

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

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. 30-039-31488
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)		
1. Well plat certified by a registered surveyor. 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.
25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		Office
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached.		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.		

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 12/19/2024

Additional Operator Remarks**Location of Well**

0. SHL: NESE / 1784 FSL / 462 FEL / TWSP: 23N / RANGE: 6W / SECTION: 5 / LAT: 36.251116 / LONG: -107.485255 (TVD: 0 feet, MD: 0 feet)
PPP: SWNW / 2283 FNL / 232 FWL / TWSP: 23N / RANGE: 6W / SECTION: 4 / LAT: 36.254336 / LONG: -107.482924 (TVD: 5473 feet, MD: 5939 feet)
PPP: NWSW / 0 FNL / 0 FEL / TWSP: 23N / RANGE: 6W / SECTION: 4 / LAT: 36.246302 / LONG: -107.472751 (TVD: 5545 feet, MD: 20583 feet)
PPP: NENE / 0 FNL / 0 FEL / TWSP: 23N / RANGE: 6W / SECTION: 15 / LAT: 36.228639 / LONG: -107.450395 (TVD: 5545 feet, MD: 20583 feet)
PPP: SENE / 0 FNL / 0 FEL / TWSP: 23N / RANGE: 6W / SECTION: 15 / LAT: 36.228639 / LONG: -107.450395 (TVD: 5545 feet, MD: 20583 feet)
PPP: NWNE / 0 FNL / 0 FEL / TWSP: 23N / RANGE: 6W / SECTION: 9 / LAT: 36.240832 / LONG: -107.465826 (TVD: 5545 feet, MD: 20583 feet)
PPP: SWNW / 0 FNL / 0 FEL / TWSP: 23N / RANGE: 6W / SECTION: 10 / LAT: 36.23214 / LONG: -107.454826 (TVD: 5545 feet, MD: 20583 feet)
PPP: NWNE / 0 FNL / 0 FEL / TWSP: 23N / RANGE: 6W / SECTION: 15 / LAT: 36.229895 / LONG: -107.451985 (TVD: 5545 feet, MD: 20583 feet)
BHL: SENE / 1996 FNL / 240 FEL / TWSP: 23N / RANGE: 6W / SECTION: 15 / LAT: 36.226816 / LONG: -107.44809 (TVD: 5545 feet, MD: 20583 feet)

BLM Point of Contact

Name: CHRISTOPHER P WENMAN

Title: Natural Resource Specialist

Phone: (505) 564-7727

Email: cwenman@blm.gov

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

WELL LOCATION INFORMATION

API Number 30-039-31488	Pool Code 13379	Pool Name COUNSELORS GALLUP - DAKOTA	
Property Code 335063	Property Name HAYNES CANYON UNIT		Well Number 426H
OGRID No. 372286	Operator Name ENDURING RESOURCES, LLC		Ground Level Elevation 6765'
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	

Surface Location

UL I	Section 5	Township 23N	Range 6W	Lot	Feet from N/S Line 1784' SOUTH	Feet from E/W Line 462' EAST	Latitude 36.251116 °N	Longitude -107.485255 °W	County RIO ARRIBA
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Bottom Hole Location

UL H	Section 15	Township 23N	Range 6W	Lot	Feet from N/S Line 1996' NORTH	Feet from E/W Line 240' EAST	Latitude 36.226816 °N	Longitude -107.448090 °W	County RIO ARRIBA
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Penetrated Spacing Unit:

Dedicated Acres 680.00	SW/4 NW/4, N/2 SW/4 SE/4 SW/4, SW/4 SE/4 - Section 4 N/2 NE/4, SE/4 NE/4 - Section 9 SW/4 NW/4, N/2 SW/4 SE/4 SW/4, SW/4 SE/4 - Section 10 NE/4 - Section 15	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Consolidation Code UNIT
		Order Numbers R-23096 R-22369		Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL I	Section 5	Township 23N	Range 6W	Lot	Feet from N/S Line 1784' SOUTH	Feet from E/W Line 462' EAST	Latitude 36.251116 °N	Longitude -107.485255 °W	County RIO ARRIBA
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First Take Point (FTP)

UL E	Section 4	Township 23N	Range 6W	Lot	Feet from N/S Line 2283' NORTH	Feet from E/W Line 232' WEST	Latitude 36.254336 °N	Longitude -107.482924 °W	County RIO ARRIBA
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Last Take Point (LTP)

UL H	Section 15	Township 23N	Range 6W	Lot	Feet from N/S Line 1996' NORTH	Feet from E/W Line 240' EAST	Latitude 36.226816 °N	Longitude -107.448090 °W	County RIO ARRIBA
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Unitized Area or Area of Uniform Interest HAYNES CANYON UNIT	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input type="checkbox"/> Directional	Ground Floor Elevation
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<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</p> <p><u>Shaw-Marie Ford</u> Signature</p> <p><u>1/21/2025</u> Date</p> <p><u>Shaw-Marie Ford</u> Printed Name</p> <p><u>sford@enduringresources.com</u> E-mail Address</p>	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <div></div> <p>JASON C. EDWARDS</p> <p>Signature and Seal of Professional Surveyor</p> <table><tr><td>Certificate Number 15269</td><td>Date of Survey OCTOBER 25, 2018</td></tr></table>	Certificate Number 15269	Date of Survey OCTOBER 25, 2018
Certificate Number 15269	Date of Survey OCTOBER 25, 2018		



State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Enduring Resources, LLC **OGRID:** 372286 **Date:** 09 / 16 / 2024

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Haynes Canyon Unit 420H	TBD	I-05-23N-06W	1769 FSL x 521 FEL	617	1233	247
Haynes Canyon Unit 422H	TBD	I-05-23N-06W	1774 FSL x 501 FEL	714	1429	286
Haynes Canyon Unit 424H	TBD	I-05-23N-06W	1779 FSL x 482 FEL	744	1488	298
Haynes Canyon Unit 426H	TBD	I-05-23N-06W	1784 FSL x 462 FEL	748	1497	299
				3-year Decline	3-year Decline	3-year Decline
Haynes Canyon Unit 420H	TBD	I-05-23N-06W	1769 FSL x 521 FEL	139	279	56
Haynes Canyon Unit 422H	TBD	I-05-23N-06W	1774 FSL x 501 FEL	161	323	65
Haynes Canyon Unit 424H	TBD	I-05-23N-06W	1779 FSL x 482 FEL	168	336	67
Haynes Canyon Unit 426H	TBD	I-05-23N-06W	1784 FSL x 462 FEL	169	38	68

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

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Haynes Canyon Unit 420H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Haynes Canyon Unit 422H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Haynes Canyon Unit 424H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Haynes Canyon Unit 426H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025

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

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

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

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

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature: <i>Shaw-Marie Ford</i>
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@enduringresources.com
Date: 9/16/2024
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Haynes Canyon Unit 420H, 422H, 424H, 426H

SEPARATION EQUIPMENT

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

Separation equipment will be set as follows:

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

Heater treaters will be set as follows:

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

Vapor Recovery Equipment will be set as follows:

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

Production storage tanks will be set as follows:

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



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Haynes Canyon Unit 420H, 422H, 424H, 426H

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.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Haynes Canyon Unit 420H, 422H, 424H, 426H

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.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Haynes Canyon Unit 420H, 422H, 424H, 426H

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
1050 SEVENTEENTH STREET, SUITE 2500
DENVER, COLORADO 80265

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

WELL INFORMATION:

Name: HAYNES CANYON UNIT 426H

State: New Mexico

County: Rio Arriba

Surface Elevation: 6,765 ft ASL (GL) 6,790 ft ASL (KB)

Surface Location: 5-23N-06W Sec-Twn-Rng 1,784 ft FSL 462 ft FEL
 36.251116 ° N latitude 107.485255 ° W longitude (NAD 83)

BH Location: 15-23N-06W Sec-Twn-Rng 1,996 ft FNL 240 ft FEL
 36.226816 ° N latitude 107.44809 ° 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 51.0 miles to MM 101, left (north) on existing road (next to landing strip and Escrito Canyon Rd) for 0.4 miles to fork, right (northeast) for 1.0 miles to fork, right (north) for 0.6 miles to fork at Elm Ridge Marcus #2 well, right (east) for 0.4 miles to fork, right (southeast) for 0.2 miles to fork, left on upgraded access road for .9 miles to the Haynes Canyon Unit 420H Pad (Wells from West to East: 420H, 422H, 424H, 426H).

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	5,383	1,407	1,443	W	normal
	Kirtland	5,309	1,481	1,524	W	normal
	Fruitland	5,069	1,721	1,789	G, W	sub
	Pictured Cliffs	4,800	1,990	2,084	G, W	sub
	Lewis	4,663	2,127	2,235	G, W	normal
	Chacra	4,376	2,414	2,552	G, W	normal
	Cliff House	3,271	3,519	3,768	G, W	sub
	Menefee	3,256	3,534	3,784	G, W	normal
	Point Lookout	2,540	4,250	4,567	G, W	normal
	Mancos	2,243	4,547	4,873	O,G	sub (~0.38)
	Gallup (MNCS_A)	1,895	4,895	5,222	O,G	sub (~0.38)
	MNCS_B	1,815	4,975	5,302	O,G	sub (~0.38)
	MNCS_C	1,665	5,125	5,455	O,G	sub (~0.38)
	MNCS_Cms	1,605	5,185	5,520	O,G	sub (~0.38)
	MNCS_D	1,535	5,255	5,600	O,G	sub (~0.38)
	MNCS_E	1,456	5,334	5,701	O,G	sub (~0.38)
	MNCS_F	1,406	5,384	5,774	O,G	sub (~0.38)
	MNCS_G	1,317	5,473	5,939	O,G	sub (~0.38)
	MNCS_H	1,277	5,513	6,036	O,G	sub (~0.38)
	P.O.E. TARGET	1,317	5,473	5,939	O,G	sub (~0.38)
	PROJECTED TD	1,323	5,467	20,583	O,G	sub (~0.38)

Surface: Nacimiento

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

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

Max. pressure gradient:	0.43	psi/ft	Evacuated hole gradient:	0.22	psi/ft
Maximum anticipated BH pressure, assuming maximum pressure gradient:	2,360	psi			
Maximum anticipated surface pressure, assuming partially evacuated hole:	1,160	psi			

Temperature: Maximum anticipated BHT is 140° F or less

H₂S INFORMATION:

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

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

LOGGING, CORING, AND TESTING:

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

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

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

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

DRILLING RIG INFORMATION:

Contractor: Aztec

Rig No.: 1000

Draw Works: E80 AC 1,500 hp

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

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

Prime Movers: 4 - GE Jenbacher Natural Gas Generator

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

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

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

Choke: Cameron (4", 10,000 psi)

KB-GL (ft): 25

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

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

- 1) Rig will be equipped with upper and lower kelly cocks with handles available.
- 2) Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well.
- 3) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.
- 4) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 5) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.

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

FLUIDS AND SOLIDS CONTROL PROGRAM:

- Fluid Measurement:** Pumps shall be equipped with stroke counters with displays in the dog-house. Slow pump speed shall be recorded daily and after mudding up, at a minimum, on the drilling report. A Pit Volume Totalizer will be installed and the readout will be displayed in the dog-house. Gas-detecting equipment will be installed at the shakers, and readouts will be available in the dog-house and the in the geologist's work-station (if geologist or mud-logger is on-site).
- Closed-Loop System:** A fully, closed-loop system will be utilized. The system will consist of above-ground piping and above-ground storage tanks and bins. The system will not entail any earthen pits, below-grade storage, or drying pads. All equipment will be disassembled and removed from the site when drilling operations cease. The system will be capable of storing all fluids and generated cuttings and of preventing uncontrolled releases of the same. The system will be operated in an efficient manner to allow the recycling and reuse of as much fluid as possible and to minimize the amount of fluids and solids that require disposal.
- Fluid Disposal:** Fluids that cannot be reused, recycled, or returned to the supplier will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).
- Solids Disposal:** Drilling solids will be stored (until haul-off) on-site in separate containers with no other waste, debris, or garbage products. Waste solids will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).
- Fluid Program:** See "Detailed Drilling Plan" section 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	794	116,634	116,634
Min. S.F.					7.39	3.44	7.31	7.79

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

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

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

MU Torque (ft lbs): Minimum: N/A Optimum: N/A Maximum: N/A

Make-up as per API Buttress Connection running procedure.

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

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	Hole Cap. (cuft/ft)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)
	TYPE III	14.6	1.38	6.65	0.6946	100%	0	366
Annular Capacity	0.6946	cuft/ft	13-3/8" casing x 17-1/2" hole annulus			Csg capacity	0.8680	ft3/ft
Drake Energy Services: Calculated cement volumes assume gauge hole and the excess noted in table								Cu Ft Slurry
								505.3
Tail	ASTM Type III	Calcium Chloride	D-CD2 .2% BWOC					
	Blend	1% BWOC	Dispersant/Friction .25 lbs/sx Cello					
		Accelerator	reducer Flake - seepage					
Notify COGCC & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.								

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

350 ft (MD)	to	3,939 ft (MD)	Hole Section Length:	3,589 ft
350 ft (TVD)	to	3,684 ft (TVD)	Casing Required:	3,939 ft

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

Hole Size: 12-1/4"

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

MWD / Survey: MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional

Logging: None

Pressure Test: NU BOPE and test (as noted above); pressure test 13-3/8" casing to 1,500 psi for 30 minutes.

Casing Specs:							Tens. Body (lbs)	Tens. Conn (lbs)	
		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)			
	Specs	9.625	36.0	J-55	LTC	2,020	3,520	564,000	453,000
	Loading					1,609	1,371	223,660	223,660
Min. S.F.					1.26	2.57	2.52	2.03	

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

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

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

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

Casing Summary: Float shoe, 1 jt casing, float collar, casing to surface (FLOAT EQUIPMENT FROM WEATHERFORD)

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

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	828	1,772
	Tail	Type III	14.6	1.380	6.61	20%	3,439	150	207
	Displacement	301	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
	ASTM Type III Blend		D-MPA-1 .2% BWOC Fluid Loss & Gas Migration Control		D-CD 2 .5% BWOC Dispersant	Cello Flace LCM .25 lb/sx		D-R1 .2% Retarder
Drake Intermediate Cementing Program								

Cement must achieve 500 psi compressive strength before drilling out.

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

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

3,939 ft (MD)	to	20,583 ft (MD)	Hole Section Length:	16,644 ft
3,684 ft (TVD)	to	5,467 ft (TVD)	Casing Required:	20,583 ft

Estimated KOP:	5,302 ft (MD)	4,975 ft (TVD)
Estimated Landing Point (P.O.E.):	5,939 ft (MD)	5,473 ft (TVD)
Estimated Lateral Length:	14,644 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: 8-1/2" PDC bit w/mud motor

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

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

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

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					2,701	9,012	401,941	401,941
Min. S.F.					2.76	1.18	1.36	1.11

Assumptions: Collapse: fully evacuated casing with 9.5 ppg fluid in the annulus (floating casing during running)
Burst: 8,500 psi maximum surface treating pressure with 10.2 ppg equivalent mud weight sand laden fluid with 8.4 ppg equivalent external pressure gradient
Tension: buoyed weight in 9.0 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minimum: 3,470 Optimum: 4,620 Maximum: 5,780

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

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	IntegraGuard EZ	11		31.6		0	60 bbls	
Lead	ASTM type I/II	12.4	2.370	13.40	50%	0	583	1,381
Tail	G:POZ blend	13.3	1.570	7.70	10%	4,873	2,522	3,959

Displacement	454	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

American Cementing Liner & Production Blend

Spacer	S-8 Silica Flour	Avis 616 viscosifier	XCem-308	IntegraSeal Hold,						
	163.7 lbs/bbl	11.6 lb/bbl	Defoamer .5 lb/bbl	ALOC-1212 LCM 15	SS201 Surfactant -	-	1 gal/bbl			
Lead	Sodium Metasilicate A-2		IntegraGuard							
	Accelerator .2%	FL-66 Fluid Loss	GW86 Viscosifier	R3 Retarder .5%	R7C Retarder .1%	Xcem-1009	XCem-308	Static Free - Anti-		
	ASTM Type IL	BWOB	.1% BWOB	BWOB	BWOB	Extender 10.0#/sx	Defoamer .3 lb/bbl	static .01 lb/sx		
Tail	Bentonite		IntegraGuard							
	Pozzolan Fly Ash	Viscosifier/Extende	FL24 Fluid Loss .4%	GW86 Viscosifier	IntegraSeal Poli,	R3 Retarder .25%	XCem-1009	XCem-308 Defoamer		
	Type G 50%	Extender 50%	r 4% BWOB	BWOB	.1% BWOB	LCM .25 lb/sx	BWOB	Extender 3.0 lb/sx	.3% BWOB Static Free -	
								Anti-static .01 lb/sx		

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

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

FINISH WELL: ND BOP, NU WH, RDMO.

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 14,544

Est Frac Inform: 61 Frac Stages 233,000 bbls slick water 18,910,000 lbs proppant

Flowback: Flow back through production tubing as pressures allow

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

ESTIMATED START DATES:

Drilling: 2/1/2024

Completion: 3/17/2024

Production: 4/16/2024

Prepared by: Alec Bridge 2/8/2019

Updated: G Olson 11/10/2023

G Olson 11/24/2023

WELL NAME: HAYNES CANYON UNIT 426H

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

API Number: 30-039-

AFE Number:

ER Well Number:

State: New Mexico

County: Rio Arriba

Surface Elev.: 6,765 ft ASL (GL) 6,790 ft ASL (KB)

Surface Location: 5-23N-06W Sec-Twn- Rng 1,784 ft FSL 462 ft FEL

BH Location: 15-23N-06W Sec-Twn- Rng 1996 ft FNL 240 ft FEL

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

South on US Hwy 550 for 51.0 miles to MM 101, left (north) on existing road (next to landing strip and Escrito Canyon Rd) for 0.4 miles to fork, right (northeast) for 1.0 miles to fork, right (north) for 0.6 miles to fork at Elm Ridge Marcus #2 well, right (east) for 0.4 miles to fork, right (southeast) for 0.2 miles to fork, left on upgraded access road for .9 miles to the Haynes Canyon Unit 420H Pad (Wells from West to East: 420H, 422H, 424H, 426H).

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	3,939 ft
KOP (MD)	5,302 ft
KOP (TVD)	4,975 ft
Target (TVD)	5,473 ft
Curve BUR	10 °/100 ft
POE (MD)	5,939 ft
TD (MD)	20,583 ft
Lat Len (ft)	14,644 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	3,939	9.625	36.0	J-55	LTC	0	3,939
Production	8.500	20,583	5.500	17.0	P-110	LTC	0	20,583

CEMENT PROPERTIES SUMMARY:

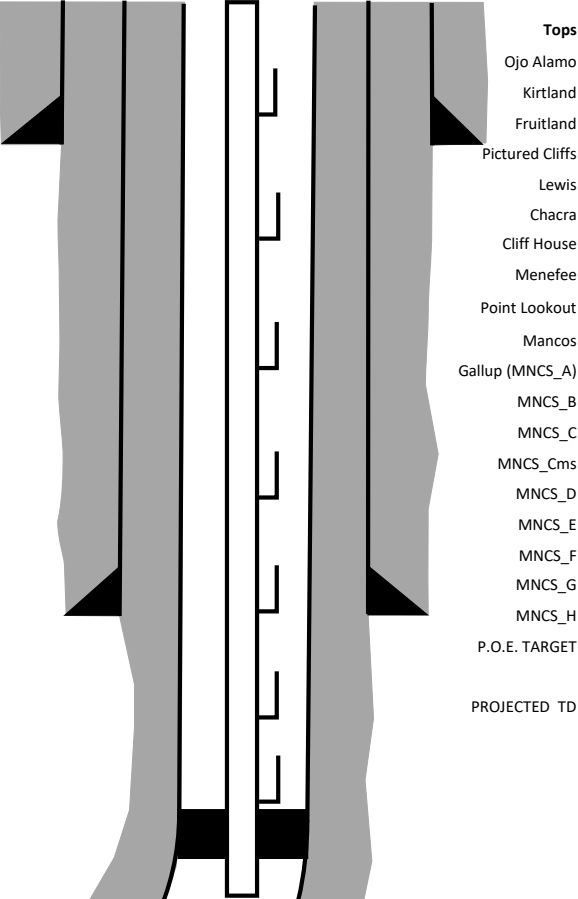
	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)	Cu Ft Slurry
Surface	TYPE III	14.6	1.38	6.65	0.6946	100%	0	366	2,435
Inter. (Lead)	90:10 Type III:POZ	12.5	2.14	12.05	0.3627	70%	0	828	9,976
Inter. (Tail)	Type III	14.6	1.38	6.61	0.3132	20%	3,439	150	992
Prod. (Lead)	ASTM type I/II	12.4	2.370	13.40	0.2691	50%	0	583	7,808
Prod. (Tail)	G:POZ blend	13.3	1.570	7.70	0.2291	10%	4,873	2,522	19,417

COMPLETION / PRODUCTION SUMMARY:

Frac: 61 Frac Stages 233000 bbls slick water 18910000 lbs proppant

Flowback: Flow back through production tubing as pressures allow

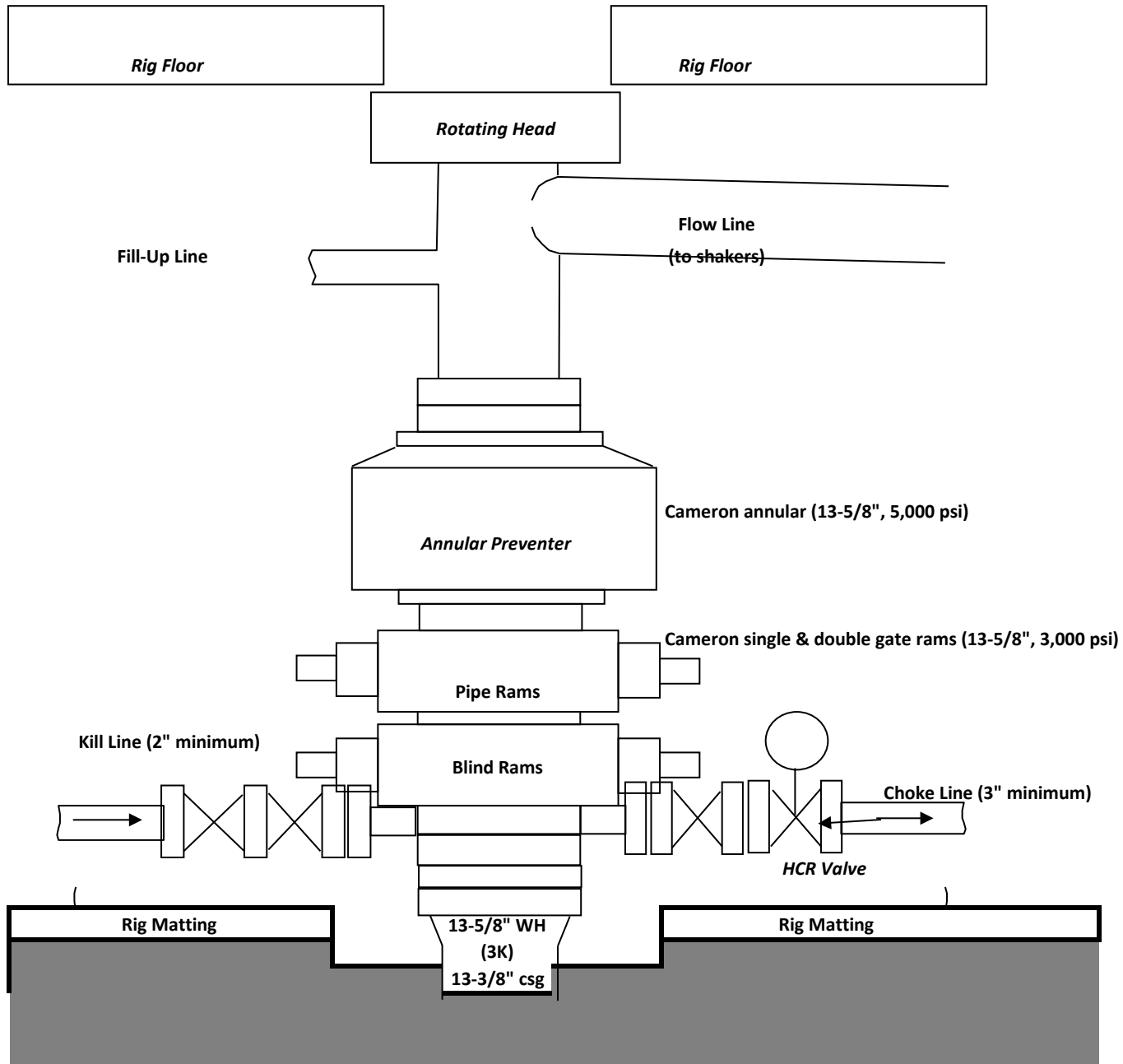
Production: Produce through production tubing via gas-lift into permanent production and storage facilities



