

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

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

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.	
2. Name of Operator		9. API Well No. 30-045-38476	
3a. Address		3b. Phone No. (include area code)	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory 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)	
Title		Date	
Approved by (Signature)		Name (Printed/Typed)	
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: 07/24/2025

Additional Operator Remarks

Location of Well

0. SHL: SENW / 1574 FNL / 1458 FWL / TWSP: 23N / RANGE: 9W / SECTION: 13 / LAT: 36.229857 / LONG: -107.744323 (TVD: 0 feet, MD: 0 feet)
PPP: NWNE / 55 FNL / 2161 FEL / TWSP: 23N / RANGE: 9W / SECTION: 13 / LAT: 36.234066 / LONG: -107.738734 (TVD: 4340 feet, MD: 5073 feet)
PPP: NWNE / 0 FNL / 0 FEL / TWSP: 23N / RANGE: 8W / SECTION: 19 / LAT: 36.219501 / LONG: -107.72046 (TVD: 4403 feet, MD: 15251 feet)
PPP: LOT 2 / 0 FSL / 0 FWL / TWSP: 23N / RANGE: 8W / SECTION: 18 / LAT: 36.22866 / LONG: -107.73134 (TVD: 4403 feet, MD: 15251 feet)
BHL: SENE / 1837 FNL / 242 FEL / TWSP: 23N / RANGE: 8W / SECTION: 19 / LAT: 36.21463 / LONG: -107.714799 (TVD: 4403 feet, MD: 15251 feet)

BLM Point of Contact

Name: CHRISTOPHER P WENMAN
Title: Natural Resource Specialist
Phone: (505) 564-7727
Email: cwenman@blm.gov

CONFIDENTIAL

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type	☐ Initial Submittal
			☒ Amended Report
		☐ As Drilled	

WELL LOCATION INFORMATION

API Number 30-045-38476	Pool Code 98157	Pool Name LYBROOK MANCOS W
Property Code 332891	Property Name GREATER LYBROOK UNIT	Well Number 077H
OGRID No. 372286	Operator Name ENDURING RESOURCES, LLC	Ground Level Elevation 6694'
Surface Owner: ☐ State ☐ Fee ☒ Tribal ☐ Federal		Mineral Owner: ☐ State ☐ Fee ☒ Tribal ☒ Federal

Surface Location

UL F	Section 13	Township 23N	Range 9W	Lot	Feet from N/S Line 1574' NORTH	Feet from E/W Line 1458' WEST	Latitude 36.229857 °N	Longitude -107.744323 °W	County SAN JUAN
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Bottom Hole Location

UL H	Section 19	Township 23N	Range 8W	Lot	Feet from N/S Line 1837' NORTH	Feet from E/W Line 242' EAST	Latitude 36.214630 °N	Longitude -107.714799 °W	County SAN JUAN
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Dedicated Acres 519.76	Penetrated Spacing Unit SW/4 SE/4 Section 12, T23N, R9W NE/4 Section 13, T23N, R9W SW/4 NW/4 (aka Lot 2), NW/4 SW/4 (aka Lot 3) E/2 SW/4, SW/4 SE/4 Section 18, T23N, R8W N/2 NE/4, SE/4 NE/4 Section 19, T23N, R8W	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit ☐ Yes ☐ No	Consolidation Code UNIT
		Order Numbers R-22081	Well setbacks are under Common Ownership ☒ Yes ☐ No		

Kick Off Point (KOP)

UL F	Section 13	Township 23N	Range 9W	Lot	Feet from N/S Line 1574' NORTH	Feet from E/W Line 1458' WEST	Latitude 36.229857 °N	Longitude -107.744323 °W	County SAN JUAN
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First Take Point (FTP)

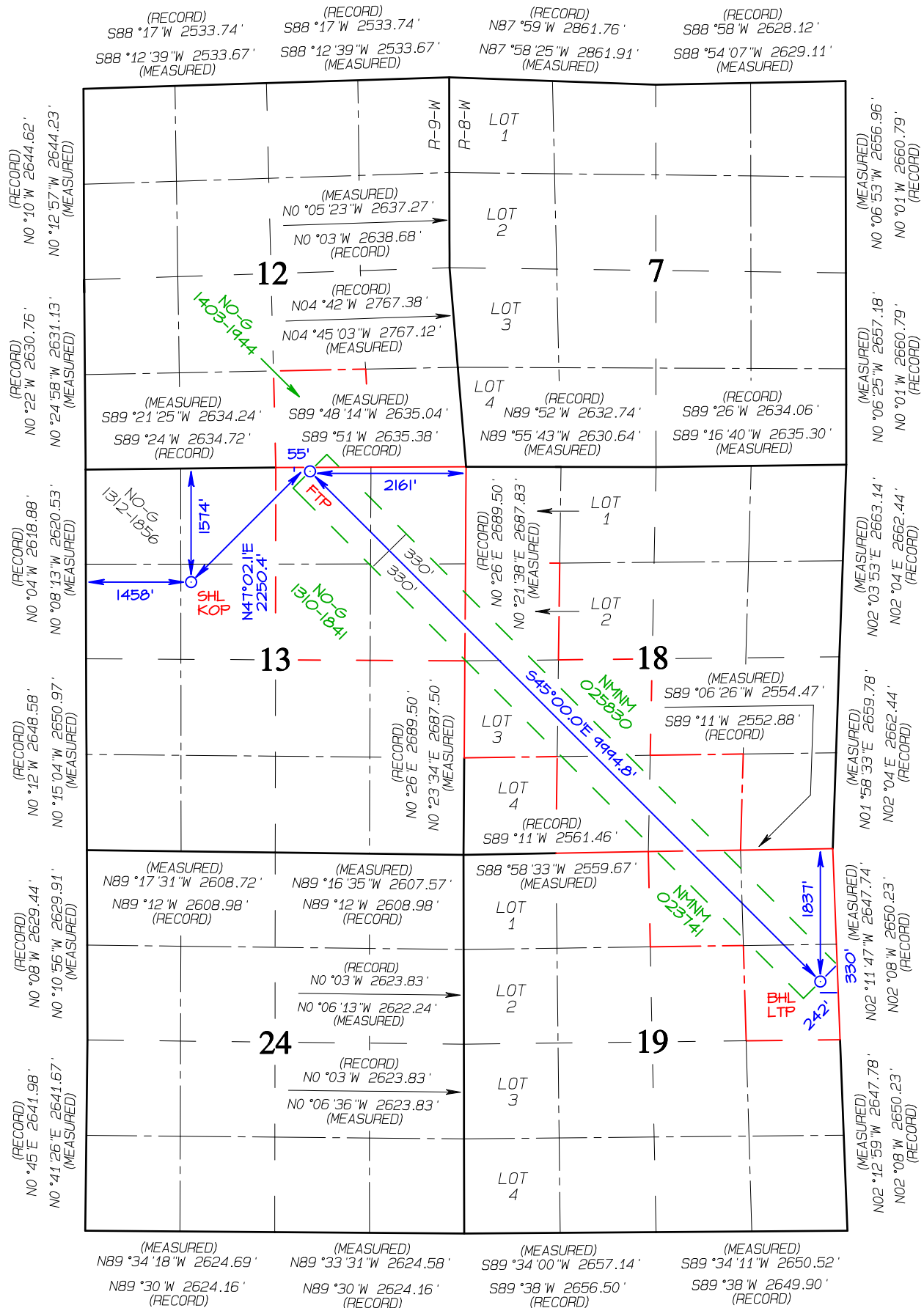
UL B	Section 13	Township 23N	Range 9W	Lot	Feet from N/S Line 55' NORTH	Feet from E/W Line 2161' EAST	Latitude 36.234066 °N	Longitude -107.738734 °W	County SAN JUAN
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Last Take Point (LTP)

UL H	Section 19	Township 23N	Range 8W	Lot	Feet from N/S Line 1837' NORTH	Feet from E/W Line 242' EAST	Latitude 36.214630 °N	Longitude -107.714799 °W	County SAN JUAN
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Unitized Area or Area of Uniform Interest GREATER LYBROOK UNIT	Spacing Unit Type ☒ Horizontal ☐ Vertical ☐ Directional	Ground Floor Elevation
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OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division. <u>Shaw-Marie Ford</u> Signature <u>8/26/2025</u> Date Shaw-Marie Ford Printed Name <u>sford@enduringresources.com</u> E-mail Address	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  JASON C. EDWARDS Signature and Seal of Professional Surveyor <table><tr><td>Certificate Number 15269</td><td>Date of Survey MARCH 6, 2024</td></tr></table>	Certificate Number 15269	Date of Survey MARCH 6, 2024
Certificate Number 15269	Date of Survey MARCH 6, 2024		



SURFACE LOCATION (SHL)
1574' FNL 1458' FWL
SECTION 13, T23N, R9W

KICK OFF POINT (KOP)
1574' FNL 1458' FWL
SECTION 13, T23N, R9W

FIRST TAKE POINT (FTP)
55' FNL 2161' FEL
SECTION 13, T23N, R9W

LAST TAKE POINT (LTP)
1837' FNL 242' FEL
SECTION 19, T23N, R8W

BOTTOM HOLE LOCATION (BHL)
1837' FNL 242' FEL
SECTION 19, T23N, R8W

LAT 36.229857°N
LONG -107.744323°W
DATUM: NAD1983

LAT 36.229857°N
LONG -107.744323°W
DATUM: NAD1983

LAT 36.234066°N
LONG -107.738734°W
DATUM: NAD1983

LAT 36.214630°N
LONG -107.714799°W
DATUM: NAD1983

LAT 36.214630°N
LONG -107.714799°W
DATUM: NAD1983

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Enduring Resources, LLC **OGRID:** 372286 **Date:** 09 / 19 / 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
Greater Lybrook Unit 065H	TBD	F-13-23N-9W	1651 FNL x 1522 FWL	210	210	84
Greater Lybrook Unit 067H	TBD	F-13-23N-9W	1635 FNL x 1509 FWL	252	252	101
Greater Lybrook Unit 069H	TBD	F-13-23N-9W	1620 FNL x 1496 FWL	263	263	105
Greater Lybrook Unit 073H	TBD	F-13-23N-9W	1605 FNL x 1483 FWL	323	323	129
Greater Lybrook Unit 075H	TBD	F-13-23N-9W	1589 FNL x 1470 FWL	314	314	125
Greater Lybrook Unit 077H	TBD	F-13-23N-9W	1574 FNL x 1458 FWL	269	269	108
				3-year Decline	3-year Decline	3-year Decline
Greater Lybrook Unit 065H	TBD	F-13-23N-9W	1651 FNL x 1522 FWL	80	80	32
Greater Lybrook Unit 067H	TBD	F-13-23N-9W	1635 FNL x 1509 FWL	96	96	38
Greater Lybrook Unit 069H	TBD	F-13-23N-9W	1620 FNL x 1496 FWL	100	100	40
Greater Lybrook Unit 073H	TBD	F-13-23N-9W	1605 FNL x 1483 FWL	123	123	49
Greater Lybrook Unit 075H	TBD	F-13-23N-9W	1589 FNL x 1470 FWL	119	119	48
Greater Lybrook Unit 077H	TBD	F-13-23N-9W	1574 FNL x 1458 FWL	102	102	41

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
Greater Lybrook Unit 065H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Greater Lybrook Unit 067H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Greater Lybrook Unit 069H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Greater Lybrook Unit 073H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Greater Lybrook Unit 075H	TBD	Q3 2025	Q3 2025	Q3 2025	Q3 2025	Q3 2025
Greater Lybrook Unit 077H	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: 09/19/2024
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 065H, 067H, 069H, 073H, 075H, 077H

SEPARATION EQUIPMENT

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

Separation equipment will be set as follows:

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

Heater treaters will be set as follows:

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

Vapor Recovery Equipment will be set as follows:

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

Production storage tanks will be set as follows:

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



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 065H, 067H, 069H, 073H, 075H, 077H

VENTING and FLARING

Enduring has a natural gas system available prior to startup of completion operations. Enduring utilizes a Vapor Recovery Unit System and sells all natural gas except during periods of startup, shutdown, maintenance, or malfunction for the gas capturing equipment, including the vapor recovery tower, vapor recovery unit, storage tanks, and pipelines.

Currently, Enduring utilizes the following from list A-I of Section 3 for its operations to minimize flaring:

- a) Enduring utilizes natural gas-powered generators to power its leases where grid power isn't available.
- b) When electrical grid power is unavailable, natural gas generators will be used for major equipment onsite.
- c) Enduring's in service compression will be natural gas powered.
- d) Should liquids removal, such as dehydration be required, units will be powered by natural gas.

Enduring will only flare gas during the following times:

- Scheduled maintenance for gas capturing equipment including:
 - Vapor Recovery Tower
 - Vapor Recovery Unit
 - Storage tanks
 - Pipelines
 - Emergency flaring



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 065H, 067H, 069H, 073H, 075H, 077H

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

Enduring understands the requirements of NMAC 19.15.27.8 which states that the venting and flaring of natural gas during drilling, completion or production that constitutes waste as defined in 19.15.2 are prohibited.

19.15.27.8 B. Venting and flaring during drilling operations

- Enduring shall capture or combust natural gas if technically feasible during drilling operations using best industry practices.
- A flare stack with a 100% capacity for expected volumes will be set on location of the facility at least 100 feet from the nearest surface hole location, well heads, and storage tanks.
- In the event of an emergency, Enduring will vent natural gas in order to avoid substantial impact. Enduring shall report the vented or flared gas to the NMOCD.

19.15.27.8 E. Venting and flaring during completion or recompletion operations

During Completion Operations, Enduring utilizes the following:

- Enduring facilities are built and ready from day 1 of Flowback.
- Individual well test separators will be set to properly separate gas and liquids. Temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline. See Separation Equipment for details.
- Should the facility not yet be capable of processing gas, or the gas does not meet quality standards, then storage tanks will be set that are tied into gas busters or temporary flare to manage natural gas. This flare would meet the following requirements:
 - 1) An appropriately sized flare stack with an automatic igniter.
 - 2) Enduring analyzes the natural gas samples twice per week.
 - 3) Enduring routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met.
 - 4) Enduring provides the NMOCD with pipeline specifications and natural gas data.



19.15.27.8 D. Venting and flaring during production operations

During Production Operations Enduring will not vent or flare natural gas except under the following circumstances:

1. During an emergency or malfunction
2. To unload or clean-up liquid holdup in a well to atmospheric pressure, provided:
 - a. Enduring does not vent after the well achieves a stabilized rate and pressure.
 - b. Enduring will remain present on-site during liquids unloading by manual purging and take all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time.
 - c. Enduring will optimize the system to minimize natural gas venting on any well equipped with a plunger lift or auto control system.
 - d. Best Management Practices will be used during downhole well maintenance.
3. During the first year of production from an exploratory well provided:
 - a. Enduring receives approval from the NMOCD.
 - b. Enduring remains in compliance with the NM gas capture requirements.
 - c. Enduring submits an updated C-129 form to the NMOCD.
4. During the following activities unless prohibited:
 - a. Gauging or sampling a storage tank or low-pressure production vessel.
 - b. Loading out liquids from a storage tank.
 - c. Repair and maintenance.
 - d. Normal operation of gas activated pneumatic controller or pump.
 - e. Normal operation of a storage tank but not including venting from a thief hatch.
 - f. Normal operation of dehydration units.
 - g. Normal operations of compressors, compressor engines, turbines, valves, flanges, and connectors.
 - h. During a bradenhead, packer leakage test, or production test lasting less than 24-hours.
 - i. When natural gas does not meet the gathering pipeline specifications.
 - j. Commissioning of pipelines, equipment, or facilities only for as long as necessary to purge introduced impurities.

19.15.27.8 E. Performance standards

1. Enduring has utilized process simulations with a safety factor to design all separation and storage equipment. The equipment is routed to a Vapor Recovery System and utilizes a flare as back up for periods of startup, shutdown, maintenance, or malfunction of the VRU System.
2. Enduring will install a flare that designed to handle the full volume of vapors from the facility in case of the VRU failure and it its designed with an auto ignition system.
3. Flare stacks will appropriately sized and designed to ensure proper combustion efficiency.
 - a. Flare stacks installed or replaced will be equipped with an automatic ignitor or continuous pilot.



- b. Previously installed flare stacks will be retrofitted with an automatic ignitor, continuous pilot, or technology that alerts ENDURING of flare malfunction within 18 months after May 25, 2021.
 - c. Flare stacks replaced after May 25, 2021, will be equipped with an automatic ignitor or continuous pilot if located at a well or facility with average daily production of 60,000 cubic feet of natural gas or less.
 - d. Flare stacks will be located at least 100 feet from the well and storage tanks and securely anchored.
4. Enduring will conduct an AVO inspection on all components for leaks and defects on a weekly basis.
5. Enduring will make and keep records of AVO inspections which will be available to the NMOCD for at least 5 years.
6. Enduring may use a remote or automated monitoring technology to detect leaks and releases in lieu of AVO inspections with prior NMOCD approval.
7. Facilities will be designed to minimize waste.
8. Enduring will resolve emergencies as promptly as possible.

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

1. Enduring will have meters on both the low- and high-pressure sides of the flares and the volumes will be recorded in ENDURING's SCADA system.
2. Enduring will install equipment to measure the volume of flared natural gas that has an average daily production of 60,000 cubic feet or greater of natural gas.
3. Enduring's measuring equipment will conform to the industry standards.
4. The measurement system is designed such that it cannot be bypassed except for inspections and servicing meters.
5. Enduring will estimate the volume of vented or flared natural gas using a methodology that can be independently verified if metering is not practicable due to low flow rate or pressure.
6. Enduring will estimate the volume of flared and vented natural gas based on the results of an annual GOR test for wells that do not require measuring equipment reported on Form C-116.
7. Enduring will install measuring equipment whenever the NMOCD determines that metering is necessary.



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 065H, 067H, 069H, 073H, 075H, 077H

BEST MANAGEMENT PRACTICES

Enduring utilizes the following Best Management Practices to minimize venting during active and planned maintenance.

Enduring has a closed vent capture system to route emissions from the heater treater, tanks, and vapor recovery to the vapor recovery unit with an enclosed combustion device (ECD) for backup. The system is designed such that if the vapor recovery unit is taken out of service for any reason, the vapors will be routed to the ECD for combustion.

Enduring will isolate and attempt to route all vapors to the vapor recovery unit or ECD prior to opening any lines for maintenance to minimize venting from the equipment.

Enduring shall notify the NMOCD of venting or flaring that exceeds 50 MCF but less than 500 MCF in volume that either resulted from an emergency or malfunction, or an event lasting over eight hours or more cumulatively within any 24-hour period from a single event by filing a form C-129 no later than 15 days following the discovery or commencement of venting or flaring.

Enduring shall notify the NMOCD verbally or by e-mail within 24-hours following discovery or commencement of venting or flaring that exceeds 500 MCF in volume or otherwise qualifies as a major release as defined in 19.15.29.7 NMAC from a single event and provide the information required in form C-129 to the NMOCD no later than 15 days that verifies, updates, or corrects the verbal or e-mail notification.

Enduring will install measuring equipment to conform to industry standards such as American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) Chapter 14.10 Measurement of Flow to Flares.

Enduring's measuring equipment shall not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

Enduring shall report the volume of vented and flared natural gas for each well or facility at which venting or flaring occurred on a monthly basis.



ENDURING RESOURCES IV, LLC
6300 S SYRACUSE WAY, SUITE 525
CENTENNIAL, COLORADO 80211

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

WELL INFORMATION:

Name: Greater Lybrook Unit 077H

State: New Mexico

County: San Juan

Surface Elevation: 6,694 ft ASL (GL) 6,718 ft ASL (KB)

Surface Location: 13-23-9 Sec-Twn-Rng 1,574 ft FNL 1,458 ft FWL
 36.229857 ° N latitude 107.744323 ° W longitude (NAD 83)

BH Location: 19-23-8 Sec-Twn-Rng 1,837 ft FNL 242 ft FEL
 36.21463 ° N latitude 107.714799 ° 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 37.8 miles to MM 113.4, Right (Southwest) on CR #7890 for 0.8 miles to fork; Left (South) remaining on 7890 for 1.3 miles to fork; Right (NW) for 0.7 mi to Y; Right (NorthEast) for 0.3 miles to location access on left into Greater Lybrook Unit 065 PAD -There are 6 wells on this pad: from SouthEast to NorthWest (location entrance) GLU 065H, 067H, 069H, 073H, 075H and 077H.

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	6,220	498	498	W	normal
	Kirtland	6,120	598	598	W	normal
	Fruitland	5,960	758	759	G, W	sub
	Pictured Cliffs	5,580	1,138	1,151	G, W	sub
	Lewis	5,465	1,253	1,274	G, W	normal
	Chacra	5,230	1,488	1,539	G, W	normal
	Cliff House	4,109	2,609	2,903	G, W	sub
	Menefee	4,099	2,619	2,916	G, W	normal
	Point Lookout	3,119	3,599	4,113	G, W	normal
	Mancos	2,939	3,779	4,333	O,G	sub (~0.38)
	Gallup (MNCS_A)	2,604	4,114	4,791	O,G	sub (~0.38)
	MNCS_B	2,504	4,214	4,872	O,G	sub (~0.38)
	MNCS_C	2,414	4,304	5,008	O,G	sub (~0.38)
	MNCS_Cms	2,378	4,340	5,073	O,G	sub (~0.38)
	MNCS_D	2,245	4,473	NA	O,G	sub (~0.38)
	FTP TARGET	2,378	4,340	5,073	O,G	sub (~0.38)
	PROJECTED TD	2,315	4,403	15,251	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: 1,900 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 940 psi

Temperature: Maximum anticipated BHT is 125° F or less

H₂S INFORMATION:

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

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

LOGGING, CORING, AND TESTING:

Mud Logs: None planned; remote geo-steering from drill out of 7" casing to TD; gas detection from drillout of 9-5/8" casing to TD.

MWD / LWD: Gamma Ray from drillout of 9-5/8" casing to TD

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

Cased Hole Logs: CBL on 7" casing from deepest free-fall depth to surface

DRILLING RIG INFORMATION:

Contractor: Ensign

Rig No.: 140

Draw Works: Pacific Rim 1500AC (1,500 hp)

Mast: Process MFG Corp Swing Up Triple (136 ft, 750,000 lbs)

Top Drive: Tesco 400-EXI-600 (400 ton)

Prime Movers: 3 - CAT 3512C (1,350 hp)

Pumps: 2 - Gardner Denver PZ-11 (7,500 psi)

BOPE 1: T3 Annular & Shaffer double gate ram (11", 5,000 psi)

BOPE 2: T3 annular(11", 5,000 psi)

Choke 3", 5,000 psi

KB-GL (ft): 23.5

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

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

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

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: 12-1/4"

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	9.625	36.0	K-55	STC	2,020	3,520	564,000	423,000
Loading					153	952	110,988	110,988
Min. S.F.					13.21	3.70	5.08	3.81

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: 3,400 Optimum: 4,530 Maximum: 5,660

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

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	Hole Cap. (cuft/ft)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Redi-Mix	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114	184

Calculated cement volumes assume gauge hole and the excess noted in table Csg ID 8.921
Mesa Ready Mix or first available Shoe Track L 44
Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.

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

350 ft (MD)	to	5,326 ft (MD)	Hole Section Length:	4,976 ft
350 ft (TVD)	to	4,436 ft (TVD)	Casing Required:	5,326 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCI)	8.8 - 9.2	15	8 - 14	12-Jun	10.8 - 11.2	No OBM

Hole Size: 8.75

Bit / Motor: 8-3/4" PDC bit w/mud motor

MWD / Survey: MWD Survey with inclination and azimuth survey (every 100' at a minimum), GR optional

Logging: None

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

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	7	26.0	K-55	LTC	4,320	4,980	415,000	367,000
Loading					1,938	1,194	220,758	220,758
Min. S.F.					2.23	4.17	1.88	1.66

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

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Lead	III:POZ Blend	12.5	2.140	12.05	70%	0	491	1,051
Tail	Type III	14.6	1.380	6.64	20%	4,233	150	207

Annular Capacity	0.16681	cuft/ft	7" casing x 9-5/8" casing annulus				Shoe Track L	44
	0.1503	cuft/ft	9-5/8" casing x 12-1/4" hole annulus				Casing ID	6.276
	0.2148	cuft/ft	7" casing casing volume					

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

Drake Intermediate Cementing Program

Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.

