

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. 9. API Well No. 30-045-38427		
2. Name of Operator 3a. Address 3b. Phone No. (include area code)		10. Field and Pool, or Exploratory 11. Sec., T. R. M. or Blk. and Survey or Area 12. County or Parish 13. State		
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		14. Distance in miles and direction from nearest town or post office* 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 16. No of acres in lease 17. Spacing Unit dedicated to this well 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 19. Proposed Depth 20. BLM/BIA Bond No. in file 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration		
24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> 1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 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). </td> <td style="width: 50%; vertical-align: top;"> 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 5. Operator certification. 6. Such other site specific information and/or plans as may be requested by the BLM. </td> </tr> </table>			1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 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).	4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 5. Operator certification. 6. Such other site specific information and/or plans as may be requested by the BLM.
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25. Signature Title		Name (Printed/Typed) Date		
Approved by (Signature) Title		Name (Printed/Typed) Office		

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)

- | | |
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2. A Drilling Plan.
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5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

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



Additional Operator Remarks

Location of Well

0. SHL: SENE / 2371 FNL / 1272 FEL / TWSP: 24N / RANGE: 8W / SECTION: 25 / LAT: 36.285848 / LONG: -107.628776 (TVD: 0 feet, MD: 0 feet)

PPP: SWNE / 2373 FNL / 2381 FEL / TWSP: 24N / RANGE: 8W / SECTION: 25 / LAT: 36.285883 / LONG: -107.632539 (TVD: 5553 feet, MD: 5743 feet)

PPP: SWSW / 0 FSL / 0 FWL / TWSP: 24N / RANGE: 8W / SECTION: 24 / LAT: 36.292488 / LONG: -107.640665 (TVD: 5718 feet, MD: 16536 feet)

PPP: SESE / 0 FSL / 0 FEL / TWSP: 24N / RANGE: 8W / SECTION: 23 / LAT: 36.29506 / LONG: -107.64256 (TVD: 5718 feet, MD: 16536 feet)

BHL: NWNW / 231 FNL / 901 FWL / TWSP: 24N / RANGE: 8W / SECTION: 23 / LAT: 36.306188 / LONG: -107.657526 (TVD: 5718 feet, MD: 16536 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	☐ Initial Submittal
			☒ Amended Report
		☐ As Drilled	

WELL LOCATION INFORMATION

API Number 30-045-38427	Pool Code 42289	Pool Name LYBROOK GALLUP
Property Code 336777	Property Name RIDGE UNIT	Well Number 128H
OGRID No. 372286	Operator Name ENDURING RESOURCES, LLC	Ground Level Elevation 6923'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL H	Section 25	Township 24N	Range 8W	Lot	Feet from N/S Line 2371' NORTH	Feet from E/W Line 1272' EAST	Latitude 36.285848 °N	Longitude -107.628776 °W	County SAN JUAN
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Bottom Hole Location

UL D	Section 23	Township 24N	Range 8W	Lot	Feet from N/S Line 231' NORTH	Feet from E/W Line 901' WEST	Latitude 36.306188 °N	Longitude -107.657526 °W	County SAN JUAN
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Penetrated Spacing Unit:

Dedicated Acres 480.00	N/2 NW/4, SE/4 NW/4, SW/4 NE/4 N/2 SE/4, SE/4 SE/4 - Section 23 SW/4 SW/4 - Section 24 N/2 NW/4, SE/4 NW/4, SW/4 NE/4 - Section 25	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit ☐ Yes ☐ No	Consolidation Code UNIT
Order Numbers R-20594			Well setbacks are under Common Ownership: ☒ Yes ☐ 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 1272' EAST	Latitude 36.285848 °N	Longitude -107.628776 °W	County SAN JUAN
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First Take Point (FTP)

UL G	Section 25	Township 24N	Range 8W	Lot	Feet from N/S Line 2373' NORTH	Feet from E/W Line 2381' EAST	Latitude 36.285883 °N	Longitude -107.632539 °W	County SAN JUAN
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Last Take Point (LTP)

UL D	Section 23	Township 24N	Range 8W	Lot	Feet from N/S Line 231' NORTH	Feet from E/W Line 901' WEST	Latitude 36.306188 °N	Longitude -107.657526 °W	County SAN JUAN
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Unitized Area or Area of Uniform Interest RIDGE UNIT	Spacing Unit Type ☒ Horizontal ☐ Vertical ☐ 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. <u>Shaw-Marie Ford</u> Signature <u>1/13/2025</u> Date Shaw-Marie Ford Printed Name <u>sford@enduringresources.com</u> 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 <table><tr><td>Certificate Number 15269</td><td>Date of Survey OCTOBER 29, 2021</td></tr></table>	Certificate Number 15269	Date of Survey OCTOBER 29, 2021
Certificate Number 15269	Date of Survey OCTOBER 29, 2021		

LAST TAKE POINT (LTP)
231' FNL 901' FWL
SECTION 23, T24N, R8W

BOTTOM HOLE LOCATION (BHL)
231' FNL 901' FWL
SECTION 23, T24N, R8W

LAT 36.306188 °N
LONG -107.657526 °W
DATUM: NAD1983

LAT 36.306188 °N
LONG -107.657526 °W
DATUM: NAD1983

SURFACE LOCATION (SHL)
2371' FNL 1272' FEL
SECTION 25, T24N, R8W

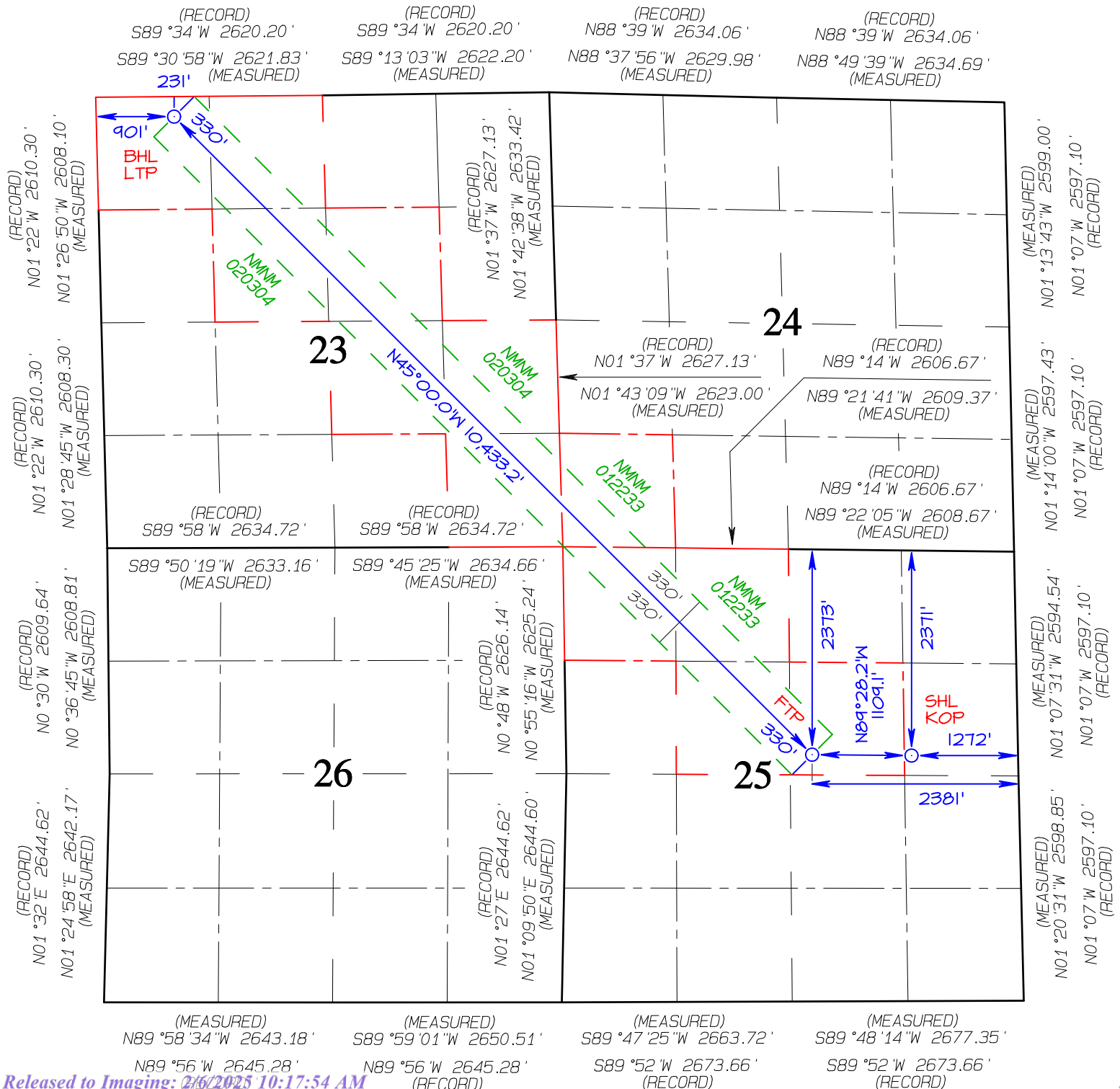
KICK OFF POINT (KOP)
2371' FNL 1272' FEL
SECTION 25, T24N, R8W

FIRST TAKE POINT (FTP)
2373' FNL 2381' FEL
SECTION 25, T24N, R8W

LAT 36.285848 °N
LONG -107.628776 °W
DATUM: NAD1983

LAT 36.285848 °N
LONG -107.628776 °W
DATUM: NAD1983

LAT 36.285883 °N
LONG -107.632539 °W
DATUM: NAD1983



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

Submit Electronically
Via E-permitting

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, COLORADO 80111

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

WELL INFORMATION:

Name: RIDGE UNIT 128H

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 1,272 ft FEL

36.285848 ° N latitude 107.628776 ° W longitude (NAD 83)

BH Location: 23-24N-08W Sec-Twn-Rng 231 ft FNL 901 ft FWL

36.306188 ° N latitude 107.657526 ° 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 128H well is the 2nd well from the West and 2nd closest to 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	1,360	W	normal
	Kirtland	5,475	1,473	1,478	W	normal
	Fruitland	5,230	1,718	1,729	G, W	sub
	Pictured Cliffs	4,935	2,013	2,032	G, W	sub
	Lewis	4,810	2,138	2,161	G, W	normal
	Chacra	4,500	2,448	2,479	G, W	normal
	Cliff House	3,400	3,548	3,608	G, W	sub
	Menefee	3,385	3,563	3,624	G, W	normal
	Point Lookout	2,555	4,393	4,476	G, W	normal
	Mancos	2,345	4,603	4,690	O,G	sub (~0.38)
	Gallup (MNCS_A)	1,975	4,973	5,060	O,G	sub (~0.38)
	MNCS_B	1,895	5,053	5,140	O,G	sub (~0.38)
	MNCS_C	1,770	5,178	5,266	O,G	sub (~0.38)
	MNCS_Cms	1,685	5,263	5,355	O,G	sub (~0.38)
	MNCS_D	1,615	5,333	5,432	O,G	sub (~0.38)
	MNCS_E	1,535	5,413	5,528	O,G	sub (~0.38)
	MNCS_F	1,480	5,468	5,602	O,G	sub (~0.38)
	MNCS_G	1,395	5,553	5,743	O,G	sub (~0.38)
	MNCS_H	1,355	5,593	5,823	O,G	sub (~0.38)
	MNCS_I	1,305	5,643	5,961	O,G	sub (~0.38)
	P.O.E. TARGET	1,395	5,553	5,743	O,G	sub (~0.38)
	PROJECTED TD	1,230	5,718	16,536	O,G	sub (~0.38)

Surface: Nacimienta

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: 2,460 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,210 psi

Temperature: Maximum anticipated BHT is 135° F or less

H₂S INFORMATION:

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

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

LOGGING, CORING, AND TESTING:

Mud Logs: None planned; remote geo-steering from drill out of 9-5/8" casing to TD; gas detection from drillout of 13-3/8" casing to TD.

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

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

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

DRILLING RIG INFORMATION:

Contractor: Aztec

Rig No.: 1000

Draw Works: E80 AC 1,500 hp

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

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

Prime Movers: 4 - GE Jenbacher Natural Gas Generator

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

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

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

Choke 3", 5,000 psi

KB-GL (ft): 25

Note: A different rig may be used to drill the well depending on rig availability at the time the well is to be drilled

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

- 1) Rig will be equipped with upper and lower kelly cocks with handles available.
- 2) Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well.
- 2) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.
- 3) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 4) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- 5) Manual locking devices (hand wheels) shall be installed on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:

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

Closed-Loop System:

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

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

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

Fluid Program: See "Detailed Drilling Plan" section for specifics.

DETAILED DRILLING PLAN:

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

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

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

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

Hole Size: 17-1/2"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, deviation survey

Logging: None

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	13.375	54.5	J-55	BTC	1,130	2,730	853,000	909,000
Loading					153	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

Tail	ASTM Type III Blend	Calcium Chloride 2% BWOC Accelerator	D-CD2 .3% BWOC Dispersant/Friction reducer	.25 lbs/sx Cello Flake - seepage
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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	3,778 ft (MD)	Hole Section Length:	3,428 ft
350 ft (TVD)	to	3,713 ft (TVD)	Casing Required:	3,778 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCl)	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 Survey with inclination and azimuth survey (every 100' at a 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	218,606	218,606
Min. S.F.					1.25	2.47	2.58	2.07

Stage 1	Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
	Spacer	D-Mud Breaker	8.5				0	10 bbls	
		90:10 Type							
	Lead	III:POZ	12.5	2.140	12.05	70%	0	788	1,686
	Tail	Type III	14.6	1.380	6.61	20%	3,278	150	207
	Displacement	289	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		D-MPA-1 .4% 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.

3,778 ft (MD)	to	16,536 ft (MD)	Hole Section Length:	12,758 ft
3,713 ft (TVD)	to	5,718 ft (TVD)	Casing Required:	16,536 ft

Estimated KOP:	5,150 ft (MD)	5,063 ft (TVD)
Estimated Landing Point (P.O.E.):	5,743 ft (MD)	5,553 ft (TVD)
Estimated Lateral Length:	10,793 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 with GR, inclination, and azimuth (survey every joint from KOP to Landing Point and survey every 100' minimum before KOP and after Landing Point)

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

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					2,825	9,035	342,574	342,574
Min. S.F.					2.64	1.18	1.59	1.30

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

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	561	1,330
Tail	G:POZ blend	13.3	1.570	7.70	10%	4,690	1,909	2,998

Displacement 365 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: 10,693
Est Frac Inform: 45 Frac Stages 172,000 bbls slick water 13,910,000 lbs proppant
Flowback: Flow back through production tubing as pressures allow (ESP may be used for load recovery assistance)
Production: Produce through production tubing via gas-lift into permanent production and storage facilities

ESTIMATED START DATES:

Drilling: 3/3/2023
Completion: 4/17/2023
Production: 5/17/2023

Prepared by: Alec Bridge 10/17/2019
Updated by: G Olson 7/15/2022
G Olson 8/17/2023

WELL NAME: RIDGE UNIT 128H

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

API Number: not yet assigned

State: New Mexico

County: San Juan

Surface Elev.: 6,923 ft ASL (GL) 6,948 ft ASL (KB)

Surface Location: 25-24N-08W Sec-Twn- Rng 2,371 ft FNL 1,272 ft FEL

BH Location: 23-24N-08W Sec-Twn- Rng 231 ft FNL 901 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 128H well is the 2nd well from the West and 2nd closest to the location entrance.

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	3,778 ft
KOP (MD)	5,150 ft
KOP (TVD)	5,063 ft
Target (TVD)	5,553 ft
Curve BUR	10 °/100 ft
POE (MD)	5,743 ft
TD (MD)	16,536 ft
Lat Len (ft)	10,793 ft

WELL CONSTRUCTION SUMMARY:

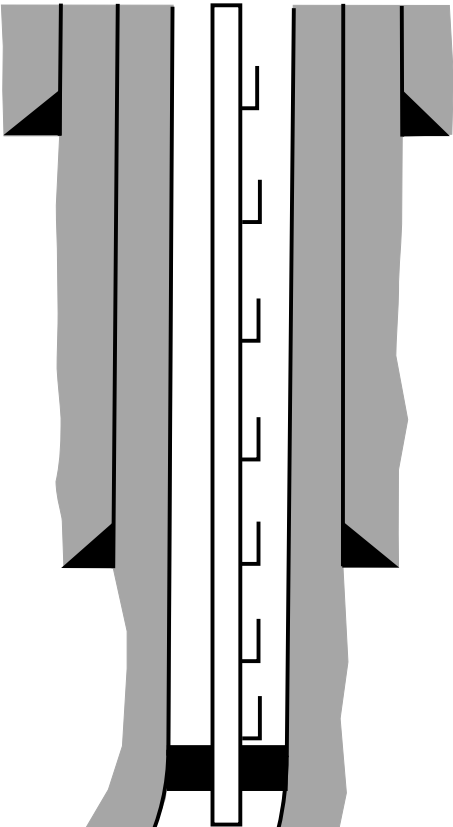
	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	3,778	9.625	36.0	J-55	LTC	0	3,778
Production	8.500	16,536	5.500	17.0	P-110	LTC	0	16,536

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	788	1,686
Inter. (Tail)	Type III	14.6	1.38	6.61	0.3132	20%	3,278	150	207
Prod. (Lead)	ASTM type I/II	12.4	2.37	13.4	0.2291	50%	0	561	1,330
Prod. (Tail)	G:POZ blend	13.3	1.57	7.7	0.2291	10%	4,690	1,909	2,998

COMPLETION / PRODUCTION SUMMARY:

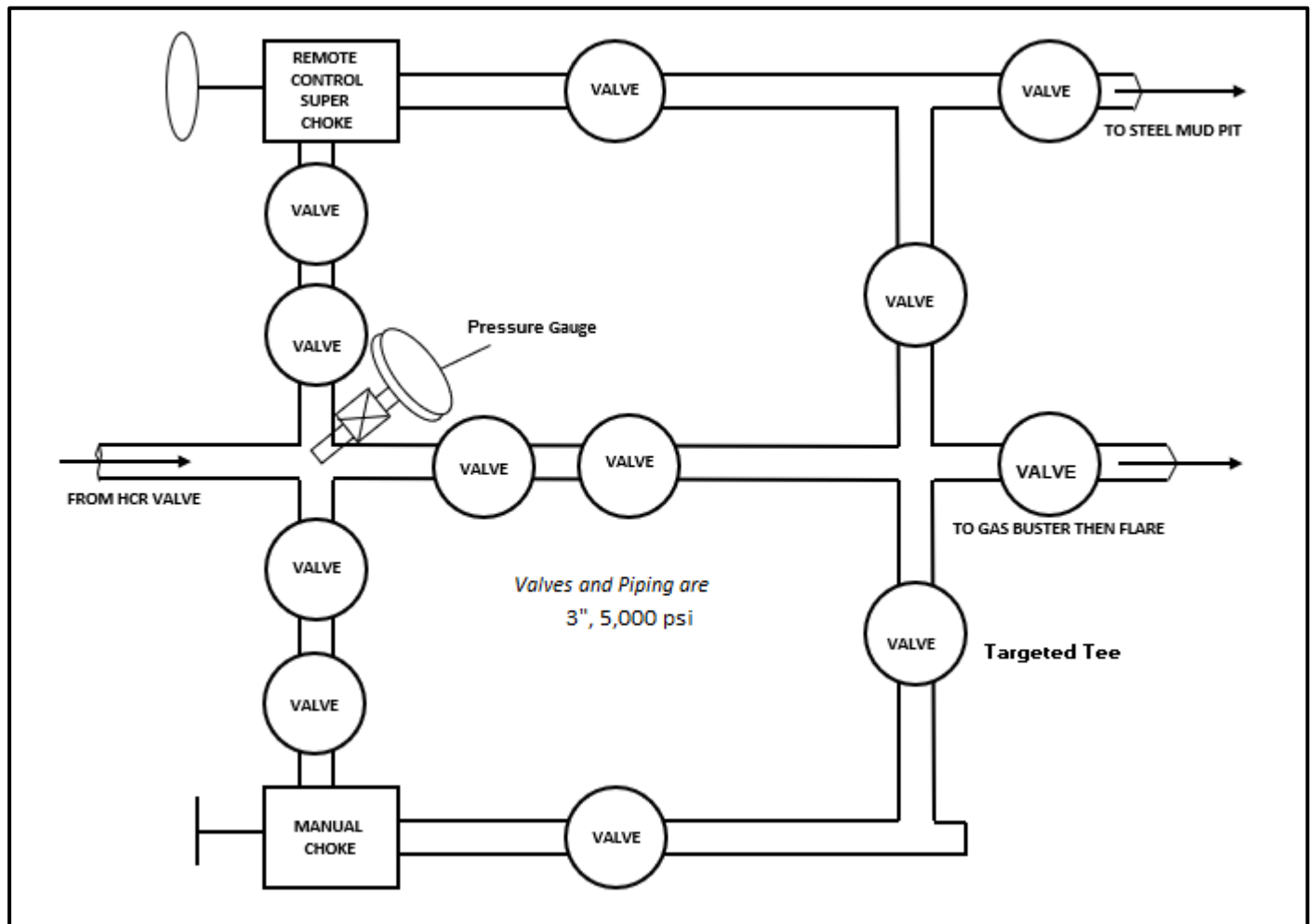
Frac: 10693
Flowback: Flow back through production tubing as pressures allow (ESP may be used for load recovery assistance)
Production: Produce through production tubing via gas-lift into permanent production and storage facilities