Haynes Canyon Unit 426H

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

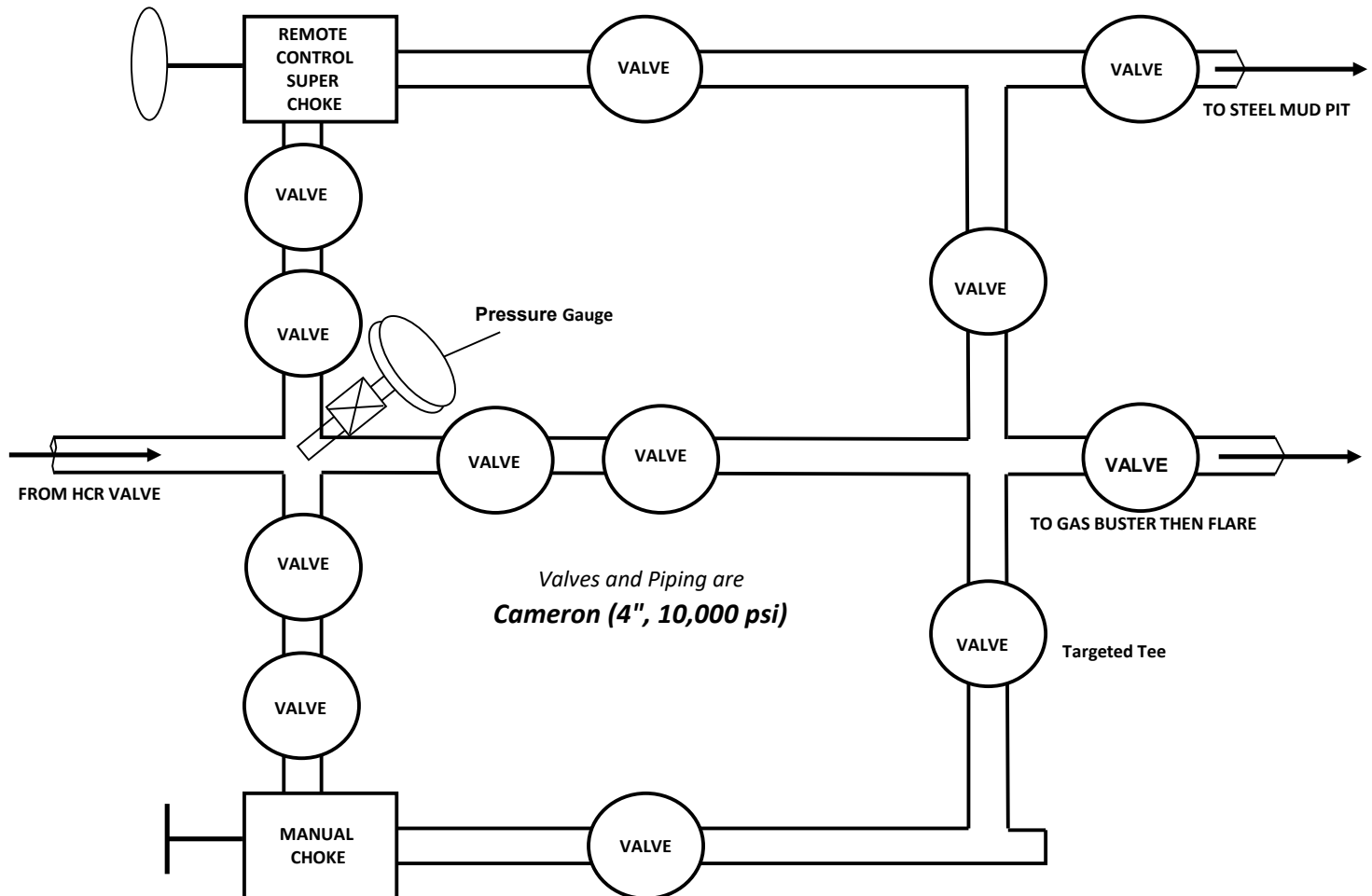
BOPE



Haynes Canyon Unit 426H

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

CHOKE MANIFOLD





Well: Haynes Canyon Unit 426 H
Site: Haynes Canyon Unit (420, 422, 424 & 426)
Project: Rio Arriba County, New Mexico NAD83 NM G
Design: rev0
Rig:

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6765+25 @ 6790.00ft

Surface location:
Northing 1913010.736 Easting 1276203.396 Latitude 36.251160000 Longitude -107.485255000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 9.17°



Azimuths to Grid North
True North: 0.73°
Magnetic North: 9.17°

Magnetic Field
Strength: 49110.8nT
Dip Angle: 62.76°
Date: 11/1/2023
Model: IGRF2020

Section Details

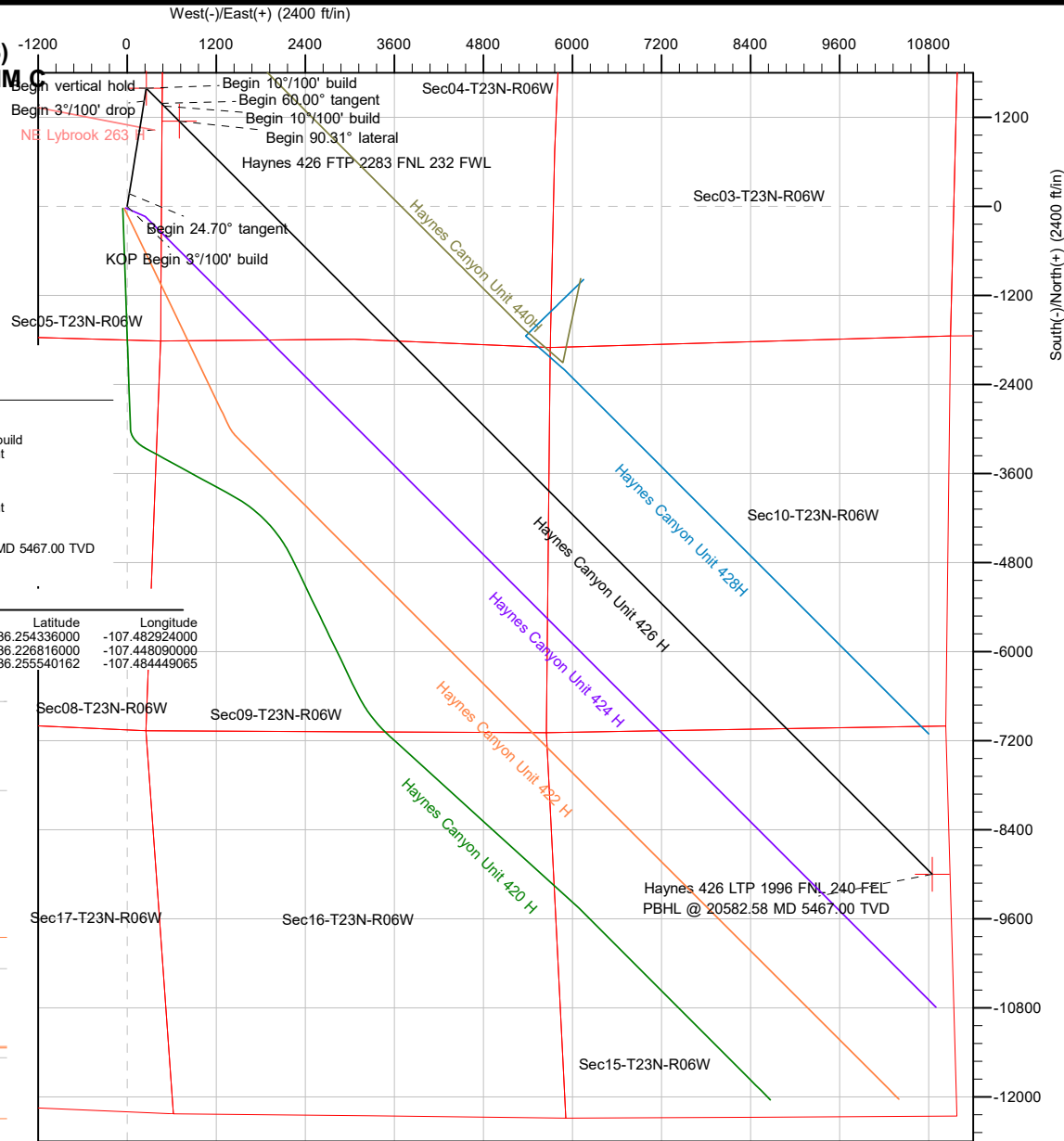
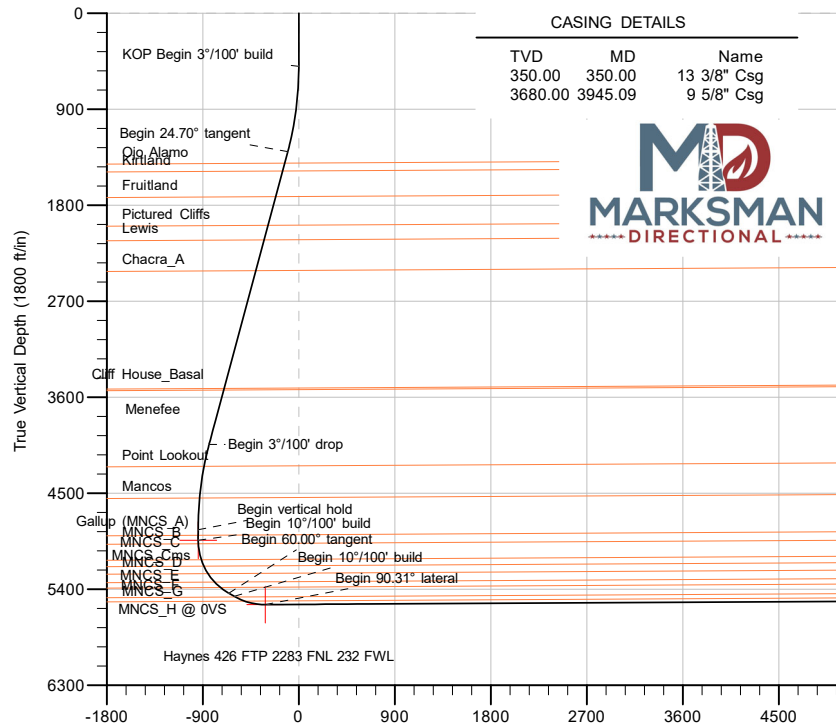
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	1323.25	24.70	9.207	1297.99	172.45	27.95	3.00	9.21	-102.18	Begin 24.70° tangent
4	4345.80	24.70	9.207	4044.06	1419.09	230.01	0.00	0.00	-840.83	Begin 3°/100' drop
5	5169.05	0.00	360.000	4842.05	1591.54	257.96	3.00	180.00	-943.01	Begin vertical hold
6	5269.05	0.00	360.000	4942.05	1591.54	257.96	0.00	0.00	-943.01	Begin 10°/100' build
7	5869.05	60.00	135.001	5438.25	1388.97	460.53	10.00	135.00	-656.53	Begin 60.00° tangent
8	5929.05	60.00	135.001	5468.25	1352.22	497.27	0.00	0.00	-604.57	Begin 10°/100' build
9	6232.17	90.31	135.001	5545.00	1147.45	702.04	10.00	0.00	-314.97	Begin 90.31° lateral
10	20582.58	90.31	135.001	5467.00	-8999.84	10849.00	0.00	0.00	14035.23	PBHL @ 20582.58 MD 5467.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Haynes 426 FTP 2283 FNL 232 FWL	5545.00	1147.45	702.04	1914158.180	1276905.435	36.254336000	-107.482924000
Haynes 426 LTP 1996 FNL 240 FEL	5467.00	-8999.84	10849.00	1904010.914	1287052.373	36.226816000	-107.448090000
Haynes 426 vert	4942.05	1591.54	257.96	1914602.273	1276461.356	36.255540162	-107.484449065

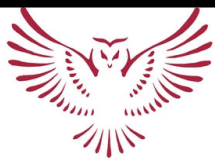
CASING DETAILS

TVD	MD	Name
350.00	350.00	13 3/8" Csg
3680.00	3945.09	9 5/8" Csg

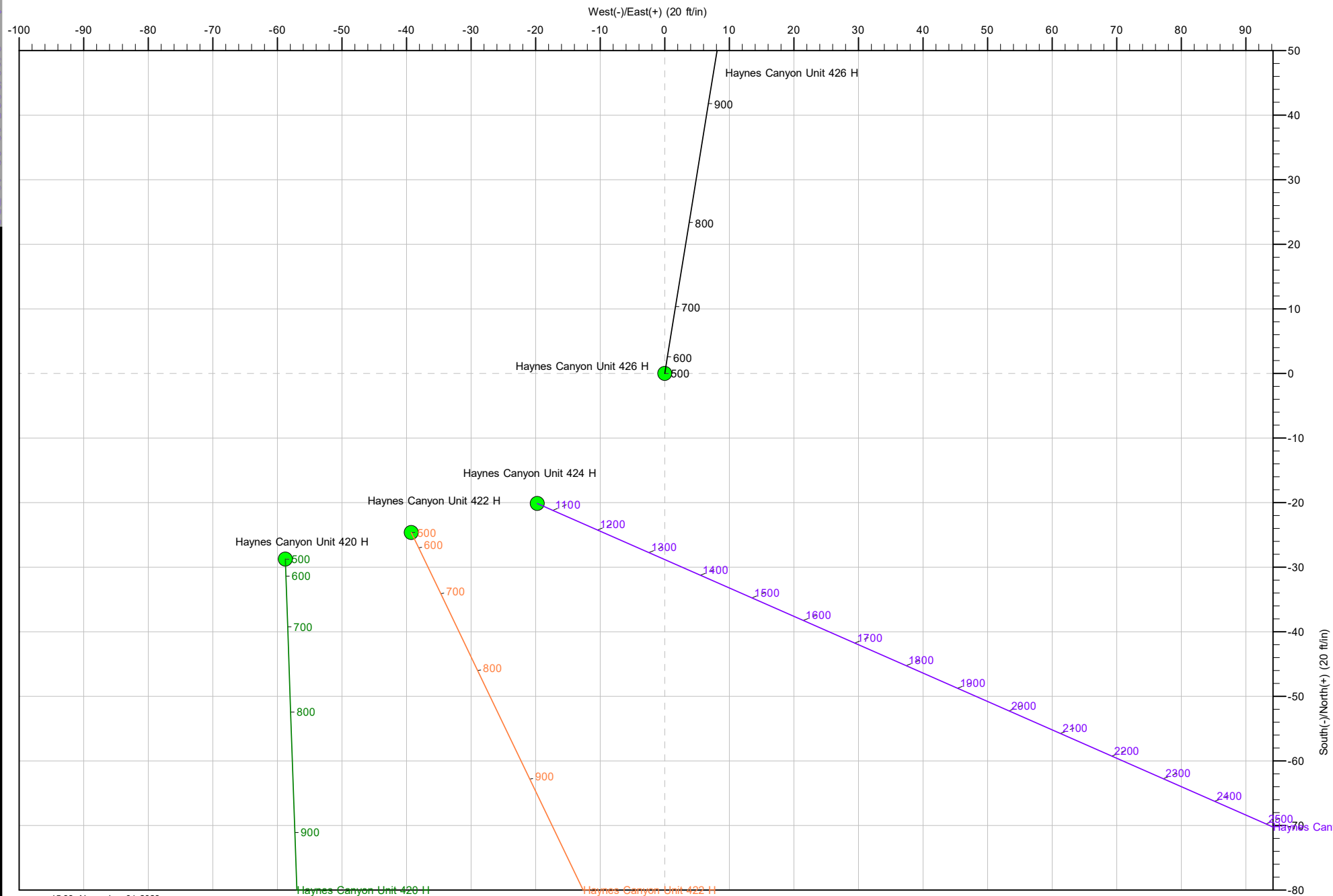


PBHL @ 20582.58 MD 5467.00 TVD

Haynes 426 LTP 1996 FNL 240 FEL



Well: Haynes Canyon Unit 426 H
Site: Haynes Canyon Unit (420, 422, 424 & 426)
Project: Rio Arriba County, New Mexico NAD83 NM C
Design: rev0
Rig:





Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

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

Site	Haynes Canyon Unit (420, 422, 424 & 426)		
Site Position:		Northing:	1,912,981.994 usft
From:	Lat/Long	Easting:	1,276,144.638 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.251079000
		Longitude:	-107.485453000

Well	Haynes Canyon Unit 426 H, Surf loc: 1784 FSL 462 FEL Section 05-T23N-R06W		
Well Position	+N/-S	0.00 ft	Northing: 1,913,010.736 usft
	+E/-W	0.00 ft	Easting: 1,276,203.396 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
Grid Convergence:	-0.73 °	Ground Level:	6,765.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/1/2023	8.44	62.76	49,110.83347463

Design	rev0				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	135.001	

Plan Survey Tool Program	Date	11/1/2023			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	20,582.58	rev0 (Original Hole)	MWD	
				OWSG MWD - Standard	



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,323.25	24.70	9.207	1,297.99	172.45	27.95	3.00	3.00	0.00	9.21	
4,345.80	24.70	9.207	4,044.06	1,419.09	230.01	0.00	0.00	0.00	0.00	
5,169.05	0.00	360.000	4,842.05	1,591.54	257.96	3.00	-3.00	0.00	180.00	
5,269.05	0.00	360.000	4,942.05	1,591.54	257.96	0.00	0.00	0.00	0.00	Haynes 426 vert
5,869.05	60.00	135.001	5,438.25	1,388.97	460.53	10.00	10.00	0.00	135.00	
5,929.05	60.00	135.001	5,468.25	1,352.22	497.27	0.00	0.00	0.00	0.00	
6,232.17	90.31	135.001	5,545.00	1,147.45	702.04	10.00	10.00	0.00	0.00	
20,582.58	90.31	135.001	5,467.00	-8,999.84	10,849.00	0.00	0.00	0.00	0.00	Haynes 426 LTP 1996



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
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	3.00	9.207	599.95	2.58	0.42	-1.53	3.00	3.00	0.00
700.00	6.00	9.207	699.63	10.33	1.67	-6.12	3.00	3.00	0.00
800.00	9.00	9.207	798.77	23.21	3.76	-13.75	3.00	3.00	0.00
900.00	12.00	9.207	897.08	41.20	6.68	-24.41	3.00	3.00	0.00
1,000.00	15.00	9.207	994.31	64.24	10.41	-38.06	3.00	3.00	0.00
1,100.00	18.00	9.207	1,090.18	92.27	14.96	-54.67	3.00	3.00	0.00
1,200.00	21.00	9.207	1,184.43	125.22	20.30	-74.19	3.00	3.00	0.00
1,300.00	24.00	9.207	1,276.81	162.99	26.42	-96.57	3.00	3.00	0.00
1,323.25	24.70	9.207	1,297.99	172.45	27.95	-102.18	3.00	3.00	0.00
1,400.00	24.70	9.207	1,367.72	204.11	33.08	-120.94	0.00	0.00	0.00
1,500.00	24.70	9.207	1,458.57	245.35	39.77	-145.37	0.00	0.00	0.00
1,600.00	24.70	9.207	1,549.43	286.60	46.45	-169.81	0.00	0.00	0.00
1,700.00	24.70	9.207	1,640.28	327.84	53.14	-194.25	0.00	0.00	0.00
1,800.00	24.70	9.207	1,731.13	369.08	59.82	-218.69	0.00	0.00	0.00
1,900.00	24.70	9.207	1,821.98	410.33	66.51	-243.12	0.00	0.00	0.00
2,000.00	24.70	9.207	1,912.84	451.57	73.19	-267.56	0.00	0.00	0.00
2,100.00	24.70	9.207	2,003.69	492.82	79.88	-292.00	0.00	0.00	0.00
2,200.00	24.70	9.207	2,094.54	534.06	86.56	-316.44	0.00	0.00	0.00
2,300.00	24.70	9.207	2,185.39	575.31	93.25	-340.88	0.00	0.00	0.00
2,400.00	24.70	9.207	2,276.25	616.55	99.93	-365.31	0.00	0.00	0.00
2,500.00	24.70	9.207	2,367.10	657.80	106.62	-389.75	0.00	0.00	0.00
2,600.00	24.70	9.207	2,457.95	699.04	113.30	-414.19	0.00	0.00	0.00
2,700.00	24.70	9.207	2,548.81	740.29	119.99	-438.63	0.00	0.00	0.00
2,800.00	24.70	9.207	2,639.66	781.53	126.67	-463.07	0.00	0.00	0.00
2,900.00	24.70	9.207	2,730.51	822.77	133.36	-487.50	0.00	0.00	0.00
3,000.00	24.70	9.207	2,821.36	864.02	140.04	-511.94	0.00	0.00	0.00
3,100.00	24.70	9.207	2,912.22	905.26	146.73	-536.38	0.00	0.00	0.00
3,200.00	24.70	9.207	3,003.07	946.51	153.41	-560.82	0.00	0.00	0.00
3,300.00	24.70	9.207	3,093.92	987.75	160.10	-585.26	0.00	0.00	0.00
3,400.00	24.70	9.207	3,184.77	1,029.00	166.78	-609.69	0.00	0.00	0.00
3,500.00	24.70	9.207	3,275.63	1,070.24	173.47	-634.13	0.00	0.00	0.00
3,600.00	24.70	9.207	3,366.48	1,111.49	180.15	-658.57	0.00	0.00	0.00
3,700.00	24.70	9.207	3,457.33	1,152.73	186.84	-683.01	0.00	0.00	0.00
3,800.00	24.70	9.207	3,548.18	1,193.98	193.52	-707.44	0.00	0.00	0.00
3,900.00	24.70	9.207	3,639.04	1,235.22	200.21	-731.88	0.00	0.00	0.00
4,000.00	24.70	9.207	3,729.89	1,276.46	206.89	-756.32	0.00	0.00	0.00
4,100.00	24.70	9.207	3,820.74	1,317.71	213.58	-780.76	0.00	0.00	0.00
4,200.00	24.70	9.207	3,911.59	1,358.95	220.26	-805.20	0.00	0.00	0.00
4,300.00	24.70	9.207	4,002.45	1,400.20	226.95	-829.63	0.00	0.00	0.00
4,345.80	24.70	9.207	4,044.06	1,419.09	230.01	-840.83	0.00	0.00	0.00
4,400.00	23.07	9.207	4,093.61	1,440.75	233.52	-853.66	3.00	-3.00	0.00
4,500.00	20.07	9.207	4,186.60	1,477.04	239.40	-875.16	3.00	-3.00	0.00
4,600.00	17.07	9.207	4,281.38	1,508.47	244.50	-893.79	3.00	-3.00	0.00
4,700.00	14.07	9.207	4,377.70	1,534.97	248.79	-909.49	3.00	-3.00	0.00
4,800.00	11.07	9.207	4,475.29	1,556.45	252.27	-922.22	3.00	-3.00	0.00
4,900.00	8.07	9.207	4,573.89	1,572.86	254.93	-931.94	3.00	-3.00	0.00
5,000.00	5.07	9.207	4,673.22	1,584.16	256.76	-938.63	3.00	-3.00	0.00
5,100.00	2.07	9.207	4,773.01	1,590.31	257.76	-942.28	3.00	-3.00	0.00



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,169.05	0.00	360.000	4,842.05	1,591.54	257.96	-943.01	3.00	-3.00	0.00
5,200.00	0.00	0.000	4,873.00	1,591.54	257.96	-943.01	0.00	0.00	0.00
5,269.05	0.00	360.000	4,942.05	1,591.54	257.96	-943.01	0.00	0.00	0.00
5,300.00	3.09	135.001	4,972.98	1,590.95	258.55	-942.17	10.00	10.00	0.00
5,350.00	8.09	135.001	5,022.73	1,587.50	262.00	-937.30	10.00	10.00	0.00
5,400.00	13.09	135.001	5,071.86	1,581.00	268.50	-928.11	10.00	10.00	0.00
5,450.00	18.09	135.001	5,120.01	1,571.50	278.00	-914.67	10.00	10.00	0.00
5,500.00	23.09	135.001	5,166.80	1,559.07	290.43	-897.09	10.00	10.00	0.00
5,550.00	28.09	135.001	5,211.87	1,543.80	305.70	-875.49	10.00	10.00	0.00
5,600.00	33.09	135.001	5,254.90	1,525.81	323.69	-850.05	10.00	10.00	0.00
5,650.00	38.09	135.001	5,295.55	1,505.24	344.26	-820.96	10.00	10.00	0.00
5,700.00	43.09	135.001	5,333.50	1,482.24	367.26	-788.44	10.00	10.00	0.00
5,750.00	48.09	135.001	5,368.48	1,456.99	392.51	-752.73	10.00	10.00	0.00
5,800.00	53.09	135.001	5,400.20	1,429.68	419.81	-714.10	10.00	10.00	0.00
5,850.00	58.09	135.001	5,428.45	1,400.52	448.98	-672.86	10.00	10.00	0.00
5,869.05	60.00	135.001	5,438.25	1,388.97	460.53	-656.53	10.00	10.00	0.00
5,900.00	60.00	135.001	5,453.72	1,370.01	479.48	-629.72	0.00	0.00	0.00
5,929.05	60.00	135.001	5,468.25	1,352.22	497.27	-604.57	0.00	0.00	0.00
5,950.00	62.09	135.001	5,478.39	1,339.26	510.23	-586.24	10.00	10.00	0.00
6,000.00	67.09	135.001	5,499.83	1,307.33	542.16	-541.09	10.00	10.00	0.00
6,050.00	72.09	135.001	5,517.26	1,274.21	575.28	-494.24	10.00	10.00	0.00
6,100.00	77.09	135.001	5,530.54	1,240.13	609.36	-446.05	10.00	10.00	0.00
6,150.00	82.09	135.001	5,539.56	1,205.37	644.12	-396.89	10.00	10.00	0.00
6,200.00	87.09	135.001	5,544.27	1,170.18	679.30	-347.13	10.00	10.00	0.00
6,232.17	90.31	135.001	5,545.00	1,147.45	702.04	-314.97	10.00	10.00	0.00
6,300.00	90.31	135.001	5,544.63	1,099.48	750.00	-247.14	0.00	0.00	0.00
6,400.00	90.31	135.001	5,544.09	1,028.77	820.71	-147.14	0.00	0.00	0.00
6,500.00	90.31	135.001	5,543.54	958.06	891.42	-47.14	0.00	0.00	0.00
6,600.00	90.31	135.001	5,543.00	887.35	962.13	52.86	0.00	0.00	0.00
6,700.00	90.31	135.001	5,542.46	816.64	1,032.84	152.85	0.00	0.00	0.00
6,800.00	90.31	135.001	5,541.91	745.93	1,103.55	252.85	0.00	0.00	0.00
6,900.00	90.31	135.001	5,541.37	675.21	1,174.26	352.85	0.00	0.00	0.00
7,000.00	90.31	135.001	5,540.83	604.50	1,244.96	452.85	0.00	0.00	0.00
7,100.00	90.31	135.001	5,540.28	533.79	1,315.67	552.85	0.00	0.00	0.00
7,200.00	90.31	135.001	5,539.74	463.08	1,386.38	652.85	0.00	0.00	0.00
7,300.00	90.31	135.001	5,539.20	392.37	1,457.09	752.85	0.00	0.00	0.00
7,400.00	90.31	135.001	5,538.65	321.66	1,527.80	852.84	0.00	0.00	0.00
7,500.00	90.31	135.001	5,538.11	250.95	1,598.51	952.84	0.00	0.00	0.00
7,600.00	90.31	135.001	5,537.56	180.24	1,669.21	1,052.84	0.00	0.00	0.00
7,700.00	90.31	135.001	5,537.02	109.53	1,739.92	1,152.84	0.00	0.00	0.00
7,800.00	90.31	135.001	5,536.48	38.82	1,810.63	1,252.84	0.00	0.00	0.00
7,900.00	90.31	135.001	5,535.93	-31.89	1,881.34	1,352.84	0.00	0.00	0.00
8,000.00	90.31	135.001	5,535.39	-102.60	1,952.05	1,452.84	0.00	0.00	0.00
8,100.00	90.31	135.001	5,534.85	-173.31	2,022.76	1,552.83	0.00	0.00	0.00
8,200.00	90.31	135.001	5,534.30	-244.03	2,093.47	1,652.83	0.00	0.00	0.00
8,300.00	90.31	135.001	5,533.76	-314.74	2,164.17	1,752.83	0.00	0.00	0.00
8,400.00	90.31	135.001	5,533.22	-385.45	2,234.88	1,852.83	0.00	0.00	0.00
8,500.00	90.31	135.001	5,532.67	-456.16	2,305.59	1,952.83	0.00	0.00	0.00
8,600.00	90.31	135.001	5,532.13	-526.87	2,376.30	2,052.83	0.00	0.00	0.00
8,700.00	90.31	135.001	5,531.59	-597.58	2,447.01	2,152.83	0.00	0.00	0.00
8,800.00	90.31	135.001	5,531.04	-668.29	2,517.72	2,252.82	0.00	0.00	0.00
8,900.00	90.31	135.001	5,530.50	-739.00	2,588.42	2,352.82	0.00	0.00	0.00
9,000.00	90.31	135.001	5,529.96	-809.71	2,659.13	2,452.82	0.00	0.00	0.00
9,100.00	90.31	135.001	5,529.41	-880.42	2,729.84	2,552.82	0.00	0.00	0.00



