.03	1,304.95	1,252.06	52.89	24.672		
5,400.00	5,237.51	5,526.53	5,164.47	25.97	34.11	67.01	784.55	1,421.66	1,300.26	1,247.24	53.02	24.526		
5,500.00	5,329.91	5,577.96	5,215.01	25.99	34.18	68.16	791.27	1,415.08	1,292.53	1,239.65	52.88	24.443		
5,600.00	5,414.32	5,629.45	5,264.57	25.98	34.24	69.75	801.22	1,405.36	1,282.17	1,229.61	52.55	24.397		
5,700.00	5,488.18	5,681.04	5,312.77	25.97	34.30	71.75	814.35	1,392.53	1,269.71	1,217.59	52.12	24.361		
5,800.00	5,549.25	5,732.76	5,359.24	26.00	34.34	74.09	830.56	1,376.69	1,255.87	1,204.20	51.67	24.305		
5,900.00	5,599.66	5,786.00	5,404.74	26.14	34.38	75.76	850.31	1,357.39	1,242.57	1,191.25	51.32	24.212		
6,000.00	5,639.79	5,850.00	5,455.74	26.40	34.41	78.38	877.92	1,330.41	1,230.66	1,179.46	51.20	24.035		
6,100.00	5,663.43	5,900.00	5,492.41	26.80	34.43	80.83	902.21	1,306.67	1,219.29	1,168.14	51.15	23.837		
6,200.00	5,670.09	5,950.00	5,525.97	27.33	34.43	83.11	928.70	1,280.79	1,209.57	1,158.31	51.26	23.595		
6,300.00	5,670.64	6,018.95	5,566.71	28.02	34.43	85.03	968.46	1,241.94	1,203.31	1,151.56	51.75	23.252		
6,400.00	5,671.20	6,099.82	5,607.72	28.88	34.42	86.96	1,018.30	1,193.24	1,200.33	1,147.73	52.60	22.821		
6,500.00	5,671.75	6,186.75	5,646.24	29.91	34.40	88.78	1,073.88	1,138.74	1,199.48	1,145.70	53.77	22.306		
6,503.66	5,671.77	6,190.15	5,647.51	29.95	34.39	88.84	1,076.13	1,136.53	1,199.48	1,145.65	53.83	22.284		
6,600.00	5,672.31	6,284.84	5,675.06	31.08	34.35	90.13	1,140.49	1,072.93	1,199.80	1,144.36	55.43	21.643		
6,700.00	5,672.86	6,390.47	5,687.78	32.37	34.28	90.71	1,214.71	999.07	1,200.12	1,142.53	57.59	20.837		
6,800.00	5,673.41	6,491.35	5,688.56	33.78	34.20	90.72	1,286.04	927.74	1,200.13	1,140.09	60.04	19.988		
6,900.00	5,673.97	6,591.35	5,689.18	35.29	34.14	90.73	1,356.75	857.03	1,200.13	1,137.41	62.72	19.135		
7,000.00	5,674.52	6,691.35	5,689.81	36.88	34.08	90.73	1,427.46	786.33	1,200.14	1,134.53	65.61	18.291		
7,100.00	5,675.08	6,791.35	5,690.44	38.54	34.02	90.73	1,498.17	715.62	1,200.14	1,131.45	68.70	17.470		
7,200.00	5,675.63	6,891.35	5,691.07	40.27	33.98	90.74	1,568.88	644.91	1,200.15	1,128.20	71.95	16.681		
7,300.00	5,676.19	6,991.35	5,691.69	42.05	33.98	90.74	1,639.59	574.20	1,200.15	1,124.80	75.35	15.927		
7,400.00	5,676.74	7,091.35	5,692.32	43.88	35.16	90.74	1,710.30	503.49	1,200.16	1,121.40	78.76	15.239		
7,500.00	5,677.29	7,191.35	5,692.95	45.76	36.98	90.75	1,781.01	432.79	1,200.16	1,117.71	82.45	14.556		
7,600.00	5,677.85	7,291.35	5,693.57	47.67	38.81	90.75	1,851.72	362.08	1,200.17	1,114.00	86.17	13.928		
7,700.00	5,678.40	7,391.35	5,694.20	49.61	40.68	90.75	1,922.43	291.37	1,200.17	1,110.20	89.97	13.340		
7,800.00	5,678.96	7,491.35	5,694.83	51.59	42.60	90.76	1,993.14	220.66	1,200.18	1,106.34	93.84	12.790		
7,900.00	5,679.51	7,591.35	5,695.45	53.58	44.54	90.76	2,063.85	149.95	1,200.18	1,102.41	97.77	12.275		
8,000.00	5,680.06	7,691.35	5,696.08	55.61	46.52	90.76	2,134.56	79.25	1,200.19	1,098.43	101.76	11.794		
8,100.00	5,680.62	7,791.35	5,696.71	57.65	48.53	90.77	2,205.27	8.54	1,200.19	1,094.39	105.80	11.344		
8,200.00	5,681.17	7,891.35	5,697.34	59.71	50.55	90.77	2,275.98	-62.17	1,200.20	1,090.32	109.88	10.923		
8,300.00	5,681.73	7,991.35	5,697.96	61.79	52.60	90.78	2,346.69	-132.88	1,200.20	1,086.20	114.00	10.528		
8,400.00	5,682.28	8,091.35	5,698.59	63.88	54.67	90.78	2,417.41	-203.59	1,200.21	1,082.05	118.15	10.158		
8,500.00	5,682.84	8,191.35	5,699.22	65.98	56.75	90.78	2,488.12	-274.30	1,200.21	1,077.87	122.34	9.810		
8,600.00	5,683.39	8,291.35	5,699.84	68.10	58.85	90.79	2,558.83	-345.00	1,200.22	1,073.66	126.55	9.484		
8,700.00	5,683.94	8,391.35	5,700.47	70.23	60.97	90.79	2,629.54	-415.71	1,200.22	1,069.43	130.79	9.176		
8,800.00	5,684.50	8,491.35	5,701.10	72.37	63.09	90.79	2,700.25	-486.42	1,200.23	1,065.17	135.06	8.887		
8,900.00	5,685.05	8,591.35	5,701.73	74.52	65.23	90.80	2,770.96	-557.13	1,200.23	1,060.89	139.34	8.614		
9,000.00	5,685.61	8,691.35	5,702.35	76.68	67.37	90.80	2,841.67	-627.84	1,200.24	1,056.59	143.64	8.356		
9,100.00	5,686.16	8,791.35	5,702.98	78.84	69.53	90.80	2,912.38	-698.54	1,200.24	1,052.28	147.96	8.112		
9,200.00	5,686.72	8,891.35	5,703.61	81.01	71.69	90.81	2,983.09	-769.25	1,200.25	1,047.95	152.29	7.881		
9,300.00	5,687.27	8,991.35	5,704.23	83.19	73.86	90.81	3,053.80	-839.96	1,200.25	1,043.61	156.64	7.662		
9,400.00	5,687.82	9,091.35	5,704.86	85.38	76.04	90.81	3,124.51	-910.67	1,200.26	1,039.25	161.01	7.455		
9,500.00	5,688.38	9,191.35	5,705.49	87.57	78.23	90.82	3,195.22	-981.38	1,200.26	1,034.88	165.38	7.258		
9,600.00	5,688.93	9,291.35	5,706.12	89.76	80.42	90.82	3,265.93	-1,052.08	1,200.26	1,030.50	169.77	7.070		
9,700.00	5,689.49	9,391.35	5,706.74	91.96	82.61	90.82	3,336.64	-1,122.79	1,200.27	1,026.11	174.16	6.892		
9,800.00	5,690.04	9,491.35	5,707.37	94.17	84.81	90.83	3,407.35	-1,193.50	1,200.27	1,021.71	178.57	6.722		
9,900.00	5,690.59	9,591.35	5,708.00	96.37	87.02	90.83	3,478.06	-1,264.21	1,200.28	1,017.30	182.98	6.559		
10,000.00	5,691.15	9,691.35	5,708.62	98.59	89.23	90.83	3,548.77	-1,334.92	1,200.28	1,012.88	187.41	6.405		
10,100.00	5,691.70	9,791.35	5,709.25	100.80	91.44	90.84	3,619.48	-1,405.62	1,200.29	1,008.45	191.84	6.257		
10,200.00	5,692.26	9,891.35	5,709.88	103.02	93.66	90.84	3,690.19	-1,476.33	1,200.29	1,004.02	196.28	6.115		