Tops	TVD (ft KB)
Ojo Alamo	1,358
Kirtland	1,473
Fruitland	1,718
Pictured Cliffs	2,013
Lewis	2,138
Chacra	2,448
Cliff House	3,548
Menefee	3,563
Point Lookout	4,393
Mancos	4,603
Gallup (MNCS_A)	4,973
MNCS_B	5,053
MNCS_C	5,178
MNCS_Cms	5,263
MNCS_D	5,333
MNCS_E	5,413
MNCS_F	5,468
MNCS_G	5,553
MNCS_H	5,593
MNCS_I	5,643
P.O.E. TARGET	5,553
PROJECTED TD	5,718

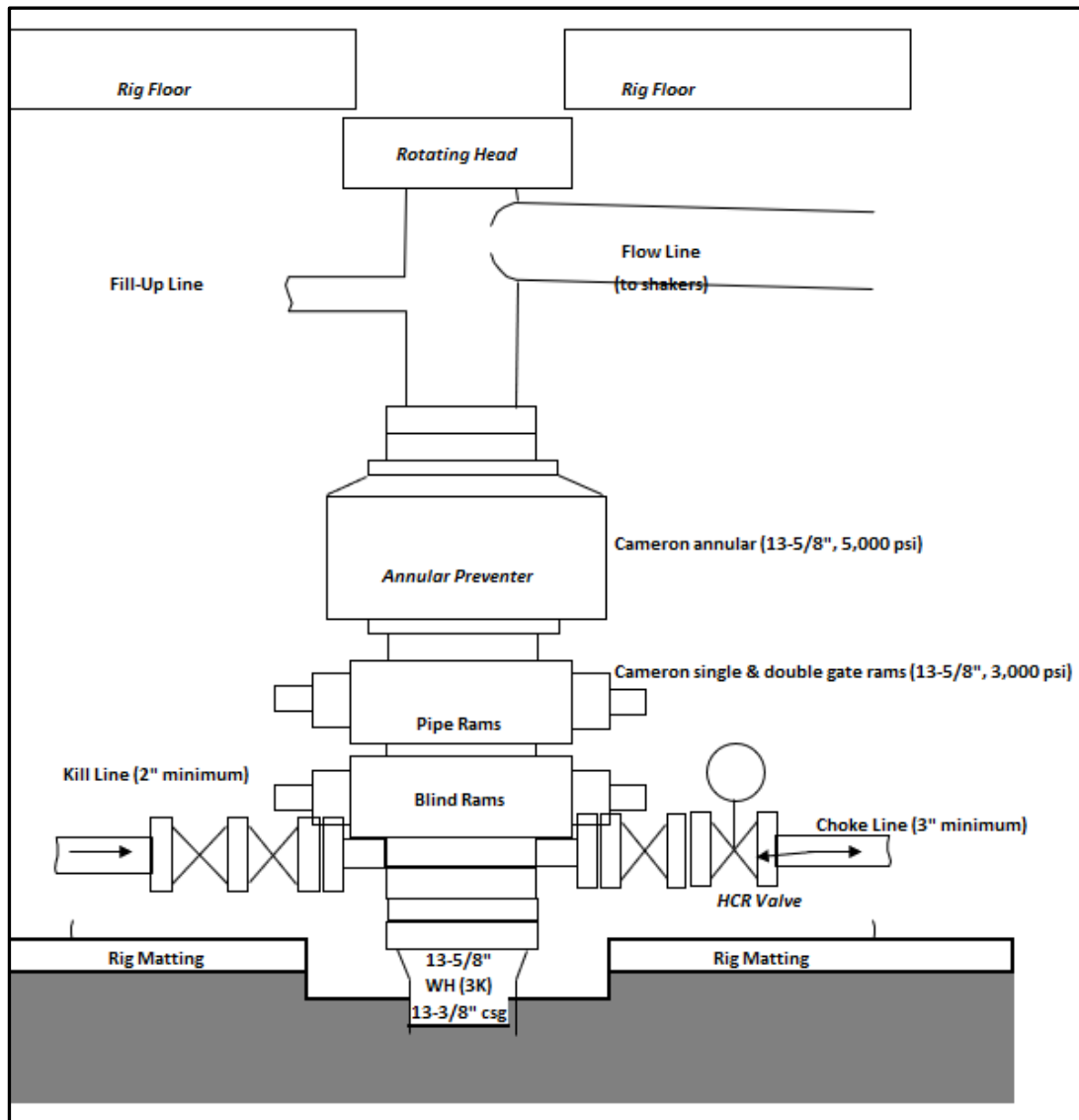


Enduring Resources IV, LLC CHOKE MANIFOLD





Enduring Resources IV, LLC BOPE Diagram





Well: Ridge Unit No. 128H
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 128H FTP 2373 FNL 2381 FEL r1	5661.00	10.42	-1109.05	1923422.153	2782269.032	36.285883000	-107.632539000
Ridge 128H LTP 231 FNL 901 FWL r1	5718.00	7387.66	-8486.57	1930799.382	2774891.522	36.306188000	-107.657526000

CASING DETAILS

TVD	MD	Name
350.00	350.00	13 3/8" Csg
3713.00	3777.62	9 5/8" Csg

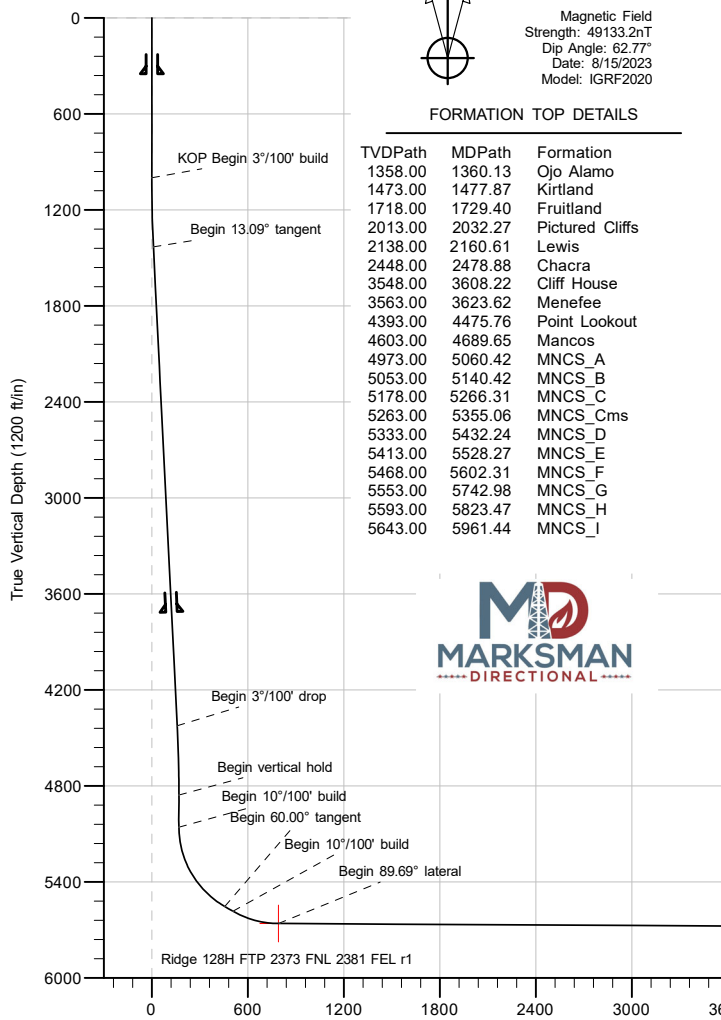


Azimuths to Grid North
 True North: -0.12°
 Magnetic North: 8.41°

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

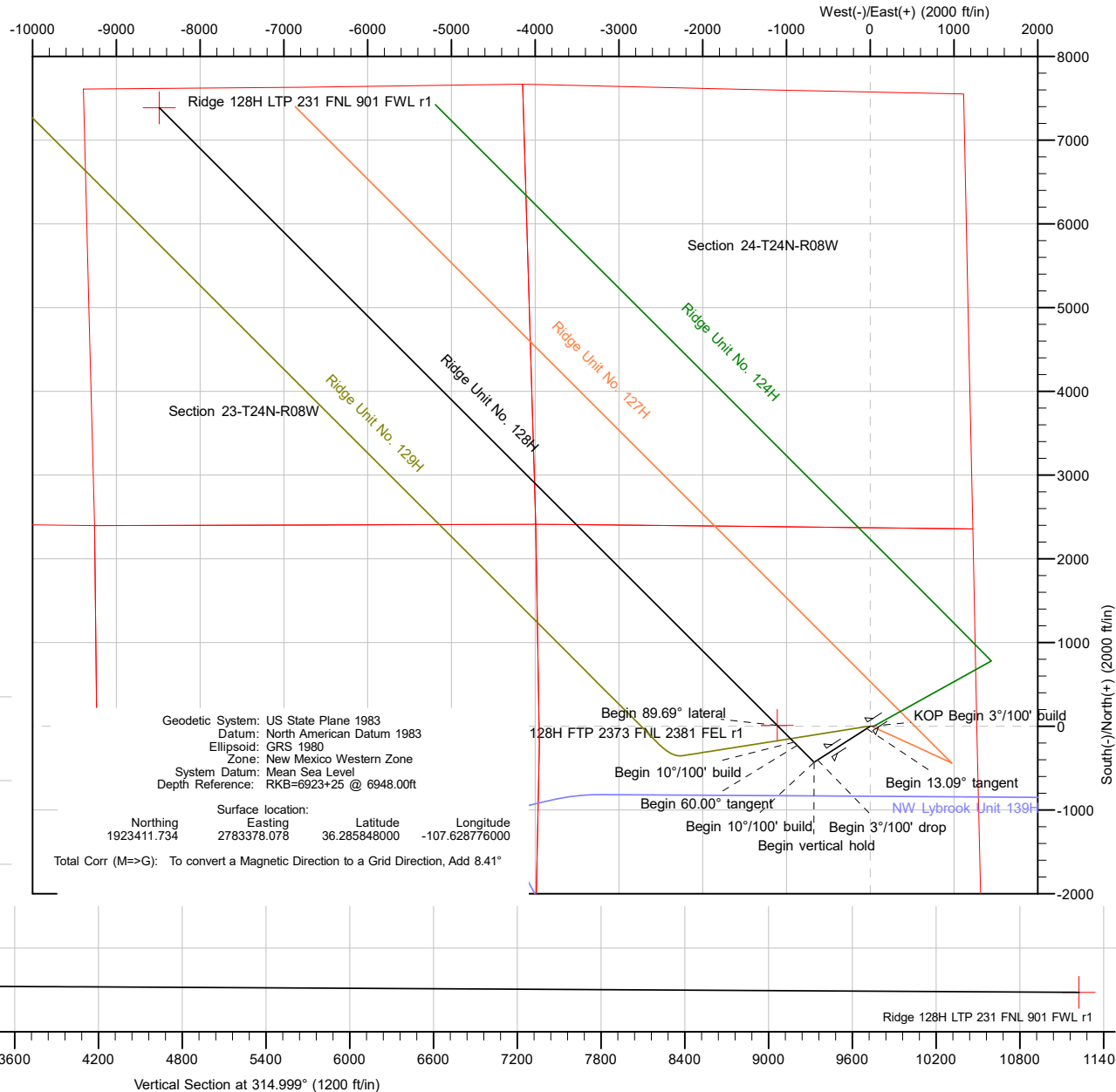
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1358.00	1360.13	Ojo Alamo
1473.00	1477.87	Kirtland
1718.00	1729.40	Fruitland
2013.00	2032.27	Pictured Cliffs
2138.00	2160.61	Lewis
2448.00	2478.88	Chacra
3548.00	3608.22	Cliff House
3563.00	3623.62	Menefee
4393.00	4475.76	Point Lookout
4603.00	4689.65	Mancos
4973.00	5060.42	MNCS_A
5053.00	5140.42	MNCS_B
5178.00	5266.31	MNCS_C
5263.00	5355.06	MNCS_Cms
5333.00	5432.24	MNCS_D
5413.00	5528.27	MNCS_E
5468.00	5602.31	MNCS_F
5553.00	5742.98	MNCS_G
5593.00	5823.47	MNCS_H
5643.00	5961.44	MNCS_I



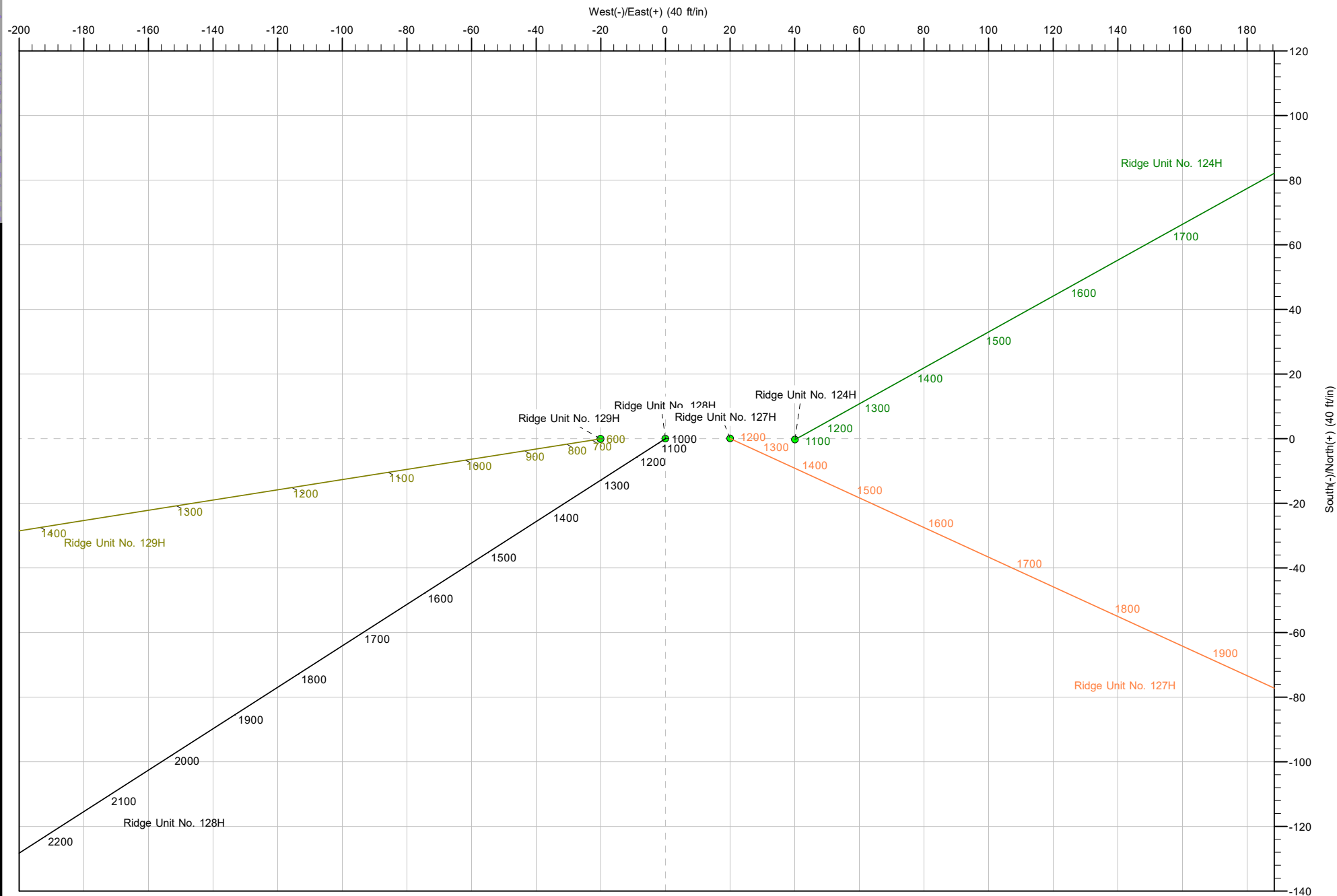
Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	1000.00	0.00	0.000	1000.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	1436.33	13.09	237.334	1432.55	-26.79	-41.78	3.00	237.33	10.60	Begin 13.09° tangent
4	4509.13	13.09	237.334	4425.50	-402.41	-627.63	0.00	0.00	159.27	Begin 3°/100' drop
5	4945.47	0.00	0.000	4858.05	-429.20	-669.41	3.00	180.00	169.87	Begin vertical hold
6	5145.47	0.00	0.000	5058.05	-429.20	-669.41	0.00	0.00	169.87	Begin 10°/100' build
7	5745.47	60.00	314.999	5554.25	-226.63	-871.98	10.00	315.00	456.35	Begin 60.00° tangent
8	5805.47	60.00	314.999	5584.25	-189.89	-908.73	0.00	0.00	508.31	Begin 10°/100' build
9	6102.34	89.69	314.999	5661.00	10.46	-1109.09	10.00	0.00	791.66	Begin 89.69° lateral
10	16535.63	89.69	314.999	5718.00	7387.66	-8486.57	0.00	0.0011224.79		PBHL/TD





Well: Ridge Unit No. 128H
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. 128H
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. 128H	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. 128H, Surf loc: 2371 FNL 1272 FEL Section 25-T24N-R08W					
Well Position	+N/-S	0.00 ft	Northing:	1,923,411.733 usft	Latitude:	36.285848000
	+E/-W	0.00 ft	Easting:	2,783,378.077 usft	Longitude:	-107.628776000
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	49,133.20938591

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	16,534.99	rev1 (Original Hole)	MWD	
				OWSG MWD - Standard	



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. 128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,436.33	13.09	237.334	1,432.55	-26.79	-41.78	3.00	3.00	0.00	237.33	
4,509.13	13.09	237.334	4,425.50	-402.41	-627.63	0.00	0.00	0.00	0.00	
4,945.47	0.00	0.000	4,858.05	-429.20	-669.41	3.00	-3.00	0.00	180.00	
5,145.47	0.00	0.000	5,058.05	-429.20	-669.41	0.00	0.00	0.00	0.00	
5,745.47	60.00	314.999	5,554.25	-226.63	-871.98	10.00	10.00	0.00	315.00	
5,805.47	60.00	314.999	5,584.25	-189.89	-908.73	0.00	0.00	0.00	0.00	
6,102.34	89.69	314.999	5,661.00	10.46	-1,109.09	10.00	10.00	0.00	0.00	
16,535.63	89.69	314.999	5,718.00	7,387.66	-8,486.57	0.00	0.00	0.00	0.00	Ridge 128H LTP 231