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,200.00	90.31	135.001	5,528.87	-951.13	2,800.55	2,652.82	0.00	0.00	0.00	
9,300.00	90.31	135.001	5,528.32	-1,021.84	2,871.26	2,752.82	0.00	0.00	0.00	
9,400.00	90.31	135.001	5,527.78	-1,092.55	2,941.97	2,852.82	0.00	0.00	0.00	
9,500.00	90.31	135.001	5,527.24	-1,163.27	3,012.68	2,952.81	0.00	0.00	0.00	
9,600.00	90.31	135.001	5,526.69	-1,233.98	3,083.38	3,052.81	0.00	0.00	0.00	
9,700.00	90.31	135.001	5,526.15	-1,304.69	3,154.09	3,152.81	0.00	0.00	0.00	
9,800.00	90.31	135.001	5,525.61	-1,375.40	3,224.80	3,252.81	0.00	0.00	0.00	
9,900.00	90.31	135.001	5,525.06	-1,446.11	3,295.51	3,352.81	0.00	0.00	0.00	
10,000.00	90.31	135.001	5,524.52	-1,516.82	3,366.22	3,452.81	0.00	0.00	0.00	
10,100.00	90.31	135.001	5,523.98	-1,587.53	3,436.93	3,552.80	0.00	0.00	0.00	
10,200.00	90.31	135.001	5,523.43	-1,658.24	3,507.64	3,652.80	0.00	0.00	0.00	
10,300.00	90.31	135.001	5,522.89	-1,728.95	3,578.34	3,752.80	0.00	0.00	0.00	
10,400.00	90.31	135.001	5,522.35	-1,799.66	3,649.05	3,852.80	0.00	0.00	0.00	
10,500.00	90.31	135.001	5,521.80	-1,870.37	3,719.76	3,952.80	0.00	0.00	0.00	
10,600.00	90.31	135.001	5,521.26	-1,941.08	3,790.47	4,052.80	0.00	0.00	0.00	
10,700.00	90.31	135.001	5,520.72	-2,011.79	3,861.18	4,152.80	0.00	0.00	0.00	
10,800.00	90.31	135.001	5,520.17	-2,082.51	3,931.89	4,252.79	0.00	0.00	0.00	
10,900.00	90.31	135.001	5,519.63	-2,153.22	4,002.59	4,352.79	0.00	0.00	0.00	
11,000.00	90.31	135.001	5,519.08	-2,223.93	4,073.30	4,452.79	0.00	0.00	0.00	
11,100.00	90.31	135.001	5,518.54	-2,294.64	4,144.01	4,552.79	0.00	0.00	0.00	
11,200.00	90.31	135.001	5,518.00	-2,365.35	4,214.72	4,652.79	0.00	0.00	0.00	
11,300.00	90.31	135.001	5,517.45	-2,436.06	4,285.43	4,752.79	0.00	0.00	0.00	
11,400.00	90.31	135.001	5,516.91	-2,506.77	4,356.14	4,852.79	0.00	0.00	0.00	
11,500.00	90.31	135.001	5,516.37	-2,577.48	4,426.85	4,952.78	0.00	0.00	0.00	
11,600.00	90.31	135.001	5,515.82	-2,648.19	4,497.55	5,052.78	0.00	0.00	0.00	
11,700.00	90.31	135.001	5,515.28	-2,718.90	4,568.26	5,152.78	0.00	0.00	0.00	
11,800.00	90.31	135.001	5,514.74	-2,789.61	4,638.97	5,252.78	0.00	0.00	0.00	
11,900.00	90.31	135.001	5,514.19	-2,860.32	4,709.68	5,352.78	0.00	0.00	0.00	
12,000.00	90.31	135.001	5,513.65	-2,931.03	4,780.39	5,452.78	0.00	0.00	0.00	
12,100.00	90.31	135.001	5,513.11	-3,001.75	4,851.10	5,552.78	0.00	0.00	0.00	
12,200.00	90.31	135.001	5,512.56	-3,072.46	4,921.81	5,652.77	0.00	0.00	0.00	
12,300.00	90.31	135.001	5,512.02	-3,143.17	4,992.51	5,752.77	0.00	0.00	0.00	
12,400.00	90.31	135.001	5,511.48	-3,213.88	5,063.22	5,852.77	0.00	0.00	0.00	
12,500.00	90.31	135.001	5,510.93	-3,284.59	5,133.93	5,952.77	0.00	0.00	0.00	
12,600.00	90.31	135.001	5,510.39	-3,355.30	5,204.64	6,052.77	0.00	0.00	0.00	
12,700.00	90.31	135.001	5,509.84	-3,426.01	5,275.35	6,152.77	0.00	0.00	0.00	
12,800.00	90.31	135.001	5,509.30	-3,496.72	5,346.06	6,252.76	0.00	0.00	0.00	
12,900.00	90.31	135.001	5,508.76	-3,567.43	5,416.76	6,352.76	0.00	0.00	0.00	
13,000.00	90.31	135.001	5,508.21	-3,638.14	5,487.47	6,452.76	0.00	0.00	0.00	
13,100.00	90.31	135.001	5,507.67	-3,708.85	5,558.18	6,552.76	0.00	0.00	0.00	
13,200.00	90.31	135.001	5,507.13	-3,779.56	5,628.89	6,652.76	0.00	0.00	0.00	
13,300.00	90.31	135.001	5,506.58	-3,850.27	5,699.60	6,752.76	0.00	0.00	0.00	
13,400.00	90.31	135.001	5,506.04	-3,920.99	5,770.31	6,852.76	0.00	0.00	0.00	
13,500.00	90.31	135.001	5,505.50	-3,991.70	5,841.02	6,952.75	0.00	0.00	0.00	
13,600.00	90.31	135.001	5,504.95	-4,062.41	5,911.72	7,052.75	0.00	0.00	0.00	
13,700.00	90.31	135.001	5,504.41	-4,133.12	5,982.43	7,152.75	0.00	0.00	0.00	
13,800.00	90.31	135.001	5,503.87	-4,203.83	6,053.14	7,252.75	0.00	0.00	0.00	
13,900.00	90.31	135.001	5,503.32	-4,274.54	6,123.85	7,352.75	0.00	0.00	0.00	
14,000.00	90.31	135.001	5,502.78	-4,345.25	6,194.56	7,452.75	0.00	0.00	0.00	
14,100.00	90.31	135.001	5,502.24	-4,415.96	6,265.27	7,552.75	0.00	0.00	0.00	
14,200.00	90.31	135.001	5,501.69	-4,486.67	6,335.98	7,652.74	0.00	0.00	0.00	
14,300.00	90.31	135.001	5,501.15	-4,557.38	6,406.68	7,752.74	0.00	0.00	0.00	
14,400.00	90.31	135.001	5,500.60	-4,628.09	6,477.39	7,852.74	0.00	0.00	0.00	
14,500.00	90.31	135.001	5,500.06	-4,698.80	6,548.10	7,952.74	0.00	0.00	0.00	



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,600.00	90.31	135.001	5,499.52	-4,769.51	6,618.81	8,052.74	0.00	0.00	0.00
14,700.00	90.31	135.001	5,498.97	-4,840.23	6,689.52	8,152.74	0.00	0.00	0.00
14,800.00	90.31	135.001	5,498.43	-4,910.94	6,760.23	8,252.74	0.00	0.00	0.00
14,900.00	90.31	135.001	5,497.89	-4,981.65	6,830.93	8,352.73	0.00	0.00	0.00
15,000.00	90.31	135.001	5,497.34	-5,052.36	6,901.64	8,452.73	0.00	0.00	0.00
15,100.00	90.31	135.001	5,496.80	-5,123.07	6,972.35	8,552.73	0.00	0.00	0.00
15,200.00	90.31	135.001	5,496.26	-5,193.78	7,043.06	8,652.73	0.00	0.00	0.00
15,300.00	90.31	135.001	5,495.71	-5,264.49	7,113.77	8,752.73	0.00	0.00	0.00
15,400.00	90.31	135.001	5,495.17	-5,335.20	7,184.48	8,852.73	0.00	0.00	0.00
15,500.00	90.31	135.001	5,494.63	-5,405.91	7,255.19	8,952.73	0.00	0.00	0.00
15,600.00	90.31	135.001	5,494.08	-5,476.62	7,325.89	9,052.72	0.00	0.00	0.00
15,700.00	90.31	135.001	5,493.54	-5,547.33	7,396.60	9,152.72	0.00	0.00	0.00
15,800.00	90.31	135.001	5,493.00	-5,618.04	7,467.31	9,252.72	0.00	0.00	0.00
15,900.00	90.31	135.001	5,492.45	-5,688.75	7,538.02	9,352.72	0.00	0.00	0.00
16,000.00	90.31	135.001	5,491.91	-5,759.47	7,608.73	9,452.72	0.00	0.00	0.00
16,100.00	90.31	135.001	5,491.36	-5,830.18	7,679.44	9,552.72	0.00	0.00	0.00
16,200.00	90.31	135.001	5,490.82	-5,900.89	7,750.15	9,652.71	0.00	0.00	0.00
16,300.00	90.31	135.001	5,490.28	-5,971.60	7,820.85	9,752.71	0.00	0.00	0.00
16,400.00	90.31	135.001	5,489.73	-6,042.31	7,891.56	9,852.71	0.00	0.00	0.00
16,500.00	90.31	135.001	5,489.19	-6,113.02	7,962.27	9,952.71	0.00	0.00	0.00
16,600.00	90.31	135.001	5,488.65	-6,183.73	8,032.98	10,052.71	0.00	0.00	0.00
16,700.00	90.31	135.001	5,488.10	-6,254.44	8,103.69	10,152.71	0.00	0.00	0.00
16,800.00	90.31	135.001	5,487.56	-6,325.15	8,174.40	10,252.71	0.00	0.00	0.00
16,900.00	90.31	135.001	5,487.02	-6,395.86	8,245.10	10,352.70	0.00	0.00	0.00
17,000.00	90.31	135.001	5,486.47	-6,466.57	8,315.81	10,452.70	0.00	0.00	0.00
17,100.00	90.31	135.001	5,485.93	-6,537.28	8,386.52	10,552.70	0.00	0.00	0.00
17,200.00	90.31	135.001	5,485.39	-6,607.99	8,457.23	10,652.70	0.00	0.00	0.00
17,300.00	90.31	135.001	5,484.84	-6,678.71	8,527.94	10,752.70	0.00	0.00	0.00
17,400.00	90.31	135.001	5,484.30	-6,749.42	8,598.65	10,852.70	0.00	0.00	0.00
17,500.00	90.31	135.001	5,483.75	-6,820.13	8,669.36	10,952.70	0.00	0.00	0.00
17,600.00	90.31	135.001	5,483.21	-6,890.84	8,740.06	11,052.69	0.00	0.00	0.00
17,700.00	90.31	135.001	5,482.67	-6,961.55	8,810.77	11,152.69	0.00	0.00	0.00
17,800.00	90.31	135.001	5,482.12	-7,032.26	8,881.48	11,252.69	0.00	0.00	0.00
17,900.00	90.31	135.001	5,481.58	-7,102.97	8,952.19	11,352.69	0.00	0.00	0.00
18,000.00	90.31	135.001	5,481.04	-7,173.68	9,022.90	11,452.69	0.00	0.00	0.00
18,100.00	90.31	135.001	5,480.49	-7,244.39	9,093.61	11,552.69	0.00	0.00	0.00
18,200.00	90.31	135.001	5,479.95	-7,315.10	9,164.32	11,652.69	0.00	0.00	0.00
18,300.00	90.31	135.001	5,479.41	-7,385.81	9,235.02	11,752.68	0.00	0.00	0.00
18,400.00	90.31	135.001	5,478.86	-7,456.52	9,305.73	11,852.68	0.00	0.00	0.00
18,500.00	90.31	135.001	5,478.32	-7,527.24	9,376.44	11,952.68	0.00	0.00	0.00
18,600.00	90.31	135.001	5,477.78	-7,597.95	9,447.15	12,052.68	0.00	0.00	0.00
18,700.00	90.31	135.001	5,477.23	-7,668.66	9,517.86	12,152.68	0.00	0.00	0.00
18,800.00	90.31	135.001	5,476.69	-7,739.37	9,588.57	12,252.68	0.00	0.00	0.00
18,900.00	90.31	135.001	5,476.15	-7,810.08	9,659.27	12,352.68	0.00	0.00	0.00
19,000.00	90.31	135.001	5,475.60	-7,880.79	9,729.98	12,452.67	0.00	0.00	0.00
19,100.00	90.31	135.001	5,475.06	-7,951.50	9,800.69	12,552.67	0.00	0.00	0.00
19,200.00	90.31	135.001	5,474.51	-8,022.21	9,871.40	12,652.67	0.00	0.00	0.00
19,300.00	90.31	135.001	5,473.97	-8,092.92	9,942.11	12,752.67	0.00	0.00	0.00
19,400.00	90.31	135.001	5,473.43	-8,163.63	10,012.82	12,852.67	0.00	0.00	0.00
19,500.00	90.31	135.001	5,472.88	-8,234.34	10,083.53	12,952.67	0.00	0.00	0.00
19,600.00	90.31	135.001	5,472.34	-8,305.05	10,154.23	13,052.66	0.00	0.00	0.00
19,700.00	90.31	135.001	5,471.80	-8,375.76	10,224.94	13,152.66	0.00	0.00	0.00
19,800.00	90.31	135.001	5,471.25	-8,446.48	10,295.65	13,252.66	0.00	0.00	0.00
19,900.00	90.31	135.001	5,470.71	-8,517.19	10,366.36	13,352.66	0.00	0.00	0.00



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
20,000.00	90.31	135.001	5,470.17	-8,587.90	10,437.07	13,452.66	0.00	0.00	0.00
20,100.00	90.31	135.001	5,469.62	-8,658.61	10,507.78	13,552.66	0.00	0.00	0.00
20,200.00	90.31	135.001	5,469.08	-8,729.32	10,578.49	13,652.66	0.00	0.00	0.00
20,300.00	90.31	135.001	5,468.54	-8,800.03	10,649.19	13,752.65	0.00	0.00	0.00
20,400.00	90.31	135.001	5,467.99	-8,870.74	10,719.90	13,852.65	0.00	0.00	0.00
20,500.00	90.31	135.001	5,467.45	-8,941.45	10,790.61	13,952.65	0.00	0.00	0.00
20,582.58	90.31	135.001	5,467.00	-8,999.84	10,849.00	14,035.23	0.00	0.00	0.00

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
Haynes 426 vert - plan hits target center - Point	0.00	360.000	4,942.05	1,591.54	257.96	1,914,602.273	1,276,461.356	36.255540163	-107.484449065
Haynes 426 LTP 1996 F - plan hits target center - Point	0.00	0.000	5,467.00	-8,999.84	10,849.00	1,904,010.914	1,287,052.373	36.226816000	-107.448090000
Haynes 426 FTP 2283 F - plan hits target center - Point	0.00	0.000	5,545.00	1,147.45	702.04	1,914,158.180	1,276,905.436	36.254336000	-107.482924000

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	
3,945.09	3,680.00	9 5/8" Csg	9-5/8	12-1/4	



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,442.92	1,406.71	Ojo Alamo		-0.31	135.001	
1,524.49	1,480.82	Kirtland		-0.31	135.001	
1,789.03	1,721.17	Fruitland		-0.31	135.001	
2,084.45	1,989.56	Pictured Cliffs		-0.31	135.001	
2,235.46	2,126.76	Lewis		-0.31	135.001	
2,551.82	2,414.18	Chacra_A		-0.31	135.001	
3,767.64	3,518.78	Cliff House_Basal		-0.31	135.001	
3,784.18	3,533.81	Menefee		-0.31	135.001	
4,566.88	4,249.80	Point Lookout		-0.31	135.001	
4,872.84	4,547.03	Mancos		-0.31	135.001	
5,222.10	4,895.10	Gallup (MNCS_A)		-0.31	135.001	
5,302.12	4,975.10	MNCS_B		-0.31	135.001	
5,455.20	5,124.94	MNCS_C		-0.31	135.001	
5,519.73	5,184.81	MNCS_Cms		-0.31	135.001	
5,599.64	5,254.60	MNCS_D		-0.31	135.001	
5,701.05	5,334.26	MNCS_E		-0.31	135.001	
5,773.76	5,383.98	MNCS_F		-0.31	135.001	
5,939.16	5,473.22	MNCS_G		-0.31	135.001	
6,035.87	5,512.75	MNCS_H @ 0VS		-0.31	135.001	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
500.00	500.00	0.00	0.00	KOP Begin 3°/100' build	
1,323.25	1,297.99	172.45	27.95	Begin 24.70° tangent	
4,345.80	4,044.06	1,419.09	230.01	Begin 3°/100' drop	
5,169.05	4,842.05	1,591.54	257.96	Begin vertical hold	
5,269.05	4,942.05	1,591.54	257.96	Begin 10°/100' build	
5,869.05	5,438.25	1,388.97	460.53	Begin 60.00° tangent	
5,929.05	5,468.25	1,352.22	497.27	Begin 10°/100' build	
6,232.17	5,545.00	1,147.45	702.04	Begin 90.31° lateral	
20,582.58	5,467.00	-8,999.84	10,849.00	PBHL @ 20582.58 MD 5467.00 TVD	



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

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

Site	Haynes Canyon Unit (420, 422, 424 & 426)				
Site Position:		Northing:	1,912,981.994 usft	Latitude:	36.251079000
From:	Lat/Long	Easting:	1,276,144.638 usft	Longitude:	-107.485453000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Haynes Canyon Unit 426 H, Surf loc: 1784 FSL 462 FEL Section 05-T23N-R06W					
Well Position	+N/-S	0.00 ft	Northing:	1,913,010.736 usft	Latitude:	36.251160000
	+E/-W	0.00 ft	Easting:	1,276,203.396 usft	Longitude:	-107.485255000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,765.00 ft
Grid Convergence:		-0.73 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/1/2023	8.44	62.76	49,110.83347463

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	135.001

Plan Survey Tool Program	Date	11/1/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,582.58 rev0 (Original Hole)	MWD	
			OWSG MWD - Standard	



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Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,323.25	24.70	9.207	1,297.99	172.45	27.95	3.00	3.00	0.00	9.21	
4,345.80	24.70	9.207	4,044.06	1,419.09	230.01	0.00	0.00	0.00	0.00	
5,169.05	0.00	360.000	4,842.05	1,591.54	257.96	3.00	-3.00	0.00	180.00	
5,269.05	0.00	360.000	4,942.05	1,591.54	257.96	0.00	0.00	0.00	0.00	Haynes 426 vert
5,869.05	60.00	135.001	5,438.25	1,388.97	460.53	10.00	10.00	0.00	135.00	
5,929.05	60.00	135.001	5,468.25	1,352.22	497.27	0.00	0.00	0.00	0.00	
6,232.17	90.31	135.001	5,545.00	1,147.45	702.04	10.00	10.00	0.00	0.00	
20,582.58	90.31	135.001	5,467.00	-8,999.84	10,849.00	0.00	0.00	0.00	0.00	Haynes 426 LTP 1996



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Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.000	0.00	0.00	0.00	1,913,010.736	1,276,203.396	36.251160000	-107.485255000
100.00	0.00	0.000	100.00	0.00	0.00	1,913,010.736	1,276,203.396	36.251160000	-107.485255000
200.00	0.00	0.000	200.00	0.00	0.00	1,913,010.736	1,276,203.396	36.251160000	-107.485255000
300.00	0.00	0.000	300.00	0.00	0.00	1,913,010.736	1,276,203.396	36.251160000	-107.485255000
400.00	0.00	0.000	400.00	0.00	0.00	1,913,010.736	1,276,203.396	36.251160000	-107.485255000
500.00	0.00	0.000	500.00	0.00	0.00	1,913,010.736	1,276,203.396	36.251160000	-107.485255000
600.00	3.00	9.207	599.95	2.58	0.42	1,913,013.320	1,276,203.815	36.251167111	-107.485253692
700.00	6.00	9.207	699.63	10.33	1.67	1,913,021.064	1,276,205.070	36.251188424	-107.485249770
800.00	9.00	9.207	798.77	23.21	3.76	1,913,033.947	1,276,207.158	36.251223880	-107.485243247
900.00	12.00	9.207	897.08	41.20	6.68	1,913,051.934	1,276,210.074	36.251273382	-107.485234139
1,000.00	15.00	9.207	994.31	64.24	10.41	1,913,074.975	1,276,213.808	36.251336795	-107.485222472
1,100.00	18.00	9.207	1,090.18	92.27	14.96	1,913,103.007	1,276,218.352	36.251413944	-107.485208277
1,200.00	21.00	9.207	1,184.43	125.22	20.30	1,913,135.954	1,276,223.692	36.251504619	-107.485191594
1,300.00	24.00	9.207	1,276.81	162.99	26.42	1,913,173.725	1,276,229.814	36.251608571	-107.485172468
1,323.25	24.70	9.207	1,297.99	172.45	27.95	1,913,183.188	1,276,231.348	36.251634614	-107.485167677
1,400.00	24.70	9.207	1,367.72	204.11	33.08	1,913,214.842	1,276,236.478	36.251721733	-107.485151648
1,500.00	24.70	9.207	1,458.57	245.35	39.77	1,913,256.087	1,276,243.163	36.251835244	-107.485130763
1,600.00	24.70	9.207	1,549.43	286.60	46.45	1,913,297.331	1,276,249.848	36.251948756	-107.485109878
1,700.00	24.70	9.207	1,640.28	327.84	53.14	1,913,338.576	1,276,256.533	36.252062267	-107.485088993
1,800.00	24.70	9.207	1,731.13	369.08	59.82	1,913,379.820	1,276,263.218	36.252175778	-107.485068108
1,900.00	24.70	9.207	1,821.98	410.33	66.51	1,913,421.065	1,276,269.903	36.252289290	-107.485047222
2,000.00	24.70	9.207	1,912.84	451.57	73.19	1,913,462.309	1,276,276.588	36.252402801	-107.485026337
2,100.00	24.70	9.207	2,003.69	492.82	79.88	1,913,503.554	1,276,283.273	36.252516312	-107.485005452
2,200.00	24.70	9.207	2,094.54	534.06	86.56	1,913,544.798	1,276,289.958	36.252629824	-107.484984567
2,300.00	24.70	9.207	2,185.39	575.31	93.25	1,913,586.043	1,276,296.643	36.252743335	-107.484963681
2,400.00	24.70	9.207	2,276.25	616.55	99.93	1,913,627.287	1,276,303.328	36.252856846	-107.484942796
2,500.00	24.70	9.207	2,367.10	657.80	106.62	1,913,668.532	1,276,310.013	36.252970358	-107.484921910
2,600.00	24.70	9.207	2,457.95	699.04	113.30	1,913,709.776	1,276,316.698	36.253083869	-107.484901025
2,700.00	24.70	9.207	2,548.81	740.29	119.99	1,913,751.020	1,276,323.383	36.253197381	-107.484880139
2,800.00	24.70	9.207	2,639.66	781.53	126.67	1,913,792.265	1,276,330.068	36.253310892	-107.484859253
2,900.00	24.70	9.207	2,730.51	822.77	133.36	1,913,833.509	1,276,336.753	36.253424403	-107.484838368
3,000.00	24.70	9.207	2,821.36	864.02	140.04	1,913,874.754	1,276,343.438	36.253537915	-107.484817482
3,100.00	24.70	9.207	2,912.22	905.26	146.73	1,913,915.998	1,276,350.123	36.253651426	-107.484796596
3,200.00	24.70	9.207	3,003.07	946.51	153.41	1,913,957.243	1,276,356.808	36.253764937	-107.484775710
3,300.00	24.70	9.207	3,093.92	987.75	160.10	1,913,998.487	1,276,363.493	36.253878449	-107.484754824
3,400.00	24.70	9.207	3,184.77	1,029.00	166.78	1,914,039.732	1,276,370.178	36.253991960	-107.484733938
3,500.00	24.70	9.207	3,275.63	1,070.24	173.47	1,914,080.976	1,276,376.863	36.254105471	-107.484713052
3,600.00	24.70	9.207	3,366.48	1,111.49	180.15	1,914,122.221	1,276,383.548	36.254218982	-107.484692166
3,700.00	24.70	9.207	3,457.33	1,152.73	186.84	1,914,163.465	1,276,390.233	36.254332494	-107.484671280
3,800.00	24.70	9.207	3,548.18	1,193.98	193.52	1,914,204.710	1,276,396.918	36.254446005	-107.484650394
3,900.00	24.70	9.207	3,639.04	1,235.22	200.21	1,914,245.954	1,276,403.603	36.254559516	-107.484629508
4,000.00	24.70	9.207	3,729.89	1,276.46	206.89	1,914,287.199	1,276,410.288	36.254673028	-107.484608621
4,100.00	24.70	9.207	3,820.74	1,317.71	213.58	1,914,328.443	1,276,416.973	36.254786539	-107.484587735
4,200.00	24.70	9.207	3,911.59	1,358.95	220.26	1,914,369.687	1,276,423.658	36.254900050	-107.484566848
4,300.00	24.70	9.207	4,002.45	1,400.20	226.95	1,914,410.932	1,276,430.343	36.255013561	-107.484545962
4,345.80	24.70	9.207	4,044.06	1,419.09	230.01	1,914,429.822	1,276,433.405	36.255065550	-107.484536396
4,400.00	23.07	9.207	4,093.61	1,440.75	233.52	1,914,451.484	1,276,436.916	36.255125166	-107.484525426
4,500.00	20.07	9.207	4,186.60	1,477.04	239.40	1,914,487.772	1,276,442.797	36.255225038	-107.484507049
4,600.00	17.07	9.207	4,281.38	1,508.47	244.50	1,914,519.207	1,276,447.892	36.255311552	-107.484491130
4,700.00	14.07	9.207	4,377.70	1,534.97	248.79	1,914,545.702	1,276,452.187	36.255384471	-107.484477713
4,800.00	11.07	9.207	4,475.29	1,556.45	252.27	1,914,567.185	1,276,455.669	36.255443595	-107.484466834
4,900.00	8.07	9.207	4,573.89	1,572.86	254.93	1,914,583.597	1,276,458.329	36.255488763	-107.484458522
5,000.00	5.07	9.207	4,673.22	1,584.16	256.76	1,914,594.893	1,276,460.160	36.255519850	-107.484452802
5,100.00	2.07	9.207	4,773.01	1,590.31	257.76	1,914,601.041	1,276,461.156	36.255536772	-107.484449688
5,169.05	0.00	360.000	4,842.05	1,591.54	257.96	1,914,602.273	1,276,461.356	36.255540163	-107.484449065