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 124H - 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	
10,300.00	5,692.81	9,991.35	5,710.50	105.25	95.88	90.84	3,760.90	-1,547.04	1,200.30	999.58	200.72	5.980	
10,400.00	5,693.37	10,091.35	5,711.13	107.47	98.11	90.85	3,831.61	-1,617.75	1,200.30	995.13	205.17	5.850	
10,500.00	5,693.92	10,191.35	5,711.76	109.70	100.33	90.85	3,902.33	-1,688.46	1,200.31	990.68	209.63	5.726	
10,600.00	5,694.47	10,291.35	5,712.39	111.93	102.57	90.86	3,973.04	-1,759.16	1,200.31	986.22	214.09	5.607	
10,700.00	5,695.03	10,391.35	5,713.01	114.17	104.80	90.86	4,043.75	-1,829.87	1,200.32	981.76	218.56	5.492	
10,800.00	5,695.58	10,491.35	5,713.64	116.40	107.03	90.86	4,114.46	-1,900.58	1,200.32	977.29	223.03	5.382	
10,900.00	5,696.14	10,591.35	5,714.27	118.64	109.27	90.87	4,185.17	-1,971.29	1,200.33	972.82	227.51	5.276	
11,000.00	5,696.69	10,691.35	5,714.89	120.88	111.51	90.87	4,255.88	-2,042.00	1,200.33	968.35	231.99	5.174	
11,100.00	5,697.25	10,791.35	5,715.52	123.13	113.75	90.87	4,326.59	-2,112.70	1,200.34	963.86	236.47	5.076	
11,200.00	5,697.80	10,891.35	5,716.15	125.37	116.00	90.88	4,397.30	-2,183.41	1,200.34	959.38	240.96	4.981	
11,300.00	5,698.35	10,991.35	5,716.78	127.62	118.25	90.88	4,468.01	-2,254.12	1,200.35	954.89	245.46	4.890	
11,400.00	5,698.91	11,091.35	5,717.40	129.86	120.49	90.88	4,538.72	-2,324.83	1,200.35	950.40	249.95	4.802	
11,500.00	5,699.46	11,191.35	5,718.03	132.11	122.74	90.89	4,609.43	-2,395.54	1,200.36	945.91	254.45	4.717	
11,600.00	5,700.02	11,291.35	5,718.66	134.37	124.99	90.89	4,680.14	-2,466.25	1,200.36	941.41	258.95	4.635	
11,700.00	5,700.57	11,391.35	5,719.28	136.62	127.25	90.89	4,750.85	-2,536.95	1,200.37	936.91	263.46	4.556	
11,800.00	5,701.12	11,491.35	5,719.91	138.87	129.50	90.90	4,821.56	-2,607.66	1,200.37	932.41	267.97	4.480	
11,900.00	5,701.68	11,591.35	5,720.54	141.13	131.76	90.90	4,892.27	-2,678.37	1,200.38	927.90	272.48	4.405	
12,000.00	5,702.23	11,691.35	5,721.17	143.38	134.01	90.90	4,962.98	-2,749.08	1,200.38	923.39	276.99	4.334	
12,100.00	5,702.79	11,791.35	5,721.79	145.64	136.27	90.91	5,033.69	-2,819.79	1,200.39	918.88	281.51	4.264	
12,200.00	5,703.34	11,891.35	5,722.42	147.90	138.53	90.91	5,104.40	-2,890.49	1,200.39	914.37	286.02	4.197	
12,300.00	5,703.90	11,991.35	5,723.05	150.16	140.79	90.91	5,175.11	-2,961.20	1,200.40	909.86	290.54	4.132	
12,400.00	5,704.45	12,091.35	5,723.67	152.42	143.05	90.92	5,245.82	-3,031.91	1,200.40	905.34	295.06	4.068	
12,500.00	5,705.00	12,191.35	5,724.30	154.68	145.32	90.92	5,316.53	-3,102.62	1,200.41	900.82	299.59	4.007	
12,600.00	5,705.56	12,291.35	5,724.93	156.95	147.58	90.92	5,387.25	-3,173.33	1,200.41	896.30	304.11	3.947	
12,700.00	5,706.11	12,391.35	5,725.55	159.21	149.84	90.93	5,457.96	-3,244.03	1,200.42	891.78	308.64	3.889	
12,800.00	5,706.67	12,491.35	5,726.18	161.47	152.11	90.93	5,528.67	-3,314.74	1,200.42	887.25	313.17	3.833	
12,900.00	5,707.22	12,591.35	5,726.81	163.74	154.37	90.94	5,599.38	-3,385.45	1,200.43	882.73	317.70	3.778	
13,000.00	5,707.77	12,691.35	5,727.44	166.01	156.64	90.94	5,670.09	-3,456.16	1,200.43	878.20	322.23	3.725	
13,100.00	5,708.33	12,791.35	5,728.06	168.27	158.91	90.94	5,740.80	-3,526.87	1,200.44	873.67	326.77	3.674	
13,200.00	5,708.88	12,891.35	5,728.69	170.54	161.18	90.95	5,811.51	-3,597.57	1,200.44	869.14	331.30	3.623	
13,300.00	5,709.44	12,991.35	5,729.32	172.81	163.45	90.95	5,882.22	-3,668.28	1,200.45	864.61	335.84	3.574	
13,400.00	5,709.99	13,091.35	5,729.94	175.08	165.72	90.95	5,952.93	-3,738.99	1,200.45	860.08	340.38	3.527	
13,500.00	5,710.55	13,191.35	5,730.57	177.35	167.99	90.96	6,023.64	-3,809.70	1,200.46	855.54	344.91	3.480	
13,600.00	5,711.10	13,291.35	5,731.20	179.62	170.26	90.96	6,094.35	-3,880.41	1,200.46	851.01	349.45	3.435	
13,700.00	5,711.65	13,391.35	5,731.83	181.89	172.53	90.96	6,165.06	-3,951.11	1,200.47	846.47	354.00	3.391	
13,800.00	5,712.21	13,491.35	5,732.45	184.16	174.80	90.97	6,235.77	-4,021.82	1,200.47	841.94	358.54	3.348	
13,900.00	5,712.76	13,591.35	5,733.08	186.43	177.07	90.97	6,306.48	-4,092.53	1,200.48	837.40	363.08	3.306	
14,000.00	5,713.32	13,691.35	5,733.71	188.71	179.35	90.97	6,377.19	-4,163.24	1,200.48	832.86	367.63	3.266	
14,100.00	5,713.87	13,791.35	5,734.33	190.98	181.62	90.98	6,447.90	-4,233.95	1,200.49	828.32	372.17	3.226	
14,200.00	5,714.43	13,891.35	5,734.96	193.25	183.90	90.98	6,518.61	-4,304.65	1,200.49	823.78	376.72	3.187	
14,300.00	5,714.98	13,991.35	5,735.59	195.53	186.17	90.98	6,589.32	-4,375.36	1,200.50	819.23	381.27	3.149	
14,400.00	5,715.53	14,091.35	5,736.22	197.80	188.45	90.99	6,660.03	-4,446.07	1,200.50	814.69	385.81	3.112	
14,500.00	5,716.09	14,191.35	5,736.84	200.08	190.72	90.99	6,730.74	-4,516.78	1,200.51	810.15	390.36	3.075	
14,600.00	5,716.64	14,291.35	5,737.47	202.35	193.00	90.99	6,801.45	-4,587.49	1,200.51	805.60	394.91	3.040	
14,700.00	5,717.20	14,391.35	5,738.10	204.63	195.28	91.00	6,872.16	-4,658.20	1,200.52	801.06	399.46	3.005	
14,800.00	5,717.75	14,491.35	5,738.72	206.91	197.55	91.00	6,942.88	-4,728.90	1,200.53	796.51	404.01	2.972	
14,900.00	5,718.30	14,591.35	5,739.35	209.18	199.83	91.00	7,013.59	-4,799.61	1,200.53	791.97	408.56	2.938	
15,000.00	5,718.86	14,691.35	5,739.98	211.46	202.11	91.01	7,084.30	-4,870.32	1,200.54	787.42	413.12	2.906	
15,100.00	5,719.41	14,791.35	5,740.60	213.74	204.39	91.01	7,155.01	-4,941.03	1,200.54	782.87	417.67	2.874	
15,200.00	5,719.97	14,891.35	5,741.23	216.02	206.66	91.01	7,225.72	-5,011.74	1,200.55	778.32	422.22	2.843	
15,300.00	5,720.52	14,991.35	5,741.86	218.30	208.94	91.02	7,296.43	-5,082.44	1,200.55	773.77	426.78	2.813	
15,400.00	5,721.08	15,091.35	5,742.49	220.57	211.22	91.02	7,367.14	-5,153.15	1,200.56	769.22	431.33	2.783	

