

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: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address	3b. Phone No. (include area code)	9. API Well No. 30-045-38511
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		12. County or Parish
16. No of acres in lease		13. State
17. Spacing Unit dedicated to this well		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		
19. Proposed Depth		
20. BLM/BIA Bond No. in file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		
22. Approximate date work will start*		
23. Estimated duration		
24. Attachments		

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

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

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

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

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

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 09/26/2025

Additional Operator Remarks

Location of Well

0. SHL: NENW / 196 FNL / 1873 FWL / TWSP: 23N / RANGE: 9W / SECTION: 28 / LAT: 36.204619 / LONG: -107.796715 (TVD: 0 feet, MD: 0 feet)
PPP: NENW / 211 FNL / 2608 FWL / TWSP: 23N / RANGE: 9W / SECTION: 28 / LAT: 36.204579 / LONG: -107.794222 (TVD: 3908 feet, MD: 4080 feet)
PPP: NWSW / 0 FNL / 0 FWL / TWSP: 23N / RANGE: 9W / SECTION: 27 / LAT: 36.190681 / LONG: -107.776401 (TVD: 4007 feet, MD: 12721 feet)
PPP: NWNE / 0 FNL / 0 FWL / TWSP: 23N / RANGE: 9W / SECTION: 28 / LAT: 36.197121 / LONG: -107.784971 (TVD: 4007 feet, MD: 12721 feet)
PPP: NENW / 0 FNL / 0 FWL / TWSP: 23N / RANGE: 9W / SECTION: 34 / LAT: 36.190681 / LONG: -107.776401 (TVD: 4007 feet, MD: 12721 feet)
BHL: NWNE / 961 FNL / 1930 FEL / TWSP: 23N / RANGE: 9W / SECTION: 34 / LAT: 36.188068 / LONG: -107.773872 (TVD: 4007 feet, MD: 12721 feet)

BLM Point of Contact

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

CONFIDENTIAL

SURFACE LOCATION (SHL)
196' FNL 1873' FWL
SEC 28, T23N, R9W

KICK OFF POINT (KOP)
196' FNL 1873' FWL
SEC 28, T23N, R9W

FIRST TAKE POINT (FTP)
211' FNL 2608' FWL
SEC 28, T23N, R9W

LAST TAKE POINT (LTP)
961' FNL 1930' FEL
SEC 34, T23N, R9W

BOTTOM HOLE LOCATION (BHL)
961' FNL 1930' FEL
SEC 34, T23N, R9W

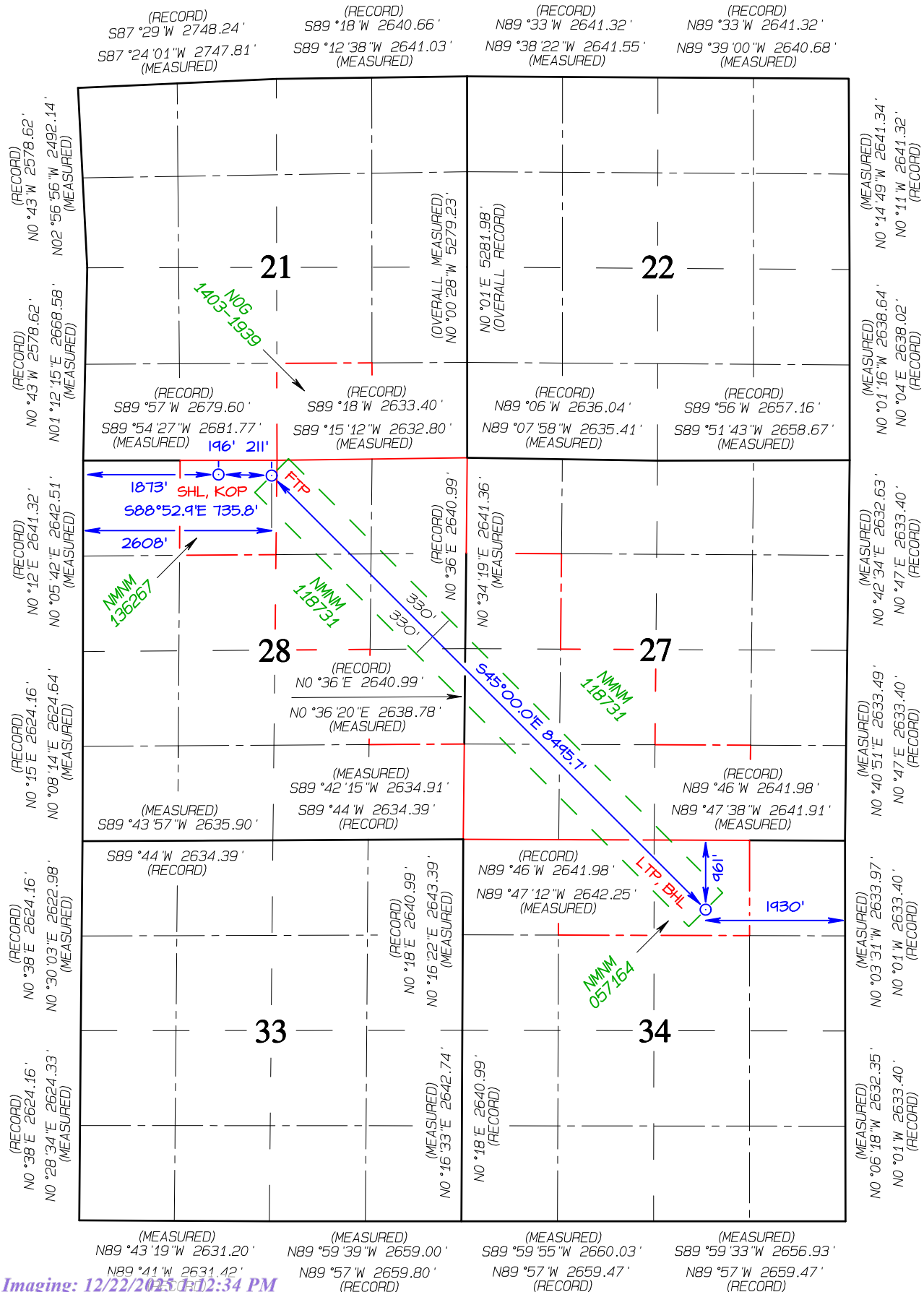
LAT 36.204619 °N
LONG -107.796715 °W
DATUM: NAD1983