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
350.00	0.00	0.000	350.00	0.00	0.00	0.00	0.00	0.00	0.00	
13 3/8" Csg										
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP Begin 3°/100' build										
1,100.00	3.00	237.334	1,099.95	-1.41	-2.20	0.56	3.00	3.00	0.00	
1,200.00	6.00	237.334	1,199.63	-5.65	-8.81	2.23	3.00	3.00	0.00	
1,300.00	9.00	237.334	1,298.77	-12.69	-19.79	5.02	3.00	3.00	0.00	
1,360.13	10.80	237.334	1,358.00	-18.27	-28.50	7.23	3.00	3.00	0.00	
Ojo Alamo										
1,400.00	12.00	237.334	1,397.08	-22.53	-35.13	8.92	3.00	3.00	0.00	
1,436.33	13.09	237.334	1,432.55	-26.79	-41.78	10.60	3.00	3.00	0.00	
Begin 13.09° tangent										
1,477.87	13.09	237.334	1,473.00	-31.86	-49.70	12.61	0.00	0.00	0.00	
Kirtland										
1,500.00	13.09	237.334	1,494.56	-34.57	-53.92	13.68	0.00	0.00	0.00	
1,600.00	13.09	237.334	1,591.96	-46.79	-72.98	18.52	0.00	0.00	0.00	
1,700.00	13.09	237.334	1,689.36	-59.02	-92.05	23.36	0.00	0.00	0.00	
1,729.40	13.09	237.334	1,718.00	-62.61	-97.65	24.78	0.00	0.00	0.00	
Fruitland										
1,800.00	13.09	237.334	1,786.76	-71.24	-111.11	28.20	0.00	0.00	0.00	
1,900.00	13.09	237.334	1,884.17	-83.47	-130.18	33.03	0.00	0.00	0.00	
2,000.00	13.09	237.334	1,981.57	-95.69	-149.24	37.87	0.00	0.00	0.00	
2,032.27	13.09	237.334	2,013.00	-99.64	-155.40	39.43	0.00	0.00	0.00	
Pictured Cliffs										
2,100.00	13.09	237.334	2,078.97	-107.91	-168.31	42.71	0.00	0.00	0.00	
2,160.61	13.09	237.334	2,138.00	-115.32	-179.87	45.64	0.00	0.00	0.00	
Lewis										
2,200.00	13.09	237.334	2,176.37	-120.14	-187.38	47.55	0.00	0.00	0.00	
2,300.00	13.09	237.334	2,273.77	-132.36	-206.44	52.39	0.00	0.00	0.00	
2,400.00	13.09	237.334	2,371.17	-144.59	-225.51	57.22	0.00	0.00	0.00	
2,478.88	13.09	237.334	2,448.00	-154.23	-240.55	61.04	0.00	0.00	0.00	
Chacra										
2,500.00	13.09	237.334	2,468.58	-156.81	-244.57	62.06	0.00	0.00	0.00	
2,600.00	13.09	237.334	2,565.98	-169.04	-263.64	66.90	0.00	0.00	0.00	
2,700.00	13.09	237.334	2,663.38	-181.26	-282.71	71.74	0.00	0.00	0.00	
2,800.00	13.09	237.334	2,760.78	-193.48	-301.77	76.58	0.00	0.00	0.00	
2,900.00	13.09	237.334	2,858.18	-205.71	-320.84	81.41	0.00	0.00	0.00	
3,000.00	13.09	237.334	2,955.58	-217.93	-339.90	86.25	0.00	0.00	0.00	
3,100.00	13.09	237.334	3,052.98	-230.16	-358.97	91.09	0.00	0.00	0.00	
3,200.00	13.09	237.334	3,150.39	-242.38	-378.04	95.93	0.00	0.00	0.00	
3,300.00	13.09	237.334	3,247.79	-254.61	-397.10	100.77	0.00	0.00	0.00	
3,400.00	13.09	237.334	3,345.19	-266.83	-416.17	105.61	0.00	0.00	0.00	
3,500.00	13.09	237.334	3,442.59	-279.05	-435.23	110.44	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. 128H	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	13.09	237.334	3,539.99	-291.28	-454.30	115.28	0.00	0.00	0.00
3,608.22	13.09	237.334	3,548.00	-292.28	-455.87	115.68	0.00	0.00	0.00
Cliff House									
3,623.62	13.09	237.334	3,563.00	-294.17	-458.80	116.42	0.00	0.00	0.00
Menefee									
3,700.00	13.09	237.334	3,637.39	-303.50	-473.36	120.12	0.00	0.00	0.00
3,777.62	13.09	237.334	3,713.00	-312.99	-488.16	123.88	0.00	0.00	0.00
9 5/8" Csg									
3,800.00	13.09	237.334	3,734.80	-315.73	-492.43	124.96	0.00	0.00	0.00
3,900.00	13.09	237.334	3,832.20	-327.95	-511.50	129.80	0.00	0.00	0.00
4,000.00	13.09	237.334	3,929.60	-340.18	-530.56	134.63	0.00	0.00	0.00
4,100.00	13.09	237.334	4,027.00	-352.40	-549.63	139.47	0.00	0.00	0.00
4,200.00	13.09	237.334	4,124.40	-364.62	-568.69	144.31	0.00	0.00	0.00
4,300.00	13.09	237.334	4,221.80	-376.85	-587.76	149.15	0.00	0.00	0.00
4,400.00	13.09	237.334	4,319.20	-389.07	-606.83	153.99	0.00	0.00	0.00
4,475.76	13.09	237.334	4,393.00	-398.33	-621.27	157.65	0.00	0.00	0.00
Point Lookout									
4,509.13	13.09	237.334	4,425.50	-402.41	-627.63	159.27	0.00	0.00	0.00
Begin 3°/100' drop									
4,600.00	10.36	237.334	4,514.46	-412.38	-643.18	163.21	3.00	-3.00	0.00
4,689.65	7.67	237.334	4,603.00	-419.97	-655.01	166.21	3.00	-3.00	0.00
Mancos									
4,700.00	7.36	237.334	4,613.26	-420.70	-656.15	166.50	3.00	-3.00	0.00
4,800.00	4.36	237.334	4,712.72	-426.21	-664.75	168.68	3.00	-3.00	0.00
4,900.00	1.36	237.334	4,812.59	-428.91	-668.95	169.75	3.00	-3.00	0.00
4,945.47	0.00	0.000	4,858.05	-429.20	-669.41	169.87	3.00	-3.00	0.00
Begin vertical hold									
5,000.00	0.00	0.000	4,912.58	-429.20	-669.41	169.87	0.00	0.00	0.00
5,060.42	0.00	0.000	4,973.00	-429.20	-669.41	169.87	0.00	0.00	0.00
MNCS_A									
5,100.00	0.00	0.000	5,012.58	-429.20	-669.41	169.87	0.00	0.00	0.00
5,140.42	0.00	0.000	5,053.00	-429.20	-669.41	169.87	0.00	0.00	0.00
MNCS_B									
5,145.47	0.00	0.000	5,058.05	-429.20	-669.41	169.87	0.00	0.00	0.00
Begin 10°/100' build									
5,150.00	0.45	314.999	5,062.58	-429.19	-669.42	169.89	10.00	10.00	0.00
5,200.00	5.45	314.999	5,112.50	-427.37	-671.24	172.46	10.00	10.00	0.00
5,250.00	10.45	314.999	5,162.00	-422.48	-676.13	179.38	10.00	10.00	0.00
5,266.31	12.08	314.999	5,178.00	-420.22	-678.39	182.56	10.00	10.00	0.00
MNCS_C									
5,300.00	15.45	314.999	5,210.72	-414.55	-684.06	190.58	10.00	10.00	0.00
5,350.00	20.45	314.999	5,258.27	-403.66	-694.95	205.99	10.00	10.00	0.00
5,355.06	20.96	314.999	5,263.00	-402.39	-696.22	207.78	10.00	10.00	0.00
MNCS_Cms									
5,400.00	25.45	314.999	5,304.29	-389.88	-708.74	225.48	10.00	10.00	0.00
5,432.24	28.68	314.999	5,333.00	-379.50	-719.11	240.15	10.00	10.00	0.00
MNCS_D									
5,450.00	30.45	314.999	5,348.45	-373.31	-725.30	248.91	10.00	10.00	0.00
5,500.00	35.45	314.999	5,390.39	-354.08	-744.53	276.10	10.00	10.00	0.00
5,528.27	38.28	314.999	5,413.00	-342.09	-756.52	293.06	10.00	10.00	0.00
MNCS_E									
5,550.00	40.45	314.999	5,429.80	-332.35	-766.27	306.84	10.00	10.00	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. 128H	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)
5,600.00	45.45	314.999	5,466.38	-308.26	-790.35	340.90	10.00	10.00	0.00
5,602.31	45.68	314.999	5,468.00	-307.10	-791.52	342.55	10.00	10.00	0.00
MNCS_F									
5,650.00	50.45	314.999	5,499.86	-282.02	-816.60	378.02	10.00	10.00	0.00
5,700.00	55.45	314.999	5,529.97	-253.81	-844.81	417.91	10.00	10.00	0.00
5,742.98	59.75	314.999	5,553.00	-228.15	-870.47	454.20	10.00	10.00	0.00
MNCS_G									
5,745.47	60.00	314.999	5,554.25	-226.63	-871.98	456.35	10.00	10.00	0.00
Begin 60.00° tangent									
5,805.47	60.00	314.999	5,584.25	-189.89	-908.73	508.31	0.00	0.00	0.00
Begin 10°/100' build									
5,823.47	61.80	314.999	5,593.00	-178.77	-919.85	524.04	10.00	10.00	0.00
MNCS_H									
5,850.00	64.45	314.999	5,604.99	-162.04	-936.58	547.70	10.00	10.00	0.00
5,900.00	69.45	314.999	5,624.56	-129.51	-969.11	593.70	10.00	10.00	0.00
5,950.00	74.45	314.999	5,640.04	-95.91	-1,002.71	641.22	10.00	10.00	0.00
5,961.44	75.60	314.999	5,643.00	-88.10	-1,010.53	652.27	10.00	10.00	0.00
MNCS_I									
6,000.00	79.45	314.999	5,651.33	-61.48	-1,037.14	689.91	10.00	10.00	0.00
6,050.00	84.45	314.999	5,658.33	-26.48	-1,072.14	739.41	10.00	10.00	0.00
6,102.34	89.69	314.999	5,661.00	10.46	-1,109.09	791.66	10.00	10.00	0.00
Begin 89.69° lateral									
6,200.00	89.69	314.999	5,661.53	79.52	-1,178.15	889.32	0.00	0.00	0.00
6,300.00	89.69	314.999	5,662.08	150.23	-1,248.86	989.32	0.00	0.00	0.00
6,400.00	89.69	314.999	5,662.63	220.94	-1,319.57	1,089.32	0.00	0.00	0.00
6,500.00	89.69	314.999	5,663.17	291.64	-1,390.28	1,189.31	0.00	0.00	0.00
6,600.00	89.69	314.999	5,663.72	362.35	-1,460.99	1,289.31	0.00	0.00	0.00
6,700.00	89.69	314.999	5,664.26	433.06	-1,531.70	1,389.31	0.00	0.00	0.00
6,800.00	89.69	314.999	5,664.81	503.77	-1,602.41	1,489.31	0.00	0.00	0.00
6,900.00	89.69	314.999	5,665.36	574.48	-1,673.12	1,589.31	0.00	0.00	0.00
7,000.00	89.69	314.999	5,665.90	645.19	-1,743.84	1,689.31	0.00	0.00	0.00
7,100.00	89.69	314.999	5,666.45	715.89	-1,814.55	1,789.30	0.00	0.00	0.00
7,200.00	89.69	314.999	5,667.00	786.60	-1,885.26	1,889.30	0.00	0.00	0.00
7,300.00	89.69	314.999	5,667.54	857.31	-1,955.97	1,989.30	0.00	0.00	0.00
7,400.00	89.69	314.999	5,668.09	928.02	-2,026.68	2,089.30	0.00	0.00	0.00
7,500.00	89.69	314.999	5,668.64	998.73	-2,097.39	2,189.30	0.00	0.00	0.00
7,600.00	89.69	314.999	5,669.18	1,069.43	-2,168.10	2,289.30	0.00	0.00	0.00
7,700.00	89.69	314.999	5,669.73	1,140.14	-2,238.81	2,389.30	0.00	0.00	0.00
7,800.00	89.69	314.999	5,670.27	1,210.85	-2,309.52	2,489.29	0.00	0.00	0.00
7,900.00	89.69	314.999	5,670.82	1,281.56	-2,380.23	2,589.29	0.00	0.00	0.00
8,000.00	89.69	314.999	5,671.37	1,352.27	-2,450.95	2,689.29	0.00	0.00	0.00
8,100.00	89.69	314.999	5,671.91	1,422.98	-2,521.66	2,789.29	0.00	0.00	0.00
8,200.00	89.69	314.999	5,672.46	1,493.68	-2,592.37	2,889.29	0.00	0.00	0.00
8,300.00	89.69	314.999	5,673.01	1,564.39	-2,663.08	2,989.29	0.00	0.00	0.00
8,400.00	89.69	314.999	5,673.55	1,635.10	-2,733.79	3,089.29	0.00	0.00	0.00
8,500.00	89.69	314.999	5,674.10	1,705.81	-2,804.50	3,189.28	0.00	0.00	0.00
8,600.00	89.69	314.999	5,674.64	1,776.52	-2,875.21	3,289.28	0.00	0.00	0.00
8,700.00	89.69	314.999	5,675.19	1,847.23	-2,945.92	3,389.28	0.00	0.00	0.00
8,800.00	89.69	314.999	5,675.74	1,917.93	-3,016.63	3,489.28	0.00	0.00	0.00
8,900.00	89.69	314.999	5,676.28	1,988.64	-3,087.34	3,589.28	0.00	0.00	0.00
9,000.00	89.69	314.999	5,676.83	2,059.35	-3,158.06	3,689.28	0.00	0.00	0.00
9,100.00	89.69	314.999	5,677.38	2,130.06	-3,228.77	3,789.28	0.00	0.00	0.00
9,200.00	89.69	314.999	5,677.92	2,200.77	-3,299.48	3,889.27	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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)
9,300.00	89.69	314.999	5,678.47	2,271.48	-3,370.19	3,989.27	0.00	0.00	0.00
9,400.00	89.69	314.999	5,679.02	2,342.18	-3,440.90	4,089.27	0.00	0.00	0.00
9,500.00	89.69	314.999	5,679.56	2,412.89	-3,511.61	4,189.27	0.00	0.00	0.00
9,600.00	89.69	314.999	5,680.11	2,483.60	-3,582.32	4,289.27	0.00	0.00	0.00
9,700.00	89.69	314.999	5,680.65	2,554.31	-3,653.03	4,389.27	0.00	0.00	0.00
9,800.00	89.69	314.999	5,681.20	2,625.02	-3,723.74	4,489.26	0.00	0.00	0.00
9,900.00	89.69	314.999	5,681.75	2,695.72	-3,794.45	4,589.26	0.00	0.00	0.00
10,000.00	89.69	314.999	5,682.29	2,766.43	-3,865.16	4,689.26	0.00	0.00	0.00
10,100.00	89.69	314.999	5,682.84	2,837.14	-3,935.88	4,789.26	0.00	0.00	0.00
10,200.00	89.69	314.999	5,683.39	2,907.85	-4,006.59	4,889.26	0.00	0.00	0.00
10,300.00	89.69	314.999	5,683.93	2,978.56	-4,077.30	4,989.26	0.00	0.00	0.00
10,400.00	89.69	314.999	5,684.48	3,049.27	-4,148.01	5,089.26	0.00	0.00	0.00
10,500.00	89.69	314.999	5,685.03	3,119.97	-4,218.72	5,189.25	0.00	0.00	0.00
10,600.00	89.69	314.999	5,685.57	3,190.68	-4,289.43	5,289.25	0.00	0.00	0.00
10,700.00	89.69	314.999	5,686.12	3,261.39	-4,360.14	5,389.25	0.00	0.00	0.00
10,800.00	89.69	314.999	5,686.66	3,332.10	-4,430.85	5,489.25	0.00	0.00	0.00
10,900.00	89.69	314.999	5,687.21	3,402.81	-4,501.56	5,589.25	0.00	0.00	0.00
11,000.00	89.69	314.999	5,687.76	3,473.52	-4,572.27	5,689.25	0.00	0.00	0.00
11,100.00	89.69	314.999	5,688.30	3,544.22	-4,642.99	5,789.25	0.00	0.00	0.00
11,200.00	89.69	314.999	5,688.85	3,614.93	-4,713.70	5,889.24	0.00	0.00	0.00
11,300.00	89.69	314.999	5,689.40	3,685.64	-4,784.41	5,989.24	0.00	0.00	0.00
11,400.00	89.69	314.999	5,689.94	3,756.35	-4,855.12	6,089.24	0.00	0.00	0.00
11,500.00	89.69	314.999	5,690.49	3,827.06	-4,925.83	6,189.24	0.00	0.00	0.00
11,600.00	89.69	314.999	5,691.04	3,897.77	-4,996.54	6,289.24	0.00	0.00	0.00
11,700.00	89.69	314.999	5,691.58	3,968.47	-5,067.25	6,389.24	0.00	0.00	0.00
11,800.00	89.69	314.999	5,692.13	4,039.18	-5,137.96	6,489.23	0.00	0.00	0.00
11,900.00	89.69	314.999	5,692.67	4,109.89	-5,208.67	6,589.23	0.00	0.00	0.00
12,000.00	89.69	314.999	5,693.22	4,180.60	-5,279.38	6,689.23	0.00	0.00	0.00
12,100.00	89.69	314.999	5,693.77	4,251.31	-5,350.10	6,789.23	0.00	0.00	0.00
12,200.00	89.69	314.999	5,694.31	4,322.02	-5,420.81	6,889.23	0.00	0.00	0.00
12,300.00	89.69	314.999	5,694.86	4,392.72	-5,491.52	6,989.23	0.00	0.00	0.00
12,400.00	89.69	314.999	5,695.41	4,463.43	-5,562.23	7,089.23	0.00	0.00	0.00
12,500.00	89.69	314.999	5,695.95	4,534.14	-5,632.94	7,189.22	0.00	0.00	0.00
12,600.00	89.69	314.999	5,696.50	4,604.85	-5,703.65	7,289.22	0.00	0.00	0.00
12,700.00	89.69	314.999	5,697.04	4,675.56	-5,774.36	7,389.22	0.00	0.00	0.00
12,800.00	89.69	314.999	5,697.59	4,746.26	-5,845.07	7,489.22	0.00	0.00	0.00
12,900.00	89.69	314.999	5,698.14	4,816.97	-5,915.78	7,589.22	0.00	0.00	0.00
13,000.00	89.69	314.999	5,698.68	4,887.68	-5,986.49	7,689.22	0.00	0.00	0.00
13,100.00	89.69	314.999	5,699.23	4,958.39	-6,057.21	7,789.22	0.00	0.00	0.00
13,200.00	89.69	314.999	5,699.78	5,029.10	-6,127.92	7,889.21	0.00	0.00	0.00
13,300.00	89.69	314.999	5,700.32	5,099.81	-6,198.63	7,989.21	0.00	0.00	0.00
13,400.00	89.69	314.999	5,700.87	5,170.51	-6,269.34	8,089.21	0.00	0.00	0.00
13,500.00	89.69	314.999	5,701.42	5,241.22	-6,340.05	8,189.21	0.00	0.00	0.00
13,600.00	89.69	314.999	5,701.96	5,311.93	-6,410.76	8,289.21	0.00	0.00	0.00
13,700.00	89.69	314.999	5,702.51	5,382.64	-6,481.47	8,389.21	0.00	0.00	0.00
13,800.00	89.69	314.999	5,703.05	5,453.35	-6,552.18	8,489.20	0.00	0.00	0.00
13,900.00	89.69	314.999	5,703.60	5,524.06	-6,622.89	8,589.20	0.00	0.00	0.00
14,000.00	89.69	314.999	5,704.15	5,594.76	-6,693.60	8,689.20	0.00	0.00	0.00
14,100.00	89.69	314.999	5,704.69	5,665.47	-6,764.32	8,789.20	0.00	0.00	0.00
14,200.00	89.69	314.999	5,705.24	5,736.18	-6,835.03	8,889.20	0.00	0.00	0.00
14,300.00	89.69	314.999	5,705.79	5,806.89	-6,905.74	8,989.20	0.00	0.00	0.00
14,400.00	89.69	314.999	5,706.33	5,877.60	-6,976.45	9,089.20	0.00	0.00	0.00
14,500.00	89.69	314.999	5,706.88	5,948.31	-7,047.16	9,189.19	0.00	0.00	0.00
14,600.00	89.69	314.999	5,707.43	6,019.01	-7,117.87	9,289.19	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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)
14,700.00	89.69	314.999	5,707.97	6,089.72	-7,188.58	9,389.19	0.00	0.00	0.00
14,800.00	89.69	314.999	5,708.52	6,160.43	-7,259.29	9,489.19	0.00	0.00	0.00
14,900.00	89.69	314.999	5,709.06	6,231.14	-7,330.00	9,589.19	0.00	0.00	0.00
15,000.00	89.69	314.999	5,709.61	6,301.85	-7,400.71	9,689.19	0.00	0.00	0.00
15,100.00	89.69	314.999	5,710.16	6,372.55	-7,471.43	9,789.19	0.00	0.00	0.00
15,200.00	89.69	314.999	5,710.70	6,443.26	-7,542.14	9,889.18	0.00	0.00	0.00
15,300.00	89.69	314.999	5,711.25	6,513.97	-7,612.85	9,989.18	0.00	0.00	0.00
15,400.00	89.69	314.999	5,711.80	6,584.68	-7,683.56	10,089.18	0.00	0.00	0.00
15,500.00	89.69	314.999	5,712.34	6,655.39	-7,754.27	10,189.18	0.00	0.00	0.00
15,600.00	89.69	314.999	5,712.89	6,726.10	-7,824.98	10,289.18	0.00	0.00	0.00
15,700.00	89.69	314.999	5,713.43	6,796.80	-7,895.69	10,389.18	0.00	0.00	0.00
15,800.00	89.69	314.999	5,713.98	6,867.51	-7,966.40	10,489.18	0.00	0.00	0.00
15,900.00	89.69	314.999	5,714.53	6,938.22	-8,037.11	10,589.17	0.00	0.00	0.00
16,000.00	89.69	314.999	5,715.07	7,008.93	-8,107.82	10,689.17	0.00	0.00	0.00
16,100.00	89.69	314.999	5,715.62	7,079.64	-8,178.54	10,789.17	0.00	0.00	0.00
16,200.00	89.69	314.999	5,716.17	7,150.35	-8,249.25	10,889.17	0.00	0.00	0.00
16,300.00	89.69	314.999	5,716.71	7,221.05	-8,319.96	10,989.17	0.00	0.00	0.00
16,400.00	89.69	314.999	5,717.26	7,291.76	-8,390.67	11,089.17	0.00	0.00	0.00
16,500.00	89.69	314.999	5,717.81	7,362.47	-8,461.38	11,189.16	0.00	0.00	0.00
16,535.63	89.69	314.999	5,718.00	7,387.66	-8,486.57	11,224.79	0.00	0.00	0.00
PBHL/TD @ 16535.63 MD 5718.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Ridge 128H FTP 2373 F	0.00	0.000	5,661.00	10.42	-1,109.05	1,923,422.152	2,782,269.032	36.285883000	-107.632539000
- hit/miss target									
- plan hits target center									
- Point									
Ridge 128H LTP 231 FN	0.00	0.000	5,718.00	7,387.66	-8,486.57	1,930,799.382	2,774,891.522	36.306188000	-107.657526000
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	13 3/8" Csg	13-3/8	17-1/2	
3,777.62	3,713.00	9 5/8" Csg	9-5/8	12-1/4	



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. 128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,360.13	1,358.00	Ojo Alamo				
1,477.87	1,473.00	Kirtland				
1,729.40	1,718.00	Fruitland				
2,032.27	2,013.00	Pictured Cliffs				
2,160.61	2,138.00	Lewis				
2,478.88	2,448.00	Chacra				
3,608.22	3,548.00	Cliff House				
3,623.62	3,563.00	Menefee				
4,475.76	4,393.00	Point Lookout				
4,689.65	4,603.00	Mancos				
5,060.42	4,973.00	MNCS_A				
5,140.42	5,053.00	MNCS_B				
5,266.31	5,178.00	MNCS_C				
5,355.06	5,263.00	MNCS_Cms				
5,432.24	5,333.00	MNCS_D				
5,528.27	5,413.00	MNCS_E				
5,602.31	5,468.00	MNCS_F				
5,742.98	5,553.00	MNCS_G				
5,823.47	5,593.00	MNCS_H				
5,961.44	5,643.00	MNCS_I				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,436.33	1,432.55	-26.79	-41.78	Begin 13.09° tangent	
4,509.13	4,425.50	-402.41	-627.63	Begin 3°/100' drop	
4,945.47	4,858.05	-429.20	-669.41	Begin vertical hold	
5,145.47	5,058.05	-429.20	-669.41	Begin 10°/100' build	
5,745.47	5,554.25	-226.63	-871.98	Begin 60.00° tangent	
5,805.47	5,584.25	-189.89	-908.73	Begin 10°/100' build	
6,102.34	5,661.00	10.46	-1,109.09	Begin 89.69° lateral	
16,535.63	5,718.00	7,387.66	-8,486.57	PBHL/TD @ 16535.63 MD 5718.00 TVD	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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. 128H, Surf loc: 2371 FNL 1272 FEL Section 25-T24N-R08W					
Well Position	+N/-S	0.00 ft	Northing:	1,923,411.733 usft	Latitude:	36.285848000
	+E/-W	0.00 ft	Easting:	2,783,378.077 usft	Longitude:	-107.628776000
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	49,133.20938591