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 124H - 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	
15,403.55	5,721.10	15,094.90	5,742.51	220.65	211.30	91.02	7,369.65	-5,155.66	1,200.56	769.06	431.50	2.782		
15,500.00	5,721.63	15,173.32	5,743.00	222.85	213.09	91.02	7,425.11	-5,211.12	1,200.70	765.09	435.61	2.756 SF		
15,600.00	5,722.18	15,173.32	5,743.00	225.13	213.09	91.02	7,425.11	-5,211.12	1,206.35	770.45	435.90	2.768		
15,700.00	5,722.74	15,173.32	5,743.00	227.41	213.09	91.02	7,425.11	-5,211.12	1,220.21	788.44	431.77	2.826		
15,800.00	5,723.29	15,173.32	5,743.00	229.69	213.09	91.02	7,425.11	-5,211.12	1,241.98	818.20	423.78	2.931		
15,900.00	5,723.85	15,173.32	5,743.00	231.97	213.09	91.02	7,425.11	-5,211.12	1,271.27	858.52	412.75	3.080		
16,000.00	5,724.40	15,173.32	5,743.00	234.25	213.09	91.02	7,425.11	-5,211.12	1,307.58	908.00	399.57	3.272		
16,100.00	5,724.96	15,173.32	5,743.00	236.53	213.09	91.02	7,425.11	-5,211.12	1,350.32	965.23	385.09	3.506		
16,200.00	5,725.51	15,173.32	5,743.00	238.81	213.09	91.02	7,425.11	-5,211.12	1,398.92	1,028.91	370.01	3.781		
16,300.00	5,726.06	15,173.32	5,743.00	241.10	213.09	91.02	7,425.11	-5,211.12	1,452.79	1,097.94	354.86	4.094		
16,400.00	5,726.62	15,173.32	5,743.00	243.38	213.09	91.02	7,425.11	-5,211.12	1,511.36	1,171.35	340.01	4.445		
16,500.00	5,727.17	15,173.32	5,743.00	245.66	213.09	91.02	7,425.11	-5,211.12	1,574.12	1,248.39	325.72	4.833		
16,600.00	5,727.73	15,173.32	5,743.00	247.94	213.09	91.02	7,425.11	-5,211.12	1,640.57	1,328.42	312.15	5.256		
16,649.41	5,728.00	15,173.32	5,743.00	249.07	213.09	91.02	7,425.11	-5,211.12	1,674.63	1,368.91	305.72	5.478		