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Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,200.00	0.00	0.000	4,873.00	1,591.54	257.96	1,914,602.273	1,276,461.356	36.255540163	-107.484449065	
5,269.05	0.00	360.000	4,942.05	1,591.54	257.96	1,914,602.273	1,276,461.356	36.255540163	-107.484449065	
5,300.00	3.09	135.001	4,972.98	1,590.95	258.55	1,914,601.682	1,276,461.947	36.255538560	-107.484447035	
5,350.00	8.09	135.001	5,022.73	1,587.50	262.00	1,914,598.236	1,276,465.393	36.255529217	-107.484435202	
5,400.00	13.09	135.001	5,071.86	1,581.00	268.50	1,914,591.738	1,276,471.891	36.255511596	-107.484412884	
5,450.00	18.09	135.001	5,120.01	1,571.50	278.00	1,914,582.236	1,276,481.392	36.255485832	-107.484380254	
5,500.00	23.09	135.001	5,166.80	1,559.07	290.43	1,914,569.803	1,276,493.825	36.255452121	-107.484337558	
5,550.00	28.09	135.001	5,211.87	1,543.80	305.70	1,914,554.534	1,276,509.093	36.255410719	-107.484285122	
5,600.00	33.09	135.001	5,254.90	1,525.81	323.69	1,914,536.545	1,276,527.082	36.255361941	-107.484223345	
5,650.00	38.09	135.001	5,295.55	1,505.24	344.26	1,914,515.973	1,276,547.654	36.255306159	-107.484152696	
5,700.00	43.09	135.001	5,333.50	1,482.24	367.26	1,914,492.974	1,276,570.652	36.255243798	-107.484073715	
5,750.00	48.09	135.001	5,368.48	1,456.99	392.51	1,914,467.723	1,276,595.901	36.255175331	-107.483987001	
5,800.00	53.09	135.001	5,400.20	1,429.68	419.81	1,914,440.413	1,276,623.211	36.255101280	-107.483893216	
5,850.00	58.09	135.001	5,428.45	1,400.52	448.98	1,914,411.251	1,276,652.371	36.255022208	-107.483793072	
5,869.05	60.00	135.001	5,438.25	1,388.97	460.53	1,914,399.699	1,276,663.923	36.254990883	-107.483753400	
5,900.00	60.00	135.001	5,453.72	1,370.01	479.48	1,914,380.746	1,276,682.875	36.254939493	-107.483688315	
5,929.05	60.00	135.001	5,468.25	1,352.22	497.27	1,914,362.956	1,276,700.665	36.254891255	-107.483627221	
5,950.00	62.09	135.001	5,478.39	1,339.26	510.23	1,914,349.995	1,276,713.626	36.254856110	-107.483582711	
6,000.00	67.09	135.001	5,499.83	1,307.33	542.16	1,914,318.068	1,276,745.551	36.254769540	-107.483473072	
6,050.00	72.09	135.001	5,517.26	1,274.21	575.28	1,914,284.941	1,276,778.677	36.254679716	-107.483359312	
6,100.00	77.09	135.001	5,530.54	1,240.13	609.36	1,914,250.867	1,276,812.750	36.254587322	-107.483242297	
6,150.00	82.09	135.001	5,539.56	1,205.37	644.12	1,914,216.103	1,276,847.513	36.254493060	-107.483122917	
6,200.00	87.09	135.001	5,544.27	1,170.18	679.30	1,914,180.916	1,276,882.699	36.254397648	-107.483002081	
6,232.17	90.31	135.001	5,545.00	1,147.45	702.04	1,914,158.180	1,276,905.434	36.254335999	-107.482924005	
6,300.00	90.31	135.001	5,544.63	1,099.48	750.00	1,914,110.213	1,276,953.399	36.254205937	-107.482759287	
6,400.00	90.31	135.001	5,544.09	1,028.77	820.71	1,914,039.503	1,277,024.107	36.254014203	-107.482516464	
6,500.00	90.31	135.001	5,543.54	958.06	891.42	1,913,968.792	1,277,094.816	36.253822467	-107.482273643	
6,600.00	90.31	135.001	5,543.00	887.35	962.13	1,913,898.082	1,277,165.524	36.253630732	-107.482030823	
6,700.00	90.31	135.001	5,542.46	816.64	1,032.84	1,913,827.371	1,277,236.232	36.253438995	-107.481788004	
6,800.00	90.31	135.001	5,541.91	745.93	1,103.55	1,913,756.660	1,277,306.941	36.253247258	-107.481545187	
6,900.00	90.31	135.001	5,541.37	675.21	1,174.26	1,913,685.950	1,277,377.649	36.253055521	-107.481302370	
7,000.00	90.31	135.001	5,540.83	604.50	1,244.96	1,913,615.239	1,277,448.357	36.252863783	-107.481059555	
7,100.00	90.31	135.001	5,540.28	533.79	1,315.67	1,913,544.528	1,277,519.066	36.252672045	-107.480816741	
7,200.00	90.31	135.001	5,539.74	463.08	1,386.38	1,913,473.818	1,277,589.774	36.252480306	-107.480573928	
7,300.00	90.31	135.001	5,539.20	392.37	1,457.09	1,913,403.107	1,277,660.482	36.252288567	-107.480331116	
7,400.00	90.31	135.001	5,538.65	321.66	1,527.80	1,913,332.397	1,277,731.191	36.252096827	-107.480088305	
7,500.00	90.31	135.001	5,538.11	250.95	1,598.51	1,913,261.686	1,277,801.899	36.251905086	-107.479845496	
7,600.00	90.31	135.001	5,537.56	180.24	1,669.21	1,913,190.975	1,277,872.607	36.251713345	-107.479602688	
7,700.00	90.31	135.001	5,537.02	109.53	1,739.92	1,913,120.265	1,277,943.316	36.251521604	-107.479359881	
7,800.00	90.31	135.001	5,536.48	38.82	1,810.63	1,913,049.554	1,278,014.024	36.251329862	-107.479117075	
7,900.00	90.31	135.001	5,535.93	-31.89	1,881.34	1,912,978.843	1,278,084.733	36.251138119	-107.478874270	
8,000.00	90.31	135.001	5,535.39	-102.60	1,952.05	1,912,908.133	1,278,155.441	36.250946376	-107.478631467	
8,100.00	90.31	135.001	5,534.85	-173.31	2,022.76	1,912,837.422	1,278,226.149	36.250754632	-107.478388665	
8,200.00	90.31	135.001	5,534.30	-244.03	2,093.47	1,912,766.712	1,278,296.858	36.250562888	-107.478145864	
8,300.00	90.31	135.001	5,533.76	-314.74	2,164.17	1,912,696.001	1,278,367.566	36.250371144	-107.477903064	
8,400.00	90.31	135.001	5,533.22	-385.45	2,234.88	1,912,625.290	1,278,438.274	36.250179399	-107.477660265	
8,500.00	90.31	135.001	5,532.67	-456.16	2,305.59	1,912,554.580	1,278,508.983	36.249987653	-107.477417467	
8,600.00	90.31	135.001	5,532.13	-526.87	2,376.30	1,912,483.869	1,278,579.691	36.249795907	-107.477174671	
8,700.00	90.31	135.001	5,531.59	-597.58	2,447.01	1,912,413.158	1,278,650.399	36.249604160	-107.476931876	
8,800.00	90.31	135.001	5,531.04	-668.29	2,517.72	1,912,342.448	1,278,721.108	36.249412413	-107.476689082	
8,900.00	90.31	135.001	5,530.50	-739.00	2,588.42	1,912,271.737	1,278,791.816	36.249220665	-107.476446289	
9,000.00	90.31	135.001	5,529.96	-809.71	2,659.13	1,912,201.027	1,278,862.524	36.249028917	-107.476203498	
9,100.00	90.31	135.001	5,529.41	-880.42	2,729.84	1,912,130.316	1,278,933.233	36.248837168	-107.475960707	
9,200.00	90.31	135.001	5,528.87	-951.13	2,800.55	1,912,059.605	1,279,003.941	36.248645419	-107.475717918	
9,300.00	90.31	135.001	5,528.32	-1,021.84	2,871.26	1,911,988.895	1,279,074.649	36.248453669	-107.475475130	



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,400.00	90.31	135.001	5,527.78	-1,092.55	2,941.97	1,911,918.184	1,279,145.358	36.248261918	-107.475232343	
9,500.00	90.31	135.001	5,527.24	-1,163.27	3,012.68	1,911,847.473	1,279,216.066	36.248070167	-107.474989557	
9,600.00	90.31	135.001	5,526.69	-1,233.98	3,083.38	1,911,776.763	1,279,286.774	36.247878416	-107.474746773	
9,700.00	90.31	135.001	5,526.15	-1,304.69	3,154.09	1,911,706.052	1,279,357.483	36.247686664	-107.474503990	
9,800.00	90.31	135.001	5,525.61	-1,375.40	3,224.80	1,911,635.342	1,279,428.191	36.247494912	-107.474261208	
9,900.00	90.31	135.001	5,525.06	-1,446.11	3,295.51	1,911,564.631	1,279,498.900	36.247303159	-107.474018427	
10,000.00	90.31	135.001	5,524.52	-1,516.82	3,366.22	1,911,493.920	1,279,569.608	36.247111405	-107.473775647	
10,100.00	90.31	135.001	5,523.98	-1,587.53	3,436.93	1,911,423.210	1,279,640.316	36.246919651	-107.473532868	
10,200.00	90.31	135.001	5,523.43	-1,658.24	3,507.64	1,911,352.499	1,279,711.025	36.246727897	-107.473290091	
10,300.00	90.31	135.001	5,522.89	-1,728.95	3,578.34	1,911,281.788	1,279,781.733	36.246536142	-107.473047315	
10,400.00	90.31	135.001	5,522.35	-1,799.66	3,649.05	1,911,211.078	1,279,852.441	36.246344386	-107.472804540	
10,500.00	90.31	135.001	5,521.80	-1,870.37	3,719.76	1,911,140.367	1,279,923.150	36.246152630	-107.472561766	
10,600.00	90.31	135.001	5,521.26	-1,941.08	3,790.47	1,911,069.657	1,279,993.858	36.245960873	-107.472318994	
10,700.00	90.31	135.001	5,520.72	-2,011.79	3,861.18	1,910,998.946	1,280,064.566	36.245769116	-107.472076222	
10,800.00	90.31	135.001	5,520.17	-2,082.51	3,931.89	1,910,928.235	1,280,135.275	36.245577358	-107.471833452	
10,900.00	90.31	135.001	5,519.63	-2,153.22	4,002.59	1,910,857.525	1,280,205.983	36.245385600	-107.471590683	
11,000.00	90.31	135.001	5,519.08	-2,223.93	4,073.30	1,910,786.814	1,280,276.691	36.245193842	-107.471347916	
11,100.00	90.31	135.001	5,518.54	-2,294.64	4,144.01	1,910,716.103	1,280,347.400	36.245002082	-107.471105149	
11,200.00	90.31	135.001	5,518.00	-2,365.35	4,214.72	1,910,645.393	1,280,418.108	36.244810323	-107.470862384	
11,300.00	90.31	135.001	5,517.45	-2,436.06	4,285.43	1,910,574.682	1,280,488.816	36.244618562	-107.470619619	
11,400.00	90.31	135.001	5,516.91	-2,506.77	4,356.14	1,910,503.972	1,280,559.525	36.244426801	-107.470376856	
11,500.00	90.31	135.001	5,516.37	-2,577.48	4,426.85	1,910,433.261	1,280,630.233	36.244235040	-107.470134094	
11,600.00	90.31	135.001	5,515.82	-2,648.19	4,497.55	1,910,362.550	1,280,700.942	36.244043278	-107.469891334	
11,700.00	90.31	135.001	5,515.28	-2,718.90	4,568.26	1,910,291.840	1,280,771.650	36.243851516	-107.469648574	
11,800.00	90.31	135.001	5,514.74	-2,789.61	4,638.97	1,910,221.129	1,280,842.358	36.243659753	-107.469405816	
11,900.00	90.31	135.001	5,514.19	-2,860.32	4,709.68	1,910,150.418	1,280,913.067	36.243467990	-107.469163058	
12,000.00	90.31	135.001	5,513.65	-2,931.03	4,780.39	1,910,079.708	1,280,983.775	36.243276226	-107.468920302	
12,100.00	90.31	135.001	5,513.11	-3,001.75	4,851.10	1,910,008.997	1,281,054.483	36.243084461	-107.468677548	
12,200.00	90.31	135.001	5,512.56	-3,072.46	4,921.81	1,909,938.287	1,281,125.192	36.242892696	-107.468434794	
12,300.00	90.31	135.001	5,512.02	-3,143.17	4,992.51	1,909,867.576	1,281,195.900	36.242700931	-107.468192042	
12,400.00	90.31	135.001	5,511.48	-3,213.88	5,063.22	1,909,796.865	1,281,266.608	36.242509165	-107.467949290	
12,500.00	90.31	135.001	5,510.93	-3,284.59	5,133.93	1,909,726.155	1,281,337.317	36.242317398	-107.467706540	
12,600.00	90.31	135.001	5,510.39	-3,355.30	5,204.64	1,909,655.444	1,281,408.025	36.242125631	-107.467463791	
12,700.00	90.31	135.001	5,509.84	-3,426.01	5,275.35	1,909,584.733	1,281,478.733	36.241933864	-107.467221044	
12,800.00	90.31	135.001	5,509.30	-3,496.72	5,346.06	1,909,514.023	1,281,549.442	36.241742095	-107.466978297	
12,900.00	90.31	135.001	5,508.76	-3,567.43	5,416.76	1,909,443.312	1,281,620.150	36.241550327	-107.466735552	
13,000.00	90.31	135.001	5,508.21	-3,638.14	5,487.47	1,909,372.602	1,281,690.858	36.241358558	-107.466492808	
13,100.00	90.31	135.001	5,507.67	-3,708.85	5,558.18	1,909,301.891	1,281,761.567	36.241166788	-107.466250065	
13,200.00	90.31	135.001	5,507.13	-3,779.56	5,628.89	1,909,231.180	1,281,832.275	36.240975018	-107.466007323	
13,300.00	90.31	135.001	5,506.58	-3,850.27	5,699.60	1,909,160.470	1,281,902.983	36.240783247	-107.465764582	
13,400.00	90.31	135.001	5,506.04	-3,920.99	5,770.31	1,909,089.759	1,281,973.692	36.240591476	-107.465521843	
13,500.00	90.31	135.001	5,505.50	-3,991.70	5,841.02	1,909,019.048	1,282,044.400	36.240399704	-107.465279105	
13,600.00	90.31	135.001	5,504.95	-4,062.41	5,911.72	1,908,948.338	1,282,115.109	36.240207932	-107.465036367	
13,700.00	90.31	135.001	5,504.41	-4,133.12	5,982.43	1,908,877.627	1,282,185.817	36.240016159	-107.464793632	
13,800.00	90.31	135.001	5,503.87	-4,203.83	6,053.14	1,908,806.916	1,282,256.525	36.239824386	-107.464550897	
13,900.00	90.31	135.001	5,503.32	-4,274.54	6,123.85	1,908,736.206	1,282,327.234	36.239632612	-107.464308163	
14,000.00	90.31	135.001	5,502.78	-4,345.25	6,194.56	1,908,665.495	1,282,397.942	36.239440838	-107.464065431	
14,100.00	90.31	135.001	5,502.24	-4,415.96	6,265.27	1,908,594.785	1,282,468.650	36.239249063	-107.463822700	
14,200.00	90.31	135.001	5,501.69	-4,486.67	6,335.98	1,908,524.074	1,282,539.359	36.239057287	-107.463579970	
14,300.00	90.31	135.001	5,501.15	-4,557.38	6,406.68	1,908,453.363	1,282,610.067	36.238865511	-107.463337241	
14,400.00	90.31	135.001	5,500.60	-4,628.09	6,477.39	1,908,382.653	1,282,680.775	36.238673735	-107.463094514	
14,500.00	90.31	135.001	5,500.06	-4,698.80	6,548.10	1,908,311.942	1,282,751.484	36.238481958	-107.462851787	
14,600.00	90.31	135.001	5,499.52	-4,769.51	6,618.81	1,908,241.231	1,282,822.192	36.238290181	-107.462609062	
14,700.00	90.31	135.001	5,498.97	-4,840.23	6,689.52	1,908,170.521	1,282,892.900	36.238098403	-107.462366338	
14,800.00	90.31	135.001	5,498.43	-4,910.94	6,760.23	1,908,099.810	1,282,963.609	36.237906624	-107.462123615	



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude		Longitude
14,900.00	90.31	135.001	5,497.89	-4,981.65	6,830.93	1,908,029.100	1,283,034.317	36.237714845		-107.461880894
15,000.00	90.31	135.001	5,497.34	-5,052.36	6,901.64	1,907,958.389	1,283,105.025	36.237523065		-107.461638173
15,100.00	90.31	135.001	5,496.80	-5,123.07	6,972.35	1,907,887.678	1,283,175.734	36.237331285		-107.461395454
15,200.00	90.31	135.001	5,496.26	-5,193.78	7,043.06	1,907,816.968	1,283,246.442	36.237139505		-107.461152736
15,300.00	90.31	135.001	5,495.71	-5,264.49	7,113.77	1,907,746.257	1,283,317.151	36.236947724		-107.460910019
15,400.00	90.31	135.001	5,495.17	-5,335.20	7,184.48	1,907,675.546	1,283,387.859	36.236755942		-107.460667303
15,500.00	90.31	135.001	5,494.63	-5,405.91	7,255.19	1,907,604.836	1,283,458.567	36.236564160		-107.460424589
15,600.00	90.31	135.001	5,494.08	-5,476.62	7,325.89	1,907,534.125	1,283,529.276	36.236372377		-107.460181876
15,700.00	90.31	135.001	5,493.54	-5,547.33	7,396.60	1,907,463.415	1,283,599.984	36.236180594		-107.459939163
15,800.00	90.31	135.001	5,493.00	-5,618.04	7,467.31	1,907,392.704	1,283,670.692	36.235988810		-107.459696452
15,900.00	90.31	135.001	5,492.45	-5,688.75	7,538.02	1,907,321.993	1,283,741.401	36.235797026		-107.459453743
16,000.00	90.31	135.001	5,491.91	-5,759.47	7,608.73	1,907,251.283	1,283,812.109	36.235605241		-107.459211034
16,100.00	90.31	135.001	5,491.36	-5,830.18	7,679.44	1,907,180.572	1,283,882.817	36.235413456		-107.458968327
16,200.00	90.31	135.001	5,490.82	-5,900.89	7,750.15	1,907,109.861	1,283,953.526	36.235221670		-107.458725620
16,300.00	90.31	135.001	5,490.28	-5,971.60	7,820.85	1,907,039.151	1,284,024.234	36.235029884		-107.458482915
16,400.00	90.31	135.001	5,489.73	-6,042.31	7,891.56	1,906,968.440	1,284,094.942	36.234838097		-107.458240212
16,500.00	90.31	135.001	5,489.19	-6,113.02	7,962.27	1,906,897.730	1,284,165.651	36.234646309		-107.457997509
16,600.00	90.31	135.001	5,488.65	-6,183.73	8,032.98	1,906,827.019	1,284,236.359	36.234454522		-107.457754807
16,700.00	90.31	135.001	5,488.10	-6,254.44	8,103.69	1,906,756.308	1,284,307.067	36.234262733		-107.457512107
16,800.00	90.31	135.001	5,487.56	-6,325.15	8,174.40	1,906,685.598	1,284,377.776	36.234070944		-107.457269408
16,900.00	90.31	135.001	5,487.02	-6,395.86	8,245.10	1,906,614.887	1,284,448.484	36.233879155		-107.457026710
17,000.00	90.31	135.001	5,486.47	-6,466.57	8,315.81	1,906,544.176	1,284,519.192	36.233687365		-107.456784013
17,100.00	90.31	135.001	5,485.93	-6,537.28	8,386.52	1,906,473.466	1,284,589.901	36.233495574		-107.456541318
17,200.00	90.31	135.001	5,485.39	-6,607.99	8,457.23	1,906,402.755	1,284,660.609	36.233303783		-107.456298623
17,300.00	90.31	135.001	5,484.84	-6,678.71	8,527.94	1,906,332.045	1,284,731.318	36.233111992		-107.456055930
17,400.00	90.31	135.001	5,484.30	-6,749.42	8,598.65	1,906,261.334	1,284,802.026	36.232920200		-107.455813238
17,500.00	90.31	135.001	5,483.75	-6,820.13	8,669.36	1,906,190.623	1,284,872.734	36.232728407		-107.455570547
17,600.00	90.31	135.001	5,483.21	-6,890.84	8,740.06	1,906,119.913	1,284,943.443	36.232536614		-107.455327858
17,700.00	90.31	135.001	5,482.67	-6,961.55	8,810.77	1,906,049.202	1,285,014.151	36.232344820		-107.455085169
17,800.00	90.31	135.001	5,482.12	-7,032.26	8,881.48	1,905,978.491	1,285,084.859	36.232153026		-107.454842482
17,900.00	90.31	135.001	5,481.58	-7,102.97	8,952.19	1,905,907.781	1,285,155.568	36.231961231		-107.454599796
18,000.00	90.31	135.001	5,481.04	-7,173.68	9,022.90	1,905,837.070	1,285,226.276	36.231769436		-107.454357111
18,100.00	90.31	135.001	5,480.49	-7,244.39	9,093.61	1,905,766.360	1,285,296.984	36.231577641		-107.454114427
18,200.00	90.31	135.001	5,479.95	-7,315.10	9,164.32	1,905,695.649	1,285,367.693	36.231385844		-107.453871745
18,300.00	90.31	135.001	5,479.41	-7,385.81	9,235.02	1,905,624.938	1,285,438.401	36.231194048		-107.453629063
18,400.00	90.31	135.001	5,478.86	-7,456.52	9,305.73	1,905,554.228	1,285,509.109	36.231002250		-107.453386383
18,500.00	90.31	135.001	5,478.32	-7,527.24	9,376.44	1,905,483.517	1,285,579.818	36.230810453		-107.453143704
18,600.00	90.31	135.001	5,477.78	-7,597.95	9,447.15	1,905,412.806	1,285,650.526	36.230618654		-107.452901027
18,700.00	90.31	135.001	5,477.23	-7,668.66	9,517.86	1,905,342.095	1,285,721.234	36.230426855		-107.452658350
18,800.00	90.31	135.001	5,476.69	-7,739.37	9,588.57	1,905,271.384	1,285,791.943	36.230235056		-107.452415675
18,900.00	90.31	135.001	5,476.15	-7,810.08	9,659.27	1,905,200.674	1,285,862.651	36.230043256		-107.452173000
19,000.00	90.31	135.001	5,475.60	-7,880.79	9,729.98	1,905,129.963	1,285,933.360	36.229851456		-107.451930327
19,100.00	90.31	135.001	5,475.06	-7,951.50	9,800.69	1,905,059.252	1,286,004.068	36.229659655		-107.451687655
19,200.00	90.31	135.001	5,474.51	-8,022.21	9,871.40	1,904,988.542	1,286,074.776	36.229467853		-107.451444985
19,300.00	90.31	135.001	5,473.97	-8,092.92	9,942.11	1,904,917.831	1,286,145.485	36.229276051		-107.451202315
19,400.00	90.31	135.001	5,473.43	-8,163.63	10,012.82	1,904,847.120	1,286,216.193	36.229084249		-107.450959647
19,500.00	90.31	135.001	5,472.88	-8,234.34	10,083.53	1,904,776.410	1,286,286.901	36.228892446		-107.450716980
19,600.00	90.31	135.001	5,472.34	-8,305.05	10,154.23	1,904,705.699	1,286,357.610	36.228700642		-107.450474314
19,700.00	90.31	135.001	5,471.80	-8,375.76	10,224.94	1,904,634.989	1,286,428.318	36.228508838		-107.450231649
19,800.00	90.31	135.001	5,471.25	-8,446.48	10,295.65	1,904,564.278	1,286,499.026	36.228317034		-107.449988986
19,900.00	90.31	135.001	5,470.71	-8,517.19	10,366.36	1,904,493.567	1,286,569.735	36.228125229		-107.449746323
20,000.00	90.31	135.001	5,470.17	-8,587.90	10,437.07	1,904,422.857	1,286,640.443	36.227933423		-107.449503662
20,100.00	90.31	135.001	5,469.62	-8,658.61	10,507.78	1,904,352.146	1,286,711.151	36.227741617		-107.449261002
20,200.00	90.31	135.001	5,469.08	-8,729.32	10,578.49	1,904,281.435	1,286,781.860	36.227549810		-107.449018343
20,300.00	90.31	135.001	5,468.54	-8,800.03	10,649.19	1,904,210.725	1,286,852.568	36.227358003		-107.448775685