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

5,326 ft (MD)	to	15,251 ft (MD)	Hole Section Length:	9,925 ft
4,436 ft (TVD)	to	4,403 ft (TVD)	Casing Required:	10,075 ft
Estimated KOP:		4,471 ft (MD)	3,892 ft (TVD)	
Estimated Liner Top:		5,176 ft (MD)	4,388 ft (TVD)	
Estimated Landing Point (FTP):		5,073 ft (MD)	4,340 ft (TVD)	
Estimated Lateral Length:		10,178 ft (MD)		

Fluid:	Type	MW (ppg)	FL (mL/30')	PV (cp)	YP (lb/100 sqft)	pH	Comments	Comments
	WBM	8.7 - 9.0	NC	+20	±2	9-9.5	prod water	OBM as contingency

Hole Size: 6.125

Bit / Motor: 6-1/8" PDC bit w/mud motor

MWD / Survey: MWD with GR, inclination, and azimuth (survey every joint from KOP to Landing Point and survey every 100' minimum before KOP and after Landing Point)

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

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

Liner/Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	4.500	11.6	P-110	BTC	7,560	10,690	367,000	385,000
Loading					2,175	8,752	252,659	252,659
Min. S.F.					3.48	1.22	1.45	1.52

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. Tension calculations assume vertical hole to approximate drag in lateral.

MU Torque (ft lbs): Minimum: BTC Optimum: BTC Maximum: BTC

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

Cement:	Type	Weight (ppg)	Yield	Water	% Excess	Planned TOC	Total Cmt	Total Cmt (cu)
Spacer	IntegraGuard Star	11		31.6		0	20 bbls	
Tail	G:POZ blend	13.3	1.560	7.70	30%	5,176	822	1,282

Displacement 208 est bbls

Annular Capacities	0.1044	cuft/ft	4-1/2" casing x 7" casing annulus	
	0.09417	cuft/ft	4-1/2" casing x 6-1/8" hole annulus	
	0.0873	cuft/ft	4-1/2" casing volume	est shoe jt ft 100
	0.0102	bbls/ft	4" DP capacity	

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

American Cementing Liner & Production Blend

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

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

Note: This well will not be considered an unorthodox well location as definted by NMAC19.15.16.15.C.5. As defined in

FINISH WELL: ND BOP, cap well, RDMO.

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 10,078

Est Frac Inform: 42 Frac Stages 162,000 bbls slick water 13,110,000 lbs proppant

Frac: 39 plug-and-perf stages with 150,000 bbls slickwater fluid and 12,100,000 lbs of proppant (estimated)

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: 8/16/2024

Completion: 10/15/2024

Production: 11/29/2024

Prepared by: Greg Olson 6/10/2024

Updated:

WELL NAME: Greater Lybrook Unit 077H

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

API Number: Not yet assigned

AFE Number: Not yet assigned

ER Well Number: Not yet assigned

State: New Mexico

County: San Juan

Surface Elev.: 6,694 ft ASL (GL) 6,718 ft ASL (KB)
Surface Location: 13-23-9 Sec-Twn- Rng 1,574 ft FNL 1,458 ft FWL
BH Location: 19-23-8 Sec-Twn- Rng 1837 ft FNL 242 ft FEL

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

South on US Hwy 550 for 37.8 miles to MM 113.4, Right (Southwest) on CR #7890 for 0.8 miles to fork; Left (South) remaining on 7890 for 1.3 miles to fork; Right (NW) for 0.7 mi to Y; Right (NorthEast) for 0.3 miles to location access on left into Greater Lybrook Unit 065 PAD -There are 6 wells on this pad: from SouthEast to NorthWest (location entrance) GLU 065H, 067H, 069H, 073H, 075H and 077H.

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	5,326 ft
KOP (MD)	4,471 ft
KOP (TVD)	3,892 ft
Target (TVD)	4,340 ft
Curve BUR	10 °/100 ft
POE (MD)	5,073 ft
TD (MD)	15,251 ft
Lat Len (ft)	10,178 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	12.250	350	9.625	36	K-55	STC	0	350
Intermediate	8.750	5,326	7	26.0	K-55	LTC	0	5,326
Production	6.125	15,251	4.500	11.6	P-110	BTC	5,176	15,251

CEMENT PROPERTIES SUMMARY:

	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)
Surface	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114
Inter. (Lead)	III:POZ Blend	12.5	2.14	12.05	0.1668	70%	0	491
Inter. (Tail)	Type III	14.6	1.38	6.64	0.1503	20%	4,233	150
Prod. (Lead)	0	0	0.000	0	0.1044	0%	0	0
Prod. (Tail)	G:POZ blend	13.3	1.560	7.7	0.0873	30%	5,176	822

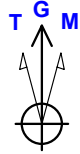
COMPLETION / PRODUCTION SUMMARY:

Frac: 39 plug-and-perf stages with 150,000 bbls slickwater fluid and 12,100,000 lbs of proppant (estimated)
Flowback: Flow back through production tubing as pressures allow
Production: Produce through production tubing via gas-lift into permanent production and storage facilities

Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	498	498
Kirtland	598	598
Fruitland	758	759
Pictured Cliffs	1,138	1,151
Lewis	1,253	1,274
Chacra	1,488	1,539
Cliff House	2,609	2,903
Menefee	2,619	2,916
Point Lookout	3,599	4,113
Mancos	3,779	4,333
Gallup (MNCS_A)	4,114	4,791
MNCS_B	4,214	4,872
MNCS_C	4,304	5,008
MNCS_Cms	4,340	5,073
MNCS_D	4,473	NA
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
FTP TARGET	4,340	5,073
PROJECTED TD	4,403	15,251



Well: Greater Lybrook Unit 077H
Site: Greater Lybrook (65, 67, 69, 73, 75 & 77)
Project: San Juan County, New Mexico NAD83 NM W
Design: rev0
Rig:



Azimuths to Grid North
True North: -0.05°
Magnetic North: 8.44°

Magnetic Field
Strength: 49016.0nT
Dip Angle: 62.68°
Date: 5/3/2024
Model: IGRF2020

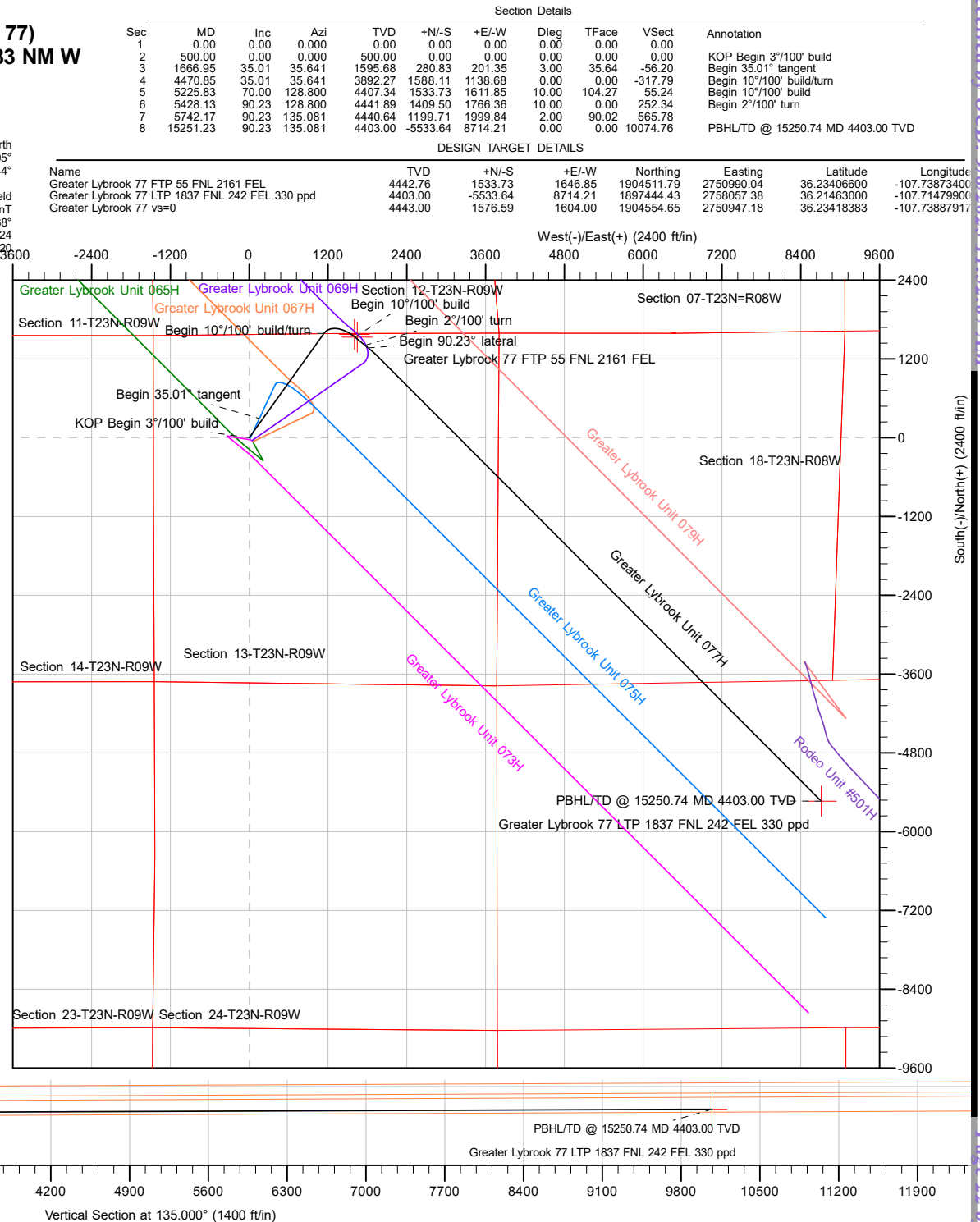
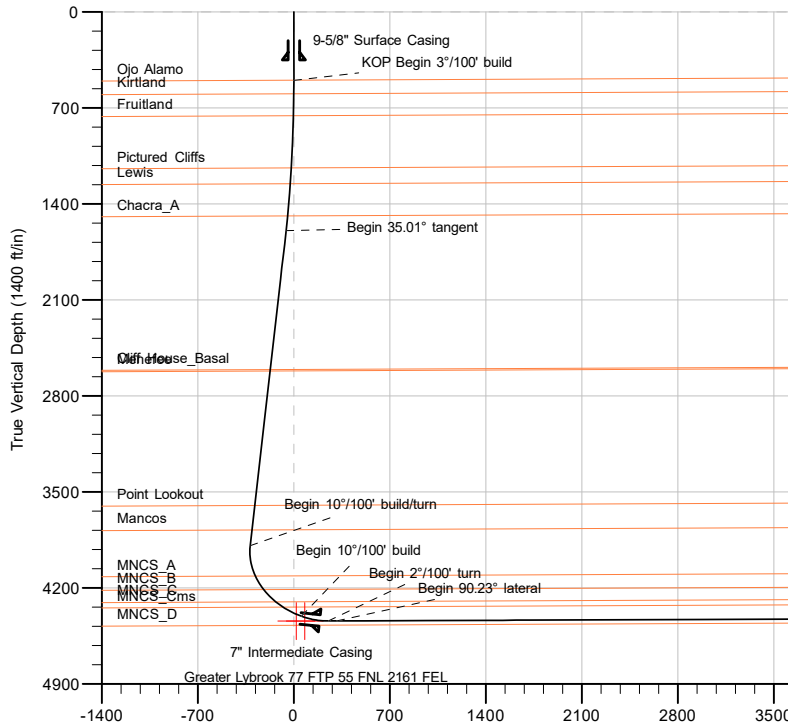
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6694+23.5 @ 6717.50ft

Surface location:
Northing 1902978.06
Easting 2749343.19
Latitude 36.22985700
Longitude -107.74432300

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.44°

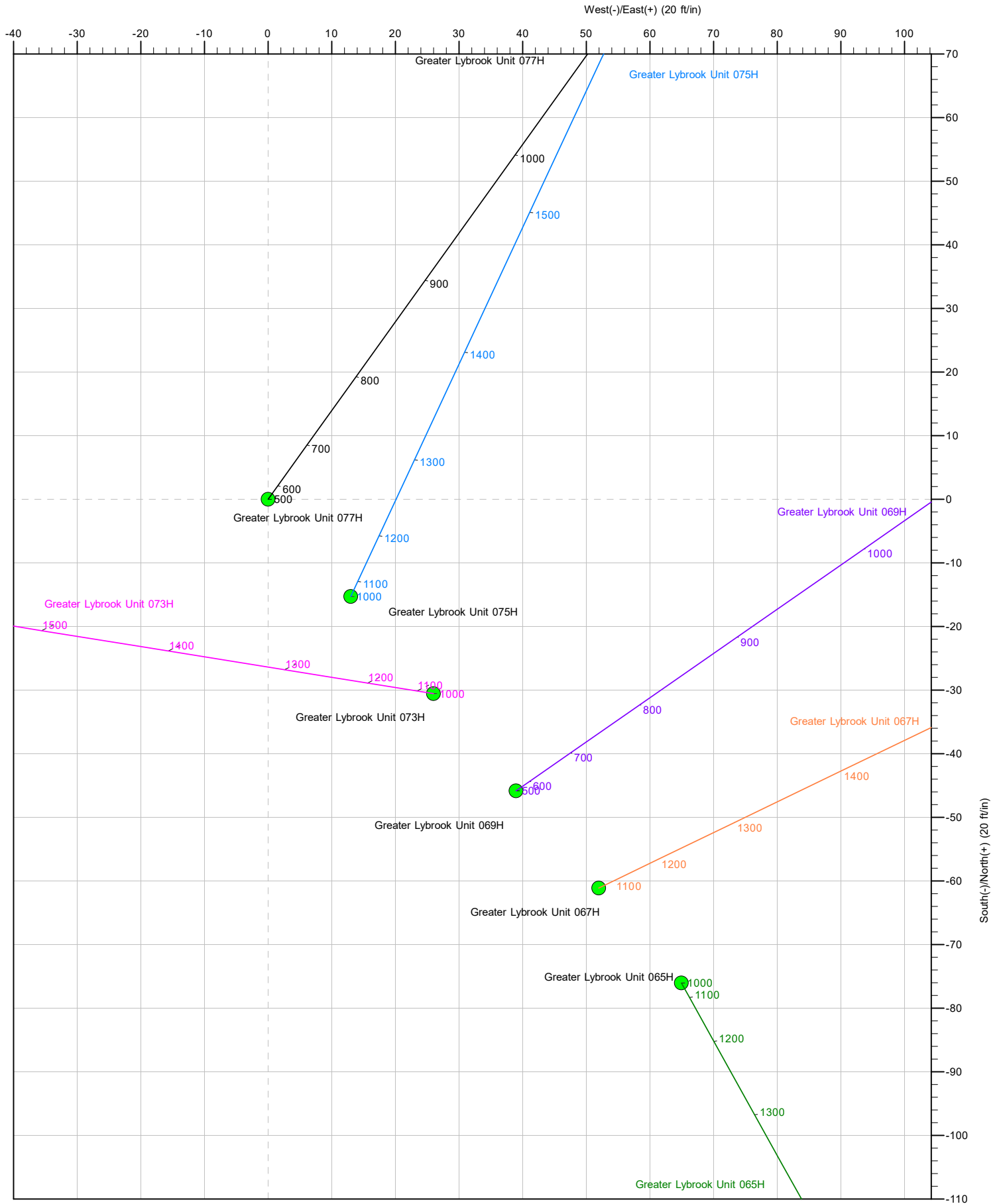
CASING DETAILS

TVD	MD	Name
350.00	350.00	9-5/8" Surface Casing
4438.63	5364.65	7" Intermediate Casing





Well: Greater Lybrook Unit 077H
Site: Greater Lybrook (65, 67, 69, 73, 75 & 77)
Project: San Juan County, New Mexico NAD83 NM W
Design: rev0
Rig:



13:27, May 03 2024



Planning Report



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

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

Site	Greater Lybrook (65, 67, 69, 73, 75 & 77)		
Site Position:		Northing:	1,902,902.05 usft
From:	Lat/Long	Easting:	2,749,408.14 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.22964800
		Longitude:	-107.74410300

Well	Greater Lybrook Unit 077H, Surf loc: 1574 FNL 1458 FWL Section 13-T23N-R09W		
Well Position	+N/-S	0.00 ft	Northing: 1,902,978.07 usft
	+E/-W	0.00 ft	Easting: 2,749,343.19 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
Grid Convergence:	0.05 °	Ground Level:	6,694.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/3/2024	8.49	62.68	49,016.00671227

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	135.000	

Plan Survey Tool Program	Date	5/3/2024			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	15,250.74 rev0 (Original Hole)	MWD		
			OWSG MWD - Standard		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,666.95	35.01	35.641	1,595.68	280.83	201.35	3.00	3.00	0.00	35.64	
4,470.85	35.01	35.641	3,892.27	1,588.11	1,138.68	0.00	0.00	0.00	0.00	
5,225.83	70.00	128.800	4,407.34	1,533.73	1,611.85	10.00	4.63	12.34	104.27	
5,428.13	90.23	128.800	4,441.89	1,409.50	1,766.36	10.00	10.00	0.00	0.00	
5,742.17	90.23	135.081	4,440.64	1,199.71	1,999.84	2.00	0.00	2.00	90.02	
15,251.23	90.23	135.081	4,403.00	-5,533.64	8,714.21	0.00	0.00	0.00	0.00	Greater Lybrook 77 L



Planning Report



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	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
350.00	0.00	0.000	350.00	0.00	0.00	0.00	0.00	0.00	0.00
9-5/8" Surface Casing									
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
498.00	0.00	0.000	498.00	0.00	0.00	0.00	0.00	0.00	0.00
Ojo Alamo									
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3°/100' build									
598.04	2.94	35.641	598.00	2.04	1.47	-0.41	3.00	3.00	0.00
Kirtland									
600.00	3.00	35.641	599.95	2.13	1.53	-0.43	3.00	3.00	0.00
700.00	6.00	35.641	699.63	8.50	6.10	-1.70	3.00	3.00	0.00
758.80	7.76	35.641	758.01	14.23	10.20	-2.85	3.00	3.00	0.00
Fruitland									
800.00	9.00	35.641	798.77	19.11	13.70	-3.82	3.00	3.00	0.00
900.00	12.00	35.641	897.08	33.92	24.32	-6.79	3.00	3.00	0.00
1,000.00	15.00	35.641	994.31	52.89	37.92	-10.58	3.00	3.00	0.00
1,100.00	18.00	35.641	1,090.18	75.97	54.47	-15.20	3.00	3.00	0.00
1,150.59	19.52	35.641	1,138.08	89.19	63.95	-17.85	3.00	3.00	0.00
Pictured Cliffs									
1,200.00	21.00	35.641	1,184.43	103.09	73.92	-20.63	3.00	3.00	0.00
1,274.13	23.22	35.641	1,253.11	125.77	90.18	-25.17	3.00	3.00	0.00
Lewis									
1,300.00	24.00	35.641	1,276.81	134.19	96.21	-26.85	3.00	3.00	0.00
1,400.00	27.00	35.641	1,367.06	169.17	121.30	-33.85	3.00	3.00	0.00
1,500.00	30.00	35.641	1,454.93	207.94	149.10	-41.61	3.00	3.00	0.00
1,538.64	31.16	35.641	1,488.20	223.92	160.55	-44.81	3.00	3.00	0.00
Chacra_A									
1,600.00	33.00	35.641	1,540.18	250.40	179.54	-50.11	3.00	3.00	0.00
1,666.95	35.01	35.641	1,595.68	280.83	201.35	-56.20	3.00	3.00	0.00
Begin 35.01° tangent									
1,700.00	35.01	35.641	1,622.75	296.24	212.40	-59.28	0.00	0.00	0.00
1,800.00	35.01	35.641	1,704.66	342.86	245.83	-68.61	0.00	0.00	0.00
1,900.00	35.01	35.641	1,786.57	389.49	279.26	-77.94	0.00	0.00	0.00
2,000.00	35.01	35.641	1,868.47	436.11	312.69	-87.27	0.00	0.00	0.00
2,100.00	35.01	35.641	1,950.38	482.73	346.12	-96.60	0.00	0.00	0.00
2,200.00	35.01	35.641	2,032.29	529.36	379.55	-105.93	0.00	0.00	0.00
2,300.00	35.01	35.641	2,114.19	575.98	412.98	-115.26	0.00	0.00	0.00
2,400.00	35.01	35.641	2,196.10	622.60	446.41	-124.59	0.00	0.00	0.00
2,500.00	35.01	35.641	2,278.01	669.23	479.84	-133.92	0.00	0.00	0.00
2,600.00	35.01	35.641	2,359.91	715.85	513.27	-143.25	0.00	0.00	0.00
2,700.00	35.01	35.641	2,441.82	762.47	546.70	-152.58	0.00	0.00	0.00
2,800.00	35.01	35.641	2,523.73	809.10	580.13	-161.91	0.00	0.00	0.00
2,900.00	35.01	35.641	2,605.63	855.72	613.56	-171.24	0.00	0.00	0.00
2,903.80	35.01	35.641	2,608.75	857.49	614.83	-171.59	0.00	0.00	0.00
Cliff House_Basal									
2,916.02	35.01	35.641	2,618.75	863.19	618.91	-172.73	0.00	0.00	0.00
Menefee									
3,000.00	35.01	35.641	2,687.54	902.34	646.99	-180.57	0.00	0.00	0.00