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 128H - 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	-90.12	-0.04	-20.04	20.04				
100.00	100.00	100.00	100.00	0.13	0.13	-90.12	-0.04	-20.04	20.04	19.77	0.27	74.542	
200.00	200.00	200.00	200.00	0.49	0.49	-90.12	-0.04	-20.04	20.04	19.06	0.99	20.330	
300.00	300.00	300.00	300.00	0.85	0.85	-90.12	-0.04	-20.04	20.04	18.34	1.70	11.770	
400.00	400.00	400.00	400.00	1.21	1.21	-90.12	-0.04	-20.04	20.04	17.62	2.42	8.282	
500.00	500.00	500.00	500.00	1.57	1.57	-90.12	-0.04	-20.04	20.04	16.90	3.14	6.389	
600.00	600.00	600.00	600.00	1.93	1.93	-90.12	-0.04	-20.04	20.04	16.19	3.85	5.201	
700.00	700.00	700.00	700.00	2.29	2.29	-90.12	-0.04	-20.04	20.04	15.47	4.57	4.385	
800.00	800.00	800.00	800.00	2.64	2.64	-90.12	-0.04	-20.04	20.04	14.75	5.29	3.790	
900.00	900.00	900.00	900.00	3.00	3.00	-90.12	-0.04	-20.04	20.04	14.04	6.00	3.338	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	-90.12	-0.04	-20.04	20.04	13.32	6.72	2.982 CC, ES	
1,100.00	1,100.00	1,099.03	1,098.99	3.72	3.70	-93.68	-1.43	-22.20	22.27	14.86	7.42	3.003	
1,200.00	1,199.95	1,197.35	1,197.00	4.07	4.04	147.00	-5.54	-28.62	31.45	23.38	8.07	3.897	
1,300.00	1,299.63	1,293.80	1,292.64	4.41	4.37	145.54	-12.22	-39.03	49.66	40.96	8.71	5.704	
1,400.00	1,398.77	1,387.29	1,384.64	4.76	4.72	145.38	-21.16	-52.98	76.54	67.21	9.33	8.206	
1,500.00	1,497.08	1,479.02	1,474.12	5.13	5.08	145.61	-32.05	-69.96	111.28	101.31	9.97	11.163	
1,600.00	1,594.31	1,570.86	1,563.58	5.54	5.47	146.44	-43.27	-87.47	150.67	140.02	10.65	14.143	
1,700.00	1,690.18	1,660.77	1,651.15	5.98	5.86	147.48	-54.26	-104.61	194.15	182.80	11.35	17.100	
1,800.00	1,785.05	1,749.31	1,737.40	6.47	6.25	148.97	-65.09	-121.49	240.31	228.25	12.06	19.933	
1,900.00	1,879.91	1,837.83	1,823.61	6.99	6.66	150.08	-75.91	-138.37	286.61	273.85	12.76	22.643	
2,000.00	1,974.77	1,926.35	1,909.83	7.53	7.07	150.88	-86.73	-155.24	332.98	319.50	13.48	24.710	
2,100.00	2,069.62	2,014.87	1,996.05	8.09	7.48	151.48	-97.55	-172.12	379.38	365.18	14.20	26.714	
2,200.00	2,164.48	2,103.39	2,082.27	8.66	7.91	151.96	-108.37	-189.00	425.81	410.88	14.94	28.507	
2,300.00	2,259.34	2,191.91	2,168.49	9.25	8.33	152.34	-119.19	-205.87	472.26	456.58	15.68	30.118	
2,400.00	2,354.19	2,280.43	2,254.71	9.84	8.76	152.65	-130.01	-222.75	518.73	502.30	16.43	31.570	
2,500.00	2,449.05	2,368.94	2,340.92	10.44	9.20	152.91	-140.83	-239.63	565.20	548.01	17.19	32.885	
2,600.00	2,543.91	2,457.46	2,427.14	11.05	9.63	153.13	-151.65	-256.51	611.68	593.73	17.95	34.079	
2,700.00	2,638.76	2,545.98	2,513.36	11.66	10.07	153.32	-162.47	-273.38	658.17	639.45	18.72	35.168	
2,800.00	2,733.62	2,634.50	2,599.58	12.28	10.51	153.48	-173.30	-290.26	704.66	685.17	19.49	36.163	
2,900.00	2,828.47	2,723.02	2,685.80	12.90	10.95	153.63	-184.12	-307.14	751.15	730.89	20.26	37.077	
3,000.00	2,923.33	2,811.54	2,772.02	13.53	11.40	153.76	-194.94	-324.01	797.65	776.61	21.04	37.917	
3,100.00	3,018.19	2,900.06	2,858.24	14.16	11.84	153.87	-205.76	-340.89	844.15	822.34	21.82	38.693	
3,200.00	3,113.04	2,988.58	2,944.45	14.79	12.29	153.97	-216.58	-357.77	890.66	868.06	22.60	39.410	
3,300.00	3,207.90	3,077.09	3,030.67	15.42	12.74	154.06	-227.40	-374.64	937.16	913.78	23.39	40.075	
3,400.00	3,302.76	3,165.61	3,116.89	16.06	13.19	154.14	-238.22	-391.52	983.67	959.50	24.17	40.693	
3,500.00	3,397.61	3,254.13	3,203.11	16.70	13.64	154.22	-249.04	-408.40	1,030.18	1,005.22	24.96	41.269	
3,600.00	3,492.47	3,342.65	3,289.33	17.34	14.09	154.29	-259.86	-425.27	1,076.69	1,050.93	25.75	41.807	
3,700.00	3,587.33	3,431.17	3,375.55	17.98	14.54	154.35	-270.68	-442.15	1,123.20	1,096.65	26.55	42.310	
3,800.00	3,682.18	3,519.69	3,461.77	18.62	15.00	154.41	-281.50	-459.03	1,169.71	1,142.37	27.34	42.782	
3,900.00	3,777.04	3,608.21	3,547.98	19.26	15.45	154.46	-292.32	-475.90	1,216.22	1,188.09	28.14	43.224	
4,000.00	3,871.90	3,696.72	3,634.20	19.91	15.90	154.51	-303.15	-492.78	1,262.74	1,233.80	28.93	43.641	
4,100.00	3,966.75	3,785.24	3,720.42	20.55	16.36	154.56	-313.97	-509.66	1,309.25	1,279.52	29.73	44.033	
4,200.00	4,061.61	3,873.76	3,806.64	21.20	16.81	154.60	-324.79	-526.53	1,355.77	1,325.23	30.53	44.403	
4,300.00	4,156.46	3,962.28	3,892.86	21.85	17.27	154.64	-335.61	-543.41	1,402.28	1,370.95	31.33	44.752	
4,400.00	4,251.32	4,050.80	3,979.08	22.49	17.72	154.68	-346.43	-560.29	1,448.80	1,416.66	32.14	45.083	
4,500.00	4,346.19	4,140.16	4,066.11	23.11	18.18	155.24	-357.35	-577.32	1,493.67	1,460.73	32.93	45.352	
4,600.00	4,443.68	4,231.50	4,155.09	23.67	18.65	155.70	-368.52	-594.74	1,534.27	1,500.54	33.73	45.491	
4,700.00	4,541.73	4,324.60	4,245.77	24.15	19.13	156.00	-379.90	-612.49	1,570.48	1,535.96	34.51	45.506	
4,800.00	4,640.67	4,419.21	4,337.91	24.56	19.62	156.17	-391.46	-630.53	1,602.20	1,566.92	35.29	45.406	
4,900.00	4,740.23	4,529.83	4,445.69	24.91	20.19	156.14	-404.93	-651.53	1,629.36	1,593.19	36.18	45.039	
5,000.00	4,840.14	4,631.02	4,543.61	25.20	21.63	155.67	-428.66	-688.54	1,643.57	1,604.99	38.58	42.603	
5,100.00	4,940.13	5,027.55	4,940.13	25.44	22.04	-89.70	-429.24	-689.45	1,643.99	1,604.63	39.36	41.763	