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	16,534.99 rev1 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

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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. 128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,436.33	13.09	237.334	1,432.55	-26.79	-41.78	3.00	3.00	0.00	237.33	
4,509.13	13.09	237.334	4,425.50	-402.41	-627.63	0.00	0.00	0.00	0.00	
4,945.47	0.00	0.000	4,858.05	-429.20	-669.41	3.00	-3.00	0.00	180.00	
5,145.47	0.00	0.000	5,058.05	-429.20	-669.41	0.00	0.00	0.00	0.00	
5,745.47	60.00	314.999	5,554.25	-226.63	-871.98	10.00	10.00	0.00	315.00	
5,805.47	60.00	314.999	5,584.25	-189.89	-908.73	0.00	0.00	0.00	0.00	
6,102.34	89.69	314.999	5,661.00	10.46	-1,109.09	10.00	10.00	0.00	0.00	
16,535.63	89.69	314.999	5,718.00	7,387.66	-8,486.57	0.00	0.00	0.00	0.00	Ridge 128H LTP 231



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
100.00	0.00	0.000	100.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
200.00	0.00	0.000	200.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
300.00	0.00	0.000	300.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
350.00	0.00	0.000	350.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
13 3/8" Csg									
400.00	0.00	0.000	400.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
500.00	0.00	0.000	500.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
600.00	0.00	0.000	600.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
700.00	0.00	0.000	700.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
800.00	0.00	0.000	800.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
900.00	0.00	0.000	900.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
1,000.00	0.00	0.000	1,000.00	0.00	0.00	1,923,411.733	2,783,378.077	36.285848000	-107.628776000
KOP Begin 3"/100' build									
1,100.00	3.00	237.334	1,099.95	-1.41	-2.20	1,923,410.321	2,783,375.874	36.285844132	-107.628783486
1,200.00	6.00	237.334	1,199.63	-5.65	-8.81	1,923,406.086	2,783,369.270	36.285832539	-107.628805925
1,300.00	9.00	237.334	1,298.77	-12.69	-19.79	1,923,399.042	2,783,358.283	36.285813251	-107.628843254
1,360.13	10.80	237.334	1,358.00	-18.27	-28.50	1,923,393.461	2,783,349.579	36.285797971	-107.628872829
Ojo Alamo									
1,400.00	12.00	237.334	1,397.08	-22.53	-35.13	1,923,389.207	2,783,342.944	36.285786323	-107.628895372
1,436.33	13.09	237.334	1,432.55	-26.79	-41.78	1,923,384.947	2,783,336.300	36.285774660	-107.628917945
Begin 13.09° tangent									
1,477.87	13.09	237.334	1,473.00	-31.86	-49.70	1,923,379.870	2,783,328.382	36.285760760	-107.628944848
Kirtland									
1,500.00	13.09	237.334	1,494.56	-34.57	-53.92	1,923,377.165	2,783,324.162	36.285753351	-107.628959187
1,600.00	13.09	237.334	1,591.96	-46.79	-72.98	1,923,364.940	2,783,305.096	36.285719881	-107.629023966
1,700.00	13.09	237.334	1,689.36	-59.02	-92.05	1,923,352.716	2,783,286.030	36.285686411	-107.629088745
1,729.40	13.09	237.334	1,718.00	-62.61	-97.65	1,923,349.122	2,783,280.425	36.285676571	-107.629107791
Fruitland									
1,800.00	13.09	237.334	1,786.76	-71.24	-111.11	1,923,340.492	2,783,266.964	36.285652941	-107.629153524
1,900.00	13.09	237.334	1,884.17	-83.47	-130.18	1,923,328.268	2,783,247.898	36.285619471	-107.629218303
2,000.00	13.09	237.334	1,981.57	-95.69	-149.24	1,923,316.043	2,783,228.833	36.285586001	-107.629283082
2,032.27	13.09	237.334	2,013.00	-99.64	-155.40	1,923,312.098	2,783,222.680	36.285575199	-107.629303987
Pictured Cliffs									
2,100.00	13.09	237.334	2,078.97	-107.91	-168.31	1,923,303.819	2,783,209.767	36.285552530	-107.629347861
2,160.61	13.09	237.334	2,138.00	-115.32	-179.87	1,923,296.410	2,783,198.212	36.285532245	-107.629387121
Lewis									
2,200.00	13.09	237.334	2,176.37	-120.14	-187.38	1,923,291.595	2,783,190.701	36.285519060	-107.629412640
2,300.00	13.09	237.334	2,273.77	-132.36	-206.44	1,923,279.370	2,783,171.635	36.285485590	-107.629477419
2,400.00	13.09	237.334	2,371.17	-144.59	-225.51	1,923,267.146	2,783,152.569	36.285452119	-107.629542198
2,478.88	13.09	237.334	2,448.00	-154.23	-240.55	1,923,257.504	2,783,137.531	36.285425719	-107.629593292
Chacra									
2,500.00	13.09	237.334	2,468.58	-156.81	-244.57	1,923,254.922	2,783,133.504	36.285418649	-107.629606976
2,600.00	13.09	237.334	2,565.98	-169.04	-263.64	1,923,242.698	2,783,114.438	36.285385178	-107.629671755
2,700.00	13.09	237.334	2,663.38	-181.26	-282.71	1,923,230.473	2,783,095.372	36.285351708	-107.629736533
2,800.00	13.09	237.334	2,760.78	-193.48	-301.77	1,923,218.249	2,783,076.306	36.285318237	-107.629801312
2,900.00	13.09	237.334	2,858.18	-205.71	-320.84	1,923,206.025	2,783,057.240	36.285284767	-107.629866090
3,000.00	13.09	237.334	2,955.58	-217.93	-339.90	1,923,193.801	2,783,038.174	36.285251296	-107.629930869
3,100.00	13.09	237.334	3,052.98	-230.16	-358.97	1,923,181.576	2,783,019.109	36.285217826	-107.629995647
3,200.00	13.09	237.334	3,150.39	-242.38	-378.04	1,923,169.352	2,783,000.043	36.285184355	-107.630060425
3,300.00	13.09	237.334	3,247.79	-254.61	-397.10	1,923,157.128	2,782,980.977	36.285150884	-107.630125204
3,400.00	13.09	237.334	3,345.19	-266.83	-416.17	1,923,144.903	2,782,961.911	36.285117414	-107.630189982
3,500.00	13.09	237.334	3,442.59	-279.05	-435.23	1,923,132.679	2,782,942.845	36.285083943	-107.630254760



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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	13.09	237.334	3,539.99	-291.28	-454.30	1,923,120.455	2,782,923.780	36.285050472	-107.630319538	
3,608.22	13.09	237.334	3,548.00	-292.28	-455.87	1,923,119.450	2,782,922.212	36.285047720	-107.630324864	
Cliff House										
3,623.62	13.09	237.334	3,563.00	-294.17	-458.80	1,923,117.567	2,782,919.276	36.285042566	-107.630334840	
Menefee										
3,700.00	13.09	237.334	3,637.39	-303.50	-473.36	1,923,108.231	2,782,904.714	36.285017001	-107.630384316	
3,777.62	13.09	237.334	3,713.00	-312.99	-488.16	1,923,098.742	2,782,889.914	36.284991020	-107.630434599	
9 5/8" Csg										
3,800.00	13.09	237.334	3,734.80	-315.73	-492.43	1,923,096.006	2,782,885.648	36.284983530	-107.630449094	
3,900.00	13.09	237.334	3,832.20	-327.95	-511.50	1,923,083.782	2,782,866.582	36.284950059	-107.630513872	
4,000.00	13.09	237.334	3,929.60	-340.18	-530.56	1,923,071.558	2,782,847.516	36.284916589	-107.630578650	
4,100.00	13.09	237.334	4,027.00	-352.40	-549.63	1,923,059.334	2,782,828.450	36.284883118	-107.630643427	
4,200.00	13.09	237.334	4,124.40	-364.62	-568.69	1,923,047.109	2,782,809.385	36.284849647	-107.630708205	
4,300.00	13.09	237.334	4,221.80	-376.85	-587.76	1,923,034.885	2,782,790.319	36.284816175	-107.630772983	
4,400.00	13.09	237.334	4,319.20	-389.07	-606.83	1,923,022.661	2,782,771.253	36.284782704	-107.630837760	
4,475.76	13.09	237.334	4,393.00	-398.33	-621.27	1,923,013.399	2,782,756.808	36.284757345	-107.630886839	
Point Lookout										
4,509.13	13.09	237.334	4,425.50	-402.41	-627.63	1,923,009.320	2,782,750.446	36.284746176	-107.630908454	
Begin 3°/100' drop										
4,600.00	10.36	237.334	4,514.46	-412.38	-643.18	1,922,999.353	2,782,734.900	36.284718885	-107.630961272	
4,689.65	7.67	237.334	4,603.00	-419.97	-655.01	1,922,991.767	2,782,723.070	36.284698116	-107.631001467	
Mancos										
4,700.00	7.36	237.334	4,613.26	-420.70	-656.15	1,922,991.037	2,782,721.930	36.284696115	-107.631005340	
4,800.00	4.36	237.334	4,712.72	-426.21	-664.75	1,922,985.523	2,782,713.330	36.284681017	-107.631034558	
4,900.00	1.36	237.334	4,812.59	-428.91	-668.95	1,922,982.826	2,782,709.124	36.284673634	-107.631048847	
4,945.47	0.00	0.000	4,858.05	-429.20	-669.41	1,922,982.534	2,782,708.669	36.284672834	-107.631050395	
Begin vertical hold										
5,000.00	0.00	0.000	4,912.58	-429.20	-669.41	1,922,982.534	2,782,708.669	36.284672834	-107.631050395	
5,060.42	0.00	0.000	4,973.00	-429.20	-669.41	1,922,982.534	2,782,708.669	36.284672834	-107.631050395	
MNCS_A										
5,100.00	0.00	0.000	5,012.58	-429.20	-669.41	1,922,982.534	2,782,708.669	36.284672834	-107.631050395	
5,140.42	0.00	0.000	5,053.00	-429.20	-669.41	1,922,982.534	2,782,708.669	36.284672834	-107.631050395	
MNCS_B										
5,145.47	0.00	0.000	5,058.05	-429.20	-669.41	1,922,982.534	2,782,708.669	36.284672834	-107.631050395	
Begin 10°/100' build										
5,150.00	0.45	314.999	5,062.58	-429.19	-669.42	1,922,982.547	2,782,708.656	36.284672869	-107.631050438	
5,200.00	5.45	314.999	5,112.50	-427.37	-671.24	1,922,984.368	2,782,706.835	36.284677882	-107.631056604	
5,250.00	10.45	314.999	5,162.00	-422.48	-676.13	1,922,989.258	2,782,701.945	36.284691343	-107.631073163	
5,266.31	12.08	314.999	5,178.00	-420.22	-678.39	1,922,991.512	2,782,699.691	36.284697548	-107.631080794	
MNCS_C										
5,300.00	15.45	314.999	5,210.72	-414.55	-684.06	1,922,997.180	2,782,694.022	36.284713152	-107.631099988	
5,350.00	20.45	314.999	5,258.27	-403.66	-694.95	1,923,008.075	2,782,683.127	36.284743142	-107.631136877	
5,355.06	20.96	314.999	5,263.00	-402.39	-696.22	1,923,009.340	2,782,681.862	36.284746625	-107.631141161	
MNCS_Cms										
5,400.00	25.45	314.999	5,304.29	-389.88	-708.74	1,923,021.858	2,782,669.343	36.284781084	-107.631183548	
5,432.24	28.68	314.999	5,333.00	-379.50	-719.11	1,923,032.230	2,782,658.971	36.284809636	-107.631218668	
MNCS_D										
5,450.00	30.45	314.999	5,348.45	-373.31	-725.30	1,923,038.425	2,782,652.776	36.284826690	-107.631239646	
5,500.00	35.45	314.999	5,390.39	-354.08	-744.53	1,923,057.651	2,782,633.550	36.284879613	-107.631304744	
5,528.27	38.28	314.999	5,413.00	-342.09	-756.52	1,923,069.641	2,782,621.559	36.284912620	-107.631345344	
MNCS_E										
5,550.00	40.45	314.999	5,429.80	-332.35	-766.27	1,923,079.387	2,782,611.812	36.284939450	-107.631378346	
5,600.00	45.45	314.999	5,466.38	-308.26	-790.35	1,923,103.470	2,782,587.728	36.285005745	-107.631459894	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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	
5,602.31	45.68	314.999	5,468.00	-307.10	-791.52	1,923,104.636	2,782,586.563	36.285008952	-107.631463839	
MNCS_F										
5,650.00	50.45	314.999	5,499.86	-282.02	-816.60	1,923,129.716	2,782,561.481	36.285077995	-107.631548765	
5,700.00	55.45	314.999	5,529.97	-253.81	-844.81	1,923,157.926	2,782,533.271	36.285155648	-107.631644283	
5,742.98	59.75	314.999	5,553.00	-228.15	-870.47	1,923,183.583	2,782,507.613	36.285226277	-107.631731162	
MNCS_G										
5,745.47	60.00	314.999	5,554.25	-226.63	-871.98	1,923,185.101	2,782,506.094	36.285230456	-107.631736303	
Begin 60.00° tangent										
5,805.47	60.00	314.999	5,584.25	-189.89	-908.73	1,923,221.843	2,782,469.352	36.285331597	-107.631860714	
Begin 10°/100' build										
5,823.47	61.80	314.999	5,593.00	-178.77	-919.85	1,923,232.964	2,782,458.230	36.285362211	-107.631898371	
MNCS_H										
5,850.00	64.45	314.999	5,604.99	-162.04	-936.58	1,923,249.697	2,782,441.496	36.285408273	-107.631955031	
5,900.00	69.45	314.999	5,624.56	-129.51	-969.11	1,923,282.220	2,782,408.973	36.285497800	-107.632065156	
5,950.00	74.45	314.999	5,640.04	-95.91	-1,002.71	1,923,315.824	2,782,375.367	36.285590305	-107.632178946	
5,961.44	75.60	314.999	5,643.00	-88.10	-1,010.53	1,923,323.637	2,782,367.554	36.285611813	-107.632205402	
MNCS_I										
6,000.00	79.45	314.999	5,651.33	-61.48	-1,037.14	1,923,350.255	2,782,340.935	36.285685086	-107.632295535	
6,050.00	84.45	314.999	5,658.33	-26.48	-1,072.14	1,923,385.251	2,782,305.938	36.285781419	-107.632414034	
6,102.34	89.69	314.999	5,661.00	10.46	-1,109.09	1,923,422.197	2,782,268.990	36.285883122	-107.632539139	
Begin 89.69° lateral										
6,200.00	89.69	314.999	5,661.53	79.52	-1,178.15	1,923,491.252	2,782,199.932	36.286073214	-107.632772974	
6,300.00	89.69	314.999	5,662.08	150.23	-1,248.86	1,923,561.960	2,782,129.221	36.286267855	-107.633012405	
6,400.00	89.69	314.999	5,662.63	220.94	-1,319.57	1,923,632.668	2,782,058.511	36.286462495	-107.633251838	
6,500.00	89.69	314.999	5,663.17	291.64	-1,390.28	1,923,703.377	2,781,987.800	36.286657135	-107.633491271	
6,600.00	89.69	314.999	5,663.72	362.35	-1,460.99	1,923,774.085	2,781,917.089	36.286851774	-107.633730706	
6,700.00	89.69	314.999	5,664.26	433.06	-1,531.70	1,923,844.793	2,781,846.378	36.287046413	-107.633970142	
6,800.00	89.69	314.999	5,664.81	503.77	-1,602.41	1,923,915.501	2,781,775.667	36.287241051	-107.634209580	
6,900.00	89.69	314.999	5,665.36	574.48	-1,673.12	1,923,986.209	2,781,704.956	36.287435689	-107.634449018	
7,000.00	89.69	314.999	5,665.90	645.19	-1,743.84	1,924,056.917	2,781,634.245	36.287630326	-107.634688458	
7,100.00	89.69	314.999	5,666.45	715.89	-1,814.55	1,924,127.625	2,781,563.535	36.287824963	-107.634927899	
7,200.00	89.69	314.999	5,667.00	786.60	-1,885.26	1,924,198.333	2,781,492.824	36.288019599	-107.635167341	
7,300.00	89.69	314.999	5,667.54	857.31	-1,955.97	1,924,269.042	2,781,422.113	36.288214235	-107.635406784	
7,400.00	89.69	314.999	5,668.09	928.02	-2,026.68	1,924,339.750	2,781,351.402	36.288408870	-107.635646228	
7,500.00	89.69	314.999	5,668.64	998.73	-2,097.39	1,924,410.458	2,781,280.691	36.288603505	-107.635885674	
7,600.00	89.69	314.999	5,669.18	1,069.43	-2,168.10	1,924,481.166	2,781,209.980	36.288798140	-107.636125121	
7,700.00	89.69	314.999	5,669.73	1,140.14	-2,238.81	1,924,551.874	2,781,139.270	36.288992774	-107.636364569	
7,800.00	89.69	314.999	5,670.27	1,210.85	-2,309.52	1,924,622.582	2,781,068.559	36.289187407	-107.636604018	
7,900.00	89.69	314.999	5,670.82	1,281.56	-2,380.23	1,924,693.290	2,780,997.848	36.289382040	-107.636843468	
8,000.00	89.69	314.999	5,671.37	1,352.27	-2,450.95	1,924,763.998	2,780,927.137	36.289576672	-107.637082920	
8,100.00	89.69	314.999	5,671.91	1,422.98	-2,521.66	1,924,834.706	2,780,856.426	36.289771304	-107.637322372	
8,200.00	89.69	314.999	5,672.46	1,493.68	-2,592.37	1,924,905.415	2,780,785.715	36.289965936	-107.637561826	
8,300.00	89.69	314.999	5,673.01	1,564.39	-2,663.08	1,924,976.123	2,780,715.005	36.290160567	-107.637801281	
8,400.00	89.69	314.999	5,673.55	1,635.10	-2,733.79	1,925,046.831	2,780,644.294	36.290355198	-107.638040738	
8,500.00	89.69	314.999	5,674.10	1,705.81	-2,804.50	1,925,117.539	2,780,573.583	36.290549828	-107.638280195	
8,600.00	89.69	314.999	5,674.64	1,776.52	-2,875.21	1,925,188.247	2,780,502.872	36.290744457	-107.638519654	
8,700.00	89.69	314.999	5,675.19	1,847.23	-2,945.92	1,925,258.955	2,780,432.161	36.290939086	-107.638759114	
8,800.00	89.69	314.999	5,675.74	1,917.93	-3,016.63	1,925,329.663	2,780,361.450	36.291133715	-107.638998575	
8,900.00	89.69	314.999	5,676.28	1,988.64	-3,087.34	1,925,400.371	2,780,290.740	36.291328343	-107.639238037	
9,000.00	89.69	314.999	5,676.83	2,059.35	-3,158.06	1,925,471.080	2,780,220.029	36.291522971	-107.639477501	
9,100.00	89.69	314.999	5,677.38	2,130.06	-3,228.77	1,925,541.788	2,780,149.318	36.291717598	-107.639716965	
9,200.00	89.69	314.999	5,677.92	2,200.77	-3,299.48	1,925,612.496	2,780,078.607	36.291912225	-107.639956431	
9,300.00	89.69	314.999	5,678.47	2,271.48	-3,370.19	1,925,683.204	2,780,007.896	36.292106851	-107.640195898	
9,400.00	89.69	314.999	5,679.02	2,342.18	-3,440.90	1,925,753.912	2,779,937.185	36.292301477	-107.640435366	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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
9,500.00	89.69	314.999	5,679.56	2,412.89	-3,511.61	1,925,824.620	2,779,866.475	36.292496102		-107.640674836
9,600.00	89.69	314.999	5,680.11	2,483.60	-3,582.32	1,925,895.328	2,779,795.764	36.292690727		-107.640914306
9,700.00	89.69	314.999	5,680.65	2,554.31	-3,653.03	1,925,966.036	2,779,725.053	36.292885351		-107.641153778
9,800.00	89.69	314.999	5,681.20	2,625.02	-3,723.74	1,926,036.744	2,779,654.342	36.293079975		-107.641393251
9,900.00	89.69	314.999	5,681.75	2,695.72	-3,794.45	1,926,107.453	2,779,583.631	36.293274598		-107.641632725
10,000.00	89.69	314.999	5,682.29	2,766.43	-3,865.16	1,926,178.161	2,779,512.920	36.293469221		-107.641872201
10,100.00	89.69	314.999	5,682.84	2,837.14	-3,935.88	1,926,248.869	2,779,442.210	36.293663843		-107.642111677
10,200.00	89.69	314.999	5,683.39	2,907.85	-4,006.59	1,926,319.577	2,779,371.499	36.293858465		-107.642351155
10,300.00	89.69	314.999	5,683.93	2,978.56	-4,077.30	1,926,390.285	2,779,300.788	36.294053086		-107.642590634
10,400.00	89.69	314.999	5,684.48	3,049.27	-4,148.01	1,926,460.994	2,779,230.077	36.294247707		-107.642830114
10,500.00	89.69	314.999	5,685.03	3,119.97	-4,218.72	1,926,531.702	2,779,159.366	36.294442328		-107.643069595
10,600.00	89.69	314.999	5,685.57	3,190.68	-4,289.43	1,926,602.410	2,779,088.655	36.294636948		-107.643309078
10,700.00	89.69	314.999	5,686.12	3,261.39	-4,360.14	1,926,673.119	2,779,017.944	36.294831567		-107.643548561
10,800.00	89.69	314.999	5,686.66	3,332.10	-4,430.85	1,926,743.827	2,778,947.234	36.295026186		-107.643788046
10,900.00	89.69	314.999	5,687.21	3,402.81	-4,501.56	1,926,814.535	2,778,876.523	36.295220805		-107.644027532
11,000.00	89.69	314.999	5,687.76	3,473.52	-4,572.27	1,926,885.243	2,778,805.812	36.295415422		-107.644267019
11,100.00	89.69	314.999	5,688.30	3,544.22	-4,642.99	1,926,955.951	2,778,735.101	36.295610039		-107.644506508
11,200.00	89.69	314.999	5,688.85	3,614.93	-4,713.70	1,927,026.659	2,778,664.390	36.295804656		-107.644745997
11,300.00	89.69	314.999	5,689.40	3,685.64	-4,784.41	1,927,097.367	2,778,593.679	36.295999273		-107.644985488
11,400.00	89.69	314.999	5,689.94	3,756.35	-4,855.12	1,927,168.075	2,778,522.969	36.296193889		-107.645224980
11,500.00	89.69	314.999	5,690.49	3,827.06	-4,925.83	1,927,238.783	2,778,452.258	36.296388504		-107.645464473
11,600.00	89.69	314.999	5,691.04	3,897.77	-4,996.54	1,927,309.492	2,778,381.547	36.296583119		-107.645703968
11,700.00	89.69	314.999	5,691.58	3,968.47	-5,067.25	1,927,380.200	2,778,310.836	36.296777734		-107.645943463
11,800.00	89.69	314.999	5,692.13	4,039.18	-5,137.96	1,927,450.908	2,778,240.125	36.296972348		-107.646182960
11,900.00	89.69	314.999	5,692.67	4,109.89	-5,208.67	1,927,521.616	2,778,169.414	36.297166962		-107.646422458
12,000.00	89.69	314.999	5,693.22	4,180.60	-5,279.38	1,927,592.324	2,778,098.704	36.297361575		-107.646661957
12,100.00	89.69	314.999	5,693.77	4,251.31	-5,350.10	1,927,663.032	2,778,027.993	36.297556188		-107.646901457
12,200.00	89.69	314.999	5,694.31	4,322.02	-5,420.81	1,927,733.740	2,777,957.282	36.297750800		-107.647140959
12,300.00	89.69	314.999	5,694.86	4,392.72	-5,491.52	1,927,804.448	2,777,886.571	36.297945412		-107.647380462
12,400.00	89.69	314.999	5,695.41	4,463.43	-5,562.23	1,927,875.157	2,777,815.860	36.298140023		-107.647619966
12,500.00	89.69	314.999	5,695.95	4,534.14	-5,632.94	1,927,945.865	2,777,745.149	36.298334634		-107.647859471
12,600.00	89.69	314.999	5,696.50	4,604.85	-5,703.65	1,928,016.573	2,777,674.439	36.298529244		-107.648098977
12,700.00	89.69	314.999	5,697.04	4,675.56	-5,774.36	1,928,087.281	2,777,603.728	36.298723854		-107.648338483
12,800.00	89.69	314.999	5,697.59	4,746.26	-5,845.07	1,928,157.989	2,777,533.017	36.298918463		-107.648577992
12,900.00	89.69	314.999	5,698.14	4,816.97	-5,915.78	1,928,228.697	2,777,462.306	36.299113072		-107.648817502
13,000.00	89.69	314.999	5,698.68	4,887.68	-5,986.49	1,928,299.405	2,777,391.595	36.299307680		-107.649057013
13,100.00	89.69	314.999	5,699.23	4,958.39	-6,057.21	1,928,370.113	2,777,320.884	36.299502288		-107.649296525
13,200.00	89.69	314.999	5,699.78	5,029.10	-6,127.92	1,928,440.821	2,777,250.174	36.299696896		-107.649536039
13,300.00	89.69	314.999	5,700.32	5,099.81	-6,198.63	1,928,511.530	2,777,179.463	36.299891503		-107.649775553
13,400.00	89.69	314.999	5,700.87	5,170.51	-6,269.34	1,928,582.238	2,777,108.752	36.300086109		-107.650015069
13,500.00	89.69	314.999	5,701.42	5,241.22	-6,340.05	1,928,652.946	2,777,038.041	36.300280715		-107.650254586
13,600.00	89.69	314.999	5,701.96	5,311.93	-6,410.76	1,928,723.654	2,776,967.330	36.300475320		-107.650494104
13,700.00	89.69	314.999	5,702.51	5,382.64	-6,481.47	1,928,794.362	2,776,896.619	36.300669925		-107.650733623
13,800.00	89.69	314.999	5,703.05	5,453.35	-6,552.18	1,928,865.070	2,776,825.908	36.300864530		-107.650973144
13,900.00	89.69	314.999	5,703.60	5,524.06	-6,622.89	1,928,935.778	2,776,755.198	36.301059134		-107.651212666
14,000.00	89.69	314.999	5,704.15	5,594.76	-6,693.60	1,929,006.486	2,776,684.487	36.301253737		-107.651452189
14,100.00	89.69	314.999	5,704.69	5,665.47	-6,764.32	1,929,077.195	2,776,613.776	36.301448340		-107.651691713
14,200.00	89.69	314.999	5,705.24	5,736.18	-6,835.03	1,929,147.903	2,776,543.065	36.301642943		-107.651931238
14,300.00	89.69	314.999	5,705.79	5,806.89	-6,905.74	1,929,218.611	2,776,472.354	36.301837545		-107.652170765
14,400.00	89.69	314.999	5,706.33	5,877.60	-6,976.45	1,929,289.319	2,776,401.643	36.302032147		-107.652410292
14,500.00	89.69	314.999	5,706.88	5,948.31	-7,047.16	1,929,360.027	2,776,330.933	36.302226748		-107.652649821
14,600.00	89.69	314.999	5,707.43	6,019.01	-7,117.87	1,929,430.735	2,776,260.222	36.302421348		-107.652889351
14,700.00	89.69	314.999	5,707.97	6,089.72	-7,188.58	1,929,501.443	2,776,189.511	36.302615949		-107.653128883
14,800.00	89.69	314.999	5,708.52	6,160.43	-7,259.29	1,929,572.151	2,776,118.800	36.302810548		-107.653368415
14,900.00	89.69	314.999	5,709.06	6,231.14	-7,330.00	1,929,642.859	2,776,048.089	36.303005147		-107.653607949



