

Form 3160-3
(October 2024)FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2027UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. 30-045-38509
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

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

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)



Additional Operator Remarks

Location of Well

0. SHL: SESE / 293 FSL / 444 FEL / TWSP: 23N / RANGE: 8W / SECTION: 18 / LAT: 36.220471 / LONG: -107.71568 (TVD: 0 feet, MD: 0 feet)
PPP: NENE / 131 FNL / 243 FEL / TWSP: 23N / RANGE: 8W / SECTION: 19 / LAT: 36.219314 / LONG: -107.715016 (TVD: 4535 feet, MD: 4850 feet)
PPP: SESE / 0 FSL / 546 FEL / TWSP: 23N / RANGE: 9W / SECTION: 12 / LAT: 36.234227 / LONG: -107.733259 (TVD: 4709 feet, MD: 19896 feet)
PPP: SENW / 2676 FSL / 2097 FWL / TWSP: 23N / RANGE: 9W / SECTION: 12 / LAT: 36.241549 / LONG: -107.74222 (TVD: 4709 feet, MD: 19896 feet)
PPP: NENE / 548 FNL / 0 FEL / TWSP: 23N / RANGE: 9W / SECTION: 13 / LAT: 36.232724 / LONG: -107.73142 (TVD: 4709 feet, MD: 19896 feet)
PPP: NESW / 2164 FSL / 2500 FEL / TWSP: 23N / RANGE: 9W / SECTION: 12 / LAT: 36.240156 / LONG: -107.740514 (TVD: 4709 feet, MD: 19896 feet)
PPP: SESE / 0 FSL / 366 FEL / TWSP: 23N / RANGE: 8W / SECTION: 18 / LAT: 36.219669 / LONG: -107.715451 (TVD: 4709 feet, MD: 19896 feet)
BHL: NENE / 231 FNL / 222 FEL / TWSP: 23N / RANGE: 9W / SECTION: 11 / LAT: 36.247993 / LONG: -107.750108 (TVD: 4709 feet, MD: 19896 feet)

BLM Point of Contact

Name: CHRISTOPHER P WENMAN

Title: Natural Resource Specialist

Phone: (505) 564-7727

Email: cwenman@blm.gov

GREATER LYBROOK UNIT #079H

BOTTOM HOLE LOCATION (BHL)
231' FNL 222' FEL
SECTION 11, T23N, R9W

LAST TAKE POINT (LTP)
231' FNL 222' FEL
SECTION 11, T23N, R9W

FIRST TAKE POINT (FTP)
131' FNL 243' FEL
SECTION 19, T23N, R8W

KICK OFF POINT (KOP)
293' FSL 444' FEL
SECTION 18, T23N, R8W

SURFACE LOCATION (SHL)
293' FSL 444' FEL
SECTION 18, T23N, R8W

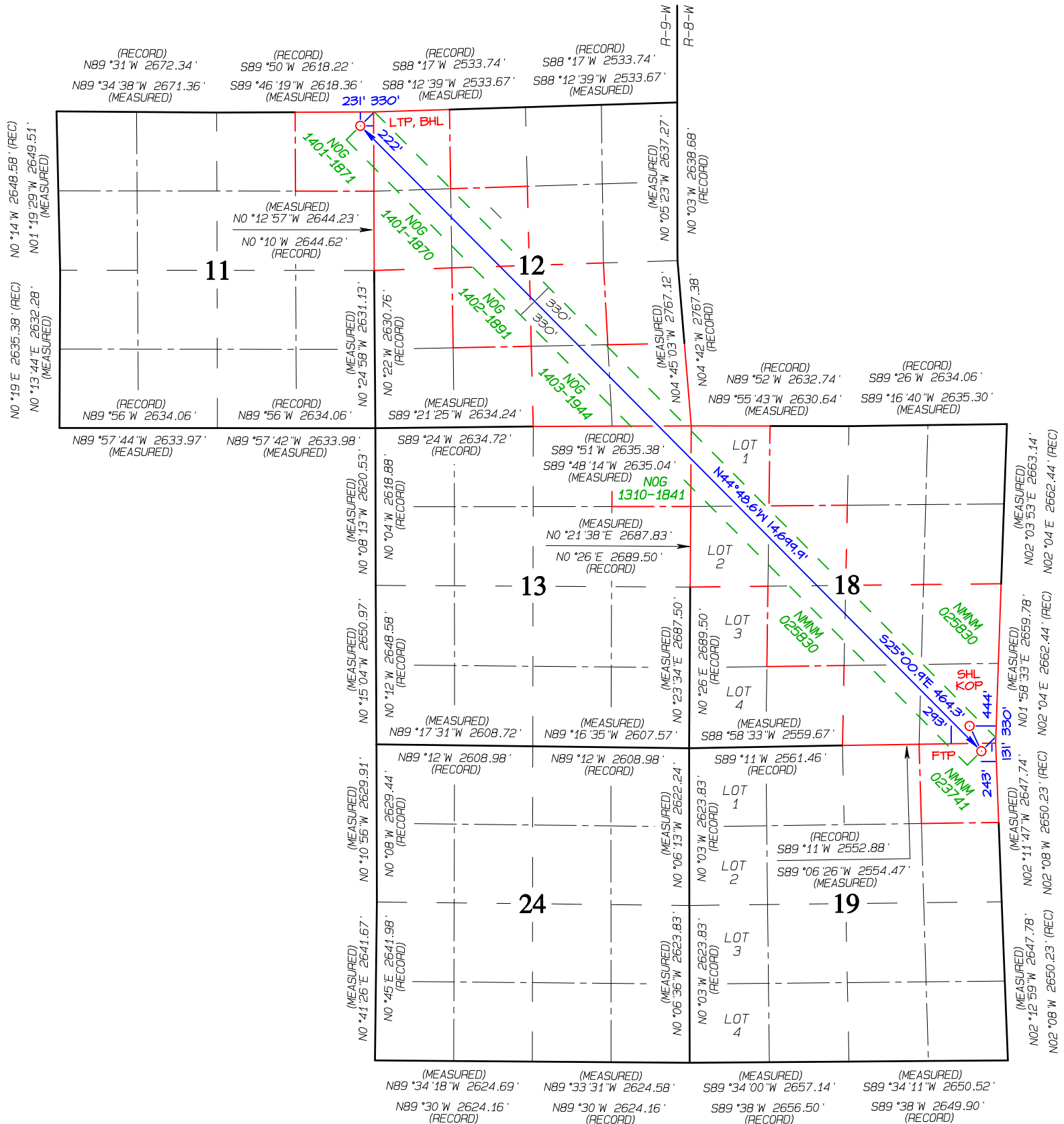
LAT 36.247993°N
LONG -107.750108°W
DATUM: NAD1983

LAT 36.247993°N
LONG -107.750108°W
DATUM: NAD1983

LAT 36.219314°N
LONG -107.715016°W
DATUM: NAD1983

LAT 36.220471°N
LONG -107.715680°W
DATUM: NAD1983

LAT 36.220471°N
LONG -107.715680°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 Operating, LLC **OGRID:** 372286 **Date:** 09 / 25 / 2025

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Greater Lybrook Unit 079		P-18-23N-8W	293 FSL 444 FEL	210	210	84
Greater Lybrook Unit 081		P-18-23N-8W	304 FSL 461 FEL	391	782	156
				3-year decline		
Greater Lybrook Unit 079		P-18-23N-8W	293 FSL 444 FEL	80	80	32
Greater Lybrook Unit 081		P-18-23N-8W	304 FSL 461 FEL	88	177	35

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 079		Q2 2026	Q2 2026	Q2 2026	Q2 2026	Q2 2026
Greater Lybrook Unit 081		Q2 2026	Q2 2026	Q2 2026	Q2 2026	Q2 2026

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:
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@enduringresources.com
Date: 9/25/2025
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Greater Lybrook Unit 079H and 081H

SEPARATION EQUIPMENT

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

Separation equipment will be set as follows:

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

Heater treaters will be set as follows:

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

Vapor Recovery Equipment will be set as follows:

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

Production storage tanks will be set as follows:

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



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Greater Lybrook Unit 079H and 081H

VENTING and FLARING

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

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

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

Enduring will only flare gas during the following times:

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



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Greater Lybrook Unit 079H and 081H

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.



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Greater Lybrook Unit 079H and 081H

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 is designed with an auto ignition system.
3. Flare stacks will appropriately sized and designed to ensure proper combustion efficiency.



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Greater Lybrook Unit 079H and 081H

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

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

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



Enduring Resources, LLC.
OGRID No: 372286
NATURAL GAS MANAGEMENT PLAN
Greater Lybrook Unit 079H and 081H

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 079H

State: New Mexico

County: San Juan

Surface Elevation: 6,894 ft ASL (GL) 6,919 ft ASL (KB)

Surface Location: 18-23-8 Sec-Twn-Rng 293 ft FSL 444 ft FEL

36.220471 ° N latitude 107.71568 ° W longitude (NAD 83)

BH Location: 11-23-9 Sec-Twn-Rng 231 ft FNL 222 ft FEL

36.247993 ° N latitude 107.750108 ° 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 (South) on CR #7890 for 0.7 miles to fork; Left (SouthEast) exiting CR #7890 for 1.2 miles to location access on right into Greater Rodeo Unit 500H Pad. From NorthWest to SouthEast will be Greater Lybrook Unit 081H (closest to location entrance), Greater Lybrook Unit 079H, Rodeo Unit 501H, and Rodeo Unit 500H.

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	6,227	692	692	W	normal
	Kirtland	6,101	818	818	W	normal
	Fruitland	5,910	1,009	1,010	G, W	sub
	Pictured Cliffs	5,600	1,319	1,330	G, W	sub
	Lewis	5,425	1,494	1,519	G, W	normal
	Chacra	5,171	1,748	1,797	G, W	normal
	Cliff House	4,094	2,825	2,979	G, W	sub
	Menefee	4,084	2,835	2,990	G, W	normal
	Point Lookout	3,105	3,814	4,019	G, W	normal
	Mancos	2,947	3,972	4,177	O,G	sub (~0.38)
	Gallup (MNCS_A)	2,615	4,304	4,521	O,G	sub (~0.38)
	MNCS_B	2,522	4,397	4,633	O,G	sub (~0.38)
	MNCS_C	2,429	4,490	4,767	O,G	sub (~0.38)
	MNCS_Cms	2,384	4,535	4,850	O,G	sub (~0.38)
	MNCS_D	2,248	4,671	NA	O,G	sub (~0.38)
	FTP TARGET	2,384	4,535	4,850	O,G	sub (~0.38)
	PROJECTED LTP	2,210	4,709	19,896	O,G	sub (~0.38)

Surface: Nacimiento

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

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

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

Maximum anticipated BH pressure, assuming maximum pressure gradient: 2,030 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,000 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 9-5/8" casing to TD; gas detection from drillout of 13-3/8" casing to TD.

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

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

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

DRILLING RIG INFORMATION:

Contractor: Aztec

Rig No.: 1000

Draw Works: E80 AC 1,500 hp

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

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

Prime Movers: 4 - GE Jenbacher Natural Gas Generator

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

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

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

Choke 3", 5,000 psi

KB-GL (ft): 25

Note: 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 and located on drill floor.
- 3) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.
- 4) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 5) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- 6) Manual locking devices (hand wheels) shall be intalled on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when 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 at drill out of surface casing, and readouts will be available in the dog-house and the in the geologist's work-station (if geologist or mud-logger is on-site).
- Closed-Loop System:** A fully, closed-loop system will be utilized. The system will consist of above-ground piping and above-ground storage tanks and bins. The system will not entail any earthen pits, below-grade storage, or drying pads. All equipment will be disassembled and removed from the site when drilling operations cease. The system will be capable of storing all fluids and generated cuttings and of preventing uncontrolled releases of the same. The system will be operated in an efficient manner to allow the recycling and reuse of as much fluid as possible and to minimize the amount of fluids and solids that require disposal.
- Fluid Disposal:** Fluids that cannot be reused, recycled, or returned to the supplier will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).
- Solids Disposal:** Drilling solids will be stored (until haul-off) on-site in separate containers with no other waste, debris, or garbage products. Waste solids will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).
- Fluid Program:** See "Detailed Drilling Plan" section for additional details. Sufficient barite will be on location to weight up mud system to balance maximum anticipated pressure gradient.

DETAILED DRILLING PLAN:

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

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

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

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

Hole Size: 17-1/2"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, deviation survey

Logging: None

Casing Specs:	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	13.375	54.5	J-55	BTC	1,130	2,730	853,000
Loading				153	647	116,634	116,634
Min. S.F.				7.39	4.22	7.31	7.79

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

Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling

intermediate hole and 8.4 ppg equivalent external pressure gradient

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

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

Make-up as per API Buttress Connection running procedure.

Casing 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)
	TYPE III	14.6	1.39	6.686	0.6946	100%	0	364

Annular Capacity 0.6946 cuft/ft 13-3/8" casing x 17-1/2" hole annulus Csg capacity 0.8680 ft3/ft

Drake Energy Services: Calculated cement volumes assume gauge hole and the excess noted in table

Tail ASTM Type III Blend Calcium Chloride 2% BWOC Accelerator D-CD2 .3% BWOC Dispersant/Friction reducer Flake - seepage

Cu Ft Slurry
505.3

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

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

350 ft (MD)	to	3,154 ft (MD)	Hole Section Length:	2,804 ft
350 ft (TVD)	to	2,985 ft (TVD)	Casing Required:	3,154 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (5% KCl)	8.8 - 9.5	20	8 - 14	8 - 14	9.0 - 9.5	No OBM

Hole Size: 12-1/4"

Bit / Motor: 12-1/4" 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	9.625	36.0	J-55	LTC	2,020	3,520	564,000
Loading					1,304	1,171	193,710
Min. S.F.					1.55	3.01	2.91

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

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

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

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

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

Centralizers: 1 per joint in non-vertical hole; 1 per 3-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)
Spacer	D-Mud Breaker	8.5				0	10 bbls	
	90:10 Type							
Lead	III:POZ	12.5	2.140	12.05	70%	0	633	1,354
Tail	Type III	14.6	1.380	6.64	20%	2,654	150	207
Displacement	240	est bbls						

Annular Capacity 0.3627 cuft/ft 9-5/8" casing x 13-3/8" casing annulus

0.3132 cuft/ft 9-5/8" casing x 12-1/4" hole annulus 9-5/8" 36# ID 8.921

0.4341 cuft/ft 9-5/8" casing vol est shoe jt ft 44

Calculated cement volumes assume gauge hole and the excess (open hole only) noted in table

Spacer D-Mud Breaker SAPP

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

Tail ASTM Type III Blend D-MPA-1 .4% BWOC Fluid Loss & Gas Migration Control D-CD 2 .5% BWOC Dispersant Cello Flace LCM .25 lb/sx D-R1 .2% Retarder

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.

3,154 ft (MD)	to	19,896 ft (MD)	Hole Section Length:	16,742 ft
2,985 ft (TVD)	to	4,709 ft (TVD)	Casing Required:	19,896 ft

Estimated KOP:	4,250 ft (MD)	4,045 ft (TVD)
Estimated Landing Point (FTP):	4,850 ft (MD)	4,535 ft (TVD)
Estimated Lateral Length:	15,046 ft (MD)	

Fluid:	Type	MW (ppg)	WPS ppm	HTHP	YP (lb/100 sqft)	ES	OWR	Comment
	OBM	8.0 - 9.0	120,000 CaCl	NC	±6	+300	80:20	WBM as contingency

Hole Size: 8-1/2"

Bit / Motor: 8-1/2" PDC bit w/mud motor

MWD / Survey: MWD 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.

Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	5.500	17.0	P-110	LTC	7,460	10,640	546,000	445,000
Loading					2,326	8,941	391,864	391,864
Min. S.F.					3.21	1.19	1.39	1.14

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

Burst: 8,500 psi maximum surface treating pressure with 10.2 ppg equivalent mud weight sand laden fluid with 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 9.0 ppg fluid with 100,000 lbs over-pull

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

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

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	IntegraGuard Star	11		31.6		0	60 bbls	
Lead	ASTM type I/II	12.4	2.370	13.40	50%	0	506	1,200
Tail	G:POZ blend	13.3	1.570	7.70	10%	4,177	2,531	3,974

Displacement 439 est bbls

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

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

American Cementing Liner & Production Blend

	S-8 Silica Flour	Avis 616 viscosifier	FP24 Defoamer .5	IntegraGuard Star	Plus 3K LCM 15	SS201 Surfactant 1
Spacer	163.7 lbs/bbl	11.6 lb/bbl	lb/bbl	lb/bbl	gal/bbl	

Lead	ASTM Type I/II	BA90 Bonding Agent 5.0 lb/sx	Bentonite Viscosifier 8% BWOB	FL24 Fluid Loss .5% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R7C Retarder .2% BWOB	FP24 Defoamer 0.3% BWOB, Anti-Static .01 lb/sx	
		Pozzolan Fly Ash Extender 50%	BA90 Bonding Agent 3.0 lb/sx	Bentonite Viscosifier 4% BWOB	FL24 Fluid Loss .4% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R3 Retarder .5% BWOB	FP24 Defoamer .3% BWOB, IntegraSeal 0.25 lb/sx
Tail	Type G 50%							

American Cementing Liner & Production Blend

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

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

FINISH WELL: ND BOP, cap well, RDMO.

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 14,946

Est Frac Inform: 62 Frac Stages 240,000 bbls slick water 19,430,000 lbs proppant

Flowback: Flow back through production tubing as pressures allow

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

ESTIMATED START DATES:

Drilling: 5/1/2024

Completion: 6/30/2024

Production: 8/14/2024

Prepared by: G Olson 9/28/2023

Updated:

WELL NAME: Greater Lybrook Unit 079H

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.: 6,894 ft ASL (GL) 6,919 ft ASL (KB) 444 ft FEL
Surface Location: 18-23-8 Sec-Twn- Rng 293 ft FSL 444 ft FEL
BH Location: 11-23-9 Sec-Twn- Rng 231 ft FNL 222 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 (South) on CR #7890 for 0.7 miles to fork; Left (SouthEast) exiting CR #7890 for 1.2 miles to location access on right into Greater Rodeo Unit 500H Pad. From NorthWest to SouthEast will be Greater Lybrook Unit 081H (closest to location entrance), Greater Lybrook Unit 079H, Rodeo Unit 501H, and Rodeo Unit 500H.

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	3,154 ft
KOP (MD)	4,250 ft
KOP (TVD)	4,045 ft
Target (TVD)	4,535 ft
Curve BUR	10 °/100 ft
POE (MD)	4,850 ft
TD (MD)	19,896 ft
Lat Len (ft)	15,046 ft

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	3,154	9.625	36.0	J-55	LTC	0	3,154
Production	8.500	19,896	5.500	17.0	P-110	LTC	0	19,896

CEMENT PROPERTIES SUMMARY:

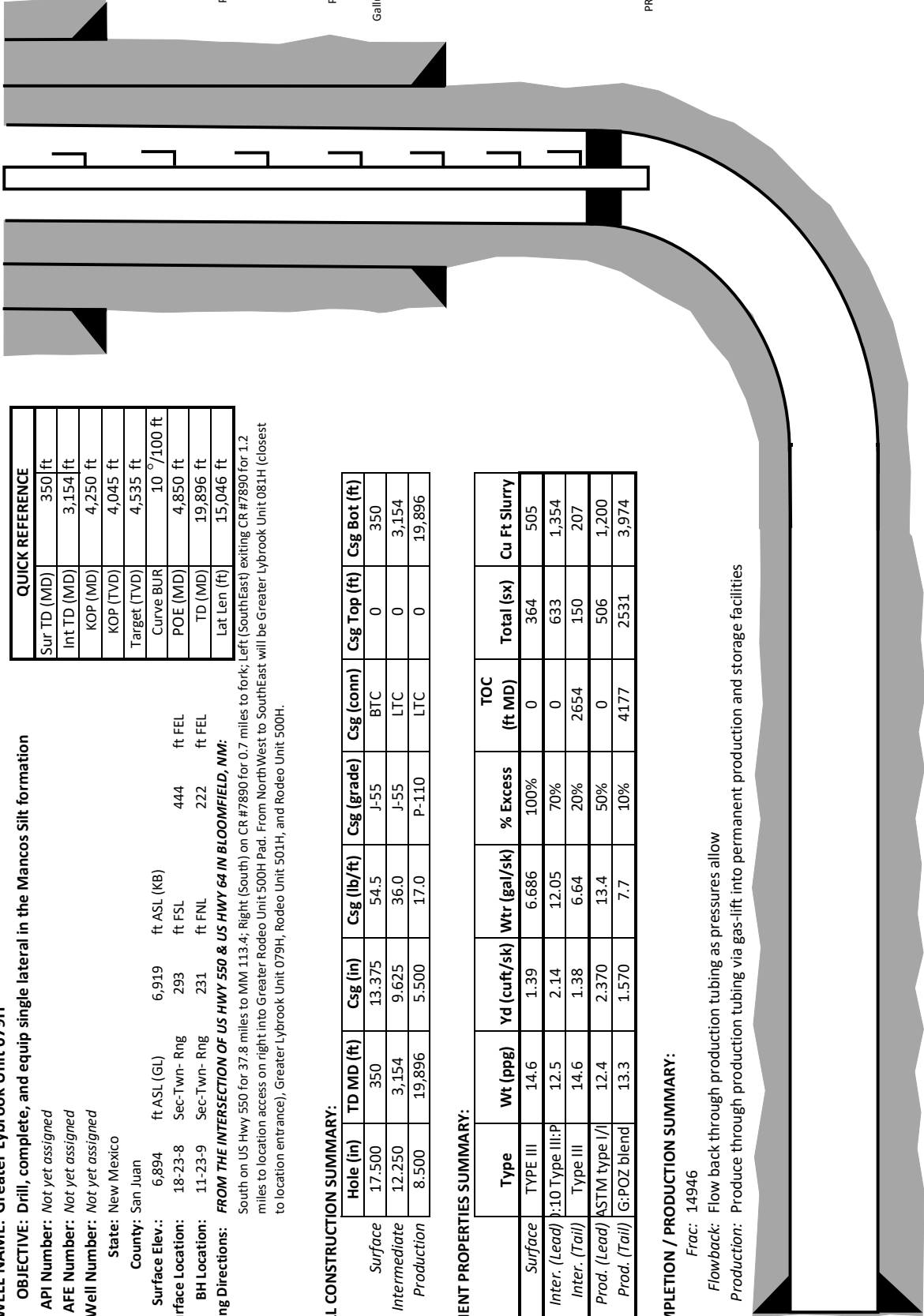
	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	% Excess	TOC (ft MD)	Total (sx)	Cu Ft Slurry
Surface	TYPE III	14.6	1.39	6.686	100%	0	364	505
Inter. (Lead)	10 Type III:P	12.5	2.14	12.05	70%	0	633	1,354
Inter. (Tail)	Type III	14.6	1.38	6.64	20%	2654	150	207
Prod. (Lead)	ASTM type I/II	12.4	2.370	13.4	50%	0	506	1,200
Prod. (Tail)	G:POZ blend	13.3	1.570	7.7	10%	4177	2531	3,974