LAT 36.204619 °N
LONG -107.796715 °W
DATUM: NAD1983

LAT 36.204579 °N
LONG -107.794222 °W
DATUM: NAD1983

LAT 36.188068 °N
LONG -107.773872 °W
DATUM: NAD1983

LAT 36.188068 °N
LONG -107.773872 °W
DATUM: NAD1983



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

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Enduring Resources, LLC **OGRID:** 372286 **Date:** 07 / 19 / 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 036H	TBD	C-28-23N-9W	196 FNL x 1853 FWL	294	294	118
Greater Lybrook Unit 037H	TBD	C-28-23N-9W	196 FNL x 1873 FWL	336	336	135
Greater Lybrook Unit 038H	TBD	C-28-23N-9W	196 FNL x 1893 FWL	252	252	101
Greater Lybrook Unit 039H	TBD	C-28-23N-9W	196 FNL x 1913 FWL	378	378	151
				3-year Decline	3-year Decline	3-year Decline
Greater Lybrook Unit 036H	TBD	C-28-23N-9W	196 FNL x 1853 FWL	112	112	45
Greater Lybrook Unit 037H	TBD	C-28-23N-9W	196 FNL x 1873 FWL	128	128	51
Greater Lybrook Unit 038H	TBD	C-28-23N-9W	196 FNL x 1893 FWL	96	96	38
Greater Lybrook Unit 039H	TBD	C-28-23N-9W	196 FNL x 1913 FWL	144	144	58

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 059H	TBD	Q4 2025	Q4 2025	Q4 2025	Q4 2025	Q4 2025
Greater Lybrook Unit 061H	TBD	Q4 2025	Q4 2025	Q4 2025	Q4 2025	Q4 2025
Greater Lybrook Unit 063H	TBD	Q4 2025	Q4 2025	Q4 2025	Q4 2025	Q4 2025
Greater Lybrook Unit 071H	TBD	Q4 2025	Q4 2025	Q4 2025	Q4 2025	Q4 2025

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

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

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

Section 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: 7/19/2025
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 036H 037H 038H 039H

SEPARATION EQUIPMENT

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

Separation equipment will be set as follows:

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

Heater treaters will be set as follows:

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

Vapor Recovery Equipment will be set as follows:

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

Production storage tanks will be set as follows:

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



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 036H 037H 038H 039H

VENTING and FLARING

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

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

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

Enduring will only flare gas during the following times:

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



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 036H 037H 038H 039H

OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

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

19.15.27.8 B. Venting and flaring during drilling operations

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

19.15.27.8 E. Venting and flaring during completion or recompletion operations

During Completion Operations, Enduring utilizes the following:

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



19.15.27.8 D. Venting and flaring during production operations

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

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

19.15.27.8 E. Performance standards

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



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

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

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



Enduring Resources, LLC.
NATURAL GAS MANAGEMENT and WASTE MINIMIZATION PLAN
Greater Lybrook Unit 036H 037H 038H 039H

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-Cms Silt formation*

WELL INFORMATION:

Name: Greater Lybrook Unit 037H

API Number: TBD

AFE Number: TBD

ER Well Number: TBD

State: New Mexico

County: San Juan

Surface Elevation: 6,529 ft ASL (GL) 6,553 ft ASL (KB)

Surface Location: 28-23-9 Sec-Twn-Rng 196 ft FNL 1,873 ft FWL

36.204619 ° N latitude 107.796715 ° W longitude (NAD 83)

BH Location: 34-23-9 Sec-Twn-Rng 961 ft FNL 1,930 ft FEL

36.188068 ° N latitude 107.773872 ° 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 38.3 miles to MM 113.4; Right (Southwest) on CR #7890 for 0.8 miles to fork; Left (South) remaining on CR #7890 for 1.3 miles to 4-way; Left (Southeast) remaining on CR #7890 for 0.6 miles to T; Right (SouthWest) on CR #7890 for 0.6 miles to fork; Right (West) on access road for 0.6 mi to fork; Left/Straight (West) for 3.1 miles to Greater Lybrook Unit 772H PAD. There are 5 existing wells on this location and 4 new wells staked on the west side of the pad, from West to East: Greater Lybrook Unit 036H, 037H, 038H, 039H

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	6,478	75	75	W	normal
	Kirtland	6,395	158	158	W	normal
	Fruitland	6,160	393	393	G, W	sub
	Pictured Cliffs	5,770	783	783	G, W	sub
	Lewis	5,605	948	948	G, W	normal
	Chacra	5,415	1,138	1,138	G, W	normal
	Cliff House	4,411	2,142	2,180	G, W	sub
	Menefee	4,396	2,157	2,196	G, W	normal
	Point Lookout	3,371	3,182	3,269	G, W	normal
	Mancos	3,209	3,344	3,431	O,G	sub (~0.38)
	Gallup (MNCS_A)	2,875	3,678	3,773	O,G	sub (~0.38)
	MNCS_B	2,778	3,775	3,886	O,G	sub (~0.38)
	MNCS_C	2,688	3,865	4,009	O,G	sub (~0.38)
	MNCS_Cms	2,645	3,908	4,080	O,G	sub (~0.38)
	FTP TARGET	2,645	3,908	4,080	O,G	sub (~0.38)
	PROJECTED TD	2,623	3,930	12,722	O,G	sub (~0.38)

Surface: Nacimiento

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

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

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

Maximum anticipated BH pressure, assuming maximum pressure gradient: 1,690 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 830 psi

Temperature: Maximum anticipated BHT is 125° F or less

H₂S INFORMATION:

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

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

LOGGING, CORING, AND TESTING:

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

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

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

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

DRILLING RIG INFORMATION:

Contractor: Ensign

Rig No.: 140

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

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

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

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

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

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

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

Choke 3", 5,000 psi

KB-GL (ft): 23.5

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

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

- 1) Rig will be equipped with upper and lower kelly cocks with handles available.
- 2) Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well.
- 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 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 5) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.