Planning Report



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	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)
3,100.00	35.01	35.641	2,769.45	948.97	680.42	-189.90	0.00	0.00	0.00
3,200.00	35.01	35.641	2,851.35	995.59	713.84	-199.23	0.00	0.00	0.00
3,300.00	35.01	35.641	2,933.26	1,042.22	747.27	-208.56	0.00	0.00	0.00
3,400.00	35.01	35.641	3,015.17	1,088.84	780.70	-217.89	0.00	0.00	0.00
3,500.00	35.01	35.641	3,097.07	1,135.46	814.13	-227.21	0.00	0.00	0.00
3,600.00	35.01	35.641	3,178.98	1,182.09	847.56	-236.54	0.00	0.00	0.00
3,700.00	35.01	35.641	3,260.89	1,228.71	880.99	-245.87	0.00	0.00	0.00
3,800.00	35.01	35.641	3,342.80	1,275.33	914.42	-255.20	0.00	0.00	0.00
3,900.00	35.01	35.641	3,424.70	1,321.96	947.85	-264.53	0.00	0.00	0.00
4,000.00	35.01	35.641	3,506.61	1,368.58	981.28	-273.86	0.00	0.00	0.00
4,100.00	35.01	35.641	3,588.52	1,415.20	1,014.71	-283.19	0.00	0.00	0.00
4,113.09	35.01	35.641	3,599.24	1,421.31	1,019.09	-284.41	0.00	0.00	0.00
Point Lookout									
4,200.00	35.01	35.641	3,670.42	1,461.83	1,048.14	-292.52	0.00	0.00	0.00
4,300.00	35.01	35.641	3,752.33	1,508.45	1,081.57	-301.85	0.00	0.00	0.00
4,332.97	35.01	35.641	3,779.33	1,523.82	1,092.59	-304.93	0.00	0.00	0.00
Mancos									
4,400.00	35.01	35.641	3,834.24	1,555.07	1,115.00	-311.18	0.00	0.00	0.00
4,470.85	35.01	35.641	3,892.27	1,588.11	1,138.68	-317.79	0.00	0.00	0.00
Begin 10°/100' build/turn									
4,500.00	34.39	40.646	3,916.24	1,601.15	1,148.92	-319.78	10.00	-2.12	17.17
4,550.00	33.83	49.511	3,957.66	1,620.92	1,168.71	-319.76	10.00	-1.13	17.73
4,600.00	33.91	58.489	3,999.21	1,637.25	1,191.20	-315.41	10.00	0.16	17.96
4,650.00	34.63	67.282	4,040.55	1,650.03	1,216.21	-306.76	10.00	1.44	17.59
4,700.00	35.95	75.633	4,081.39	1,659.17	1,243.55	-293.89	10.00	2.65	16.70
4,740.94	37.44	82.018	4,114.22	1,663.88	1,267.53	-280.26	10.00	3.64	15.59
MNCS_A									
4,750.00	37.82	83.369	4,121.40	1,664.58	1,273.01	-276.88	10.00	4.13	14.92
4,800.00	40.14	90.411	4,160.28	1,666.24	1,304.38	-255.87	10.00	4.65	14.08
4,850.00	42.85	96.756	4,197.74	1,664.12	1,337.40	-231.03	10.00	5.42	12.69
4,872.35	44.17	99.378	4,213.95	1,661.96	1,352.63	-218.73	10.00	5.90	11.73
MNCS_B									
4,900.00	45.88	102.451	4,233.50	1,658.25	1,371.83	-202.53	10.00	6.18	11.12
4,950.00	49.16	107.570	4,267.27	1,648.66	1,407.41	-170.59	10.00	6.56	10.24
5,000.00	52.65	112.191	4,298.81	1,635.44	1,443.87	-135.46	10.00	6.97	9.24
5,007.89	53.21	112.881	4,303.57	1,633.02	1,449.69	-129.64	10.00	7.17	8.73
MNCS_C									
5,050.00	56.30	116.394	4,327.87	1,618.68	1,480.92	-97.41	10.00	7.32	8.34
5,073.01	58.02	118.206	4,340.34	1,609.81	1,498.10	-78.99	10.00	7.50	7.88
MNCS_Cms									
5,100.00	60.08	120.247	4,354.23	1,598.50	1,518.30	-56.72	10.00	7.61	7.56
5,150.00	63.96	123.815	4,377.69	1,575.07	1,555.70	-13.70	10.00	7.77	7.14
5,200.00	67.93	127.151	4,398.07	1,548.57	1,592.85	31.32	10.00	7.93	6.67
5,225.83	70.00	128.800	4,407.34	1,533.73	1,611.85	55.24	10.00	8.03	6.38
Begin 10°/100' build									
5,250.00	72.42	128.800	4,415.13	1,519.39	1,629.68	77.99	10.00	10.00	0.00
5,300.00	77.42	128.800	4,428.13	1,489.15	1,667.30	125.97	10.00	10.00	0.00
5,350.00	82.42	128.800	4,436.88	1,458.32	1,705.65	174.89	10.00	10.00	0.00
5,364.65	83.88	128.800	4,438.63	1,449.20	1,716.98	189.35	10.00	10.00	0.00
7" Intermediate Casing									
5,400.00	87.42	128.800	4,441.31	1,427.12	1,744.45	224.39	10.00	10.00	0.00
5,428.13	90.23	128.800	4,441.89	1,409.50	1,766.36	252.34	10.00	10.00	0.00
Begin 2°/100' turn									



Planning Report



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Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	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)
5,490.13	90.23	130.040	4,441.64	1,370.13	1,814.26	314.05	2.00	0.00	2.00
Begin 90.23° lateral									
5,500.00	90.23	130.237	4,441.60	1,363.77	1,821.81	323.88	2.00	0.00	2.00
5,600.00	90.23	132.237	4,441.20	1,297.85	1,897.00	423.66	2.00	0.00	2.00
5,700.00	90.23	134.237	4,440.80	1,229.35	1,969.85	523.61	2.00	0.00	2.00
5,742.17	90.23	135.081	4,440.64	1,199.71	1,999.84	565.78	2.00	0.00	2.00
5,800.00	90.23	135.081	4,440.41	1,158.76	2,040.68	623.61	0.00	0.00	0.00
5,900.00	90.23	135.081	4,440.01	1,087.95	2,111.29	723.61	0.00	0.00	0.00
6,000.00	90.23	135.081	4,439.62	1,017.14	2,181.90	823.60	0.00	0.00	0.00
6,100.00	90.23	135.081	4,439.22	946.33	2,252.51	923.60	0.00	0.00	0.00
6,200.00	90.23	135.081	4,438.82	875.52	2,323.12	1,023.60	0.00	0.00	0.00
6,300.00	90.23	135.081	4,438.43	804.71	2,393.73	1,123.60	0.00	0.00	0.00
6,400.00	90.23	135.081	4,438.03	733.90	2,464.34	1,223.60	0.00	0.00	0.00
6,500.00	90.23	135.081	4,437.64	663.09	2,534.95	1,323.60	0.00	0.00	0.00
6,600.00	90.23	135.081	4,437.24	592.28	2,605.56	1,423.60	0.00	0.00	0.00
6,700.00	90.23	135.081	4,436.85	521.48	2,676.17	1,523.60	0.00	0.00	0.00
6,800.00	90.23	135.081	4,436.45	450.67	2,746.78	1,623.60	0.00	0.00	0.00
6,900.00	90.23	135.081	4,436.05	379.86	2,817.39	1,723.60	0.00	0.00	0.00
7,000.00	90.23	135.081	4,435.66	309.05	2,888.00	1,823.60	0.00	0.00	0.00
7,100.00	90.23	135.081	4,435.26	238.24	2,958.61	1,923.60	0.00	0.00	0.00
7,200.00	90.23	135.081	4,434.87	167.43	3,029.22	2,023.59	0.00	0.00	0.00
7,300.00	90.23	135.081	4,434.47	96.62	3,099.83	2,123.59	0.00	0.00	0.00
7,400.00	90.23	135.081	4,434.07	25.81	3,170.44	2,223.59	0.00	0.00	0.00
7,500.00	90.23	135.081	4,433.68	-45.00	3,241.05	2,323.59	0.00	0.00	0.00
7,600.00	90.23	135.081	4,433.28	-115.81	3,311.66	2,423.59	0.00	0.00	0.00
7,700.00	90.23	135.081	4,432.89	-186.62	3,382.27	2,523.59	0.00	0.00	0.00
7,800.00	90.23	135.081	4,432.49	-257.43	3,452.88	2,623.59	0.00	0.00	0.00
7,900.00	90.23	135.081	4,432.10	-328.24	3,523.49	2,723.59	0.00	0.00	0.00
8,000.00	90.23	135.081	4,431.70	-399.05	3,594.10	2,823.59	0.00	0.00	0.00
8,100.00	90.23	135.081	4,431.30	-469.86	3,664.71	2,923.59	0.00	0.00	0.00
8,200.00	90.23	135.081	4,430.91	-540.67	3,735.32	3,023.59	0.00	0.00	0.00
8,300.00	90.23	135.081	4,430.51	-611.48	3,805.93	3,123.58	0.00	0.00	0.00
8,400.00	90.23	135.081	4,430.12	-682.29	3,876.54	3,223.58	0.00	0.00	0.00
8,500.00	90.23	135.081	4,429.72	-753.10	3,947.15	3,323.58	0.00	0.00	0.00
8,600.00	90.23	135.081	4,429.33	-823.91	4,017.76	3,423.58	0.00	0.00	0.00
8,700.00	90.23	135.081	4,428.93	-894.72	4,088.37	3,523.58	0.00	0.00	0.00
8,800.00	90.23	135.081	4,428.53	-965.53	4,158.98	3,623.58	0.00	0.00	0.00
8,900.00	90.23	135.081	4,428.14	-1,036.34	4,229.59	3,723.58	0.00	0.00	0.00
9,000.00	90.23	135.081	4,427.74	-1,107.15	4,300.20	3,823.58	0.00	0.00	0.00
9,100.00	90.23	135.081	4,427.35	-1,177.96	4,370.81	3,923.58	0.00	0.00	0.00
9,200.00	90.23	135.081	4,426.95	-1,248.77	4,441.42	4,023.58	0.00	0.00	0.00
9,300.00	90.23	135.081	4,426.55	-1,319.58	4,512.03	4,123.58	0.00	0.00	0.00
9,400.00	90.23	135.081	4,426.16	-1,390.39	4,582.64	4,223.57	0.00	0.00	0.00
9,500.00	90.23	135.081	4,425.76	-1,461.20	4,653.25	4,323.57	0.00	0.00	0.00
9,600.00	90.23	135.081	4,425.37	-1,532.01	4,723.86	4,423.57	0.00	0.00	0.00
9,700.00	90.23	135.081	4,424.97	-1,602.82	4,794.48	4,523.57	0.00	0.00	0.00
9,800.00	90.23	135.081	4,424.58	-1,673.63	4,865.09	4,623.57	0.00	0.00	0.00
9,900.00	90.23	135.081	4,424.18	-1,744.44	4,935.70	4,723.57	0.00	0.00	0.00
10,000.00	90.23	135.081	4,423.78	-1,815.25	5,006.31	4,823.57	0.00	0.00	0.00
10,100.00	90.23	135.081	4,423.39	-1,886.06	5,076.92	4,923.57	0.00	0.00	0.00
10,200.00	90.23	135.081	4,422.99	-1,956.87	5,147.53	5,023.57	0.00	0.00	0.00
10,300.00	90.23	135.081	4,422.60	-2,027.68	5,218.14	5,123.57	0.00	0.00	0.00
10,400.00	90.23	135.081	4,422.20	-2,098.49	5,288.75	5,223.57	0.00	0.00	0.00



Planning Report



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	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)
10,500.00	90.23	135.081	4,421.81	-2,169.30	5,359.36	5,323.57	0.00	0.00	0.00
10,600.00	90.23	135.081	4,421.41	-2,240.11	5,429.97	5,423.56	0.00	0.00	0.00
10,700.00	90.23	135.081	4,421.01	-2,310.92	5,500.58	5,523.56	0.00	0.00	0.00
10,800.00	90.23	135.081	4,420.62	-2,381.73	5,571.19	5,623.56	0.00	0.00	0.00
10,900.00	90.23	135.081	4,420.22	-2,452.54	5,641.80	5,723.56	0.00	0.00	0.00
11,000.00	90.23	135.081	4,419.83	-2,523.35	5,712.41	5,823.56	0.00	0.00	0.00
11,100.00	90.23	135.081	4,419.43	-2,594.16	5,783.02	5,923.56	0.00	0.00	0.00
11,200.00	90.23	135.081	4,419.03	-2,664.97	5,853.63	6,023.56	0.00	0.00	0.00
11,300.00	90.23	135.081	4,418.64	-2,735.78	5,924.24	6,123.56	0.00	0.00	0.00
11,400.00	90.23	135.081	4,418.24	-2,806.59	5,994.85	6,223.56	0.00	0.00	0.00
11,500.00	90.23	135.081	4,417.85	-2,877.40	6,065.46	6,323.56	0.00	0.00	0.00
11,600.00	90.23	135.081	4,417.45	-2,948.21	6,136.07	6,423.56	0.00	0.00	0.00
11,700.00	90.23	135.081	4,417.06	-3,019.02	6,206.68	6,523.55	0.00	0.00	0.00
11,800.00	90.23	135.081	4,416.66	-3,089.83	6,277.29	6,623.55	0.00	0.00	0.00
11,900.00	90.23	135.081	4,416.26	-3,160.64	6,347.90	6,723.55	0.00	0.00	0.00
12,000.00	90.23	135.081	4,415.87	-3,231.45	6,418.51	6,823.55	0.00	0.00	0.00
12,100.00	90.23	135.081	4,415.47	-3,302.26	6,489.12	6,923.55	0.00	0.00	0.00
12,200.00	90.23	135.081	4,415.08	-3,373.07	6,559.73	7,023.55	0.00	0.00	0.00
12,300.00	90.23	135.081	4,414.68	-3,443.88	6,630.34	7,123.55	0.00	0.00	0.00
12,400.00	90.23	135.081	4,414.28	-3,514.69	6,700.95	7,223.55	0.00	0.00	0.00
12,500.00	90.23	135.081	4,413.89	-3,585.50	6,771.56	7,323.55	0.00	0.00	0.00
12,600.00	90.23	135.081	4,413.49	-3,656.31	6,842.17	7,423.55	0.00	0.00	0.00
12,700.00	90.23	135.081	4,413.10	-3,727.12	6,912.78	7,523.55	0.00	0.00	0.00
12,800.00	90.23	135.081	4,412.70	-3,797.93	6,983.39	7,623.54	0.00	0.00	0.00
12,900.00	90.23	135.081	4,412.31	-3,868.74	7,054.00	7,723.54	0.00	0.00	0.00
13,000.00	90.23	135.081	4,411.91	-3,939.55	7,124.61	7,823.54	0.00	0.00	0.00
13,100.00	90.23	135.081	4,411.51	-4,010.36	7,195.22	7,923.54	0.00	0.00	0.00
13,200.00	90.23	135.081	4,411.12	-4,081.17	7,265.83	8,023.54	0.00	0.00	0.00
13,300.00	90.23	135.081	4,410.72	-4,151.98	7,336.44	8,123.54	0.00	0.00	0.00
13,400.00	90.23	135.081	4,410.33	-4,222.79	7,407.05	8,223.54	0.00	0.00	0.00
13,500.00	90.23	135.081	4,409.93	-4,293.60	7,477.66	8,323.54	0.00	0.00	0.00
13,600.00	90.23	135.081	4,409.54	-4,364.41	7,548.27	8,423.54	0.00	0.00	0.00
13,700.00	90.23	135.081	4,409.14	-4,435.22	7,618.88	8,523.54	0.00	0.00	0.00
13,800.00	90.23	135.081	4,408.74	-4,506.03	7,689.49	8,623.54	0.00	0.00	0.00
13,900.00	90.23	135.081	4,408.35	-4,576.84	7,760.10	8,723.54	0.00	0.00	0.00
14,000.00	90.23	135.081	4,407.95	-4,647.65	7,830.71	8,823.53	0.00	0.00	0.00
14,100.00	90.23	135.081	4,407.56	-4,718.46	7,901.32	8,923.53	0.00	0.00	0.00
14,200.00	90.23	135.081	4,407.16	-4,789.27	7,971.93	9,023.53	0.00	0.00	0.00
14,300.00	90.23	135.081	4,406.76	-4,860.08	8,042.54	9,123.53	0.00	0.00	0.00
14,400.00	90.23	135.081	4,406.37	-4,930.89	8,113.16	9,223.53	0.00	0.00	0.00
14,500.00	90.23	135.081	4,405.97	-5,001.70	8,183.77	9,323.53	0.00	0.00	0.00
14,600.00	90.23	135.081	4,405.58	-5,072.51	8,254.38	9,423.53	0.00	0.00	0.00
14,700.00	90.23	135.081	4,405.18	-5,143.32	8,324.99	9,523.53	0.00	0.00	0.00
14,800.00	90.23	135.081	4,404.79	-5,214.13	8,395.60	9,623.53	0.00	0.00	0.00
14,900.00	90.23	135.081	4,404.39	-5,284.94	8,466.21	9,723.53	0.00	0.00	0.00
15,000.00	90.23	135.081	4,403.99	-5,355.75	8,536.82	9,823.53	0.00	0.00	0.00
15,100.00	90.23	135.081	4,403.60	-5,426.56	8,607.43	9,923.52	0.00	0.00	0.00
15,200.00	90.23	135.081	4,403.20	-5,497.37	8,678.04	10,023.52	0.00	0.00	0.00
15,250.74	90.23	135.081	4,403.00	-5,533.30	8,713.86	10,074.26	0.00	0.00	0.00
PBHL/TD @ 15250.74 MD 4403.00 TVD									
15,251.23	90.23	135.081	4,403.00	-5,533.64	8,714.21	10,074.76	0.00	0.00	0.00



Planning Report



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Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	9-5/8" Surface Casing	9-5/8	12-1/4	
5,364.65	4,438.63	7" Intermediate Casing	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
498.00	498.00	Ojo Alamo		-0.25	135.000
598.04	598.00	Kirtland		-0.25	135.000
758.80	758.01	Fruitland		-0.25	135.000
1,150.59	1,138.08	Pictured Cliffs		-0.25	135.000
1,274.13	1,253.11	Lewis		-0.25	135.000
1,538.64	1,488.20	Chacra_A		-0.25	135.000
2,903.80	2,608.75	Cliff House_Basal		-0.25	135.000
2,916.02	2,618.75	Menefee		-0.25	135.000
4,113.09	3,599.24	Point Lookout		-0.25	135.000
4,332.97	3,779.33	Mancos		-0.25	135.000
4,740.94	4,114.22	MNCS_A		-0.25	135.000
4,872.35	4,213.95	MNCS_B		-0.25	135.000
5,007.89	4,303.57	MNCS_C		-0.25	135.000
5,073.01	4,340.34	MNCS_Cms		-0.25	135.000

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	
1,666.95	1,595.68	280.83	201.35	Begin 35.01° tangent	
4,470.85	3,892.27	1,588.11	1,138.68	Begin 10°/100' build/turn	
5,225.83	4,407.34	1,533.73	1,611.85	Begin 10°/100' build	
5,428.13	4,441.89	1,409.50	1,766.36	Begin 2°/100' turn	
5,490.13	4,441.64	1,368.11	1,812.49	Begin 90.23° lateral	
15,250.74	4,403.00	-5,533.64	8,714.21	PBHL/TD @ 15250.74 MD 4403.00 TVD	



Planning Report - Geographic



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

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

Site	Greater Lybrook (65, 67, 69, 73, 75 & 77)				
Site Position:		Northing:	1,902,902.05 usft	Latitude:	36.22964800
From:	Lat/Long	Easting:	2,749,408.14 usft	Longitude:	-107.74410300
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Greater Lybrook Unit 077H, Surf loc: 1574 FNL 1458 FWL Section 13-T23N-R09W					
Well Position	+N/-S	0.00 ft	Northing:	1,902,978.07 usft	Latitude:	36.22985700
	+E/-W	0.00 ft	Easting:	2,749,343.19 usft	Longitude:	-107.74432300
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,694.00 ft
Grid Convergence:		0.05 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/3/2024	8.49	62.68	49,016.00671227

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	135.000

Plan Survey Tool Program	Date	5/3/2024		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,250.74 rev0 (Original Hole)	MWD	OWSG MWD - Standard

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,666.95	35.01	35.641	1,595.68	280.83	201.35	3.00	3.00	0.00	35.64	
4,470.85	35.01	35.641	3,892.27	1,588.11	1,138.68	0.00	0.00	0.00	0.00	
5,225.83	70.00	128.800	4,407.34	1,533.73	1,611.85	10.00	4.63	12.34	104.27	
5,428.13	90.23	128.800	4,441.89	1,409.50	1,766.36	10.00	10.00	0.00	0.00	
5,742.17	90.23	135.081	4,440.64	1,199.71	1,999.84	2.00	0.00	2.00	90.02	
15,251.23	90.23	135.081	4,403.00	-5,533.64	8,714.21	0.00	0.00	0.00	0.00	Greater Lybrook 77 L



Planning Report - Geographic



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	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	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
100.00	0.00	0.000	100.00	0.00	0.00	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
200.00	0.00	0.000	200.00	0.00	0.00	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
300.00	0.00	0.000	300.00	0.00	0.00	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
350.00	0.00	0.000	350.00	0.00	0.00	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
9-5/8" Surface Casing										
400.00	0.00	0.000	400.00	0.00	0.00	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
498.00	0.00	0.000	498.00	0.00	0.00	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
Ojo Alamo										
500.00	0.00	0.000	500.00	0.00	0.00	1,902,978.07	2,749,343.19	36.22985700	-107.74432300	
KOP Begin 3°/100' build										
598.04	2.94	35.641	598.00	2.04	1.47	1,902,980.11	2,749,344.66	36.22986261	-107.74431803	
Kirtland										
600.00	3.00	35.641	599.95	2.13	1.53	1,902,980.19	2,749,344.72	36.22986284	-107.74431783	
700.00	6.00	35.641	699.63	8.50	6.10	1,902,986.57	2,749,349.29	36.22988034	-107.74430231	
758.80	7.76	35.641	758.01	14.23	10.20	1,902,992.30	2,749,353.39	36.22989606	-107.74428837	
Fruitland										
800.00	9.00	35.641	798.77	19.11	13.70	1,902,997.18	2,749,356.89	36.22990946	-107.74427649	
900.00	12.00	35.641	897.08	33.92	24.32	1,903,011.98	2,749,367.51	36.22995011	-107.74424044	
1,000.00	15.00	35.641	994.31	52.89	37.92	1,903,030.95	2,749,381.11	36.23000219	-107.74419426	
1,100.00	18.00	35.641	1,090.18	75.97	54.47	1,903,054.03	2,749,397.66	36.23006555	-107.74413809	
1,150.59	19.52	35.641	1,138.08	89.19	63.95	1,903,067.25	2,749,407.14	36.23010184	-107.74410590	
Pictured Cliffs										
1,200.00	21.00	35.641	1,184.43	103.09	73.92	1,903,081.16	2,749,417.11	36.23014001	-107.74407206	
1,274.13	23.22	35.641	1,253.11	125.77	90.18	1,903,103.83	2,749,433.37	36.23020227	-107.74401685	
Lewis										
1,300.00	24.00	35.641	1,276.81	134.19	96.21	1,903,112.25	2,749,439.40	36.23022538	-107.74399636	
1,400.00	27.00	35.641	1,367.06	169.17	121.30	1,903,147.24	2,749,464.49	36.23032142	-107.74391120	
1,500.00	30.00	35.641	1,454.93	207.94	149.10	1,903,186.01	2,749,492.29	36.23042786	-107.74381682	
1,538.64	31.16	35.641	1,488.20	223.92	160.55	1,903,201.99	2,749,503.74	36.23047172	-107.74377793	
Chacra_A										
1,600.00	33.00	35.641	1,540.18	250.40	179.54	1,903,228.47	2,749,522.73	36.23054442	-107.74371346	
1,666.95	35.01	35.641	1,595.68	280.83	201.35	1,903,258.89	2,749,544.55	36.23062795	-107.74363940	
Begin 35.01° tangent										
1,700.00	35.01	35.641	1,622.75	296.24	212.40	1,903,274.30	2,749,555.59	36.23067025	-107.74360188	
1,800.00	35.01	35.641	1,704.66	342.86	245.83	1,903,320.93	2,749,589.02	36.23079825	-107.74348839	
1,900.00	35.01	35.641	1,786.57	389.49	279.26	1,903,367.55	2,749,622.45	36.23092624	-107.74337489	
2,000.00	35.01	35.641	1,868.47	436.11	312.69	1,903,414.17	2,749,655.88	36.23105423	-107.74326140	
2,100.00	35.01	35.641	1,950.38	482.73	346.12	1,903,460.80	2,749,689.31	36.23118223	-107.74314790	
2,200.00	35.01	35.641	2,032.29	529.36	379.55	1,903,507.42	2,749,722.74	36.23131022	-107.74303440	
2,300.00	35.01	35.641	2,114.19	575.98	412.98	1,903,554.05	2,749,756.17	36.23143821	-107.74292091	
2,400.00	35.01	35.641	2,196.10	622.60	446.41	1,903,600.67	2,749,789.60	36.23156621	-107.74280741	
2,500.00	35.01	35.641	2,278.01	669.23	479.84	1,903,647.29	2,749,823.03	36.23169420	-107.74269391	
2,600.00	35.01	35.641	2,359.91	715.85	513.27	1,903,693.92	2,749,856.46	36.23182219	-107.74258041	
2,700.00	35.01	35.641	2,441.82	762.47	546.70	1,903,740.54	2,749,889.89	36.23195018	-107.74246691	
2,800.00	35.01	35.641	2,523.73	809.10	580.13	1,903,787.16	2,749,923.32	36.23207818	-107.74235341	
2,900.00	35.01	35.641	2,605.63	855.72	613.56	1,903,833.79	2,749,956.75	36.23220617	-107.74223992	
2,903.80	35.01	35.641	2,608.75	857.49	614.83	1,903,835.56	2,749,958.02	36.23221104	-107.74223560	
Cliff House_Basal										
2,916.02	35.01	35.641	2,618.75	863.19	618.91	1,903,841.25	2,749,962.10	36.23222667	-107.74222174	
Menefee										
3,000.00	35.01	35.641	2,687.54	902.34	646.99	1,903,880.41	2,749,990.18	36.23233416	-107.74212642	
3,100.00	35.01	35.641	2,769.45	948.97	680.42	1,903,927.03	2,750,023.60	36.23246215	-107.74201292	