COMPLETION / PRODUCTION SUMMARY:

Frac: 14946

Flowback: Flow back through production tubing as pressures allow

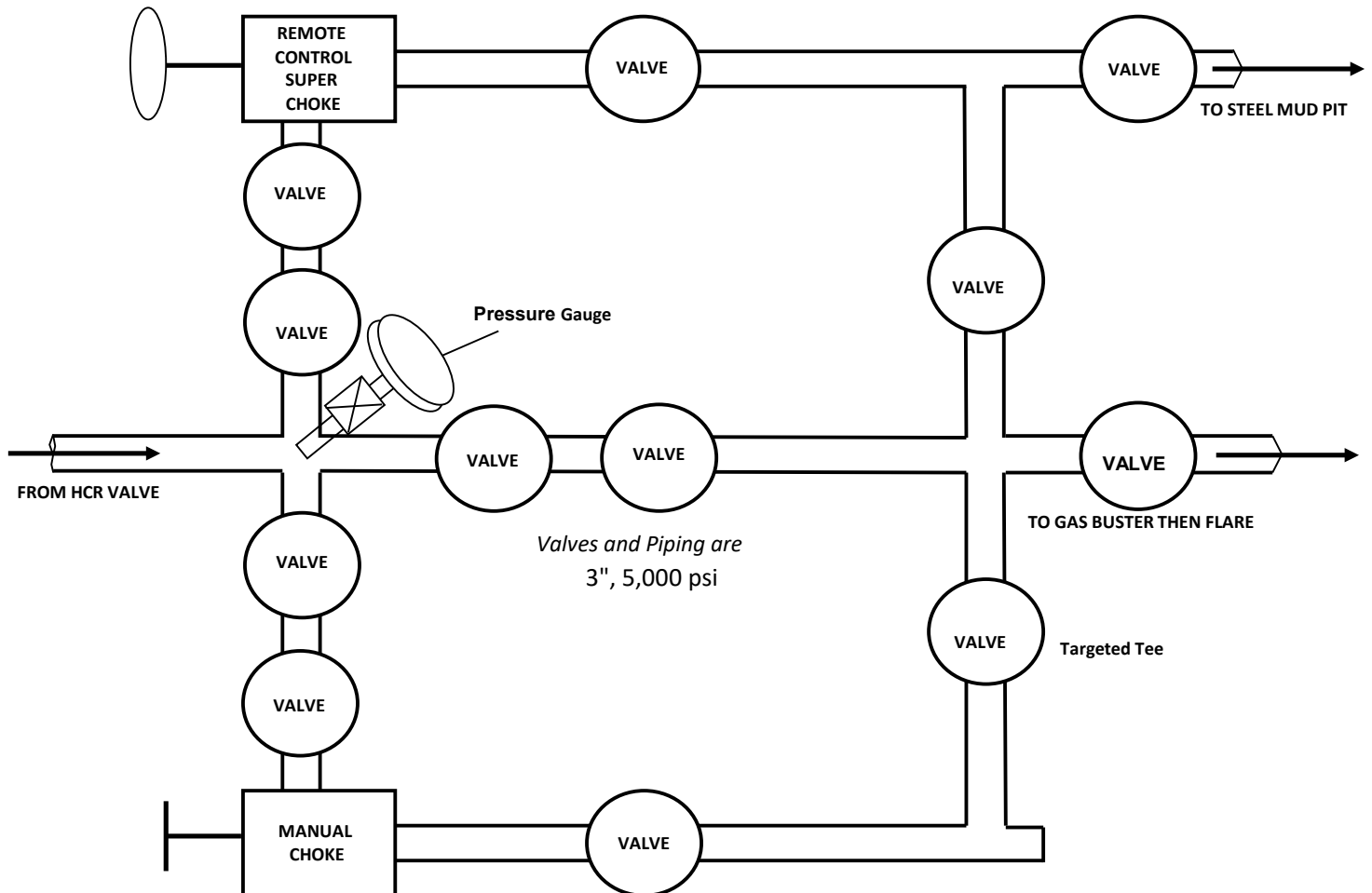
Production: Produce through production tubing via gas-lift into permanent production and storage facilities



Greater Lybrook Unit 079H

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

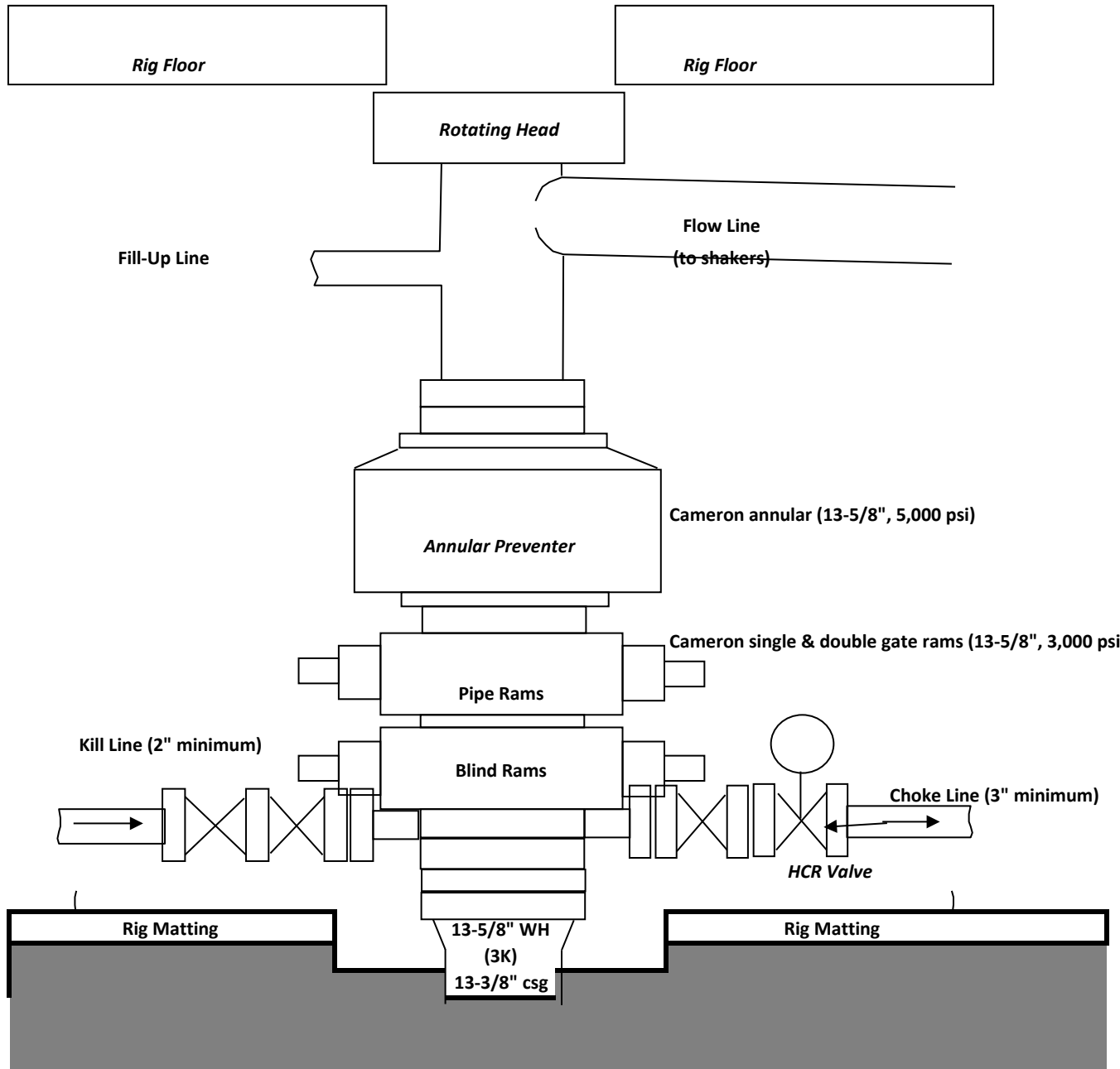
CHOKE MANIFOLD



Greater Lybrook Unit 079H

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

BOPE





Well: Greater Lybrook Unit 079H
Site: Greater Lybrook Unit (79 & 81)
Project: San Juan County, New Mexico NAD83 NM W
Design: rev0
Rig:

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Lybrook 79H FTP 131 FNL 243 FEL 330 perp	4636.68	-420.94	196.37	1899149.427	2757991.292	36.219314000	-107.715016000
Lybrook 79H vs=0	4639.00	-110.89	-111.62	1899459.472	2757683.304	36.220166747	-107.716058875
Lybrook 79H LTP 231 FNL 222 FEL 330 perp	4709.00	10008.12	-10163.57	1909578.457	2747631.369	36.247993000	-107.750108000

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
2	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	Begin 24.22° tangent
3	1507.28	24.22	143.64	1483.46	-135.37	99.65	3.00	143.64	-166.27	Begin 3°/100' drop
4	3297.97	24.22	143.64	3116.54	-726.92	535.15	0.00	0.00	-892.86	Begin vertical hold
5	4105.25	0.00	0.00	3900.00	-862.29	634.80	3.00	180.00	-1059.13	Begin 10°/100' build
6	4238.98	0.00	0.00	4033.73	-862.29	634.80	0.00	0.00	-1059.13	Begin 60.00° tangent
7	4838.98	60.00	315.19	4529.93	-659.05	432.90	10.00	315.19	-772.65	Begin 10°/100' build
8	4898.98	60.00	315.19	4559.93	-622.18	396.28	0.00	0.00	-720.69	Begin 89.72° lateral
9	5196.17	89.72	315.19	4636.68	-420.94	196.37	10.00	0.00	-437.03	PBHL/TD
10	19896.47	89.72	315.19	4709.00	10008.12	10163.57	0.00	0.00	14263.10	

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-6894+25 @ 6919.00ft
Surface location:

Northing: 1899570.362
Easting: 2757794.923
Latitude: 36.220471000
Longitude: -107.715680000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.51°

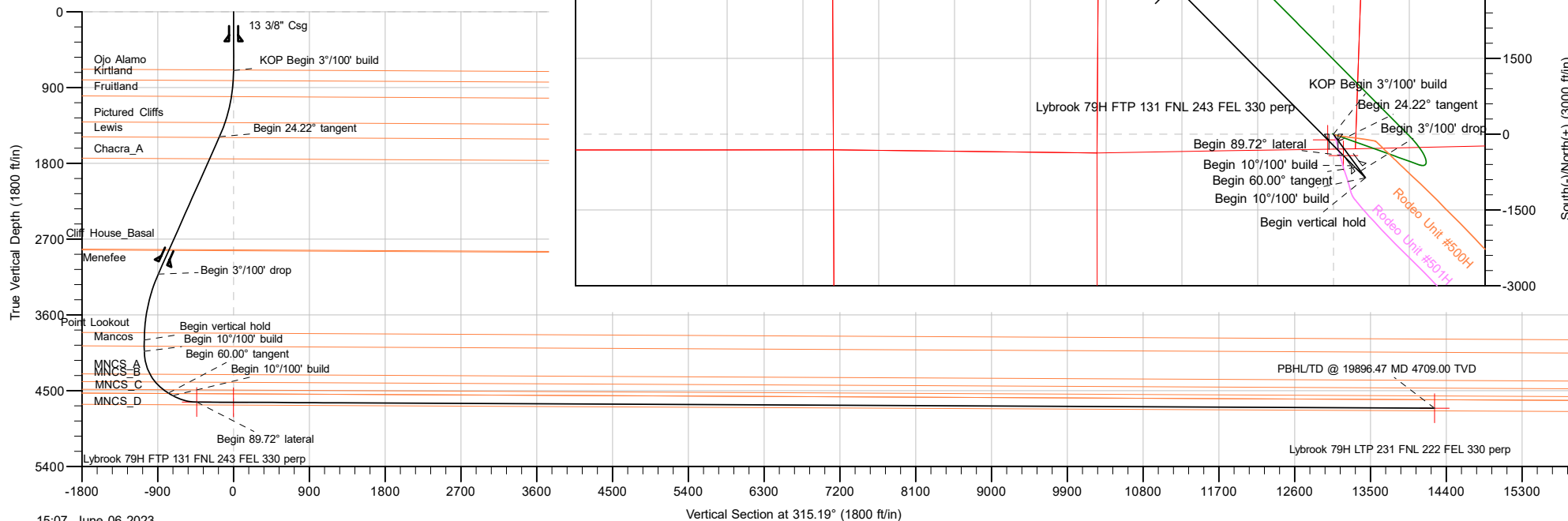
CASING DETAILS

TVD	MD	Name
350.00	350.00	13 3/8" Csg
2989.00	3158.12	9 5/8" Csg



Azimuths to Grid North
True North: -0.07°
Magnetic North: 8.51°

Magnetic Field
Strength: 49105.4nT
Dip Angle: 62.71°
Date: 6/5/2023
Model: IGRF2020



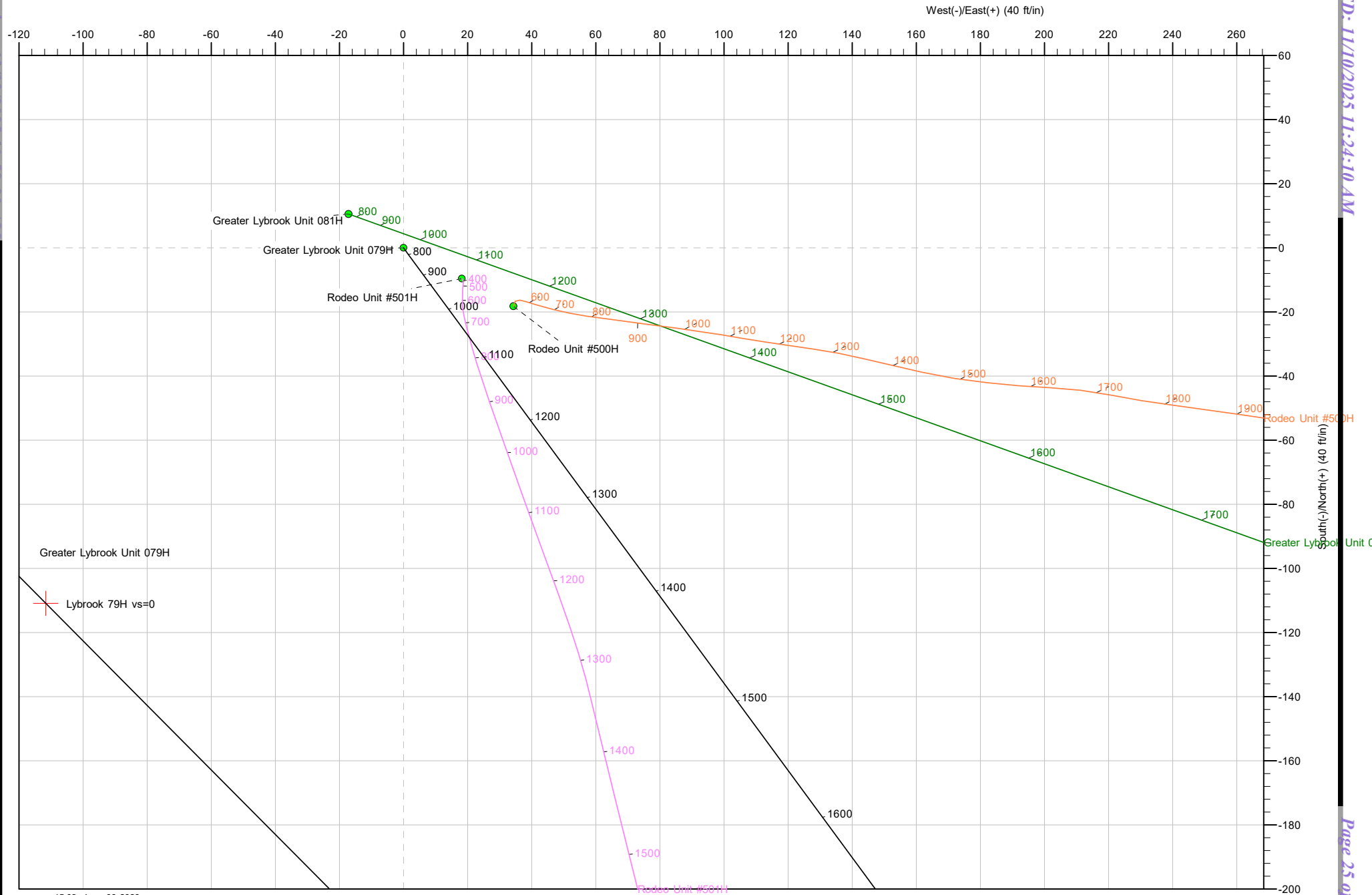
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Vertical Section at 315.19° (1800 ft/in)

South/North (+) (3000 ft/in)



Well: Greater Lybrook Unit 079H
Site: Greater Lybrook Unit (79 & 81)
Project: San Juan County, New Mexico NAD83 NM W
Design: rev0
Rig:





Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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 Unit (79 & 81)		
Site Position:		Northing:	1,899,570.361 usft
From:	Lat/Long	Easting:	2,757,794.923 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.220471000
		Longitude:	-107.715680000

Well	Greater Lybrook Unit 079H, Surf loc: 293 FSL 444 FEL Section 18-T23N-R08W		
Well Position	+N/-S	0.00 ft	Northing: 1,899,570.361 usft
	+E/-W	0.00 ft	Easting: 2,757,794.923 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
Grid Convergence:	0.07 °	Ground Level:	6,894.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	6/5/2023	8.58	62.71	49,105.35452208

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	315.19

Plan Survey Tool Program	Date	6/6/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,896.47	rev0 (Original Hole)	MWD
				OWSG MWD - Standard



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,507.28	24.22	143.64	1,483.46	-135.37	99.65	3.00	3.00	0.00	143.64	
3,297.97	24.22	143.64	3,116.54	-726.92	535.15	0.00	0.00	0.00	0.00	
4,105.25	0.00	0.00	3,900.00	-862.29	634.80	3.00	-3.00	0.00	180.00	
4,238.98	0.00	0.00	4,033.73	-862.29	634.80	0.00	0.00	0.00	0.00	
4,838.98	60.00	315.19	4,529.93	-659.05	432.90	10.00	10.00	0.00	315.19	
4,898.98	60.00	315.19	4,559.93	-622.18	396.28	0.00	0.00	0.00	0.00	
5,196.17	89.72	315.19	4,636.68	-420.94	196.37	10.00	10.00	0.00	0.00	
19,896.47	89.72	315.19	4,709.00	10,008.12	-10,163.58	0.00	0.00	0.00	0.00	Lybrook 79H LTP 231