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

FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement:

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

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

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

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

Fluid Program: See "Detailed Drilling Plan" section and attached Newpark mud program for additional details.

DETAILED DRILLING PLAN:

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

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

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

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

Hole Size: 12-1/4"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, deviation survey

Logging: None

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	9.625	36.0	K-55	STC	2,020	3,520	564,000	423,000
Loading					153	861	110,988	110,988
Min. S.F.					13.21	4.09	5.08	3.81

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

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

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

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

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

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

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

Calculated cement volumes assume gauge hole and the excess noted in table Csg ID 8.921

Mesa Ready Mix or first available

Shoe Track L 44

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

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

350 ft (MD)	to	4,367 ft (MD)	Hole Section Length:	4,017 ft
350 ft (TVD)	to	4,005 ft (TVD)	Casing Required:	4,367 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCI)	8.8 - 9.2	15	8 - 14	6 - 12	10.8 - 11.2	No OBM

Hole Size (inches): 8.75

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

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

Logging: None

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

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	7	26.0	K-55	LTC	4,320	4,980	415,000	367,000
Loading					1,749	1,059	199,014	199,014
Min. S.F.					2.47	4.70	2.09	1.84

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

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

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

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

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Lead	III:POZ Blend	12.5	2.150	12.06	80%	0	402	865
Tail	Type III	13.5	1.710	8.88	30%	3,331	124	212

Annular Capacity 0.16681 cuft/ft 7" casing x 9-5/8" casing annulus Shoe Track L 44

0.1503 cuft/ft 9-5/8" casing x 12-1/4" hole annulus Casing ID 6.276

0.2148 cuft/ft 7" casing casing volume

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

Drake Intermediate Cementing Program

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

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

4,367 ft (MD)	to	12,722 ft (MD)	Hole Section Length:	8,355 ft
4,005 ft (TVD)	to	3,930 ft (TVD)	Casing Required:	8,505 ft
Estimated KOP:		3,521 ft (MD)	3,434 ft (TVD)	
Estimated Liner Top:		4,217 ft (MD)	3,972 ft (TVD)	

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

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: 8,542
Est Frac Inform: 36 Frac Stages 137,000 bbls slick water 11,110,000 lbs proppant
Frac: 39 plug-and-perf stages with 150,000 bbls slickwater fluid and 12,100,000 lbs of proppant (estimated)
Flowback: Flow back through production tubing as pressures allow
Production: Produce through production tubing via gas-lift into permanent production and storage facilities

ESTIMATED START DATES:

Drilling: 12/16/2024
Completion: 2/14/2025
Production: 3/31/2025

Prepared by: Greg Olson 7/18/2024
Updated:

WELL NAME: **Greater Lybrook Unit 037H**

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

API Number: *TBD*

AFE Number: *TBD*

ER Well Number: *TBD*

State: *New Mexico*

County: *San Juan*

Surface Elev.: *6,529* ft ASL (GL) *6,553* ft ASL (KB)

Surface Location: *28-23-9* Sec-Twn- Rng *196* ft FNL *1,873* ft FWL

BH Location: *34-23-9* Sec-Twn- Rng *961* ft FNL *1930* ft FEL

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

South on US Hwy 550 for 38.3 miles to MM 113.4; Right (Southwest) on CR #7890 for 0.8 miles to fork; Left (South) remaining on CR #7890 for 1.3 miles to 4-way; Left (Southeast) remaining on CR #7890 for 0.6 miles to T; Right (SouthWest) on CR #7890 for 0.6 miles to fork; Right (West) on access road for 0.6 mi to fork; Left/Straight (West) for 3.1 miles to Greater Lybrook Unit 772H PAD. There are 5 existing wells on this location and 4 new wells staked on the west side of the pad, from West to East: Greater Lybrook Unit 036H, 037H, 038H, 039H

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	4,367 ft
KOP (MD)	3,521 ft
KOP (TVD)	3,434 ft
Target (TVD)	3,908 ft
Curve BUR	10 °/100 ft
POE (MD)	4,080 ft
TD (MD)	12,722 ft
Lat Len (ft)	8,642 ft

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	12.250	350	9.625	36	K-55	STC	0	350
Intermediate	8.750	4,367	7	26.0	K-55	LTC	0	4,367
Production	6.125	12,722	4.500	11.6	P-110	BTC	4,217	12,722

CEMENT PROPERTIES SUMMARY:

	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)
Surface	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114
Inter. (Lead)	III:POZ Blend	12.5	2.15	12.06	0.1668	80%	0	402
Inter. (Tail)	Type III	13.5	1.71	8.88	0.1503	30%	3,331	124
Prod. (Lead)	0	0	0.000	0	0.1044	0%	0	0
Prod. (Tail)	G:POZ blend	13.3	1.520	7.5	0.0873	25%	4,217	691

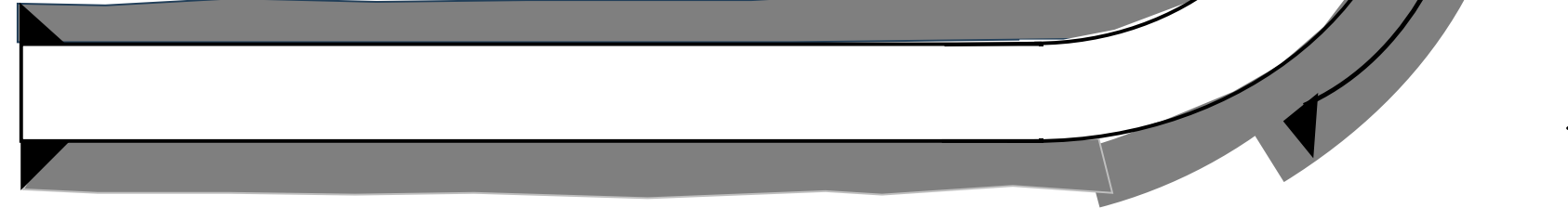
COMPLETION / PRODUCTION SUMMARY:

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

Flowback: Flow back through production tubing as pressures allow

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

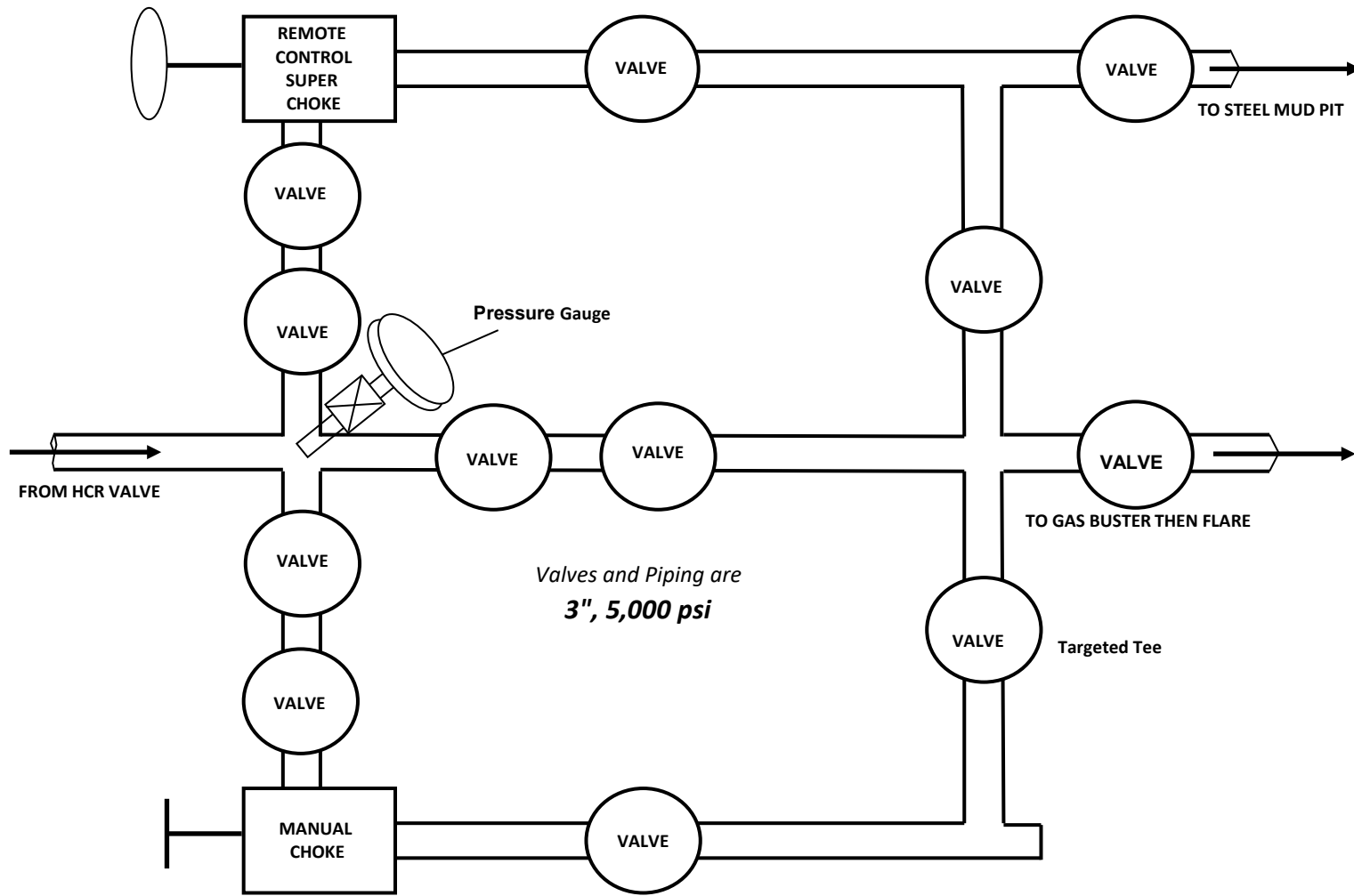
Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	75	75
Kirtland	158	158
Fruitland	393	393
Pictured Cliffs	783	783
Lewis	948	948
Chacra	1,138	1,138
Cliff House	2,142	2,180
Menefee	2,157	2,196
Point Lookout	3,182	3,269
Mancos	3,344	3,431
Gallup (MNCS_A)	3,678	3,773
MNCS_B	3,775	3,886
MNCS_C	3,865	4,009
MNCS_Cms	3,908	4,080
MNCS_D	NA	NA
MNCS_E	NA	NA
MNCS_F	NA	NA
MNCS_G	NA	NA
MNCS_H	NA	NA
MNCS_I	NA	NA
FTP TARGET	3,908	4,080
PROJECTED TD	3,930	12,722