Planning Report - Geographic



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Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured			Vertical			Map				
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Map	Map			
(ft)	(°)	(°)	(ft)	(ft)	(ft)	Northing	Easting	Latitude	Longitude	
						(usft)	(usft)			
3,200.00	35.01	35.641	2,851.35	995.59	713.84	1,903,973.66	2,750,057.03	36.23259015	-107.74189942	
3,300.00	35.01	35.641	2,933.26	1,042.22	747.27	1,904,020.28	2,750,090.46	36.23271814	-107.74178591	
3,400.00	35.01	35.641	3,015.17	1,088.84	780.70	1,904,066.90	2,750,123.89	36.23284613	-107.74167241	
3,500.00	35.01	35.641	3,097.07	1,135.46	814.13	1,904,113.53	2,750,157.32	36.23297412	-107.74155891	
3,600.00	35.01	35.641	3,178.98	1,182.09	847.56	1,904,160.15	2,750,190.75	36.23310211	-107.74144541	
3,700.00	35.01	35.641	3,260.89	1,228.71	880.99	1,904,206.77	2,750,224.18	36.23323010	-107.74133191	
3,800.00	35.01	35.641	3,342.80	1,275.33	914.42	1,904,253.40	2,750,257.61	36.23335810	-107.74121840	
3,900.00	35.01	35.641	3,424.70	1,321.96	947.85	1,904,300.02	2,750,291.04	36.23348609	-107.74110490	
4,000.00	35.01	35.641	3,506.61	1,368.58	981.28	1,904,346.64	2,750,324.47	36.23361408	-107.74099140	
4,100.00	35.01	35.641	3,588.52	1,415.20	1,014.71	1,904,393.27	2,750,357.90	36.23374207	-107.74087789	
4,113.09	35.01	35.641	3,599.24	1,421.31	1,019.09	1,904,399.37	2,750,362.27	36.23375883	-107.74086303	
Point Lookout										
4,200.00	35.01	35.641	3,670.42	1,461.83	1,048.14	1,904,439.89	2,750,391.33	36.23387006	-107.74076439	
4,300.00	35.01	35.641	3,752.33	1,508.45	1,081.57	1,904,486.51	2,750,424.76	36.23399805	-107.74065089	
4,332.97	35.01	35.641	3,779.33	1,523.82	1,092.59	1,904,501.88	2,750,435.78	36.23404024	-107.74061347	
Mancos										
4,400.00	35.01	35.641	3,834.24	1,555.07	1,115.00	1,904,533.14	2,750,458.18	36.23412604	-107.74053738	
4,470.85	35.01	35.641	3,892.27	1,588.11	1,138.68	1,904,566.17	2,750,481.87	36.23421673	-107.74045696	
Begin 10°/100' build/turn										
4,500.00	34.39	40.646	3,916.24	1,601.15	1,148.92	1,904,579.22	2,750,492.11	36.23425253	-107.74042221	
4,550.00	33.83	49.511	3,957.66	1,620.92	1,168.71	1,904,598.98	2,750,511.90	36.23430677	-107.74035502	
4,600.00	33.91	58.489	3,999.21	1,637.25	1,191.20	1,904,615.31	2,750,534.39	36.23435158	-107.74027872	
4,650.00	34.63	67.282	4,040.55	1,650.03	1,216.21	1,904,628.10	2,750,559.40	36.23438664	-107.74019387	
4,700.00	35.95	75.633	4,081.39	1,659.17	1,243.55	1,904,637.23	2,750,586.74	36.23441166	-107.74010113	
4,740.94	37.44	82.018	4,114.22	1,663.88	1,267.53	1,904,641.94	2,750,610.72	36.23442454	-107.74001981	
MNCS_A										
4,750.00	37.82	83.369	4,121.40	1,664.58	1,273.01	1,904,642.65	2,750,616.20	36.23442645	-107.74000121	
4,800.00	40.14	90.411	4,160.28	1,666.24	1,304.38	1,904,644.30	2,750,647.57	36.23443092	-107.73989485	
4,850.00	42.85	96.756	4,197.74	1,664.12	1,337.40	1,904,642.19	2,750,680.59	36.23442502	-107.73978288	
4,872.35	44.17	99.378	4,213.95	1,661.96	1,352.63	1,904,640.02	2,750,695.82	36.23441903	-107.73973124	
MNCS_B										
4,900.00	45.88	102.451	4,233.50	1,658.25	1,371.83	1,904,636.31	2,750,715.02	36.23440879	-107.73966614	
4,950.00	49.16	107.570	4,267.27	1,648.66	1,407.41	1,904,626.73	2,750,750.60	36.23438236	-107.73954553	
5,000.00	52.65	112.191	4,298.81	1,635.44	1,443.87	1,904,613.50	2,750,787.06	36.23434594	-107.73942196	
5,007.89	53.21	112.881	4,303.57	1,633.02	1,449.69	1,904,611.09	2,750,792.88	36.23433929	-107.73940224	
MNCS_C										
5,050.00	56.30	116.394	4,327.87	1,618.68	1,480.92	1,904,596.74	2,750,824.11	36.23429979	-107.73929636	
5,073.01	58.02	118.206	4,340.34	1,609.81	1,498.10	1,904,587.87	2,750,841.29	36.23427538	-107.73923815	
MNCS_Cms										
5,100.00	60.08	120.247	4,354.23	1,598.50	1,518.30	1,904,576.57	2,750,861.48	36.23424428	-107.73916971	
5,150.00	63.96	123.815	4,377.69	1,575.07	1,555.70	1,904,553.14	2,750,898.89	36.23417981	-107.73904296	
5,200.00	67.93	127.151	4,398.07	1,548.57	1,592.85	1,904,526.63	2,750,936.04	36.23410689	-107.73891707	
5,225.83	70.00	128.800	4,407.34	1,533.73	1,611.85	1,904,511.80	2,750,955.04	36.23406609	-107.73885270	
Begin 10°/100' build										
5,250.00	72.42	128.800	4,415.13	1,519.39	1,629.68	1,904,497.46	2,750,972.87	36.23402666	-107.73879227	
5,300.00	77.42	128.800	4,428.13	1,489.15	1,667.30	1,904,467.22	2,751,010.48	36.23394348	-107.73866484	
5,350.00	82.42	128.800	4,436.88	1,458.32	1,705.65	1,904,436.38	2,751,048.84	36.23385867	-107.73853489	
5,364.65	83.88	128.800	4,438.63	1,449.20	1,716.98	1,904,427.27	2,751,060.17	36.23383360	-107.73849648	
7" Intermediate Casing										
5,400.00	87.42	128.800	4,441.31	1,427.12	1,744.45	1,904,405.18	2,751,087.64	36.23377286	-107.73840342	
5,428.13	90.23	128.800	4,441.89	1,409.50	1,766.36	1,904,387.56	2,751,109.55	36.23372440	-107.73832918	
Begin 2°/100' turn										



Planning Report - Geographic



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	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
5,490.13	90.23	130.040	4,441.64	1,370.13	1,814.26	1,904,348.19	2,751,157.45	36.23361612	-107.73816690
Begin 90.23° lateral									
5,500.00	90.23	130.237	4,441.60	1,363.77	1,821.81	1,904,341.83	2,751,164.99	36.23359862	-107.73814133
5,600.00	90.23	132.237	4,441.20	1,297.85	1,897.00	1,904,275.92	2,751,240.19	36.23341735	-107.73788658
5,700.00	90.23	134.237	4,440.80	1,229.35	1,969.85	1,904,207.42	2,751,313.03	36.23322898	-107.73763980
5,742.17	90.23	135.081	4,440.64	1,199.71	1,999.84	1,904,177.78	2,751,343.03	36.23314747	-107.73753819
5,800.00	90.23	135.081	4,440.41	1,158.76	2,040.68	1,904,136.83	2,751,383.86	36.23303487	-107.73739987
5,900.00	90.23	135.081	4,440.01	1,087.95	2,111.29	1,904,066.02	2,751,454.47	36.23284016	-107.73716068
6,000.00	90.23	135.081	4,439.62	1,017.14	2,181.90	1,903,995.21	2,751,525.08	36.23264544	-107.73692150
6,100.00	90.23	135.081	4,439.22	946.33	2,252.51	1,903,924.40	2,751,595.69	36.23245073	-107.73668231
6,200.00	90.23	135.081	4,438.82	875.52	2,323.12	1,903,853.59	2,751,666.30	36.23225602	-107.73644313
6,300.00	90.23	135.081	4,438.43	804.71	2,393.73	1,903,782.78	2,751,736.91	36.23206130	-107.73620395
6,400.00	90.23	135.081	4,438.03	733.90	2,464.34	1,903,711.97	2,751,807.52	36.23186659	-107.73596477
6,500.00	90.23	135.081	4,437.64	663.09	2,534.95	1,903,641.16	2,751,878.13	36.23167187	-107.73572559
6,600.00	90.23	135.081	4,437.24	592.28	2,605.56	1,903,570.35	2,751,948.74	36.23147716	-107.73548641
6,700.00	90.23	135.081	4,436.85	521.48	2,676.17	1,903,499.54	2,752,019.35	36.23128244	-107.73524723
6,800.00	90.23	135.081	4,436.45	450.67	2,746.78	1,903,428.73	2,752,089.96	36.23108772	-107.73500806
6,900.00	90.23	135.081	4,436.05	379.86	2,817.39	1,903,357.92	2,752,160.57	36.23089301	-107.73476888
7,000.00	90.23	135.081	4,435.66	309.05	2,888.00	1,903,287.11	2,752,231.18	36.23069829	-107.73452971
7,100.00	90.23	135.081	4,435.26	238.24	2,958.61	1,903,216.30	2,752,301.79	36.23050357	-107.73429053
7,200.00	90.23	135.081	4,434.87	167.43	3,029.22	1,903,145.49	2,752,372.40	36.23030885	-107.73405136
7,300.00	90.23	135.081	4,434.47	96.62	3,099.83	1,903,074.68	2,752,443.01	36.23011413	-107.73381219
7,400.00	90.23	135.081	4,434.07	25.81	3,170.44	1,903,003.87	2,752,513.62	36.22991941	-107.73357302
7,500.00	90.23	135.081	4,433.68	-45.00	3,241.05	1,902,933.06	2,752,584.23	36.22972469	-107.73333386
7,600.00	90.23	135.081	4,433.28	-115.81	3,311.66	1,902,862.25	2,752,654.84	36.22952997	-107.73309469
7,700.00	90.23	135.081	4,432.89	-186.62	3,382.27	1,902,791.44	2,752,725.45	36.22933525	-107.73285552
7,800.00	90.23	135.081	4,432.49	-257.43	3,452.88	1,902,720.63	2,752,796.06	36.22914053	-107.73261636
7,900.00	90.23	135.081	4,432.10	-328.24	3,523.49	1,902,649.82	2,752,866.67	36.22894580	-107.73237720
8,000.00	90.23	135.081	4,431.70	-399.05	3,594.10	1,902,579.01	2,752,937.28	36.22875108	-107.73213803
8,100.00	90.23	135.081	4,431.30	-469.86	3,664.71	1,902,508.20	2,753,007.89	36.22855636	-107.73189887
8,200.00	90.23	135.081	4,430.91	-540.67	3,735.32	1,902,437.39	2,753,078.51	36.22836164	-107.73165971
8,300.00	90.23	135.081	4,430.51	-611.48	3,805.93	1,902,366.58	2,753,149.12	36.22816691	-107.73142056
8,400.00	90.23	135.081	4,430.12	-682.29	3,876.54	1,902,295.77	2,753,219.73	36.22797219	-107.73118140
8,500.00	90.23	135.081	4,429.72	-753.10	3,947.15	1,902,224.96	2,753,290.34	36.22777746	-107.73094224
8,600.00	90.23	135.081	4,429.33	-823.91	4,017.76	1,902,154.16	2,753,360.95	36.22758274	-107.73070309
8,700.00	90.23	135.081	4,428.93	-894.72	4,088.37	1,902,083.35	2,753,431.56	36.22738801	-107.73046393
8,800.00	90.23	135.081	4,428.53	-965.53	4,158.98	1,902,012.54	2,753,502.17	36.22719328	-107.73022478
8,900.00	90.23	135.081	4,428.14	-1,036.34	4,229.59	1,901,941.73	2,753,572.78	36.22699856	-107.72998563
9,000.00	90.23	135.081	4,427.74	-1,107.15	4,300.20	1,901,870.92	2,753,643.39	36.22680383	-107.72974648
9,100.00	90.23	135.081	4,427.35	-1,177.96	4,370.81	1,901,800.11	2,753,714.00	36.22660910	-107.72950733
9,200.00	90.23	135.081	4,426.95	-1,248.77	4,441.42	1,901,729.30	2,753,784.61	36.22641437	-107.72926818
9,300.00	90.23	135.081	4,426.55	-1,319.58	4,512.03	1,901,658.49	2,753,855.22	36.22621964	-107.72902904
9,400.00	90.23	135.081	4,426.16	-1,390.39	4,582.64	1,901,587.68	2,753,925.83	36.22602491	-107.72878989
9,500.00	90.23	135.081	4,425.76	-1,461.20	4,653.25	1,901,516.87	2,753,996.44	36.22583018	-107.72855075
9,600.00	90.23	135.081	4,425.37	-1,532.01	4,723.86	1,901,446.06	2,754,067.05	36.22563545	-107.72831160
9,700.00	90.23	135.081	4,424.97	-1,602.82	4,794.48	1,901,375.25	2,754,137.66	36.22544072	-107.72807246
9,800.00	90.23	135.081	4,424.58	-1,673.63	4,865.09	1,901,304.44	2,754,208.27	36.22524599	-107.72783332
9,900.00	90.23	135.081	4,424.18	-1,744.44	4,935.70	1,901,233.63	2,754,278.88	36.22505126	-107.72759418
10,000.00	90.23	135.081	4,423.78	-1,815.25	5,006.31	1,901,162.82	2,754,349.49	36.22485653	-107.72735504
10,100.00	90.23	135.081	4,423.39	-1,886.06	5,076.92	1,901,092.01	2,754,420.10	36.22466179	-107.72711591
10,200.00	90.23	135.081	4,422.99	-1,956.87	5,147.53	1,901,021.20	2,754,490.71	36.22446706	-107.72687677
10,300.00	90.23	135.081	4,422.60	-2,027.68	5,218.14	1,900,950.39	2,754,561.32	36.22427233	-107.72663764
10,400.00	90.23	135.081	4,422.20	-2,098.49	5,288.75	1,900,879.58	2,754,631.93	36.22407759	-107.72639850
10,500.00	90.23	135.081	4,421.81	-2,169.30	5,359.36	1,900,808.77	2,754,702.54	36.22388286	-107.72615937



Planning Report - Geographic



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	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	
10,600.00	90.23	135.081	4,421.41	-2,240.11	5,429.97	1,900,737.96	2,754,773.15	36.22368812	-107.72592024	
10,700.00	90.23	135.081	4,421.01	-2,310.92	5,500.58	1,900,667.15	2,754,843.76	36.22349339	-107.72568111	
10,800.00	90.23	135.081	4,420.62	-2,381.73	5,571.19	1,900,596.34	2,754,914.37	36.22329865	-107.72544198	
10,900.00	90.23	135.081	4,420.22	-2,452.54	5,641.80	1,900,525.53	2,754,984.98	36.22310391	-107.72520285	
11,000.00	90.23	135.081	4,419.83	-2,523.35	5,712.41	1,900,454.72	2,755,055.59	36.22290918	-107.72496373	
11,100.00	90.23	135.081	4,419.43	-2,594.16	5,783.02	1,900,383.91	2,755,126.20	36.22271444	-107.72472460	
11,200.00	90.23	135.081	4,419.03	-2,664.97	5,853.63	1,900,313.10	2,755,196.81	36.22251970	-107.72448548	
11,300.00	90.23	135.081	4,418.64	-2,735.78	5,924.24	1,900,242.29	2,755,267.42	36.22232496	-107.72424636	
11,400.00	90.23	135.081	4,418.24	-2,806.59	5,994.85	1,900,171.48	2,755,338.03	36.22213022	-107.72400723	
11,500.00	90.23	135.081	4,417.85	-2,877.40	6,065.46	1,900,100.67	2,755,408.64	36.22193548	-107.72376811	
11,600.00	90.23	135.081	4,417.45	-2,948.21	6,136.07	1,900,029.86	2,755,479.25	36.22174074	-107.72352899	
11,700.00	90.23	135.081	4,417.06	-3,019.02	6,206.68	1,899,959.05	2,755,549.86	36.22154600	-107.72328988	
11,800.00	90.23	135.081	4,416.66	-3,089.83	6,277.29	1,899,888.24	2,755,620.47	36.22135126	-107.72305076	
11,900.00	90.23	135.081	4,416.26	-3,160.64	6,347.90	1,899,817.43	2,755,691.08	36.22115652	-107.72281164	
12,000.00	90.23	135.081	4,415.87	-3,231.45	6,418.51	1,899,746.62	2,755,761.69	36.22096178	-107.72257253	
12,100.00	90.23	135.081	4,415.47	-3,302.26	6,489.12	1,899,675.81	2,755,832.30	36.22076704	-107.72233342	
12,200.00	90.23	135.081	4,415.08	-3,373.07	6,559.73	1,899,605.00	2,755,902.91	36.22057229	-107.72209430	
12,300.00	90.23	135.081	4,414.68	-3,443.88	6,630.34	1,899,534.19	2,755,973.52	36.22037755	-107.72185519	
12,400.00	90.23	135.081	4,414.28	-3,514.69	6,700.95	1,899,463.38	2,756,044.13	36.22018281	-107.72161608	
12,500.00	90.23	135.081	4,413.89	-3,585.50	6,771.56	1,899,392.57	2,756,114.74	36.21998806	-107.72137697	
12,600.00	90.23	135.081	4,413.49	-3,656.31	6,842.17	1,899,321.76	2,756,185.35	36.21979332	-107.72113787	
12,700.00	90.23	135.081	4,413.10	-3,727.12	6,912.78	1,899,250.96	2,756,255.96	36.21959857	-107.72089876	
12,800.00	90.23	135.081	4,412.70	-3,797.93	6,983.39	1,899,180.15	2,756,326.57	36.21940383	-107.72065966	
12,900.00	90.23	135.081	4,412.31	-3,868.74	7,054.00	1,899,109.34	2,756,397.18	36.21920908	-107.72042055	
13,000.00	90.23	135.081	4,411.91	-3,939.55	7,124.61	1,899,038.53	2,756,467.79	36.21901433	-107.72018145	
13,100.00	90.23	135.081	4,411.51	-4,010.36	7,195.22	1,898,967.72	2,756,538.40	36.21881958	-107.71994235	
13,200.00	90.23	135.081	4,411.12	-4,081.17	7,265.83	1,898,896.91	2,756,609.01	36.21862484	-107.71970325	
13,300.00	90.23	135.081	4,410.72	-4,151.98	7,336.44	1,898,826.10	2,756,679.62	36.21843009	-107.71946415	
13,400.00	90.23	135.081	4,410.33	-4,222.79	7,407.05	1,898,755.29	2,756,750.23	36.21823534	-107.71922505	
13,500.00	90.23	135.081	4,409.93	-4,293.60	7,477.66	1,898,684.48	2,756,820.84	36.21804059	-107.71898595	
13,600.00	90.23	135.081	4,409.54	-4,364.41	7,548.27	1,898,613.67	2,756,891.45	36.21784584	-107.71874686	
13,700.00	90.23	135.081	4,409.14	-4,435.22	7,618.88	1,898,542.86	2,756,962.06	36.21765109	-107.71850776	
13,800.00	90.23	135.081	4,408.74	-4,506.03	7,689.49	1,898,472.05	2,757,032.67	36.21745634	-107.71826867	
13,900.00	90.23	135.081	4,408.35	-4,576.84	7,760.10	1,898,401.24	2,757,103.28	36.21726159	-107.71802958	
14,000.00	90.23	135.081	4,407.95	-4,647.65	7,830.71	1,898,330.43	2,757,173.89	36.21706684	-107.71779049	
14,100.00	90.23	135.081	4,407.56	-4,718.46	7,901.32	1,898,259.62	2,757,244.50	36.21687209	-107.71755140	
14,200.00	90.23	135.081	4,407.16	-4,789.27	7,971.93	1,898,188.81	2,757,315.11	36.21667733	-107.71731231	
14,300.00	90.23	135.081	4,406.76	-4,860.08	8,042.54	1,898,118.00	2,757,385.72	36.21648258	-107.71707322	
14,400.00	90.23	135.081	4,406.37	-4,930.89	8,113.16	1,898,047.19	2,757,456.33	36.21628783	-107.71683414	
14,500.00	90.23	135.081	4,405.97	-5,001.70	8,183.77	1,897,976.38	2,757,526.94	36.21609307	-107.71659505	
14,600.00	90.23	135.081	4,405.58	-5,072.51	8,254.38	1,897,905.57	2,757,597.55	36.21589832	-107.71635597	
14,700.00	90.23	135.081	4,405.18	-5,143.32	8,324.99	1,897,834.76	2,757,668.16	36.21570356	-107.71611689	
14,800.00	90.23	135.081	4,404.79	-5,214.13	8,395.60	1,897,763.95	2,757,738.77	36.21550881	-107.71587780	
14,900.00	90.23	135.081	4,404.39	-5,284.94	8,466.21	1,897,693.14	2,757,809.38	36.21531405	-107.71563872	
15,000.00	90.23	135.081	4,403.99	-5,355.75	8,536.82	1,897,622.33	2,757,879.99	36.21511929	-107.71539964	
15,100.00	90.23	135.081	4,403.60	-5,426.56	8,607.43	1,897,551.52	2,757,950.60	36.21492454	-107.71516057	
15,200.00	90.23	135.081	4,403.20	-5,497.37	8,678.04	1,897,480.71	2,758,021.21	36.21472978	-107.71492149	
15,250.74	90.23	135.081	4,403.00	-5,533.30	8,713.86	1,897,444.78	2,758,057.04	36.21463096	-107.71480018	
PBHL/TD @ 15250.74 MD 4403.00 TVD										
15,251.23	90.23	135.081	4,403.00	-5,533.64	8,714.21	1,897,444.43	2,758,057.39	36.21463000	-107.71479900	



Planning Report - Geographic



Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	North Reference:	Grid
Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
Greater Lybrook 77 LTP	0.00	0.000	4,403.00	-5,533.64	8,714.21	1,897,444.43	2,758,057.39	36.21463000	-107.71479900
- plan hits target center									
- Point									
Greater Lybrook 77 FTP	0.00	0.000	4,442.76	1,533.73	1,646.85	1,904,511.80	2,750,990.04	36.23406600	-107.73873400
- plan misses target center by 33.37ft at 5261.44ft MD (4418.47 TVD, 1512.54 N, 1638.21 E)									
- Point									
Greater Lybrook 77 vs=C	0.00	0.000	4,443.00	1,576.59	1,604.00	1,904,554.65	2,750,947.19	36.23418384	-107.73887918
- plan misses target center by 53.36ft at 5208.24ft MD (4401.12 TVD, 1543.92 N, 1598.93 E)									
- Point									

Casing Points					
Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter	
(ft)	(ft)	Name	(")	(")	
350.00	350.00	9-5/8" Surface Casing	9-5/8	12-1/4	
5,364.65	4,438.63	7" Intermediate Casing	7	8-3/4	

Formations					
Measured Depth	Vertical Depth			Dip	Dip Direction
(ft)	(ft)	Name	Lithology	(°)	(°)
498.00	498.00	Ojo Alamo		-0.25	135.000
598.04	598.00	Kirtland		-0.25	135.000
758.80	758.01	Fruitland		-0.25	135.000
1,150.59	1,138.08	Pictured Cliffs		-0.25	135.000
1,274.13	1,253.11	Lewis		-0.25	135.000
1,538.64	1,488.20	Chacra_A		-0.25	135.000
2,903.80	2,608.75	Cliff House_Basal		-0.25	135.000
2,916.02	2,618.75	Menefee		-0.25	135.000
4,113.09	3,599.24	Point Lookout		-0.25	135.000
4,332.97	3,779.33	Mancos		-0.25	135.000
4,740.94	4,114.22	MNCS_A		-0.25	135.000
4,872.35	4,213.95	MNCS_B		-0.25	135.000
5,007.89	4,303.57	MNCS_C		-0.25	135.000
5,073.01	4,340.34	MNCS_Cms		-0.25	135.000