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8" Csg									
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
692.00	0.00	0.00	692.00	0.00	0.00	0.00	0.00	0.00	0.00
Ojo Alamo									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3°/100' build									
800.00	3.00	143.64	799.95	-2.11	1.55	-2.59	3.00	3.00	0.00
818.06	3.54	143.64	817.98	-2.94	2.16	-3.61	3.00	3.00	0.00
Kirtland									
900.00	6.00	143.64	899.63	-8.43	6.20	-10.35	3.00	3.00	0.00
1,000.00	9.00	143.64	998.77	-18.94	13.94	-23.26	3.00	3.00	0.00
1,010.24	9.31	143.64	1,008.88	-20.25	14.91	-24.87	3.00	3.00	0.00
Fruitland									
1,100.00	12.00	143.64	1,097.08	-33.61	24.74	-41.28	3.00	3.00	0.00
1,200.00	15.00	143.64	1,194.31	-52.41	38.58	-64.37	3.00	3.00	0.00
1,300.00	18.00	143.64	1,290.18	-75.28	55.42	-92.46	3.00	3.00	0.00
1,329.86	18.90	143.64	1,318.50	-82.89	61.02	-101.81	3.00	3.00	0.00
Pictured Cliffs									
1,400.00	21.00	143.64	1,384.43	-102.16	75.20	-125.47	3.00	3.00	0.00
1,507.28	24.22	143.64	1,483.46	-135.37	99.65	-166.27	3.00	3.00	0.00
Begin 24.22° tangent									
1,519.02	24.22	143.64	1,494.16	-139.24	102.51	-171.03	0.00	0.00	0.00
Lewis									
1,600.00	24.22	143.64	1,568.01	-165.99	122.20	-203.89	0.00	0.00	0.00
1,700.00	24.22	143.64	1,659.21	-199.03	146.52	-244.46	0.00	0.00	0.00
1,796.93	24.22	143.64	1,747.61	-231.05	170.10	-283.80	0.00	0.00	0.00
Chacra_A									
1,800.00	24.22	143.64	1,750.41	-232.07	170.84	-285.04	0.00	0.00	0.00
1,900.00	24.22	143.64	1,841.61	-265.10	195.16	-325.62	0.00	0.00	0.00
2,000.00	24.22	143.64	1,932.81	-298.14	219.48	-366.19	0.00	0.00	0.00
2,100.00	24.22	143.64	2,024.01	-331.17	243.80	-406.77	0.00	0.00	0.00
2,200.00	24.22	143.64	2,115.21	-364.21	268.12	-447.35	0.00	0.00	0.00
2,300.00	24.22	143.64	2,206.41	-397.24	292.44	-487.92	0.00	0.00	0.00
2,400.00	24.22	143.64	2,297.60	-430.28	316.76	-528.50	0.00	0.00	0.00
2,500.00	24.22	143.64	2,388.80	-463.31	341.08	-569.08	0.00	0.00	0.00
2,600.00	24.22	143.64	2,480.00	-496.35	365.40	-609.65	0.00	0.00	0.00
2,700.00	24.22	143.64	2,571.20	-529.38	389.72	-650.23	0.00	0.00	0.00
2,800.00	24.22	143.64	2,662.40	-562.42	414.04	-690.80	0.00	0.00	0.00
2,900.00	24.22	143.64	2,753.60	-595.45	438.36	-731.38	0.00	0.00	0.00
2,978.59	24.22	143.64	2,825.27	-621.42	457.47	-763.27	0.00	0.00	0.00
Cliff House_Basal									
2,989.53	24.22	143.64	2,835.25	-625.03	460.13	-767.71	0.00	0.00	0.00
Menefee									
3,000.00	24.22	143.64	2,844.80	-628.49	462.68	-771.96	0.00	0.00	0.00
3,100.00	24.22	143.64	2,936.00	-661.52	487.00	-812.53	0.00	0.00	0.00
3,158.12	24.22	143.64	2,989.00	-680.72	501.14	-836.12	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9 5/8" Csg										
3,200.00	24.22	143.64	3,027.19	-694.56	511.32	-853.11	0.00	0.00	0.00	
3,297.97	24.22	143.64	3,116.54	-726.92	535.15	-892.86	0.00	0.00	0.00	
Begin 3°/100' drop										
3,300.00	24.16	143.64	3,118.39	-727.59	535.64	-893.69	3.00	-3.00	0.00	
3,400.00	21.16	143.64	3,210.67	-758.61	558.48	-931.79	3.00	-3.00	0.00	
3,500.00	18.16	143.64	3,304.83	-785.70	578.42	-965.06	3.00	-3.00	0.00	
3,600.00	15.16	143.64	3,400.62	-808.78	595.41	-993.41	3.00	-3.00	0.00	
3,700.00	12.16	143.64	3,497.78	-827.79	609.41	-1,016.76	3.00	-3.00	0.00	
3,800.00	9.16	143.64	3,596.04	-842.69	620.37	-1,035.05	3.00	-3.00	0.00	
3,900.00	6.16	143.64	3,695.14	-853.42	628.27	-1,048.23	3.00	-3.00	0.00	
4,000.00	3.16	143.64	3,794.80	-859.95	633.08	-1,056.26	3.00	-3.00	0.00	
4,019.06	2.59	143.64	3,813.83	-860.72	633.65	-1,057.21	3.00	-3.00	0.00	
Point Lookout										
4,105.25	0.00	0.00	3,900.00	-862.29	634.80	-1,059.13	3.00	-3.00	0.00	
Begin vertical hold										
4,177.08	0.00	0.00	3,971.82	-862.29	634.80	-1,059.13	0.00	0.00	0.00	
Mancos										
4,200.00	0.00	0.00	3,994.75	-862.29	634.80	-1,059.13	0.00	0.00	0.00	
4,238.98	0.00	0.00	4,033.73	-862.29	634.80	-1,059.13	0.00	0.00	0.00	
Begin 10°/100' build										
4,250.00	1.10	315.19	4,044.75	-862.21	634.73	-1,059.02	10.00	10.00	0.00	
4,300.00	6.10	315.19	4,094.63	-859.99	632.51	-1,055.88	10.00	10.00	0.00	
4,350.00	11.10	315.19	4,144.05	-854.68	627.24	-1,048.41	10.00	10.00	0.00	
4,400.00	16.10	315.19	4,192.63	-846.34	618.96	-1,036.65	10.00	10.00	0.00	
4,450.00	21.10	315.19	4,240.01	-835.03	607.72	-1,020.71	10.00	10.00	0.00	
4,500.00	26.10	315.19	4,285.81	-820.83	593.62	-1,000.70	10.00	10.00	0.00	
4,520.61	28.16	315.19	4,304.16	-814.17	586.99	-991.30	10.00	10.00	0.00	
MNCS_A										
4,550.00	31.10	315.19	4,329.70	-803.86	576.76	-976.77	10.00	10.00	0.00	
4,600.00	36.10	315.19	4,371.33	-784.23	557.26	-949.11	10.00	10.00	0.00	
4,633.06	39.41	315.19	4,397.46	-769.88	543.00	-928.87	10.00	10.00	0.00	
MNCS_B										
4,650.00	41.10	315.19	4,410.39	-762.11	535.28	-917.92	10.00	10.00	0.00	
4,700.00	46.10	315.19	4,446.59	-737.65	510.99	-883.45	10.00	10.00	0.00	
4,750.00	51.10	315.19	4,479.64	-711.05	484.56	-845.96	10.00	10.00	0.00	
4,766.69	52.77	315.19	4,489.93	-701.73	475.30	-832.82	10.00	10.00	0.00	
MNCS_C										
4,800.00	56.10	315.19	4,509.30	-682.51	456.21	-805.72	10.00	10.00	0.00	
4,838.98	60.00	315.19	4,529.93	-659.05	432.90	-772.65	10.00	10.00	0.00	
Begin 60.00° tangent										
4,849.67	60.00	315.19	4,535.27	-652.48	426.38	-763.40	0.00	0.00	0.00	
MNCS_Cms - MNCS_Cms @ 0vs										
4,898.98	60.00	315.19	4,559.93	-622.18	396.28	-720.69	0.00	0.00	0.00	
Begin 10°/100' build										
4,900.00	60.10	315.19	4,560.43	-621.56	395.66	-719.81	10.00	10.00	0.00	
4,950.00	65.10	315.19	4,583.43	-590.08	364.39	-675.43	10.00	10.00	0.00	
5,000.00	70.10	315.19	4,602.48	-557.29	331.82	-629.22	10.00	10.00	0.00	
5,050.00	75.10	315.19	4,617.43	-523.45	298.20	-581.52	10.00	10.00	0.00	
5,100.00	80.10	315.19	4,628.16	-488.82	263.80	-532.70	10.00	10.00	0.00	
5,150.00	85.10	315.19	4,634.60	-453.65	228.86	-483.14	10.00	10.00	0.00	
5,196.17	89.72	315.19	4,636.68	-420.94	196.37	-437.03	10.00	10.00	0.00	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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)
Begin 89.72° lateral									
5,200.00	89.72	315.19	4,636.70	-418.22	193.67	-433.19	0.00	0.00	0.00
5,300.00	89.72	315.19	4,637.19	-347.28	123.19	-333.20	0.00	0.00	0.00
5,400.00	89.72	315.19	4,637.68	-276.33	52.72	-233.20	0.00	0.00	0.00
5,500.00	89.72	315.19	4,638.18	-205.39	-17.76	-133.20	0.00	0.00	0.00
5,600.00	89.72	315.19	4,638.67	-134.44	-88.23	-33.20	0.00	0.00	0.00
5,700.00	89.72	315.19	4,639.16	-63.50	-158.70	66.80	0.00	0.00	0.00
5,800.00	89.72	315.19	4,639.65	7.45	-229.18	166.80	0.00	0.00	0.00
5,900.00	89.72	315.19	4,640.14	78.39	-299.65	266.80	0.00	0.00	0.00
6,000.00	89.72	315.19	4,640.64	149.34	-370.13	366.80	0.00	0.00	0.00
6,100.00	89.72	315.19	4,641.13	220.28	-440.60	466.79	0.00	0.00	0.00
6,200.00	89.72	315.19	4,641.62	291.22	-511.08	566.79	0.00	0.00	0.00
6,300.00	89.72	315.19	4,642.11	362.17	-581.55	666.79	0.00	0.00	0.00
6,400.00	89.72	315.19	4,642.60	433.11	-652.02	766.79	0.00	0.00	0.00
6,500.00	89.72	315.19	4,643.10	504.06	-722.50	866.79	0.00	0.00	0.00
6,600.00	89.72	315.19	4,643.59	575.00	-792.97	966.79	0.00	0.00	0.00
6,700.00	89.72	315.19	4,644.08	645.95	-863.45	1,066.79	0.00	0.00	0.00
6,800.00	89.72	315.19	4,644.57	716.89	-933.92	1,166.79	0.00	0.00	0.00
6,900.00	89.72	315.19	4,645.06	787.84	-1,004.40	1,266.78	0.00	0.00	0.00
7,000.00	89.72	315.19	4,645.56	858.78	-1,074.87	1,366.78	0.00	0.00	0.00
7,100.00	89.72	315.19	4,646.05	929.72	-1,145.34	1,466.78	0.00	0.00	0.00
7,200.00	89.72	315.19	4,646.54	1,000.67	-1,215.82	1,566.78	0.00	0.00	0.00
7,300.00	89.72	315.19	4,647.03	1,071.61	-1,286.29	1,666.78	0.00	0.00	0.00
7,400.00	89.72	315.19	4,647.52	1,142.56	-1,356.77	1,766.78	0.00	0.00	0.00
7,500.00	89.72	315.19	4,648.01	1,213.50	-1,427.24	1,866.78	0.00	0.00	0.00
7,600.00	89.72	315.19	4,648.51	1,284.45	-1,497.72	1,966.78	0.00	0.00	0.00
7,700.00	89.72	315.19	4,649.00	1,355.39	-1,568.19	2,066.77	0.00	0.00	0.00
7,800.00	89.72	315.19	4,649.49	1,426.34	-1,638.67	2,166.77	0.00	0.00	0.00
7,900.00	89.72	315.19	4,649.98	1,497.28	-1,709.14	2,266.77	0.00	0.00	0.00
8,000.00	89.72	315.19	4,650.47	1,568.23	-1,779.61	2,366.77	0.00	0.00	0.00
8,100.00	89.72	315.19	4,650.97	1,639.17	-1,850.09	2,466.77	0.00	0.00	0.00
8,200.00	89.72	315.19	4,651.46	1,710.11	-1,920.56	2,566.77	0.00	0.00	0.00
8,300.00	89.72	315.19	4,651.95	1,781.06	-1,991.04	2,666.77	0.00	0.00	0.00
8,400.00	89.72	315.19	4,652.44	1,852.00	-2,061.51	2,766.77	0.00	0.00	0.00
8,500.00	89.72	315.19	4,652.93	1,922.95	-2,131.99	2,866.77	0.00	0.00	0.00
8,600.00	89.72	315.19	4,653.43	1,993.89	-2,202.46	2,966.76	0.00	0.00	0.00
8,700.00	89.72	315.19	4,653.92	2,064.84	-2,272.93	3,066.76	0.00	0.00	0.00
8,800.00	89.72	315.19	4,654.41	2,135.78	-2,343.41	3,166.76	0.00	0.00	0.00
8,900.00	89.72	315.19	4,654.90	2,206.73	-2,413.88	3,266.76	0.00	0.00	0.00
9,000.00	89.72	315.19	4,655.39	2,277.67	-2,484.36	3,366.76	0.00	0.00	0.00
9,100.00	89.72	315.19	4,655.89	2,348.61	-2,554.83	3,466.76	0.00	0.00	0.00
9,200.00	89.72	315.19	4,656.38	2,419.56	-2,625.31	3,566.76	0.00	0.00	0.00
9,300.00	89.72	315.19	4,656.87	2,490.50	-2,695.78	3,666.76	0.00	0.00	0.00
9,400.00	89.72	315.19	4,657.36	2,561.45	-2,766.26	3,766.75	0.00	0.00	0.00
9,500.00	89.72	315.19	4,657.85	2,632.39	-2,836.73	3,866.75	0.00	0.00	0.00
9,600.00	89.72	315.19	4,658.35	2,703.34	-2,907.20	3,966.75	0.00	0.00	0.00
9,700.00	89.72	315.19	4,658.84	2,774.28	-2,977.68	4,066.75	0.00	0.00	0.00
9,800.00	89.72	315.19	4,659.33	2,845.23	-3,048.15	4,166.75	0.00	0.00	0.00
9,900.00	89.72	315.19	4,659.82	2,916.17	-3,118.63	4,266.75	0.00	0.00	0.00
10,000.00	89.72	315.19	4,660.31	2,987.12	-3,189.10	4,366.75	0.00	0.00	0.00
10,100.00	89.72	315.19	4,660.81	3,058.06	-3,259.58	4,466.75	0.00	0.00	0.00
10,200.00	89.72	315.19	4,661.30	3,129.00	-3,330.05	4,566.74	0.00	0.00	0.00
10,300.00	89.72	315.19	4,661.79	3,199.95	-3,400.52	4,666.74	0.00	0.00	0.00
10,400.00	89.72	315.19	4,662.28	3,270.89	-3,471.00	4,766.74	0.00	0.00	0.00



Planning Report

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Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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	89.72	315.19	4,662.77	3,341.84	-3,541.47	4,866.74	0.00	0.00	0.00
10,600.00	89.72	315.19	4,663.27	3,412.78	-3,611.95	4,966.74	0.00	0.00	0.00
10,700.00	89.72	315.19	4,663.76	3,483.73	-3,682.42	5,066.74	0.00	0.00	0.00
10,800.00	89.72	315.19	4,664.25	3,554.67	-3,752.90	5,166.74	0.00	0.00	0.00
10,900.00	89.72	315.19	4,664.74	3,625.62	-3,823.37	5,266.74	0.00	0.00	0.00
11,000.00	89.72	315.19	4,665.23	3,696.56	-3,893.85	5,366.74	0.00	0.00	0.00
11,100.00	89.72	315.19	4,665.73	3,767.50	-3,964.32	5,466.73	0.00	0.00	0.00
11,200.00	89.72	315.19	4,666.22	3,838.45	-4,034.79	5,566.73	0.00	0.00	0.00
11,300.00	89.72	315.19	4,666.71	3,909.39	-4,105.27	5,666.73	0.00	0.00	0.00
11,400.00	89.72	315.19	4,667.20	3,980.34	-4,175.74	5,766.73	0.00	0.00	0.00
11,500.00	89.72	315.19	4,667.69	4,051.28	-4,246.22	5,866.73	0.00	0.00	0.00
11,600.00	89.72	315.19	4,668.19	4,122.23	-4,316.69	5,966.73	0.00	0.00	0.00
11,700.00	89.72	315.19	4,668.68	4,193.17	-4,387.17	6,066.73	0.00	0.00	0.00
11,800.00	89.72	315.19	4,669.17	4,264.12	-4,457.64	6,166.73	0.00	0.00	0.00
11,900.00	89.72	315.19	4,669.66	4,335.06	-4,528.11	6,266.72	0.00	0.00	0.00
12,000.00	89.72	315.19	4,670.15	4,406.01	-4,598.59	6,366.72	0.00	0.00	0.00
12,100.00	89.72	315.19	4,670.64	4,476.95	-4,669.06	6,466.72	0.00	0.00	0.00
12,200.00	89.72	315.19	4,671.14	4,547.89	-4,739.54	6,566.72	0.00	0.00	0.00
12,300.00	89.72	315.19	4,671.63	4,618.84	-4,810.01	6,666.72	0.00	0.00	0.00
12,400.00	89.72	315.19	4,672.12	4,689.78	-4,880.49	6,766.72	0.00	0.00	0.00
12,500.00	89.72	315.19	4,672.61	4,760.73	-4,950.96	6,866.72	0.00	0.00	0.00
12,600.00	89.72	315.19	4,673.10	4,831.67	-5,021.43	6,966.72	0.00	0.00	0.00
12,700.00	89.72	315.19	4,673.60	4,902.62	-5,091.91	7,066.71	0.00	0.00	0.00
12,800.00	89.72	315.19	4,674.09	4,973.56	-5,162.38	7,166.71	0.00	0.00	0.00
12,900.00	89.72	315.19	4,674.58	5,044.51	-5,232.86	7,266.71	0.00	0.00	0.00
13,000.00	89.72	315.19	4,675.07	5,115.45	-5,303.33	7,366.71	0.00	0.00	0.00
13,100.00	89.72	315.19	4,675.56	5,186.39	-5,373.81	7,466.71	0.00	0.00	0.00
13,200.00	89.72	315.19	4,676.06	5,257.34	-5,444.28	7,566.71	0.00	0.00	0.00
13,300.00	89.72	315.19	4,676.55	5,328.28	-5,514.76	7,666.71	0.00	0.00	0.00
13,400.00	89.72	315.19	4,677.04	5,399.23	-5,585.23	7,766.71	0.00	0.00	0.00
13,500.00	89.72	315.19	4,677.53	5,470.17	-5,655.70	7,866.70	0.00	0.00	0.00
13,600.00	89.72	315.19	4,678.02	5,541.12	-5,726.18	7,966.70	0.00	0.00	0.00
13,700.00	89.72	315.19	4,678.52	5,612.06	-5,796.65	8,066.70	0.00	0.00	0.00
13,800.00	89.72	315.19	4,679.01	5,683.01	-5,867.13	8,166.70	0.00	0.00	0.00
13,900.00	89.72	315.19	4,679.50	5,753.95	-5,937.60	8,266.70	0.00	0.00	0.00
14,000.00	89.72	315.19	4,679.99	5,824.90	-6,008.08	8,366.70	0.00	0.00	0.00
14,100.00	89.72	315.19	4,680.48	5,895.84	-6,078.55	8,466.70	0.00	0.00	0.00
14,200.00	89.72	315.19	4,680.98	5,966.78	-6,149.02	8,566.70	0.00	0.00	0.00
14,300.00	89.72	315.19	4,681.47	6,037.73	-6,219.50	8,666.70	0.00	0.00	0.00
14,400.00	89.72	315.19	4,681.96	6,108.67	-6,289.97	8,766.69	0.00	0.00	0.00
14,500.00	89.72	315.19	4,682.45	6,179.62	-6,360.45	8,866.69	0.00	0.00	0.00
14,600.00	89.72	315.19	4,682.94	6,250.56	-6,430.92	8,966.69	0.00	0.00	0.00
14,700.00	89.72	315.19	4,683.44	6,321.51	-6,501.40	9,066.69	0.00	0.00	0.00
14,800.00	89.72	315.19	4,683.93	6,392.45	-6,571.87	9,166.69	0.00	0.00	0.00
14,900.00	89.72	315.19	4,684.42	6,463.40	-6,642.35	9,266.69	0.00	0.00	0.00
15,000.00	89.72	315.19	4,684.91	6,534.34	-6,712.82	9,366.69	0.00	0.00	0.00
15,100.00	89.72	315.19	4,685.40	6,605.28	-6,783.29	9,466.69	0.00	0.00	0.00
15,200.00	89.72	315.19	4,685.90	6,676.23	-6,853.77	9,566.68	0.00	0.00	0.00
15,300.00	89.72	315.19	4,686.39	6,747.17	-6,924.24	9,666.68	0.00	0.00	0.00
15,400.00	89.72	315.19	4,686.88	6,818.12	-6,994.72	9,766.68	0.00	0.00	0.00
15,500.00	89.72	315.19	4,687.37	6,889.06	-7,065.19	9,866.68	0.00	0.00	0.00
15,600.00	89.72	315.19	4,687.86	6,960.01	-7,135.67	9,966.68	0.00	0.00	0.00
15,700.00	89.72	315.19	4,688.36	7,030.95	-7,206.14	10,066.68	0.00	0.00	0.00
15,800.00	89.72	315.19	4,688.85	7,101.90	-7,276.61	10,166.68	0.00	0.00	0.00