Greater Lybrook Unit 037H

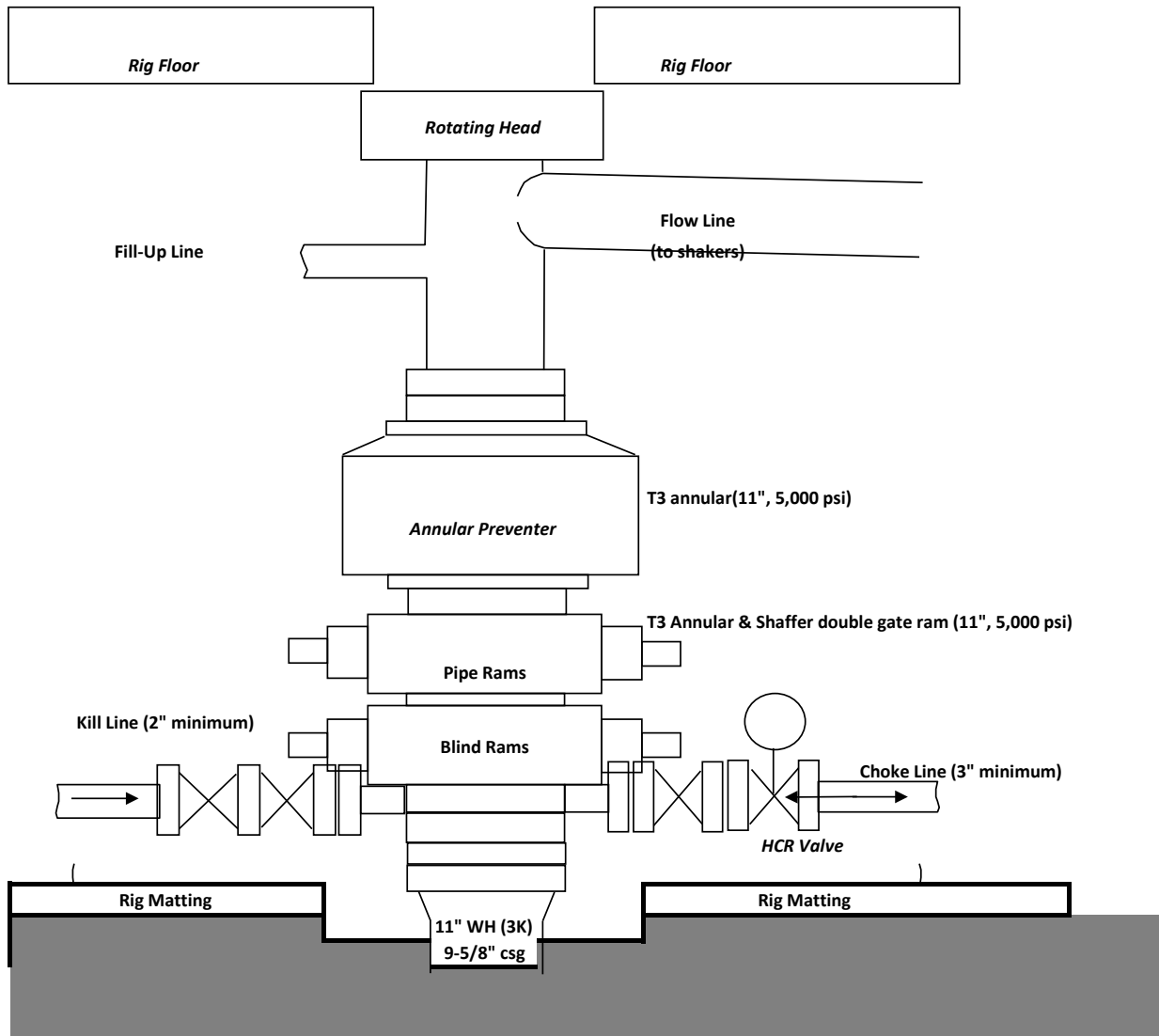
NOTE: EXACT BOPE AND CHOKE CONFIGURATION AND COMPONENTS MAY DIFFER FROM WHAT IS DEPICTED IN THE DIGRAMS BELOW DEPENDING ON THE RIG AND ITS ASSOCIATED EQUIPMENT. RAM PREVENTERS, ANNULAR PREVENTERS, AND CHOKE MANIFOLD AND COMPONENTS WILL BE RATED TO 3,000 PSI MINIMUM.

CHOKE MANIFOLD



Greater Lybrook Unit 037H

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 37H
Site: Greater Lybrook (36, 37, 38 & 39)
Project: San Juan County, New Mexico NAD83 NM W
Design: rev0
Rig:

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=6529+23.5 @ 6552.50ft

Surface location:
Northing 1893780.89 Easting 2733894.86 Latitude 36.20461900 Longitude -107.79671500

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.457°



Azimuths to Grid North
True North: -0.02°
Magnetic North: 8.46°

Magnetic Field
Strength: 48966.0nT
Dip Angle: 62.65°
Date: 8/20/2024
Model: IGRF2020



CASING DETAILS

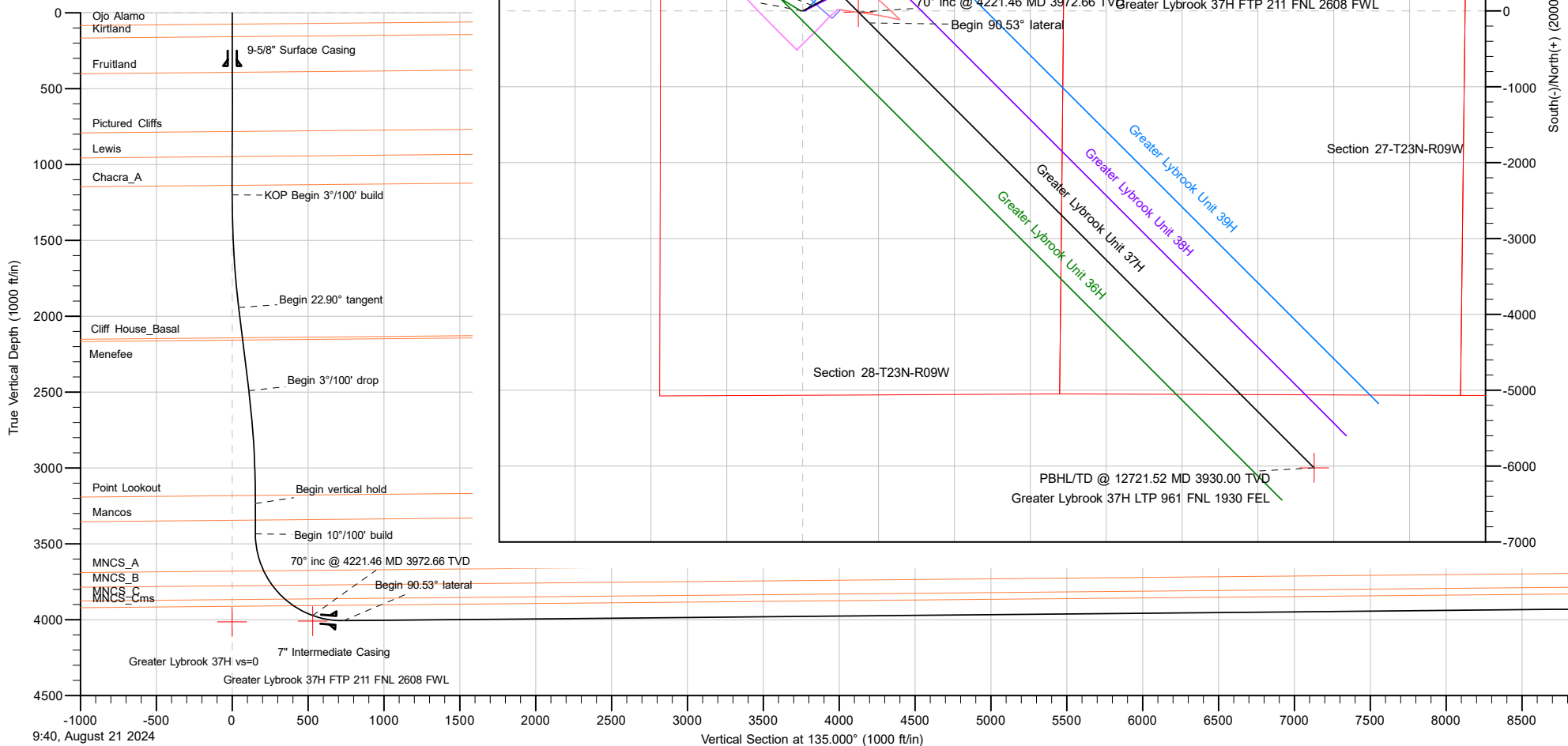
TVD	MD	Size
350.00	350.00	9-5/8
4005.65	4379.10	7