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(ft)	(ft)	+N/-S	+E/-W	Comment
(ft)	(ft)	(ft)	(ft)	
500.00	500.00	0.00	0.00	KOP Begin 3°/100' build
1,666.95	1,595.68	280.83	201.35	Begin 35.01° tangent
4,470.85	3,892.27	1,588.11	1,138.68	Begin 10°/100' build/turn
5,225.83	4,407.34	1,533.73	1,611.85	Begin 10°/100' build
5,428.13	4,441.89	1,409.50	1,766.36	Begin 2°/100' turn
5,490.13	4,441.64	1,368.11	1,812.49	Begin 90.23° lateral
15,250.74	4,403.00	-5,533.64	8,714.21	PBHL/TD @ 15250.74 MD 4403.00 TVD



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
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 1,725.12ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	5/3/2024		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	15,250.74	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						
Greater Lybrook (65, 67, 69, 73, 75 & 77)						
Greater Lybrook Unit 065H - Original Hole - rev0	500.00	500.00	99.99	96.57	29.269	CC
Greater Lybrook Unit 065H - Original Hole - rev0	600.00	599.95	100.65	96.52	24.361	ES
Greater Lybrook Unit 065H - Original Hole - rev0	900.00	897.08	117.21	110.89	18.542	SF
Greater Lybrook Unit 067H - Original Hole - rev0	500.00	500.00	80.21	76.80	23.480	CC
Greater Lybrook Unit 067H - Original Hole - rev0	600.00	599.95	80.89	76.76	19.578	ES
Greater Lybrook Unit 067H - Original Hole - rev0	900.00	897.08	98.97	92.65	15.660	SF
Greater Lybrook Unit 069H - Original Hole - rev0	500.00	500.00	60.16	56.74	17.610	CC
Greater Lybrook Unit 069H - Original Hole - rev0	5,215.40	5,275.58	61.82	22.84	1.586	Level 3<2.00, ES, SF
Greater Lybrook Unit 073H - Original Hole - rev0	500.00	500.00	40.11	36.69	11.740	CC
Greater Lybrook Unit 073H - Original Hole - rev0	600.00	599.95	40.82	36.69	9.880	ES
Greater Lybrook Unit 073H - Original Hole - rev0	700.00	699.63	43.83	38.98	9.036	SF
Greater Lybrook Unit 075H - Original Hole - rev0	500.00	500.00	20.05	16.64	5.870	CC, ES
Greater Lybrook Unit 075H - Original Hole - rev0	15,251.23	14,718.12	1,209.35	742.15	2.589	SF
Greater Lybrook (79 & 81)						
Greater Lybrook Unit 079H - Original Hole - rev0	14,189.18	5,000.28	1,156.76	922.92	4.947	CC
Greater Lybrook Unit 079H - Original Hole - rev0	14,300.00	4,904.23	1,157.72	920.91	4.889	ES
Greater Lybrook Unit 079H - Original Hole - rev0	14,500.00	4,750.00	1,167.15	925.50	4.830	SF
Rodeo Unit (500, 501, 503, 504, 506, 508, 509&510)						
Rodeo Unit #501H - Original Hole - Surveys Original Hole	14,723.07	4,876.33	714.17	468.56	2.908	CC, ES
Rodeo Unit #501H - Original Hole - Surveys Original Hole	14,800.00	4,907.61	717.66	469.85	2.896	SF

Offset Design:	Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 065H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program:	0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Rule Assigned:						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	139.49	-76.02	64.95	99.99					
100.00	100.00	100.00	100.00	0.27	0.27	139.49	-76.02	64.95	99.99	99.44	0.55	182.312		
200.00	200.00	200.00	200.00	0.63	0.63	139.49	-76.02	64.95	99.99	98.73	1.27	79.019		
300.00	300.00	300.00	300.00	0.99	0.99	139.49	-76.02	64.95	99.99	98.01	1.98	50.441		
400.00	400.00	400.00	400.00	1.35	1.35	139.49	-76.02	64.95	99.99	97.29	2.70	37.043		
500.00	500.00	500.00	500.00	1.71	1.71	139.49	-76.02	64.95	99.99	96.57	3.42	29.269	CC	
600.00	599.95	599.95	599.95	2.07	2.07	105.27	-76.02	64.95	100.65	96.52	4.13	24.361	ES	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 065H - 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)			
700.00	699.63	699.63	699.63	2.43	2.42	109.41	-76.02	64.95	103.00	98.15	4.85	21.239	
800.00	798.77	798.77	798.77	2.80	2.78	115.77	-76.02	64.95	108.06	102.48	5.58	19.371	
900.00	897.08	897.08	897.08	3.19	3.13	123.49	-76.02	64.95	117.21	110.89	6.32	18.542 SF	
1,000.00	994.31	994.31	994.31	3.63	3.48	131.53	-76.02	64.95	131.71	124.64	7.07	18.619	
1,100.00	1,090.18	1,084.05	1,084.02	4.11	3.79	138.21	-77.64	65.85	154.15	146.36	7.79	19.788	
1,200.00	1,184.43	1,170.36	1,170.14	4.64	4.08	143.15	-82.66	68.64	186.38	177.90	8.47	21.997	
1,300.00	1,276.81	1,252.86	1,252.13	5.24	4.36	146.45	-90.64	73.07	227.36	218.22	9.13	24.896	
1,400.00	1,367.06	1,330.96	1,329.31	5.91	4.63	148.49	-101.03	78.84	276.11	266.34	9.77	28.256	
1,500.00	1,454.93	1,410.80	1,407.79	6.66	4.92	149.89	-113.80	85.92	331.26	320.81	10.45	31.698	
1,600.00	1,540.18	1,490.45	1,486.08	7.48	5.23	151.02	-126.67	93.07	390.63	379.48	11.15	35.028	
1,700.00	1,622.75	1,567.14	1,561.44	8.38	5.53	152.24	-139.06	99.94	453.76	441.91	11.85	38.297	
1,800.00	1,704.66	1,643.10	1,636.10	9.31	5.84	153.83	-151.34	106.76	517.96	505.42	12.53	41.327	
1,900.00	1,786.57	1,719.06	1,710.75	10.27	6.15	155.07	-163.61	113.57	582.34	569.11	13.23	44.029	
2,000.00	1,868.47	1,795.02	1,785.40	11.24	6.46	156.07	-175.89	120.38	646.86	632.93	13.93	46.440	
2,100.00	1,950.38	1,870.98	1,860.05	12.22	6.78	156.89	-188.16	127.19	711.47	696.83	14.64	48.598	
2,200.00	2,032.29	1,946.94	1,934.70	13.21	7.11	157.58	-200.44	134.01	776.15	760.79	15.36	50.537	
2,300.00	2,114.19	2,022.90	2,009.35	14.21	7.44	158.16	-212.71	140.82	840.89	824.81	16.08	52.287	
2,400.00	2,196.10	2,098.86	2,084.01	15.21	7.77	158.66	-224.98	147.63	905.67	888.86	16.81	53.871	
2,500.00	2,278.01	2,174.82	2,158.66	16.22	8.10	159.09	-237.26	154.44	970.48	952.94	17.55	55.308	
2,600.00	2,359.91	2,250.78	2,233.31	17.23	8.44	159.46	-249.53	161.25	1,035.33	1,017.04	18.29	56.618	
2,700.00	2,441.82	2,326.74	2,307.96	18.24	8.77	159.80	-261.81	168.07	1,100.19	1,081.17	19.03	57.816	
2,800.00	2,523.73	2,402.70	2,382.61	19.25	9.11	160.09	-274.08	174.88	1,165.08	1,145.30	19.78	58.914	
2,900.00	2,605.63	2,478.66	2,457.27	20.27	9.45	160.36	-286.35	181.69	1,229.98	1,209.46	20.53	59.923	
3,000.00	2,687.54	2,554.62	2,531.92	21.29	9.79	160.60	-298.63	188.50	1,294.90	1,273.62	21.28	60.854	
3,100.00	2,769.45	2,630.58	2,606.57	22.31	10.14	160.81	-310.90	195.32	1,359.82	1,337.79	22.03	61.714	
3,200.00	2,851.35	2,738.87	2,713.20	23.33	10.61	161.13	-327.39	204.46	1,424.37	1,401.28	23.08	61.701	
3,300.00	2,933.26	2,893.39	2,866.73	24.36	11.23	161.89	-342.25	212.71	1,485.57	1,461.11	24.46	60.740	
3,400.00	3,015.17	3,041.93	3,015.17	25.38	11.74	162.92	-346.32	214.97	1,542.64	1,517.00	25.64	60.172	
3,500.00	3,097.07	3,123.84	3,097.07	26.41	11.99	163.52	-346.32	214.97	1,598.33	1,572.01	26.33	60.715	
3,600.00	3,178.98	3,205.74	3,178.98	27.43	12.24	164.07	-346.32	214.97	1,654.15	1,627.13	27.01	61.232	
3,700.00	3,260.89	3,287.65	3,260.89	28.46	12.50	164.59	-346.32	214.97	1,710.06	1,682.35	27.71	61.723	



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 067H - 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)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	139.62	-61.11	51.96	80.21				
100.00	100.00	100.00	100.00	0.27	0.27	139.62	-61.11	51.96	80.21	79.67	0.55	146.254	
200.00	200.00	200.00	200.00	0.63	0.63	139.62	-61.11	51.96	80.21	78.95	1.27	63.391	
300.00	300.00	300.00	300.00	0.99	0.99	139.62	-61.11	51.96	80.21	78.23	1.98	40.464	
400.00	400.00	400.00	400.00	1.35	1.35	139.62	-61.11	51.96	80.21	77.52	2.70	29.717	
500.00	500.00	500.00	500.00	1.71	1.71	139.62	-61.11	51.96	80.21	76.80	3.42	23.480	CC
600.00	599.95	599.95	599.95	2.07	2.07	105.76	-61.11	51.96	80.89	76.76	4.13	19.578	ES
700.00	699.63	699.63	699.63	2.43	2.42	110.87	-61.11	51.96	83.36	78.51	4.85	17.190	
800.00	798.77	798.77	798.77	2.80	2.78	118.56	-61.11	51.96	88.88	83.30	5.58	15.932	
900.00	897.08	897.08	897.08	3.19	3.13	127.53	-61.11	51.96	98.97	92.65	6.32	15.660	SF
1,000.00	994.31	994.31	994.31	3.63	3.48	136.35	-61.11	51.96	114.86	107.79	7.07	16.253	
1,100.00	1,090.18	1,093.12	1,093.09	4.11	3.83	143.42	-60.12	54.01	136.12	128.30	7.82	17.411	
1,200.00	1,184.43	1,193.02	1,192.69	4.64	4.18	147.90	-56.87	60.74	160.72	152.14	8.58	18.736	
1,300.00	1,276.81	1,293.82	1,292.66	5.24	4.55	150.54	-51.30	72.28	187.70	178.34	9.36	20.055	
1,400.00	1,367.06	1,395.46	1,392.64	5.91	4.93	151.91	-43.37	88.70	216.54	206.37	10.17	21.285	
1,500.00	1,454.93	1,497.88	1,492.26	6.66	5.35	152.40	-33.05	110.07	246.97	235.93	11.04	22.379	
1,600.00	1,540.18	1,601.01	1,591.14	7.48	5.81	152.26	-20.32	136.42	278.84	266.87	11.96	23.310	
1,700.00	1,622.75	1,704.89	1,689.00	8.38	6.34	151.80	-5.18	167.78	311.82	298.85	12.97	24.035	
1,800.00	1,704.66	1,804.16	1,780.91	9.31	6.89	151.16	11.12	201.54	343.26	329.21	14.06	24.420	
1,900.00	1,786.57	1,899.11	1,868.64	10.27	7.46	150.59	26.92	234.25	374.46	359.28	15.18	24.672	
2,000.00	1,868.47	1,994.06	1,956.36	11.24	8.05	150.11	42.71	266.97	405.68	389.34	16.33	24.835	
2,100.00	1,950.38	2,089.01	2,044.09	12.22	8.66	149.69	58.51	299.68	436.92	419.40	17.52	24.938	
2,200.00	2,032.29	2,183.96	2,131.81	13.21	9.28	149.33	74.31	332.39	468.19	449.46	18.73	24.997	
2,300.00	2,114.19	2,278.91	2,219.54	14.21	9.92	149.02	90.11	365.11	499.46	479.50	19.96	25.024	
2,400.00	2,196.10	2,373.86	2,307.26	15.21	10.57	148.74	105.90	397.82	530.75	509.55	21.21	25.029	
2,500.00	2,278.01	2,468.81	2,394.99	16.22	11.22	148.49	121.70	430.53	562.05	539.59	22.46	25.019	
2,600.00	2,359.91	2,563.76	2,482.71	17.23	11.89	148.27	137.50	463.24	593.36	569.62	23.74	24.998	
2,700.00	2,441.82	2,658.71	2,570.44	18.24	12.55	148.07	153.29	495.96	624.67	599.66	25.02	24.969	
2,800.00	2,523.73	2,753.66	2,658.16	19.25	13.23	147.89	169.09	528.67	656.00	629.69	26.31	24.936	
2,900.00	2,605.63	2,848.61	2,745.89	20.27	13.91	147.73	184.89	561.38	687.32	659.72	27.60	24.899	
3,000.00	2,687.54	2,943.55	2,833.61	21.29	14.59	147.58	200.68	594.10	718.65	689.74	28.91	24.860	
3,100.00	2,769.45	3,038.50	2,921.34	22.31	15.28	147.44	216.48	626.81	749.99	719.77	30.22	24.819	
3,200.00	2,851.35	3,133.45	3,009.06	23.33	15.96	147.32	232.28	659.52	781.33	749.79	31.53	24.778	
3,300.00	2,933.26	3,228.40	3,096.79	24.36	16.65	147.20	248.08	692.24	812.67	779.82	32.85	24.737	
3,400.00	3,015.17	3,323.35	3,184.51	25.38	17.35	147.10	263.87	724.95	844.01	809.84	34.17	24.697	
3,500.00	3,097.07	3,418.30	3,272.24	26.41	18.04	147.00	279.67	757.66	875.36	839.86	35.50	24.658	
3,600.00	3,178.98	3,513.25	3,359.96	27.43	18.74	146.90	295.47	790.38	906.71	869.88	36.83	24.619	
3,700.00	3,260.89	3,608.20	3,447.69	28.46	19.44	146.82	311.26	823.09	938.06	899.90	38.16	24.582	
3,800.00	3,342.80	3,703.15	3,535.41	29.49	20.13	146.74	327.06	855.80	969.41	929.92	39.50	24.545	
3,900.00	3,424.70	3,798.10	3,623.14	30.52	20.84	146.66	342.86	888.51	1,000.77	959.93	40.83	24.509	
4,000.00	3,506.61	3,893.05	3,710.86	31.55	21.54	146.59	358.65	921.23	1,032.12	989.95	42.17	24.475	
4,100.00	3,588.52	4,339.17	4,120.27	32.58	23.83	151.86	500.06	973.33	1,059.23	1,016.75	42.48	24.936	
4,200.00	3,670.42	5,051.59	4,417.39	33.61	23.90	-174.78	938.36	559.34	1,034.84	997.00	37.84	27.349	
4,300.00	3,752.33	5,062.44	4,417.43	34.64	23.90	-174.17	945.81	551.45	1,019.78	979.97	39.80	25.620	
4,400.00	3,834.24	5,073.89	4,417.47	35.67	23.90	-173.53	953.71	543.15	1,014.30	972.79	41.51	24.435	
4,406.70	3,839.73	5,074.67	4,417.48	35.74	23.90	-173.76	954.25	542.59	1,014.28	972.67	41.61	24.374	
4,500.00	3,916.24	5,084.94	4,417.51	36.70	23.91	-177.24	961.36	535.18	1,018.47	975.59	42.88	23.753	
4,600.00	3,999.21	5,077.36	4,417.49	37.71	23.90	166.32	956.11	540.65	1,030.60	987.00	43.59	23.641	
4,700.00	4,081.39	5,043.18	4,417.36	38.65	23.90	148.53	932.60	565.47	1,049.08	1,005.58	43.50	24.119	
4,800.00	4,160.28	4,981.49	4,417.12	39.50	23.95	131.54	890.95	610.97	1,071.39	1,028.73	42.66	25.115	
4,900.00	4,233.50	4,898.55	4,413.59	40.23	24.01	116.77	836.10	673.01	1,093.95	1,052.44	41.51	26.352	
5,000.00	4,298.81	4,823.06	4,400.39	40.83	24.07	105.26	786.96	728.70	1,114.32	1,073.90	40.41	27.572	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 067H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,100.00	4,354.23	4,757.77	4,381.19	41.31	24.11	96.63	745.70	775.47	1,131.28	1,091.95	39.33	28.763	
5,200.00	4,398.07	4,719.70	4,366.86	41.67	24.13	91.03	721.97	801.54	1,144.73	1,106.28	38.44	29.776	
5,300.00	4,428.13	4,680.54	4,349.87	41.98	24.14	87.91	697.52	826.98	1,157.12	1,119.45	37.68	30.713	
5,400.00	4,441.31	4,650.00	4,335.09	42.37	24.15	85.23	678.51	845.76	1,174.45	1,137.18	37.27	31.511	
5,500.00	4,441.60	4,600.00	4,308.13	42.84	24.14	83.38	647.64	874.37	1,195.11	1,158.18	36.93	32.364	
5,600.00	4,441.20	4,550.00	4,277.91	43.34	24.12	82.03	617.28	900.12	1,218.04	1,181.39	36.65	33.237	
5,700.00	4,440.80	4,529.33	4,264.51	43.89	24.11	81.49	604.93	909.89	1,242.78	1,205.95	36.82	33.751	
5,800.00	4,440.41	4,500.00	4,244.65	44.47	24.09	80.62	587.67	922.83	1,270.46	1,233.49	36.97	34.365	
5,900.00	4,440.01	4,470.76	4,223.91	45.16	24.05	79.69	570.78	934.62	1,303.34	1,266.13	37.22	35.020	
6,000.00	4,439.62	4,450.00	4,208.62	45.94	24.03	79.02	559.02	942.32	1,341.57	1,303.89	37.68	35.606	
6,100.00	4,439.22	4,422.51	4,187.73	46.83	23.99	78.10	543.76	951.61	1,384.80	1,346.71	38.09	36.360	
6,200.00	4,438.82	4,400.00	4,170.09	47.82	23.95	77.34	531.56	958.44	1,432.79	1,394.18	38.61	37.108	
6,300.00	4,438.43	4,382.59	4,156.14	48.91	23.92	76.75	522.32	963.24	1,485.17	1,445.93	39.25	37.841	
6,400.00	4,438.03	4,350.00	4,129.35	50.09	23.85	75.63	505.50	971.07	1,541.85	1,502.24	39.62	38.917	
6,500.00	4,437.64	4,350.00	4,129.35	51.36	23.85	75.63	505.50	971.07	1,601.75	1,561.22	40.53	39.515	
6,600.00	4,437.24	4,350.00	4,129.35	52.71	23.85	75.63	505.50	971.07	1,665.50	1,624.09	41.41	40.218	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 069H - Original Hole - rev0													Offset Site Error: 0.00 ft	
Survey Program: Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned: Distance				Offset Well Error: 0.00 ft	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	139.62	-45.83	38.97	60.16					
100.00	100.00	100.00	100.00	0.27	0.27	139.62	-45.83	38.97	60.16	59.61	0.55	109.690		
200.00	200.00	200.00	200.00	0.63	0.63	139.62	-45.83	38.97	60.16	58.90	1.27	47.543		
300.00	300.00	300.00	300.00	0.99	0.99	139.62	-45.83	38.97	60.16	58.18	1.98	30.348		
400.00	400.00	400.00	400.00	1.35	1.35	139.62	-45.83	38.97	60.16	57.46	2.70	22.288		
500.00	500.00	500.00	500.00	1.71	1.71	139.62	-45.83	38.97	60.16	56.74	3.42	17.610 CC		
600.00	599.95	599.69	599.64	2.07	2.06	103.90	-44.35	41.11	61.05	56.92	4.13	14.791		
700.00	699.63	699.33	698.97	2.43	2.42	103.68	-39.90	47.50	63.70	58.86	4.84	13.151		
800.00	798.77	798.88	797.66	2.80	2.79	103.33	-32.50	58.13	68.11	62.53	5.59	12.192		
900.00	897.08	898.30	895.42	3.19	3.19	102.91	-22.20	72.94	74.27	67.90	6.38	11.646		
1,000.00	994.31	997.53	991.93	3.63	3.62	102.43	-9.03	91.87	82.16	74.93	7.24	11.352		
1,100.00	1,090.18	1,096.56	1,086.90	4.11	4.10	101.94	6.94	114.84	91.76	83.57	8.19	11.205		
1,200.00	1,184.43	1,195.33	1,180.07	4.64	4.64	101.45	25.65	141.74	103.03	93.78	9.25	11.138		
1,300.00	1,276.81	1,293.81	1,271.15	5.24	5.24	100.95	47.02	172.46	115.95	105.51	10.44	11.109		
1,400.00	1,367.06	1,391.98	1,359.91	5.91	5.92	100.47	70.96	206.89	130.47	118.70	11.76	11.091		
1,500.00	1,454.93	1,489.82	1,446.10	6.66	6.68	99.99	97.38	244.87	146.54	133.30	13.24	11.071		
1,600.00	1,540.18	1,587.30	1,529.51	7.48	7.51	99.52	126.18	286.27	164.12	149.26	14.86	11.042		
1,700.00	1,622.75	1,684.42	1,609.94	8.38	8.44	99.16	157.25	330.93	183.12	166.48	16.64	11.004		
1,800.00	1,704.66	1,781.62	1,687.78	9.31	9.44	98.19	190.49	378.73	202.89	184.36	18.53	10.951		
1,900.00	1,786.57	1,879.53	1,765.57	10.27	10.49	97.12	224.43	427.53	222.86	202.37	20.48	10.879		
2,000.00	1,868.47	1,977.44	1,843.37	11.24	11.57	96.23	258.38	476.33	242.89	220.42	22.47	10.808		
2,100.00	1,950.38	2,075.35	1,921.17	12.22	12.66	95.47	292.32	525.13	262.97	238.49	24.49	10.740		
2,200.00	2,032.29	2,173.26	1,998.97	13.21	13.76	94.82	326.27	573.93	283.09	256.57	26.52	10.676		
2,300.00	2,114.19	2,271.16	2,076.76	14.21	14.87	94.26	360.21	622.73	303.24	274.68	28.56	10.617		
2,400.00	2,196.10	2,369.07	2,154.56	15.21	15.98	93.76	394.15	671.53	323.41	292.80	30.61	10.564		
2,500.00	2,278.01	2,466.98	2,232.36	16.22	17.10	93.33	428.10	720.34	343.61	310.93	32.68	10.515		
2,600.00	2,359.91	2,564.89	2,310.15	17.23	18.23	92.94	462.04	769.14	363.82	329.07	34.75	10.470		
2,700.00	2,441.82	2,662.80	2,387.95	18.24	19.36	92.59	495.98	817.94	384.04	347.22	36.82	10.430		
2,800.00	2,523.73	2,760.71	2,465.75	19.25	20.50	92.28	529.93	866.74	404.28	365.38	38.90	10.392		
2,900.00	2,605.63	2,858.61	2,543.54	20.27	21.63	92.00	563.87	915.54	424.53	383.54	40.99	10.358		
3,000.00	2,687.54	2,956.52	2,621.34	21.29	22.77	91.75	597.82	964.34	444.78	401.71	43.07	10.326		
3,100.00	2,769.45	3,054.43	2,699.14	22.31	23.91	91.51	631.76	1,013.14	465.05	419.88	45.16	10.297		
3,200.00	2,851.35	3,152.34	2,776.93	23.33	25.05	91.30	665.70	1,061.94	485.32	438.06	47.26	10.270		
3,300.00	2,933.26	3,250.25	2,854.73	24.36	26.20	91.10	699.65	1,110.74	505.60	456.25	49.35	10.245		
3,400.00	3,015.17	3,348.16	2,932.53	25.38	27.34	90.92	733.59	1,159.54	525.88	474.43	51.45	10.222		
3,500.00	3,097.07	3,446.07	3,010.32	26.41	28.49	90.75	767.54	1,208.34	546.17	492.62	53.55	10.200		
3,600.00	3,178.98	3,543.97	3,088.12	27.43	29.64	90.59	801.48	1,257.14	566.46	510.81	55.64	10.180		
3,700.00	3,260.89	3,641.88	3,165.92	28.46	30.79	90.45	835.42	1,305.95	586.75	529.01	57.75	10.161		
3,800.00	3,342.80	3,739.79	3,243.71	29.49	31.93	90.31	869.37	1,354.75	607.05	547.20	59.85	10.143		
3,900.00	3,424.70	3,837.70	3,321.51	30.52	33.08	90.18	903.31	1,403.55	627.35	565.40	61.95	10.127		
4,000.00	3,506.61	3,935.61	3,399.31	31.55	34.23	90.07	937.26	1,452.35	647.66	583.60	64.05	10.111		
4,100.00	3,588.52	4,033.52	3,477.10	32.58	35.39	89.95	971.20	1,501.15	667.96	601.81	66.16	10.097		
4,200.00	3,670.42	4,131.42	3,554.90	33.61	36.54	89.85	1,005.14	1,549.95	688.27	620.01	68.26	10.083		
4,300.00	3,752.33	4,229.33	3,632.70	34.64	37.69	89.75	1,039.09	1,598.75	708.58	638.22	70.37	10.070		
4,400.00	3,834.24	4,327.24	3,710.50	35.67	38.84	89.65	1,073.03	1,647.55	715.56	697.67	71.89	39.998		
4,500.00	3,916.24	4,409.24	3,792.40	36.70	40.00	89.54	1,106.97	1,696.35	729.67	715.56	73.00	39.998		
4,600.00	3,998.15	4,491.15	3,874.30	37.73	41.16	89.44	1,140.90	1,745.15	743.77	733.77	74.11	39.998		
4,700.00	4,079.96	4,572.96	3,956.20	38.76	42.32	89.34	1,174.84	1,793.95	761.87	751.87	75.22	39.998		
4,800.00	4,161.87	4,654.87	4,038.10	39.79	43.48	89.24	1,208.78	1,842.75	779.97	769.97	76.33	39.998		
4,900.00	4,243.78	4,736.78	4,119.99	40.82	44.64	89.14	1,242.71	1,891.55	798.07	788.07	77.44	39.998		
5,000.00	4,325.69	4,818.69	4,201.89	41.85	45.80	89.04	1,276.65	1,940.35	816.17	796.17	78.55	39.998		
5,100.00	4,407.60	4,900.60	4,283.79	42.88	46.96	88.94	1,310.59	1,989.15	834.27	814.27	79.66	39.998		
5,200.00	4,489.51	4,982.51	4,365.69	43.91	48.12	88.84	1,344.53	2,037.95	852.37	832.37	80.77	39.998		
5,300.00	4,571.42	5,064.42	4,447.59	44.94	49.28	88.74	1,378.47	2,086.75	870.47	850.47	81.88	39.998		
5,400.00	4,653.33	5,146.33	4,529.49	45.97	50.44	88.64	1,412.41	2,135.55	888.57	868.57	82.99	39.998		
5,500.00	4,735.24	5,228.24	4,611.39	46.99	51.60	88.54	1,446.35	2,184.35	906.67	886.67	84.10	39.998		
5,600.00	4,817.15	5,310.15	4,693.29	48.02	52.76	88.44	1,480.29	2,233.15	924.77	904.77	85.21	39.998		
5,700.00	4,899.06	5,392.06	4,775.19	49.05	53.92	88.34	1,514.23	2,281.95	942.87	922.87	86.32	39.998		
5,800.00	4,980.97	5,473.97	4,857.09	50.08	55.08	88.24	1,548.17	2,330.75	960.97	940.97	87.43	39.998		
5,900.00	5,062.88	5,555.88	4,938.99	51.11	56.24	88.14	1,582.11	2,379.55	979.07	959.07	88.54	39.998		
6,000.00	5,144.79	5,637.79	5,020.89	52.14	57.40	88.04	1,616.05	2,428.35	997.17	977.17	89.65	39.998		
6,100.00	5,226.70	5,719.70	5,102.79	53.17	58.56	87.94	1,650.00	2,477.15	1,015.27	995.27	90.76	39.998		
6,200.00	5,308.61	5,801.61	5,184.69	54.20	59.72	87.84	1,683.94	2,525.95	1,033.37	1,013.37	91.87	39.998		
6,300.00	5,390.52	5,883.52	5,266.59	55.23	60.88	87.74	1,717.88	2,574.75	1,051.47	1,031.47	92.98	39.998		
6,400.00	5,472.43	5,965.43	5,348.49	56.26	62.04	87.64	1,751.82	2,623.55	1,069.57	1,049.57	94.09	39.998		
6,500.00	5,554.34	6,047.34	5,430.39	57.29	63.20	87.54	1,785.76	2,672.35	1,087.67	1,067.67	95.20	39.998		
6,600.00	5,636.25	6,129.25	5,512.29	58.32	64.36	87.44	1,819.70	2,721.15	1,105.77	1,085.77	96.31	39.998		
6,700.00	5,718.16	6,211.16	5,594.19	59.35	65.52	87.34	1,853.64	2,770.00	1,123.87	1,103.87	97.42	39.998		
6,800.00	5,800.07	6,293.07	5,676.09	60.38	66.68	87.24	1,887.8							