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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)
15,900.00	89.72	315.19	4,689.34	7,172.84	-7,347.09	10,266.68	0.00	0.00	0.00
16,000.00	89.72	315.19	4,689.83	7,243.79	-7,417.56	10,366.67	0.00	0.00	0.00
16,100.00	89.72	315.19	4,690.32	7,314.73	-7,488.04	10,466.67	0.00	0.00	0.00
16,200.00	89.72	315.19	4,690.82	7,385.67	-7,558.51	10,566.67	0.00	0.00	0.00
16,300.00	89.72	315.19	4,691.31	7,456.62	-7,628.99	10,666.67	0.00	0.00	0.00
16,400.00	89.72	315.19	4,691.80	7,527.56	-7,699.46	10,766.67	0.00	0.00	0.00
16,500.00	89.72	315.19	4,692.29	7,598.51	-7,769.94	10,866.67	0.00	0.00	0.00
16,600.00	89.72	315.19	4,692.78	7,669.45	-7,840.41	10,966.67	0.00	0.00	0.00
16,700.00	89.72	315.19	4,693.27	7,740.40	-7,910.88	11,066.67	0.00	0.00	0.00
16,800.00	89.72	315.19	4,693.77	7,811.34	-7,981.36	11,166.66	0.00	0.00	0.00
16,900.00	89.72	315.19	4,694.26	7,882.29	-8,051.83	11,266.66	0.00	0.00	0.00
17,000.00	89.72	315.19	4,694.75	7,953.23	-8,122.31	11,366.66	0.00	0.00	0.00
17,100.00	89.72	315.19	4,695.24	8,024.17	-8,192.78	11,466.66	0.00	0.00	0.00
17,200.00	89.72	315.19	4,695.73	8,095.12	-8,263.26	11,566.66	0.00	0.00	0.00
17,300.00	89.72	315.19	4,696.23	8,166.06	-8,333.73	11,666.66	0.00	0.00	0.00
17,400.00	89.72	315.19	4,696.72	8,237.01	-8,404.20	11,766.66	0.00	0.00	0.00
17,500.00	89.72	315.19	4,697.21	8,307.95	-8,474.68	11,866.66	0.00	0.00	0.00
17,600.00	89.72	315.19	4,697.70	8,378.90	-8,545.15	11,966.66	0.00	0.00	0.00
17,700.00	89.72	315.19	4,698.19	8,449.84	-8,615.63	12,066.65	0.00	0.00	0.00
17,800.00	89.72	315.19	4,698.69	8,520.79	-8,686.10	12,166.65	0.00	0.00	0.00
17,900.00	89.72	315.19	4,699.18	8,591.73	-8,756.58	12,266.65	0.00	0.00	0.00
18,000.00	89.72	315.19	4,699.67	8,662.68	-8,827.05	12,366.65	0.00	0.00	0.00
18,100.00	89.72	315.19	4,700.16	8,733.62	-8,897.53	12,466.65	0.00	0.00	0.00
18,200.00	89.72	315.19	4,700.65	8,804.56	-8,968.00	12,566.65	0.00	0.00	0.00
18,300.00	89.72	315.19	4,701.15	8,875.51	-9,038.47	12,666.65	0.00	0.00	0.00
18,400.00	89.72	315.19	4,701.64	8,946.45	-9,108.95	12,766.65	0.00	0.00	0.00
18,500.00	89.72	315.19	4,702.13	9,017.40	-9,179.42	12,866.64	0.00	0.00	0.00
18,600.00	89.72	315.19	4,702.62	9,088.34	-9,249.90	12,966.64	0.00	0.00	0.00
18,700.00	89.72	315.19	4,703.11	9,159.29	-9,320.37	13,066.64	0.00	0.00	0.00
18,800.00	89.72	315.19	4,703.61	9,230.23	-9,390.85	13,166.64	0.00	0.00	0.00
18,900.00	89.72	315.19	4,704.10	9,301.18	-9,461.32	13,266.64	0.00	0.00	0.00
19,000.00	89.72	315.19	4,704.59	9,372.12	-9,531.79	13,366.64	0.00	0.00	0.00
19,100.00	89.72	315.19	4,705.08	9,443.06	-9,602.27	13,466.64	0.00	0.00	0.00
19,200.00	89.72	315.19	4,705.57	9,514.01	-9,672.74	13,566.64	0.00	0.00	0.00
19,300.00	89.72	315.19	4,706.07	9,584.95	-9,743.22	13,666.63	0.00	0.00	0.00
19,400.00	89.72	315.19	4,706.56	9,655.90	-9,813.69	13,766.63	0.00	0.00	0.00
19,500.00	89.72	315.19	4,707.05	9,726.84	-9,884.17	13,866.63	0.00	0.00	0.00
19,600.00	89.72	315.19	4,707.54	9,797.79	-9,954.64	13,966.63	0.00	0.00	0.00
19,700.00	89.72	315.19	4,708.03	9,868.73	-10,025.11	14,066.63	0.00	0.00	0.00
19,800.00	89.72	315.19	4,708.53	9,939.68	-10,095.59	14,166.63	0.00	0.00	0.00
19,896.47	89.72	315.19	4,709.00	10,008.12	-10,163.58	14,263.10	0.00	0.00	0.00
PBHL/TD @ 19896.47 MD 4709.00 TVD									



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lybrook 79H FTP 131 FI - plan hits target center - Point	0.00	0.01	4,636.68	-420.94	196.37	1,899,149.427	2,757,991.292	36.219314000	-107.715016000
Lybrook 79H vs=0 - plan misses target center by 0.17ft at 5633.20ft MD (4638.83 TVD, -110.89 N, -111.62 E) - Point	0.00	0.01	4,639.00	-110.89	-111.62	1,899,459.472	2,757,683.304	36.220166748	-107.716058875
Lybrook 79H LTP 231 FI - plan hits target center - Point	0.00	0.01	4,709.00	10,008.12	-10,163.58	1,909,578.457	2,747,631.369	36.247993000	-107.750108000

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	13 3/8" Csg	13-3/8	17-1/2	
3,158.12	2,989.00	9 5/8" Csg	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
692.00	692.00	Ojo Alamo		0.28	315.19	
818.06	817.98	Kirtland		0.28	315.19	
1,010.24	1,008.88	Fruitland		0.28	315.19	
1,329.86	1,318.50	Pictured Cliffs		0.28	315.19	
1,519.02	1,494.16	Lewis		0.28	315.19	
1,796.93	1,747.61	Chacra_A		0.28	315.19	
2,978.59	2,825.27	Cliff House_Basal		0.28	315.19	
2,989.53	2,835.25	Menefee		0.28	315.19	
4,019.06	3,813.83	Point Lookout		0.28	315.19	
4,177.08	3,971.82	Mancos		0.28	315.19	
4,520.61	4,304.16	MNCS_A		0.28	315.19	
4,633.06	4,397.46	MNCS_B		0.28	315.19	
4,766.69	4,489.93	MNCS_C		0.28	315.19	
4,849.67	4,535.27	MNCS_Cms		0.28	315.19	
4,849.67	4,535.27	MNCS_Cms @ 0vs		0.28	315.19	



Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
700.00	700.00	0.00	0.00	KOP Begin 3°/100' build	
1,507.28	1,483.46	-135.37	99.65	Begin 24.22° tangent	
3,297.97	3,116.54	-726.92	535.15	Begin 3°/100' drop	
4,105.25	3,900.00	-862.29	634.80	Begin vertical hold	
4,238.98	4,033.73	-862.29	634.80	Begin 10°/100' build	
4,838.98	4,529.93	-659.05	432.90	Begin 60.00° tangent	
4,898.98	4,559.93	-622.18	396.28	Begin 10°/100' build	
5,196.17	4,636.68	-420.94	196.37	Begin 89.72° lateral	
19,896.47	4,709.00	10,008.12	-10,163.58	PBHL/TD @ 19896.47 MD 4709.00 TVD	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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 Unit (79 & 81)				
Site Position:		Northing:	1,899,570.361 usft	Latitude:	36.220471000
From:	Lat/Long	Easting:	2,757,794.923 usft	Longitude:	-107.715680000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Greater Lybrook Unit 079H, Surf loc: 293 FSL 444 FEL Section 18-T23N-R08W					
Well Position	+N/-S	0.00 ft	Northing:	1,899,570.361 usft	Latitude:	36.220471000
	+E/-W	0.00 ft	Easting:	2,757,794.923 usft	Longitude:	-107.715680000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,894.00 ft
Grid Convergence:		0.07 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	6/5/2023	8.58	62.71	49,105.35452208

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	315.19

Plan Survey Tool Program	Date	6/6/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,896.47 rev0 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,507.28	24.22	143.64	1,483.46	-135.37	99.65	3.00	3.00	0.00	143.64	
3,297.97	24.22	143.64	3,116.54	-726.92	535.15	0.00	0.00	0.00	0.00	
4,105.25	0.00	0.00	3,900.00	-862.29	634.80	3.00	-3.00	0.00	180.00	
4,238.98	0.00	0.00	4,033.73	-862.29	634.80	0.00	0.00	0.00	0.00	
4,838.98	60.00	315.19	4,529.93	-659.05	432.90	10.00	10.00	0.00	315.19	
4,898.98	60.00	315.19	4,559.93	-622.18	396.28	0.00	0.00	0.00	0.00	
5,196.17	89.72	315.19	4,636.68	-420.94	196.37	10.00	10.00	0.00	0.00	
19,896.47	89.72	315.19	4,709.00	10,008.12	-10,163.58	0.00	0.00	0.00	0.00	Lybrook 79H LTP 231



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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	0.00	0.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
100.00	0.00	0.00	100.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
200.00	0.00	0.00	200.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
300.00	0.00	0.00	300.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
350.00	0.00	0.00	350.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
13 3/8" Csg									
400.00	0.00	0.00	400.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
500.00	0.00	0.00	500.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
600.00	0.00	0.00	600.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
692.00	0.00	0.00	692.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
Ojo Alamo									
700.00	0.00	0.00	700.00	0.00	0.00	1,899,570.361	2,757,794.923	36.220471000	-107.715680000
KOP Begin 3°/100' build									
800.00	3.00	143.64	799.95	-2.11	1.55	1,899,568.254	2,757,796.475	36.220465205	-107.715674748
818.06	3.54	143.64	817.98	-2.94	2.16	1,899,567.424	2,757,797.086	36.220462924	-107.715672681
Kirtland									
900.00	6.00	143.64	899.63	-8.43	6.20	1,899,561.936	2,757,801.126	36.220447834	-107.715659006
1,000.00	9.00	143.64	998.77	-18.94	13.94	1,899,551.426	2,757,808.863	36.220418936	-107.715632818
1,010.24	9.31	143.64	1,008.88	-20.25	14.91	1,899,550.114	2,757,809.829	36.220415329	-107.715629549
Fruitland									
1,100.00	12.00	143.64	1,097.08	-33.61	24.74	1,899,536.752	2,757,819.666	36.220378589	-107.715596255
1,200.00	15.00	143.64	1,194.31	-52.41	38.58	1,899,517.954	2,757,833.504	36.220326905	-107.715549417
1,300.00	18.00	143.64	1,290.18	-75.28	55.42	1,899,495.085	2,757,850.340	36.220264025	-107.715492433
1,329.86	18.90	143.64	1,318.50	-82.89	61.02	1,899,487.476	2,757,855.942	36.220243104	-107.715473474
Pictured Cliffs									
1,400.00	21.00	143.64	1,384.43	-102.16	75.20	1,899,468.206	2,757,870.128	36.220190120	-107.715425459
1,507.28	24.22	143.64	1,483.46	-135.37	99.65	1,899,434.996	2,757,894.577	36.220098806	-107.715342708
Begin 24.22° tangent									
1,519.02	24.22	143.64	1,494.16	-139.24	102.51	1,899,431.118	2,757,897.432	36.220088144	-107.715333045
Lewis									
1,600.00	24.22	143.64	1,568.01	-165.99	122.20	1,899,404.367	2,757,917.125	36.220014591	-107.715266390
1,700.00	24.22	143.64	1,659.21	-199.03	146.52	1,899,371.332	2,757,941.445	36.219923759	-107.715184076
1,796.93	24.22	143.64	1,747.61	-231.05	170.10	1,899,339.310	2,757,965.019	36.219835714	-107.715104289
Chacra_A									
1,800.00	24.22	143.64	1,750.41	-232.07	170.84	1,899,338.297	2,757,965.765	36.219832927	-107.715101763
1,900.00	24.22	143.64	1,841.61	-265.10	195.16	1,899,305.261	2,757,990.085	36.219742095	-107.715019449
2,000.00	24.22	143.64	1,932.81	-298.14	219.48	1,899,272.226	2,758,014.405	36.219651262	-107.714937136
2,100.00	24.22	143.64	2,024.01	-331.17	243.80	1,899,239.191	2,758,038.724	36.219560430	-107.714854823
2,200.00	24.22	143.64	2,115.21	-364.21	268.12	1,899,206.156	2,758,063.044	36.219469598	-107.714772511
2,300.00	24.22	143.64	2,206.41	-397.24	292.44	1,899,173.120	2,758,087.364	36.219378765	-107.714690198
2,400.00	24.22	143.64	2,297.60	-430.28	316.76	1,899,140.085	2,758,111.684	36.219287933	-107.714607886
2,500.00	24.22	143.64	2,388.80	-463.31	341.08	1,899,107.050	2,758,136.004	36.219197100	-107.714525574
2,600.00	24.22	143.64	2,480.00	-496.35	365.40	1,899,074.015	2,758,160.324	36.219106268	-107.714443262
2,700.00	24.22	143.64	2,571.20	-529.38	389.72	1,899,040.979	2,758,184.643	36.219015435	-107.714360950
2,800.00	24.22	143.64	2,662.40	-562.42	414.04	1,899,007.944	2,758,208.963	36.218924602	-107.714278638
2,900.00	24.22	143.64	2,753.60	-595.45	438.36	1,898,974.909	2,758,233.283	36.218833770	-107.714196327
2,978.59	24.22	143.64	2,825.27	-621.42	457.47	1,898,948.947	2,758,252.396	36.218762385	-107.714131639
Cliff House_Basal									
2,989.53	24.22	143.64	2,835.25	-625.03	460.13	1,898,945.333	2,758,255.057	36.218752447	-107.714122633
Menefee									
3,000.00	24.22	143.64	2,844.80	-628.49	462.68	1,898,941.874	2,758,257.603	36.218742937	-107.714114015
3,100.00	24.22	143.64	2,936.00	-661.52	487.00	1,898,908.839	2,758,281.923	36.218652104	-107.714031704



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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	
3,158.12	24.22	143.64	2,989.00	-680.72	501.14	1,898,889.639	2,758,296.058	36.218599312	-107.713983865	
9 5/8" Csg										
3,200.00	24.22	143.64	3,027.19	-694.56	511.32	1,898,875.803	2,758,306.243	36.218561271	-107.713949394	
3,297.97	24.22	143.64	3,116.54	-726.92	535.15	1,898,843.439	2,758,330.069	36.218472282	-107.713868754	
Begin 3°/100' drop										
3,300.00	24.16	143.64	3,118.39	-727.59	535.64	1,898,842.769	2,758,330.562	36.218470440	-107.713867085	
3,400.00	21.16	143.64	3,210.67	-758.61	558.48	1,898,811.750	2,758,353.397	36.218385151	-107.713789798	
3,500.00	18.16	143.64	3,304.83	-785.70	578.42	1,898,784.663	2,758,373.339	36.218310672	-107.713722308	
3,600.00	15.16	143.64	3,400.62	-808.78	595.41	1,898,761.581	2,758,390.331	36.218247207	-107.713664798	
3,700.00	12.16	143.64	3,497.78	-827.79	609.41	1,898,742.568	2,758,404.328	36.218194930	-107.713617426	
3,800.00	9.16	143.64	3,596.04	-842.69	620.37	1,898,727.677	2,758,415.291	36.218153984	-107.713580322	
3,900.00	6.16	143.64	3,695.14	-853.42	628.27	1,898,716.947	2,758,423.190	36.218124482	-107.713553588	
4,000.00	3.16	143.64	3,794.80	-859.95	633.08	1,898,710.408	2,758,428.003	36.218106504	-107.713537297	
4,019.06	2.59	143.64	3,813.83	-860.72	633.65	1,898,709.639	2,758,428.569	36.218104389	-107.713535381	
Point Lookout										
4,105.25	0.00	0.00	3,900.00	-862.29	634.80	1,898,708.073	2,758,429.722	36.218100083	-107.713531479	
Begin vertical hold										
4,177.08	0.00	0.00	3,971.82	-862.29	634.80	1,898,708.073	2,758,429.722	36.218100083	-107.713531479	
Mancos										
4,200.00	0.00	0.00	3,994.75	-862.29	634.80	1,898,708.073	2,758,429.722	36.218100083	-107.713531479	
4,238.98	0.00	0.00	4,033.73	-862.29	634.80	1,898,708.073	2,758,429.722	36.218100083	-107.713531479	
Begin 10°/100' build										
4,250.00	1.10	315.19	4,044.75	-862.21	634.73	1,898,708.148	2,758,429.648	36.218100290	-107.713531731	
4,300.00	6.10	315.19	4,094.63	-859.99	632.51	1,898,710.376	2,758,427.435	36.218106417	-107.713539224	
4,350.00	11.10	315.19	4,144.05	-854.68	627.24	1,898,715.680	2,758,422.166	36.218121004	-107.713557063	
4,400.00	16.10	315.19	4,192.63	-846.34	618.96	1,898,724.019	2,758,413.882	36.218143941	-107.713585113	
4,450.00	21.10	315.19	4,240.01	-835.03	607.72	1,898,735.331	2,758,402.645	36.218175053	-107.713623160	
4,500.00	26.10	315.19	4,285.81	-820.83	593.62	1,898,749.528	2,758,388.541	36.218214103	-107.713670915	
4,520.61	28.16	315.19	4,304.16	-814.17	586.99	1,898,756.197	2,758,381.916	36.218232447	-107.713693347	
MNCS_A										
4,550.00	31.10	315.19	4,329.70	-803.86	576.76	1,898,766.504	2,758,371.678	36.218260794	-107.713728015	
4,600.00	36.10	315.19	4,371.33	-784.23	557.26	1,898,786.129	2,758,352.183	36.218314771	-107.713794024	
4,633.06	39.41	315.19	4,397.46	-769.88	543.00	1,898,800.486	2,758,337.920	36.218354261	-107.713842316	
MNCS_B										
4,650.00	41.10	315.19	4,410.39	-762.11	535.28	1,898,808.253	2,758,330.205	36.218375623	-107.713868440	
4,700.00	46.10	315.19	4,446.59	-737.65	510.99	1,898,832.708	2,758,305.911	36.218442886	-107.713950698	
4,750.00	51.10	315.19	4,479.64	-711.05	484.56	1,898,859.309	2,758,279.486	36.218516049	-107.714040171	
4,766.69	52.77	315.19	4,489.93	-701.73	475.30	1,898,868.631	2,758,270.226	36.218541689	-107.714071526	
MNCS_C										
4,800.00	56.10	315.19	4,509.30	-682.51	456.21	1,898,887.852	2,758,251.132	36.218594555	-107.714136178	
4,838.98	60.00	315.19	4,529.93	-659.05	432.90	1,898,911.315	2,758,227.824	36.218659089	-107.714215098	
Begin 60.00° tangent										
4,849.67	60.00	315.19	4,535.27	-652.48	426.38	1,898,917.880	2,758,221.302	36.218677147	-107.714237183	
MNCS_Cms - MNCS_Cms @ 0vs										
4,898.98	60.00	315.19	4,559.93	-622.18	396.28	1,898,948.179	2,758,191.204	36.218760480	-107.714339094	
Begin 10°/100' build										
4,900.00	60.10	315.19	4,560.43	-621.56	395.66	1,898,948.803	2,758,190.584	36.218762198	-107.714341195	
4,950.00	65.10	315.19	4,583.43	-590.08	364.39	1,898,980.286	2,758,159.308	36.218848791	-107.714447093	
5,000.00	70.10	315.19	4,602.48	-557.29	331.82	1,899,013.072	2,758,126.740	36.218938966	-107.714557371	
5,050.00	75.10	315.19	4,617.43	-523.45	298.20	1,899,046.911	2,758,093.125	36.219032038	-107.714671192	
5,100.00	80.10	315.19	4,628.16	-488.82	263.80	1,899,081.545	2,758,058.720	36.219127296	-107.714787688	
5,150.00	85.10	315.19	4,634.60	-453.65	228.86	1,899,116.711	2,758,023.787	36.219224018	-107.714905973	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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
5,196.17	89.72	315.19	4,636.68	-420.94	196.37	1,899,149.421	2,757,991.294	36.219313984	-107.715015996
Begin 89.72° lateral									
5,200.00	89.72	315.19	4,636.70	-418.22	193.67	1,899,152.142	2,757,988.591	36.219321466	-107.715025146
5,300.00	89.72	315.19	4,637.19	-347.28	123.19	1,899,223.086	2,757,918.117	36.219516592	-107.715263776
5,400.00	89.72	315.19	4,637.68	-276.33	52.72	1,899,294.030	2,757,847.643	36.219711718	-107.715502407
5,500.00	89.72	315.19	4,638.18	-205.39	-17.76	1,899,364.975	2,757,777.168	36.219906844	-107.715741039
5,600.00	89.72	315.19	4,638.67	-134.44	-88.23	1,899,435.919	2,757,706.694	36.220101969	-107.715979672
5,700.00	89.72	315.19	4,639.16	-63.50	-158.70	1,899,506.863	2,757,636.220	36.220297093	-107.716218307
5,800.00	89.72	315.19	4,639.65	7.45	-229.18	1,899,577.808	2,757,565.746	36.220492217	-107.716456942
5,900.00	89.72	315.19	4,640.14	78.39	-299.65	1,899,648.752	2,757,495.272	36.220687341	-107.716695579
6,000.00	89.72	315.19	4,640.64	149.34	-370.13	1,899,719.696	2,757,424.797	36.220882464	-107.716934217
6,100.00	89.72	315.19	4,641.13	220.28	-440.60	1,899,790.641	2,757,354.323	36.221077586	-107.717172856
6,200.00	89.72	315.19	4,641.62	291.22	-511.08	1,899,861.585	2,757,283.849	36.221272708	-107.717411496
6,300.00	89.72	315.19	4,642.11	362.17	-581.55	1,899,932.529	2,757,213.375	36.221467830	-107.717650138
6,400.00	89.72	315.19	4,642.60	433.11	-652.02	1,900,003.474	2,757,142.900	36.221662951	-107.717888781
6,500.00	89.72	315.19	4,643.10	504.06	-722.50	1,900,074.418	2,757,072.426	36.221858072	-107.718127425
6,600.00	89.72	315.19	4,643.59	575.00	-792.97	1,900,145.362	2,757,001.952	36.222053192	-107.718366070
6,700.00	89.72	315.19	4,644.08	645.95	-863.45	1,900,216.307	2,756,931.478	36.222248311	-107.718604716
6,800.00	89.72	315.19	4,644.57	716.89	-933.92	1,900,287.251	2,756,861.004	36.222443431	-107.718843363
6,900.00	89.72	315.19	4,645.06	787.84	-1,004.40	1,900,358.196	2,756,790.529	36.222638549	-107.719082011
7,000.00	89.72	315.19	4,645.56	858.78	-1,074.87	1,900,429.140	2,756,720.055	36.222833668	-107.719320661
7,100.00	89.72	315.19	4,646.05	929.72	-1,145.34	1,900,500.084	2,756,649.581	36.223028785	-107.719559312
7,200.00	89.72	315.19	4,646.54	1,000.67	-1,215.82	1,900,571.029	2,756,579.107	36.223223903	-107.719797964
7,300.00	89.72	315.19	4,647.03	1,071.61	-1,286.29	1,900,641.973	2,756,508.632	36.223419019	-107.720036618
7,400.00	89.72	315.19	4,647.52	1,142.56	-1,356.77	1,900,712.917	2,756,438.158	36.223614136	-107.720275272
7,500.00	89.72	315.19	4,648.01	1,213.50	-1,427.24	1,900,783.862	2,756,367.684	36.223809252	-107.720513928
7,600.00	89.72	315.19	4,648.51	1,284.45	-1,497.72	1,900,854.806	2,756,297.210	36.224004367	-107.720752585
7,700.00	89.72	315.19	4,649.00	1,355.39	-1,568.19	1,900,925.750	2,756,226.736	36.224199482	-107.720991243
7,800.00	89.72	315.19	4,649.49	1,426.34	-1,638.67	1,900,996.695	2,756,156.261	36.224394596	-107.721229902
7,900.00	89.72	315.19	4,649.98	1,497.28	-1,709.14	1,901,067.639	2,756,085.787	36.224589709	-107.721468563
8,000.00	89.72	315.19	4,650.47	1,568.23	-1,779.61	1,901,138.583	2,756,015.313	36.224784822	-107.721707224
8,100.00	89.72	315.19	4,650.97	1,639.17	-1,850.09	1,901,209.528	2,755,944.839	36.224979935	-107.721945887
8,200.00	89.72	315.19	4,651.46	1,710.11	-1,920.56	1,901,280.472	2,755,874.365	36.225175048	-107.722184551
8,300.00	89.72	315.19	4,651.95	1,781.06	-1,991.04	1,901,351.417	2,755,803.890	36.225370160	-107.722423217
8,400.00	89.72	315.19	4,652.44	1,852.00	-2,061.51	1,901,422.361	2,755,733.416	36.225565271	-107.722661883
8,500.00	89.72	315.19	4,652.93	1,922.95	-2,131.99	1,901,493.305	2,755,662.922	36.225760382	-107.722900551
8,600.00	89.72	315.19	4,653.43	1,993.89	-2,202.46	1,901,564.250	2,755,592.468	36.225955493	-107.723139219
8,700.00	89.72	315.19	4,653.92	2,064.84	-2,272.93	1,901,635.194	2,755,521.993	36.226150603	-107.723377889
8,800.00	89.72	315.19	4,654.41	2,135.78	-2,343.41	1,901,706.138	2,755,451.519	36.226345713	-107.723616561
8,900.00	89.72	315.19	4,654.90	2,206.73	-2,413.88	1,901,777.083	2,755,381.045	36.226540822	-107.723855233
9,000.00	89.72	315.19	4,655.39	2,277.67	-2,484.36	1,901,848.027	2,755,310.571	36.226735930	-107.724093907
9,100.00	89.72	315.19	4,655.89	2,348.61	-2,554.83	1,901,918.971	2,755,240.097	36.226931038	-107.724332581
9,200.00	89.72	315.19	4,656.38	2,419.56	-2,625.31	1,901,989.916	2,755,169.622	36.227126146	-107.724571257
9,300.00	89.72	315.19	4,656.87	2,490.50	-2,695.78	1,902,060.860	2,755,099.148	36.227321253	-107.724809934
9,400.00	89.72	315.19	4,657.36	2,561.45	-2,766.26	1,902,131.804	2,755,028.674	36.227516360	-107.725048613
9,500.00	89.72	315.19	4,657.85	2,632.39	-2,836.73	1,902,202.749	2,754,958.200	36.227711466	-107.725287292
9,600.00	89.72	315.19	4,658.35	2,703.34	-2,907.20	1,902,273.693	2,754,887.725	36.227906572	-107.725525973
9,700.00	89.72	315.19	4,658.84	2,774.28	-2,977.68	1,902,344.637	2,754,817.251	36.228101677	-107.725764654
9,800.00	89.72	315.19	4,659.33	2,845.23	-3,048.15	1,902,415.582	2,754,746.777	36.228296782	-107.726003338
9,900.00	89.72	315.19	4,659.82	2,916.17	-3,118.63	1,902,486.526	2,754,676.303	36.228491886	-107.726242022
10,000.00	89.72	315.19	4,660.31	2,987.12	-3,189.10	1,902,557.471	2,754,605.829	36.228686990	-107.726480707
10,100.00	89.72	315.19	4,660.81	3,058.06	-3,259.58	1,902,628.415	2,754,535.354	36.228882093	-107.726719394
10,200.00	89.72	315.19	4,661.30	3,129.00	-3,330.05	1,902,699.359	2,754,464.880	36.229077196	-107.726958081
10,300.00	89.72	315.19	4,661.79	3,199.95	-3,400.52	1,902,770.304	2,754,394.406	36.229272299	-107.727196770