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.000	0.00	
2	1200.00	0.00	0.000	1200.00	0.00	0.00	0.00	0.000	0.00	KOP Begin 3°/100' build
3	1963.31	22.90	61.717	1943.15	71.32	132.55	3.00	61.717	43.29	Begin 22.90° tangent
4	2558.15	22.90	61.717	2491.11	180.99	336.37	0.00	0.000	109.87	Begin 3°/100' drop
5	3321.46	0.00	0.000	3234.26	252.31	468.92	3.00	180.000	153.17	Begin vertical hold
6	3521.46	0.00	0.000	3434.26	252.31	468.92	0.00	0.000	153.17	Begin 10°/100' build
7	4221.46	70.00	135.000	3972.66	-14.27	735.50	10.00	135.000	530.16	70° inc @ 4221.46 MD 3972.66 TVD
8	4426.79	90.53	135.000	4007.19	-156.60	877.83	10.00	-0.001	731.46	Begin 90.53° lateral
9	12721.52	90.53	135.000	3930.00	-6021.56	6742.88	0.00	0.000	9025.83	PBHL/TD @ 12721.52 MD 3930.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Greater Lybrook 37H FTP 211 FNL 2608 FWL	4009.07	-14.27	735.50	1893766.62	2734630.35	36.20457900	-107.79422200
Greater Lybrook 37H LTP 961 FNL 1930 FEL	3930.00	-6021.56	6742.88	1887759.34	2740637.73	36.18806800	-107.77387200
Greater Lybrook 37H vs=0	4014.00	360.61	360.61	1894141.50	2734255.47	36.20560925	-107.79549221



9:40, August 21 2024

Vertical Section at 135.000° (1000 ft/in)



Planning Report



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	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 (36, 37, 38 & 39)				
Site Position:		Northing:	1,893,780.89 usft	Latitude:	36.20461900
From:	Lat/Long	Easting:	2,733,874.80 usft	Longitude:	-107.79678300
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Greater Lybrook Unit 37H, Surf loc: 196 FNL 1873 FWL Section 28-T23N-R09W					
Well Position	+N/-S	0.00 ft	Northing:	1,893,780.89 usft	Latitude:	36.20461900
	+E/-W	0.00 ft	Easting:	2,733,894.86 usft	Longitude:	-107.79671500
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,529.00 ft
Grid Convergence:		0.022 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/20/2024	8.479	62.646	48,965.95682605

Design	rev0				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	135.000	

Plan Survey Tool Program	Date	8/21/2024			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	12,721.52	rev0 (Original Hole)	MWD	
				OWSG MWD - Standard	



Planning Report



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,963.31	22.90	61.717	1,943.15	71.32	132.55	3.00	3.00	0.00	61.717	
2,558.15	22.90	61.717	2,491.11	180.99	336.37	0.00	0.00	0.00	0.000	
3,321.46	0.00	0.000	3,234.26	252.31	468.92	3.00	-3.00	0.00	180.000	
3,521.46	0.00	0.000	3,434.26	252.31	468.92	0.00	0.00	0.00	0.000	
4,221.46	70.00	135.000	3,972.66	-14.27	735.50	10.00	10.00	0.00	135.000	
4,426.79	90.53	135.000	4,007.19	-156.60	877.83	10.00	10.00	0.00	-0.001	
12,721.52	90.53	135.000	3,930.00	-6,021.56	6,742.88	0.00	0.00	0.00	0.000	Greater Lybrook 37H