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 069H - 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
5,200.00	4,398.07	5,287.34	4,400.96	41.67	44.37	-90.20	1,594.26	1,635.70	62.71	29.32	33.38	1.878	Level 3<2.00
5,215.40	4,403.67	5,275.58	4,396.44	41.71	44.37	-82.81	1,586.92	1,643.71	61.82	22.84	38.98	1.586	Level 3<2.00, ES, SF
5,300.00	4,428.13	5,212.88	4,369.43	41.98	44.38	-46.69	1,546.97	1,683.73	84.02	34.26	49.76	1.689	Level 3<2.00
5,400.00	4,441.31	5,142.02	4,333.25	42.37	44.35	-22.62	1,500.52	1,723.08	132.37	85.42	46.95	2.820	
5,500.00	4,441.60	5,076.49	4,294.93	42.84	44.29	-10.38	1,456.93	1,753.41	186.73	136.47	50.26	3.715	
5,600.00	4,441.20	5,020.69	4,259.00	43.34	44.20	-2.44	1,419.76	1,774.35	251.20	195.43	55.76	4.505	
5,700.00	4,440.80	4,973.23	4,226.32	43.89	44.09	3.35	1,388.39	1,788.46	322.80	261.95	60.85	5.305	
5,800.00	4,440.41	4,932.66	4,197.01	44.47	43.97	6.66	1,361.92	1,797.74	399.41	334.51	64.91	6.154	
5,900.00	4,440.01	4,900.00	4,172.61	45.16	43.87	8.34	1,340.95	1,803.32	479.95	411.74	68.21	7.037	
6,000.00	4,439.62	4,868.73	4,148.65	45.94	43.74	9.82	1,321.22	1,807.06	563.58	493.26	70.32	8.015	
6,100.00	4,439.22	4,850.00	4,134.05	46.83	43.66	10.66	1,309.59	1,808.55	649.75	577.09	72.66	8.942	
6,200.00	4,438.82	4,821.54	4,111.54	47.82	43.52	11.87	1,292.21	1,809.72	737.78	664.26	73.52	10.035	
6,300.00	4,438.43	4,800.00	4,094.28	48.91	43.42	12.73	1,279.32	1,809.73	827.49	753.01	74.48	11.110	
6,400.00	4,438.03	4,800.00	4,094.28	50.09	43.42	12.73	1,279.32	1,809.73	918.78	842.49	76.28	12.044	
6,500.00	4,437.64	4,770.94	4,070.74	51.36	43.25	13.83	1,262.33	1,808.55	1,010.62	934.39	76.23	13.258	
6,600.00	4,437.24	4,750.00	4,053.62	52.71	43.12	14.58	1,250.39	1,806.86	1,103.72	1,027.25	76.46	14.435	
6,700.00	4,436.85	4,750.00	4,053.62	54.14	43.12	14.58	1,250.39	1,806.86	1,197.45	1,119.99	77.45	15.460	
6,800.00	4,436.45	4,750.00	4,053.62	55.64	43.12	14.58	1,250.39	1,806.86	1,292.12	1,213.88	78.24	16.515	
6,900.00	4,436.05	4,726.03	4,033.91	57.20	42.96	15.41	1,237.06	1,804.05	1,386.86	1,308.84	78.02	17.775	
7,000.00	4,435.66	4,700.00	4,012.38	58.82	42.78	16.26	1,223.02	1,799.96	1,482.68	1,404.98	77.71	19.081	
7,100.00	4,435.26	4,700.00	4,012.38	60.49	42.78	16.26	1,223.02	1,799.96	1,578.32	1,500.09	78.24	20.174	
7,200.00	4,434.87	4,700.00	4,012.38	62.22	42.78	16.26	1,223.02	1,799.96	1,674.47	1,595.79	78.68	21.282	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 073H - 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)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	139.62	-30.55	25.98	40.11				
100.00	100.00	100.00	100.00	0.27	0.27	139.62	-30.55	25.98	40.11	39.56	0.55	73.127	
200.00	200.00	200.00	200.00	0.63	0.63	139.62	-30.55	25.98	40.11	38.84	1.27	31.695	
300.00	300.00	300.00	300.00	0.99	0.99	139.62	-30.55	25.98	40.11	38.12	1.98	20.232	
400.00	400.00	400.00	400.00	1.35	1.35	139.62	-30.55	25.98	40.11	37.41	2.70	14.858	
500.00	500.00	500.00	500.00	1.71	1.71	139.62	-30.55	25.98	40.11	36.69	3.42	11.740	CC
600.00	599.95	599.95	599.95	2.07	2.07	107.53	-30.55	25.98	40.82	36.69	4.13	9.880	ES
700.00	699.63	699.63	699.63	2.43	2.42	117.25	-30.55	25.98	43.83	38.98	4.85	9.036	SF
800.00	798.77	798.77	798.77	2.80	2.78	130.12	-30.55	25.98	51.16	45.58	5.58	9.170	
900.00	897.08	897.08	897.08	3.19	3.13	142.27	-30.55	25.98	64.49	58.18	6.31	10.216	
1,000.00	994.31	994.31	994.31	3.63	3.48	151.68	-30.55	25.98	84.29	77.25	7.04	11.967	
1,100.00	1,090.18	1,089.59	1,089.55	4.11	3.82	159.45	-30.22	23.91	110.50	102.74	7.76	14.242	
1,200.00	1,184.43	1,181.40	1,181.13	4.64	4.14	166.49	-29.19	17.48	143.85	135.40	8.45	17.022	
1,300.00	1,276.81	1,268.90	1,268.01	5.24	4.45	172.35	-27.55	7.32	184.77	175.64	9.12	20.255	
1,400.00	1,367.06	1,351.43	1,349.45	5.91	4.76	177.10	-25.43	-5.85	233.12	223.35	9.77	23.861	
1,500.00	1,454.93	1,431.94	1,428.41	6.66	5.07	-179.03	-22.94	-21.35	288.20	277.78	10.42	27.649	
1,600.00	1,540.18	1,510.91	1,505.83	7.48	5.39	-176.22	-20.46	-36.75	348.32	337.23	11.09	31.417	
1,700.00	1,622.75	1,586.88	1,580.30	8.38	5.71	-174.24	-18.07	-51.57	412.64	400.89	11.75	35.110	
1,800.00	1,704.66	1,662.12	1,654.05	9.31	6.02	-172.90	-15.71	-66.24	478.04	465.64	12.40	38.538	
1,900.00	1,786.57	1,737.35	1,727.81	10.27	6.35	-171.88	-13.35	-80.91	543.56	530.49	13.07	41.586	
2,000.00	1,868.47	1,812.59	1,801.56	11.24	6.67	-171.08	-10.99	-95.59	609.15	595.40	13.75	44.302	
2,100.00	1,950.38	1,887.83	1,875.32	12.22	7.00	-170.43	-8.63	-110.26	674.80	660.36	14.44	46.729	
2,200.00	2,032.29	1,963.06	1,949.07	13.21	7.34	-169.90	-6.27	-124.93	740.49	725.34	15.14	48.906	
2,300.00	2,114.19	2,038.30	2,022.83	14.21	7.68	-169.46	-3.91	-139.60	806.20	790.35	15.85	50.865	
2,400.00	2,196.10	2,113.54	2,096.58	15.21	8.02	-169.08	-1.54	-154.28	871.95	855.38	16.57	52.638	
2,500.00	2,278.01	2,188.77	2,170.33	16.22	8.36	-168.75	0.82	-168.95	937.71	920.42	17.29	54.244	
2,600.00	2,359.91	2,264.01	2,244.09	17.23	8.70	-168.47	3.18	-183.62	1,003.48	985.47	18.01	55.703	
2,700.00	2,441.82	2,339.25	2,317.84	18.24	9.05	-168.22	5.54	-198.30	1,069.27	1,050.52	18.75	57.036	
2,800.00	2,523.73	2,414.48	2,391.60	19.25	9.40	-168.00	7.90	-212.97	1,135.07	1,115.58	19.48	58.255	
2,900.00	2,605.63	2,489.72	2,465.35	20.27	9.75	-167.81	10.26	-227.64	1,200.87	1,180.65	20.23	59.375	
3,000.00	2,687.54	2,564.96	2,539.10	21.29	10.10	-167.63	12.63	-242.32	1,266.69	1,245.72	20.97	60.406	
3,100.00	2,769.45	2,640.19	2,612.86	22.31	10.45	-167.47	14.99	-256.99	1,332.51	1,310.79	21.72	61.358	
3,200.00	2,851.35	2,715.43	2,686.61	23.33	10.80	-167.33	17.35	-271.66	1,398.33	1,375.86	22.47	62.239	
3,300.00	2,933.26	2,790.67	2,760.37	24.36	11.15	-167.20	19.71	-286.34	1,464.16	1,440.94	23.22	63.056	
3,400.00	3,015.17	2,876.62	2,844.65	25.38	11.55	-167.07	22.39	-302.97	1,529.95	1,505.87	24.08	63.540	
3,500.00	3,097.07	3,028.03	2,994.38	26.41	12.20	-167.14	25.92	-324.94	1,593.46	1,567.97	25.49	62.508	
3,600.00	3,178.98	3,190.65	3,156.61	27.43	12.79	-167.67	27.61	-335.41	1,653.10	1,626.25	26.85	61.563	
3,700.00	3,260.89	3,294.94	3,260.89	28.46	13.12	-168.17	27.69	-335.90	1,709.76	1,682.06	27.70	61.715	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 075H - 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 (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	139.62	-15.28	12.99	20.05				
100.00	100.00	100.00	100.00	0.27	0.27	139.62	-15.28	12.99	20.05	19.51	0.55	36.563	
200.00	200.00	200.00	200.00	0.63	0.63	139.62	-15.28	12.99	20.05	18.79	1.27	15.848	
300.00	300.00	300.00	300.00	0.99	0.99	139.62	-15.28	12.99	20.05	18.07	1.98	10.116	
400.00	400.00	400.00	400.00	1.35	1.35	139.62	-15.28	12.99	20.05	17.35	2.70	7.429	
500.00	500.00	500.00	500.00	1.71	1.71	139.62	-15.28	12.99	20.05	16.64	3.42	5.870 CC, ES	
600.00	599.95	599.95	599.95	2.07	2.07	110.96	-15.28	12.99	20.84	16.71	4.13	5.044	
700.00	699.63	699.63	699.63	2.43	2.42	128.04	-15.28	12.99	24.76	19.91	4.85	5.103	
800.00	798.77	798.77	798.77	2.80	2.78	145.21	-15.28	12.99	34.39	28.82	5.58	6.165	
900.00	897.08	897.08	897.08	3.19	3.13	156.87	-15.28	12.99	50.48	44.18	6.31	8.006	
1,000.00	994.31	994.31	994.31	3.63	3.48	163.93	-15.28	12.99	72.58	65.55	7.03	10.326	
1,100.00	1,090.18	1,095.09	1,095.06	4.11	3.84	168.42	-13.13	13.99	97.98	90.23	7.76	12.631	
1,200.00	1,184.43	1,197.53	1,197.18	4.64	4.21	171.54	-6.03	17.30	123.59	115.11	8.48	14.568	
1,300.00	1,276.81	1,301.44	1,300.19	5.24	4.59	174.00	6.24	23.02	149.25	140.04	9.21	16.207	
1,400.00	1,367.06	1,406.85	1,403.78	5.91	4.99	176.11	23.85	31.23	174.87	164.93	9.93	17.603	
1,500.00	1,454.93	1,513.80	1,507.62	6.66	5.42	178.00	46.99	42.01	200.38	189.72	10.66	18.794	
1,600.00	1,540.18	1,622.32	1,611.37	7.48	5.90	179.77	75.81	55.44	225.72	214.32	11.40	19.806	
1,700.00	1,622.75	1,724.99	1,707.95	8.38	6.41	-178.69	107.39	70.15	251.32	239.13	12.19	20.622	
1,800.00	1,704.66	1,821.34	1,798.35	9.31	6.91	-177.49	137.57	84.22	277.56	264.54	13.02	21.315	
1,900.00	1,786.57	1,917.69	1,888.76	10.27	7.43	-176.50	167.76	98.29	303.91	290.03	13.88	21.899	
2,000.00	1,868.47	2,014.03	1,979.17	11.24	7.97	-175.67	197.95	112.35	330.32	315.57	14.75	22.395	
2,100.00	1,950.38	2,110.38	2,069.58	12.22	8.52	-174.96	228.13	126.42	356.79	341.15	15.64	22.817	
2,200.00	2,032.29	2,206.73	2,159.98	13.21	9.08	-174.35	258.32	140.49	383.30	366.76	16.54	23.179	
2,300.00	2,114.19	2,303.07	2,250.39	14.21	9.65	-173.82	288.51	154.55	409.85	392.40	17.45	23.490	
2,400.00	2,196.10	2,399.42	2,340.80	15.21	10.23	-173.36	318.70	168.62	436.42	418.05	18.37	23.759	
2,500.00	2,278.01	2,495.77	2,431.21	16.22	10.82	-172.94	348.88	182.69	463.02	443.72	19.30	23.993	
2,600.00	2,359.91	2,592.11	2,521.61	17.23	11.41	-172.58	379.07	196.76	489.64	469.41	20.23	24.198	
2,700.00	2,441.82	2,688.46	2,612.02	18.24	12.01	-172.25	409.26	210.82	516.28	495.10	21.18	24.378	
2,800.00	2,523.73	2,784.81	2,702.43	19.25	12.61	-171.95	439.45	224.89	542.93	520.80	22.13	24.538	
2,900.00	2,605.63	2,881.15	2,792.84	20.27	13.21	-171.68	469.63	238.96	569.59	546.51	23.08	24.679	
3,000.00	2,687.54	2,977.50	2,883.24	21.29	13.81	-171.43	499.82	253.02	596.26	572.23	24.04	24.805	
3,100.00	2,769.45	3,073.85	2,973.65	22.31	14.42	-171.21	530.01	267.09	622.95	597.95	25.00	24.917	
3,200.00	2,851.35	3,170.19	3,064.06	23.33	15.03	-171.00	560.20	281.16	649.64	623.67	25.97	25.018	
3,300.00	2,933.26	3,266.54	3,154.47	24.36	15.65	-170.81	590.38	295.23	676.34	649.40	26.94	25.109	
3,400.00	3,015.17	3,362.89	3,244.87	25.38	16.26	-170.63	620.57	309.29	703.04	675.13	27.91	25.191	
3,500.00	3,097.07	3,459.23	3,335.28	26.41	16.88	-170.47	650.76	323.36	729.75	700.87	28.88	25.265	
3,600.00	3,178.98	3,555.58	3,425.69	27.43	17.49	-170.32	680.94	337.43	756.47	726.61	29.86	25.333	
3,700.00	3,260.89	3,651.93	3,516.10	28.46	18.11	-170.18	711.13	351.49	783.19	752.35	30.84	25.395	
3,800.00	3,342.80	3,748.27	3,606.51	29.49	18.73	-170.05	741.32	365.56	809.91	778.09	31.82	25.451	
3,900.00	3,424.70	3,844.62	3,696.91	30.52	19.35	-169.92	771.51	379.63	836.64	803.84	32.81	25.503	
4,000.00	3,506.61	3,940.97	3,787.32	31.55	19.98	-169.81	801.69	393.70	863.37	829.58	33.79	25.551	
4,100.00	3,588.52	4,031.86	3,873.08	32.58	20.54	-170.07	826.25	410.64	890.36	855.71	34.65	25.692	
4,200.00	3,670.42	4,118.42	3,954.79	33.61	21.02	-171.15	839.71	435.56	918.23	882.93	35.30	26.010	
4,300.00	3,752.33	4,200.00	4,030.15	34.64	21.40	-172.86	843.17	466.45	947.71	911.92	35.79	26.477	
4,400.00	3,834.24	4,268.86	4,091.35	35.67	21.67	-174.75	839.05	497.65	979.75	943.59	36.17	27.090	
4,500.00	3,916.24	4,330.81	4,143.75	36.70	21.89	178.04	829.89	529.33	1,015.13	978.65	36.48	27.826	
4,600.00	3,999.21	4,389.80	4,190.73	37.71	22.06	157.77	816.47	562.34	1,051.58	1,014.80	36.78	28.594	
4,700.00	4,081.39	4,450.00	4,235.21	38.65	22.22	138.77	798.20	598.51	1,086.74	1,049.68	37.06	29.320	
4,800.00	4,160.28	4,500.00	4,269.14	39.50	22.33	123.08	779.64	630.18	1,119.13	1,081.91	37.22	30.070	
4,900.00	4,233.50	4,563.98	4,308.14	40.23	22.46	110.77	751.67	672.44	1,147.44	1,109.90	37.54	30.569	
5,000.00	4,298.81	4,621.64	4,338.67	40.83	22.58	101.77	722.67	711.80	1,170.76	1,132.95	37.81	30.964	
5,100.00	4,354.23	4,679.25	4,364.47	41.31	22.69	95.41	690.40	751.90	1,188.33	1,150.17	38.15	31.145	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 075H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,200.00	4,398.07	4,747.83	4,388.67	41.67	22.86	91.17	648.30	800.28	1,199.48	1,160.67	38.81	30.909	
5,300.00	4,428.13	4,844.90	4,409.61	41.98	23.21	89.70	585.57	871.18	1,204.41	1,164.15	40.26	29.915	
5,400.00	4,441.31	4,936.20	4,414.60	42.37	23.74	88.87	525.20	939.37	1,209.27	1,167.32	41.94	28.832	
5,500.00	4,441.60	5,000.00	4,414.29	42.84	24.22	88.70	482.19	986.49	1,214.77	1,171.55	43.22	28.107	
5,600.00	4,441.20	5,076.47	4,413.92	43.34	24.90	88.71	429.28	1,041.70	1,219.31	1,174.28	45.03	27.080	
5,700.00	4,440.80	5,166.90	4,413.48	43.89	25.86	88.72	365.40	1,105.70	1,222.26	1,174.72	47.54	25.712	
5,800.00	4,440.41	5,266.90	4,413.00	44.47	27.09	88.72	294.69	1,176.41	1,222.43	1,172.26	50.17	24.364	
5,900.00	4,440.01	5,366.90	4,412.52	45.16	28.50	88.71	223.98	1,247.12	1,222.29	1,168.92	53.37	22.902	
6,000.00	4,439.62	5,466.90	4,412.03	45.94	30.04	88.71	153.27	1,317.83	1,222.15	1,165.44	56.71	21.551	
6,100.00	4,439.22	5,566.90	4,411.55	46.83	31.69	88.70	82.56	1,388.53	1,222.02	1,161.81	60.20	20.298	
6,200.00	4,438.82	5,666.90	4,411.07	47.82	33.42	88.70	11.85	1,459.24	1,221.88	1,158.04	63.83	19.142	
6,300.00	4,438.43	5,766.90	4,410.58	48.91	35.22	88.69	-58.86	1,529.95	1,221.74	1,154.16	67.58	18.079	
6,400.00	4,438.03	5,866.90	4,410.10	50.09	37.09	88.69	-129.57	1,600.66	1,221.60	1,150.18	71.42	17.105	
6,500.00	4,437.64	5,966.90	4,409.62	51.36	38.99	88.69	-200.28	1,671.37	1,221.46	1,146.12	75.34	16.213	
6,600.00	4,437.24	6,066.90	4,409.13	52.71	40.95	88.68	-270.99	1,742.08	1,221.32	1,141.99	79.33	15.395	
6,700.00	4,436.85	6,166.90	4,408.65	54.14	42.93	88.68	-341.70	1,812.79	1,221.18	1,137.80	83.38	14.645	
6,800.00	4,436.45	6,266.90	4,408.17	55.64	44.95	88.67	-412.41	1,883.50	1,221.04	1,133.56	87.49	13.956	
6,900.00	4,436.05	6,366.90	4,407.68	57.20	46.99	88.67	-483.12	1,954.21	1,220.91	1,129.27	91.64	13.323	
7,000.00	4,435.66	6,466.90	4,407.20	58.82	49.05	88.66	-553.83	2,024.92	1,220.77	1,124.94	95.83	12.739	
7,100.00	4,435.26	6,566.90	4,406.72	60.49	51.14	88.66	-624.54	2,095.63	1,220.63	1,120.58	100.05	12.200	
7,200.00	4,434.87	6,666.90	4,406.23	62.22	53.24	88.66	-695.25	2,166.34	1,220.49	1,116.18	104.31	11.701	
7,300.00	4,434.47	6,766.90	4,405.75	63.98	55.36	88.65	-765.96	2,237.05	1,220.35	1,111.77	108.59	11.239	
7,400.00	4,434.07	6,866.90	4,405.27	65.78	57.49	88.65	-836.67	2,307.76	1,220.21	1,107.32	112.89	10.809	
7,500.00	4,433.68	6,966.90	4,404.78	67.62	59.63	88.64	-907.38	2,378.47	1,220.07	1,102.86	117.21	10.409	
7,600.00	4,433.28	7,066.90	4,404.30	69.49	61.79	88.64	-978.09	2,449.18	1,219.94	1,098.38	121.56	10.036	
7,700.00	4,432.89	7,166.90	4,403.81	71.39	63.95	88.63	-1,048.80	2,519.89	1,219.80	1,093.88	125.92	9.687	
7,800.00	4,432.49	7,266.89	4,403.33	73.32	66.12	88.63	-1,119.51	2,590.59	1,219.66	1,089.37	130.29	9.361	
7,900.00	4,432.10	7,366.89	4,402.85	75.27	68.30	88.63	-1,190.22	2,661.30	1,219.52	1,084.84	134.68	9.055	
8,000.00	4,431.70	7,466.89	4,402.36	77.24	70.49	88.62	-1,260.93	2,732.01	1,219.38	1,080.30	139.08	8.767	
8,100.00	4,431.30	7,566.89	4,401.88	79.23	72.68	88.62	-1,331.64	2,802.72	1,219.24	1,075.75	143.49	8.497	
8,200.00	4,430.91	7,666.89	4,401.40	81.24	74.88	88.61	-1,402.35	2,873.43	1,219.10	1,071.19	147.91	8.242	
8,300.00	4,430.51	7,766.89	4,400.91	83.27	77.09	88.61	-1,473.06	2,944.14	1,218.97	1,066.62	152.35	8.001	
8,400.00	4,430.12	7,866.89	4,400.43	85.31	79.30	88.60	-1,543.77	3,014.85	1,218.83	1,062.04	156.79	7.774	
8,500.00	4,429.72	7,966.89	4,399.95	87.36	81.51	88.60	-1,614.48	3,085.56	1,218.69	1,057.45	161.23	7.558	
8,600.00	4,429.33	8,066.89	4,399.46	89.43	83.73	88.60	-1,685.19	3,156.27	1,218.55	1,052.86	165.69	7.354	
8,700.00	4,428.93	8,166.89	4,398.98	91.51	85.96	88.59	-1,755.90	3,226.98	1,218.41	1,048.26	170.15	7.161	
8,800.00	4,428.53	8,266.89	4,398.50	93.60	88.18	88.59	-1,826.61	3,297.69	1,218.27	1,043.66	174.62	6.977	
8,900.00	4,428.14	8,366.89	4,398.01	95.70	90.41	88.58	-1,897.32	3,368.40	1,218.13	1,039.04	179.09	6.802	
9,000.00	4,427.74	8,466.89	4,397.53	97.81	92.65	88.58	-1,968.03	3,439.11	1,218.00	1,034.43	183.57	6.635	
9,100.00	4,427.35	8,566.89	4,397.05	99.93	94.88	88.57	-2,038.74	3,509.82	1,217.86	1,029.81	188.05	6.476	
9,200.00	4,426.95	8,666.89	4,396.56	102.05	97.12	88.57	-2,109.45	3,580.53	1,217.72	1,025.18	192.54	6.324	
9,300.00	4,426.55	8,766.89	4,396.08	104.19	99.36	88.57	-2,180.16	3,651.24	1,217.58	1,020.55	197.03	6.180	
9,400.00	4,426.16	8,866.89	4,395.60	106.33	101.61	88.56	-2,250.87	3,721.95	1,217.44	1,015.91	201.53	6.041	
9,500.00	4,425.76	8,966.89	4,395.11	108.48	103.85	88.56	-2,321.58	3,792.65	1,217.30	1,011.28	206.03	5.908	
9,600.00	4,425.37	9,066.89	4,394.63	110.63	106.10	88.55	-2,392.29	3,863.36	1,217.17	1,006.64	210.53	5.781	
9,700.00	4,424.97	9,166.89	4,394.15	112.79	108.35	88.55	-2,463.00	3,934.07	1,217.03	1,001.99	215.03	5.660	
9,800.00	4,424.58	9,266.89	4,393.66	114.95	110.60	88.54	-2,533.71	4,004.78	1,216.89	997.35	219.54	5.543	
9,900.00	4,424.18	9,366.89	4,393.18	117.13	112.86	88.54	-2,604.42	4,075.49	1,216.75	992.70	224.05	5.431	
10,000.00	4,423.78	9,466.89	4,392.70	119.30	115.11	88.54	-2,675.13	4,146.20	1,216.61	988.05	228.57	5.323	
10,100.00	4,423.39	9,566.89	4,392.21	121.48	117.37	88.53	-2,745.84	4,216.91	1,216.47	983.39	233.08	5.219	
10,200.00	4,422.99	9,666.89	4,391.73	123.66	119.63	88.53	-2,816.55	4,287.62	1,216.33	978.73	237.60	5.119	
10,300.00	4,422.60	9,766.89	4,391.25	125.85	121.89	88.52	-2,887.26	4,358.33	1,216.20	974.07	242.12	5.023	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (65, 67, 69, 73, 75 & 77) - Greater Lybrook Unit 075H - 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	
10,400.00	4,422.20	9,866.89	4,390.76	128.05	124.15	88.52	-2,957.98	4,429.04	1,216.06	969.41	246.64	4.930	
10,500.00	4,421.81	9,966.89	4,390.28	130.24	126.41	88.51	-3,028.69	4,499.75	1,215.92	964.75	251.17	4.841	
10,600.00	4,421.41	10,066.89	4,389.80	132.44	128.67	88.51	-3,099.40	4,570.46	1,215.78	960.08	255.70	4.755	
10,700.00	4,421.01	10,166.89	4,389.31	134.64	130.94	88.51	-3,170.11	4,641.17	1,215.64	955.42	260.23	4.672	
10,800.00	4,420.62	10,266.89	4,388.83	136.85	133.20	88.50	-3,240.82	4,711.88	1,215.50	950.75	264.76	4.591	
10,900.00	4,420.22	10,366.89	4,388.35	139.06	135.47	88.50	-3,311.53	4,782.59	1,215.37	946.08	269.29	4.513	
11,000.00	4,419.83	10,466.89	4,387.86	141.27	137.73	88.49	-3,382.24	4,853.30	1,215.23	941.41	273.82	4.438	
11,100.00	4,419.43	10,566.89	4,387.38	143.48	140.00	88.49	-3,452.95	4,924.01	1,215.09	936.74	278.35	4.365	
11,200.00	4,419.03	10,666.89	4,386.90	145.70	142.27	88.48	-3,523.66	4,994.71	1,214.95	932.06	282.89	4.295	
11,300.00	4,418.64	10,766.89	4,386.41	147.92	144.54	88.48	-3,594.37	5,065.42	1,214.81	927.39	287.43	4.227	
11,400.00	4,418.24	10,866.89	4,385.93	150.14	146.81	88.48	-3,665.08	5,136.13	1,214.67	922.71	291.96	4.160	
11,500.00	4,417.85	10,966.89	4,385.45	152.36	149.08	88.47	-3,735.79	5,206.84	1,214.54	918.03	296.50	4.096	
11,600.00	4,417.45	11,066.89	4,384.96	154.59	151.35	88.47	-3,806.50	5,277.55	1,214.40	913.36	301.04	4.034	
11,700.00	4,417.06	11,166.89	4,384.48	156.81	153.62	88.46	-3,877.21	5,348.26	1,214.26	908.68	305.58	3.974	
11,800.00	4,416.66	11,266.89	4,384.00	159.04	155.90	88.46	-3,947.92	5,418.97	1,214.12	904.00	310.12	3.915	
11,900.00	4,416.26	11,366.89	4,383.51	161.27	158.17	88.45	-4,018.63	5,489.68	1,213.98	899.32	314.67	3.858	
12,000.00	4,415.87	11,466.89	4,383.03	163.51	160.45	88.45	-4,089.34	5,560.39	1,213.84	894.63	319.21	3.803	
12,100.00	4,415.47	11,566.89	4,382.54	165.74	162.72	88.45	-4,160.05	5,631.10	1,213.71	889.95	323.75	3.749	
12,200.00	4,415.08	11,666.89	4,382.06	167.98	165.00	88.44	-4,230.76	5,701.81	1,213.57	885.27	328.30	3.697	
12,300.00	4,414.68	11,766.89	4,381.58	170.22	167.27	88.44	-4,301.47	5,772.52	1,213.43	880.58	332.85	3.646	
12,400.00	4,414.28	11,866.89	4,381.09	172.46	169.55	88.43	-4,372.18	5,843.23	1,213.29	875.90	337.39	3.596	
12,500.00	4,413.89	11,966.89	4,380.61	174.70	171.82	88.43	-4,442.89	5,913.94	1,213.15	871.21	341.94	3.548	
12,600.00	4,413.49	12,066.89	4,380.13	176.94	174.10	88.42	-4,513.60	5,984.65	1,213.02	866.53	346.49	3.501	
12,700.00	4,413.10	12,166.89	4,379.64	179.18	176.38	88.42	-4,584.31	6,055.36	1,212.88	861.84	351.04	3.455	
12,800.00	4,412.70	12,266.89	4,379.16	181.43	178.66	88.42	-4,655.02	6,126.07	1,212.74	857.15	355.58	3.411	
12,900.00	4,412.31	12,366.89	4,378.68	183.67	180.93	88.41	-4,725.73	6,196.77	1,212.60	852.47	360.13	3.367	
13,000.00	4,411.91	12,466.89	4,378.19	185.92	183.21	88.41	-4,796.44	6,267.48	1,212.46	847.78	364.68	3.325	
13,100.00	4,411.51	12,566.89	4,377.71	188.17	185.49	88.40	-4,867.15	6,338.19	1,212.32	843.09	369.23	3.283	
13,200.00	4,411.12	12,666.89	4,377.23	190.42	187.77	88.40	-4,937.86	6,408.90	1,212.19	838.40	373.78	3.243	
13,300.00	4,410.72	12,766.89	4,376.74	192.67	190.05	88.39	-5,008.57	6,479.61	1,212.05	833.71	378.34	3.204	
13,400.00	4,410.33	12,866.89	4,376.26	194.92	192.33	88.39	-5,079.28	6,550.32	1,211.91	829.02	382.89	3.165	
13,500.00	4,409.93	12,966.89	4,375.78	197.17	194.61	88.39	-5,149.99	6,621.03	1,211.77	824.33	387.44	3.128	
13,600.00	4,409.54	13,066.89	4,375.29	199.42	196.89	88.38	-5,220.70	6,691.74	1,211.63	819.64	391.99	3.091	
13,700.00	4,409.14	13,166.89	4,374.81	201.68	199.18	88.38	-5,291.41	6,762.45	1,211.49	814.95	396.54	3.055	
13,800.00	4,408.74	13,266.89	4,374.33	203.93	201.46	88.37	-5,362.12	6,833.16	1,211.36	810.26	401.10	3.020	
13,900.00	4,408.35	13,366.89	4,373.84	206.19	203.74	88.37	-5,432.83	6,903.87	1,211.22	805.57	405.65	2.986	
14,000.00	4,407.95	13,466.89	4,373.36	208.45	206.02	88.36	-5,503.54	6,974.58	1,211.08	800.88	410.20	2.952	
14,100.00	4,407.56	13,566.89	4,372.88	210.70	208.30	88.36	-5,574.25	7,045.29	1,210.94	796.18	414.76	2.920	
14,200.00	4,407.16	13,666.89	4,372.39	212.96	210.59	88.35	-5,644.96	7,116.00	1,210.80	791.49	419.31	2.888	
14,300.00	4,406.76	13,766.89	4,371.91	215.22	212.87	88.35	-5,715.67	7,186.71	1,210.67	786.80	423.87	2.856	
14,400.00	4,406.37	13,866.89	4,371.43	217.48	215.15	88.35	-5,786.38	7,257.42	1,210.53	782.11	428.42	2.826	
14,500.00	4,405.97	13,966.89	4,370.94	219.74	217.43	88.34	-5,857.09	7,328.13	1,210.39	777.41	432.98	2.796	
14,600.00	4,405.58	14,066.89	4,370.46	222.00	219.72	88.34	-5,927.80	7,398.83	1,210.25	772.72	437.53	2.766	
14,700.00	4,405.18	14,166.89	4,369.98	224.26	222.00	88.33	-5,998.51	7,469.54	1,210.11	768.03	442.09	2.737	
14,800.00	4,404.79	14,266.89	4,369.49	226.53	224.29	88.33	-6,069.22	7,540.25	1,209.98	763.33	446.64	2.709	
14,900.00	4,404.39	14,366.89	4,369.01	228.79	226.57	88.32	-6,139.93	7,610.96	1,209.84	758.64	451.20	2.681	
15,000.00	4,403.99	14,466.89	4,368.53	231.05	228.85	88.32	-6,210.64	7,681.67	1,209.70	753.95	455.75	2.654	
15,100.00	4,403.60	14,566.89	4,368.04	233.32	231.14	88.32	-6,281.35	7,752.38	1,209.56	749.25	460.31	2.628	
15,200.00	4,403.20	14,666.89	4,367.56	235.58	233.42	88.31	-6,352.06	7,823.09	1,209.42	744.56	464.86	2.602	
15,251.23	4,403.00	14,718.12	4,367.31	236.74	234.59	88.31	-6,388.29	7,859.32	1,209.35	742.15	467.20	2.589 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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (79 & 81) - Greater Lybrook Unit 079H - 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	
4,400.00	3,834.24	14,321.59	4,681.57	35.67	217.64	16.46	2,645.34	2,217.04	1,679.37	1,464.64	214.72	7.821	
4,500.00	3,916.24	14,330.78	4,681.62	36.70	217.85	7.58	2,651.85	2,210.56	1,596.57	1,378.36	218.21	7.317	
4,600.00	3,999.21	14,326.99	4,681.60	37.71	217.76	-20.18	2,649.17	2,213.23	1,516.50	1,294.95	221.56	6.845	
4,700.00	4,081.39	14,306.06	4,681.50	38.65	217.28	-43.67	2,634.32	2,227.99	1,441.84	1,217.32	224.52	6.422	
4,800.00	4,160.28	14,268.59	4,681.31	39.50	216.43	-61.49	2,607.74	2,254.39	1,375.15	1,148.22	226.93	6.060	
4,900.00	4,233.50	14,215.74	4,681.05	40.23	215.23	-74.02	2,570.24	2,291.63	1,318.45	1,089.83	228.62	5.767	
5,000.00	4,298.81	14,149.12	4,680.73	40.83	213.71	-82.35	2,522.98	2,338.59	1,273.10	1,043.59	229.51	5.547	
5,100.00	4,354.23	14,070.73	4,680.34	41.31	211.93	-87.55	2,467.37	2,393.83	1,239.76	1,010.11	229.65	5.398	
5,200.00	4,398.07	13,982.98	4,679.91	41.67	209.93	-90.50	2,405.11	2,455.67	1,218.43	989.29	229.15	5.317	
5,300.00	4,428.13	13,888.51	4,679.44	41.98	207.78	-90.93	2,338.09	2,522.25	1,205.87	977.69	228.18	5.285	
5,400.00	4,441.31	13,790.19	4,678.96	42.37	205.54	-91.45	2,268.34	2,591.54	1,194.37	967.45	226.92	5.263	
5,500.00	4,441.60	13,690.73	4,678.47	42.84	203.28	-91.74	2,197.78	2,661.63	1,184.12	958.54	225.58	5.249	
5,600.00	4,441.20	13,590.98	4,677.98	43.34	201.01	-91.73	2,127.01	2,731.93	1,177.22	952.82	224.40	5.246	
5,700.00	4,440.80	13,491.04	4,677.49	43.89	198.73	-91.72	2,056.11	2,802.36	1,173.81	950.43	223.38	5.255	
5,800.00	4,440.41	13,391.04	4,677.00	44.47	196.46	-91.71	1,985.16	2,872.83	1,173.31	950.82	222.49	5.274	
5,900.00	4,440.01	13,291.04	4,676.50	45.16	194.19	-91.71	1,914.22	2,943.31	1,173.12	951.40	221.72	5.291	
6,000.00	4,439.62	13,191.04	4,676.01	45.94	191.91	-91.71	1,843.28	3,013.78	1,172.92	951.87	221.05	5.306	
6,100.00	4,439.22	13,091.04	4,675.52	46.83	189.64	-91.70	1,772.33	3,084.26	1,172.73	952.26	220.46	5.319	
6,200.00	4,438.82	12,991.04	4,675.03	47.82	187.37	-91.70	1,701.39	3,154.73	1,172.53	952.58	219.95	5.331	
6,300.00	4,438.43	12,891.04	4,674.54	48.91	185.09	-91.69	1,630.44	3,225.21	1,172.34	952.83	219.51	5.341	
6,400.00	4,438.03	12,791.04	4,674.04	50.09	182.82	-91.69	1,559.50	3,295.68	1,172.15	953.03	219.11	5.350	
6,500.00	4,437.64	12,691.04	4,673.55	51.36	180.55	-91.68	1,488.55	3,366.15	1,171.95	953.19	218.76	5.357	
6,600.00	4,437.24	12,591.04	4,673.06	52.71	178.28	-91.68	1,417.61	3,436.63	1,171.76	953.30	218.45	5.364	
6,700.00	4,436.85	12,491.04	4,672.57	54.14	176.01	-91.67	1,346.66	3,507.10	1,171.56	953.38	218.18	5.370	
6,800.00	4,436.45	12,391.04	4,672.08	55.64	173.74	-91.67	1,275.72	3,577.58	1,171.37	953.44	217.93	5.375	
6,900.00	4,436.05	12,291.04	4,671.58	57.20	171.47	-91.67	1,204.78	3,648.05	1,171.18	953.46	217.71	5.379	
7,000.00	4,435.66	12,191.05	4,671.09	58.82	169.20	-91.66	1,133.83	3,718.53	1,170.98	953.46	217.52	5.383	
7,100.00	4,435.26	12,091.05	4,670.60	60.49	166.93	-91.66	1,062.89	3,789.00	1,170.79	953.45	217.34	5.387	
7,200.00	4,434.87	11,991.05	4,670.11	62.22	164.67	-91.65	991.94	3,859.47	1,170.59	953.41	217.18	5.390	
7,300.00	4,434.47	11,891.05	4,669.62	63.98	162.40	-91.65	921.00	3,929.95	1,170.40	953.36	217.04	5.393	
7,400.00	4,434.07	11,791.05	4,669.12	65.78	160.13	-91.64	850.05	4,000.42	1,170.21	953.30	216.91	5.395	
7,500.00	4,433.68	11,691.05	4,668.63	67.62	157.87	-91.64	779.11	4,070.90	1,170.01	953.22	216.79	5.397	
7,600.00	4,433.28	11,591.05	4,668.14	69.49	155.60	-91.63	708.17	4,141.37	1,169.82	953.14	216.68	5.399	
7,700.00	4,432.89	11,491.05	4,667.65	71.39	153.34	-91.63	637.22	4,211.84	1,169.62	953.04	216.58	5.400	
7,800.00	4,432.49	11,391.05	4,667.16	73.32	151.08	-91.63	566.28	4,282.32	1,169.43	952.93	216.50	5.402	
7,900.00	4,432.10	11,291.05	4,666.67	75.27	148.81	-91.62	495.33	4,352.79	1,169.24	952.82	216.42	5.403	
8,000.00	4,431.70	11,191.05	4,666.17	77.24	146.55	-91.62	424.39	4,423.27	1,169.04	952.69	216.35	5.403	
8,100.00	4,431.30	11,091.05	4,665.68	79.23	144.29	-91.61	353.44	4,493.74	1,168.85	952.56	216.29	5.404	
8,200.00	4,430.91	10,991.05	4,665.19	81.24	142.03	-91.61	282.50	4,564.22	1,168.65	952.42	216.23	5.405	
8,300.00	4,430.51	10,891.05	4,664.70	83.27	139.77	-91.60	211.56	4,634.69	1,168.46	952.28	216.18	5.405	
8,400.00	4,430.12	10,791.05	4,664.21	85.31	137.52	-91.60	140.61	4,705.16	1,168.27	952.13	216.14	5.405	
8,500.00	4,429.72	10,691.05	4,663.71	87.36	135.26	-91.59	69.67	4,775.64	1,168.07	951.97	216.10	5.405	
8,600.00	4,429.33	10,591.05	4,663.22	89.43	133.01	-91.59	-1.28	4,846.11	1,167.88	951.81	216.07	5.405	
8,700.00	4,428.93	10,491.05	4,662.73	91.51	130.75	-91.59	-72.22	4,916.59	1,167.69	951.64	216.04	5.405	
8,800.00	4,428.53	10,391.05	4,662.24	93.60	128.50	-91.58	-143.17	4,987.06	1,167.49	951.47	216.02	5.405	
8,900.00	4,428.14	10,291.05	4,661.75	95.70	126.25	-91.58	-214.11	5,057.53	1,167.30	951.30	216.00	5.404	
9,000.00	4,427.74	10,191.05	4,661.25	97.81	124.00	-91.57	-285.05	5,128.01	1,167.10	951.12	215.99	5.404	
9,100.00	4,427.35	10,091.05	4,660.76	99.93	121.75	-91.57	-356.00	5,198.48	1,166.91	950.93	215.98	5.403	
9,200.00	4,426.95	9,991.05	4,660.27	102.05	119.50	-91.56	-426.94	5,268.96	1,166.72	950.74	215.97	5.402	
9,300.00	4,426.55	9,891.05	4,659.78	104.19	117.26	-91.56	-497.89	5,339.43	1,166.52	950.55	215.97	5.401	
9,400.00	4,426.16	9,791.05	4,659.29	106.33	115.02	-91.55	-568.83	5,409.91	1,166.33	950.35	215.98	5.400	
9,500.00	4,425.76	9,691.05	4,658.79	108.48	112.77	-91.55	-639.78	5,480.38	1,166.13	950.15	215.98	5.399	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (79 & 81) - Greater Lybrook Unit 079H - 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	
9,600.00	4,425.37	9,591.05	4,658.30	110.63	110.54	-91.55	-710.72	5,550.85	1,165.94	949.95	215.99	5.398	
9,700.00	4,424.97	9,491.05	4,657.81	112.79	108.30	-91.54	-781.67	5,621.33	1,165.75	949.74	216.01	5.397	
9,800.00	4,424.58	9,391.05	4,657.32	114.95	106.06	-91.54	-852.61	5,691.80	1,165.55	949.52	216.03	5.395	
9,900.00	4,424.18	9,291.05	4,656.83	117.13	103.83	-91.53	-923.55	5,762.28	1,165.36	949.31	216.05	5.394	
10,000.00	4,423.78	9,191.05	4,656.33	119.30	101.60	-91.53	-994.50	5,832.75	1,165.17	949.09	216.08	5.392	
10,100.00	4,423.39	9,091.05	4,655.84	121.48	99.38	-91.52	-1,065.44	5,903.23	1,164.97	948.86	216.11	5.391	
10,200.00	4,422.99	8,991.05	4,655.35	123.66	97.15	-91.52	-1,136.39	5,973.70	1,164.78	948.63	216.15	5.389	
10,300.00	4,422.60	8,891.05	4,654.86	125.85	94.93	-91.51	-1,207.33	6,044.17	1,164.58	948.40	216.19	5.387	
10,400.00	4,422.20	8,791.05	4,654.37	128.05	92.72	-91.51	-1,278.28	6,114.65	1,164.39	948.16	216.24	5.385	
10,500.00	4,421.81	8,691.05	4,653.87	130.24	90.50	-91.51	-1,349.22	6,185.12	1,164.20	947.91	216.29	5.383	
10,600.00	4,421.41	8,591.05	4,653.38	132.44	88.29	-91.50	-1,420.16	6,255.60	1,164.00	947.66	216.34	5.380	
10,700.00	4,421.01	8,491.05	4,652.89	134.64	86.09	-91.50	-1,491.11	6,326.07	1,163.81	947.41	216.40	5.378	
10,800.00	4,420.62	8,391.05	4,652.40	136.85	83.89	-91.49	-1,562.05	6,396.54	1,163.62	947.15	216.47	5.375	
10,900.00	4,420.22	8,291.05	4,651.91	139.06	81.69	-91.49	-1,633.00	6,467.02	1,163.42	946.88	216.54	5.373	
11,000.00	4,419.83	8,191.05	4,651.41	141.27	79.50	-91.48	-1,703.94	6,537.49	1,163.23	946.61	216.62	5.370	
11,100.00	4,419.43	8,091.05	4,650.92	143.48	77.32	-91.48	-1,774.89	6,607.97	1,163.04	946.33	216.70	5.367	
11,200.00	4,419.03	7,991.05	4,650.43	145.70	75.14	-91.47	-1,845.83	6,678.44	1,162.84	946.05	216.80	5.364	
11,300.00	4,418.64	7,891.05	4,649.94	147.92	72.97	-91.47	-1,916.77	6,748.92	1,162.65	945.75	216.90	5.360	
11,400.00	4,418.24	7,791.06	4,649.45	150.14	70.80	-91.46	-1,987.72	6,819.39	1,162.45	945.45	217.00	5.357	
11,500.00	4,417.85	7,691.06	4,648.95	152.36	68.65	-91.46	-2,058.66	6,889.86	1,162.26	945.14	217.12	5.353	
11,600.00	4,417.45	7,591.06	4,648.46	154.59	66.50	-91.46	-2,129.61	6,960.34	1,162.07	944.82	217.25	5.349	
11,700.00	4,417.06	7,491.06	4,647.97	156.81	64.37	-91.45	-2,200.55	7,030.81	1,161.87	944.49	217.39	5.345	
11,800.00	4,416.66	7,391.06	4,647.48	159.04	62.24	-91.45	-2,271.50	7,101.29	1,161.68	944.14	217.54	5.340	
11,900.00	4,416.26	7,291.06	4,646.99	161.27	60.13	-91.44	-2,342.44	7,171.76	1,161.49	943.79	217.70	5.335	
12,000.00	4,415.87	7,191.06	4,646.49	163.51	58.03	-91.44	-2,413.39	7,242.24	1,161.29	943.42	217.88	5.330	
12,100.00	4,415.47	7,091.06	4,646.00	165.74	55.95	-91.43	-2,484.33	7,312.71	1,161.10	943.03	218.07	5.324	
12,200.00	4,415.08	6,991.06	4,645.51	167.98	53.88	-91.43	-2,555.27	7,383.18	1,160.91	942.63	218.28	5.318	
12,300.00	4,414.68	6,891.06	4,645.02	170.22	51.83	-91.42	-2,626.22	7,453.66	1,160.71	942.21	218.51	5.312	
12,400.00	4,414.28	6,791.06	4,644.53	172.46	49.80	-91.42	-2,697.16	7,524.13	1,160.52	941.76	218.76	5.305	
12,500.00	4,413.89	6,691.06	4,644.04	174.70	47.80	-91.42	-2,768.11	7,594.61	1,160.33	941.29	219.03	5.298	
12,600.00	4,413.49	6,591.06	4,643.54	176.94	45.82	-91.41	-2,839.05	7,665.08	1,160.13	940.80	219.33	5.289	
12,700.00	4,413.10	6,491.06	4,643.05	179.18	43.88	-91.41	-2,910.00	7,735.55	1,159.94	940.27	219.67	5.280	
12,800.00	4,412.70	6,391.06	4,642.56	181.43	41.97	-91.40	-2,980.94	7,806.03	1,159.74	939.71	220.04	5.271	
12,900.00	4,412.31	6,291.06	4,642.07	183.67	40.10	-91.40	-3,051.88	7,876.50	1,159.55	939.11	220.45	5.260	
13,000.00	4,411.91	6,191.06	4,641.58	185.92	38.27	-91.39	-3,122.83	7,946.98	1,159.36	938.46	220.90	5.248	
13,100.00	4,411.51	6,091.06	4,641.08	188.17	36.50	-91.39	-3,193.77	8,017.45	1,159.16	937.75	221.41	5.235	
13,200.00	4,411.12	5,991.06	4,640.59	190.42	34.79	-91.38	-3,264.72	8,087.93	1,158.97	936.99	221.98	5.221	
13,300.00	4,410.72	5,891.06	4,640.10	192.67	33.15	-91.38	-3,335.66	8,158.40	1,158.78	936.16	222.62	5.205	
13,400.00	4,410.33	5,791.06	4,639.61	194.92	31.59	-91.37	-3,406.61	8,228.87	1,158.58	935.24	223.34	5.188	
13,500.00	4,409.93	5,691.06	4,639.12	197.17	30.13	-91.37	-3,477.55	8,299.35	1,158.39	934.24	224.15	5.168	
13,600.00	4,409.54	5,591.06	4,638.62	199.42	28.78	-91.37	-3,548.49	8,369.82	1,158.20	933.12	225.08	5.146	
13,700.00	4,409.14	5,491.06	4,638.13	201.68	27.55	-91.36	-3,619.44	8,440.30	1,158.00	931.88	226.12	5.121	
13,800.00	4,408.74	5,391.06	4,637.64	203.93	26.47	-91.36	-3,690.38	8,510.77	1,157.81	930.50	227.31	5.093	
13,900.00	4,408.35	5,291.06	4,637.15	206.19	25.55	-91.35	-3,761.33	8,581.25	1,157.62	928.96	228.66	5.063	
14,000.00	4,407.95	5,190.81	4,636.63	208.45	24.80	-91.35	-3,832.45	8,651.90	1,157.42	927.25	230.17	5.029	
14,100.00	4,407.56	5,087.18	4,625.81	210.70	24.20	-90.83	-3,905.47	8,724.43	1,157.04	925.18	231.86	4.990	
14,189.18	4,407.20	5,000.28	4,602.58	212.72	23.83	-89.70	-3,964.81	8,783.38	1,156.76	922.92	233.84	4.947 CC	
14,200.00	4,407.16	4,990.27	4,599.09	212.96	23.80	-89.53	-3,971.47	8,790.00	1,156.77	922.65	234.11	4.941	
14,300.00	4,406.76	4,904.23	4,562.53	215.22	23.58	-87.73	-4,026.66	8,844.82	1,157.72	920.91	236.81	4.889 ES	
14,400.00	4,406.37	4,821.10	4,520.75	217.48	23.47	-85.68	-4,077.64	8,895.47	1,160.87	921.52	239.35	4.850	
14,500.00	4,405.97	4,750.00	4,479.64	219.74	23.45	-83.67	-4,118.76	8,936.32	1,167.15	925.50	241.65	4.830 SF	
14,600.00	4,405.58	4,700.00	4,446.59	222.00	23.47	-82.07	-4,145.36	8,962.74	1,177.77	934.30	243.46	4.838	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (79 & 81) - Greater Lybrook Unit 079H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,700.00	4,405.18	4,650.00	4,410.39	224.26	23.50	-80.32	-4,169.82	8,987.03	1,193.54	949.38	244.16	4.888		
14,800.00	4,404.79	4,610.44	4,379.70	226.53	23.54	-78.86	-4,187.53	9,004.62	1,214.97	971.23	243.75	4.985		
14,900.00	4,404.39	4,576.64	4,352.17	228.79	23.57	-77.55	-4,201.43	9,018.44	1,242.30	1,000.15	242.15	5.130		
15,000.00	4,403.99	4,550.00	4,329.70	231.05	23.59	-76.50	-4,211.57	9,028.51	1,275.53	1,036.04	239.49	5.326		
15,100.00	4,403.60	4,523.19	4,306.43	233.32	23.62	-75.41	-4,221.01	9,037.88	1,314.48	1,078.59	235.89	5.572		
15,200.00	4,403.20	4,500.00	4,285.81	235.58	23.64	-74.46	-4,228.54	9,045.37	1,358.87	1,127.29	231.58	5.868		
15,251.23	4,403.00	4,500.00	4,285.81	236.74	23.64	-74.46	-4,228.54	9,045.37	1,383.66	1,154.48	229.18	6.038		