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 128H - 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)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,040.13	5,127.55	5,040.13	25.67	22.31	-89.70	-429.24	-689.45	1,643.99	1,604.04	39.95	41.149	
5,300.00	5,139.94	5,172.46	5,085.03	25.88	22.43	-44.86	-428.79	-689.90	1,642.06	1,601.76	40.30	40.749	
5,400.00	5,237.51	5,200.00	5,112.50	25.97	22.51	-45.65	-427.41	-691.28	1,632.27	1,591.82	40.45	40.352	
5,500.00	5,329.91	5,250.00	5,162.00	25.99	22.67	-47.30	-422.52	-696.17	1,614.57	1,573.95	40.63	39.740	
5,600.00	5,414.32	5,269.18	5,180.81	25.98	22.73	-49.48	-419.83	-698.86	1,589.07	1,548.49	40.58	39.162	
5,700.00	5,488.18	5,300.00	5,210.72	25.97	22.83	-52.57	-414.60	-704.10	1,556.86	1,516.27	40.60	38.351	
5,800.00	5,549.25	5,329.30	5,238.75	26.00	22.92	-56.48	-408.57	-710.13	1,518.73	1,478.05	40.68	37.336	
5,900.00	5,599.66	5,350.00	5,258.27	26.14	22.99	-58.46	-403.70	-714.99	1,478.00	1,437.17	40.83	36.199	
6,000.00	5,639.79	5,400.00	5,304.29	26.40	23.17	-63.81	-389.92	-728.78	1,436.19	1,394.80	41.39	34.698	
6,100.00	5,663.43	5,400.00	5,304.29	26.80	23.17	-68.37	-389.92	-728.78	1,391.60	1,349.74	41.86	33.241	
6,200.00	5,670.09	5,435.61	5,335.95	27.33	23.29	-73.73	-378.40	-740.30	1,346.04	1,303.13	42.91	31.371	
6,300.00	5,670.64	5,450.00	5,348.45	28.02	23.34	-74.30	-373.35	-745.34	1,304.11	1,260.06	44.05	29.602	
6,400.00	5,671.20	5,487.09	5,379.79	28.88	23.48	-75.75	-359.34	-759.36	1,267.49	1,221.90	45.59	27.801	
6,500.00	5,671.75	5,519.19	5,405.83	29.91	23.60	-76.96	-346.07	-772.62	1,236.59	1,189.29	47.30	26.143	
6,600.00	5,672.31	5,550.00	5,429.80	31.08	23.73	-78.09	-332.39	-786.31	1,211.44	1,162.27	49.18	24.634	
6,700.00	5,672.86	5,600.00	5,466.38	32.37	23.93	-79.82	-308.31	-810.39	1,191.84	1,140.54	51.30	23.232	
6,800.00	5,673.41	5,650.00	5,499.86	33.78	24.16	-81.43	-282.06	-836.64	1,177.53	1,124.00	53.53	21.998	
6,900.00	5,673.97	5,713.17	5,537.32	35.29	24.47	-83.24	-246.12	-872.58	1,167.86	1,111.96	55.90	20.891	
7,000.00	5,674.52	5,790.86	5,576.94	36.88	24.92	-85.16	-198.88	-919.82	1,161.86	1,103.43	58.43	19.886	
7,100.00	5,675.08	5,870.28	5,613.41	38.54	25.45	-86.94	-149.03	-969.67	1,158.33	1,097.27	61.07	18.969	
7,200.00	5,675.63	5,957.26	5,641.95	40.27	26.16	-88.33	-91.00	-1,027.71	1,156.90	1,093.02	63.88	18.111	
7,300.00	5,676.19	6,051.58	5,658.48	42.05	27.08	-89.12	-25.41	-1,093.30	1,156.52	1,089.71	66.81	17.311	
7,400.00	5,676.74	6,150.08	5,661.26	43.88	28.19	-89.23	44.18	-1,162.89	1,156.48	1,086.53	69.95	16.532	
7,415.88	5,676.83	6,165.95	5,661.35	44.18	28.38	-89.23	55.40	-1,174.11	1,156.48	1,086.01	70.47	16.410	
7,500.00	5,677.29	6,250.08	5,661.81	45.76	29.46	-89.23	114.88	-1,233.60	1,156.48	1,083.20	73.29	15.780	
7,600.00	5,677.85	6,350.08	5,662.35	47.67	30.87	-89.23	185.59	-1,304.31	1,156.48	1,079.72	76.76	15.066	
7,700.00	5,678.40	6,450.08	5,662.90	49.61	32.38	-89.23	256.30	-1,375.02	1,156.48	1,076.12	80.36	14.392	
7,800.00	5,678.96	6,550.08	5,663.45	51.59	34.00	-89.23	327.01	-1,445.73	1,156.48	1,072.42	84.06	13.757	
7,900.00	5,679.51	6,650.08	5,663.99	53.58	35.69	-89.23	397.72	-1,516.44	1,156.48	1,068.62	87.86	13.163	
8,000.00	5,680.06	6,750.08	5,664.54	55.61	37.46	-89.23	468.43	-1,587.15	1,156.48	1,064.75	91.73	12.607	
8,100.00	5,680.62	6,850.08	5,665.08	57.65	39.28	-89.23	539.13	-1,657.86	1,156.48	1,060.81	95.68	12.088	
8,200.00	5,681.17	6,950.08	5,665.63	59.71	41.15	-89.23	609.84	-1,728.57	1,156.48	1,056.80	99.68	11.602	
8,300.00	5,681.73	7,050.08	5,666.18	61.79	43.06	-89.23	680.55	-1,799.28	1,156.48	1,052.75	103.73	11.149	
8,400.00	5,682.28	7,150.08	5,666.72	63.88	45.01	-89.23	751.26	-1,870.00	1,156.48	1,048.65	107.83	10.725	
8,500.00	5,682.84	7,250.08	5,667.27	65.98	47.00	-89.23	821.97	-1,940.71	1,156.48	1,044.51	111.97	10.328	
8,600.00	5,683.39	7,350.08	5,667.82	68.10	49.01	-89.23	892.68	-2,011.42	1,156.48	1,040.33	116.15	9.957	
8,700.00	5,683.94	7,450.08	5,668.36	70.23	51.04	-89.23	963.38	-2,082.13	1,156.48	1,036.12	120.36	9.609	
8,800.00	5,684.50	7,550.08	5,668.91	72.37	53.10	-89.23	1,034.09	-2,152.84	1,156.48	1,031.89	124.60	9.282	
8,900.00	5,685.05	7,650.08	5,669.46	74.52	55.18	-89.23	1,104.80	-2,223.55	1,156.48	1,027.62	128.86	8.975	
9,000.00	5,685.61	7,750.08	5,670.00	76.68	57.27	-89.23	1,175.51	-2,294.26	1,156.48	1,023.34	133.14	8.686	
9,100.00	5,686.16	7,850.08	5,670.55	78.84	59.38	-89.23	1,246.22	-2,364.97	1,156.48	1,019.04	137.44	8.414	
9,200.00	5,686.72	7,950.08	5,671.09	81.01	61.51	-89.23	1,316.92	-2,435.68	1,156.48	1,014.71	141.77	8.158	
9,300.00	5,687.27	8,050.08	5,671.64	83.19	63.64	-89.23	1,387.63	-2,506.39	1,156.48	1,010.37	146.11	7.915	
9,400.00	5,687.82	8,150.08	5,672.19	85.38	65.79	-89.23	1,458.34	-2,577.11	1,156.48	1,006.02	150.46	7.686	
9,500.00	5,688.38	8,250.08	5,672.73	87.57	67.94	-89.22	1,529.05	-2,647.82	1,156.48	1,001.65	154.83	7.469	
9,600.00	5,688.93	8,350.08	5,673.28	89.76	70.11	-89.22	1,599.76	-2,718.53	1,156.48	997.27	159.21	7.264	
9,700.00	5,689.49	8,450.08	5,673.83	91.96	72.28	-89.22	1,670.47	-2,789.24	1,156.48	992.88	163.60	7.069	
9,800.00	5,690.04	8,550.08	5,674.37	94.17	74.46	-89.22	1,741.17	-2,859.95	1,156.48	988.47	168.01	6.884	
9,900.00	5,690.59	8,650.08	5,674.92	96.37	76.65	-89.22	1,811.88	-2,930.66	1,156.48	984.06	172.42	6.707	
10,000.00	5,691.15	8,750.08	5,675.46	98.59	78.84	-89.22	1,882.59	-3,001.37	1,156.48	979.64	176.84	6.540	
10,100.00	5,691.70	8,850.08	5,676.01	100.80	81.04	-89.22	1,953.30	-3,072.08	1,156.48	975.21	181.27	6.380	
10,200.00	5,692.26	8,950.08	5,676.56	103.02	83.24	-89.22	2,024.01	-3,142.79	1,156.48	970.77	185.71	6.227	