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
20,400.00	90.31	135.001	5,467.99	-8,870.74	10,719.90	1,904,140.014	1,286,923.276	36.227166196	-107.448533029	
20,500.00	90.31	135.001	5,467.45	-8,941.45	10,790.61	1,904,069.304	1,286,993.985	36.226974387	-107.448290374	
20,582.58	90.31	135.001	5,467.00	-8,999.84	10,849.00	1,904,010.914	1,287,052.373	36.226816000	-107.448090000	

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	
Haynes 426 vert - plan hits target center - Point	0.00	360.000	4,942.05	1,591.54	257.96	1,914,602.273	1,276,461.356	36.255540163	-107.484449065	
Haynes 426 LTP 1996 F - plan hits target center - Point	0.00	0.000	5,467.00	-8,999.84	10,849.00	1,904,010.914	1,287,052.373	36.226816000	-107.448090000	
Haynes 426 FTP 2283 F - plan hits target center - Point	0.00	0.000	5,545.00	1,147.45	702.04	1,914,158.180	1,276,905.436	36.254336000	-107.482924000	

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
3,945.09	3,680.00	9 5/8" Csg			9-5/8	12-1/4



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6765+25 @ 6790.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	MD Reference:	RKB=6765+25 @ 6790.00ft
Site:	Haynes Canyon Unit (420, 422, 424 & 426)	North Reference:	Grid
Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,442.92	1,406.71	Ojo Alamo		-0.31	135.001	
1,524.49	1,480.82	Kirtland		-0.31	135.001	
1,789.03	1,721.17	Fruitland		-0.31	135.001	
2,084.45	1,989.56	Pictured Cliffs		-0.31	135.001	
2,235.46	2,126.76	Lewis		-0.31	135.001	
2,551.82	2,414.18	Chacra_A		-0.31	135.001	
3,767.64	3,518.78	Cliff House_Basal		-0.31	135.001	
3,784.18	3,533.81	Menefee		-0.31	135.001	
4,566.88	4,249.80	Point Lookout		-0.31	135.001	
4,872.84	4,547.03	Mancos		-0.31	135.001	
5,222.10	4,895.10	Gallup (MNCS_A)		-0.31	135.001	
5,302.12	4,975.10	MNCS_B		-0.31	135.001	
5,455.20	5,124.94	MNCS_C		-0.31	135.001	
5,519.73	5,184.81	MNCS_Cms		-0.31	135.001	
5,599.64	5,254.60	MNCS_D		-0.31	135.001	
5,701.05	5,334.26	MNCS_E		-0.31	135.001	
5,773.76	5,383.98	MNCS_F		-0.31	135.001	
5,939.16	5,473.22	MNCS_G		-0.31	135.001	
6,035.87	5,512.75	MNCS_H @ 0VS		-0.31	135.001	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
500.00	500.00	0.00	0.00	KOP Begin 3°/100' build	
1,323.25	1,297.99	172.45	27.95	Begin 24.70° tangent	
4,345.80	4,044.06	1,419.09	230.01	Begin 3°/100' drop	
5,169.05	4,842.05	1,591.54	257.96	Begin vertical hold	
5,269.05	4,942.05	1,591.54	257.96	Begin 10°/100' build	
5,869.05	5,438.25	1,388.97	460.53	Begin 60.00° tangent	
5,929.05	5,468.25	1,352.22	497.27	Begin 10°/100' build	
6,232.17	5,545.00	1,147.45	702.04	Begin 90.31° lateral	
20,582.58	5,467.00	-8,999.84	10,849.00	PBHL @ 20582.58 MD 5467.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference	rev0		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 2,258.26ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	11/1/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	20,582.58	rev0 (Original Hole)	MWD	OWSG MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Haynes Canyon Unit (420, 422, 424 & 426)						
Haynes Canyon Unit 420 H - Original Hole - rev0	500.00	500.00	65.41	62.28	20.854	CC, ES
Haynes Canyon Unit 420 H - Original Hole - rev0	700.00	695.16	77.70	73.18	17.169	SF
Haynes Canyon Unit 422 H - Original Hole - rev0	500.00	500.00	46.33	43.19	14.770	CC, ES
Haynes Canyon Unit 422 H - Original Hole - rev0	700.00	697.50	57.34	52.80	12.633	SF
Haynes Canyon Unit 424 H - Original Hole - rev1	500.00	500.00	28.19	25.05	8.986	CC, ES
Haynes Canyon Unit 424 H - Original Hole - rev1	20,582.58	19,024.20	1,230.55	575.55	1.879	Level 3<2.00, SF
Haynes Canyon Unit (428,430,440 & 442)						
Haynes Canyon Unit 428H - Original Hole - rev0	11,793.36	5,605.03	1,274.60	1,120.39	8.265	CC
Haynes Canyon Unit 428H - Original Hole - rev0	19,200.00	13,050.30	1,304.30	825.16	2.722	ES
Haynes Canyon Unit 428H - Original Hole - rev0	19,300.00	13,060.59	1,307.38	827.07	2.722	SF
Haynes Canyon Unit 440H - Original Hole - rev0	5,800.00	11,787.99	1,315.61	1,151.76	8.029	SF
Haynes Canyon Unit 440H - Original Hole - rev0	6,000.00	11,615.28	1,305.68	1,144.57	8.104	ES
Haynes Canyon Unit 440H - Original Hole - rev0	6,292.13	11,329.36	1,303.65	1,147.91	8.371	CC
Section 06-T23N-R06W						
NE Lybrook Com 263 H - Original Hole - rev2	5,900.00	15,786.04	365.05	108.28	1.422	Level 2<1.50, ES, SF
NE Lybrook Com 263 H - Original Hole - rev2	6,078.26	15,786.04	319.37	158.38	1.984	Level 3<2.00, CC

Offset Design:	Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 420 H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program:	0-MWD												Offset Well Error:	0.00 ft
Reference	Offset		Semi Major Axis		Offset Wellbore Centre				Rule Assigned:					
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-116.07	-28.74	-58.76	65.41					
100.00	100.00	100.00	100.00	0.13	0.13	-116.07	-28.74	-58.76	65.41	65.14	0.27	243.301		
200.00	200.00	200.00	200.00	0.49	0.49	-116.07	-28.74	-58.76	65.41	64.43	0.99	66.355		
300.00	300.00	300.00	300.00	0.85	0.85	-116.07	-28.74	-58.76	65.41	63.71	1.70	38.416		
400.00	400.00	400.00	400.00	1.21	1.21	-116.07	-28.74	-58.76	65.41	62.99	2.42	27.033		
500.00	500.00	500.00	500.00	1.57	1.57	-116.07	-28.74	-58.76	65.41	62.28	3.14	20.854	CC, ES	
600.00	599.95	598.36	598.32	1.93	1.91	-128.92	-31.27	-58.67	68.12	64.29	3.83	17.777		
700.00	699.63	695.16	694.82	2.29	2.24	-138.01	-38.70	-58.41	77.70	73.18	4.53	17.169	SF	
800.00	798.77	788.96	787.85	2.66	2.57	-148.41	-50.55	-58.01	96.82	91.60	5.23	18.529		
900.00	897.08	878.47	876.00	3.06	2.91	-157.10	-66.10	-57.47	126.77	120.87	5.91	21.463		
1,000.00	994.31	962.67	958.16	3.49	3.27	-163.40	-84.48	-56.83	167.17	160.62	6.55	25.522		