Planning Report



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75.00	0.00	0.000	75.00	0.00	0.00	0.00	0.00	0.00	0.00
Ojo Alamo									
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
158.00	0.00	0.000	158.00	0.00	0.00	0.00	0.00	0.00	0.00
Kirtland									
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
350.00	0.00	0.000	350.00	0.00	0.00	0.00	0.00	0.00	0.00
9-5/8" Surface Casing									
393.00	0.00	0.000	393.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruitland									
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
783.00	0.00	0.000	783.00	0.00	0.00	0.00	0.00	0.00	0.00
Pictured Cliffs									
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
948.00	0.00	0.000	948.00	0.00	0.00	0.00	0.00	0.00	0.00
Lewis									
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,138.00	0.00	0.000	1,138.00	0.00	0.00	0.00	0.00	0.00	0.00
Chacra_A									
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3°/100' build									
1,300.00	3.00	61.717	1,299.95	1.24	2.30	0.75	3.00	3.00	0.00
1,400.00	6.00	61.717	1,399.63	4.96	9.21	3.01	3.00	3.00	0.00
1,500.00	9.00	61.717	1,498.77	11.14	20.71	6.76	3.00	3.00	0.00
1,600.00	12.00	61.717	1,597.08	19.78	36.75	12.00	3.00	3.00	0.00
1,700.00	15.00	61.717	1,694.31	30.84	57.31	18.72	3.00	3.00	0.00
1,800.00	18.00	61.717	1,790.18	44.29	82.32	26.89	3.00	3.00	0.00
1,900.00	21.00	61.717	1,884.43	60.11	111.71	36.49	3.00	3.00	0.00
1,963.31	22.90	61.717	1,943.15	71.32	132.55	43.29	3.00	3.00	0.00
Begin 22.90° tangent									
2,000.00	22.90	61.717	1,976.95	78.08	145.12	47.40	0.00	0.00	0.00
2,100.00	22.90	61.717	2,069.07	96.52	179.38	58.59	0.00	0.00	0.00
2,179.58	22.90	61.717	2,142.38	111.19	206.65	67.50	0.00	0.00	0.00
Cliff House_Basal									
2,195.84	22.90	61.717	2,157.36	114.19	212.23	69.32	0.00	0.00	0.00
Menefee									
2,200.00	22.90	61.717	2,161.19	114.96	213.65	69.79	0.00	0.00	0.00
2,300.00	22.90	61.717	2,253.31	133.40	247.92	80.98	0.00	0.00	0.00
2,400.00	22.90	61.717	2,345.43	151.83	282.18	92.17	0.00	0.00	0.00
2,500.00	22.90	61.717	2,437.54	170.27	316.45	103.36	0.00	0.00	0.00
2,558.15	22.90	61.717	2,491.11	180.99	336.37	109.87	0.00	0.00	0.00
Begin 3°/100' drop									
2,600.00	21.64	61.717	2,529.84	188.51	350.34	114.43	3.00	-3.00	0.00
2,700.00	18.64	61.717	2,623.71	204.82	380.66	124.34	3.00	-3.00	0.00
2,800.00	15.64	61.717	2,719.26	218.79	406.62	132.82	3.00	-3.00	0.00
2,900.00	12.64	61.717	2,816.21	230.36	428.13	139.84	3.00	-3.00	0.00



Planning Report



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,000.00	9.64	61.717	2,914.32	239.52	445.15	145.40	3.00	-3.00	0.00
3,100.00	6.64	61.717	3,013.30	246.23	457.63	149.48	3.00	-3.00	0.00
3,200.00	3.64	61.717	3,112.88	250.48	465.52	152.06	3.00	-3.00	0.00
3,268.78	1.58	61.717	3,181.59	251.97	468.28	152.96	3.00	-3.00	0.00
Point Lookout									
3,300.00	0.64	61.717	3,212.80	252.25	468.81	153.13	3.00	-3.00	0.00
3,321.46	0.00	0.000	3,234.26	252.31	468.92	153.17	3.00	-3.00	0.00
Begin vertical hold									
3,400.00	0.00	0.000	3,312.80	252.31	468.92	153.17	0.00	0.00	0.00
3,430.78	0.00	0.000	3,343.58	252.31	468.92	153.17	0.00	0.00	0.00
Mancos									
3,500.00	0.00	0.000	3,412.80	252.31	468.92	153.17	0.00	0.00	0.00
3,521.46	0.00	0.000	3,434.26	252.31	468.92	153.17	0.00	0.00	0.00
Begin 10°/100' build									
3,550.00	2.85	135.000	3,462.79	251.81	469.42	153.88	10.00	10.00	0.00
3,600.00	7.85	135.000	3,512.56	248.51	472.72	158.54	10.00	10.00	0.00
3,650.00	12.85	135.000	3,561.73	242.16	479.07	167.53	10.00	10.00	0.00
3,700.00	17.85	135.000	3,609.93	232.80	488.43	180.76	10.00	10.00	0.00
3,750.00	22.85	135.000	3,656.79	220.50	500.73	198.15	10.00	10.00	0.00
3,773.31	25.19	135.000	3,678.08	213.80	507.43	207.63	10.00	10.00	0.00
MNCS_A									
3,800.00	27.85	135.000	3,701.96	205.37	515.86	219.55	10.00	10.00	0.00
3,850.00	32.85	135.000	3,745.09	187.51	533.72	244.81	10.00	10.00	0.00
3,885.81	36.44	135.000	3,774.55	173.12	548.11	265.16	10.00	10.00	0.00
MNCS_B									
3,900.00	37.85	135.000	3,785.86	167.06	554.17	273.73	10.00	10.00	0.00
3,950.00	42.85	135.000	3,823.95	144.17	577.06	306.10	10.00	10.00	0.00
4,000.00	47.85	135.000	3,859.07	119.03	602.20	341.66	10.00	10.00	0.00
4,008.58	48.71	135.000	3,864.78	114.50	606.73	348.06	10.00	10.00	0.00
MNCS_C									
4,050.00	52.85	135.000	3,890.97	91.81	629.42	380.15	10.00	10.00	0.00
4,079.67	55.82	135.000	3,908.26	74.77	646.46	404.25	10.00	10.00	0.00
MNCS_Cms									
4,100.00	57.85	135.000	3,919.38	62.73	658.50	421.27	10.00	10.00	0.00
4,150.00	62.85	135.000	3,944.11	32.02	689.21	464.71	10.00	10.00	0.00
4,200.00	67.85	135.000	3,964.95	-0.11	721.34	510.14	10.00	10.00	0.00
4,221.46	70.00	135.000	3,972.66	-14.27	735.50	530.16	10.00	10.00	0.00
70° inc @ 4221.46 MD 3972.66 TVD									
4,250.00	72.85	135.000	3,981.75	-33.39	754.62	557.21	10.00	10.00	0.00
4,300.00	77.85	135.000	3,994.39	-67.59	788.82	605.57	10.00	10.00	0.00
4,350.00	82.85	135.000	4,002.77	-102.43	823.66	654.85	10.00	10.00	0.00
4,379.10	85.76	135.000	4,005.65	-122.91	844.14	683.80	10.00	10.00	0.00
7" Intermediate Casing									
4,400.00	87.85	135.000	4,006.82	-137.66	858.89	704.67	10.00	10.00	0.00
4,426.79	90.53	135.000	4,007.19	-156.60	877.83	731.46	10.00	10.00	0.00
Begin 90.53° lateral									
4,500.00	90.53	135.000	4,006.51	-208.37	929.60	804.66	0.00	0.00	0.00
4,600.00	90.53	135.000	4,005.58	-279.07	1,000.31	904.66	0.00	0.00	0.00
4,700.00	90.53	135.000	4,004.65	-349.78	1,071.01	1,004.65	0.00	0.00	0.00
4,800.00	90.53	135.000	4,003.72	-420.49	1,141.72	1,104.65	0.00	0.00	0.00
4,900.00	90.53	135.000	4,002.79	-491.19	1,212.43	1,204.65	0.00	0.00	0.00
5,000.00	90.53	135.000	4,001.86	-561.90	1,283.14	1,304.64	0.00	0.00	0.00
5,100.00	90.53	135.000	4,000.93	-632.61	1,353.85	1,404.64	0.00	0.00	0.00