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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
10,400.00	89.72	315.19	4,662.28	3,270.89	-3,471.00	1,902,841.248	2,754,323.932	36.229467401		-107.727435461
10,500.00	89.72	315.19	4,662.77	3,341.84	-3,541.47	1,902,912.192	2,754,253.457	36.229662502		-107.727674152
10,600.00	89.72	315.19	4,663.27	3,412.78	-3,611.95	1,902,983.137	2,754,182.983	36.229857603		-107.727912844
10,700.00	89.72	315.19	4,663.76	3,483.73	-3,682.42	1,903,054.081	2,754,112.509	36.230052703		-107.728151538
10,800.00	89.72	315.19	4,664.25	3,554.67	-3,752.90	1,903,125.025	2,754,042.035	36.230247803		-107.728390233
10,900.00	89.72	315.19	4,664.74	3,625.62	-3,823.37	1,903,195.970	2,753,971.561	36.230442903		-107.728628929
11,000.00	89.72	315.19	4,665.23	3,696.56	-3,893.85	1,903,266.914	2,753,901.086	36.230638002		-107.728867626
11,100.00	89.72	315.19	4,665.73	3,767.50	-3,964.32	1,903,337.858	2,753,830.612	36.230833100		-107.729106325
11,200.00	89.72	315.19	4,666.22	3,838.45	-4,034.79	1,903,408.803	2,753,760.138	36.231028198		-107.729345024
11,300.00	89.72	315.19	4,666.71	3,909.39	-4,105.27	1,903,479.747	2,753,689.664	36.231223296		-107.729583725
11,400.00	89.72	315.19	4,667.20	3,980.34	-4,175.74	1,903,550.691	2,753,619.189	36.231418393		-107.729822427
11,500.00	89.72	315.19	4,667.69	4,051.28	-4,246.22	1,903,621.636	2,753,548.715	36.231613490		-107.730061130
11,600.00	89.72	315.19	4,668.19	4,122.23	-4,316.69	1,903,692.580	2,753,478.241	36.231808586		-107.730299835
11,700.00	89.72	315.19	4,668.68	4,193.17	-4,387.17	1,903,763.525	2,753,407.767	36.232003681		-107.730538540
11,800.00	89.72	315.19	4,669.17	4,264.12	-4,457.64	1,903,834.469	2,753,337.293	36.232198777		-107.730777247
11,900.00	89.72	315.19	4,669.66	4,335.06	-4,528.11	1,903,905.413	2,753,266.818	36.232393871		-107.731015955
12,000.00	89.72	315.19	4,670.15	4,406.01	-4,598.59	1,903,976.358	2,753,196.344	36.232588966		-107.731254664
12,100.00	89.72	315.19	4,670.64	4,476.95	-4,669.06	1,904,047.302	2,753,125.870	36.232784059		-107.731493374
12,200.00	89.72	315.19	4,671.14	4,547.89	-4,739.54	1,904,118.246	2,753,055.396	36.232979152		-107.731732086
12,300.00	89.72	315.19	4,671.63	4,618.84	-4,810.01	1,904,189.191	2,752,984.922	36.233174245		-107.731970799
12,400.00	89.72	315.19	4,672.12	4,689.78	-4,880.49	1,904,260.135	2,752,914.447	36.233369338		-107.732209512
12,500.00	89.72	315.19	4,672.61	4,760.73	-4,950.96	1,904,331.079	2,752,843.973	36.233564429		-107.732448227
12,600.00	89.72	315.19	4,673.10	4,831.67	-5,021.43	1,904,402.024	2,752,773.499	36.233759521		-107.732686944
12,700.00	89.72	315.19	4,673.60	4,902.62	-5,091.91	1,904,472.968	2,752,703.025	36.233954612		-107.732925661
12,800.00	89.72	315.19	4,674.09	4,973.56	-5,162.38	1,904,543.912	2,752,632.550	36.234149702		-107.733164380
12,900.00	89.72	315.19	4,674.58	5,044.51	-5,232.86	1,904,614.857	2,752,562.076	36.234344792		-107.733403100
13,000.00	89.72	315.19	4,675.07	5,115.45	-5,303.33	1,904,685.801	2,752,491.602	36.234539881		-107.733641820
13,100.00	89.72	315.19	4,675.56	5,186.39	-5,373.81	1,904,756.746	2,752,421.128	36.234734970		-107.733880543
13,200.00	89.72	315.19	4,676.06	5,257.34	-5,444.28	1,904,827.690	2,752,350.654	36.234930058		-107.734119266
13,300.00	89.72	315.19	4,676.55	5,328.28	-5,514.76	1,904,898.634	2,752,280.179	36.235125146		-107.734357991
13,400.00	89.72	315.19	4,677.04	5,399.23	-5,585.23	1,904,969.579	2,752,209.705	36.235320234		-107.734596716
13,500.00	89.72	315.19	4,677.53	5,470.17	-5,655.70	1,905,040.523	2,752,139.231	36.235515321		-107.734835443
13,600.00	89.72	315.19	4,678.02	5,541.12	-5,726.18	1,905,111.467	2,752,068.757	36.235710407		-107.735074171
13,700.00	89.72	315.19	4,678.52	5,612.06	-5,796.65	1,905,182.412	2,751,998.282	36.235905493		-107.735312901
13,800.00	89.72	315.19	4,679.01	5,683.01	-5,867.13	1,905,253.356	2,751,927.808	36.236100579		-107.735551631
13,900.00	89.72	315.19	4,679.50	5,753.95	-5,937.60	1,905,324.300	2,751,857.334	36.236295664		-107.735790363
14,000.00	89.72	315.19	4,679.99	5,824.90	-6,008.08	1,905,395.246	2,751,786.860	36.236490749		-107.736029095
14,100.00	89.72	315.19	4,680.48	5,895.84	-6,078.55	1,905,466.190	2,751,716.386	36.236685833		-107.736267830
14,200.00	89.72	315.19	4,680.98	5,966.78	-6,149.02	1,905,537.134	2,751,645.911	36.236880916		-107.736506565
14,300.00	89.72	315.19	4,681.47	6,037.73	-6,219.50	1,905,608.079	2,751,575.437	36.237076000		-107.736745301
14,400.00	89.72	315.19	4,681.96	6,108.67	-6,289.97	1,905,679.023	2,751,504.963	36.237271082		-107.736984039
14,500.00	89.72	315.19	4,682.45	6,179.62	-6,360.45	1,905,749.967	2,751,434.489	36.237466164		-107.737222777
14,600.00	89.72	315.19	4,682.94	6,250.56	-6,430.92	1,905,820.912	2,751,364.014	36.237661246		-107.737461517
14,700.00	89.72	315.19	4,683.44	6,321.51	-6,501.40	1,905,891.856	2,751,293.540	36.237856327		-107.737700259
14,800.00	89.72	315.19	4,683.93	6,392.45	-6,571.87	1,905,962.801	2,751,223.066	36.238051408		-107.737939001
14,900.00	89.72	315.19	4,684.42	6,463.40	-6,642.35	1,906,033.745	2,751,152.592	36.238246488		-107.738177744
15,000.00	89.72	315.19	4,684.91	6,534.34	-6,712.82	1,906,104.689	2,751,082.118	36.238441568		-107.738416489
15,100.00	89.72	315.19	4,685.40	6,605.28	-6,783.29	1,906,175.634	2,751,011.643	36.238636647		-107.738655235
15,200.00	89.72	315.19	4,685.90	6,676.23	-6,853.77	1,906,246.578	2,750,941.169	36.238831726		-107.738893982
15,300.00	89.72	315.19	4,686.39	6,747.17	-6,924.24	1,906,317.522	2,750,870.695	36.239026805		-107.739132730
15,400.00	89.72	315.19	4,686.88	6,818.12	-6,994.72	1,906,388.467	2,750,800.221	36.239221882		-107.739371480
15,500.00	89.72	315.19	4,687.37	6,889.06	-7,065.19	1,906,459.411	2,750,729.746	36.239416960		-107.739610230
15,600.00	89.72	315.19	4,687.86	6,960.01	-7,135.67	1,906,530.355	2,750,659.272	36.239612037		-107.739848982
15,700.00	89.72	315.19	4,688.36	7,030.95	-7,206.14	1,906,601.300	2,750,588.798	36.239807113		-107.740087735
15,800.00	89.72	315.19	4,688.85	7,101.90	-7,276.61	1,906,672.244	2,750,518.324	36.240002189		-107.740326489



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	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	
15,900.00	89.72	315.19	4,689.34	7,172.84	-7,347.09	1,906,743.188	2,750,447.850	36.240197264	-107.740565245	
16,000.00	89.72	315.19	4,689.83	7,243.79	-7,417.56	1,906,814.133	2,750,377.375	36.240392339	-107.740804001	
16,100.00	89.72	315.19	4,690.32	7,314.73	-7,488.04	1,906,885.077	2,750,306.901	36.240587414	-107.741042759	
16,200.00	89.72	315.19	4,690.82	7,385.67	-7,558.51	1,906,956.022	2,750,236.427	36.240782488	-107.741281518	
16,300.00	89.72	315.19	4,691.31	7,456.62	-7,628.99	1,907,026.966	2,750,165.953	36.240977561	-107.741520278	
16,400.00	89.72	315.19	4,691.80	7,527.56	-7,699.46	1,907,097.910	2,750,095.479	36.241172635	-107.741759039	
16,500.00	89.72	315.19	4,692.29	7,598.51	-7,769.94	1,907,168.855	2,750,025.004	36.241367707	-107.741997802	
16,600.00	89.72	315.19	4,692.78	7,669.45	-7,840.41	1,907,239.799	2,749,954.530	36.241562779	-107.742236566	
16,700.00	89.72	315.19	4,693.27	7,740.40	-7,910.88	1,907,310.743	2,749,884.056	36.241757851	-107.742475331	
16,800.00	89.72	315.19	4,693.77	7,811.34	-7,981.36	1,907,381.688	2,749,813.582	36.241952922	-107.742714097	
16,900.00	89.72	315.19	4,694.26	7,882.29	-8,051.83	1,907,452.632	2,749,743.107	36.242147993	-107.742952864	
17,000.00	89.72	315.19	4,694.75	7,953.23	-8,122.31	1,907,523.576	2,749,672.633	36.242343063	-107.743191632	
17,100.00	89.72	315.19	4,695.24	8,024.17	-8,192.78	1,907,594.521	2,749,602.159	36.242538132	-107.743430402	
17,200.00	89.72	315.19	4,695.73	8,095.12	-8,263.26	1,907,665.465	2,749,531.685	36.242733202	-107.743669173	
17,300.00	89.72	315.19	4,696.23	8,166.06	-8,333.73	1,907,736.409	2,749,461.211	36.242928270	-107.743907945	
17,400.00	89.72	315.19	4,696.72	8,237.01	-8,404.20	1,907,807.354	2,749,390.736	36.243123338	-107.744146718	
17,500.00	89.72	315.19	4,697.21	8,307.95	-8,474.68	1,907,878.298	2,749,320.262	36.243318406	-107.744385492	
17,600.00	89.72	315.19	4,697.70	8,378.90	-8,545.15	1,907,949.242	2,749,249.788	36.243513474	-107.744624268	
17,700.00	89.72	315.19	4,698.19	8,449.84	-8,615.63	1,908,020.187	2,749,179.314	36.243708540	-107.744863044	
17,800.00	89.72	315.19	4,698.69	8,520.79	-8,686.10	1,908,091.131	2,749,108.839	36.243903607	-107.745101822	
17,900.00	89.72	315.19	4,699.18	8,591.73	-8,756.58	1,908,162.076	2,749,038.365	36.244098672	-107.745340601	
18,000.00	89.72	315.19	4,699.67	8,662.68	-8,827.05	1,908,233.020	2,748,967.891	36.244293738	-107.745579382	
18,100.00	89.72	315.19	4,700.16	8,733.62	-8,897.53	1,908,303.964	2,748,897.417	36.244488803	-107.745818163	
18,200.00	89.72	315.19	4,700.65	8,804.56	-8,968.00	1,908,374.909	2,748,826.943	36.244683867	-107.746056946	
18,300.00	89.72	315.19	4,701.15	8,875.51	-9,038.47	1,908,445.853	2,748,756.468	36.244878931	-107.746295730	
18,400.00	89.72	315.19	4,701.64	8,946.45	-9,108.95	1,908,516.797	2,748,685.994	36.245073994	-107.746534515	
18,500.00	89.72	315.19	4,702.13	9,017.40	-9,179.42	1,908,587.742	2,748,615.520	36.245269057	-107.746773301	
18,600.00	89.72	315.19	4,702.62	9,088.34	-9,249.90	1,908,658.686	2,748,545.046	36.245464120	-107.747012088	
18,700.00	89.72	315.19	4,703.11	9,159.29	-9,320.37	1,908,729.630	2,748,474.571	36.245659182	-107.747250877	
18,800.00	89.72	315.19	4,703.61	9,230.23	-9,390.85	1,908,800.575	2,748,404.097	36.245854243	-107.747489667	
18,900.00	89.72	315.19	4,704.10	9,301.18	-9,461.32	1,908,871.519	2,748,333.623	36.246049304	-107.747728458	
19,000.00	89.72	315.19	4,704.59	9,372.12	-9,531.79	1,908,942.463	2,748,263.149	36.246244365	-107.747967250	
19,100.00	89.72	315.19	4,705.08	9,443.06	-9,602.27	1,909,013.408	2,748,192.675	36.246439425	-107.748206043	
19,200.00	89.72	315.19	4,705.57	9,514.01	-9,672.74	1,909,084.352	2,748,122.200	36.246634484	-107.748444838	
19,300.00	89.72	315.19	4,706.07	9,584.95	-9,743.22	1,909,155.296	2,748,051.726	36.246829543	-107.748683634	
19,400.00	89.72	315.19	4,706.56	9,655.90	-9,813.69	1,909,226.241	2,747,981.252	36.247024602	-107.748922431	
19,500.00	89.72	315.19	4,707.05	9,726.84	-9,884.17	1,909,297.185	2,747,910.778	36.247219660	-107.749161229	
19,600.00	89.72	315.19	4,707.54	9,797.79	-9,954.64	1,909,368.130	2,747,840.303	36.247414718	-107.749400028	
19,700.00	89.72	315.19	4,708.03	9,868.73	-10,025.11	1,909,439.074	2,747,769.829	36.247609775	-107.749638828	
19,800.00	89.72	315.19	4,708.53	9,939.68	-10,095.59	1,909,510.018	2,747,699.355	36.247804832	-107.749877630	
19,896.47	89.72	315.19	4,709.00	10,008.12	-10,163.58	1,909,578.457	2,747,631.369	36.247993000	-107.750108000	
PBHL/TD @ 19896.47 MD 4709.00 TVD										



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lybrook 79H FTP 131 FI - plan hits target center - Point	0.00	0.01	4,636.68	-420.94	196.37	1,899,149.427	2,757,991.292	36.219314000	-107.715016000
Lybrook 79H LTP 231 FI - plan hits target center - Point	0.00	0.01	4,709.00	10,008.12	-10,163.58	1,909,578.457	2,747,631.369	36.247993000	-107.750108000
Lybrook 79H vs=0 - plan misses target center by 0.17ft at 5633.20ft MD (4638.83 TVD, -110.89 N, -111.62 E) - Point	0.00	0.01	4,639.00	-110.89	-111.62	1,899,459.472	2,757,683.304	36.220166748	-107.716058875

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	13 3/8" Csg	13-3/8	17-1/2	
3,158.12	2,989.00	9 5/8" Csg	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
692.00	692.00	Ojo Alamo		0.28	315.19	
818.06	817.98	Kirtland		0.28	315.19	
1,010.24	1,008.88	Fruitland		0.28	315.19	
1,329.86	1,318.50	Pictured Cliffs		0.28	315.19	
1,519.02	1,494.16	Lewis		0.28	315.19	
1,796.93	1,747.61	Chacra_A		0.28	315.19	
2,978.59	2,825.27	Cliff House_Basal		0.28	315.19	
2,989.53	2,835.25	Menefee		0.28	315.19	
4,019.06	3,813.83	Point Lookout		0.28	315.19	
4,177.08	3,971.82	Mancos		0.28	315.19	
4,520.61	4,304.16	MNCS_A		0.28	315.19	
4,633.06	4,397.46	MNCS_B		0.28	315.19	
4,766.69	4,489.93	MNCS_C		0.28	315.19	
4,849.67	4,535.27	MNCS_Cms		0.28	315.19	
4,849.67	4,535.27	MNCS_Cms @ 0vs		0.28	315.19	



Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6894+25 @ 6919.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6894+25 @ 6919.00ft
Site:	Greater Lybrook Unit (79 & 81)	North Reference:	Grid
Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
700.00	700.00	0.00	0.00	KOP Begin 3°/100' build	
1,507.28	1,483.46	-135.37	99.65	Begin 24.22° tangent	
3,297.97	3,116.54	-726.92	535.15	Begin 3°/100' drop	
4,105.25	3,900.00	-862.29	634.80	Begin vertical hold	
4,238.98	4,033.73	-862.29	634.80	Begin 10°/100' build	
4,838.98	4,529.93	-659.05	432.90	Begin 60.00° tangent	
4,898.98	4,559.93	-622.18	396.28	Begin 10°/100' build	
5,196.17	4,636.68	-420.94	196.37	Begin 89.72° lateral	
19,896.47	4,709.00	10,008.12	-10,163.58	PBHL/TD @ 19896.47 MD 4709.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference	rev0		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 2,189.65ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	6/6/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	19,896.47	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 Unit (79 & 81)						
Greater Lybrook Unit 081H - Original Hole - rev0	816.97	818.15	19.99	14.62	3.720	CC
Greater Lybrook Unit 081H - Original Hole - rev0	900.00	901.89	20.40	14.47	3.444	ES
Greater Lybrook Unit 081H - Original Hole - rev0	18,800.00	19,854.81	1,193.12	536.51	1.817	Level 3<2.00, SF
Rodeo Unit						
Rodeo Unit #500H - Original Hole - Surveys Original Hole	444.08	442.21	38.64	37.02	23.858	CC, ES
Rodeo Unit #500H - Original Hole - Surveys Original Hole	1,300.00	1,283.18	87.36	79.35	10.904	SF
Rodeo Unit #501H - Original Hole - Surveys Original Hole	309.72	307.59	20.59	19.70	23.147	CC, ES
Rodeo Unit #501H - Original Hole - Surveys Original Hole	1,500.00	1,481.76	55.47	45.35	5.482	SF

Offset Design:	Greater Lybrook Unit (79 & 81) - Greater Lybrook Unit 081H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program:	0-MWD												Offset Well Error:	0.00 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset 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	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-58.39	10.54	-17.12	20.10					
100.00	100.00	100.00	100.00	0.13	0.13	-58.39	10.54	-17.12	20.10	19.83	0.27	74.772		
200.00	200.00	200.00	200.00	0.49	0.49	-58.39	10.54	-17.12	20.10	19.12	0.99	20.392		
300.00	300.00	300.00	300.00	0.85	0.85	-58.39	10.54	-17.12	20.10	18.40	1.70	11.806		
400.00	400.00	400.00	400.00	1.21	1.21	-58.39	10.54	-17.12	20.10	17.68	2.42	8.308		
500.00	500.00	500.00	500.00	1.57	1.57	-58.39	10.54	-17.12	20.10	16.97	3.14	6.409		
600.00	600.00	600.00	600.00	1.93	1.93	-58.39	10.54	-17.12	20.10	16.25	3.85	5.217		
700.00	700.00	700.00	700.00	2.29	2.29	-58.39	10.54	-17.12	20.10	15.53	4.57	4.398		
800.00	799.95	801.02	800.97	2.63	2.64	162.39	9.63	-14.61	20.00	14.74	5.26	3.802		
816.97	816.89	818.15	818.07	2.69	2.70	164.02	9.30	-13.68	19.99	14.62	5.37	3.720	CC	
900.00	899.63	901.89	901.51	2.97	2.99	175.52	6.94	-7.09	20.40	14.47	5.92	3.444	ES	
1,000.00	998.77	1,002.47	1,001.21	3.32	3.35	-165.51	2.46	5.38	23.18	16.56	6.62	3.504		
1,100.00	1,097.08	1,102.63	1,099.66	3.70	3.74	-147.57	-3.74	22.68	30.05	22.67	7.38	4.072		
1,200.00	1,194.31	1,202.24	1,196.47	4.12	4.17	-134.70	-11.64	44.68	41.28	33.06	8.23	5.019		
1,300.00	1,290.18	1,301.17	1,291.29	4.59	4.64	-126.29	-21.15	71.20	56.39	47.23	9.16	6.157		
1,400.00	1,384.43	1,399.32	1,383.80	5.12	5.18	-120.73	-32.22	102.05	74.92	64.72	10.20	7.348		
1,500.00	1,476.81	1,496.60	1,473.70	5.73	5.78	-116.87	-44.75	137.00	96.54	85.19	11.35	8.503		
1,600.00	1,568.01	1,593.01	1,560.82	6.39	6.45	-113.69	-58.69	175.84	120.18	107.55	12.63	9.515		
1,700.00	1,659.21	1,688.35	1,644.82	7.08	7.21	-109.68	-73.91	218.27	144.95	130.95	14.00	10.354		

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook Unit (79 & 81) - Greater Lybrook Unit 081H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program:		0-MWD						Rule Assigned:					Offset Well Error:	0.00 ft
Reference	Offset	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)			
1,800.00	1,750.41	1,782.18	1,725.19	7.79	8.05	-105.31	-90.26	263.83	171.44	156.02	15.42	11.118		
1,900.00	1,841.61	1,874.09	1,801.53	8.51	8.96	-100.90	-107.54	312.01	200.21	183.36	16.85	11.883		
2,000.00	1,932.81	1,966.11	1,875.78	9.25	9.94	-96.66	-125.90	363.16	231.44	213.15	18.29	12.654		
2,100.00	2,024.01	2,059.68	1,950.99	10.00	10.99	-93.25	-144.69	415.55	263.83	244.04	19.78	13.337		
2,200.00	2,115.21	2,153.24	2,026.20	10.76	12.06	-90.59	-163.48	467.93	296.88	275.60	21.28	13.951		
2,300.00	2,206.41	2,246.80	2,101.42	11.52	13.14	-88.45	-182.27	520.31	330.39	307.61	22.79	14.500		
2,400.00	2,297.60	2,340.37	2,176.63	12.29	14.24	-86.71	-201.07	572.69	364.24	339.95	24.30	14.990		
2,500.00	2,388.80	2,433.93	2,251.84	13.06	15.35	-85.26	-219.86	625.08	398.35	372.53	25.82	15.430		
2,600.00	2,480.00	2,527.49	2,327.06	13.83	16.47	-84.04	-238.65	677.46	432.64	405.30	27.34	15.824		
2,700.00	2,571.20	2,621.06	2,402.27	14.61	17.60	-82.99	-257.44	729.84	467.09	438.22	28.87	16.179		
2,800.00	2,662.40	2,714.62	2,477.48	15.39	18.73	-82.09	-276.24	782.22	501.65	471.25	30.40	16.500		
2,900.00	2,753.60	2,808.18	2,552.69	16.17	19.87	-81.31	-295.03	834.61	536.31	504.37	31.94	16.791		
3,000.00	2,844.80	2,901.75	2,627.91	16.95	21.01	-80.62	-313.82	886.99	571.05	537.57	33.48	17.057		
3,100.00	2,936.00	2,995.31	2,703.12	17.74	22.15	-80.01	-332.62	939.37	605.85	570.83	35.02	17.299		
3,200.00	3,027.19	3,088.87	2,778.33	18.52	23.29	-79.46	-351.41	991.75	640.70	604.14	36.57	17.521		
3,300.00	3,118.39	3,182.44	2,853.55	19.31	24.44	-78.99	-370.20	1,044.14	675.61	637.49	38.12	17.725		
3,400.00	3,210.67	3,275.63	2,928.46	20.06	25.59	-79.44	-388.92	1,096.31	711.04	671.47	39.57	17.968		
3,500.00	3,304.83	3,367.93	3,002.66	20.74	26.72	-79.58	-407.46	1,147.98	747.52	706.67	40.85	18.298		
3,600.00	3,400.62	3,459.08	3,075.93	21.34	27.85	-79.47	-425.77	1,199.02	785.15	743.21	41.95	18.718		
3,700.00	3,497.78	3,548.84	3,148.09	21.87	28.96	-79.17	-443.80	1,249.27	824.12	781.26	42.85	19.231		
3,800.00	3,596.04	3,636.96	3,218.93	22.32	30.04	-78.73	-461.49	1,298.61	864.60	821.03	43.57	19.842		
3,900.00	3,695.14	3,723.20	3,288.25	22.70	31.11	-78.20	-478.82	1,346.89	906.81	862.70	44.11	20.556		
4,000.00	3,794.80	3,807.32	3,355.87	23.02	32.15	-77.63	-495.71	1,393.99	950.95	906.47	44.48	21.380		
4,100.00	3,894.75	3,889.09	3,421.61	23.26	33.16	-77.07	-512.14	1,439.77	997.22	952.55	44.67	22.325		
4,200.00	3,994.75	3,969.48	3,486.23	23.45	34.16	-68.55	-528.28	1,484.77	1,045.28	1,000.49	44.78	23.341		
4,300.00	4,094.63	4,048.03	3,549.38	23.62	35.13	-112.02	-544.06	1,528.75	1,095.61	1,050.77	44.83	24.438		
4,400.00	4,192.63	4,116.49	3,604.41	23.68	35.98	-107.85	-557.81	1,567.08	1,152.47	1,107.96	44.51	25.891		
4,500.00	4,285.81	4,172.08	3,649.09	23.64	36.67	-102.37	-568.98	1,598.20	1,215.74	1,171.87	43.87	27.713		
4,600.00	4,371.33	5,754.09	4,653.09	23.55	42.06	97.91	61.26	1,409.84	1,233.35	1,172.92	60.43	20.410		
4,700.00	4,446.59	5,820.20	4,653.49	23.47	42.39	97.10	108.14	1,363.22	1,218.39	1,156.67	61.72	19.740		
4,800.00	4,509.30	5,898.31	4,653.97	23.46	42.85	95.72	163.52	1,308.14	1,209.33	1,146.37	62.96	19.208		
4,900.00	4,560.43	5,984.53	4,654.49	23.57	43.46	93.88	224.66	1,247.34	1,204.28	1,140.01	64.27	18.737		
5,000.00	4,602.48	6,075.38	4,655.04	23.83	44.18	92.35	289.07	1,183.28	1,201.70	1,135.97	65.73	18.282		
5,100.00	4,628.16	6,172.05	4,655.63	24.27	45.04	91.29	357.61	1,115.11	1,200.81	1,133.42	67.38	17.821		
5,200.00	4,636.70	6,271.61	4,656.24	24.86	46.04	90.93	428.20	1,044.91	1,200.59	1,131.37	69.23	17.343		
5,300.00	4,637.19	6,371.61	4,656.85	25.62	47.13	90.94	499.10	974.39	1,200.53	1,129.24	71.29	16.840		
5,400.00	4,637.68	6,471.61	4,657.46	26.55	48.33	90.94	570.01	903.88	1,200.48	1,126.87	73.61	16.309		
5,500.00	4,638.18	6,571.61	4,658.07	27.65	49.61	90.95	640.91	833.36	1,200.42	1,124.27	76.15	15.763		
5,600.00	4,638.67	6,671.61	4,658.68	28.89	50.97	90.95	711.81	762.85	1,200.37	1,121.46	78.90	15.214		
5,700.00	4,639.16	6,771.61	4,659.29	30.25	52.41	90.96	782.71	692.33	1,200.31	1,118.48	81.83	14.669		
5,800.00	4,639.65	6,871.61	4,659.90	31.72	53.92	90.97	853.62	621.82	1,200.25	1,115.34	84.92	14.135		
5,900.00	4,640.14	6,971.61	4,660.50	33.29	55.49	90.97	924.52	551.30	1,200.20	1,112.05	88.14	13.616		
6,000.00	4,640.64	7,071.61	4,661.11	34.94	57.11	90.98	995.42	480.79	1,200.14	1,108.64	91.50	13.117		
6,100.00	4,641.13	7,171.61	4,661.72	36.65	58.79	90.98	1,066.33	410.27	1,200.08	1,105.13	94.96	12.638		
6,200.00	4,641.62	7,271.61	4,662.33	38.43	60.51	90.99	1,137.23	339.75	1,200.03	1,101.51	98.51	12.181		
6,300.00	4,642.11	7,371.61	4,662.94	40.26	62.28	90.99	1,208.13	269.24	1,199.97	1,097.81	102.16	11.746		
6,400.00	4,642.60	7,471.61	4,663.55	42.13	64.08	91.00	1,279.03	198.72	1,199.91	1,094.04	105.88	11.333		
6,500.00	4,643.10	7,571.61	4,664.16	44.05	65.92	91.01	1,349.94	128.21	1,199.86	1,090.19	109.66	10.941		
6,600.00	4,643.59	7,671.61	4,664.77	46.00	67.78	91.01	1,420.84	57.69	1,199.80	1,086.29	113.51	10.570		
6,700.00	4,644.08	7,771.61	4,665.38	47.98	69.68	91.02	1,491.74	-12.82	1,199.74	1,082.33	117.41	10.218		
6,800.00	4,644.57	7,871.61	4,665.99	49.98	71.60	91.02	1,562.64	-83.34	1,199.69	1,078.33	121.36	9.886		
6,900.00	4,645.06	7,971.61	4,666.60	52.01	73.54	91.03	1,633.55	-153.85	1,199.63	1,074.28	125.35	9.570		

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook Unit (79 & 81) - Greater Lybrook Unit 081H - 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	Rule Assigned:				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
7,000.00	4,645.56	8,071.61	4,667.21	54.06	75.51	91.03	1,704.45	-224.37	1,199.57	1,070.19	129.38	9.272
7,100.00	4,646.05	8,171.61	4,667.82	56.13	77.49	91.04	1,775.35	-294.88	1,199.52	1,066.07	133.45	8.989
7,200.00	4,646.54	8,271.61	4,668.43	58.22	79.50	91.05	1,846.26	-365.40	1,199.46	1,061.91	137.55	8.720
7,300.00	4,647.03	8,371.61	4,669.03	60.32	81.51	91.05	1,917.16	-435.91	1,199.41	1,057.73	141.68	8.466
7,400.00	4,647.52	8,471.61	4,669.64	62.43	83.55	91.06	1,988.06	-506.43	1,199.35	1,053.52	145.83	8.224
7,500.00	4,648.01	8,571.61	4,670.25	64.56	85.60	91.06	2,058.96	-576.95	1,199.29	1,049.28	150.01	7.995
7,600.00	4,648.51	8,671.61	4,670.86	66.69	87.66	91.07	2,129.87	-647.46	1,199.24	1,045.02	154.21	7.776
7,700.00	4,649.00	8,771.61	4,671.47	68.84	89.73	91.07	2,200.77	-717.98	1,199.18	1,040.74	158.44	7.569
7,800.00	4,649.49	8,871.61	4,672.08	71.00	91.81	91.08	2,271.67	-788.49	1,199.12	1,036.44	162.68	7.371
7,900.00	4,649.98	8,971.61	4,672.69	73.16	93.90	91.08	2,342.57	-859.01	1,199.07	1,032.13	166.94	7.183
8,000.00	4,650.47	9,071.61	4,673.30	75.33	96.01	91.09	2,413.48	-929.52	1,199.01	1,027.79	171.22	7.003
8,100.00	4,650.97	9,171.61	4,673.91	77.51	98.12	91.10	2,484.38	-1,000.04	1,198.95	1,023.45	175.51	6.831
8,200.00	4,651.46	9,271.61	4,674.52	79.70	100.24	91.10	2,555.28	-1,070.55	1,198.90	1,019.08	179.81	6.667
8,300.00	4,651.95	9,371.61	4,675.13	81.89	102.37	91.11	2,626.19	-1,141.07	1,198.84	1,014.71	184.13	6.511
8,400.00	4,652.44	9,471.61	4,675.74	84.08	104.50	91.11	2,697.09	-1,211.58	1,198.79	1,010.32	188.46	6.361
8,500.00	4,652.93	9,571.61	4,676.35	86.28	106.64	91.12	2,767.99	-1,282.10	1,198.73	1,005.92	192.81	6.217
8,600.00	4,653.43	9,671.61	4,676.96	88.49	108.79	91.12	2,838.89	-1,352.61	1,198.67	1,001.52	197.16	6.080
8,700.00	4,653.92	9,771.61	4,677.56	90.70	110.94	91.13	2,909.80	-1,423.13	1,198.62	997.10	201.52	5.948
8,800.00	4,654.41	9,871.61	4,678.17	92.91	113.10	91.14	2,980.70	-1,493.64	1,198.56	992.67	205.89	5.821
8,900.00	4,654.90	9,971.61	4,678.78	95.13	115.27	91.14	3,051.60	-1,564.16	1,198.51	988.23	210.27	5.700
9,000.00	4,655.39	10,071.61	4,679.39	97.35	117.44	91.15	3,122.50	-1,634.68	1,198.45	983.79	214.66	5.583
9,100.00	4,655.89	10,171.61	4,680.00	99.58	119.61	91.15	3,193.41	-1,705.19	1,198.39	979.34	219.06	5.471
9,200.00	4,656.38	10,271.61	4,680.61	101.80	121.79	91.16	3,264.31	-1,775.71	1,198.34	974.88	223.46	5.363
9,300.00	4,656.87	10,371.61	4,681.22	104.03	123.97	91.16	3,335.21	-1,846.22	1,198.28	970.41	227.87	5.259
9,400.00	4,657.36	10,471.61	4,681.83	106.26	126.16	91.17	3,406.12	-1,916.74	1,198.22	965.94	232.29	5.158
9,500.00	4,657.85	10,571.61	4,682.44	108.50	128.35	91.18	3,477.02	-1,987.25	1,198.17	961.46	236.71	5.062
9,600.00	4,658.35	10,671.61	4,683.05	110.74	130.54	91.18	3,547.92	-2,057.77	1,198.11	956.97	241.14	4.969
9,700.00	4,658.84	10,771.61	4,683.66	112.98	132.74	91.19	3,618.82	-2,128.28	1,198.06	952.48	245.57	4.879
9,800.00	4,659.33	10,871.61	4,684.27	115.22	134.94	91.19	3,689.73	-2,198.80	1,198.00	947.99	250.01	4.792
9,900.00	4,659.82	10,971.61	4,684.88	117.46	137.14	91.20	3,760.63	-2,269.31	1,197.94	943.49	254.46	4.708
10,000.00	4,660.31	11,071.61	4,685.49	119.70	139.35	91.20	3,831.53	-2,339.83	1,197.89	938.98	258.91	4.627
10,100.00	4,660.81	11,171.61	4,686.09	121.95	141.56	91.21	3,902.43	-2,410.34	1,197.83	934.47	263.36	4.548
10,200.00	4,661.30	11,271.61	4,686.70	124.20	143.77	91.22	3,973.34	-2,480.86	1,197.78	929.96	267.82	4.472
10,300.00	4,661.79	11,371.61	4,687.31	126.45	145.98	91.22	4,044.24	-2,551.38	1,197.72	925.44	272.28	4.399
10,400.00	4,662.28	11,471.61	4,687.92	128.70	148.20	91.23	4,115.14	-2,621.89	1,197.66	920.92	276.74	4.328
10,500.00	4,662.77	11,571.61	4,688.53	130.95	150.42	91.23	4,186.05	-2,692.41	1,197.61	916.40	281.21	4.259
10,600.00	4,663.27	11,671.61	4,689.14	133.21	152.64	91.24	4,256.95	-2,762.92	1,197.55	911.87	285.68	4.192
10,700.00	4,663.76	11,771.61	4,689.75	135.46	154.86	91.24	4,327.85	-2,833.44	1,197.50	907.34	290.16	4.127
10,800.00	4,664.25	11,871.61	4,690.36	137.72	157.08	91.25	4,398.75	-2,903.95	1,197.44	902.81	294.63	4.064
10,900.00	4,664.74	11,971.61	4,690.97	139.98	159.31	91.25	4,469.66	-2,974.47	1,197.38	898.27	299.11	4.003
11,000.00	4,665.23	12,071.61	4,691.58	142.23	161.54	91.26	4,540.56	-3,044.98	1,197.33	893.73	303.60	3.944
11,100.00	4,665.73	12,171.61	4,692.19	144.49	163.77	91.27	4,611.46	-3,115.50	1,197.27	889.19	308.08	3.886
11,200.00	4,666.22	12,271.61	4,692.80	146.75	166.00	91.27	4,682.36	-3,186.01	1,197.22	884.64	312.57	3.830
11,300.00	4,666.71	12,371.61	4,693.41	149.02	168.24	91.28	4,753.27	-3,256.53	1,197.16	880.10	317.06	3.776
11,400.00	4,667.20	12,471.61	4,694.02	151.28	170.47	91.28	4,824.17	-3,327.04	1,197.10	875.55	321.56	3.723
11,500.00	4,667.69	12,571.61	4,694.62	153.54	172.71	91.29	4,895.07	-3,397.56	1,197.05	870.99	326.05	3.671
11,600.00	4,668.19	12,671.61	4,695.23	155.81	174.95	91.29	4,965.97	-3,468.07	1,196.99	866.44	330.55	3.621
11,700.00	4,668.68	12,771.61	4,695.84	158.07	177.19	91.30	5,036.88	-3,538.59	1,196.94	861.88	335.05	3.572
11,800.00	4,669.17	12,871.61	4,696.45	160.34	179.43	91.31	5,107.78	-3,609.11	1,196.88	857.33	339.56	3.525
11,900.00	4,669.66	12,971.61	4,697.06	162.60	181.67	91.31	5,178.68	-3,679.62	1,196.83	852.76	344.06	3.479
12,000.00	4,670.15	13,071.61	4,697.67	164.87	183.91	91.32	5,249.59	-3,750.14	1,196.77	848.20	348.57	3.433
12,100.00	4,670.64	13,171.61	4,698.28	167.14	186.16	91.32	5,320.49	-3,820.65	1,196.71	843.64	353.07	3.389