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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	
15,000.00	89.69	314.999	5,709.61	6,301.85	-7,400.71	1,929,713.568	2,775,977.378	36.303199746	-107.653847483	
15,100.00	89.69	314.999	5,710.16	6,372.55	-7,471.43	1,929,784.276	2,775,906.668	36.303394344	-107.654087019	
15,200.00	89.69	314.999	5,710.70	6,443.26	-7,542.14	1,929,854.984	2,775,835.957	36.303588942	-107.654326557	
15,300.00	89.69	314.999	5,711.25	6,513.97	-7,612.85	1,929,925.692	2,775,765.246	36.303783539	-107.654566095	
15,400.00	89.69	314.999	5,711.80	6,584.68	-7,683.56	1,929,996.400	2,775,694.535	36.303978136	-107.654805635	
15,500.00	89.69	314.999	5,712.34	6,655.39	-7,754.27	1,930,067.108	2,775,623.824	36.304172732	-107.655045175	
15,600.00	89.69	314.999	5,712.89	6,726.10	-7,824.98	1,930,137.816	2,775,553.113	36.304367328	-107.655284717	
15,700.00	89.69	314.999	5,713.43	6,796.80	-7,895.69	1,930,208.524	2,775,482.403	36.304561923	-107.655524261	
15,800.00	89.69	314.999	5,713.98	6,867.51	-7,966.40	1,930,279.233	2,775,411.692	36.304756518	-107.655763805	
15,900.00	89.69	314.999	5,714.53	6,938.22	-8,037.11	1,930,349.941	2,775,340.981	36.304951113	-107.656003351	
16,000.00	89.69	314.999	5,715.07	7,008.93	-8,107.82	1,930,420.649	2,775,270.270	36.305145706	-107.656242897	
16,100.00	89.69	314.999	5,715.62	7,079.64	-8,178.54	1,930,491.357	2,775,199.559	36.305340300	-107.656482445	
16,200.00	89.69	314.999	5,716.17	7,150.35	-8,249.25	1,930,562.065	2,775,128.848	36.305534893	-107.656721994	
16,300.00	89.69	314.999	5,716.71	7,221.05	-8,319.96	1,930,632.773	2,775,058.138	36.305729485	-107.656961545	
16,400.00	89.69	314.999	5,717.26	7,291.76	-8,390.67	1,930,703.481	2,774,987.427	36.305924077	-107.657201096	
16,500.00	89.69	314.999	5,717.81	7,362.47	-8,461.38	1,930,774.189	2,774,916.716	36.306118669	-107.657440649	
16,535.63	89.69	314.999	5,718.00	7,387.66	-8,486.57	1,930,799.382	2,774,891.522	36.306188000	-107.657526000	
PBHL/TD @ 16535.63 MD 5718.00 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 128H FTP 2373 F - plan hits target center - Point	0.00	0.000	5,661.00	10.42	-1,109.05	1,923,422.152	2,782,269.032	36.285883000	-107.632539000	
Ridge 128H LTP 231 FN - plan hits target center - Point	0.00	0.000	5,718.00	7,387.66	-8,486.57	1,930,799.382	2,774,891.522	36.306188000	-107.657526000	

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		
3,777.62	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. 128H
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. 128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,360.13	1,358.00	Ojo Alamo				
1,477.87	1,473.00	Kirtland				
1,729.40	1,718.00	Fruitland				
2,032.27	2,013.00	Pictured Cliffs				
2,160.61	2,138.00	Lewis				
2,478.88	2,448.00	Chacra				
3,608.22	3,548.00	Cliff House				
3,623.62	3,563.00	Menefee				
4,475.76	4,393.00	Point Lookout				
4,689.65	4,603.00	Mancos				
5,060.42	4,973.00	MNCS_A				
5,140.42	5,053.00	MNCS_B				
5,266.31	5,178.00	MNCS_C				
5,355.06	5,263.00	MNCS_Cms				
5,432.24	5,333.00	MNCS_D				
5,528.27	5,413.00	MNCS_E				
5,602.31	5,468.00	MNCS_F				
5,742.98	5,553.00	MNCS_G				
5,823.47	5,593.00	MNCS_H				
5,961.44	5,643.00	MNCS_I				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,436.33	1,432.55	-26.79	-41.78	Begin 13.09° tangent	
4,509.13	4,425.50	-402.41	-627.63	Begin 3°/100' drop	
4,945.47	4,858.05	-429.20	-669.41	Begin vertical hold	
5,145.47	5,058.05	-429.20	-669.41	Begin 10°/100' build	
5,745.47	5,554.25	-226.63	-871.98	Begin 60.00° tangent	
5,805.47	5,584.25	-189.89	-908.73	Begin 10°/100' build	
6,102.34	5,661.00	10.46	-1,109.09	Begin 89.69° lateral	
16,535.63	5,718.00	7,387.66	-8,486.57	PBHL/TD @ 16535.63 MD 5718.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Ridge Unit No. 128H
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. 128H	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 1,853.60ft	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	16,534.99	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	5,513.87	9,365.92	544.39	441.98	5.316	CC, ES	
NW Lybrook Unit 139H - Original Hole - rev0	5,600.00	9,326.00	554.64	446.87	5.147	SF	
Ridge Unit (124, 127, 128 & 129)							
Ridge Unit No. 124H - Original Hole - rev1	1,000.00	1,000.00	40.08	33.36	5.964	CC, ES, SF	
Ridge Unit No. 127H - Original Hole - rev1	1,000.00	1,000.00	20.04	13.32	2.982	CC, ES	
Ridge Unit No. 127H - Original Hole - rev1	15,400.00	16,649.41	1,156.47	678.49	2.419	SF	
Ridge Unit No. 129H - Original Hole - rev1	600.00	600.00	20.04	16.19	5.201	CC, ES	
Ridge Unit No. 129H - Original Hole - rev1	16,535.96	15,849.35	1,156.35	653.48	2.300	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	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre	Distance	Rule Assigned:	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)				
4,000.00	3,929.60	9,577.30	5,579.73	17.46	96.74	-106.69	-831.70	-543.49	1,794.79	1,742.41	52.38	34.264	
4,100.00	4,027.00	9,558.87	5,579.62	17.98	96.29	-105.07	-831.58	-561.93	1,697.70	1,644.87	52.83	32.135	
4,200.00	4,124.40	9,540.43	5,579.52	18.49	95.84	-103.35	-831.46	-580.36	1,600.75	1,547.40	53.34	30.009	
4,300.00	4,221.80	9,521.99	5,579.41	19.01	95.39	-101.51	-831.34	-598.80	1,503.97	1,450.04	53.93	27.888	
4,400.00	4,319.20	9,503.56	5,579.31	19.52	94.94	-99.54	-831.22	-617.23	1,407.40	1,352.80	54.60	25.775	
4,500.00	4,416.61	9,485.12	5,579.20	20.04	94.49	-97.44	-831.10	-635.67	1,311.09	1,255.70	55.39	23.670	
4,600.00	4,514.46	9,468.46	5,579.11	20.53	94.09	-85.94	-831.00	-652.33	1,215.07	1,158.68	56.39	21.546	
4,700.00	4,613.26	9,456.10	5,579.04	20.97	93.79	-74.70	-830.92	-664.69	1,119.67	1,061.89	57.79	19.376	
4,800.00	4,712.72	9,448.10	5,579.00	21.36	93.59	-65.58	-830.87	-672.69	1,025.52	965.84	59.68	17.183	
4,900.00	4,812.59	9,444.48	5,578.98	21.69	93.50	-58.74	-830.84	-676.31	933.39	871.16	62.23	14.998	
5,000.00	4,912.58	9,444.59	5,578.98	21.96	93.51	-179.03	-830.84	-676.20	844.10	778.50	65.60	12.867	
5,100.00	5,012.58	9,445.15	5,578.98	22.23	93.52	-179.11	-830.85	-675.64	757.65	687.79	69.85	10.846	
5,200.00	5,112.50	9,443.87	5,578.97	22.51	93.49	-138.89	-830.84	-676.92	676.09	600.74	75.35	8.973	
5,300.00	5,210.72	9,431.53	5,578.90	22.83	93.19	-143.21	-830.76	-689.26	608.73	525.77	82.96	7.338	
5,400.00	5,304.29	9,407.22	5,578.77	23.17	92.60	-143.70	-830.60	-713.57	563.11	470.86	92.25	6.104	
5,500.00	5,390.39	9,371.68	5,578.56	23.53	91.73	-141.33	-830.37	-749.10	544.66	443.36	101.31	5.376	
5,513.87	5,401.59	9,365.92	5,578.53	23.58	91.59	-140.80	-830.33	-754.86	544.39	441.98	102.41	5.316	CC, ES
5,600.00	5,466.38	9,326.00	5,578.31	23.93	90.62	-136.38	-830.08	-794.79	554.64	446.87	107.76	5.147	SF
5,700.00	5,529.97	9,271.55	5,578.00	24.40	89.30	-128.92	-829.72	-849.24	589.13	478.32	110.82	5.316	

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. 128H
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. 128H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: NW Lybrook (138, 139, 140 & 141) - NW Lybrook Unit 139H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,800.00	5,581.51	9,210.88	5,577.66	24.97	87.83	-122.25	-829.33	-909.90	640.19	528.69	111.50	5.742	
5,900.00	5,624.56	9,146.98	5,577.30	25.68	86.28	-111.82	-828.92	-973.79	700.01	588.94	111.07	6.303	
6,000.00	5,651.33	9,078.66	5,576.91	26.56	84.63	-100.40	-828.47	-1,042.12	767.01	656.77	110.25	6.957	
6,100.00	5,660.98	9,007.97	5,576.51	27.61	82.93	-89.72	-828.02	-1,112.80	836.89	727.42	109.47	7.645	
6,200.00	5,661.53	8,936.81	5,576.11	28.80	81.22	-89.47	-827.56	-1,183.96	907.14	798.35	108.79	8.338	
6,300.00	5,662.08	8,865.64	5,575.71	30.15	79.51	-89.45	-827.10	-1,255.12	977.40	869.22	108.17	9.035	
6,400.00	5,662.63	8,794.48	5,575.31	31.61	77.81	-89.44	-826.64	-1,326.28	1,047.65	940.05	107.60	9.736	
6,500.00	5,663.17	8,723.32	5,574.90	33.18	76.11	-89.43	-826.18	-1,397.44	1,117.91	1,010.83	107.08	10.440	
6,600.00	5,663.72	8,652.15	5,574.50	34.83	74.42	-89.41	-825.71	-1,468.60	1,188.16	1,081.57	106.59	11.147	
6,700.00	5,664.26	8,580.99	5,574.10	36.56	72.74	-89.40	-825.25	-1,539.77	1,258.42	1,152.28	106.14	11.856	
6,800.00	5,664.81	8,509.83	5,573.70	38.36	71.05	-89.39	-824.79	-1,610.93	1,328.68	1,222.95	105.73	12.567	
6,900.00	5,665.36	8,438.67	5,573.30	40.20	69.38	-89.38	-824.33	-1,682.09	1,398.93	1,293.58	105.35	13.279	
7,000.00	5,665.90	8,367.50	5,572.89	42.10	67.71	-89.38	-823.87	-1,753.25	1,469.19	1,364.19	105.00	13.993	
7,100.00	5,666.45	8,296.34	5,572.49	44.03	66.05	-89.37	-823.41	-1,824.41	1,539.44	1,434.77	104.67	14.707	
7,200.00	5,667.00	8,225.18	5,572.09	46.00	64.40	-89.36	-822.95	-1,895.57	1,609.70	1,505.32	104.38	15.422	
7,300.00	5,667.54	8,154.01	5,571.69	48.00	62.75	-89.36	-822.49	-1,966.73	1,679.95	1,575.85	104.10	16.137	
7,400.00	5,668.09	8,082.85	5,571.29	50.02	61.11	-89.35	-822.03	-2,037.89	1,750.21	1,646.35	103.86	16.852	
7,500.00	5,668.64	8,011.69	5,570.88	52.07	59.48	-89.35	-821.57	-2,109.05	1,820.46	1,716.83	103.63	17.567	

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. 128H
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. 128H	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)	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	90.40	-0.28	40.08	40.08				
100.00	100.00	100.00	100.00	0.13	0.13	90.40	-0.28	40.08	40.08	39.81	0.27	149.090	
200.00	200.00	200.00	200.00	0.49	0.49	90.40	-0.28	40.08	40.08	39.10	0.99	40.661	
300.00	300.00	300.00	300.00	0.85	0.85	90.40	-0.28	40.08	40.08	38.38	1.70	23.540	
400.00	400.00	400.00	400.00	1.21	1.21	90.40	-0.28	40.08	40.08	37.66	2.42	16.566	
500.00	500.00	500.00	500.00	1.57	1.57	90.40	-0.28	40.08	40.08	36.95	3.14	12.779	
600.00	600.00	600.00	600.00	1.93	1.93	90.40	-0.28	40.08	40.08	36.23	3.85	10.402	
700.00	700.00	700.00	700.00	2.29	2.29	90.40	-0.28	40.08	40.08	35.51	4.57	8.770	
800.00	800.00	800.00	800.00	2.64	2.64	90.40	-0.28	40.08	40.08	34.80	5.29	7.581	
900.00	900.00	900.00	900.00	3.00	3.00	90.40	-0.28	40.08	40.08	34.08	6.00	6.676	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	90.40	-0.28	40.08	40.08	33.36	6.72	5.964 CC, ES, SF	
1,100.00	1,099.95	1,097.94	1,097.90	3.71	3.71	-150.26	0.94	42.28	44.59	37.18	7.41	6.018	
1,200.00	1,199.63	1,194.33	1,194.00	4.05	4.05	-157.02	4.52	48.72	58.69	50.62	8.07	7.273	
1,300.00	1,298.77	1,287.71	1,286.62	4.40	4.39	-162.97	10.23	58.99	82.94	74.24	8.71	9.527	
1,400.00	1,397.08	1,376.81	1,374.37	4.77	4.73	-167.04	17.72	72.47	117.11	107.80	9.31	12.577	
1,500.00	1,494.56	1,461.06	1,456.59	5.17	5.06	-169.76	26.62	88.49	159.58	149.70	9.88	16.156	
1,600.00	1,591.96	1,541.58	1,534.35	5.59	5.41	-171.49	36.77	106.76	206.41	196.02	10.39	19.863	
1,700.00	1,689.36	1,618.46	1,607.71	6.03	5.77	-172.62	47.93	126.85	256.95	246.07	10.88	23.621	
1,800.00	1,786.76	1,691.71	1,676.69	6.48	6.13	-173.41	59.90	148.39	310.89	299.56	11.34	27.423	
1,900.00	1,884.17	1,761.38	1,741.37	6.94	6.52	-173.98	72.46	171.00	367.98	356.21	11.77	31.261	
2,000.00	1,981.57	1,827.56	1,801.91	7.41	6.91	-174.40	85.45	194.37	427.98	415.80	12.18	35.139	
2,100.00	2,078.97	1,900.00	1,867.06	7.89	7.38	-174.77	100.82	222.04	490.77	478.07	12.70	38.656	
2,200.00	2,176.37	1,955.63	1,916.33	8.37	7.77	-175.00	113.36	244.62	555.67	542.66	13.01	42.723	
2,300.00	2,273.77	2,031.12	1,983.05	8.86	8.32	-175.25	130.52	275.50	621.21	607.61	13.60	45.668	
2,400.00	2,371.17	2,106.62	2,049.76	9.35	8.88	-175.46	147.69	306.39	686.76	672.56	14.21	48.346	
2,500.00	2,468.58	2,182.12	2,116.48	9.84	9.47	-175.63	164.85	337.28	752.32	737.50	14.82	50.778	
2,600.00	2,565.98	2,257.62	2,183.20	10.34	10.07	-175.78	182.01	368.16	817.88	802.44	15.43	52.997	
2,700.00	2,663.38	2,333.11	2,249.92	10.84	10.68	-175.90	199.17	399.05	883.44	867.38	16.05	55.029	
2,800.00	2,760.78	2,408.61	2,316.64	11.34	11.29	-176.00	216.33	429.93	949.00	932.32	16.68	56.895	
2,900.00	2,858.18	2,484.11	2,383.36	11.84	11.92	-176.10	233.49	460.82	1,014.57	997.25	17.31	58.609	
3,000.00	2,955.58	2,559.60	2,450.08	12.35	12.55	-176.18	250.65	491.71	1,080.13	1,062.19	17.95	60.188	
3,100.00	3,052.98	2,635.10	2,516.79	12.86	13.19	-176.25	267.81	522.59	1,145.70	1,127.12	18.58	61.652	
3,200.00	3,150.39	2,710.60	2,583.51	13.36	13.83	-176.31	284.97	553.48	1,211.27	1,192.04	19.22	63.009	
3,300.00	3,247.79	2,786.10	2,650.23	13.87	14.47	-176.37	302.13	584.37	1,276.84	1,256.97	19.87	64.268	
3,400.00	3,345.19	2,861.59	2,716.95	14.38	15.12	-176.42	319.30	615.25	1,342.41	1,321.89	20.51	65.438	
3,500.00	3,442.59	2,937.09	2,783.67	14.89	15.78	-176.47	336.46	646.14	1,407.98	1,386.81	21.16	66.530	
3,600.00	3,539.99	3,012.59	2,850.39	15.41	16.43	-176.51	353.62	677.02	1,473.55	1,451.73	21.81	67.551	
3,700.00	3,637.39	3,088.09	2,917.11	15.92	17.09	-176.55	370.78	707.91	1,539.12	1,516.65	22.47	68.505	
3,800.00	3,734.80	3,163.58	2,983.83	16.43	17.75	-176.58	387.94	738.80	1,604.69	1,581.57	23.12	69.399	
3,900.00	3,832.20	3,239.08	3,050.54	16.95	18.41	-176.62	405.10	769.68	1,670.26	1,646.48	23.78	70.239	
4,000.00	3,929.60	3,314.58	3,117.26	17.46	19.08	-176.65	422.26	800.57	1,735.83	1,711.39	24.44	71.029	
4,100.00	4,027.00	3,390.08	3,183.98	17.98	19.74	-176.68	439.42	831.46	1,801.40	1,776.31	25.10	71.772	