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Rodeo Unit (500, 501, 503, 504, 506, 508, 509&510) - Rodeo Unit #501H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 438-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Rule Assigned:										Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (ft)		Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
							+N/-S (ft)	+E/-W (ft)					
13,100.00	4,411.51	4,481.59	4,290.15	188.17	24.55	-67.35	-4,547.56	8,796.42	1,719.12	1,638.95	80.17	21.443	
13,200.00	4,411.12	4,505.45	4,312.82	190.42	24.70	-68.74	-4,554.70	8,798.59	1,631.64	1,547.52	84.12	19.396	
13,300.00	4,410.72	4,529.13	4,335.34	192.67	24.85	-70.17	-4,561.64	8,800.85	1,545.27	1,456.64	88.63	17.435	
13,400.00	4,410.33	4,553.79	4,358.83	194.92	25.01	-71.70	-4,568.74	8,803.30	1,460.20	1,366.45	93.75	15.576	
13,500.00	4,409.93	4,580.98	4,384.76	197.17	25.17	-73.45	-4,576.42	8,806.05	1,376.62	1,277.10	99.51	13.833	
13,600.00	4,409.54	4,607.61	4,410.21	199.42	25.34	-75.21	-4,583.81	8,808.78	1,294.81	1,188.67	106.14	12.199	
13,700.00	4,409.14	4,633.71	4,435.17	201.68	25.50	-76.99	-4,590.93	8,811.48	1,215.16	1,101.39	113.77	10.681	
13,800.00	4,408.74	4,658.81	4,459.22	203.93	25.65	-78.74	-4,597.62	8,814.11	1,138.13	1,015.56	122.58	9.285	
13,900.00	4,408.35	4,684.39	4,483.80	206.19	25.79	-80.57	-4,604.14	8,816.83	1,064.34	931.65	132.69	8.021	
14,000.00	4,407.95	4,708.75	4,507.29	208.45	25.93	-82.36	-4,610.07	8,819.42	994.48	850.15	144.33	6.890	
14,100.00	4,407.56	4,730.64	4,528.39	210.70	26.06	-83.98	-4,615.38	8,821.79	929.56	771.94	157.62	5.897	
14,200.00	4,407.16	4,749.11	4,546.16	212.96	26.16	-85.37	-4,619.97	8,823.90	870.72	698.14	172.59	5.045	
14,300.00	4,406.76	4,765.00	4,561.38	215.22	26.26	-86.56	-4,624.09	8,825.85	819.31	630.37	188.94	4.336	
14,400.00	4,406.37	4,788.62	4,583.88	217.48	26.40	-88.34	-4,630.49	8,829.08	776.70	571.17	205.53	3.779	
14,500.00	4,405.97	4,810.81	4,604.86	219.74	26.55	-90.01	-4,636.83	8,832.53	744.33	522.74	221.58	3.359	
14,600.00	4,405.58	4,836.55	4,628.99	222.00	26.72	-91.95	-4,644.57	8,837.08	723.36	488.23	235.14	3.076	
14,700.00	4,405.18	4,868.09	4,658.17	224.26	26.94	-94.30	-4,654.66	8,843.48	714.49	470.21	244.28	2.925	
14,723.07	4,405.09	4,876.33	4,665.73	224.79	27.00	-94.91	-4,657.39	8,845.29	714.17	468.56	245.61	2.908 CC, ES	
14,800.00	4,404.79	4,907.61	4,694.16	226.53	27.24	-97.20	-4,668.18	8,852.64	717.66	469.85	247.81	2.896 SF	
14,900.00	4,404.39	4,961.02	4,741.44	228.79	27.67	-100.99	-4,688.35	8,867.12	731.82	486.11	245.72	2.978	
15,000.00	4,403.99	5,015.98	4,788.06	231.05	28.16	-104.67	-4,711.21	8,885.09	755.51	515.37	240.14	3.146	
15,100.00	4,403.60	5,254.75	4,953.80	233.32	30.89	-117.03	-4,841.30	8,993.04	783.72	557.64	226.09	3.466	
15,200.00	4,403.20	5,495.65	5,028.48	235.58	34.56	-122.40	-5,012.73	9,142.25	794.76	577.48	217.29	3.658	
15,251.23	4,403.00	5,574.03	5,032.87	236.74	35.86	-122.78	-5,069.94	9,195.59	794.97	577.82	217.15	3.661	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6694+23.5 @ 6717.50ft