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook Unit (79 & 81) - Greater Lybrook Unit 081H - 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)			
12,200.00	4,671.14	13,271.60	4,698.89	169.40	188.40	91.33	5,391.39	-3,891.17	1,196.66	839.07	357.58	3.347	
12,300.00	4,671.63	13,371.60	4,699.50	171.67	190.65	91.33	5,462.29	-3,961.68	1,196.60	834.51	362.09	3.305	
12,400.00	4,672.12	13,471.60	4,700.11	173.94	192.90	91.34	5,533.20	-4,032.20	1,196.55	829.94	366.61	3.264	
12,500.00	4,672.61	13,571.60	4,700.72	176.21	195.14	91.35	5,604.10	-4,102.71	1,196.49	825.37	371.12	3.224	
12,600.00	4,673.10	13,671.60	4,701.33	178.48	197.39	91.35	5,675.00	-4,173.23	1,196.43	820.80	375.64	3.185	
12,700.00	4,673.60	13,771.60	4,701.94	180.75	199.64	91.36	5,745.90	-4,243.74	1,196.38	816.22	380.15	3.147	
12,800.00	4,674.09	13,871.60	4,702.55	183.03	201.90	91.36	5,816.81	-4,314.26	1,196.32	811.65	384.67	3.110	
12,900.00	4,674.58	13,971.60	4,703.15	185.30	204.15	91.37	5,887.71	-4,384.77	1,196.27	807.08	389.19	3.074	
13,000.00	4,675.07	14,071.60	4,703.76	187.57	206.40	91.37	5,958.61	-4,455.29	1,196.21	802.50	393.71	3.038	
13,100.00	4,675.56	14,171.60	4,704.37	189.84	208.66	91.38	6,029.52	-4,525.81	1,196.16	797.92	398.24	3.004	
13,200.00	4,676.06	14,271.60	4,704.98	192.12	210.91	91.39	6,100.42	-4,596.32	1,196.10	793.34	402.76	2.970	
13,300.00	4,676.55	14,371.60	4,705.59	194.39	213.17	91.39	6,171.32	-4,666.84	1,196.04	788.76	407.28	2.937	
13,400.00	4,677.04	14,471.60	4,706.20	196.66	215.42	91.40	6,242.22	-4,737.35	1,195.99	784.18	411.81	2.904	
13,500.00	4,677.53	14,571.60	4,706.81	198.94	217.68	91.40	6,313.13	-4,807.87	1,195.93	779.60	416.34	2.873	
13,600.00	4,678.02	14,671.60	4,707.42	201.21	219.94	91.41	6,384.03	-4,878.38	1,195.88	775.01	420.86	2.841	
13,700.00	4,678.52	14,771.60	4,708.03	203.49	222.20	91.41	6,454.93	-4,948.90	1,195.82	770.43	425.39	2.811	
13,800.00	4,679.01	14,871.60	4,708.64	205.76	224.46	91.42	6,525.83	-5,019.41	1,195.77	765.85	429.92	2.781	
13,900.00	4,679.50	14,971.60	4,709.25	208.04	226.72	91.43	6,596.74	-5,089.93	1,195.71	761.26	434.45	2.752	
14,000.00	4,679.99	15,071.60	4,709.86	210.32	228.98	91.43	6,667.64	-5,160.44	1,195.66	756.67	438.98	2.724	
14,100.00	4,680.48	15,171.60	4,710.47	212.59	231.24	91.44	6,738.54	-5,230.96	1,195.60	752.08	443.52	2.696	
14,200.00	4,680.98	15,271.60	4,711.08	214.87	233.50	91.44	6,809.45	-5,301.47	1,195.54	747.50	448.05	2.668	
14,300.00	4,681.47	15,371.60	4,711.68	217.15	235.76	91.45	6,880.35	-5,371.99	1,195.49	742.91	452.58	2.641	
14,400.00	4,681.96	15,471.60	4,712.29	219.42	238.02	91.45	6,951.25	-5,442.50	1,195.43	738.32	457.12	2.615	
14,500.00	4,682.45	15,571.60	4,712.90	221.70	240.29	91.46	7,022.15	-5,513.02	1,195.38	733.73	461.65	2.589	
14,600.00	4,682.94	15,671.60	4,713.51	223.98	242.55	91.47	7,093.06	-5,583.54	1,195.32	729.14	466.19	2.564	
14,700.00	4,683.44	15,771.60	4,714.12	226.26	244.82	91.47	7,163.96	-5,654.05	1,195.27	724.54	470.72	2.539	
14,800.00	4,683.93	15,871.60	4,714.73	228.54	247.08	91.48	7,234.86	-5,724.57	1,195.21	719.95	475.26	2.515	
14,900.00	4,684.42	15,971.60	4,715.34	230.82	249.35	91.48	7,305.76	-5,795.08	1,195.16	715.36	479.80	2.491	
15,000.00	4,684.91	16,071.60	4,715.95	233.09	251.61	91.49	7,376.67	-5,865.60	1,195.10	710.76	484.34	2.467	
15,100.00	4,685.40	16,171.60	4,716.56	235.37	253.88	91.49	7,447.57	-5,936.11	1,195.05	706.17	488.88	2.444	
15,200.00	4,685.90	16,271.60	4,717.17	237.65	256.14	91.50	7,518.47	-6,006.63	1,194.99	701.57	493.42	2.422	
15,300.00	4,686.39	16,371.60	4,717.78	239.93	258.41	91.51	7,589.38	-6,077.14	1,194.93	696.98	497.96	2.400	
15,400.00	4,686.88	16,471.60	4,718.39	242.21	260.68	91.51	7,660.28	-6,147.66	1,194.88	692.38	502.50	2.378	
15,500.00	4,687.37	16,571.60	4,719.00	244.49	262.95	91.52	7,731.18	-6,218.17	1,194.82	687.79	507.04	2.356	
15,600.00	4,687.86	16,671.60	4,719.61	246.77	265.22	91.52	7,802.08	-6,288.69	1,194.77	683.19	511.58	2.335	
15,700.00	4,688.36	16,771.60	4,720.21	249.05	267.48	91.53	7,872.99	-6,359.20	1,194.71	678.59	516.12	2.315	
15,800.00	4,688.85	16,871.60	4,720.82	251.33	269.75	91.53	7,943.89	-6,429.72	1,194.66	673.99	520.66	2.294	
15,900.00	4,689.34	16,971.60	4,721.43	253.62	272.02	91.54	8,014.79	-6,500.24	1,194.60	669.40	525.21	2.275	
16,000.00	4,689.83	17,071.60	4,722.04	255.90	274.29	91.55	8,085.69	-6,570.75	1,194.55	664.80	529.75	2.255	
16,100.00	4,690.32	17,171.60	4,722.65	258.18	276.56	91.55	8,156.60	-6,641.27	1,194.49	660.20	534.29	2.236	
16,200.00	4,690.82	17,271.60	4,723.26	260.46	278.83	91.56	8,227.50	-6,711.78	1,194.44	655.60	538.84	2.217	
16,300.00	4,691.31	17,371.60	4,723.87	262.74	281.10	91.56	8,298.40	-6,782.30	1,194.38	651.00	543.38	2.198	
16,400.00	4,691.80	17,471.60	4,724.48	265.02	283.38	91.57	8,369.31	-6,852.81	1,194.33	646.40	547.93	2.180	
16,500.00	4,692.29	17,571.60	4,725.09	267.30	285.65	91.57	8,440.21	-6,923.33	1,194.27	641.80	552.47	2.162	
16,600.00	4,692.78	17,671.60	4,725.70	269.59	287.92	91.58	8,511.11	-6,993.84	1,194.21	637.20	557.02	2.144	
16,700.00	4,693.27	17,771.60	4,726.31	271.87	290.19	91.58	8,582.01	-7,064.36	1,194.16	632.60	561.56	2.126	
16,800.00	4,693.77	17,871.60	4,726.92	274.15	292.46	91.59	8,652.92	-7,134.87	1,194.10	628.00	566.11	2.109	
16,900.00	4,694.26	17,971.60	4,727.53	276.43	294.74	91.60	8,723.82	-7,205.39	1,194.05	623.39	570.66	2.092	
17,000.00	4,694.75	18,071.60	4,728.14	278.72	297.01	91.60	8,794.72	-7,275.90	1,193.99	618.79	575.20	2.076	
17,100.00	4,695.24	18,171.60	4,728.74	281.00	299.28	91.61	8,865.62	-7,346.42	1,193.94	614.19	579.75	2.059	
17,200.00	4,695.73	18,271.60	4,729.35	283.28	301.56	91.61	8,936.53	-7,416.93	1,193.88	609.59	584.30	2.043	
17,300.00	4,696.23	18,371.60	4,729.96	285.56	303.83	91.62	9,007.43	-7,487.45	1,193.83	604.98	588.84	2.027	

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook Unit (79 & 81) - Greater Lybrook Unit 081H - Original Hole - rev0													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Rule Assigned:													
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	Warning
17,400.00	4,696.72	18,471.60	4,730.57	287.85	306.11	91.62	9,078.33	-7,557.97	1,193.77	600.38	593.39	2.012	
17,500.00	4,697.21	18,571.60	4,731.18	290.13	308.38	91.63	9,149.24	-7,628.48	1,193.72	595.78	597.94	1.996 Level 3<2.00	
17,600.00	4,697.70	18,671.60	4,731.79	292.41	310.65	91.64	9,220.14	-7,699.00	1,193.66	591.18	602.49	1.981 Level 3<2.00	
17,700.00	4,698.19	18,771.60	4,732.40	294.70	312.93	91.64	9,291.04	-7,769.51	1,193.61	586.57	607.04	1.966 Level 3<2.00	
17,800.00	4,698.69	18,871.60	4,733.01	296.98	315.20	91.65	9,361.94	-7,840.03	1,193.55	581.97	611.58	1.952 Level 3<2.00	
17,900.00	4,699.18	18,971.60	4,733.62	299.26	317.48	91.65	9,432.85	-7,910.54	1,193.50	577.37	616.13	1.937 Level 3<2.00	
18,000.00	4,699.67	19,071.60	4,734.23	301.55	319.76	91.66	9,503.75	-7,981.06	1,193.44	572.76	620.68	1.923 Level 3<2.00	
18,100.00	4,700.16	19,171.60	4,734.84	303.83	322.03	91.66	9,574.65	-8,051.57	1,193.39	568.16	625.23	1.909 Level 3<2.00	
18,200.00	4,700.65	19,271.60	4,735.45	306.12	324.31	91.67	9,645.55	-8,122.09	1,193.33	563.55	629.78	1.895 Level 3<2.00	
18,300.00	4,701.15	19,371.60	4,736.06	308.40	326.58	91.68	9,716.46	-8,192.60	1,193.28	558.95	634.33	1.881 Level 3<2.00	
18,400.00	4,701.64	19,471.60	4,736.67	310.68	328.86	91.68	9,787.36	-8,263.12	1,193.22	554.34	638.88	1.868 Level 3<2.00	
18,500.00	4,702.13	19,571.60	4,737.27	312.97	331.14	91.69	9,858.26	-8,333.63	1,193.17	549.74	643.43	1.854 Level 3<2.00	
18,600.00	4,702.62	19,671.60	4,737.88	315.25	333.41	91.69	9,929.17	-8,404.15	1,193.11	545.14	647.98	1.841 Level 3<2.00	
18,700.00	4,703.11	19,771.60	4,738.49	317.54	335.69	91.70	10,000.07	-8,474.67	1,193.06	540.53	652.52	1.828 Level 3<2.00	
18,783.87	4,703.53	19,854.81	4,739.00	319.45	337.59	91.70	10,059.07	-8,533.34	1,193.01	536.68	656.33	1.818 Level 3<2.00	
18,800.00	4,703.61	19,854.81	4,739.00	319.82	337.59	91.70	10,059.07	-8,533.34	1,193.12	536.51	656.61	1.817 Level 3<2.00, SF	
18,900.00	4,704.10	19,854.81	4,739.00	322.11	337.59	91.70	10,059.07	-8,533.34	1,198.65	546.12	652.53	1.837 Level 3<2.00	
19,000.00	4,704.59	19,854.81	4,739.00	324.39	337.59	91.70	10,059.07	-8,533.34	1,212.43	573.14	639.29	1.897 Level 3<2.00	
19,100.00	4,705.08	19,854.81	4,739.00	326.68	337.59	91.70	10,059.07	-8,533.34	1,234.19	615.28	618.91	1.994 Level 3<2.00	
19,200.00	4,705.57	19,854.81	4,739.00	328.96	337.59	91.70	10,059.07	-8,533.34	1,263.50	669.69	593.81	2.128	
19,300.00	4,706.07	19,854.81	4,739.00	331.25	337.59	91.70	10,059.07	-8,533.34	1,299.87	733.65	566.22	2.296	
19,400.00	4,706.56	19,854.81	4,739.00	333.53	337.59	91.70	10,059.07	-8,533.34	1,342.72	804.87	537.84	2.496	
19,500.00	4,707.05	19,854.81	4,739.00	335.82	337.59	91.70	10,059.07	-8,533.34	1,391.44	881.62	509.83	2.729	
19,600.00	4,707.54	19,854.81	4,739.00	338.10	337.59	91.70	10,059.07	-8,533.34	1,445.46	962.55	482.91	2.993	
19,700.00	4,708.03	19,854.81	4,739.00	340.39	337.59	91.70	10,059.07	-8,533.34	1,504.18	1,046.70	457.48	3.288	
19,800.00	4,708.53	19,854.81	4,739.00	342.67	337.59	91.70	10,059.07	-8,533.34	1,567.10	1,133.36	433.73	3.613	
19,896.47	4,709.00	19,854.81	4,739.00	344.88	337.59	91.70	10,059.07	-8,533.34	1,631.30	1,218.83	412.47	3.955	

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Rodeo Unit - Rodeo Unit #500H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 438-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	306.00	305.88	0.00	0.00	117.96	-18.21	34.31	310.32				
100.00	100.00	306.00	305.88	0.13	0.00	117.96	-18.21	34.31	211.48	209.22	2.26	93.558	
200.00	200.00	306.00	305.88	0.49	0.00	117.96	-18.21	34.31	114.66	112.49	2.18	52.710	
300.00	300.00	306.00	305.88	0.85	0.00	117.96	-18.21	34.31	39.64	38.69	0.94	42.024	
336.64	336.64	334.82	334.70	0.98	0.05	117.47	-17.90	34.42	38.80	37.76	1.03	37.502	
400.00	400.00	398.18	398.06	1.21	0.17	116.32	-17.16	34.69	38.70	37.32	1.38	28.140	
444.08	444.08	442.21	442.08	1.37	0.25	115.46	-16.61	34.89	38.64	37.02	1.62	23.858 CC, ES	
500.00	500.00	497.46	497.32	1.57	0.45	114.54	-16.25	35.59	39.13	37.11	2.02	19.403	
600.00	600.00	595.70	595.49	1.93	0.80	113.54	-17.05	39.13	42.76	40.03	2.73	15.673	
700.00	700.00	693.64	693.11	2.29	1.16	112.36	-19.17	46.61	50.64	47.20	3.44	14.735	
800.00	799.95	791.24	790.05	2.63	1.54	-34.50	-21.37	57.68	59.87	55.74	4.12	14.519	
900.00	899.63	889.96	887.77	2.97	1.95	-40.45	-23.25	71.60	67.78	62.98	4.80	14.107	
1,000.00	998.77	989.43	986.17	3.32	2.36	-48.09	-25.14	86.00	73.10	67.58	5.52	13.254	
1,100.00	1,097.08	1,089.00	1,084.74	3.70	2.78	-57.64	-27.25	99.98	76.21	69.94	6.27	12.152	
1,200.00	1,194.31	1,186.04	1,180.66	4.12	3.20	-68.96	-29.59	114.44	80.07	72.98	7.08	11.301	
1,300.00	1,290.18	1,283.18	1,276.46	4.59	3.62	-81.63	-31.92	130.35	87.36	79.35	8.01	10.904 SF	
1,400.00	1,384.43	1,379.99	1,371.65	5.12	4.07	-93.62	-35.53	147.56	98.95	89.91	9.03	10.953	
1,500.00	1,476.81	1,474.38	1,464.07	5.73	4.52	-103.83	-39.73	166.31	116.15	106.06	10.09	11.511	
1,600.00	1,568.01	1,566.94	1,554.41	6.39	4.97	-112.36	-42.49	186.24	139.60	128.48	11.12	12.558	
1,700.00	1,659.21	1,662.23	1,647.62	7.08	5.43	-119.10	-43.90	205.98	166.41	154.29	12.13	13.722	
1,800.00	1,750.41	1,760.44	1,743.78	7.79	5.91	-124.15	-46.87	225.69	193.20	180.06	13.14	14.702	
1,900.00	1,841.61	1,853.57	1,834.64	8.51	6.37	-127.36	-49.85	245.89	221.21	207.09	14.12	15.672	
2,000.00	1,932.81	1,949.65	1,929.38	9.25	6.86	-129.93	-52.81	266.78	249.86	234.74	15.12	16.524	
2,100.00	2,024.01	2,045.18	2,021.47	10.00	7.34	-131.85	-56.03	287.99	278.67	262.54	16.12	17.282	
2,200.00	2,115.21	2,139.39	2,113.53	10.76	7.82	-133.62	-58.92	307.76	307.85	290.75	17.10	18.002	
2,300.00	2,206.41	2,233.01	2,204.79	11.52	8.29	-134.89	-61.42	328.51	337.76	319.67	18.09	18.676	
2,400.00	2,297.60	2,328.06	2,297.39	12.29	8.78	-135.93	-63.78	349.86	367.99	348.89	19.10	19.270	
2,500.00	2,388.80	2,423.05	2,389.86	13.06	9.28	-136.77	-66.22	371.45	398.26	378.15	20.11	19.801	
2,600.00	2,480.00	2,516.62	2,480.77	13.83	9.77	-137.38	-68.42	393.47	428.86	407.73	21.13	20.294	
2,700.00	2,571.20	2,611.16	2,572.62	14.61	10.27	-137.90	-70.36	415.78	459.77	437.61	22.17	20.743	
2,800.00	2,662.40	2,707.27	2,666.18	15.39	10.77	-138.47	-72.43	437.68	490.59	467.39	23.20	21.146	
2,900.00	2,753.60	2,804.84	2,761.47	16.17	11.26	-139.14	-74.68	458.51	521.25	497.03	24.23	21.516	
3,000.00	2,844.80	2,901.79	2,856.11	16.95	11.75	-139.71	-77.69	479.32	551.22	525.98	25.24	21.839	
3,100.00	2,936.00	2,996.51	2,949.10	17.74	12.21	-140.47	-80.21	497.20	581.60	555.41	26.19	22.208	
3,200.00	3,027.19	3,098.73	3,049.26	18.52	12.71	-141.14	-83.78	517.23	611.29	584.07	27.22	22.457	
3,300.00	3,118.39	3,195.40	3,143.56	19.31	13.20	-141.53	-87.97	538.11	640.20	611.96	28.24	22.670	
3,400.00	3,210.67	3,290.84	3,236.53	20.06	13.70	-142.19	-91.84	559.33	667.35	638.10	29.26	22.810	
3,500.00	3,304.83	3,385.86	3,329.12	20.74	14.19	-142.50	-95.71	580.36	690.49	660.23	30.27	22.813	
3,600.00	3,400.62	3,477.89	3,418.49	21.34	14.68	-142.38	-98.81	602.11	710.29	679.02	31.26	22.720	
3,700.00	3,497.78	3,572.73	3,510.91	21.87	15.17	-142.08	-101.27	623.20	726.81	694.56	32.25	22.533	
3,800.00	3,596.04	3,671.56	3,607.65	22.32	15.66	-141.61	-103.64	643.29	739.53	706.28	33.25	22.244	
3,900.00	3,695.14	3,771.66	3,705.44	22.70	16.17	-140.77	-106.18	664.50	748.22	713.96	34.26	21.842	
4,000.00	3,794.80	3,875.47	3,806.78	23.02	16.70	-139.54	-109.22	686.78	752.78	717.47	35.31	21.321	
4,100.00	3,894.75	3,976.17	3,904.90	23.26	17.22	-137.97	-112.89	709.16	753.17	716.85	36.32	20.735	
4,200.00	3,994.75	4,077.17	4,003.40	23.45	17.74	7.36	-116.88	731.11	751.68	714.35	37.33	20.138	
4,300.00	4,094.63	4,167.77	4,091.91	23.62	18.20	54.00	-120.25	750.14	749.03	710.83	38.20	19.608	
4,400.00	4,192.63	4,261.69	4,183.85	23.68	18.66	57.46	-123.19	769.13	738.61	699.50	39.11	18.885	
4,500.00	4,285.81	4,351.30	4,271.67	23.64	19.10	62.53	-126.26	786.69	721.02	681.02	40.00	18.025	
4,600.00	4,371.33	4,423.64	4,342.50	23.55	19.46	68.31	-128.98	801.12	699.68	658.92	40.76	17.166	
4,700.00	4,446.59	4,485.58	4,402.93	23.47	19.77	74.36	-131.37	814.50	679.29	637.86	41.43	16.396	
4,800.00	4,509.30	4,569.26	4,484.75	23.46	20.19	82.34	-135.69	831.46	663.58	621.34	42.24	15.710	
4,900.00	4,560.43	4,644.56	4,558.12	23.57	20.55	89.06	-145.83	844.90	654.32	611.61	42.71	15.321	