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 420 H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		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)			
1,100.00	1,090.18	1,040.80	1,033.60	3.97	3.63	-167.77	-104.75	-56.13	216.96	209.81	7.15	30.349	
1,200.00	1,184.43	1,112.36	1,101.92	4.50	3.99	-170.81	-126.02	-55.40	275.06	267.35	7.70	35.701	
1,300.00	1,276.81	1,177.10	1,163.00	5.10	4.34	-172.95	-147.45	-54.66	340.43	332.22	8.21	41.462	
1,400.00	1,367.72	1,235.90	1,217.83	5.74	4.69	-174.73	-168.69	-53.92	411.12	402.45	8.66	47.455	
1,500.00	1,458.57	1,300.00	1,276.81	6.42	5.09	-176.31	-193.76	-53.05	484.22	475.05	9.17	52.808	
1,600.00	1,549.43	1,342.90	1,315.80	7.11	5.38	-177.18	-211.64	-52.44	559.10	549.63	9.48	59.007	
1,700.00	1,640.28	1,400.00	1,367.06	7.81	5.77	-178.17	-236.78	-51.57	635.93	626.00	9.94	63.999	
1,800.00	1,731.13	1,437.48	1,400.28	8.52	6.06	-178.73	-254.11	-50.97	714.22	704.01	10.21	69.963	
1,900.00	1,821.98	1,480.63	1,438.10	9.24	6.38	-179.32	-274.87	-50.25	794.03	783.49	10.55	75.273	
2,000.00	1,912.84	1,521.28	1,473.30	9.96	6.71	-179.81	-295.20	-49.55	875.17	864.30	10.87	80.485	
2,100.00	2,003.69	1,559.61	1,506.08	10.69	7.03	179.77	-315.05	-48.86	957.52	946.33	11.18	85.613	
2,200.00	2,094.54	1,600.00	1,540.18	11.42	7.36	179.36	-336.68	-48.11	1,040.98	1,029.45	11.52	90.325	
2,300.00	2,185.39	1,629.94	1,565.17	12.15	7.64	179.08	-353.17	-47.54	1,125.42	1,113.66	11.76	95.659	
2,400.00	2,276.25	1,662.24	1,591.82	12.89	7.93	178.79	-371.40	-46.91	1,210.80	1,198.77	12.04	100.585	
2,500.00	2,367.10	1,700.00	1,622.59	13.63	8.27	178.48	-393.28	-46.16	1,297.07	1,284.70	12.38	104.810	
2,600.00	2,457.95	1,721.78	1,640.13	14.37	8.48	178.31	-406.17	-45.71	1,384.05	1,371.50	12.55	110.281	
2,700.00	2,548.81	1,756.59	1,667.91	15.11	8.81	178.05	-427.13	-44.99	1,471.75	1,458.88	12.87	114.333	
2,800.00	2,639.66	1,804.19	1,705.84	15.86	9.28	177.73	-455.89	-43.99	1,559.60	1,546.26	13.34	116.924	
2,900.00	2,730.51	1,851.79	1,743.76	16.60	9.75	177.44	-484.64	-43.00	1,647.46	1,633.65	13.81	119.298	
3,000.00	2,821.36	1,899.40	1,781.68	17.35	10.23	177.19	-513.40	-42.01	1,735.33	1,721.04	14.28	121.488	
3,100.00	2,912.22	1,947.00	1,819.61	18.09	10.70	176.95	-542.15	-41.01	1,823.20	1,808.44	14.76	123.500	
3,200.00	3,003.07	1,994.60	1,857.53	18.84	11.18	176.74	-570.91	-40.02	1,911.08	1,895.84	15.24	125.363	
3,300.00	3,093.92	2,042.20	1,895.45	19.59	11.67	176.55	-599.66	-39.02	1,998.97	1,983.24	15.73	127.081	
3,400.00	3,184.77	2,089.81	1,933.37	20.33	12.15	176.37	-628.42	-38.03	2,086.86	2,070.64	16.22	128.677	
3,500.00	3,275.63	2,137.41	1,971.30	21.08	12.64	176.21	-657.18	-37.04	2,174.76	2,158.05	16.71	130.156	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 422 H - Original Hole - rev0													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	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	-122.11	-24.62	-39.24	46.33				
100.00	100.00	100.00	100.00	0.13	0.13	-122.11	-24.62	-39.24	46.33	46.06	0.27	172.314	
200.00	200.00	200.00	200.00	0.49	0.49	-122.11	-24.62	-39.24	46.33	45.34	0.99	46.995	
300.00	300.00	300.00	300.00	0.85	0.85	-122.11	-24.62	-39.24	46.33	44.62	1.70	27.208	
400.00	400.00	400.00	400.00	1.21	1.21	-122.11	-24.62	-39.24	46.33	43.91	2.42	19.146	
500.00	500.00	500.00	500.00	1.57	1.57	-122.11	-24.62	-39.24	46.33	43.19	3.14	14.770 CC, ES	
600.00	599.95	599.48	599.44	1.93	1.91	-136.62	-26.96	-38.12	48.56	44.73	3.84	12.657	
700.00	699.63	697.50	697.14	2.29	2.25	-149.35	-33.82	-34.82	57.34	52.80	4.54	12.633 SF	
800.00	798.77	792.67	791.53	2.66	2.58	-162.65	-44.80	-29.55	76.07	70.82	5.25	14.491	
900.00	897.08	883.80	881.22	3.06	2.94	-172.56	-59.27	-22.60	105.84	99.90	5.94	17.808	
1,000.00	994.31	969.88	965.15	3.49	3.31	-179.15	-76.46	-14.34	145.81	139.20	6.60	22.078	
1,100.00	1,090.18	1,050.17	1,042.59	3.97	3.69	176.46	-95.56	-5.17	194.81	187.58	7.23	26.948	
1,200.00	1,184.43	1,124.17	1,113.12	4.50	4.07	173.41	-115.75	4.53	251.79	243.97	7.82	32.198	
1,300.00	1,276.81	1,191.61	1,176.59	5.10	4.44	171.14	-136.27	14.39	315.83	307.47	8.36	37.772	
1,400.00	1,367.72	1,253.28	1,233.90	5.74	4.82	169.67	-156.80	24.25	385.02	376.16	8.87	43.429	
1,500.00	1,458.57	1,311.35	1,287.17	6.42	5.20	168.59	-177.65	34.26	456.44	447.11	9.33	48.906	
1,600.00	1,549.43	1,366.09	1,336.71	7.11	5.58	167.70	-198.63	44.34	529.81	520.02	9.78	54.162	
1,700.00	1,640.28	1,417.70	1,382.79	7.81	5.96	166.95	-219.57	54.39	604.95	594.74	10.21	59.240	
1,800.00	1,731.13	1,466.36	1,425.65	8.52	6.34	166.30	-240.34	64.37	681.72	671.09	10.63	64.161	
1,900.00	1,821.98	1,500.00	1,454.93	9.24	6.60	165.87	-255.27	71.54	760.12	749.24	10.88	69.892	
2,000.00	1,912.84	1,555.60	1,502.67	9.96	7.09	165.21	-280.96	83.88	839.61	828.21	11.40	73.651	
2,100.00	2,003.69	1,600.00	1,540.18	10.69	7.47	164.72	-302.36	94.16	920.52	908.72	11.80	78.002	
2,200.00	2,094.54	1,635.21	1,569.54	11.42	7.81	164.35	-319.89	102.58	1,002.56	990.45	12.11	82.775	
2,300.00	2,185.39	1,671.80	1,599.65	12.15	8.15	163.98	-338.62	111.58	1,085.68	1,073.23	12.45	87.231	
2,400.00	2,276.25	1,700.00	1,622.59	12.89	8.42	163.70	-353.41	118.68	1,169.81	1,157.12	12.69	92.202	
2,500.00	2,367.10	1,739.24	1,654.09	13.63	8.83	163.33	-374.50	128.81	1,254.79	1,241.71	13.08	95.953	
2,600.00	2,457.95	1,770.35	1,678.73	14.37	9.15	163.04	-391.62	137.03	1,340.64	1,327.26	13.37	100.239	
2,700.00	2,548.81	1,799.89	1,701.83	15.11	9.46	162.78	-408.22	145.01	1,427.26	1,413.60	13.66	104.495	
2,800.00	2,639.66	1,848.93	1,739.94	15.86	9.99	162.37	-436.03	158.37	1,514.25	1,500.06	14.19	106.703	
2,900.00	2,730.51	1,897.96	1,778.05	16.60	10.52	162.00	-463.85	171.73	1,601.26	1,586.54	14.73	108.730	
3,000.00	2,821.36	1,947.00	1,816.16	17.35	11.07	161.68	-491.66	185.09	1,688.29	1,673.02	15.27	110.566	
3,100.00	2,912.22	1,996.04	1,854.27	18.09	11.61	161.38	-519.48	198.45	1,775.33	1,759.52	15.81	112.260	
3,200.00	3,003.07	2,045.07	1,892.38	18.84	12.16	161.11	-547.29	211.81	1,862.38	1,846.02	16.36	113.803	
3,300.00	3,093.92	2,094.11	1,930.50	19.59	12.71	160.87	-575.11	225.17	1,949.44	1,932.52	16.92	115.231	
3,400.00	3,184.77	2,143.15	1,968.61	20.33	13.26	160.65	-602.92	238.53	2,036.51	2,019.03	17.48	116.538	
3,500.00	3,275.63	2,192.18	2,006.72	21.08	13.82	160.44	-630.74	251.89	2,123.58	2,105.55	18.03	117.751	
3,600.00	3,366.48	2,241.22	2,044.83	21.83	14.38	160.25	-658.55	265.25	2,210.66	2,192.06	18.60	118.867	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 424 H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-135.60	-20.14	-19.72	28.19				
100.00	100.00	100.00	100.00	0.13	0.13	-135.60	-20.14	-19.72	28.19	27.92	0.27	104.839	
200.00	200.00	200.00	200.00	0.49	0.49	-135.60	-20.14	-19.72	28.19	27.20	0.99	28.592	
300.00	300.00	300.00	300.00	0.85	0.85	-135.60	-20.14	-19.72	28.19	26.48	1.70	16.553	
400.00	400.00	400.00	400.00	1.21	1.21	-135.60	-20.14	-19.72	28.19	25.77	2.42	11.649	
500.00	500.00	500.00	500.00	1.57	1.57	-135.60	-20.14	-19.72	28.19	25.05	3.14	8.986 CC, ES	
600.00	599.95	599.95	599.95	1.93	1.93	-147.62	-20.14	-19.72	30.36	26.51	3.85	7.878	
700.00	699.63	699.63	699.63	2.29	2.28	-154.00	-20.14	-19.72	37.23	32.65	4.58	8.134	
800.00	798.77	798.77	798.77	2.66	2.64	-160.54	-20.14	-19.72	49.30	44.00	5.30	9.298	
900.00	897.08	897.08	897.08	3.06	2.99	-165.62	-20.14	-19.72	66.78	60.75	6.03	11.077	
1,000.00	994.31	994.31	994.31	3.49	3.34	-169.19	-20.14	-19.72	89.60	82.84	6.75	13.269	
1,100.00	1,090.18	1,089.48	1,089.45	3.97	3.67	-172.71	-20.98	-17.80	117.90	110.44	7.46	15.801	
1,200.00	1,184.43	1,182.05	1,181.78	4.50	3.99	-176.79	-23.60	-11.85	152.27	144.12	8.16	18.672	
1,300.00	1,276.81	1,273.25	1,272.64	5.10	4.30	-179.91	-26.78	-4.61	192.33	183.48	8.85	21.727	
1,400.00	1,367.72	1,362.91	1,361.96	5.74	4.62	-178.04	-29.91	2.51	236.07	226.53	9.55	24.726	
1,500.00	1,458.57	1,452.51	1,451.23	6.42	4.94	-176.63	-33.03	9.62	280.11	269.87	10.24	27.361	
1,600.00	1,549.43	1,542.12	1,540.49	7.11	5.26	-175.60	-36.16	16.73	324.24	313.31	10.94	29.641	
1,700.00	1,640.28	1,631.72	1,629.76	7.81	5.59	-174.82	-39.29	23.84	368.44	356.79	11.65	31.628	
1,800.00	1,731.13	1,721.32	1,719.02	8.52	5.92	-174.21	-42.41	30.95	412.69	400.32	12.37	33.368	
1,900.00	1,821.98	1,810.92	1,808.29	9.24	6.25	-173.71	-45.54	38.06	456.96	443.87	13.09	34.903	
2,000.00	1,912.84	1,900.53	1,897.55	9.96	6.58	-173.31	-48.66	45.17	501.25	487.43	13.82	36.265	
2,100.00	2,003.69	1,990.13	1,986.82	10.69	6.91	-172.97	-51.79	52.28	545.57	531.01	14.56	37.479	
2,200.00	2,094.54	2,079.73	2,076.08	11.42	7.25	-172.68	-54.91	59.39	589.89	574.60	15.30	38.567	
2,300.00	2,185.39	2,169.33	2,165.35	12.15	7.58	-172.43	-58.04	66.50	634.23	618.19	16.04	39.547	
2,400.00	2,276.25	2,258.94	2,254.61	12.89	7.92	-172.21	-61.17	73.61	678.57	661.79	16.78	40.434	
2,500.00	2,367.10	2,348.54	2,343.88	13.63	8.26	-172.02	-64.29	80.72	722.93	705.40	17.53	41.240	
2,600.00	2,457.95	2,438.14	2,433.14	14.37	8.60	-171.85	-67.42	87.83	767.28	749.00	18.28	41.975	
2,700.00	2,548.81	2,527.74	2,522.41	15.11	8.93	-171.70	-70.54	94.94	811.65	792.61	19.03	42.648	
2,800.00	2,639.66	2,617.34	2,611.67	15.86	9.27	-171.57	-73.67	102.06	856.01	836.23	19.78	43.266	
2,900.00	2,730.51	2,706.95	2,700.94	16.60	9.61	-171.44	-76.80	109.17	900.38	879.84	20.54	43.836	
3,000.00	2,821.36	2,796.55	2,790.20	17.35	9.95	-171.33	-79.92	116.28	944.75	923.46	21.30	44.362	
3,100.00	2,912.22	2,886.15	2,879.47	18.09	10.29	-171.23	-83.05	123.39	989.13	967.07	22.05	44.850	
3,200.00	3,003.07	2,975.75	2,968.73	18.84	10.63	-171.14	-86.17	130.50	1,033.51	1,010.69	22.81	45.303	
3,300.00	3,093.92	3,065.36	3,058.00	19.59	10.97	-171.06	-89.30	137.61	1,077.88	1,054.31	23.57	45.725	
3,400.00	3,184.77	3,154.96	3,147.26	20.33	11.32	-170.98	-92.42	144.72	1,122.27	1,097.93	24.33	46.119	
3,500.00	3,275.63	3,244.56	3,236.53	21.08	11.66	-170.91	-95.55	151.83	1,166.65	1,141.55	25.10	46.488	
3,600.00	3,366.48	3,334.16	3,325.79	21.83	12.00	-170.84	-98.68	158.94	1,211.03	1,185.17	25.86	46.833	
3,700.00	3,457.33	3,423.77	3,415.06	22.58	12.34	-170.78	-101.80	166.05	1,255.42	1,228.79	26.62	47.157	
3,800.00	3,548.18	3,513.37	3,504.32	23.33	12.68	-170.73	-104.93	173.16	1,299.80	1,272.42	27.39	47.462	
3,900.00	3,639.04	3,602.97	3,593.59	24.08	13.03	-170.67	-108.05	180.27	1,344.19	1,316.04	28.15	47.749	
4,000.00	3,729.89	3,692.57	3,682.85	24.83	13.37	-170.62	-111.18	187.38	1,388.58	1,359.66	28.92	48.020	
4,100.00	3,820.74	3,782.17	3,772.12	25.58	13.71	-170.57	-114.30	194.49	1,432.97	1,403.28	29.68	48.276	
4,200.00	3,911.59	3,871.78	3,861.38	26.33	14.05	-170.53	-117.43	201.60	1,477.36	1,446.91	30.45	48.518	
4,300.00	4,002.45	3,961.38	3,950.65	27.08	14.40	-170.49	-120.56	208.72	1,521.75	1,490.53	31.22	48.748	
4,400.00	4,093.61	4,051.31	4,040.24	27.83	14.74	-170.57	-123.69	215.85	1,565.45	1,533.47	31.98	48.947	
4,500.00	4,186.60	4,143.15	4,131.73	28.51	15.09	-170.71	-126.90	223.14	1,604.96	1,572.21	32.75	49.010	
4,600.00	4,281.38	4,236.88	4,225.11	29.13	15.45	-170.79	-130.17	230.58	1,639.67	1,606.16	33.51	48.932	
4,700.00	4,377.70	4,332.25	4,320.12	29.68	15.82	-170.81	-133.49	238.15	1,669.49	1,635.23	34.26	48.723	
4,800.00	4,475.29	4,474.16	4,461.77	30.16	16.34	-170.84	-136.73	245.52	1,693.25	1,657.91	35.34	47.915	
4,900.00	4,573.89	4,586.28	4,573.89	30.57	16.72	-171.01	-136.89	245.87	1,709.78	1,673.66	36.12	47.342	
5,000.00	4,673.22	4,685.61	4,673.22	30.92	17.04	-171.12	-136.89	245.87	1,721.08	1,684.31	36.78	46.800	
5,100.00	4,773.01	4,785.40	4,773.01	31.19	17.37	-171.18	-136.89	245.87	1,727.24	1,689.82	37.42	46.163	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 424 H - 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	4,873.00	4,885.39	4,873.00	31.40	17.71	-179.60	-136.89	245.87	1,728.47	1,690.43	38.04	45.439	
5,300.00	4,972.98	4,950.00	4,937.60	31.58	17.93	45.40	-137.29	246.27	1,728.65	1,690.24	38.41	45.010	
5,400.00	5,071.86	4,975.98	4,963.52	31.68	18.02	45.86	-138.53	247.51	1,723.07	1,684.66	38.41	44.859	
5,500.00	5,166.80	5,000.00	4,987.39	31.68	18.11	46.96	-140.41	249.39	1,709.41	1,671.11	38.30	44.627	
5,600.00	5,254.90	5,050.00	5,036.61	31.57	18.32	49.01	-146.58	255.56	1,687.95	1,649.54	38.41	43.949	
5,700.00	5,333.50	5,069.24	5,055.31	31.38	18.41	51.56	-149.76	258.74	1,659.09	1,620.91	38.18	43.450	
5,800.00	5,400.20	5,100.00	5,084.88	31.13	18.54	55.07	-155.76	264.74	1,623.91	1,585.78	38.13	42.589	
5,900.00	5,453.72	5,126.30	5,109.76	30.82	18.67	58.11	-161.77	270.75	1,583.74	1,545.61	38.14	41.527	
6,000.00	5,499.83	5,150.00	5,131.83	30.52	18.79	61.37	-167.88	276.86	1,543.39	1,505.16	38.24	40.364	
6,100.00	5,530.54	5,180.66	5,159.81	30.21	18.95	66.54	-176.73	285.71	1,499.89	1,461.20	38.69	38.764	
6,200.00	5,544.27	5,200.00	5,177.11	29.91	19.05	71.94	-182.85	291.83	1,454.52	1,415.22	39.30	37.011	
6,300.00	5,544.63	5,225.56	5,199.50	29.62	19.19	74.47	-191.56	300.55	1,409.94	1,369.62	40.32	34.970	
6,400.00	5,544.09	5,250.00	5,220.37	29.37	19.33	75.38	-200.55	309.53	1,370.15	1,328.64	41.52	33.003	
6,500.00	5,543.54	5,277.79	5,243.43	29.15	19.50	76.40	-211.52	320.50	1,335.64	1,292.69	42.95	31.097	
6,600.00	5,543.00	5,300.00	5,261.29	28.96	19.64	77.19	-220.85	329.83	1,306.62	1,262.18	44.45	29.398	
6,700.00	5,542.46	5,350.00	5,299.55	28.80	19.97	78.90	-243.60	352.58	1,282.91	1,236.41	46.50	27.591	
6,800.00	5,541.91	5,400.00	5,334.86	30.10	20.34	80.50	-268.61	377.59	1,264.58	1,215.95	48.63	26.004	
6,900.00	5,541.37	5,450.00	5,366.95	31.62	20.74	81.97	-295.71	404.69	1,251.14	1,200.33	50.81	24.624	
7,000.00	5,540.83	5,505.86	5,398.70	33.21	21.23	83.43	-328.19	437.17	1,242.03	1,188.92	53.11	23.385	
7,100.00	5,540.28	5,586.38	5,439.21	34.88	22.02	85.32	-377.39	486.37	1,236.21	1,180.37	55.84	22.138	
7,200.00	5,539.74	5,663.44	5,472.91	36.60	22.86	86.90	-426.35	535.33	1,232.82	1,174.25	58.57	21.048	
7,300.00	5,539.20	5,750.00	5,499.31	38.38	23.92	88.15	-484.58	593.56	1,231.39	1,169.88	61.50	20.021	
7,400.00	5,538.65	5,843.51	5,513.55	40.21	25.17	88.83	-549.85	658.83	1,230.96	1,166.34	64.62	19.049	
7,500.00	5,538.11	5,941.63	5,514.73	42.08	26.59	88.91	-619.21	728.19	1,230.92	1,163.04	67.88	18.132	
7,513.11	5,538.04	5,954.73	5,514.66	42.33	26.79	88.91	-628.48	737.46	1,230.92	1,162.59	68.33	18.015	
7,600.00	5,537.56	6,041.63	5,514.23	43.99	28.14	88.91	-689.92	798.90	1,230.92	1,159.60	71.32	17.259	
7,700.00	5,537.02	6,141.63	5,513.73	45.93	29.79	88.92	-760.63	869.61	1,230.92	1,156.02	74.89	16.435	
7,800.00	5,536.48	6,241.63	5,513.23	47.89	31.52	88.92	-831.34	940.32	1,230.91	1,152.33	78.58	15.664	
7,900.00	5,535.93	6,341.63	5,512.74	49.89	33.32	88.92	-902.05	1,011.03	1,230.91	1,148.54	82.37	14.943	
8,000.00	5,535.39	6,441.63	5,512.24	51.91	35.18	88.92	-972.76	1,081.74	1,230.91	1,144.66	86.25	14.272	
8,100.00	5,534.85	6,541.63	5,511.74	53.95	37.09	88.92	-1,043.47	1,152.45	1,230.91	1,140.71	90.19	13.647	
8,200.00	5,534.30	6,641.63	5,511.24	56.01	39.04	88.93	-1,114.17	1,223.16	1,230.90	1,136.70	94.21	13.066	
8,300.00	5,533.76	6,741.63	5,510.74	58.08	41.03	88.93	-1,184.88	1,293.87	1,230.90	1,132.63	98.27	12.525	
8,400.00	5,533.22	6,841.63	5,510.24	60.17	43.05	88.93	-1,255.59	1,364.58	1,230.90	1,128.51	102.39	12.022	
8,500.00	5,532.67	6,941.63	5,509.74	62.28	45.09	88.93	-1,326.30	1,435.29	1,230.89	1,124.35	106.54	11.553	
8,600.00	5,532.13	7,041.63	5,509.24	64.40	47.16	88.93	-1,397.01	1,506.00	1,230.89	1,120.15	110.74	11.115	
8,700.00	5,531.59	7,141.63	5,508.75	66.52	49.26	88.94	-1,467.72	1,576.71	1,230.89	1,115.92	114.96	10.707	
8,800.00	5,531.04	7,241.63	5,508.25	68.66	51.37	88.94	-1,538.43	1,647.42	1,230.88	1,111.66	119.22	10.324	
8,900.00	5,530.50	7,341.63	5,507.75	70.81	53.49	88.94	-1,609.14	1,718.13	1,230.88	1,107.38	123.50	9.966	
9,000.00	5,529.96	7,441.63	5,507.25	72.97	55.63	88.94	-1,679.85	1,788.84	1,230.88	1,103.07	127.81	9.631	
9,100.00	5,529.41	7,541.63	5,506.75	75.14	57.79	88.95	-1,750.56	1,859.55	1,230.88	1,098.74	132.13	9.315	
9,200.00	5,528.87	7,641.63	5,506.25	77.31	59.95	88.95	-1,821.27	1,930.26	1,230.87	1,094.39	136.48	9.019	
9,300.00	5,528.32	7,741.63	5,505.75	79.49	62.13	88.95	-1,891.98	2,000.97	1,230.87	1,090.03	140.84	8.739	
9,400.00	5,527.78	7,841.63	5,505.26	81.68	64.31	88.95	-1,962.69	2,071.68	1,230.87	1,085.65	145.22	8.476	
9,500.00	5,527.24	7,941.63	5,504.76	83.87	66.50	88.95	-2,033.40	2,142.39	1,230.86	1,081.25	149.61	8.227	
9,600.00	5,526.69	8,041.63	5,504.26	86.07	68.70	88.96	-2,104.11	2,213.10	1,230.86	1,076.84	154.02	7.992	
9,700.00	5,526.15	8,141.63	5,503.76	88.28	70.91	88.96	-2,174.82	2,283.81	1,230.86	1,072.42	158.43	7.769	
9,800.00	5,525.61	8,241.63	5,503.26	90.49	73.12	88.96	-2,245.53	2,354.52	1,230.85	1,067.99	162.86	7.558	
9,900.00	5,525.06	8,341.63	5,502.76	92.70	75.34	88.96	-2,316.24	2,425.23	1,230.85	1,063.55	167.30	7.357	
10,000.00	5,524.52	8,441.63	5,502.26	94.92	77.56	88.96	-2,386.94	2,495.94	1,230.85	1,059.10	171.75	7.167	
10,100.00	5,523.98	8,541.63	5,501.76	97.14	79.79	88.97	-2,457.65	2,566.66	1,230.85	1,054.65	176.20	6.986	
10,200.00	5,523.43	8,641.63	5,501.27	99.36	82.02	88.97	-2,528.36	2,637.37	1,230.84	1,050.18	180.66	6.813	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 424 H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,300.00	5,522.89	8,741.63	5,500.77	101.59	84.25	88.97	-2,599.07	2,708.08	1,230.84	1,045.71	185.13	6.648	
10,400.00	5,522.35	8,841.63	5,500.27	103.82	86.49	88.97	-2,669.78	2,778.79	1,230.84	1,041.23	189.61	6.491	
10,500.00	5,521.80	8,941.63	5,499.77	106.06	88.73	88.97	-2,740.49	2,849.50	1,230.83	1,036.74	194.09	6.342	
10,600.00	5,521.26	9,041.63	5,499.27	108.29	90.98	88.98	-2,811.20	2,920.21	1,230.83	1,032.25	198.58	6.198	
10,700.00	5,520.72	9,141.63	5,498.77	110.53	93.23	88.98	-2,881.91	2,990.92	1,230.83	1,027.76	203.07	6.061	
10,800.00	5,520.17	9,241.63	5,498.27	112.78	95.48	88.98	-2,952.62	3,061.63	1,230.83	1,023.25	207.57	5.930	
10,900.00	5,519.63	9,341.63	5,497.78	115.02	97.73	88.98	-3,023.33	3,132.34	1,230.82	1,018.75	212.08	5.804	
11,000.00	5,519.08	9,441.63	5,497.28	117.27	99.99	88.98	-3,094.04	3,203.05	1,230.82	1,014.24	216.58	5.683	
11,100.00	5,518.54	9,541.63	5,496.78	119.52	102.25	88.99	-3,164.75	3,273.76	1,230.82	1,009.72	221.10	5.567	
11,200.00	5,518.00	9,641.63	5,496.28	121.77	104.51	88.99	-3,235.46	3,344.47	1,230.81	1,005.20	225.61	5.455	
11,300.00	5,517.45	9,741.63	5,495.78	124.02	106.77	88.99	-3,306.17	3,415.18	1,230.81	1,000.68	230.13	5.348	
11,400.00	5,516.91	9,841.63	5,495.28	126.27	109.03	88.99	-3,376.88	3,485.89	1,230.81	996.15	234.65	5.245	
11,500.00	5,516.37	9,941.63	5,494.78	128.53	111.30	89.00	-3,447.59	3,556.60	1,230.81	991.63	239.18	5.146	
11,600.00	5,515.82	10,041.63	5,494.28	130.79	113.57	89.00	-3,518.30	3,627.31	1,230.80	987.09	243.71	5.050	
11,700.00	5,515.28	10,141.63	5,493.79	133.05	115.84	89.00	-3,589.01	3,698.02	1,230.80	982.56	248.24	4.958	
11,800.00	5,514.74	10,241.63	5,493.29	135.31	118.11	89.00	-3,659.71	3,768.73	1,230.80	978.02	252.78	4.869	
11,900.00	5,514.19	10,341.63	5,492.79	137.57	120.38	89.00	-3,730.42	3,839.44	1,230.79	973.48	257.31	4.783	
12,000.00	5,513.65	10,441.63	5,492.29	139.84	122.65	89.01	-3,801.13	3,910.15	1,230.79	968.94	261.85	4.700	
12,100.00	5,513.11	10,541.63	5,491.79	142.10	124.92	89.01	-3,871.84	3,980.86	1,230.79	964.39	266.40	4.620	
12,200.00	5,512.56	10,641.63	5,491.29	144.37	127.20	89.01	-3,942.55	4,051.57	1,230.79	959.84	270.94	4.543	
12,300.00	5,512.02	10,741.63	5,490.79	146.63	129.47	89.01	-4,013.26	4,122.28	1,230.78	955.29	275.49	4.468	
12,400.00	5,511.48	10,841.63	5,490.30	148.90	131.75	89.01	-4,083.97	4,192.99	1,230.78	950.74	280.04	4.395	
12,500.00	5,510.93	10,941.63	5,489.80	151.17	134.03	89.02	-4,154.68	4,263.70	1,230.78	946.19	284.59	4.325	
12,600.00	5,510.39	11,041.63	5,489.30	153.44	136.31	89.02	-4,225.39	4,334.41	1,230.77	941.63	289.14	4.257	
12,700.00	5,509.84	11,141.63	5,488.80	155.71	138.59	89.02	-4,296.10	4,405.12	1,230.77	937.08	293.69	4.191	
12,800.00	5,509.30	11,241.63	5,488.30	157.99	140.87	89.02	-4,366.81	4,475.83	1,230.77	932.52	298.25	4.127	
12,900.00	5,508.76	11,341.63	5,487.80	160.26	143.15	89.02	-4,437.52	4,546.54	1,230.76	927.96	302.81	4.065	
13,000.00	5,508.21	11,441.63	5,487.30	162.53	145.43	89.03	-4,508.23	4,617.25	1,230.76	923.40	307.36	4.004	
13,100.00	5,507.67	11,541.63	5,486.80	164.81	147.72	89.03	-4,578.94	4,687.96	1,230.76	918.83	311.92	3.946	
13,200.00	5,507.13	11,641.63	5,486.31	167.09	150.00	89.03	-4,649.65	4,758.67	1,230.76	914.27	316.49	3.889	
13,300.00	5,506.58	11,741.63	5,485.81	169.36	152.28	89.03	-4,720.36	4,829.38	1,230.75	909.70	321.05	3.834	
13,400.00	5,506.04	11,841.63	5,485.31	171.64	154.57	89.03	-4,791.07	4,900.09	1,230.75	905.14	325.61	3.780	
13,500.00	5,505.50	11,941.63	5,484.81	173.92	156.85	89.04	-4,861.77	4,970.80	1,230.75	900.57	330.18	3.728	
13,600.00	5,504.95	12,041.63	5,484.31	176.20	159.14	89.04	-4,932.48	5,041.51	1,230.74	896.00	334.75	3.677	
13,700.00	5,504.41	12,141.63	5,483.81	178.48	161.42	89.04	-5,003.19	5,112.22	1,230.74	891.43	339.31	3.627	
13,800.00	5,503.87	12,241.63	5,483.31	180.76	163.71	89.04	-5,073.90	5,182.93	1,230.74	886.86	343.88	3.579	
13,900.00	5,503.32	12,341.63	5,482.82	183.04	166.00	89.05	-5,144.61	5,253.64	1,230.74	882.29	348.45	3.532	
14,000.00	5,502.78	12,441.63	5,482.32	185.32	168.29	89.05	-5,215.32	5,324.35	1,230.73	877.71	353.02	3.486	
14,100.00	5,502.24	12,541.63	5,481.82	187.60	170.58	89.05	-5,286.03	5,395.06	1,230.73	873.14	357.59	3.442	
14,200.00	5,501.69	12,641.63	5,481.32	189.88	172.86	89.05	-5,356.74	5,465.77	1,230.73	868.56	362.17	3.398	
14,300.00	5,501.15	12,741.63	5,480.82	192.16	175.15	89.05	-5,427.45	5,536.48	1,230.72	863.99	366.74	3.356	
14,400.00	5,500.60	12,841.63	5,480.32	194.45	177.44	89.06	-5,498.16	5,607.19	1,230.72	859.41	371.31	3.315	
14,500.00	5,500.06	12,941.63	5,479.82	196.73	179.73	89.06	-5,568.87	5,677.90	1,230.72	854.83	375.89	3.274	
14,600.00	5,499.52	13,041.63	5,479.32	199.02	182.02	89.06	-5,639.58	5,748.61	1,230.72	850.25	380.46	3.235	
14,700.00	5,498.97	13,141.63	5,478.83	201.30	184.31	89.06	-5,710.29	5,819.32	1,230.71	845.67	385.04	3.196	
14,800.00	5,498.43	13,241.63	5,478.33	203.59	186.60	89.06	-5,781.00	5,890.03	1,230.71	841.09	389.62	3.159	
14,900.00	5,497.89	13,341.63	5,477.83	205.87	188.90	89.07	-5,851.71	5,960.74	1,230.71	836.51	394.20	3.122	
15,000.00	5,497.34	13,441.63	5,477.33	208.16	191.19	89.07	-5,922.42	6,031.45	1,230.70	831.93	398.77	3.086	
15,100.00	5,496.80	13,541.63	5,476.83	210.44	193.48	89.07	-5,993.13	6,102.16	1,230.70	827.35	403.35	3.051	
15,200.00	5,496.26	13,641.63	5,476.33	212.73	195.77	89.07	-6,063.84	6,172.87	1,230.70	822.77	407.93	3.017	
15,300.00	5,495.71	13,741.63	5,475.83	215.02	198.06	89.07	-6,134.54	6,243.58	1,230.70	818.18	412.51	2.983	
15,400.00	5,495.17	13,841.63	5,475.34	217.31	200.36	89.08	-6,205.25	6,314.29	1,230.69	813.60	417.10	2.951	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 424 H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance	Minimum	Separation	Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor	
15,500.00	5,494.63	13,941.63	5,474.84	219.59	202.65	89.08	-6,275.96	6,385.00	1,230.69	809.01	421.68	2.919	
15,600.00	5,494.08	14,041.63	5,474.34	221.88	204.94	89.08	-6,346.67	6,455.71	1,230.69	804.43	426.26	2.887	
15,700.00	5,493.54	14,141.63	5,473.84	224.17	207.24	89.08	-6,417.38	6,526.42	1,230.68	799.84	430.84	2.856	
15,800.00	5,493.00	14,241.63	5,473.34	226.46	209.53	89.08	-6,488.09	6,597.13	1,230.68	795.26	435.43	2.826	
15,900.00	5,492.45	14,341.63	5,472.84	228.75	211.83	89.09	-6,558.80	6,667.84	1,230.68	790.67	440.01	2.797	
16,000.00	5,491.91	14,441.63	5,472.34	231.04	214.12	89.09	-6,629.51	6,738.55	1,230.68	786.08	444.59	2.768	
16,100.00	5,491.36	14,541.63	5,471.84	233.33	216.42	89.09	-6,700.22	6,809.26	1,230.67	781.50	449.18	2.740	
16,200.00	5,490.82	14,641.63	5,471.35	235.62	218.71	89.09	-6,770.93	6,879.97	1,230.67	776.91	453.76	2.712	
16,300.00	5,490.28	14,741.63	5,470.85	237.91	221.01	89.10	-6,841.64	6,950.68	1,230.67	772.32	458.35	2.685	
16,400.00	5,489.73	14,841.63	5,470.35	240.20	223.30	89.10	-6,912.35	7,021.39	1,230.67	767.73	462.94	2.658	
16,500.00	5,489.19	14,941.63	5,469.85	242.49	225.60	89.10	-6,983.06	7,092.10	1,230.66	763.14	467.52	2.632	
16,600.00	5,488.65	15,041.63	5,469.35	244.78	227.89	89.10	-7,053.77	7,162.81	1,230.66	758.55	472.11	2.607	
16,700.00	5,488.10	15,141.63	5,468.85	247.07	230.19	89.10	-7,124.48	7,233.53	1,230.66	753.96	476.70	2.582	
16,800.00	5,487.56	15,241.63	5,468.35	249.36	232.48	89.11	-7,195.19	7,304.24	1,230.65	749.37	481.28	2.557	
16,900.00	5,487.02	15,341.63	5,467.86	251.66	234.78	89.11	-7,265.90	7,374.95	1,230.65	744.78	485.87	2.533	
17,000.00	5,486.47	15,441.63	5,467.36	253.95	237.08	89.11	-7,336.61	7,445.66	1,230.65	740.19	490.46	2.509	
17,100.00	5,485.93	15,541.63	5,466.86	256.24	239.37	89.11	-7,407.31	7,516.37	1,230.65	735.60	495.05	2.486	
17,200.00	5,485.39	15,641.63	5,466.36	258.53	241.67	89.11	-7,478.02	7,587.08	1,230.64	731.00	499.64	2.463	
17,300.00	5,484.84	15,741.63	5,465.86	260.83	243.97	89.12	-7,548.73	7,657.79	1,230.64	726.41	504.23	2.441	
17,400.00	5,484.30	15,841.63	5,465.36	263.12	246.26	89.12	-7,619.44	7,728.50	1,230.64	721.82	508.82	2.419	
17,500.00	5,483.75	15,941.63	5,464.86	265.41	248.56	89.12	-7,690.15	7,799.21	1,230.63	717.23	513.41	2.397	
17,600.00	5,483.21	16,041.63	5,464.36	267.70	250.86	89.12	-7,760.86	7,869.92	1,230.63	712.63	518.00	2.376	
17,700.00	5,482.67	16,141.63	5,463.87	270.00	253.15	89.12	-7,831.57	7,940.63	1,230.63	708.04	522.59	2.355	
17,800.00	5,482.12	16,241.63	5,463.37	272.29	255.45	89.13	-7,902.28	8,011.34	1,230.63	703.45	527.18	2.334	
17,900.00	5,481.58	16,341.63	5,462.87	274.59	257.75	89.13	-7,972.99	8,082.05	1,230.62	698.85	531.77	2.314	
18,000.00	5,481.04	16,441.63	5,462.37	276.88	260.05	89.13	-8,043.70	8,152.76	1,230.62	694.26	536.36	2.294	
18,100.00	5,480.49	16,541.63	5,461.87	279.17	262.34	89.13	-8,114.41	8,223.47	1,230.62	689.67	540.95	2.275	
18,200.00	5,479.95	16,641.63	5,461.37	281.47	264.64	89.14	-8,185.12	8,294.18	1,230.61	685.07	545.54	2.256	
18,300.00	5,479.41	16,741.63	5,460.87	283.76	266.94	89.14	-8,255.83	8,364.89	1,230.61	680.48	550.14	2.237	
18,400.00	5,478.86	16,841.63	5,460.38	286.06	269.24	89.14	-8,326.54	8,435.60	1,230.61	675.88	554.73	2.218	
18,500.00	5,478.32	16,941.63	5,459.88	288.35	271.54	89.14	-8,397.25	8,506.31	1,230.61	671.29	559.32	2.200	
18,600.00	5,477.78	17,041.63	5,459.38	290.65	273.84	89.14	-8,467.96	8,577.02	1,230.60	666.69	563.91	2.182	
18,700.00	5,477.23	17,141.63	5,458.88	292.94	276.13	89.15	-8,538.67	8,647.73	1,230.60	662.09	568.51	2.165	
18,800.00	5,476.69	17,241.63	5,458.38	295.24	278.43	89.15	-8,609.38	8,718.44	1,230.60	657.50	573.10	2.147	
18,900.00	5,476.15	17,341.63	5,457.88	297.53	280.73	89.15	-8,680.08	8,789.15	1,230.60	652.90	577.69	2.130	
19,000.00	5,475.60	17,441.63	5,457.38	299.83	283.03	89.15	-8,750.79	8,859.86	1,230.59	648.31	582.29	2.113	
19,100.00	5,475.06	17,541.63	5,456.89	302.13	285.33	89.15	-8,821.50	8,930.57	1,230.59	643.71	586.88	2.097	
19,200.00	5,474.51	17,641.63	5,456.39	304.42	287.63	89.16	-8,892.21	9,001.28	1,230.59	639.11	591.47	2.081	
19,300.00	5,473.97	17,741.63	5,455.89	306.72	289.93	89.16	-8,962.92	9,071.99	1,230.58	634.52	596.07	2.065	
19,400.00	5,473.43	17,841.63	5,455.39	309.01	292.23	89.16	-9,033.63	9,142.70	1,230.58	629.92	600.66	2.049	
19,500.00	5,472.88	17,941.63	5,454.89	311.31	294.53	89.16	-9,104.34	9,213.41	1,230.58	625.32	605.26	2.033	
19,600.00	5,472.34	18,041.63	5,454.39	313.61	296.83	89.16	-9,175.05	9,284.12	1,230.58	620.73	609.85	2.018	
19,700.00	5,471.80	18,141.63	5,453.89	315.90	299.13	89.17	-9,245.76	9,354.83	1,230.57	616.13	614.45	2.003	
19,800.00	5,471.25	18,241.63	5,453.39	318.20	301.42	89.17	-9,316.47	9,425.54	1,230.57	611.53	619.04	1.988 Level 3<2.00	
19,900.00	5,470.71	18,341.63	5,452.90	320.50	303.72	89.17	-9,387.18	9,496.25	1,230.57	606.93	623.64	1.973 Level 3<2.00	
20,000.00	5,470.17	18,441.63	5,452.40	322.79	306.02	89.17	-9,457.89	9,566.96	1,230.56	602.33	628.23	1.959 Level 3<2.00	
20,100.00	5,469.62	18,541.63	5,451.90	325.09	308.32	89.17	-9,528.60	9,637.67	1,230.56	597.74	632.83	1.945 Level 3<2.00	
20,200.00	5,469.08	18,641.63	5,451.40	327.39	310.62	89.18	-9,599.31	9,708.38	1,230.56	593.14	637.42	1.931 Level 3<2.00	
20,300.00	5,468.54	18,741.63	5,450.90	329.68	312.92	89.18	-9,670.02	9,779.09	1,230.56	588.54	642.02	1.917 Level 3<2.00	
20,400.00	5,467.99	18,841.63	5,450.40	331.98	315.22	89.18	-9,740.73	9,849.80	1,230.55	583.94	646.61	1.903 Level 3<2.00	
20,500.00	5,467.45	18,941.63	5,449.90	334.28	317.52	89.18	-9,811.44	9,920.51	1,230.55	579.34	651.21	1.890 Level 3<2.00	
20,582.58	5,467.00	19,024.20	5,449.49	336.18	319.42	89.18	-9,869.82	9,978.90	1,230.55	575.55	655.00	1.879 Level 3<2.00, 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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 428H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,800.00	5,525.61	5,222.91	5,025.36	90.49	25.75	-71.16	-1,755.31	5,380.70	2,232.56	2,161.15	71.40	31.267	
9,900.00	5,525.06	5,228.20	5,030.50	92.70	25.76	-71.37	-1,756.11	5,381.63	2,152.93	2,079.01	73.92	29.123	
10,000.00	5,524.52	5,250.00	5,051.58	94.92	25.81	-72.25	-1,759.76	5,385.82	2,075.26	1,998.52	76.74	27.044	
10,100.00	5,523.98	5,250.00	5,051.58	97.14	25.81	-72.25	-1,759.76	5,385.82	1,999.07	1,919.36	79.71	25.079	
10,200.00	5,523.43	5,250.00	5,051.58	99.36	25.81	-72.25	-1,759.76	5,385.82	1,925.06	1,842.13	82.93	23.213	
10,300.00	5,522.89	5,250.00	5,051.58	101.59	25.81	-72.25	-1,759.76	5,385.82	1,853.50	1,767.09	86.41	21.450	
10,400.00	5,522.35	5,250.00	5,051.58	103.82	25.81	-72.25	-1,759.76	5,385.82	1,784.67	1,694.53	90.15	19.798	
10,500.00	5,521.80	5,271.65	5,072.29	106.06	25.85	-73.11	-1,763.89	5,390.58	1,718.47	1,624.23	94.24	18.234	
10,600.00	5,521.26	5,281.69	5,081.82	108.29	25.87	-73.52	-1,765.99	5,392.99	1,655.66	1,557.11	98.55	16.801	
10,700.00	5,520.72	5,300.00	5,099.02	110.53	25.91	-74.25	-1,770.08	5,397.70	1,596.47	1,493.34	103.13	15.481	
10,800.00	5,520.17	5,300.00	5,099.02	112.78	25.91	-74.25	-1,770.08	5,397.70	1,541.17	1,433.33	107.84	14.291	
10,900.00	5,519.63	5,319.64	5,117.26	115.02	25.94	-75.03	-1,774.88	5,403.22	1,490.21	1,377.39	112.83	13.208	
11,000.00	5,519.08	5,350.00	5,144.91	117.27	26.00	-76.22	-1,783.08	5,412.66	1,444.18	1,326.20	117.99	12.240	
11,100.00	5,518.54	5,350.00	5,144.91	119.52	26.00	-76.22	-1,783.08	5,412.66	1,402.95	1,279.88	123.07	11.400	
11,200.00	5,518.00	5,375.37	5,167.49	121.77	26.05	-77.20	-1,790.67	5,421.39	1,367.31	1,239.05	128.26	10.661	
11,300.00	5,517.45	5,400.00	5,188.90	124.02	26.09	-78.14	-1,798.65	5,430.58	1,337.42	1,204.10	133.33	10.031	
11,400.00	5,516.91	5,428.82	5,213.26	126.27	26.14	-79.22	-1,808.75	5,442.20	1,313.45	1,175.24	138.21	9.503	
11,500.00	5,516.37	5,462.83	5,240.96	128.53	26.20	-80.46	-1,821.69	5,457.08	1,295.43	1,152.61	142.82	9.070	
11,600.00	5,515.82	5,500.00	5,269.85	130.79	26.25	-81.75	-1,837.03	5,474.73	1,283.24	1,136.18	147.06	8.726	
11,700.00	5,515.28	5,550.00	5,306.19	133.05	26.33	-83.39	-1,859.54	5,500.63	1,276.50	1,125.56	150.94	8.457	
11,793.36	5,514.77	5,605.03	5,342.56	135.16	26.40	-85.04	-1,886.61	5,531.77	1,274.60	1,120.39	154.21	8.265 CC	
11,800.00	5,514.74	5,609.18	5,345.15	135.31	26.41	-85.16	-1,888.74	5,534.23	1,274.61	1,120.18	154.43	8.254	
11,900.00	5,514.19	5,677.87	5,384.32	137.57	26.49	-86.94	-1,925.72	5,576.78	1,276.69	1,119.09	157.61	8.101	
12,000.00	5,513.65	5,761.59	5,426.24	139.84	26.60	-88.84	-1,973.26	5,631.47	1,281.53	1,120.88	160.65	7.977	
12,100.00	5,513.11	5,850.96	5,463.29	142.10	26.73	-90.52	-2,026.55	5,692.78	1,288.25	1,124.62	163.64	7.873	
12,200.00	5,512.56	5,951.91	5,489.38	144.37	26.92	-91.70	-2,090.43	5,766.29	1,295.77	1,128.96	166.82	7.768	
12,300.00	5,512.02	6,067.97	5,497.91	146.63	27.30	-92.09	-2,166.27	5,853.48	1,303.03	1,132.61	170.42	7.646	
12,400.00	5,511.48	6,250.30	5,496.69	148.90	28.66	-92.07	-2,292.44	5,985.05	1,304.24	1,129.27	174.97	7.454	
12,500.00	5,510.93	6,350.30	5,496.02	151.17	29.83	-92.07	-2,363.14	6,055.76	1,304.24	1,125.38	178.86	7.292	
12,600.00	5,510.39	6,450.30	5,495.35	153.44	31.23	-92.06	-2,433.85	6,126.47	1,304.24	1,121.44	182.81	7.135	
12,700.00	5,509.84	6,550.30	5,494.68	155.71	32.78	-92.06	-2,504.56	6,197.18	1,304.24	1,117.42	186.82	6.981	
12,800.00	5,509.30	6,650.30	5,494.01	157.99	34.46	-92.05	-2,575.26	6,267.89	1,304.24	1,113.34	190.90	6.832	
12,900.00	5,508.76	6,750.30	5,493.34	160.26	36.22	-92.05	-2,645.97	6,338.61	1,304.24	1,109.21	195.04	6.687	
13,000.00	5,508.21	6,850.30	5,492.67	162.53	38.06	-92.04	-2,716.68	6,409.32	1,304.24	1,105.02	199.23	6.547	
13,100.00	5,507.67	6,950.30	5,492.00	164.81	39.95	-92.04	-2,787.38	6,480.03	1,304.25	1,100.79	203.46	6.410	
13,200.00	5,507.13	7,050.30	5,491.32	167.09	41.89	-92.03	-2,858.09	6,550.74	1,304.25	1,096.52	207.72	6.279	
13,300.00	5,506.58	7,150.30	5,490.65	169.36	43.86	-92.02	-2,928.80	6,621.45	1,304.25	1,092.22	212.02	6.151	
13,400.00	5,506.04	7,250.30	5,489.98	171.64	45.87	-92.02	-2,999.50	6,692.16	1,304.25	1,087.90	216.35	6.028	
13,500.00	5,505.50	7,350.30	5,489.31	173.92	47.91	-92.01	-3,070.21	6,762.87	1,304.25	1,083.55	220.70	5.910	
13,600.00	5,504.95	7,450.30	5,488.64	176.20	49.97	-92.01	-3,140.92	6,833.59	1,304.25	1,079.18	225.07	5.795	
13,700.00	5,504.41	7,550.30	5,487.97	178.48	52.05	-92.00	-3,211.62	6,904.30	1,304.25	1,074.79	229.46	5.684	
13,800.00	5,503.87	7,650.30	5,487.30	180.76	54.16	-92.00	-3,282.33	6,975.01	1,304.25	1,070.38	233.87	5.577	
13,900.00	5,503.32	7,750.30	5,486.63	183.04	56.27	-91.99	-3,353.04	7,045.72	1,304.25	1,065.96	238.29	5.473	
14,000.00	5,502.78	7,850.30	5,485.96	185.32	58.41	-91.99	-3,423.74	7,116.43	1,304.25	1,061.53	242.72	5.373	
14,100.00	5,502.24	7,950.30	5,485.29	187.60	60.55	-91.98	-3,494.45	7,187.14	1,304.25	1,057.08	247.17	5.277	
14,200.00	5,501.69	8,050.30	5,484.61	189.88	62.71	-91.97	-3,565.16	7,257.85	1,304.25	1,052.63	251.63	5.183	
14,300.00	5,501.15	8,150.30	5,483.94	192.16	64.88	-91.97	-3,635.86	7,328.57	1,304.25	1,048.16	256.09	5.093	
14,400.00	5,500.60	8,250.30	5,483.27	194.45	67.05	-91.96	-3,706.57	7,399.28	1,304.25	1,043.69	260.57	5.005	
14,500.00	5,500.06	8,350.30	5,482.60	196.73	69.24	-91.96	-3,777.28	7,469.99	1,304.25	1,039.20	265.05	4.921	
14,600.00	5,499.52	8,450.30	5,481.93	199.02	71.43	-91.95	-3,847.98	7,540.70	1,304.25	1,034.71	269.54	4.839	
14,700.00	5,498.97	8,550.30	5,481.26	201.30	73.63	-91.95	-3,918.69	7,611.41	1,304.25	1,030.22	274.04	4.759	
14,800.00	5,498.43	8,650.30	5,480.59	203.59	75.84	-91.94	-3,989.40	7,682.12	1,304.26	1,025.72	278.54	4.682	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 428H - 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)			
14,900.00	5,497.89	8,750.30	5,479.92	205.87	78.05	-91.93	-4,060.10	7,752.83	1,304.26	1,021.21	283.05	4.608	
15,000.00	5,497.34	8,850.30	5,479.25	208.16	80.27	-91.93	-4,130.81	7,823.55	1,304.26	1,016.70	287.56	4.536	
15,100.00	5,496.80	8,950.30	5,478.58	210.44	82.49	-91.92	-4,201.51	7,894.26	1,304.26	1,012.18	292.08	4.465	
15,200.00	5,496.26	9,050.30	5,477.91	212.73	84.71	-91.92	-4,272.22	7,964.97	1,304.26	1,007.66	296.60	4.397	
15,300.00	5,495.71	9,150.30	5,477.23	215.02	86.94	-91.91	-4,342.93	8,035.68	1,304.26	1,003.13	301.12	4.331	
15,400.00	5,495.17	9,250.30	5,476.56	217.31	89.18	-91.91	-4,413.63	8,106.39	1,304.26	998.61	305.65	4.267	
15,500.00	5,494.63	9,350.30	5,475.89	219.59	91.42	-91.90	-4,484.34	8,177.10	1,304.26	994.07	310.19	4.205	
15,600.00	5,494.08	9,450.30	5,475.22	221.88	93.66	-91.90	-4,555.05	8,247.82	1,304.26	989.54	314.72	4.144	
15,700.00	5,493.54	9,550.30	5,474.55	224.17	95.90	-91.89	-4,625.75	8,318.53	1,304.26	985.00	319.26	4.085	
15,800.00	5,493.00	9,650.30	5,473.88	226.46	98.15	-91.88	-4,696.46	8,389.24	1,304.26	980.46	323.80	4.028	
15,900.00	5,492.45	9,750.30	5,473.21	228.75	100.40	-91.88	-4,767.17	8,459.95	1,304.26	975.92	328.35	3.972	
16,000.00	5,491.91	9,850.30	5,472.54	231.04	102.65	-91.87	-4,837.87	8,530.66	1,304.27	971.37	332.89	3.918	
16,100.00	5,491.36	9,950.30	5,471.87	233.33	104.90	-91.87	-4,908.58	8,601.37	1,304.27	966.82	337.44	3.865	
16,200.00	5,490.82	10,050.30	5,471.20	235.62	107.16	-91.86	-4,979.29	8,672.08	1,304.27	962.27	341.99	3.814	
16,300.00	5,490.28	10,150.30	5,470.53	237.91	109.42	-91.86	-5,049.99	8,742.80	1,304.27	957.72	346.55	3.764	
16,400.00	5,489.73	10,250.30	5,469.85	240.20	111.68	-91.85	-5,120.70	8,813.51	1,304.27	953.17	351.10	3.715	
16,500.00	5,489.19	10,350.30	5,469.18	242.49	113.94	-91.85	-5,191.41	8,884.22	1,304.27	948.61	355.66	3.667	
16,600.00	5,488.65	10,450.30	5,468.51	244.78	116.21	-91.84	-5,262.11	8,954.93	1,304.27	944.05	360.22	3.621	
16,700.00	5,488.10	10,550.30	5,467.84	247.07	118.47	-91.83	-5,332.82	9,025.64	1,304.27	939.49	364.78	3.576	
16,800.00	5,487.56	10,650.30	5,467.17	249.36	120.74	-91.83	-5,403.53	9,096.35	1,304.27	934.93	369.34	3.531	
16,900.00	5,487.02	10,750.30	5,466.50	251.66	123.01	-91.82	-5,474.23	9,167.06	1,304.27	930.37	373.90	3.488	
17,000.00	5,486.47	10,850.30	5,465.83	253.95	125.27	-91.82	-5,544.94	9,237.78	1,304.27	925.81	378.47	3.446	
17,100.00	5,485.93	10,950.30	5,465.16	256.24	127.55	-91.81	-5,615.65	9,308.49	1,304.28	921.24	383.03	3.405	
17,200.00	5,485.39	11,050.30	5,464.49	258.53	129.82	-91.81	-5,686.35	9,379.20	1,304.28	916.67	387.60	3.365	
17,300.00	5,484.84	11,150.30	5,463.82	260.83	132.09	-91.80	-5,757.06	9,449.91	1,304.28	912.11	392.17	3.326	
17,400.00	5,484.30	11,250.30	5,463.15	263.12	134.36	-91.79	-5,827.77	9,520.62	1,304.28	907.54	396.74	3.287	
17,500.00	5,483.75	11,350.30	5,462.47	265.41	136.64	-91.79	-5,898.47	9,591.33	1,304.28	902.97	401.31	3.250	
17,600.00	5,483.21	11,450.30	5,461.80	267.70	138.92	-91.78	-5,969.18	9,662.04	1,304.28	898.40	405.88	3.213	
17,700.00	5,482.67	11,550.30	5,461.13	270.00	141.19	-91.78	-6,039.89	9,732.76	1,304.28	893.83	410.46	3.178	
17,800.00	5,482.12	11,650.30	5,460.46	272.29	143.47	-91.77	-6,110.59	9,803.47	1,304.28	889.25	415.03	3.143	
17,900.00	5,481.58	11,750.30	5,459.79	274.59	145.75	-91.77	-6,181.30	9,874.18	1,304.28	884.68	419.60	3.108	
18,000.00	5,481.04	11,850.30	5,459.12	276.88	148.03	-91.76	-6,252.01	9,944.89	1,304.28	880.11	424.18	3.075	
18,100.00	5,480.49	11,950.30	5,458.45	279.17	150.31	-91.76	-6,322.71	10,015.60	1,304.29	875.53	428.76	3.042	
18,200.00	5,479.95	12,050.30	5,457.78	281.47	152.59	-91.75	-6,393.42	10,086.31	1,304.29	870.95	433.33	3.010	
18,300.00	5,479.41	12,150.30	5,457.11	283.76	154.87	-91.74	-6,464.13	10,157.02	1,304.29	866.38	437.91	2.978	
18,400.00	5,478.86	12,250.30	5,456.44	286.06	157.16	-91.74	-6,534.83	10,227.74	1,304.29	861.80	442.49	2.948	
18,500.00	5,478.32	12,350.30	5,455.77	288.35	159.44	-91.73	-6,605.54	10,298.45	1,304.29	857.22	447.07	2.917	
18,600.00	5,477.78	12,450.30	5,455.09	290.65	161.72	-91.73	-6,676.25	10,369.16	1,304.29	852.64	451.65	2.888	
18,700.00	5,477.23	12,550.30	5,454.42	292.94	164.01	-91.72	-6,746.95	10,439.87	1,304.29	848.06	456.23	2.859	
18,800.00	5,476.69	12,650.30	5,453.75	295.24	166.29	-91.72	-6,817.66	10,510.58	1,304.29	843.48	460.81	2.830	
18,900.00	5,476.15	12,750.30	5,453.08	297.53	168.58	-91.71	-6,888.37	10,581.29	1,304.30	838.90	465.39	2.803	
19,000.00	5,475.60	12,850.30	5,452.41	299.83	170.86	-91.71	-6,959.07	10,652.00	1,304.30	834.32	469.97	2.775	
19,100.00	5,475.06	12,950.30	5,451.74	302.13	173.15	-91.70	-7,029.78	10,722.72	1,304.30	829.74	474.56	2.748	
19,200.00	5,474.51	13,050.30	5,451.07	304.42	175.44	-91.69	-7,100.49	10,793.43	1,304.30	825.16	479.14	2.722 ES	
19,300.00	5,473.97	13,060.59	5,451.00	306.72	175.67	-91.69	-7,107.76	10,800.71	1,307.38	827.07	480.31	2.722 SF	
19,400.00	5,473.43	13,060.59	5,451.00	309.01	175.67	-91.69	-7,107.76	10,800.71	1,318.03	840.97	477.05	2.763	
19,500.00	5,472.88	13,060.59	5,451.00	311.31	175.67	-91.69	-7,107.76	10,800.71	1,336.09	866.17	469.92	2.843	
19,600.00	5,472.34	13,060.59	5,451.00	313.61	175.67	-91.69	-7,107.76	10,800.71	1,361.28	901.71	459.57	2.962	
19,700.00	5,471.80	13,060.59	5,451.00	315.90	175.67	-91.69	-7,107.76	10,800.71	1,393.21	946.43	446.77	3.118	
19,800.00	5,471.25	13,060.59	5,451.00	318.20	175.67	-91.69	-7,107.76	10,800.71	1,431.42	999.10	432.32	3.311	
19,900.00	5,470.71	13,060.59	5,451.00	320.50	175.67	-91.69	-7,107.76	10,800.71	1,475.44	1,058.54	416.90	3.539	
20,000.00	5,470.17	13,060.59	5,451.00	322.79	175.67	-91.69	-7,107.76	10,800.71	1,524.75	1,123.66	401.09	3.802	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 428H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
20,100.00	5,469.62	13,060.59	5,451.00	325.09	175.67	-91.69	-7,107.76	10,800.71	1,578.86	1,193.54	385.33	4.097		
20,200.00	5,469.08	13,060.59	5,451.00	327.39	175.67	-91.69	-7,107.76	10,800.71	1,637.30	1,267.39	369.91	4.426		
20,300.00	5,468.54	13,060.59	5,451.00	329.68	175.67	-91.69	-7,107.76	10,800.71	1,699.62	1,344.55	355.06	4.787		
20,400.00	5,467.99	13,060.59	5,451.00	331.98	175.67	-91.69	-7,107.76	10,800.71	1,765.40	1,424.50	340.90	5.179		
20,500.00	5,467.45	13,060.59	5,451.00	334.28	175.67	-91.69	-7,107.76	10,800.71	1,834.28	1,506.78	327.50	5.601		
20,582.58	5,467.00	13,060.59	5,451.00	336.18	175.67	-91.69	-7,107.76	10,800.71	1,893.25	1,576.23	317.02	5.972		