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. 128H
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. 128H	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. 127H - 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	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.88	0.04	20.04	20.04				
100.00	100.00	100.00	100.00	0.13	0.13	89.88	0.04	20.04	20.04	19.77	0.27	74.542	
200.00	200.00	200.00	200.00	0.49	0.49	89.88	0.04	20.04	20.04	19.06	0.99	20.330	
300.00	300.00	300.00	300.00	0.85	0.85	89.88	0.04	20.04	20.04	18.34	1.70	11.770	
400.00	400.00	400.00	400.00	1.21	1.21	89.88	0.04	20.04	20.04	17.62	2.42	8.282	
500.00	500.00	500.00	500.00	1.57	1.57	89.88	0.04	20.04	20.04	16.90	3.14	6.389	
600.00	600.00	600.00	600.00	1.93	1.93	89.88	0.04	20.04	20.04	16.19	3.85	5.201	
700.00	700.00	700.00	700.00	2.29	2.29	89.88	0.04	20.04	20.04	15.47	4.57	4.385	
800.00	800.00	800.00	800.00	2.64	2.64	89.88	0.04	20.04	20.04	14.75	5.29	3.790	
900.00	900.00	900.00	900.00	3.00	3.00	89.88	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	89.88	0.04	20.04	20.04	13.32	6.72	2.982 CC, ES	
1,100.00	1,099.95	1,099.95	1,099.95	3.71	3.72	-151.04	0.04	20.04	22.29	14.87	7.42	3.002	
1,200.00	1,199.63	1,198.32	1,198.28	4.05	4.06	-155.57	-1.01	22.34	31.52	23.42	8.10	3.891	
1,300.00	1,298.77	1,294.92	1,294.59	4.40	4.39	-156.75	-4.10	29.07	49.79	41.04	8.76	5.687	
1,400.00	1,397.08	1,388.66	1,387.56	4.77	4.72	-156.48	-9.03	39.83	76.76	67.36	9.40	8.168	
1,500.00	1,494.56	1,478.90	1,476.42	5.17	5.05	-155.87	-15.58	54.09	111.16	101.14	10.02	11.093	
1,600.00	1,591.96	1,566.27	1,561.65	5.59	5.40	-154.73	-23.57	71.52	149.46	138.85	10.61	14.083	
1,700.00	1,689.36	1,650.66	1,643.07	6.03	5.76	-153.39	-32.83	91.70	191.29	180.11	11.18	17.105	
1,800.00	1,786.76	1,733.69	1,722.16	6.48	6.14	-152.02	-43.35	114.65	236.47	224.71	11.77	20.095	
1,900.00	1,884.17	1,822.21	1,806.12	6.94	6.59	-150.88	-55.03	140.12	282.77	270.31	12.46	22.694	
2,000.00	1,981.57	1,910.73	1,890.09	7.41	7.05	-150.06	-66.72	165.59	329.14	315.97	13.17	24.997	
2,100.00	2,078.97	1,999.25	1,974.05	7.89	7.53	-149.44	-78.40	191.06	375.54	361.65	13.89	27.042	
2,200.00	2,176.37	2,087.77	2,058.02	8.37	8.02	-148.96	-90.08	216.54	421.97	407.35	14.62	28.867	
2,300.00	2,273.77	2,176.29	2,141.99	8.86	8.53	-148.57	-101.77	242.01	468.41	453.06	15.36	30.501	
2,400.00	2,371.17	2,264.80	2,225.95	9.35	9.04	-148.25	-113.45	267.48	514.88	498.77	16.10	31.971	
2,500.00	2,468.58	2,353.32	2,309.92	9.84	9.56	-147.99	-125.13	292.95	561.35	544.49	16.86	33.297	
2,600.00	2,565.98	2,441.84	2,393.88	10.34	10.09	-147.77	-136.82	318.42	607.83	590.21	17.62	34.500	
2,700.00	2,663.38	2,530.36	2,477.85	10.84	10.62	-147.57	-148.50	343.90	654.31	635.93	18.38	35.593	
2,800.00	2,760.78	2,618.88	2,561.81	11.34	11.16	-147.41	-160.18	369.37	700.80	681.65	19.15	36.591	
2,900.00	2,858.18	2,707.40	2,645.78	11.84	11.71	-147.26	-171.87	394.84	747.30	727.37	19.93	37.505	
3,000.00	2,955.58	2,795.92	2,729.74	12.35	12.26	-147.13	-183.55	420.31	793.80	773.10	20.70	38.344	
3,100.00	3,052.98	2,884.44	2,813.71	12.86	12.81	-147.02	-195.23	445.79	840.30	818.82	21.48	39.117	
3,200.00	3,150.39	2,972.95	2,897.68	13.36	13.36	-146.92	-206.92	471.26	886.80	864.54	22.26	39.831	
3,300.00	3,247.79	3,061.47	2,981.64	13.87	13.92	-146.82	-218.60	496.73	933.31	910.26	23.05	40.492	
3,400.00	3,345.19	3,149.99	3,065.61	14.38	14.47	-146.74	-230.28	522.20	979.81	955.98	23.84	41.105	
3,500.00	3,442.59	3,238.51	3,149.57	14.89	15.03	-146.66	-241.97	547.67	1,026.32	1,001.70	24.63	41.676	
3,600.00	3,539.99	3,327.03	3,233.54	15.41	15.60	-146.59	-253.65	573.15	1,072.83	1,047.42	25.42	42.209	
3,700.00	3,637.39	3,415.55	3,317.50	15.92	16.16	-146.53	-265.33	598.62	1,119.34	1,093.13	26.21	42.706	
3,800.00	3,734.80	3,504.07	3,401.47	16.43	16.72	-146.47	-277.02	624.09	1,165.86	1,138.85	27.01	43.172	
3,900.00	3,832.20	3,592.58	3,485.44	16.95	17.29	-146.42	-288.70	649.56	1,212.37	1,184.57	27.80	43.608	
4,000.00	3,929.60	3,681.10	3,569.40	17.46	17.86	-146.37	-300.38	675.03	1,258.88	1,230.28	28.60	44.018	
4,100.00	4,027.00	3,769.62	3,653.37	17.98	18.42	-146.32	-312.07	700.51	1,305.40	1,276.00	29.40	44.404	
4,200.00	4,124.40	3,858.14	3,737.33	18.49	18.99	-146.28	-323.75	725.98	1,351.91	1,321.72	30.20	44.768	
4,300.00	4,221.80	3,946.66	3,821.30	19.01	19.56	-146.24	-335.43	751.45	1,398.43	1,367.43	31.00	45.111	
4,400.00	4,319.20	4,035.18	3,905.26	19.52	20.13	-146.20	-347.12	776.92	1,444.95	1,413.14	31.80	45.436	
4,500.00	4,416.61	4,123.70	3,989.23	20.04	20.71	-146.16	-358.80	802.39	1,491.46	1,458.86	32.61	45.743	
4,600.00	4,514.46	4,213.01	4,073.95	20.53	21.28	-146.83	-370.59	828.10	1,536.37	1,502.97	33.40	45.996	
4,700.00	4,613.26	4,301.31	4,158.99	21.07	21.87	-146.16	-382.37	853.97	1,581.91	1,548.00	34.20	46.250	
4,800.00	4,712.72	4,390.05	4,248.00	21.56	22.41	-146.12	-394.15	879.84	1,628.86	1,594.50	35.00	46.504	
4,900.00	4,812.59	4,478.67	4,337.00	22.05	22.95	-146.11	-405.93	905.71	1,675.80	1,641.00	35.80	46.758	
5,000.00	4,912.58	4,567.34	4,426.01	22.54	23.54	-146.11	-417.71	931.58	1,722.74	1,687.50	36.60	47.012	
5,100.00	5,012.58	4,656.01	4,515.01	23.03	24.13	-146.11	-429.49	957.45	1,769.68	1,734.00	37.40	47.266	

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. 128H
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. 128H	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. 127H - 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	5,112.50	6,730.04	5,673.03	22.51	32.79	92.79	388.14	148.62	1,285.07	1,237.58	47.49	27.057	
5,300.00	5,210.72	6,748.70	5,673.13	22.83	33.06	96.20	401.34	135.42	1,245.41	1,196.14	49.28	25.274	
5,400.00	5,304.29	6,784.12	5,673.33	23.17	33.56	97.90	426.38	110.38	1,213.84	1,162.68	51.16	23.726	
5,500.00	5,390.39	6,835.22	5,673.61	23.53	34.31	98.15	462.51	74.25	1,190.56	1,137.42	53.15	22.402	
5,600.00	5,466.38	6,900.44	5,673.97	23.93	35.29	97.33	508.63	28.13	1,174.87	1,119.65	55.21	21.279	
5,700.00	5,529.97	6,977.80	5,674.40	24.40	36.52	95.90	563.33	-26.58	1,165.36	1,107.92	57.45	20.287	
5,800.00	5,581.51	7,063.74	5,674.88	24.97	37.94	94.01	624.10	-87.35	1,160.14	1,100.28	59.86	19.382	
5,900.00	5,624.56	7,154.10	5,675.38	25.68	39.48	92.36	687.99	-151.24	1,157.50	1,095.05	62.44	18.536	
6,000.00	5,651.33	7,250.47	5,675.91	26.56	41.17	91.20	756.13	-219.38	1,156.64	1,091.35	65.29	17.715	
6,100.00	5,660.98	7,349.93	5,676.46	27.61	42.97	90.77	826.45	-289.71	1,156.48	1,088.12	68.36	16.918	
6,185.68	5,661.65	7,435.60	5,676.94	28.62	44.55	90.76	887.03	-350.29	1,156.48	1,085.35	71.13	16.260	
6,200.00	5,661.53	7,449.93	5,677.02	28.80	44.82	90.77	897.16	-360.42	1,156.48	1,084.88	71.61	16.151	
6,300.00	5,662.08	7,549.93	5,677.57	30.15	46.71	90.77	967.87	-431.13	1,156.48	1,081.48	75.01	15.418	
6,400.00	5,662.63	7,649.93	5,678.12	31.61	48.64	90.77	1,038.58	-501.84	1,156.48	1,077.94	78.54	14.724	
6,500.00	5,663.17	7,749.93	5,678.68	33.18	50.60	90.77	1,109.28	-572.55	1,156.48	1,074.29	82.20	14.070	
6,600.00	5,663.72	7,849.93	5,679.23	34.83	52.58	90.77	1,179.99	-643.27	1,156.48	1,070.54	85.95	13.456	
6,700.00	5,664.26	7,949.93	5,679.79	36.56	54.59	90.77	1,250.70	-713.98	1,156.48	1,066.70	89.78	12.881	
6,800.00	5,664.81	8,049.93	5,680.34	38.36	56.63	90.77	1,321.41	-784.69	1,156.48	1,062.79	93.69	12.343	
6,900.00	5,665.36	8,149.93	5,680.90	40.20	58.68	90.77	1,392.12	-855.40	1,156.48	1,058.82	97.67	11.841	
7,000.00	5,665.90	8,249.93	5,681.45	42.10	60.75	90.77	1,462.82	-926.11	1,156.48	1,054.79	101.70	11.372	
7,100.00	5,666.45	8,349.93	5,682.00	44.03	62.83	90.77	1,533.53	-996.82	1,156.48	1,050.71	105.77	10.933	
7,200.00	5,667.00	8,449.93	5,682.56	46.00	64.93	90.77	1,604.24	-1,067.53	1,156.48	1,046.59	109.90	10.523	
7,300.00	5,667.54	8,549.93	5,683.11	48.00	67.04	90.77	1,674.95	-1,138.24	1,156.48	1,042.43	114.06	10.140	
7,400.00	5,668.09	8,649.93	5,683.67	50.02	69.17	90.77	1,745.66	-1,208.95	1,156.48	1,038.23	118.25	9.780	
7,500.00	5,668.64	8,749.93	5,684.22	52.07	71.30	90.77	1,816.36	-1,279.67	1,156.48	1,034.01	122.47	9.443	
7,600.00	5,669.18	8,849.93	5,684.78	54.14	73.44	90.77	1,887.07	-1,350.38	1,156.48	1,029.76	126.72	9.126	
7,700.00	5,669.73	8,949.93	5,685.33	56.22	75.60	90.77	1,957.78	-1,421.09	1,156.48	1,025.49	130.99	8.829	
7,800.00	5,670.27	9,049.93	5,685.88	58.32	77.76	90.77	2,028.49	-1,491.80	1,156.48	1,021.19	135.29	8.548	
7,900.00	5,670.82	9,149.93	5,686.44	60.44	79.92	90.77	2,099.20	-1,562.51	1,156.48	1,016.88	139.60	8.284	
8,000.00	5,671.37	9,249.93	5,686.99	62.57	82.10	90.77	2,169.90	-1,633.22	1,156.48	1,012.55	143.93	8.035	
8,100.00	5,671.91	9,349.93	5,687.55	64.71	84.28	90.77	2,240.61	-1,703.93	1,156.48	1,008.20	148.28	7.799	
8,200.00	5,672.46	9,449.93	5,688.10	66.86	86.47	90.77	2,311.32	-1,774.64	1,156.48	1,003.84	152.64	7.577	
8,300.00	5,673.01	9,549.93	5,688.65	69.02	88.66	90.78	2,382.03	-1,845.35	1,156.48	999.46	157.02	7.365	
8,400.00	5,673.55	9,649.93	5,689.21	71.19	90.86	90.78	2,452.74	-1,916.07	1,156.48	995.08	161.40	7.165	
8,500.00	5,674.10	9,749.93	5,689.76	73.37	93.06	90.78	2,523.45	-1,986.78	1,156.48	990.68	165.80	6.975	
8,600.00	5,674.64	9,849.93	5,690.32	75.55	95.27	90.78	2,594.15	-2,057.49	1,156.48	986.27	170.21	6.794	
8,700.00	5,675.19	9,949.93	5,690.87	77.74	97.48	90.78	2,664.86	-2,128.20	1,156.48	981.85	174.63	6.623	
8,800.00	5,675.74	10,049.93	5,691.43	79.94	99.69	90.78	2,735.57	-2,198.91	1,156.48	977.43	179.05	6.459	
8,900.00	5,676.28	10,149.93	5,691.98	82.14	101.91	90.78	2,806.28	-2,269.62	1,156.48	972.99	183.49	6.303	
9,000.00	5,676.83	10,249.93	5,692.53	84.35	104.13	90.78	2,876.99	-2,340.33	1,156.48	968.55	187.93	6.154	
9,100.00	5,677.38	10,349.93	5,693.09	86.56	106.36	90.78	2,947.69	-2,411.04	1,156.48	964.10	192.38	6.011	
9,200.00	5,677.92	10,449.93	5,693.64	88.77	108.59	90.78	3,018.40	-2,481.75	1,156.48	959.64	196.84	5.875	
9,300.00	5,678.47	10,549.93	5,694.20	90.99	110.82	90.78	3,089.11	-2,552.47	1,156.48	955.18	201.30	5.745	
9,400.00	5,679.02	10,649.93	5,694.75	93.22	113.05	90.78	3,159.82	-2,623.18	1,156.48	950.71	205.76	5.620	
9,500.00	5,679.56	10,749.93	5,695.31	95.44	115.28	90.78	3,230.53	-2,693.89	1,156.48	946.24	210.24	5.501	
9,600.00	5,680.11	10,849.93	5,695.86	97.67	117.52	90.78	3,301.23	-2,764.60	1,156.48	941.76	214.71	5.386	
9,700.00	5,680.65	10,949.93	5,696.41	99.91	119.76	90.78	3,371.94	-2,835.31	1,156.48	937.28	219.20	5.276	
9,800.00	5,681.20	11,049.93	5,696.97	102.14	122.00	90.78	3,442.65	-2,906.02	1,156.48	932.80	223.68	5.170	
9,900.00	5,681.75	11,149.93	5,697.52	104.38	124.25	90.78	3,513.36	-2,976.73	1,156.48	928.31	228.17	5.068	
10,000.00	5,682.29	11,249.93	5,698.08	106.62	126.49	90.78	3,584.07	-3,047.44	1,156.48	923.81	232.67	4.971	
10,100.00	5,682.84	11,349.93	5,698.63	108.86	128.74	90.78	3,654.77	-3,118.15	1,156.48	919.31	237.16	4.876	
10,200.00	5,683.39	11,449.93	5,699.18	111.11	130.99	90.78	3,725.48	-3,188.87	1,156.48	914.81	241.67	4.785	