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Rodeo Unit - Rodeo Unit #500H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 438-MWD												Offset Well Error:	0.00 ft
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	Warning
4,919.23	4,569.74	4,648.56	4,561.98	23.62	20.58	89.43	-146.52	845.65	654.06	611.32	42.74	15.304	
5,000.00	4,602.48	4,660.48	4,573.48	23.83	20.64	89.98	-148.68	847.94	658.85	616.17	42.68	15.436	
5,100.00	4,628.16	4,659.24	4,572.29	24.27	20.63	87.91	-148.45	847.70	678.01	635.63	42.38	15.997	
5,200.00	4,636.70	4,645.15	4,558.69	24.86	20.56	83.48	-145.93	845.01	710.05	668.14	41.91	16.941	
5,300.00	4,637.19	4,624.11	4,538.28	25.62	20.46	81.72	-142.51	841.25	752.94	711.52	41.42	18.179	
5,400.00	4,637.68	4,596.69	4,511.55	26.55	20.33	79.43	-138.66	836.51	805.41	764.46	40.96	19.666	
5,500.00	4,638.18	4,554.77	4,470.58	27.65	20.12	75.94	-134.51	828.65	865.36	824.87	40.49	21.372	
5,600.00	4,638.67	4,531.30	4,447.64	28.89	20.00	74.00	-133.15	823.93	931.55	891.38	40.17	23.190	
5,700.00	4,639.16	4,512.58	4,429.32	30.25	19.91	72.46	-132.38	820.12	1,003.01	963.08	39.93	25.120	
5,800.00	4,639.65	4,490.51	4,407.75	31.72	19.80	70.66	-131.56	815.54	1,078.71	1,038.99	39.72	27.160	
5,900.00	4,640.14	4,460.00	4,377.98	33.29	19.64	68.21	-130.38	808.97	1,157.72	1,118.22	39.50	29.306	
6,000.00	4,640.64	4,460.00	4,377.98	34.94	19.64	68.21	-130.38	808.97	1,239.54	1,200.09	39.45	31.420	
6,100.00	4,641.13	4,434.44	4,353.05	36.65	19.51	66.20	-129.39	803.41	1,323.51	1,284.19	39.31	33.666	
6,200.00	4,641.62	4,422.44	4,341.33	38.43	19.45	65.27	-128.93	800.87	1,409.50	1,370.26	39.24	35.917	
6,300.00	4,642.11	4,410.82	4,329.98	40.26	19.40	64.38	-128.49	798.45	1,497.11	1,457.92	39.18	38.207	
6,400.00	4,642.60	4,399.57	4,318.97	42.13	19.34	63.53	-128.06	796.15	1,586.05	1,546.92	39.13	40.530	
6,500.00	4,643.10	4,388.67	4,308.30	44.05	19.28	62.71	-127.65	793.96	1,676.14	1,637.05	39.09	42.880	
6,600.00	4,643.59	4,366.00	4,286.08	46.00	19.17	61.04	-126.80	789.52	1,767.26	1,728.24	39.02	45.292	
6,700.00	4,644.08	4,369.14	4,289.16	47.98	19.19	61.27	-126.92	790.13	1,859.08	1,820.06	39.02	47.645	
6,800.00	4,644.57	4,352.18	4,272.53	49.98	19.10	60.04	-126.29	786.86	1,951.66	1,912.69	38.97	50.076	
6,900.00	4,645.06	4,335.19	4,255.87	52.01	19.02	58.84	-125.67	783.58	2,044.81	2,005.88	38.93	52.522	
7,000.00	4,645.56	4,318.16	4,239.18	54.06	18.94	57.65	-125.07	780.26	2,138.46	2,099.56	38.89	54.982	

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Rodeo Unit - Rodeo Unit #501H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 438-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	306.00	305.99	0.00	0.00	117.77	-9.59	18.21	308.68				
100.00	100.00	306.00	305.99	0.13	0.00	117.77	-9.59	18.21	209.01	206.72	2.29	91.336	
200.00	200.00	306.00	305.99	0.49	0.00	117.77	-9.59	18.21	109.93	107.66	2.27	48.474	
300.00	300.00	306.00	305.99	0.85	0.00	117.77	-9.59	18.21	22.07	20.96	1.12	19.764	
309.72	309.72	307.59	307.58	0.89	0.00	117.78	-9.60	18.21	20.59	19.70	0.89	23.147 CC, ES	
400.00	400.00	397.86	397.85	1.21	0.17	118.93	-10.27	18.58	21.23	19.85	1.37	15.438	
500.00	500.00	497.73	497.70	1.57	0.45	122.48	-11.88	18.66	22.12	20.10	2.02	10.944	
600.00	600.00	597.20	597.07	1.93	0.82	131.75	-16.32	18.29	24.53	21.79	2.74	8.948	
700.00	700.00	695.94	695.56	2.29	1.19	140.21	-23.18	19.31	30.27	26.81	3.46	8.745	
800.00	799.95	794.12	793.12	2.63	1.57	3.21	-33.71	22.18	38.05	33.90	4.15	9.161	
900.00	899.63	893.28	891.29	2.97	1.98	8.59	-47.03	26.46	44.05	39.22	4.84	9.109	
1,000.00	998.77	992.00	988.68	3.32	2.40	13.73	-62.24	31.81	47.54	42.02	5.52	8.608	
1,100.00	1,097.08	1,090.25	1,085.09	3.70	2.85	19.79	-80.06	38.18	49.38	43.16	6.22	7.943	
1,200.00	1,194.31	1,188.64	1,181.14	4.12	3.33	27.34	-100.06	45.47	49.43	42.48	6.95	7.115	
1,295.08	1,285.50	1,281.79	1,271.42	4.57	3.81	36.71	-121.67	53.09	49.14	41.43	7.71	6.371	
1,300.00	1,290.18	1,286.60	1,276.07	4.59	3.83	37.28	-122.86	53.48	49.14	41.39	7.75	6.337	
1,400.00	1,384.43	1,384.04	1,369.76	5.12	4.37	51.60	-148.70	60.38	50.47	41.68	8.78	5.746	
1,500.00	1,476.81	1,481.76	1,462.76	5.73	4.94	67.16	-177.82	67.57	55.47	45.35	10.12	5.482 SF	
1,600.00	1,568.01	1,580.07	1,556.00	6.39	5.53	81.39	-208.05	75.08	63.95	52.33	11.62	5.504	
1,700.00	1,659.21	1,678.43	1,648.52	7.08	6.15	90.07	-240.31	83.69	75.68	62.64	13.04	5.802	
1,800.00	1,750.41	1,776.76	1,741.25	7.79	6.78	96.89	-272.06	91.51	89.13	74.71	14.43	6.178	
1,900.00	1,841.61	1,875.62	1,834.38	8.51	7.41	101.73	-304.31	99.38	103.63	87.85	15.77	6.570	
2,000.00	1,932.81	1,974.45	1,927.74	9.25	8.04	105.75	-335.73	107.38	118.28	101.19	17.09	6.922	
2,100.00	2,024.01	2,073.91	2,021.93	10.00	8.67	109.21	-366.65	115.31	133.30	114.92	18.38	7.254	
2,200.00	2,115.21	2,173.75	2,116.50	10.76	9.30	111.99	-397.41	124.28	147.66	128.01	19.65	7.515	
2,300.00	2,206.41	2,272.83	2,210.37	11.52	9.93	114.32	-427.69	133.54	161.90	141.00	20.90	7.746	
2,400.00	2,297.60	2,371.42	2,303.41	12.29	10.57	115.88	-458.93	142.98	176.30	154.13	22.17	7.953	
2,500.00	2,388.80	2,470.44	2,396.59	13.06	11.22	116.96	-491.05	152.46	190.90	167.44	23.46	8.136	
2,600.00	2,480.00	2,568.58	2,488.62	13.83	11.88	117.62	-523.78	161.90	205.61	180.83	24.78	8.298	
2,700.00	2,571.20	2,667.78	2,581.47	14.61	12.56	118.03	-557.45	171.33	220.53	194.40	26.13	8.440	
2,800.00	2,662.40	2,764.96	2,672.40	15.39	13.22	118.38	-590.50	180.36	235.67	208.21	27.45	8.584	
2,900.00	2,753.60	2,862.26	2,763.89	16.17	13.87	118.95	-622.56	188.63	251.50	222.76	28.74	8.750	
3,000.00	2,844.80	2,962.30	2,858.36	16.95	14.52	119.73	-654.42	196.99	267.41	237.38	30.04	8.903	
3,100.00	2,936.00	3,064.31	2,954.56	17.74	15.19	120.40	-687.01	206.39	282.51	251.15	31.36	9.009	
3,200.00	3,027.19	3,166.25	3,049.99	18.52	15.88	120.63	-721.23	217.10	296.47	263.73	32.74	9.055	
3,300.00	3,118.39	3,265.07	3,142.44	19.31	16.56	120.84	-754.38	227.96	309.94	275.86	34.09	9.093	
3,400.00	3,210.67	3,363.52	3,234.81	20.06	17.23	121.04	-786.86	238.27	322.51	287.08	35.43	9.103	
3,500.00	3,304.83	3,464.65	3,329.84	20.74	17.90	120.49	-819.59	249.39	331.87	295.05	36.82	9.013	
3,600.00	3,400.62	3,563.72	3,423.10	21.34	18.56	119.24	-851.26	260.12	338.86	300.65	38.21	8.868	
3,700.00	3,497.78	3,663.99	3,517.84	21.87	19.22	117.39	-882.17	271.17	343.29	303.69	39.60	8.669	
3,800.00	3,596.04	3,758.72	3,607.66	22.32	19.82	115.09	-910.52	281.29	346.06	305.16	40.90	8.461	
3,900.00	3,695.14	3,852.42	3,696.66	22.70	20.42	112.18	-938.60	289.67	349.17	307.02	42.15	8.284	
4,000.00	3,794.80	3,947.72	3,786.47	23.02	21.05	108.19	-969.33	298.18	352.37	308.99	43.38	8.123	
4,100.00	3,894.75	4,042.11	3,874.73	23.26	21.70	103.33	-1,001.57	306.98	356.64	312.20	44.43	8.026	
4,200.00	3,994.75	4,137.93	3,964.59	23.45	22.34	-118.25	-1,033.67	315.86	363.16	317.92	45.25	8.027	
4,300.00	4,094.63	4,231.42	4,053.09	23.62	22.95	-77.91	-1,062.69	323.83	371.40	325.65	45.75	8.118	
4,400.00	4,192.63	4,318.96	4,135.95	23.68	23.51	-83.32	-1,090.03	330.99	381.18	335.53	45.65	8.350	
4,500.00	4,285.81	4,398.89	4,211.74	23.64	24.03	-89.03	-1,114.54	337.63	396.21	351.45	44.77	8.850	
4,600.00	4,371.33	4,466.24	4,275.59	23.55	24.46	-93.46	-1,135.18	343.32	421.57	378.44	43.12	9.776	
4,700.00	4,446.59	4,527.75	4,334.03	23.47	24.85	-96.40	-1,153.53	348.96	459.82	418.63	41.19	11.164	
4,800.00	4,509.30	4,571.19	4,375.43	23.46	25.11	-95.71	-1,165.96	353.31	511.57	472.26	39.31	13.014	
4,900.00	4,560.43	4,599.81	4,402.75	23.57	25.29	-96.36	-1,173.95	356.23	575.26	537.41	37.85	15.197	

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Rodeo Unit - 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		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)			
5,000.00	4,602.48	4,617.85	4,420.00	23.83	25.40	-88.18	-1,178.91	358.08	647.82	610.93	36.90	17.558	
5,100.00	4,628.16	4,616.49	4,418.69	24.27	25.39	-75.45	-1,178.54	357.94	726.37	690.09	36.28	20.019	
5,200.00	4,636.70	4,595.04	4,398.19	24.86	25.26	-60.75	-1,172.63	355.74	807.05	771.14	35.91	22.471	
5,300.00	4,637.19	4,563.82	4,368.39	25.62	25.07	-57.48	-1,163.88	352.56	889.17	853.44	35.73	24.884	
5,400.00	4,637.68	4,531.62	4,337.71	26.55	24.87	-54.27	-1,154.66	349.34	973.77	938.09	35.67	27.296	
5,500.00	4,638.18	4,498.64	4,306.35	27.65	24.66	-51.16	-1,144.96	346.21	1,060.22	1,024.53	35.68	29.712	
5,600.00	4,638.67	4,465.30	4,274.70	28.89	24.45	-48.18	-1,134.90	343.24	1,148.08	1,112.35	35.73	32.133	
5,700.00	4,639.16	4,437.80	4,248.63	30.25	24.28	-45.85	-1,126.45	340.91	1,237.11	1,201.30	35.82	34.541	
5,800.00	4,639.65	4,411.56	4,223.75	31.72	24.11	-43.75	-1,118.41	338.70	1,327.16	1,291.25	35.91	36.955	
5,900.00	4,640.14	4,385.47	4,199.01	33.29	23.94	-41.77	-1,110.43	336.51	1,418.04	1,382.03	36.01	39.379	
6,000.00	4,640.64	4,358.32	4,173.25	34.94	23.77	-39.81	-1,102.14	334.24	1,509.60	1,473.50	36.10	41.816	
6,100.00	4,641.13	4,327.39	4,143.94	36.65	23.57	-37.72	-1,092.63	331.68	1,601.68	1,565.50	36.18	44.275	
6,200.00	4,641.62	4,296.10	4,114.30	38.43	23.37	-35.73	-1,082.92	329.11	1,694.15	1,657.91	36.24	46.743	
6,300.00	4,642.11	4,266.05	4,085.87	40.26	23.17	-33.94	-1,073.51	326.67	1,786.95	1,750.64	36.31	49.214	
6,400.00	4,642.60	4,241.13	4,062.29	42.13	23.01	-32.53	-1,065.71	324.63	1,880.10	1,843.72	36.38	51.674	
6,500.00	4,643.10	4,216.36	4,038.83	44.05	22.85	-31.21	-1,058.02	322.58	1,973.58	1,937.12	36.45	54.142	
6,600.00	4,643.59	4,156.78	3,982.49	46.00	22.47	-28.31	-1,039.37	317.44	2,067.27	2,030.84	36.43	56.745	
6,700.00	4,644.08	4,115.40	3,943.37	47.98	22.19	-26.49	-1,026.35	313.83	2,161.19	2,124.74	36.45	59.290	

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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6894+25 @ 6919.00ft

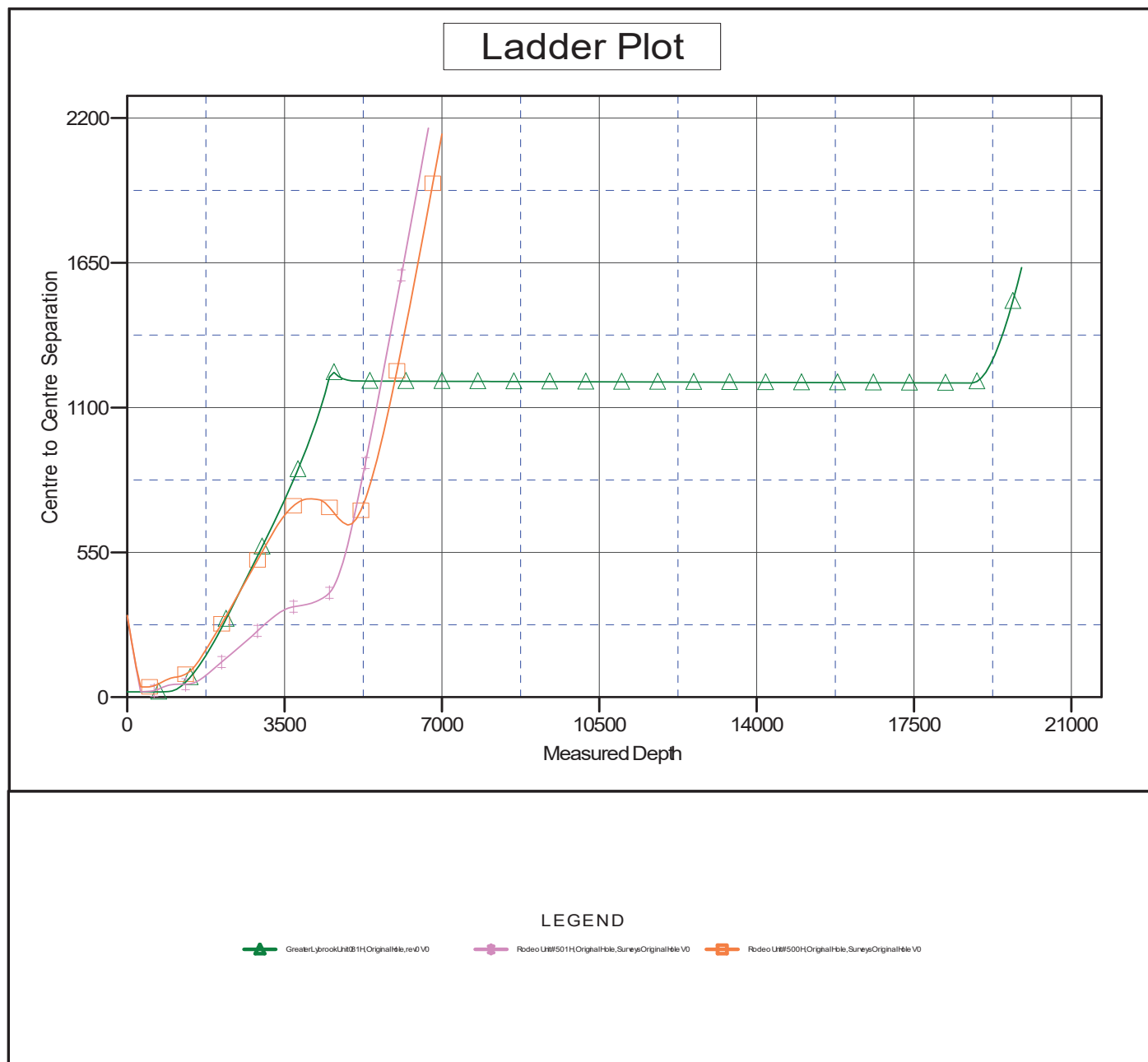
Offset Depths are relative to Offset Datum

Central Meridian is -107.833333333

Coordinates are relative to: Greater Lybrook Unit 079H

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

Grid Convergence at Surface is: 0.07°



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 079H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6894+25 @ 6919.00ft
Reference Site:	Greater Lybrook Unit (79 & 81)	MD Reference:	RKB=6894+25 @ 6919.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 079H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6894+25 @ 6919.00ft

Offset Depths are relative to Offset Datum

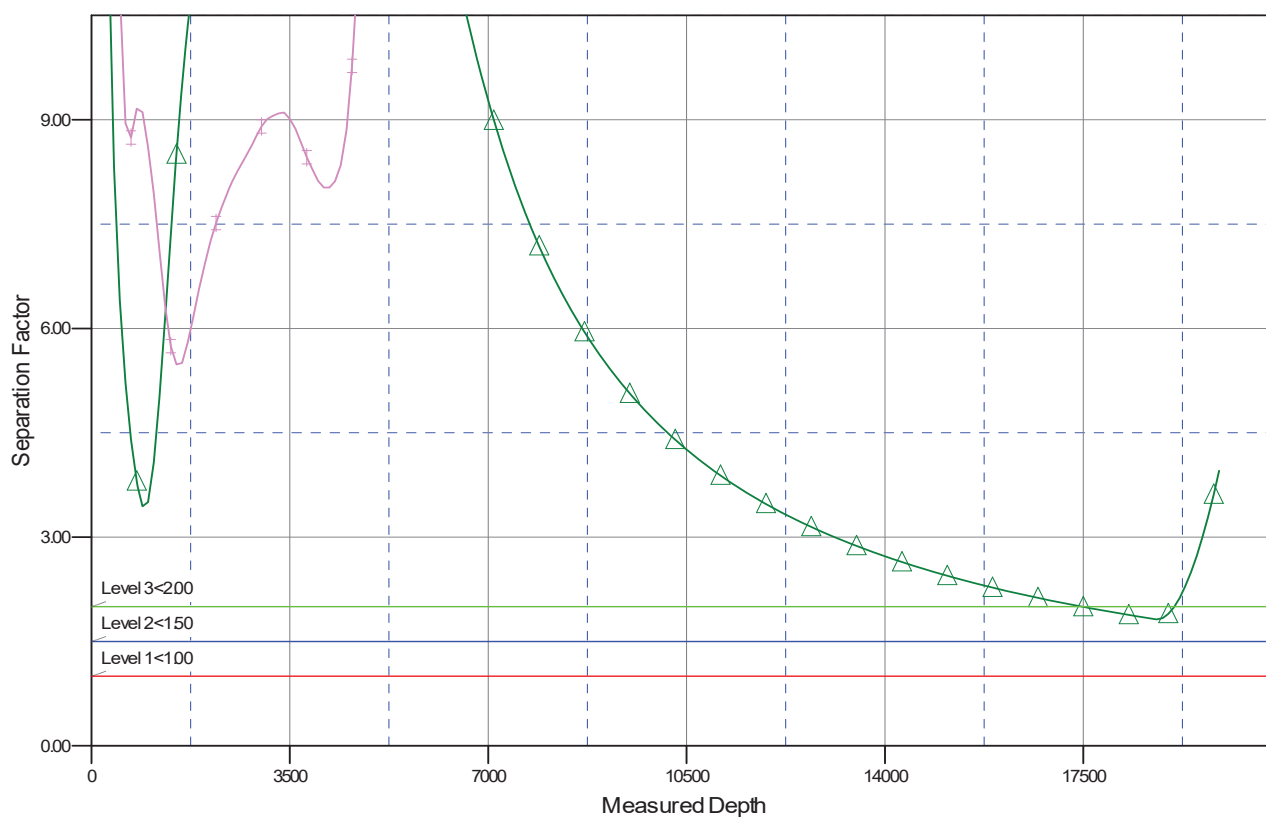
Central Meridian is -107.83333333

Coordinates are relative to: Greater Lybrook Unit 079H

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

Grid Convergence at Surface is: 0.07°

Separation Factor Plot



LEGEND

Greater Lybrook Unit 079H Original Hole, rev0 V0
 Rodeo Unit 501H Original Hole, Surveys Original Hole V0
 Rodeo Unit 500H Original Hole, Surveys Original Hole 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
#079H GREATER LYBROOK UNIT
Lease: NMNM23741 Agreement: NMNM144419X

SH: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 18, T. 23N., R. 08W.
San Juan County, New Mexico
BH: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 11, T. 23N., R. 09W.
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. 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.
- L. 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.
- M. **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.

VII. PHONE NUMBERS

- A. For BOPE tests, cementing, and plugging operations the phone number is 505-564-7750 and must be called 24 hours in advance in order that a BLM representative may witness the operations.

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 524868

ACKNOWLEDGMENTS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 524868
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	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 524868

CONDITIONS

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

CONDITIONS

Created By	Condition	Condition Date
sford	Cement is required to circulate on both surface and intermediate1 strings of casing.	11/10/2025
sford	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	11/10/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	12/22/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	12/22/2025
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.	12/22/2025
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.	12/22/2025