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 440H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
4,200.00	3,911.59	11,874.59	5,518.58	26.33	143.51	65.44	2,412.07	1,280.45	2,240.22	2,124.84	115.38	19.415	
4,300.00	4,002.45	11,899.30	5,518.66	27.08	144.07	64.22	2,429.55	1,262.97	2,150.27	2,032.65	117.62	18.281	
4,400.00	4,093.61	11,923.60	5,518.73	27.83	144.62	60.21	2,446.73	1,245.79	2,061.12	1,941.08	120.03	17.171	
4,500.00	4,186.60	11,945.38	5,518.80	28.51	145.12	54.57	2,462.13	1,230.39	1,973.89	1,851.15	122.74	16.082	
4,600.00	4,281.38	11,964.30	5,518.86	29.13	145.55	49.83	2,475.50	1,217.02	1,889.33	1,763.55	125.78	15.020	
4,700.00	4,377.70	11,980.28	5,518.90	29.68	145.91	45.92	2,486.81	1,205.71	1,808.15	1,678.96	129.18	13.997	
4,800.00	4,475.29	11,993.31	5,518.94	30.16	146.21	42.73	2,496.02	1,196.50	1,731.13	1,598.19	132.94	13.021	
4,900.00	4,573.89	12,003.33	5,518.97	30.57	146.44	40.19	2,503.10	1,189.41	1,659.16	1,522.11	137.05	12.106	
5,000.00	4,673.22	12,010.32	5,519.00	30.92	146.60	38.20	2,508.05	1,184.47	1,593.19	1,451.75	141.45	11.264	
5,100.00	4,773.01	12,014.27	5,519.01	31.19	146.69	36.68	2,510.83	1,181.68	1,534.23	1,388.17	146.05	10.505	
5,200.00	4,873.00	12,015.30	5,519.01	31.40	146.71	45.09	2,511.56	1,180.95	1,483.12	1,332.38	150.74	9.839	
5,300.00	4,972.98	12,014.77	5,519.01	31.58	146.70	-91.37	2,511.19	1,181.33	1,438.07	1,282.76	155.31	9.259	
5,400.00	5,071.86	12,001.00	5,518.97	31.68	146.38	-95.00	2,501.46	1,191.06	1,399.12	1,239.90	159.22	8.787	
5,500.00	5,166.80	11,970.27	5,518.87	31.68	145.68	-97.06	2,479.72	1,212.79	1,367.41	1,205.31	162.10	8.436	
5,600.00	5,254.90	11,923.50	5,518.73	31.57	144.62	-97.74	2,446.66	1,245.86	1,343.33	1,179.52	163.81	8.201	
5,700.00	5,333.50	11,862.12	5,518.55	31.38	143.22	-97.36	2,403.26	1,289.27	1,326.43	1,162.09	164.34	8.071	
5,800.00	5,400.20	11,787.99	5,518.32	31.13	141.54	-96.29	2,350.84	1,341.68	1,315.61	1,151.76	163.85	8.029 SF	
5,900.00	5,453.72	11,703.77	5,518.07	30.82	139.63	-94.79	2,291.29	1,401.24	1,309.33	1,146.71	162.63	8.051	
6,000.00	5,499.83	11,615.28	5,517.80	30.52	137.61	-93.23	2,228.72	1,463.82	1,305.68	1,144.57	161.11	8.104 ES	
6,100.00	5,530.54	11,520.33	5,517.51	30.21	135.46	-92.10	2,161.58	1,530.95	1,304.15	1,144.84	159.31	8.186	
6,200.00	5,544.27	11,421.45	5,517.21	29.91	133.21	-91.53	2,091.67	1,600.88	1,303.71	1,146.30	157.41	8.282	
6,292.13	5,546.56	11,329.36	5,516.94	29.65	131.12	-91.42	2,026.55	1,665.99	1,303.65	1,147.91	155.73	8.371 CC	
6,300.00	5,544.63	11,321.47	5,516.91	29.62	130.94	-91.51	2,020.97	1,671.58	1,303.69	1,148.12	155.57	8.380	
6,400.00	5,544.09	11,221.47	5,516.61	29.37	128.68	-91.52	1,950.26	1,742.29	1,303.71	1,149.77	153.93	8.469	
6,500.00	5,543.54	11,121.47	5,516.31	29.15	126.41	-91.53	1,879.55	1,813.00	1,303.72	1,151.24	152.48	8.550	
6,600.00	5,543.00	11,021.47	5,516.01	28.96	124.15	-91.54	1,808.85	1,883.72	1,303.73	1,152.53	151.20	8.623	
6,700.00	5,542.46	10,921.47	5,515.70	28.80	121.88	-91.55	1,738.14	1,954.43	1,303.74	1,153.67	150.07	8.688	
6,800.00	5,541.91	10,821.47	5,515.40	30.10	119.62	-91.56	1,667.43	2,025.14	1,303.75	1,154.68	149.08	8.746	
6,900.00	5,541.37	10,721.47	5,515.10	31.62	117.36	-91.57	1,596.72	2,095.85	1,303.76	1,155.56	148.20	8.797	
7,000.00	5,540.83	10,621.47	5,514.80	33.21	115.10	-91.58	1,526.02	2,166.57	1,303.77	1,156.34	147.43	8.843	
7,100.00	5,540.28	10,521.47	5,514.49	34.88	112.84	-91.59	1,455.31	2,237.28	1,303.79	1,157.03	146.76	8.884	
7,200.00	5,539.74	10,421.47	5,514.19	36.60	110.59	-91.60	1,384.60	2,307.99	1,303.80	1,157.64	146.16	8.921	
7,300.00	5,539.20	10,321.47	5,513.89	38.38	108.34	-91.61	1,313.89	2,378.70	1,303.81	1,158.18	145.63	8.953	
7,400.00	5,538.65	10,221.47	5,513.59	40.21	106.09	-91.62	1,243.18	2,449.42	1,303.82	1,158.66	145.16	8.982	
7,500.00	5,538.11	10,121.47	5,513.28	42.08	103.84	-91.63	1,172.48	2,520.13	1,303.83	1,159.09	144.74	9.008	
7,600.00	5,537.56	10,021.47	5,512.98	43.99	101.59	-91.64	1,101.77	2,590.84	1,303.85	1,159.47	144.37	9.031	
7,700.00	5,537.02	9,921.47	5,512.68	45.93	99.35	-91.66	1,031.06	2,661.55	1,303.86	1,159.81	144.05	9.052	
7,800.00	5,536.48	9,821.47	5,512.38	47.89	97.11	-91.67	960.35	2,732.27	1,303.87	1,160.11	143.76	9.070	
7,900.00	5,535.93	9,721.47	5,512.07	49.89	94.87	-91.68	889.65	2,802.98	1,303.88	1,160.38	143.50	9.086	
8,000.00	5,535.39	9,621.47	5,511.77	51.91	92.63	-91.69	818.94	2,873.69	1,303.89	1,160.62	143.27	9.101	
8,100.00	5,534.85	9,521.47	5,511.47	53.95	90.40	-91.70	748.23	2,944.40	1,303.91	1,160.83	143.07	9.113	
8,200.00	5,534.30	9,421.47	5,511.17	56.01	88.17	-91.71	677.52	3,015.12	1,303.92	1,161.02	142.90	9.125	
8,300.00	5,533.76	9,321.47	5,510.86	58.08	85.95	-91.72	606.81	3,085.83	1,303.93	1,161.18	142.75	9.135	
8,400.00	5,533.22	9,221.47	5,510.56	60.17	83.73	-91.73	536.11	3,156.54	1,303.94	1,161.33	142.61	9.143	
8,500.00	5,532.67	9,121.47	5,510.26	62.28	81.52	-91.74	465.40	3,227.25	1,303.95	1,161.45	142.50	9.151	
8,600.00	5,532.13	9,021.47	5,509.96	64.40	79.31	-91.75	394.69	3,297.97	1,303.97	1,161.56	142.40	9.157	
8,700.00	5,531.59	8,921.47	5,509.66	66.52	77.10	-91.76	323.98	3,368.68	1,303.98	1,161.65	142.33	9.162	
8,800.00	5,531.04	8,821.47	5,509.35	68.66	74.90	-91.77	253.28	3,439.39	1,303.99	1,161.72	142.27	9.166	
8,900.00	5,530.50	8,721.47	5,509.05	70.81	72.71	-91.78	182.57	3,510.10	1,304.00	1,161.78	142.22	9.169	
9,000.00	5,529.96	8,621.47	5,508.75	72.97	70.52	-91.79	111.86	3,580.82	1,304.02	1,161.82	142.19	9.171	
9,100.00	5,529.41	8,521.47	5,508.45	75.14	68.35	-91.80	41.15	3,651.53	1,304.03	1,161.85	142.18	9.172	
9,200.00	5,528.87	8,421.47	5,508.14	77.31	66.18	-91.81	-29.56	3,722.24	1,304.04	1,161.86	142.18	9.171	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 440H - 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)			
9,300.00	5,528.32	8,321.47	5,507.84	79.49	64.01	-91.82	-100.26	3,792.95	1,304.05	1,161.85	142.20	9.170	
9,400.00	5,527.78	8,221.47	5,507.54	81.68	61.86	-91.83	-170.97	3,863.67	1,304.07	1,161.83	142.24	9.168	
9,500.00	5,527.24	8,121.47	5,507.24	83.87	59.72	-91.85	-241.68	3,934.38	1,304.08	1,161.79	142.29	9.165	
9,600.00	5,526.69	8,021.48	5,506.93	86.07	57.59	-91.86	-312.39	4,005.09	1,304.09	1,161.73	142.36	9.160	
9,700.00	5,526.15	7,921.48	5,506.63	88.28	55.48	-91.87	-383.09	4,075.80	1,304.11	1,161.65	142.45	9.155	
9,800.00	5,525.61	7,821.48	5,506.33	90.49	53.38	-91.88	-453.80	4,146.52	1,304.12	1,161.56	142.56	9.148	
9,900.00	5,525.06	7,721.48	5,506.03	92.70	51.29	-91.89	-524.51	4,217.23	1,304.13	1,161.44	142.69	9.140	
10,000.00	5,524.52	7,621.48	5,505.72	94.92	49.23	-91.90	-595.22	4,287.94	1,304.14	1,161.30	142.85	9.130	
10,100.00	5,523.98	7,521.48	5,505.42	97.14	47.18	-91.91	-665.93	4,358.65	1,304.16	1,161.13	143.03	9.118	
10,200.00	5,523.43	7,421.48	5,505.12	99.36	45.16	-91.92	-736.63	4,429.37	1,304.17	1,160.94	143.23	9.105	
10,300.00	5,522.89	7,321.48	5,504.82	101.59	43.17	-91.93	-807.34	4,500.08	1,304.18	1,160.71	143.47	9.090	
10,400.00	5,522.35	7,221.48	5,504.52	103.82	41.20	-91.94	-878.05	4,570.79	1,304.20	1,160.45	143.75	9.073	
10,500.00	5,521.80	7,121.48	5,504.21	106.06	39.27	-91.95	-948.76	4,641.51	1,304.21	1,160.14	144.07	9.053	
10,600.00	5,521.26	7,021.48	5,503.91	108.29	37.38	-91.96	-1,019.46	4,712.22	1,304.22	1,159.79	144.43	9.030	
10,700.00	5,520.72	6,921.48	5,503.61	110.53	35.54	-91.97	-1,090.17	4,782.93	1,304.24	1,159.39	144.84	9.004	
10,800.00	5,520.17	6,821.48	5,503.31	112.78	33.75	-91.98	-1,160.88	4,853.64	1,304.25	1,158.93	145.32	8.975	
10,900.00	5,519.63	6,721.48	5,503.00	115.02	32.01	-91.99	-1,231.59	4,924.36	1,304.26	1,158.39	145.87	8.941	
11,000.00	5,519.08	6,621.48	5,502.70	117.27	30.35	-92.00	-1,302.30	4,995.07	1,304.28	1,157.78	146.50	8.903	
11,100.00	5,518.54	6,521.48	5,502.40	119.52	28.77	-92.01	-1,373.00	5,065.78	1,304.29	1,157.07	147.22	8.859	
11,200.00	5,518.00	6,421.48	5,502.10	121.77	27.29	-92.03	-1,443.71	5,136.49	1,304.30	1,156.25	148.05	8.810	
11,300.00	5,517.45	6,321.48	5,501.79	124.02	25.96	-92.04	-1,514.42	5,207.21	1,304.32	1,155.36	148.95	8.756	
11,400.00	5,516.91	6,221.48	5,501.49	126.27	25.21	-92.05	-1,585.13	5,277.92	1,304.33	1,154.06	150.27	8.680	
11,500.00	5,516.37	6,121.48	5,501.18	128.53	25.32	-92.05	-1,633.22	5,326.80	1,305.28	1,153.30	151.97	8.589	
11,600.00	5,515.82	6,100.00	5,501.13	130.79	25.39	-92.06	-1,669.18	5,365.60	1,309.28	1,155.41	153.87	8.509	
11,700.00	5,515.28	6,016.22	5,499.49	133.05	25.50	-91.99	-1,724.19	5,428.74	1,316.06	1,160.62	155.45	8.466	
11,800.00	5,514.74	5,910.54	5,482.17	135.31	25.66	-91.26	-1,792.09	5,507.64	1,323.07	1,166.02	157.06	8.424	
11,900.00	5,514.19	5,813.94	5,449.86	137.57	25.80	-89.88	-1,851.40	5,576.56	1,330.20	1,171.30	158.89	8.372	
12,000.00	5,513.65	5,727.47	5,409.05	139.84	25.92	-88.14	-1,901.09	5,634.30	1,338.57	1,177.83	160.74	8.327	
12,100.00	5,513.11	5,650.00	5,368.61	142.10	26.03	-86.43	-1,944.17	5,684.36	1,348.93	1,186.48	162.44	8.304	
12,200.00	5,512.56	5,585.16	5,328.69	144.37	26.10	-84.76	-1,977.46	5,723.05	1,362.30	1,198.48	163.82	8.316	
12,300.00	5,512.02	5,531.42	5,291.40	146.63	26.16	-83.21	-2,002.69	5,752.37	1,379.57	1,214.85	164.72	8.375	
12,400.00	5,511.48	5,486.48	5,257.55	148.90	26.19	-81.81	-2,021.96	5,774.75	1,401.35	1,236.24	165.11	8.487	
12,500.00	5,510.93	5,450.00	5,228.44	151.17	26.21	-80.61	-2,036.29	5,791.41	1,427.98	1,263.02	164.97	8.656	
12,600.00	5,510.39	5,416.97	5,200.92	153.44	26.21	-79.49	-2,048.20	5,805.25	1,459.61	1,295.28	164.34	8.882	
12,700.00	5,509.84	5,400.00	5,186.38	155.71	26.22	-78.90	-2,053.91	5,811.88	1,496.29	1,333.03	163.26	9.165	
12,800.00	5,509.30	5,366.74	5,157.17	157.99	26.21	-77.73	-2,064.28	5,823.93	1,537.67	1,375.82	161.84	9.501	
12,900.00	5,508.76	5,350.00	5,142.13	160.26	26.21	-77.13	-2,069.08	5,829.50	1,583.74	1,423.61	160.12	9.891	
13,000.00	5,508.21	5,329.26	5,123.21	162.53	26.20	-76.38	-2,074.62	5,835.94	1,634.13	1,475.96	158.17	10.331	
13,100.00	5,507.67	5,300.00	5,096.03	164.81	26.18	-75.30	-2,081.67	5,844.13	1,688.71	1,532.67	156.04	10.822	
13,200.00	5,507.13	5,300.00	5,096.03	167.09	26.18	-75.30	-2,081.67	5,844.13	1,746.73	1,592.88	153.84	11.354	
13,300.00	5,506.58	5,300.00	5,096.03	169.36	26.18	-75.30	-2,081.67	5,844.13	1,808.41	1,656.85	151.57	11.931	
13,400.00	5,506.04	5,277.74	5,074.99	171.64	26.16	-74.48	-2,086.42	5,849.65	1,873.00	1,723.74	149.26	12.549	
13,500.00	5,505.50	5,268.11	5,065.81	173.92	26.15	-74.12	-2,088.31	5,851.85	1,940.53	1,793.57	146.96	13.205	
13,600.00	5,504.95	5,250.00	5,048.41	176.20	26.14	-73.45	-2,091.59	5,855.66	2,010.70	1,866.03	144.68	13.898	
13,700.00	5,504.41	5,250.00	5,048.41	178.48	26.14	-73.45	-2,091.59	5,855.66	2,083.06	1,940.60	142.46	14.622	
13,800.00	5,503.87	5,250.00	5,048.41	180.76	26.14	-73.45	-2,091.59	5,855.66	2,157.63	2,017.34	140.29	15.380	
13,900.00	5,503.32	5,250.00	5,048.41	183.04	26.14	-73.45	-2,091.59	5,855.66	2,234.18	2,096.00	138.18	16.168	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Section 06-T23N-R06W - NE Lybrook Com 263 H - Original Hole - rev2												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	
3,500.00	3,275.63	15,577.27	5,734.24	21.08	251.93	-179.49	1,067.85	164.66	2,243.63	2,157.21	86.42	25.961	
3,600.00	3,366.48	15,576.34	5,734.23	21.83	251.91	-179.44	1,068.03	163.75	2,153.26	2,066.41	86.85	24.794	
3,700.00	3,457.33	15,575.41	5,734.23	22.58	251.88	-179.38	1,068.21	162.84	2,063.77	1,976.25	87.52	23.579	
3,800.00	3,548.18	15,574.48	5,734.23	23.33	251.86	-179.32	1,068.38	161.93	1,975.29	1,886.78	88.51	22.317	
3,900.00	3,639.04	15,573.55	5,734.22	24.08	251.84	-179.27	1,068.56	161.02	1,887.97	1,798.09	89.87	21.007	
4,000.00	3,729.89	15,572.62	5,734.22	24.83	251.81	-179.21	1,068.73	160.10	1,801.96	1,710.28	91.68	19.655	
4,100.00	3,820.74	15,571.69	5,734.22	25.58	251.79	-179.15	1,068.91	159.19	1,717.46	1,623.43	94.04	18.264	
4,200.00	3,911.59	15,570.76	5,734.21	26.33	251.77	-179.10	1,069.09	158.28	1,634.72	1,537.67	97.05	16.844	
4,300.00	4,002.45	15,569.83	5,734.21	27.08	251.74	-179.04	1,069.26	157.37	1,554.01	1,453.18	100.83	15.412	
4,400.00	4,093.61	15,568.93	5,734.21	27.83	251.72	-178.95	1,069.43	156.48	1,475.17	1,369.69	105.48	13.986	
4,500.00	4,186.60	15,568.16	5,734.20	28.51	251.70	-178.82	1,069.58	155.72	1,396.02	1,285.20	110.81	12.598	
4,600.00	4,281.38	15,567.54	5,734.20	29.13	251.68	-178.69	1,069.70	155.12	1,316.33	1,199.51	116.82	11.268	
4,700.00	4,377.70	15,567.08	5,734.20	29.68	251.67	-178.56	1,069.78	154.67	1,236.24	1,112.74	123.50	10.010	
4,800.00	4,475.29	15,566.78	5,734.20	30.16	251.66	-178.43	1,069.84	154.37	1,155.91	1,025.00	130.90	8.830	
4,900.00	4,573.89	15,566.64	5,734.20	30.57	251.66	-178.31	1,069.87	154.23	1,075.53	936.45	139.08	7.733	
5,000.00	4,673.22	15,566.66	5,734.20	30.92	251.66	-178.19	1,069.86	154.25	995.33	847.21	148.12	6.720	
5,100.00	4,773.01	15,566.84	5,734.20	31.19	251.67	-178.07	1,069.83	154.42	915.62	757.48	158.14	5.790	
5,200.00	4,873.00	15,567.16	5,734.20	31.40	251.67	-168.81	1,069.77	154.74	836.94	667.58	169.37	4.942	
5,300.00	4,972.98	15,568.22	5,734.20	31.58	251.70	58.91	1,069.57	155.78	762.07	579.38	182.70	4.171	
5,400.00	5,071.86	15,580.23	5,734.25	31.68	252.01	67.17	1,067.29	167.58	688.65	491.31	197.35	3.490	
5,500.00	5,166.80	15,606.27	5,734.34	31.68	252.67	73.86	1,062.35	193.15	616.83	404.18	212.65	2.901	
5,600.00	5,254.90	15,645.56	5,734.49	31.57	253.66	78.63	1,054.90	231.72	547.93	319.79	228.14	2.402	
5,700.00	5,333.50	15,696.89	5,734.67	31.38	254.97	81.60	1,045.16	282.11	482.65	239.55	243.10	1.985 Level 3<2.00	
5,800.00	5,400.20	15,758.71	5,734.90	31.13	256.53	83.21	1,033.43	342.81	421.03	164.41	256.62	1.641 Level 3<2.00	
5,900.00	5,453.72	15,786.04	5,735.00	30.82	257.23	85.59	1,028.25	369.65	365.05	108.28	256.77	1.422 Level 2<1.50, ES, SF	
6,000.00	5,499.83	15,786.04	5,735.00	30.52	257.23	88.07	1,028.25	369.65	328.72	115.02	213.70	1.538 Level 3<2.00	
6,078.26	5,525.28	15,786.04	5,735.00	30.28	257.23	89.02	1,028.25	369.65	319.37	158.38	161.00	1.984 Level 3<2.00, CC	
6,100.00	5,530.54	15,786.04	5,735.00	30.21	257.23	88.95	1,028.25	369.65	320.10	172.74	147.36	2.172	
6,200.00	5,544.27	15,786.04	5,735.00	29.91	257.23	86.73	1,028.25	369.65	341.50	243.72	97.78	3.492	
6,300.00	5,544.63	15,786.04	5,735.00	29.62	257.23	85.38	1,028.25	369.65	387.75	318.21	69.54	5.576	
6,400.00	5,544.09	15,786.04	5,735.00	29.37	257.23	85.38	1,028.25	369.65	451.71	394.56	57.15	7.904	
6,500.00	5,543.54	15,786.04	5,735.00	29.15	257.23	85.38	1,028.25	369.65	527.00	472.31	54.69	9.635	
6,600.00	5,543.00	15,786.04	5,735.00	28.96	257.23	85.38	1,028.25	369.65	609.44	551.29	58.15	10.480	
6,700.00	5,542.46	15,786.04	5,735.00	28.80	257.23	85.38	1,028.25	369.65	696.50	631.48	65.02	10.712	
6,800.00	5,541.91	15,786.04	5,735.00	30.10	257.23	85.38	1,028.25	369.65	786.64	712.98	73.66	10.680	
6,900.00	5,541.37	15,786.04	5,735.00	31.62	257.23	85.38	1,028.25	369.65	878.91	795.97	82.94	10.597	
7,000.00	5,540.83	15,786.04	5,735.00	33.21	257.23	85.38	1,028.25	369.65	972.71	880.65	92.06	10.566	
7,100.00	5,540.28	15,786.04	5,735.00	34.88	257.23	85.38	1,028.25	369.65	1,067.64	967.15	100.50	10.624	
7,200.00	5,539.74	15,786.04	5,735.00	36.60	257.23	85.38	1,028.25	369.65	1,163.42	1,055.41	108.01	10.772	
7,300.00	5,539.20	15,786.04	5,735.00	38.38	257.23	85.38	1,028.25	369.65	1,259.86	1,145.27	114.59	10.995	
7,400.00	5,538.65	15,786.04	5,735.00	40.21	257.23	85.38	1,028.25	369.65	1,356.81	1,236.49	120.32	11.277	
7,500.00	5,538.11	15,786.04	5,735.00	42.08	257.23	85.38	1,028.25	369.65	1,454.17	1,328.86	125.31	11.605	
7,600.00	5,537.56	15,786.04	5,735.00	43.99	257.23	85.38	1,028.25	369.65	1,551.87	1,422.20	129.67	11.968	
7,700.00	5,537.02	15,786.04	5,735.00	45.93	257.23	85.38	1,028.25	369.65	1,649.85	1,516.33	133.51	12.357	
7,800.00	5,536.48	15,786.04	5,735.00	47.89	257.23	85.38	1,028.25	369.65	1,748.05	1,611.14	136.91	12.768	
7,900.00	5,535.93	15,786.04	5,735.00	49.89	257.23	85.38	1,028.25	369.65	1,846.45	1,706.52	139.93	13.195	
8,000.00	5,535.39	15,786.04	5,735.00	51.91	257.23	85.38	1,028.25	369.65	1,945.01	1,802.37	142.64	13.636	
8,100.00	5,534.85	15,786.04	5,735.00	53.95	257.23	85.38	1,028.25	369.65	2,043.71	1,898.65	145.06	14.088	
8,200.00	5,534.30	15,786.04	5,735.00	56.01	257.23	85.38	1,028.25	369.65	2,142.53	1,995.27	147.26	14.549	
8,300.00	5,533.76	15,786.04	5,735.00	58.08	257.23	85.38	1,028.25	369.65	2,241.46	2,092.20	149.25	15.018	