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. 128H
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. 128H	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. 127H - Original Hole - rev1													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Rule Assigned:													
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		Distance		Minimum Separation (ft)	Separation Factor	Warning
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
10,300.00	5,683.93	11,549.93	5,699.74	113.35	133.24	90.78	3,796.19	-3,259.58	1,156.48	910.31	246.17	4.698	
10,400.00	5,684.48	11,649.93	5,700.29	115.60	135.49	90.78	3,866.90	-3,330.29	1,156.48	905.80	250.68	4.613	
10,500.00	5,685.03	11,749.93	5,700.85	117.85	137.74	90.78	3,937.61	-3,401.00	1,156.48	901.29	255.19	4.532	
10,600.00	5,685.57	11,849.93	5,701.40	120.11	140.00	90.78	4,008.31	-3,471.71	1,156.48	896.78	259.70	4.453	
10,700.00	5,686.12	11,949.93	5,701.96	122.36	142.25	90.78	4,079.02	-3,542.42	1,156.48	892.26	264.22	4.377	
10,800.00	5,686.66	12,049.93	5,702.51	124.62	144.51	90.79	4,149.73	-3,613.13	1,156.48	887.74	268.73	4.303	
10,900.00	5,687.21	12,149.93	5,703.06	126.87	146.77	90.79	4,220.44	-3,683.84	1,156.48	883.22	273.26	4.232	
11,000.00	5,687.76	12,249.93	5,703.62	129.13	149.03	90.79	4,291.15	-3,754.55	1,156.48	878.70	277.78	4.163	
11,100.00	5,688.30	12,349.93	5,704.17	131.39	151.29	90.79	4,361.86	-3,825.27	1,156.48	874.17	282.30	4.097	
11,200.00	5,688.85	12,449.93	5,704.73	133.65	153.55	90.79	4,432.56	-3,895.98	1,156.48	869.65	286.83	4.032	
11,300.00	5,689.40	12,549.93	5,705.28	135.91	155.81	90.79	4,503.27	-3,966.69	1,156.48	865.12	291.36	3.969	
11,400.00	5,689.94	12,649.93	5,705.83	138.18	158.08	90.79	4,573.98	-4,037.40	1,156.48	860.59	295.89	3.908	
11,500.00	5,690.49	12,749.93	5,706.39	140.44	160.34	90.79	4,644.69	-4,108.11	1,156.48	856.05	300.42	3.850	
11,600.00	5,691.04	12,849.93	5,706.94	142.70	162.61	90.79	4,715.40	-4,178.82	1,156.48	851.52	304.96	3.792	
11,700.00	5,691.58	12,949.93	5,707.50	144.97	164.87	90.79	4,786.10	-4,249.53	1,156.48	846.98	309.49	3.737	
11,800.00	5,692.13	13,049.93	5,708.05	147.24	167.14	90.79	4,856.81	-4,320.24	1,156.48	842.45	314.03	3.683	
11,900.00	5,692.67	13,149.93	5,708.61	149.51	169.41	90.79	4,927.52	-4,390.95	1,156.48	837.91	318.57	3.630	
12,000.00	5,693.22	13,249.93	5,709.16	151.77	171.67	90.79	4,998.23	-4,461.67	1,156.48	833.37	323.11	3.579	
12,100.00	5,693.77	13,349.93	5,709.71	154.04	173.94	90.79	5,068.94	-4,532.38	1,156.48	828.83	327.65	3.530	
12,200.00	5,694.31	13,449.93	5,710.27	156.31	176.21	90.79	5,139.64	-4,603.09	1,156.48	824.29	332.19	3.481	
12,300.00	5,694.86	13,549.93	5,710.82	158.58	178.48	90.79	5,210.35	-4,673.80	1,156.48	819.74	336.73	3.434	
12,400.00	5,695.41	13,649.93	5,711.38	160.85	180.75	90.79	5,281.06	-4,744.51	1,156.48	815.20	341.28	3.389	
12,500.00	5,695.95	13,749.93	5,711.93	163.13	183.03	90.79	5,351.77	-4,815.22	1,156.48	810.65	345.82	3.344	
12,600.00	5,696.50	13,849.93	5,712.49	165.40	185.30	90.79	5,422.48	-4,885.93	1,156.48	806.10	350.37	3.301	
12,700.00	5,697.04	13,949.93	5,713.04	167.67	187.57	90.79	5,493.18	-4,956.64	1,156.48	801.55	354.92	3.258	
12,800.00	5,697.59	14,049.93	5,713.59	169.95	189.84	90.79	5,563.89	-5,027.35	1,156.47	797.01	359.47	3.217	
12,900.00	5,698.14	14,149.93	5,714.15	172.22	192.12	90.79	5,634.60	-5,098.07	1,156.47	792.46	364.02	3.177	
13,000.00	5,698.68	14,249.93	5,714.70	174.50	194.39	90.79	5,705.31	-5,168.78	1,156.47	787.90	368.57	3.138	
13,100.00	5,699.23	14,349.93	5,715.26	176.77	196.66	90.79	5,776.02	-5,239.49	1,156.47	783.35	373.12	3.099	
13,200.00	5,699.78	14,449.93	5,715.81	179.05	198.94	90.79	5,846.72	-5,310.20	1,156.47	778.80	377.68	3.062	
13,300.00	5,700.32	14,549.93	5,716.36	181.32	201.22	90.79	5,917.43	-5,380.91	1,156.47	774.24	382.23	3.026	
13,400.00	5,700.87	14,649.93	5,716.92	183.60	203.49	90.80	5,988.14	-5,451.62	1,156.47	769.69	386.78	2.990	
13,500.00	5,701.42	14,749.93	5,717.47	185.88	205.77	90.80	6,058.85	-5,522.33	1,156.47	765.13	391.34	2.955	
13,600.00	5,701.96	14,849.93	5,718.03	188.16	208.04	90.80	6,129.56	-5,593.04	1,156.47	760.58	395.90	2.921	
13,700.00	5,702.51	14,949.93	5,718.58	190.43	210.32	90.80	6,200.27	-5,663.75	1,156.47	756.02	400.45	2.888	
13,800.00	5,703.05	15,049.93	5,719.14	192.71	212.60	90.80	6,270.97	-5,734.47	1,156.47	751.46	405.01	2.855	
13,900.00	5,703.60	15,149.93	5,719.69	194.99	214.88	90.80	6,341.68	-5,805.18	1,156.47	746.91	409.57	2.824	
14,000.00	5,704.15	15,249.93	5,720.24	197.27	217.15	90.80	6,412.39	-5,875.89	1,156.47	742.35	414.13	2.793	
14,100.00	5,704.69	15,349.93	5,720.80	199.55	219.43	90.80	6,483.10	-5,946.60	1,156.47	737.79	418.68	2.762	
14,200.00	5,705.24	15,449.93	5,721.35	201.83	221.71	90.80	6,553.81	-6,017.31	1,156.47	733.23	423.24	2.732	
14,300.00	5,705.79	15,549.93	5,721.91	204.11	223.99	90.80	6,624.51	-6,088.02	1,156.47	728.67	427.81	2.703	
14,400.00	5,706.33	15,649.93	5,722.46	206.39	226.27	90.80	6,695.22	-6,158.73	1,156.47	724.11	432.37	2.675	
14,500.00	5,706.88	15,749.93	5,723.02	208.67	228.55	90.80	6,765.93	-6,229.44	1,156.47	719.55	436.93	2.647	
14,600.00	5,707.43	15,849.93	5,723.57	210.95	230.83	90.80	6,836.64	-6,300.15	1,156.47	714.98	441.49	2.619	
14,700.00	5,707.97	15,949.93	5,724.12	213.23	233.11	90.80	6,907.35	-6,370.87	1,156.47	710.42	446.05	2.593	
14,800.00	5,708.52	16,049.93	5,724.68	215.52	235.39	90.80	6,978.05	-6,441.58	1,156.47	705.86	450.62	2.566	
14,900.00	5,709.06	16,149.93	5,725.23	217.80	237.67	90.80	7,048.76	-6,512.29	1,156.47	701.29	455.18	2.541	
15,000.00	5,709.61	16,249.93	5,725.79	220.08	239.95	90.80	7,119.47	-6,583.00	1,156.47	696.73	459.74	2.515	
15,100.00	5,710.16	16,349.93	5,726.34	222.36	242.23	90.80	7,190.18	-6,653.71	1,156.47	692.16	464.31	2.491	
15,200.00	5,710.70	16,449.93	5,726.89	224.65	244.52	90.80	7,260.89	-6,724.42	1,156.47	687.60	468.87	2.466	
15,300.00	5,711.25	16,549.93	5,727.45	226.93	246.80	90.80	7,331.59	-6,795.13	1,156.47	683.03	473.44	2.443	
15,399.02	5,711.79	16,648.95	5,728.00	229.19	249.06	90.80	7,401.61	-6,865.15	1,156.47	678.51	477.96	2.420	

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. 128H
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. 128H	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. 127H - 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	
15,400.00	5,711.80	16,649.41	5,728.00	229.21	249.07	90.80	7,401.94	-6,865.48	1,156.47	678.49	477.99	2.419 SF		
15,500.00	5,712.34	16,649.41	5,728.00	231.50	249.07	90.80	7,401.94	-6,865.48	1,160.83	684.66	476.17	2.438		
15,600.00	5,712.89	16,649.41	5,728.00	233.78	249.07	90.80	7,401.94	-6,865.48	1,173.73	704.99	468.73	2.504		
15,700.00	5,713.43	16,649.41	5,728.00	236.06	249.07	90.80	7,401.94	-6,865.48	1,194.88	738.32	456.56	2.617		
15,800.00	5,713.98	16,649.41	5,728.00	238.35	249.07	90.80	7,401.94	-6,865.48	1,223.86	782.98	440.88	2.776		
15,900.00	5,714.53	16,649.41	5,728.00	240.63	249.07	90.80	7,401.94	-6,865.48	1,260.13	837.17	422.97	2.979		
16,000.00	5,715.07	16,649.41	5,728.00	242.92	249.07	90.80	7,401.94	-6,865.48	1,303.09	899.15	403.94	3.226		
16,100.00	5,715.62	16,649.41	5,728.00	245.20	249.07	90.80	7,401.94	-6,865.48	1,352.09	967.43	384.65	3.515		
16,200.00	5,716.17	16,649.41	5,728.00	247.49	249.07	90.80	7,401.94	-6,865.48	1,406.50	1,040.78	365.72	3.846		
16,300.00	5,716.71	16,649.41	5,728.00	249.77	249.07	90.80	7,401.94	-6,865.48	1,465.72	1,118.20	347.53	4.218		
16,400.00	5,717.26	16,649.41	5,728.00	252.06	249.07	90.80	7,401.94	-6,865.48	1,529.20	1,198.89	330.31	4.630		
16,500.00	5,717.81	16,649.41	5,728.00	254.34	249.07	90.80	7,401.94	-6,865.48	1,596.42	1,282.24	314.18	5.081		
16,535.96	5,718.00	16,649.41	5,728.00	255.16	249.07	90.80	7,401.94	-6,865.48	1,621.41	1,312.76	308.65	5.253		

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. 128H
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. 128H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Ridge Unit (124, 127, 128 & 129) - Ridge Unit No. 129H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside 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)			
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	CC, ES
700.00	700.00	698.89	698.84	2.29	2.27	-91.12	-0.44	-22.57	22.60	18.05	4.56	4.961	
800.00	800.00	797.24	796.89	2.64	2.62	-93.10	-1.63	-30.09	30.30	25.05	5.24	5.778	
900.00	900.00	894.56	893.40	3.00	2.97	-94.82	-3.58	-42.43	43.09	37.17	5.92	7.281	
1,000.00	1,000.00	990.37	987.65	3.36	3.35	-96.01	-6.25	-59.31	60.90	54.33	6.58	9.261	
1,100.00	1,099.95	1,084.75	1,079.57	3.71	3.76	26.39	-9.59	-80.48	81.30	74.10	7.20	11.297	
1,200.00	1,199.63	1,178.11	1,169.33	4.05	4.21	27.26	-13.59	-105.81	101.94	94.15	7.79	13.086	
1,300.00	1,298.77	1,270.43	1,256.75	4.40	4.71	28.65	-18.22	-135.08	122.83	114.46	8.37	14.671	
1,400.00	1,397.08	1,361.71	1,341.68	4.77	5.26	30.30	-23.44	-168.10	144.05	135.08	8.97	16.061	
1,500.00	1,494.56	1,451.77	1,423.82	5.17	5.88	32.12	-29.20	-204.56	166.52	156.94	9.58	17.384	
1,600.00	1,591.96	1,539.88	1,502.40	5.59	6.54	33.40	-35.41	-243.90	193.30	183.10	10.20	18.948	
1,700.00	1,689.36	1,633.54	1,584.58	6.03	7.32	34.27	-42.42	-288.29	223.08	212.10	10.98	20.318	
1,800.00	1,786.76	1,728.93	1,668.23	6.48	8.14	34.95	-49.58	-333.56	252.98	241.17	11.82	21.409	
1,900.00	1,884.17	1,824.32	1,751.89	6.94	8.98	35.49	-56.73	-378.83	282.91	270.24	12.67	22.327	
2,000.00	1,981.57	1,919.70	1,835.54	7.41	9.84	35.92	-63.88	-424.10	312.86	299.32	13.54	23.106	
2,100.00	2,078.97	2,015.09	1,919.19	7.89	10.71	36.28	-71.04	-469.37	342.82	328.40	14.42	23.773	
2,200.00	2,176.37	2,110.48	2,002.85	8.37	11.59	36.58	-78.19	-514.64	372.79	357.48	15.31	24.347	
2,300.00	2,273.77	2,205.86	2,086.50	8.86	12.48	36.84	-85.34	-559.92	402.77	386.56	16.21	24.845	
2,400.00	2,371.17	2,301.25	2,170.15	9.35	13.37	37.06	-92.49	-605.19	432.76	415.64	17.12	25.282	
2,500.00	2,468.58	2,396.63	2,253.81	9.84	14.27	37.25	-99.65	-650.46	462.75	444.72	18.03	25.666	
2,600.00	2,565.98	2,492.02	2,337.46	10.34	15.17	37.42	-106.80	-695.73	492.74	473.80	18.95	26.006	
2,700.00	2,663.38	2,587.41	2,421.11	10.84	16.07	37.57	-113.95	-741.00	522.74	502.87	19.87	26.309	
2,800.00	2,760.78	2,682.79	2,504.77	11.34	16.98	37.70	-121.11	-786.27	552.74	531.95	20.80	26.580	
2,900.00	2,858.18	2,778.18	2,588.42	11.84	17.89	37.82	-128.26	-831.55	582.75	561.02	21.72	26.824	
3,000.00	2,955.58	2,873.56	2,672.07	12.35	18.80	37.93	-135.41	-876.82	612.75	590.09	22.66	27.045	
3,100.00	3,052.98	2,968.95	2,755.72	12.86	19.71	38.02	-142.56	-922.09	642.76	619.17	23.59	27.245	
3,200.00	3,150.39	3,064.34	2,839.38	13.36	20.62	38.11	-149.72	-967.36	672.77	648.24	24.53	27.427	
3,300.00	3,247.79	3,159.72	2,923.03	13.87	21.54	38.19	-156.87	-1,012.63	702.78	677.31	25.47	27.593	
3,400.00	3,345.19	3,255.11	3,006.68	14.38	22.46	38.27	-164.02	-1,057.90	732.79	706.38	26.41	27.746	
3,500.00	3,442.59	3,350.50	3,090.34	14.89	23.37	38.34	-171.18	-1,103.17	762.80	735.45	27.35	27.887	
3,600.00	3,539.99	3,445.88	3,173.99	15.41	24.29	38.40	-178.33	-1,148.45	792.81	764.52	28.30	28.016	
3,700.00	3,637.39	3,541.27	3,257.64	15.92	25.21	38.46	-185.48	-1,193.72	822.83	793.58	29.25	28.136	
3,800.00	3,734.80	3,636.65	3,341.30	16.43	26.13	38.51	-192.63	-1,238.99	852.84	822.65	30.19	28.247	
3,900.00	3,832.20	3,732.04	3,424.95	16.95	27.05	38.56	-199.79	-1,284.26	882.86	851.72	31.14	28.350	
4,000.00	3,929.60	3,827.43	3,508.60	17.46	27.97	38.61	-206.94	-1,329.53	912.88	880.79	32.09	28.447	
4,100.00	4,027.00	3,922.81	3,592.26	17.98	28.89	38.66	-214.09	-1,374.80	942.89	909.85	33.04	28.537	
4,200.00	4,124.40	4,018.20	3,675.91	18.49	29.81	38.70	-221.24	-1,420.08	972.91	938.92	33.99	28.621	
4,300.00	4,221.80	4,113.59	3,759.56	19.01	30.73	38.74	-228.40	-1,465.35	1,002.93	967.98	34.94	28.700	
4,400.00	4,319.20	4,208.97	3,843.22	19.52	31.66	38.77	-235.55	-1,510.62	1,032.95	997.05	35.90	28.774	
4,500.00	4,416.61	4,304.36	3,926.87	20.04	32.58	38.81	-242.70	-1,555.89	1,062.96	1,026.11	36.85	28.844	
4,600.00	4,514.46	4,399.21	4,010.06	20.53	33.50	39.34	-249.82	-1,600.91	1,094.58	1,056.80	37.77	28.977	
4,700.00	4,613.26	4,492.64	4,091.99	20.97	34.40	39.85	-256.82	-1,645.25	1,130.00	1,091.38	38.62	29.262	
4,800.00	4,712.72	4,584.36	4,172.43	21.36	35.29	40.29	-263.70	-1,688.78	1,169.18	1,129.80	39.38	29.691	
4,900.00	4,812.59	4,674.14	4,251.17	21.69	36.16	40.69	-270.43	-1,731.39	1,212.06	1,172.00	40.06	30.256	
5,000.00	4,912.58	4,762.07	4,328.28	21.96	37.01	-82.15	-277.03	-1,773.13	1,258.08	1,217.41	40.67	30.936	
5,100.00	5,012.58	4,849.77	4,405.19	22.23	37.86	-82.76	-283.60	-1,814.75	1,304.58	1,263.31	41.27	31.612	

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. 128H
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. 128H	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	
5,200.00	5,112.50	4,938.13	4,482.69	22.51	38.72	-36.80	-290.23	-1,856.69	1,349.35	1,307.49	41.86	32.231	
5,300.00	5,210.72	5,029.39	4,562.72	22.83	39.60	-35.69	-297.07	-1,900.00	1,382.83	1,340.47	42.36	32.645	
5,400.00	5,304.29	5,121.32	4,643.34	23.17	40.49	-35.78	-303.97	-1,943.63	1,403.28	1,360.54	42.75	32.829	
5,500.00	5,390.39	5,211.13	4,722.10	23.53	41.37	-36.92	-310.70	-1,986.25	1,410.81	1,367.77	43.04	32.780	
5,600.00	5,466.38	5,296.09	4,796.61	23.93	42.19	-39.02	-317.07	-2,026.58	1,406.03	1,362.76	43.28	32.490	
5,700.00	5,529.97	5,373.62	4,864.60	24.40	42.94	-42.06	-322.88	-2,063.37	1,390.11	1,346.58	43.53	31.936	
5,800.00	5,581.51	5,443.02	4,925.47	24.97	43.61	-44.88	-328.09	-2,096.31	1,366.35	1,322.43	43.91	31.114	
5,900.00	5,624.56	5,506.24	4,980.91	25.68	44.23	-48.89	-332.83	-2,126.32	1,339.69	1,295.11	44.57	30.057	
6,000.00	5,651.33	5,556.91	5,025.35	26.56	44.72	-53.60	-336.63	-2,150.37	1,306.45	1,260.87	45.59	28.659	
6,100.00	5,660.98	5,593.46	5,057.41	27.61	45.07	-58.58	-339.37	-2,167.72	1,268.75	1,221.69	47.06	26.963	
6,200.00	5,661.53	5,622.20	5,082.61	28.80	45.35	-60.01	-341.53	-2,181.36	1,232.42	1,183.32	49.10	25.101	
6,300.00	5,662.08	5,650.94	5,107.81	30.15	45.63	-61.36	-343.68	-2,195.00	1,202.64	1,150.85	51.78	23.224	
6,400.00	5,662.63	5,679.68	5,133.02	31.61	45.91	-62.72	-345.84	-2,208.64	1,179.90	1,124.83	55.07	21.425	
6,500.00	5,663.17	5,708.42	5,158.22	33.18	46.19	-64.08	-347.99	-2,222.27	1,164.61	1,105.75	58.86	19.787	
6,600.00	5,663.72	5,737.15	5,183.42	34.83	46.47	-65.45	-350.15	-2,235.91	1,157.08	1,094.08	63.01	18.364	
6,645.24	5,663.97	5,750.15	5,194.82	35.61	46.59	-66.06	-351.12	-2,242.08	1,156.27	1,091.31	64.96	17.799	
6,700.00	5,664.26	5,779.55	5,220.55	36.56	46.88	-67.45	-352.97	-2,256.19	1,157.41	1,089.87	67.54	17.136	
6,800.00	5,664.81	5,937.59	5,352.87	38.36	48.55	-74.44	-339.68	-2,340.64	1,163.48	1,090.46	73.02	15.935	
6,900.00	5,665.36	6,257.08	5,559.11	40.20	52.12	-84.73	-199.96	-2,534.34	1,163.07	1,087.20	75.86	15.331	
7,000.00	5,665.90	6,337.42	5,597.35	42.10	53.03	-86.60	-150.03	-2,584.27	1,159.04	1,079.25	79.80	14.525	
7,100.00	5,666.45	6,422.57	5,627.48	44.03	54.09	-88.07	-93.76	-2,640.53	1,157.28	1,073.59	83.69	13.828	
7,200.00	5,667.00	6,515.69	5,646.54	46.00	55.33	-88.99	-29.39	-2,704.90	1,156.75	1,069.22	87.53	13.215	
7,300.00	5,667.54	6,613.40	5,651.18	48.00	56.68	-89.19	39.57	-2,773.86	1,156.68	1,065.35	91.33	12.665	
7,400.00	5,668.09	6,713.40	5,651.77	50.02	58.11	-89.19	110.28	-2,844.57	1,156.68	1,061.44	95.23	12.146	
7,500.00	5,668.64	6,813.40	5,652.37	52.07	59.60	-89.19	180.99	-2,915.28	1,156.67	1,057.48	99.19	11.661	
7,600.00	5,669.18	6,913.40	5,652.96	54.14	61.14	-89.20	251.70	-2,985.99	1,156.67	1,053.47	103.20	11.208	
7,700.00	5,669.73	7,013.40	5,653.56	56.22	62.72	-89.20	322.41	-3,056.69	1,156.67	1,049.41	107.26	10.784	
7,800.00	5,670.27	7,113.40	5,654.15	58.32	64.35	-89.20	393.12	-3,127.40	1,156.66	1,045.30	111.36	10.387	
7,900.00	5,670.82	7,213.40	5,654.75	60.44	66.01	-89.20	463.83	-3,198.11	1,156.66	1,041.17	115.49	10.015	
8,000.00	5,671.37	7,313.40	5,655.34	62.57	67.71	-89.21	534.54	-3,268.82	1,156.65	1,037.00	119.66	9.666	
8,100.00	5,671.91	7,413.40	5,655.94	64.71	69.45	-89.21	605.25	-3,339.53	1,156.65	1,032.80	123.86	9.339	
8,200.00	5,672.46	7,513.40	5,656.53	66.86	71.22	-89.21	675.96	-3,410.24	1,156.65	1,028.57	128.08	9.031	
8,300.00	5,673.01	7,613.40	5,657.13	69.02	73.02	-89.21	746.67	-3,480.95	1,156.64	1,024.32	132.33	8.741	
8,400.00	5,673.55	7,713.40	5,657.72	71.19	74.85	-89.22	817.38	-3,551.66	1,156.64	1,020.04	136.60	8.467	
8,500.00	5,674.10	7,813.40	5,658.32	73.37	76.70	-89.22	888.09	-3,622.36	1,156.64	1,015.75	140.89	8.210	
8,600.00	5,674.64	7,913.40	5,658.91	75.55	78.58	-89.22	958.80	-3,693.07	1,156.63	1,011.44	145.20	7.966	
8,700.00	5,675.19	8,013.40	5,659.51	77.74	80.48	-89.22	1,029.51	-3,763.78	1,156.63	1,007.11	149.52	7.736	
8,800.00	5,675.74	8,113.40	5,660.10	79.94	82.41	-89.23	1,100.22	-3,834.49	1,156.63	1,002.76	153.86	7.517	
8,900.00	5,676.28	8,213.40	5,660.70	82.14	84.35	-89.23	1,170.93	-3,905.20	1,156.62	998.41	158.22	7.310	
9,000.00	5,676.83	8,313.40	5,661.29	84.35	86.31	-89.23	1,241.65	-3,975.91	1,156.62	994.04	162.58	7.114	
9,100.00	5,677.38	8,413.40	5,661.89	86.56	88.28	-89.23	1,312.36	-4,046.62	1,156.62	989.65	166.96	6.927	
9,200.00	5,677.92	8,513.40	5,662.48	88.77	90.27	-89.24	1,383.07	-4,117.33	1,156.61	985.26	171.35	6.750	
9,300.00	5,678.47	8,613.40	5,663.08	90.99	92.28	-89.24	1,453.78	-4,188.03	1,156.61	980.86	175.75	6.581	
9,400.00	5,679.02	8,713.40	5,663.68	93.22	94.30	-89.24	1,524.49	-4,258.74	1,156.60	976.45	180.16	6.420	
9,500.00	5,679.56	8,813.40	5,664.27	95.44	96.33	-89.24	1,595.20	-4,329.45	1,156.60	972.03	184.58	6.266	
9,600.00	5,680.11	8,913.40	5,664.87	97.67	98.38	-89.24	1,665.91	-4,400.16	1,156.60	967.60	189.00	6.120	
9,700.00	5,680.65	9,013.40	5,665.46	99.91	100.44	-89.25	1,736.62	-4,470.87	1,156.59	963.16	193.43	5.979	
9,800.00	5,681.20	9,113.40	5,666.06	102.14	102.50	-89.25	1,807.33	-4,541.58	1,156.59	958.72	197.87	5.845	
9,900.00	5,681.75	9,213.40	5,666.65	104.38	104.58	-89.25	1,878.04	-4,612.29	1,156.59	954.27	202.32	5.717	
10,000.00	5,682.29	9,313.40	5,667.25	106.62	106.67	-89.25	1,948.75	-4,683.00	1,156.58	949.81	206.77	5.593	
10,100.00	5,682.84	9,413.40	5,667.84	108.86	108.76	-89.26	2,019.46	-4,753.70	1,156.58	945.35	211.23	5.475	
10,200.00	5,683.39	9,513.40	5,668.44	111.11	110.86	-89.26	2,090.17	-4,824.41	1,156.58	940.88	215.70	5.362	