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 128H - 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 Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
10,300.00	5,692.81	9,050.08	5,677.10	105.25	85.45	-89.22	2,094.72	-3,213.50	1,156.48	966.32	190.16	6.082	
10,400.00	5,693.37	9,150.08	5,677.65	107.47	87.67	-89.22	2,165.42	-3,284.22	1,156.48	961.87	194.61	5.943	
10,500.00	5,693.92	9,250.08	5,678.20	109.70	89.88	-89.22	2,236.13	-3,354.93	1,156.48	957.41	199.07	5.809	
10,600.00	5,694.47	9,350.08	5,678.74	111.93	92.11	-89.22	2,306.84	-3,425.64	1,156.48	952.95	203.53	5.682	
10,700.00	5,695.03	9,450.08	5,679.29	114.17	94.33	-89.22	2,377.55	-3,496.35	1,156.48	948.48	208.00	5.560	
10,800.00	5,695.58	9,550.08	5,679.84	116.40	96.56	-89.22	2,448.26	-3,567.06	1,156.48	944.00	212.48	5.443	
10,900.00	5,696.14	9,650.08	5,680.38	118.64	98.79	-89.22	2,518.97	-3,637.77	1,156.48	939.52	216.96	5.330	
11,000.00	5,696.69	9,750.08	5,680.93	120.88	101.02	-89.22	2,589.67	-3,708.48	1,156.48	935.04	221.44	5.222	
11,100.00	5,697.25	9,850.08	5,681.47	123.13	103.26	-89.22	2,660.38	-3,779.19	1,156.48	930.55	225.93	5.119	
11,200.00	5,697.80	9,950.08	5,682.02	125.37	105.50	-89.22	2,731.09	-3,849.90	1,156.48	926.06	230.42	5.019	
11,300.00	5,698.35	10,050.08	5,682.57	127.62	107.74	-89.22	2,801.80	-3,920.61	1,156.48	921.56	234.92	4.923	
11,400.00	5,698.91	10,150.08	5,683.11	129.86	109.99	-89.22	2,872.51	-3,991.33	1,156.48	917.06	239.42	4.830	
11,500.00	5,699.46	10,250.08	5,683.66	132.11	112.23	-89.22	2,943.21	-4,062.04	1,156.48	912.56	243.92	4.741	
11,600.00	5,700.02	10,350.08	5,684.21	134.37	114.48	-89.22	3,013.92	-4,132.75	1,156.48	908.05	248.43	4.655	
11,700.00	5,700.57	10,450.08	5,684.75	136.62	116.73	-89.22	3,084.63	-4,203.46	1,156.48	903.54	252.94	4.572	
11,800.00	5,701.12	10,550.08	5,685.30	138.87	118.98	-89.22	3,155.34	-4,274.17	1,156.48	899.03	257.45	4.492	
11,900.00	5,701.68	10,650.08	5,685.85	141.13	121.24	-89.22	3,226.05	-4,344.88	1,156.48	894.52	261.96	4.415	
12,000.00	5,702.23	10,750.08	5,686.39	143.38	123.49	-89.22	3,296.76	-4,415.59	1,156.48	890.00	266.48	4.340	
12,100.00	5,702.79	10,850.08	5,686.94	145.64	125.75	-89.21	3,367.46	-4,486.30	1,156.48	885.48	271.00	4.267	
12,200.00	5,703.34	10,950.08	5,687.48	147.90	128.00	-89.21	3,438.17	-4,557.01	1,156.48	880.96	275.52	4.197	
12,300.00	5,703.90	11,050.08	5,688.03	150.16	130.26	-89.21	3,508.88	-4,627.72	1,156.48	876.43	280.04	4.130	
12,400.00	5,704.45	11,150.08	5,688.58	152.42	132.52	-89.21	3,579.59	-4,698.44	1,156.48	871.91	284.57	4.064	
12,500.00	5,705.00	11,250.08	5,689.12	154.68	134.78	-89.21	3,650.30	-4,769.15	1,156.48	867.38	289.10	4.000	
12,600.00	5,705.56	11,350.08	5,689.67	156.95	137.05	-89.21	3,721.01	-4,839.86	1,156.48	862.85	293.63	3.939	
12,700.00	5,706.11	11,450.08	5,690.22	159.21	139.31	-89.21	3,791.71	-4,910.57	1,156.48	858.32	298.16	3.879	
12,800.00	5,706.67	11,550.08	5,690.76	161.47	141.57	-89.21	3,862.42	-4,981.28	1,156.48	853.78	302.69	3.821	
12,900.00	5,707.22	11,650.08	5,691.31	163.74	143.84	-89.21	3,933.13	-5,051.99	1,156.48	849.25	307.23	3.764	
13,000.00	5,707.77	11,750.08	5,691.85	166.01	146.11	-89.21	4,003.84	-5,122.70	1,156.48	844.71	311.76	3.709	
13,100.00	5,708.33	11,850.08	5,692.40	168.27	148.37	-89.21	4,074.55	-5,193.41	1,156.48	840.18	316.30	3.656	
13,200.00	5,708.88	11,950.08	5,692.95	170.54	150.64	-89.21	4,145.26	-5,264.12	1,156.48	835.64	320.84	3.605	
13,300.00	5,709.44	12,050.08	5,693.49	172.81	152.91	-89.21	4,215.96	-5,334.83	1,156.48	831.10	325.38	3.554	
13,400.00	5,709.99	12,150.08	5,694.04	175.08	155.18	-89.21	4,286.67	-5,405.55	1,156.48	826.55	329.92	3.505	
13,500.00	5,710.55	12,250.08	5,694.59	177.35	157.45	-89.21	4,357.38	-5,476.26	1,156.48	822.01	334.47	3.458	
13,600.00	5,711.10	12,350.08	5,695.13	179.62	159.72	-89.21	4,428.09	-5,546.97	1,156.48	817.47	339.01	3.411	
13,700.00	5,711.65	12,450.08	5,695.68	181.89	161.99	-89.21	4,498.80	-5,617.68	1,156.48	812.92	343.55	3.366	
13,800.00	5,712.21	12,550.08	5,696.23	184.16	164.26	-89.21	4,569.50	-5,688.39	1,156.48	808.37	348.10	3.322	
13,900.00	5,712.76	12,650.08	5,696.77	186.43	166.54	-89.21	4,640.21	-5,759.10	1,156.48	803.83	352.65	3.279	
14,000.00	5,713.32	12,750.08	5,697.32	188.71	168.81	-89.21	4,710.92	-5,829.81	1,156.48	799.28	357.20	3.238	
14,100.00	5,713.87	12,850.08	5,697.86	190.98	171.09	-89.21	4,781.63	-5,900.52	1,156.47	794.73	361.75	3.197	
14,200.00	5,714.43	12,950.08	5,698.41	193.25	173.36	-89.21	4,852.34	-5,971.23	1,156.47	790.18	366.30	3.157	
14,300.00	5,714.98	13,050.08	5,698.96	195.53	175.63	-89.21	4,923.05	-6,041.94	1,156.47	785.62	370.85	3.118	
14,400.00	5,715.53	13,150.08	5,699.50	197.80	177.91	-89.21	4,993.75	-6,112.65	1,156.47	781.07	375.40	3.081	
14,500.00	5,716.09	13,250.08	5,700.05	200.08	180.19	-89.21	5,064.46	-6,183.37	1,156.47	776.52	379.96	3.044	
14,600.00	5,716.64	13,350.08	5,700.60	202.35	182.46	-89.20	5,135.17	-6,254.08	1,156.47	771.96	384.51	3.008	
14,700.00	5,717.20	13,450.08	5,701.14	204.63	184.74	-89.20	5,205.88	-6,324.79	1,156.47	767.41	389.07	2.972	
14,800.00	5,717.75	13,550.08	5,701.69	206.91	187.02	-89.20	5,276.59	-6,395.50	1,156.47	762.85	393.62	2.938	
14,900.00	5,718.30	13,650.08	5,702.24	209.18	189.30	-89.20	5,347.30	-6,466.21	1,156.47	758.30	398.18	2.904	
15,000.00	5,718.86	13,750.08	5,702.78	211.46	191.57	-89.20	5,418.00	-6,536.92	1,156.47	753.74	402.73	2.872	
15,100.00	5,719.41	13,850.08	5,703.33	213.74	193.85	-89.20	5,488.71	-6,607.63	1,156.47	749.18	407.29	2.839	
15,200.00	5,719.97	13,950.08	5,703.87	216.02	196.13	-89.20	5,559.42	-6,678.34	1,156.47	744.62	411.85	2.808	
15,300.00	5,720.52	14,050.08	5,704.42	218.30	198.41	-89.20	5,630.13	-6,749.05	1,156.47	740.06	416.41	2.777	
15,400.00	5,721.08	14,150.08	5,704.97	220.57	200.69	-89.20	5,700.84	-6,819.76	1,156.47	735.51	420.97	2.747	