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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6765+25 @ 6790.00ft

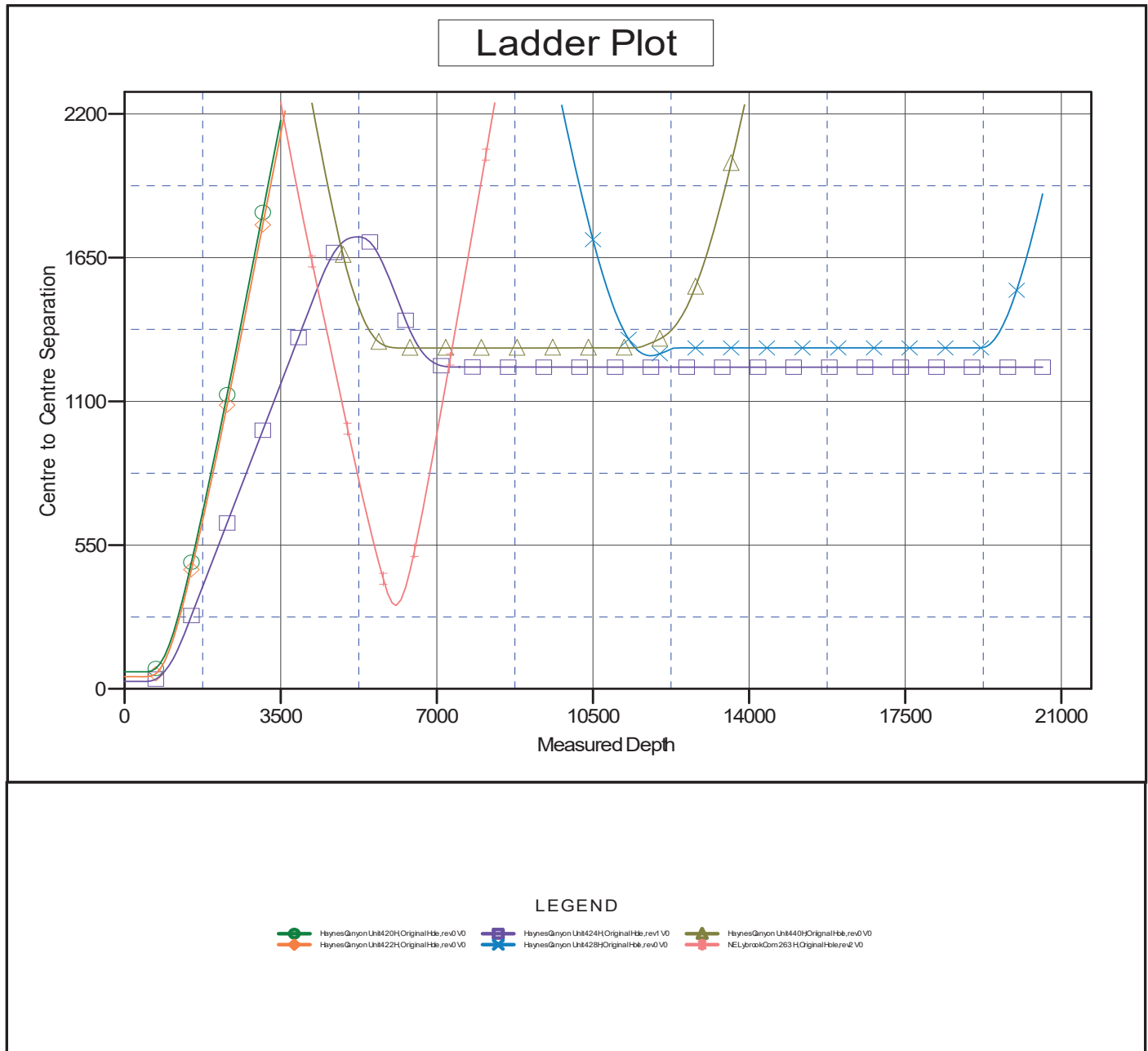
Offset Depths are relative to Offset Datum

Central Meridian is -106.250000000

Coordinates are relative to: Haynes Canyon Unit 426 H

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

Grid Convergence at Surface is: -0.73°



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 Haynes Canyon Unit 426 H
Project:	Rio Arriba County, New Mexico NAD83 NM C	TVD Reference:	RKB=6765+25 @ 6790.00ft
Reference Site:	Haynes Canyon Unit (420, 422, 424 & 426)	MD Reference:	RKB=6765+25 @ 6790.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Haynes Canyon Unit 426 H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6765+25 @ 6790.00ft

Offset Depths are relative to Offset Datum

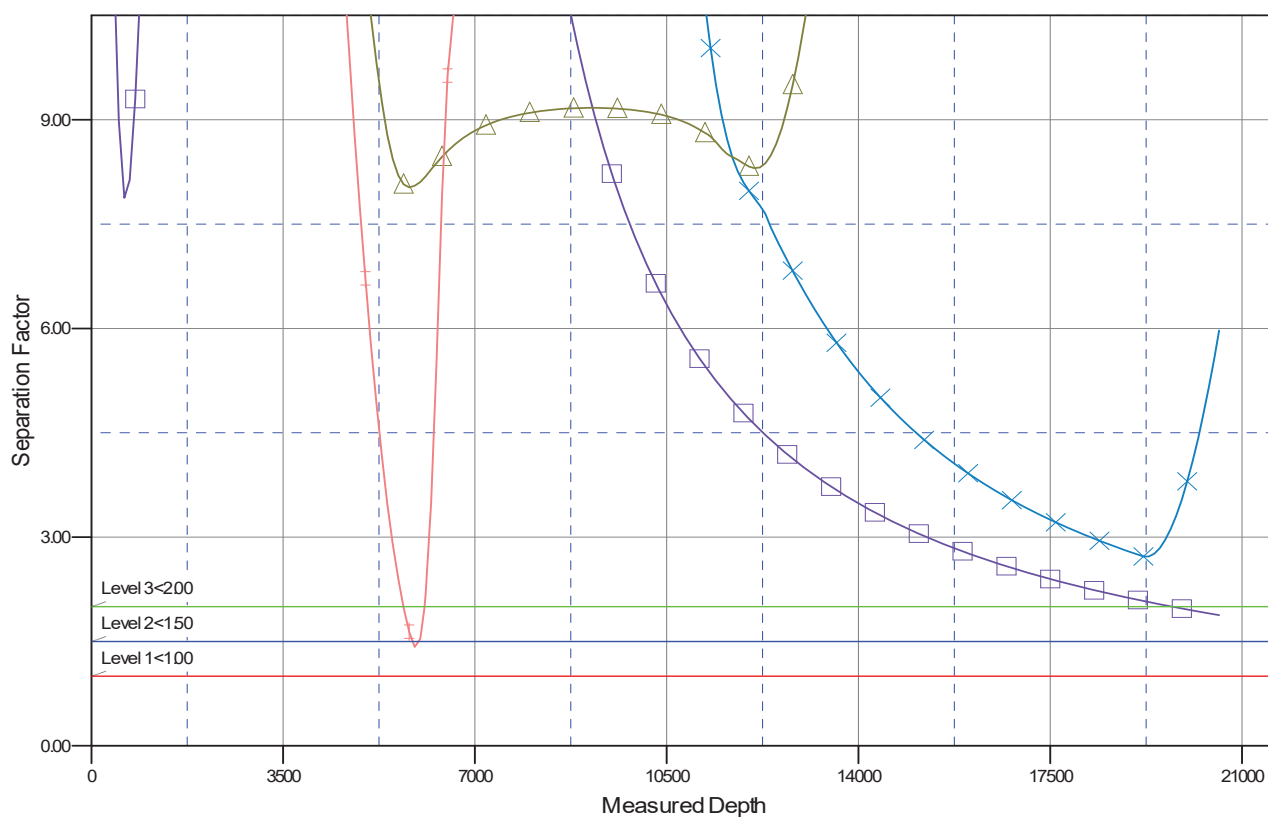
Central Meridian is -106.250000000

Coordinates are relative to: Haynes Canyon Unit 426 H

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

Grid Convergence at Surface is: -0.73°

Separation Factor Plot



LEGEND

HaynesCanyon Unit 420H Original Hole rev0 V0
 HaynesCanyon Unit 424H Original Hole rev1 V0
 HaynesCanyon Unit 440H Original Hole rev0 V0

HaynesCanyon Unit 422H Original Hole rev0 V0
 HaynesCanyon Unit 428H Original Hole rev0 V0
 NELbrookCom 263 H Original Hole rev2 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

#426H HAYNES CANYON UNIT

Lease: NMNM130875 Agreement: NMNM105770949

SH: NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 5, T. 23N., R. 6W.
Rio Arriba County, New Mexico

BH: SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 15, T. 23N., R. 6W.
Rio Arriba County, New Mexico

***Above Data Required on Well Sign**

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

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

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

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

I. GENERAL

- A. Full compliance with all applicable laws and regulations, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report is filed. The report should be on 8-1/2 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).
- F. BOP equipment (except the annular preventer) shall be tested utilizing a test plug to full working pressure for 10 minutes. No bleed-off of pressure is acceptable. (See 43 CFR 3172.6(b)(9)(ii)).
- G. The operator shall have sufficient weighting materials and lost circulation materials on location in the event of a pressure kick or in the event of lost circulation. (See 43 CFR 3172.8(a)).
- H. The flare line(s) discharge shall be located not less than 100 feet from the well head, having straight lines unless turns are targeted with running tees, and shall be positioned downwind of the prevailing wind direction and shall be anchored. The flare system shall have an effective method for ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare. (See 43 CFR 3172.8(b)(7)).
- I. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a Notice of Intent sundry within three business days. **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to Virgil Lucero at 505-793-1836.**
- J. **The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.**
- K. Unless drilling operations are commenced within 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 423120

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 423120
	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.	1/21/2025
sford	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	1/21/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	2/10/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	2/10/2025
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.	2/10/2025
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.	2/10/2025