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. 128H
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. 128H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Ridge Unit (124, 127, 128 & 129) - Ridge Unit No. 129H - Original Hole - rev1													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis		Highside 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	5,683.93	9,613.40	5,669.03	113.35	112.98	-89.26	2,160.88	-4,895.12	1,156.57	936.41	220.17	5.253	
10,400.00	5,684.48	9,713.40	5,669.63	115.60	115.09	-89.26	2,231.59	-4,965.83	1,156.57	931.93	224.64	5.149	
10,500.00	5,685.03	9,813.40	5,670.22	117.85	117.22	-89.27	2,302.30	-5,036.54	1,156.57	927.45	229.12	5.048	
10,600.00	5,685.57	9,913.40	5,670.82	120.11	119.35	-89.27	2,373.01	-5,107.25	1,156.56	922.96	233.60	4.951	
10,700.00	5,686.12	10,013.40	5,671.41	122.36	121.49	-89.27	2,443.72	-5,177.96	1,156.56	918.48	238.08	4.858	
10,800.00	5,686.66	10,113.40	5,672.01	124.62	123.63	-89.27	2,514.43	-5,248.66	1,156.55	913.98	242.57	4.768	
10,900.00	5,687.21	10,213.40	5,672.60	126.87	125.78	-89.28	2,585.14	-5,319.37	1,156.55	909.49	247.06	4.681	
11,000.00	5,687.76	10,313.40	5,673.20	129.13	127.94	-89.28	2,655.85	-5,390.08	1,156.55	904.99	251.56	4.597	
11,100.00	5,688.30	10,413.40	5,673.79	131.39	130.10	-89.28	2,726.56	-5,460.79	1,156.54	900.48	256.06	4.517	
11,200.00	5,688.85	10,513.40	5,674.39	133.65	132.26	-89.28	2,797.27	-5,531.50	1,156.54	895.98	260.56	4.439	
11,300.00	5,689.40	10,613.40	5,674.98	135.91	134.43	-89.29	2,867.98	-5,602.21	1,156.54	891.47	265.07	4.363	
11,400.00	5,689.94	10,713.40	5,675.58	138.18	136.60	-89.29	2,938.69	-5,672.92	1,156.53	886.96	269.57	4.290	
11,500.00	5,690.49	10,813.40	5,676.17	140.44	138.78	-89.29	3,009.40	-5,743.63	1,156.53	882.44	274.08	4.220	
11,600.00	5,691.04	10,913.40	5,676.77	142.70	140.96	-89.29	3,080.11	-5,814.33	1,156.53	877.93	278.60	4.151	
11,700.00	5,691.58	11,013.40	5,677.36	144.97	143.15	-89.30	3,150.82	-5,885.04	1,156.52	873.41	283.11	4.085	
11,800.00	5,692.13	11,113.40	5,677.96	147.24	145.34	-89.30	3,221.53	-5,955.75	1,156.52	868.89	287.63	4.021	
11,900.00	5,692.67	11,213.40	5,678.55	149.51	147.53	-89.30	3,292.24	-6,026.46	1,156.52	864.37	292.15	3.959	
12,000.00	5,693.22	11,313.40	5,679.15	151.77	149.72	-89.30	3,362.95	-6,097.17	1,156.51	859.84	296.67	3.898	
12,100.00	5,693.77	11,413.40	5,679.74	154.04	151.92	-89.31	3,433.66	-6,167.88	1,156.51	855.32	301.19	3.840	
12,200.00	5,694.31	11,513.40	5,680.34	156.31	154.12	-89.31	3,504.37	-6,238.59	1,156.50	850.79	305.72	3.783	
12,300.00	5,694.86	11,613.40	5,680.93	158.58	156.32	-89.31	3,575.08	-6,309.30	1,156.50	846.26	310.24	3.728	
12,400.00	5,695.41	11,713.40	5,681.53	160.85	158.53	-89.31	3,645.79	-6,380.00	1,156.50	841.73	314.77	3.674	
12,500.00	5,695.95	11,813.40	5,682.13	163.13	160.74	-89.31	3,716.50	-6,450.71	1,156.49	837.19	319.30	3.622	
12,600.00	5,696.50	11,913.40	5,682.72	165.40	162.95	-89.32	3,787.21	-6,521.42	1,156.49	832.66	323.83	3.571	
12,700.00	5,697.04	12,013.40	5,683.32	167.67	165.16	-89.32	3,857.92	-6,592.13	1,156.49	828.12	328.37	3.522	
12,800.00	5,697.59	12,113.40	5,683.91	169.95	167.38	-89.32	3,928.63	-6,662.84	1,156.48	823.58	332.90	3.474	
12,900.00	5,698.14	12,213.40	5,684.51	172.22	169.60	-89.32	3,999.34	-6,733.55	1,156.48	819.05	337.43	3.427	
13,000.00	5,698.68	12,313.40	5,685.10	174.50	171.82	-89.33	4,070.05	-6,804.26	1,156.48	814.51	341.97	3.382	
13,100.00	5,699.23	12,413.40	5,685.70	176.77	174.04	-89.33	4,140.76	-6,874.96	1,156.47	809.97	346.51	3.338	
13,200.00	5,699.78	12,513.40	5,686.29	179.05	176.26	-89.33	4,211.47	-6,945.67	1,156.47	805.42	351.05	3.294	
13,300.00	5,700.32	12,613.40	5,686.89	181.32	178.49	-89.33	4,282.18	-7,016.38	1,156.47	800.88	355.59	3.252	
13,400.00	5,700.87	12,713.40	5,687.48	183.60	180.72	-89.34	4,352.89	-7,087.09	1,156.46	796.34	360.13	3.211	
13,500.00	5,701.42	12,813.40	5,688.08	185.88	182.95	-89.34	4,423.60	-7,157.80	1,156.46	791.79	364.67	3.171	
13,600.00	5,701.96	12,913.40	5,688.67	188.16	185.18	-89.34	4,494.31	-7,228.51	1,156.46	787.24	369.21	3.132	
13,700.00	5,702.51	13,013.40	5,689.27	190.43	187.41	-89.34	4,565.02	-7,299.22	1,156.45	782.70	373.75	3.094	
13,800.00	5,703.05	13,113.40	5,689.86	192.71	189.65	-89.35	4,635.73	-7,369.93	1,156.45	778.15	378.30	3.057	
13,900.00	5,703.60	13,213.40	5,690.46	194.99	191.88	-89.35	4,706.44	-7,440.63	1,156.45	773.60	382.84	3.021	
14,000.00	5,704.15	13,313.40	5,691.05	197.27	194.12	-89.35	4,777.15	-7,511.34	1,156.44	769.05	387.39	2.985	
14,100.00	5,704.69	13,413.40	5,691.65	199.55	196.36	-89.35	4,847.86	-7,582.05	1,156.44	764.50	391.94	2.951	
14,200.00	5,705.24	13,513.40	5,692.24	201.83	198.60	-89.36	4,918.57	-7,652.76	1,156.43	759.95	396.48	2.917	
14,300.00	5,705.79	13,613.40	5,692.84	204.11	200.84	-89.36	4,989.28	-7,723.47	1,156.43	755.40	401.03	2.884	
14,400.00	5,706.33	13,713.40	5,693.43	206.39	203.08	-89.36	5,059.99	-7,794.18	1,156.43	750.85	405.58	2.851	
14,500.00	5,706.88	13,813.40	5,694.03	208.67	205.32	-89.36	5,130.70	-7,864.89	1,156.42	746.29	410.13	2.820	
14,600.00	5,707.43	13,913.40	5,694.62	210.95	207.57	-89.37	5,201.41	-7,935.60	1,156.42	741.74	414.68	2.789	
14,700.00	5,707.97	14,013.40	5,695.22	213.23	209.81	-89.37	5,272.12	-8,006.30	1,156.42	737.18	419.23	2.758	
14,800.00	5,708.52	14,113.40	5,695.81	215.52	212.06	-89.37	5,342.83	-8,077.01	1,156.41	732.63	423.78	2.729	
14,900.00	5,709.06	14,213.40	5,696.41	217.80	214.31	-89.37	5,413.54	-8,147.72	1,156.41	728.07	428.34	2.700	
15,000.00	5,709.61	14,313.40	5,697.00	220.08	216.56	-89.38	5,484.25	-8,218.43	1,156.41	723.52	432.89	2.671	
15,100.00	5,710.16	14,413.40	5,697.60	222.36	218.81	-89.38	5,554.96	-8,289.14	1,156.40	718.96	437.44	2.644	
15,200.00	5,710.70	14,513.40	5,698.19	224.65	221.06	-89.38	5,625.67	-8,359.85	1,156.40	714.40	442.00	2.616	
15,300.00	5,711.25	14,613.40	5,698.79	226.93	223.31	-89.38	5,696.38	-8,430.56	1,156.40	709.85	446.55	2.590	
15,400.00	5,711.80	14,713.40	5,699.38	229.21	225.56	-89.39	5,767.09	-8,501.26	1,156.39	705.29	451.10	2.563	

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. 128H
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. 128H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Ridge Unit (124, 127, 128 & 129) - Ridge Unit No. 129H - Original Hole - rev1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
15,500.00	5,712.34	14,813.40	5,699.98	231.50	227.81	-89.39	5,837.80	-8,571.97	1,156.39	700.73	455.66	2.538		
15,600.00	5,712.89	14,913.40	5,700.57	233.78	230.07	-89.39	5,908.51	-8,642.68	1,156.39	696.17	460.22	2.513		
15,700.00	5,713.43	15,013.40	5,701.17	236.06	232.32	-89.39	5,979.22	-8,713.39	1,156.38	691.61	464.77	2.488		
15,800.00	5,713.98	15,113.40	5,701.77	238.35	234.58	-89.39	6,049.93	-8,784.10	1,156.38	687.05	469.33	2.464		
15,900.00	5,714.53	15,213.40	5,702.36	240.63	236.84	-89.40	6,120.64	-8,854.81	1,156.38	682.49	473.88	2.440		
16,000.00	5,715.07	15,313.40	5,702.96	242.92	239.09	-89.40	6,191.35	-8,925.52	1,156.37	677.93	478.44	2.417		
16,100.00	5,715.62	15,413.40	5,703.55	245.20	241.35	-89.40	6,262.06	-8,996.23	1,156.37	673.37	483.00	2.394		
16,200.00	5,716.17	15,513.40	5,704.15	247.49	243.61	-89.40	6,332.77	-9,066.93	1,156.37	668.81	487.56	2.372		
16,300.00	5,716.71	15,613.40	5,704.74	249.77	245.87	-89.41	6,403.48	-9,137.64	1,156.36	664.25	492.11	2.350		
16,400.00	5,717.26	15,713.40	5,705.34	252.06	248.13	-89.41	6,474.20	-9,208.35	1,156.36	659.69	496.67	2.328		
16,500.00	5,717.81	15,813.40	5,705.93	254.34	250.39	-89.41	6,544.91	-9,279.06	1,156.36	655.12	501.23	2.307		
16,535.96	5,718.00	15,849.35	5,706.15	255.16	251.20	-89.41	6,570.33	-9,304.48	1,156.35	653.48	502.87	2.300 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. 128H
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. 128H	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

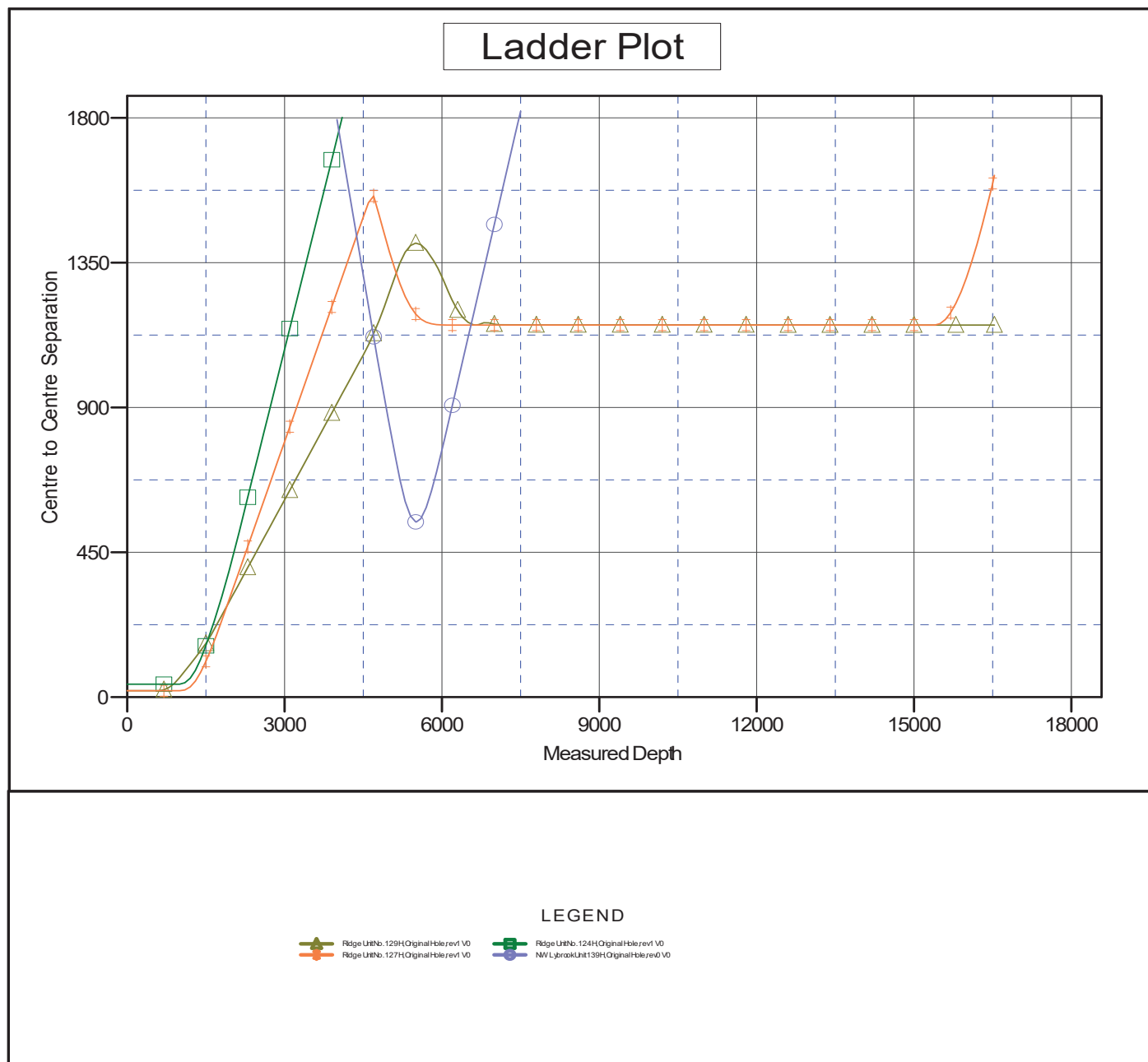
Offset Depths are relative to Offset Datum

Central Meridian is -107.833333333

Coordinates are relative to: Ridge Unit No. 128H

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. 128H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6923+25 @ 6948.00ft
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Reference Depths are relative to RKB=6923+25 @ 6948.00ft

Offset Depths are relative to Offset Datum

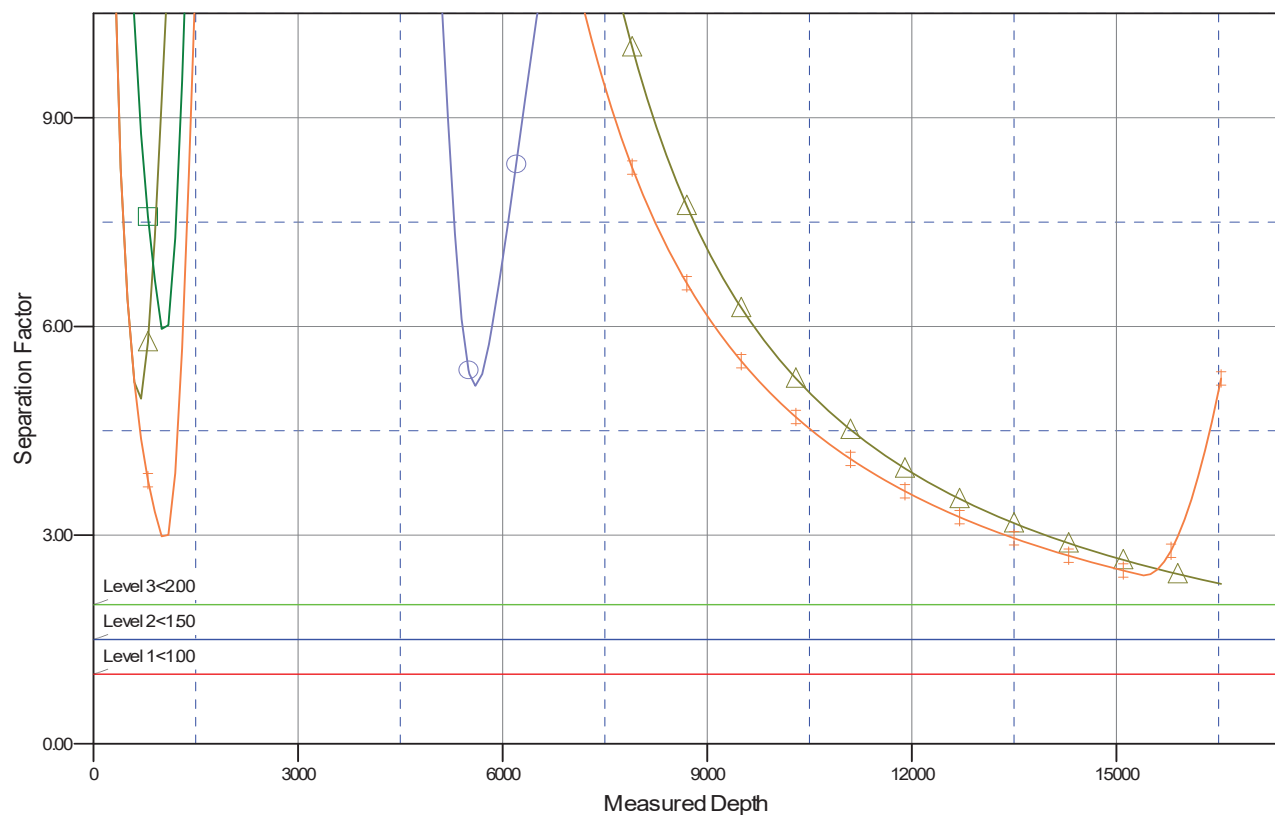
Central Meridian is -107.83333333

Coordinates are relative to: Ridge Unit No. 128H

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. 129H Original Hole rev1 V0
 Ridge Unit No. 127H Original Hole rev1 V0
 Ridge Unit No. 124H Original Hole rev1 V0
 NW L. 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

#128H 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: NW $\frac{1}{4}$ 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/oed/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 420430

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 420430
	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