Offset Depths are relative to Offset Datum

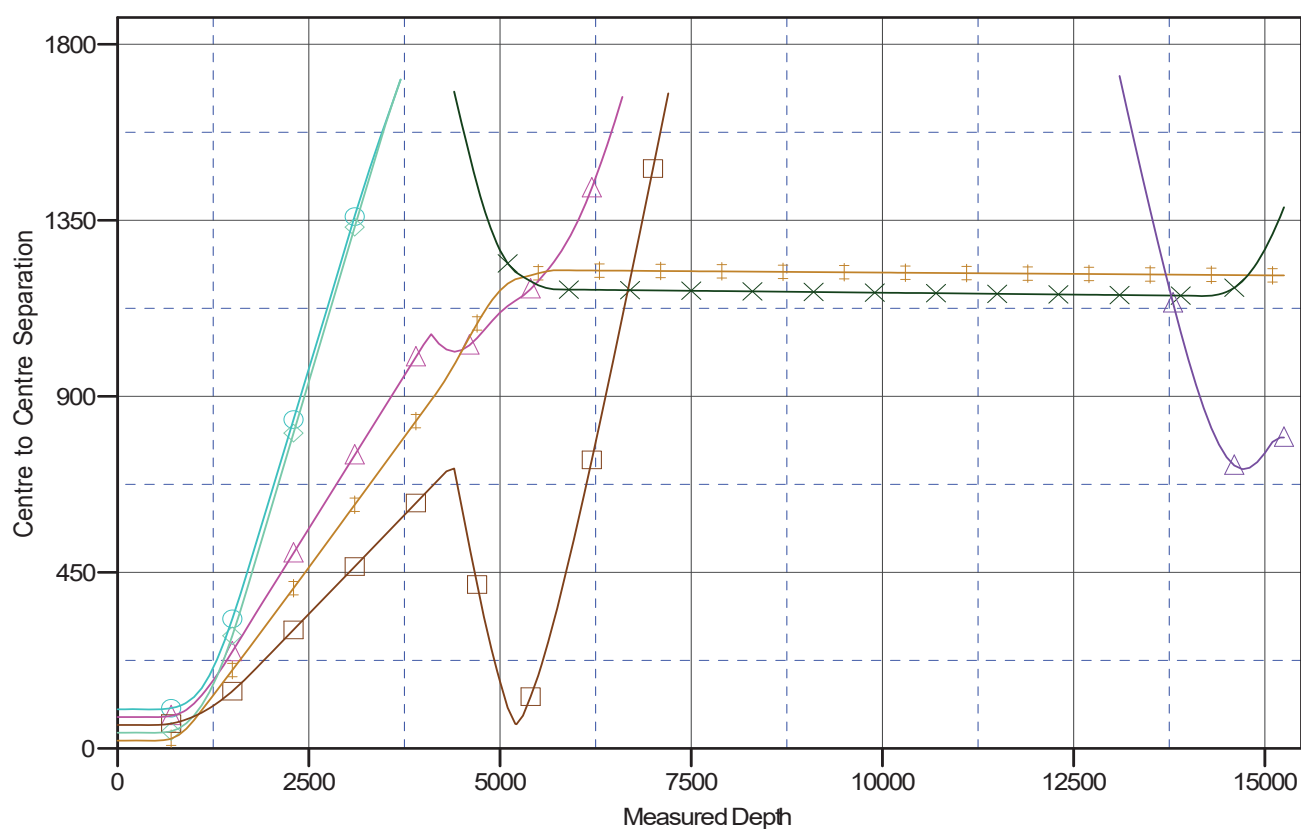
Central Meridian is -107.8333333

Coordinates are relative to: Greater Lybrook Unit 077H

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

Grid Convergence at Surface is: 0.05°

Ladder Plot



LEGEND

GreaterLybrookUnit077HOriginalHole.rev0 V0	GreaterLybrookUnit073HOriginalHole.rev0 V0	Rodeo Unit#501HOriginalHole.SurveysOriginalHole V0
GreaterLybrookUnit075HOriginalHole.rev0 V0	GreaterLybrookUnit069HOriginalHole.rev0 V0	
GreaterLybrookUnit075HOriginalHole.rev0 V0	GreaterLybrookUnit079HOriginalHole.rev0 V0	

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 Greater Lybrook Unit 077H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6694+23.5 @ 6717.50ft
Reference Site:	Greater Lybrook (65, 67, 69, 73, 75 & 77)	MD Reference:	RKB=6694+23.5 @ 6717.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 077H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Mar1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6694+23.5 @ 6717.50ft

Offset Depths are relative to Offset Datum

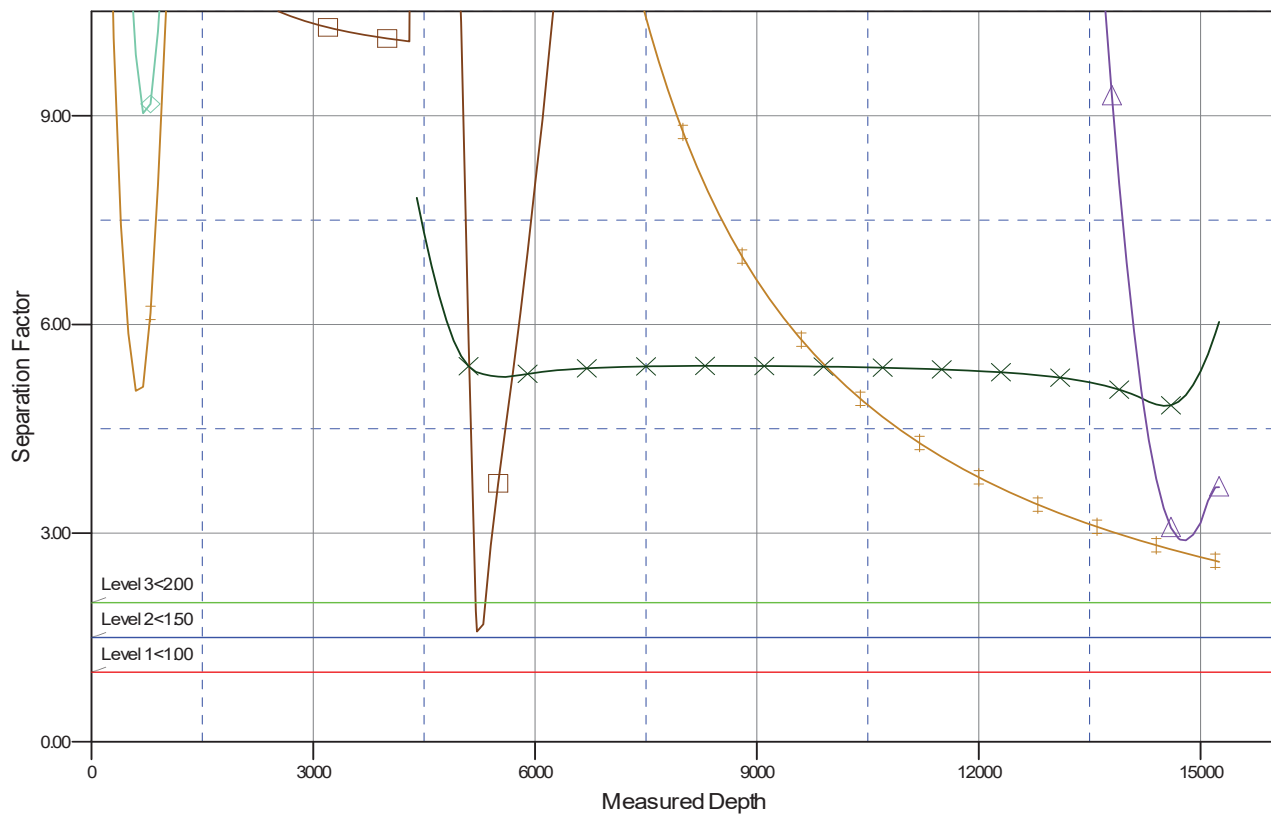
Central Meridian is -107.8333333

Coordinates are relative to: Greater Lybrook Unit 077H

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

Grid Convergence at Surface is: 0.05°

Separation Factor Plot



LEGEND

GreaterLybrookUnit077HOriginalHole.rev0 V0	GreaterLybrookUnit073HOriginalHole.rev0 V0	Rodeo Unit#501HOriginalHole.SurveysOriginalHole V0
GreaterLybrookUnit075HOriginalHole.rev0 V0	GreaterLybrookUnit069HOriginalHole.rev0 V0	
GreaterLybrookUnit075HOriginalHole.rev0 V0	GreaterLybrookUnit079HOriginalHole.rev0 V0	

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



United States Department of the Interior

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



In Reply Refer To:
3162.3-1(NMF0110)

* ENDURING RESOURCES LLC
#077H GREATER LYBROOK UNIT
Lease: NOG13101841 Agreement: NMNM144419X
SH: SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 13, T. 23N., R. 9W.
San Juan County, New Mexico
BH: SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 19, T. 23N., R. 9W.
San Juan County, New Mexico
***Above Data Required on Well Sign**

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

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

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

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

I. GENERAL

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

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

II. REPORTING REQUIREMENTS

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

III. DRILLER'S LOG

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

IV. GAS FLARING

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

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

V. SAFETY

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

VI. CHANGE OF PLANS OR ABANDONMENT

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

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

General Information
Phone: (505) 629-6116

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

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

ACKNOWLEDGMENTS

Action 503761

ACKNOWLEDGMENTS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 503761
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☒	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
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CONDITIONS

Action 503761

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CONDITIONS

Created By	Condition	Condition Date
sford	Cement is required to circulate on both surface and intermediate1 strings of casing.	9/8/2025
sford	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	9/8/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	9/17/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	9/17/2025
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.	9/17/2025
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.	9/17/2025