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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. 128H - 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	5,721.63	14,250.08	5,705.51	222.85	202.97	-89.20	5,771.55	-6,890.48	1,156.47	730.94	425.53	2.718	
15,600.00	5,722.18	14,350.08	5,706.06	225.13	205.25	-89.20	5,842.25	-6,961.19	1,156.47	726.38	430.09	2.689	
15,700.00	5,722.74	14,450.08	5,706.61	227.41	207.53	-89.20	5,912.96	-7,031.90	1,156.47	721.82	434.65	2.661	
15,800.00	5,723.29	14,550.08	5,707.15	229.69	209.81	-89.20	5,983.67	-7,102.61	1,156.47	717.26	439.21	2.633	
15,900.00	5,723.85	14,650.08	5,707.70	231.97	212.09	-89.20	6,054.38	-7,173.32	1,156.47	712.70	443.77	2.606	
16,000.00	5,724.40	14,750.08	5,708.25	234.25	214.38	-89.20	6,125.09	-7,244.03	1,156.47	708.14	448.34	2.579	
16,100.00	5,724.96	14,850.08	5,708.79	236.53	216.66	-89.20	6,195.79	-7,314.74	1,156.47	703.57	452.90	2.553	
16,200.00	5,725.51	14,950.08	5,709.34	238.81	218.94	-89.20	6,266.50	-7,385.45	1,156.47	699.01	457.46	2.528	
16,300.00	5,726.06	15,050.08	5,709.88	241.10	221.22	-89.20	6,337.21	-7,456.16	1,156.47	694.44	462.03	2.503	
16,400.00	5,726.62	15,150.08	5,710.43	243.38	223.51	-89.20	6,407.92	-7,526.87	1,156.47	689.88	466.59	2.479	
16,500.00	5,727.17	15,250.08	5,710.98	245.66	225.79	-89.20	6,478.63	-7,597.59	1,156.47	685.31	471.16	2.455	
16,600.00	5,727.73	15,350.08	5,711.52	247.94	228.07	-89.20	6,549.34	-7,668.30	1,156.47	680.75	475.72	2.431	
16,649.41	5,728.00	15,399.49	5,711.79	249.07	229.20	-89.20	6,584.27	-7,703.24	1,156.47	678.49	477.98	2.419 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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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
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	-90.12	-0.08	-40.08	40.08				
100.00	100.00	100.00	100.00	0.13	0.13	-90.12	-0.08	-40.08	40.08	39.81	0.27	149.083	
200.00	200.00	200.00	200.00	0.49	0.49	-90.12	-0.08	-40.08	40.08	39.10	0.99	40.659	
300.00	300.00	300.00	300.00	0.85	0.85	-90.12	-0.08	-40.08	40.08	38.38	1.70	23.540	
400.00	400.00	400.00	400.00	1.21	1.21	-90.12	-0.08	-40.08	40.08	37.66	2.42	16.565	
500.00	500.00	500.00	500.00	1.57	1.57	-90.12	-0.08	-40.08	40.08	36.95	3.14	12.779	
600.00	600.00	600.00	600.00	1.93	1.93	-90.12	-0.08	-40.08	40.08	36.23	3.85	10.401	CC, ES
700.00	700.00	697.88	697.84	2.29	2.27	-90.64	-0.48	-42.56	42.62	38.06	4.55	9.361	SF
800.00	800.00	795.25	794.91	2.64	2.61	-91.88	-1.64	-49.93	50.22	44.98	5.24	9.588	
900.00	900.00	891.62	890.49	3.00	2.96	-93.28	-3.55	-62.03	62.86	56.95	5.91	10.635	
1,000.00	1,000.00	986.51	983.88	3.36	3.34	-94.49	-6.17	-78.58	80.45	73.89	6.57	12.253	
1,100.00	1,100.00	1,079.51	1,074.48	3.72	3.74	-95.43	-9.43	-99.23	102.89	95.69	7.20	14.285	
1,200.00	1,199.95	1,169.60	1,161.19	4.07	4.17	149.34	-13.24	-123.36	132.14	124.33	7.81	16.914	
1,300.00	1,299.63	1,255.38	1,242.59	4.41	4.62	149.44	-17.46	-150.07	169.97	161.58	8.39	20.257	
1,400.00	1,398.77	1,336.02	1,317.94	4.76	5.10	149.75	-21.95	-178.44	215.89	206.94	8.95	24.135	
1,500.00	1,497.08	1,410.94	1,386.79	5.13	5.59	149.99	-26.55	-207.60	269.32	259.85	9.47	28.433	
1,600.00	1,594.31	1,479.76	1,448.97	5.54	6.08	150.06	-31.15	-236.71	329.66	319.69	9.97	33.066	
1,700.00	1,690.18	1,542.30	1,504.53	5.98	6.56	149.90	-35.63	-265.07	396.23	385.80	10.44	37.964	
1,800.00	1,785.05	1,609.79	1,563.75	6.47	7.12	150.87	-40.69	-297.05	466.71	455.71	11.00	42.419	
1,900.00	1,879.91	1,680.31	1,625.60	6.99	7.72	151.80	-45.97	-330.52	537.37	525.76	11.61	46.297	
2,000.00	1,974.77	1,750.83	1,687.44	7.53	8.33	152.52	-51.26	-363.99	608.09	595.87	12.22	49.742	
2,100.00	2,069.62	1,821.35	1,749.29	8.09	8.96	153.08	-56.55	-397.46	678.85	666.00	12.85	52.816	
2,200.00	2,164.48	1,891.87	1,811.13	8.66	9.59	153.54	-61.84	-430.93	749.63	736.14	13.49	55.568	
2,300.00	2,259.34	1,962.39	1,872.98	9.25	10.23	153.93	-67.13	-464.40	820.44	806.30	14.14	58.038	
2,400.00	2,354.19	2,032.92	1,934.83	9.84	10.88	154.25	-72.41	-497.87	891.26	876.47	14.79	60.267	
2,500.00	2,449.05	2,103.44	1,996.67	10.44	11.53	154.52	-77.70	-531.34	962.09	946.64	15.45	62.284	
2,600.00	2,543.91	2,173.96	2,058.52	11.05	12.18	154.76	-82.99	-564.81	1,032.93	1,016.82	16.11	64.113	
2,700.00	2,638.76	2,244.48	2,120.37	11.66	12.84	154.96	-88.28	-598.28	1,103.78	1,087.00	16.78	65.778	
2,800.00	2,733.62	2,315.00	2,182.21	12.28	13.50	155.14	-93.57	-631.75	1,174.63	1,157.18	17.45	67.300	
2,900.00	2,828.47	2,385.52	2,244.06	12.90	14.16	155.30	-98.86	-665.22	1,245.49	1,227.36	18.13	68.693	
3,000.00	2,923.33	2,456.04	2,305.90	13.53	14.83	155.45	-104.14	-698.69	1,316.35	1,297.54	18.81	69.973	
3,100.00	3,018.19	2,526.56	2,367.75	14.16	15.50	155.57	-109.43	-732.16	1,387.22	1,367.73	19.50	71.151	
3,200.00	3,113.04	2,597.08	2,429.60	14.79	16.16	155.69	-114.72	-765.64	1,458.09	1,437.91	20.18	72.239	
3,300.00	3,207.90	2,667.60	2,491.44	15.42	16.83	155.80	-120.01	-799.11	1,528.97	1,508.09	20.87	73.246	
3,400.00	3,302.76	2,738.12	2,553.29	16.06	17.51	155.89	-125.30	-832.58	1,599.84	1,578.28	21.57	74.179	
3,500.00	3,397.61	2,808.64	2,615.14	16.70	18.18	155.98	-130.59	-866.05	1,670.72	1,648.46	22.26	75.048	
3,600.00	3,492.47	2,879.17	2,676.98	17.34	18.85	156.06	-135.87	-899.52	1,741.60	1,718.64	22.96	75.856	
3,700.00	3,587.33	2,949.69	2,738.83	17.98	19.53	156.13	-141.16	-932.99	1,812.48	1,788.82	23.66	76.610	

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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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=6923+25 @ 6948.00ft

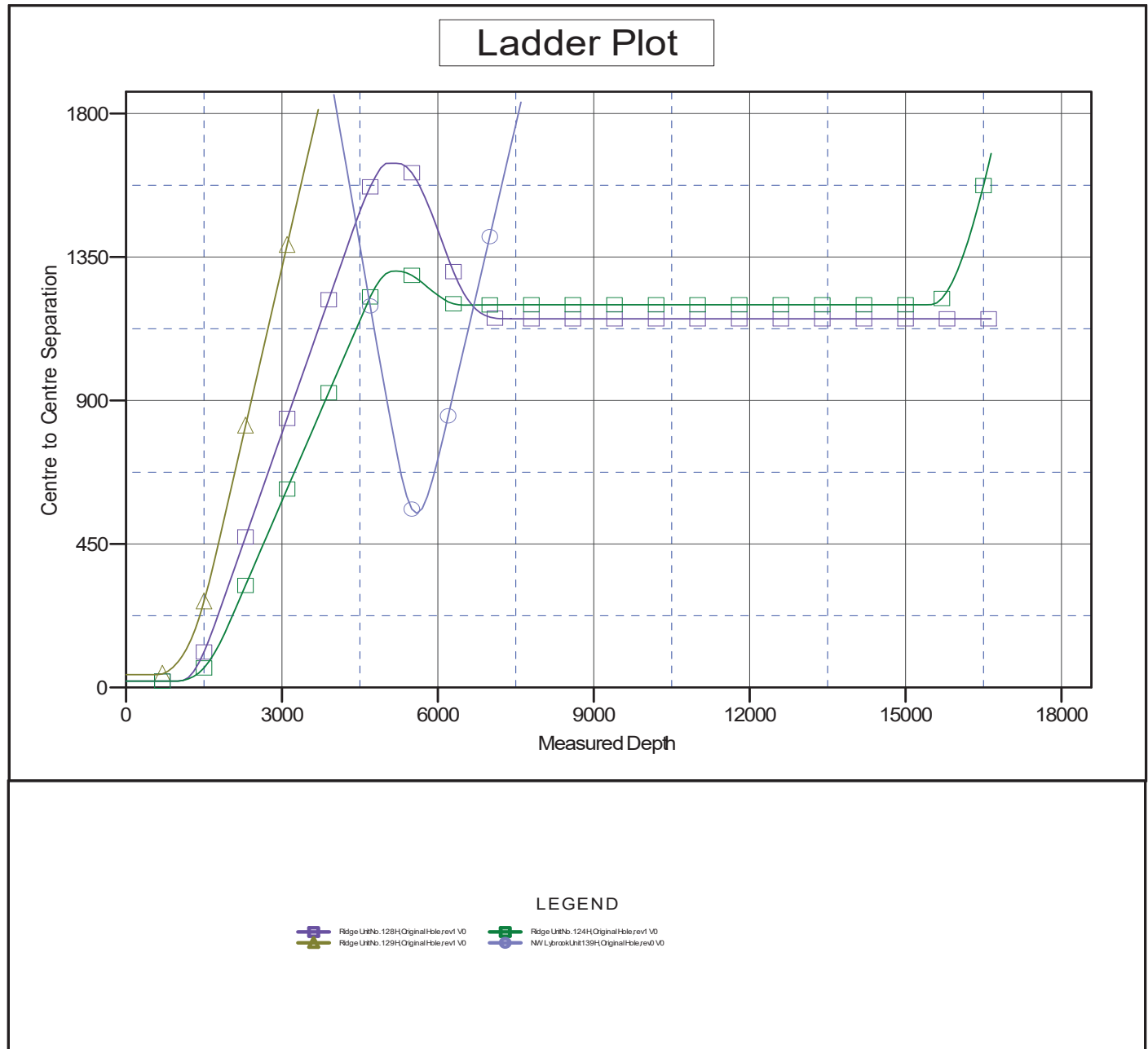
Offset Depths are relative to Offset Datum

Central Meridian is -107.833333333

Coordinates are relative to: Ridge Unit No. 127H

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

Grid Convergence at Surface is: 0.12°



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. 127H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
Reference Site:	Ridge Unit (124, 127, 128 & 129)	MD Reference:	RKB=6923+25 @ 6948.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Ridge Unit No. 127H	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=6923+25 @ 6948.00ft

Offset Depths are relative to Offset Datum

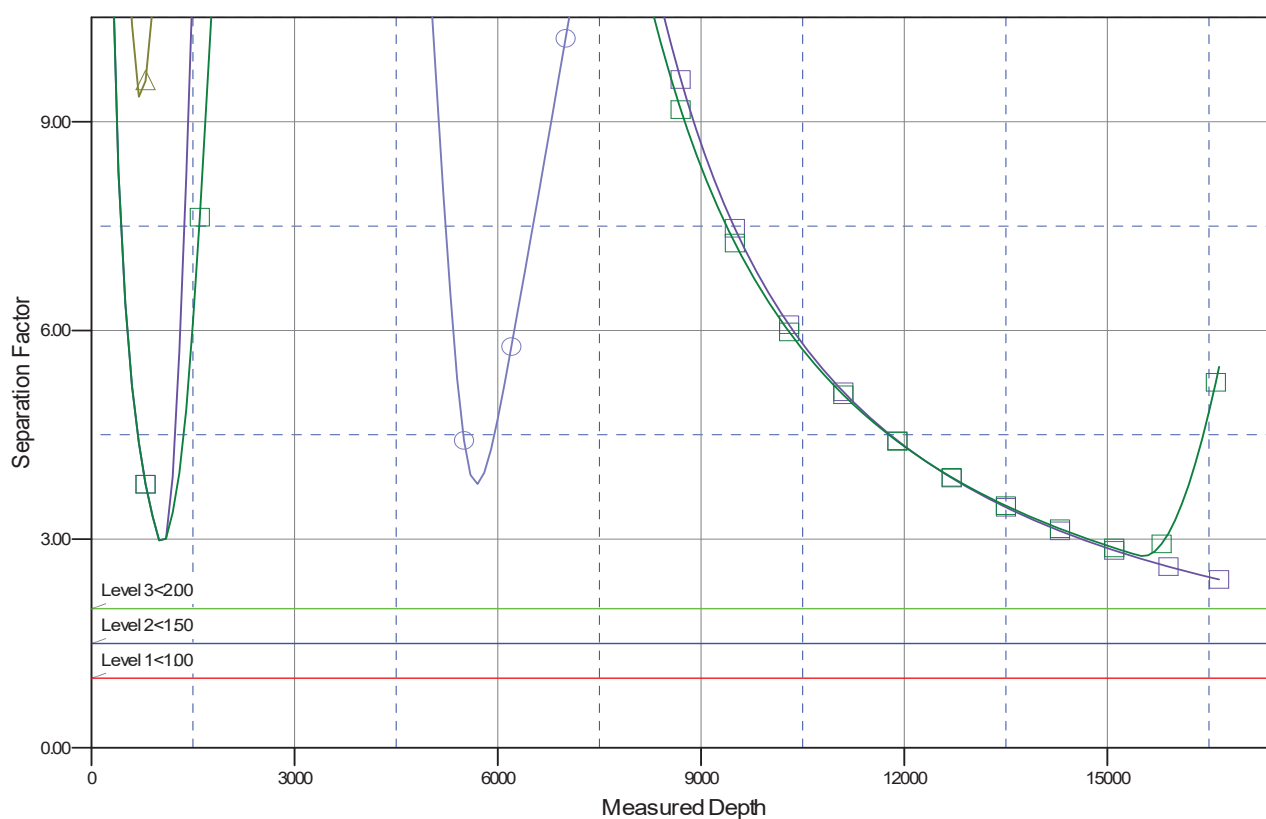
Central Meridian is -107.83333333

Coordinates are relative to: Ridge Unit No. 127H

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

Grid Convergence at Surface is: 0.12°

Separation Factor Plot



LEGEND

Ridge Unit No. 128H Original Hole rev1 V0
 Ridge Unit No. 124H Original Hole rev1 V0
 Ridge Unit No. 129H Original Hole rev1 V0
 NW Lj brook Unit 139H Original Hole rev0 V0

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



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Blvd, Suite A
Farmington, New Mexico 87402



In Reply Refer To:
3162.3-1(NMF0110)

* ENDURING RESOURCES LLC

#127H RIDGE UNIT

Lease: NMNM138391 Agreement: NMNM140471X

SH: SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 25, T. 24N., R. 8W.
San Juan County, New Mexico

BH: NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 23, 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 420418

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 420418
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
sford	Cement is required to circulate on both surface and intermediate1 strings of casing.	1/14/2025
sford	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	1/14/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	2/6/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	2/6/2025
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.	2/6/2025
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.	2/6/2025