Planning Report



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.00	90.53	135.000	4,000.00	-703.32	1,424.56	1,504.63	0.00	0.00	0.00
5,300.00	90.53	135.000	3,999.07	-774.02	1,495.26	1,604.63	0.00	0.00	0.00
5,400.00	90.53	135.000	3,998.14	-844.73	1,565.97	1,704.62	0.00	0.00	0.00
5,500.00	90.53	135.000	3,997.21	-915.44	1,636.68	1,804.62	0.00	0.00	0.00
5,600.00	90.53	135.000	3,996.27	-986.14	1,707.39	1,904.62	0.00	0.00	0.00
5,700.00	90.53	135.000	3,995.34	-1,056.85	1,778.10	2,004.61	0.00	0.00	0.00
5,800.00	90.53	135.000	3,994.41	-1,127.56	1,848.80	2,104.61	0.00	0.00	0.00
5,900.00	90.53	135.000	3,993.48	-1,198.27	1,919.51	2,204.60	0.00	0.00	0.00
6,000.00	90.53	135.000	3,992.55	-1,268.97	1,990.22	2,304.60	0.00	0.00	0.00
6,100.00	90.53	135.000	3,991.62	-1,339.68	2,060.93	2,404.59	0.00	0.00	0.00
6,200.00	90.53	135.000	3,990.69	-1,410.39	2,131.64	2,504.59	0.00	0.00	0.00
6,300.00	90.53	135.000	3,989.76	-1,481.09	2,202.34	2,604.58	0.00	0.00	0.00
6,400.00	90.53	135.000	3,988.83	-1,551.80	2,273.05	2,704.58	0.00	0.00	0.00
6,500.00	90.53	135.000	3,987.90	-1,622.51	2,343.76	2,804.58	0.00	0.00	0.00
6,600.00	90.53	135.000	3,986.97	-1,693.22	2,414.47	2,904.57	0.00	0.00	0.00
6,700.00	90.53	135.000	3,986.04	-1,763.92	2,485.18	3,004.57	0.00	0.00	0.00
6,800.00	90.53	135.000	3,985.11	-1,834.63	2,555.89	3,104.56	0.00	0.00	0.00
6,900.00	90.53	135.000	3,984.18	-1,905.34	2,626.59	3,204.56	0.00	0.00	0.00
7,000.00	90.53	135.000	3,983.25	-1,976.04	2,697.30	3,304.55	0.00	0.00	0.00
7,100.00	90.53	135.000	3,982.32	-2,046.75	2,768.01	3,404.55	0.00	0.00	0.00
7,200.00	90.53	135.000	3,981.38	-2,117.46	2,838.72	3,504.55	0.00	0.00	0.00
7,300.00	90.53	135.000	3,980.45	-2,188.17	2,909.43	3,604.54	0.00	0.00	0.00
7,400.00	90.53	135.000	3,979.52	-2,258.87	2,980.13	3,704.54	0.00	0.00	0.00
7,500.00	90.53	135.000	3,978.59	-2,329.58	3,050.84	3,804.53	0.00	0.00	0.00
7,600.00	90.53	135.000	3,977.66	-2,400.29	3,121.55	3,904.53	0.00	0.00	0.00
7,700.00	90.53	135.000	3,976.73	-2,470.99	3,192.26	4,004.52	0.00	0.00	0.00
7,800.00	90.53	135.000	3,975.80	-2,541.70	3,262.97	4,104.52	0.00	0.00	0.00
7,900.00	90.53	135.000	3,974.87	-2,612.41	3,333.67	4,204.52	0.00	0.00	0.00
8,000.00	90.53	135.000	3,973.94	-2,683.12	3,404.38	4,304.51	0.00	0.00	0.00
8,100.00	90.53	135.000	3,973.01	-2,753.82	3,475.09	4,404.51	0.00	0.00	0.00
8,200.00	90.53	135.000	3,972.08	-2,824.53	3,545.80	4,504.50	0.00	0.00	0.00
8,300.00	90.53	135.000	3,971.15	-2,895.24	3,616.51	4,604.50	0.00	0.00	0.00
8,400.00	90.53	135.000	3,970.22	-2,965.94	3,687.22	4,704.49	0.00	0.00	0.00
8,500.00	90.53	135.000	3,969.29	-3,036.65	3,757.92	4,804.49	0.00	0.00	0.00
8,600.00	90.53	135.000	3,968.36	-3,107.36	3,828.63	4,904.49	0.00	0.00	0.00
8,700.00	90.53	135.000	3,967.43	-3,178.06	3,899.34	5,004.48	0.00	0.00	0.00
8,800.00	90.53	135.000	3,966.49	-3,248.77	3,970.05	5,104.48	0.00	0.00	0.00
8,900.00	90.53	135.000	3,965.56	-3,319.48	4,040.76	5,204.47	0.00	0.00	0.00
9,000.00	90.53	135.000	3,964.63	-3,390.19	4,111.46	5,304.47	0.00	0.00	0.00
9,100.00	90.53	135.000	3,963.70	-3,460.89	4,182.17	5,404.46	0.00	0.00	0.00
9,200.00	90.53	135.000	3,962.77	-3,531.60	4,252.88	5,504.46	0.00	0.00	0.00
9,300.00	90.53	135.000	3,961.84	-3,602.31	4,323.59	5,604.45	0.00	0.00	0.00
9,400.00	90.53	135.000	3,960.91	-3,673.01	4,394.30	5,704.45	0.00	0.00	0.00
9,500.00	90.53	135.000	3,959.98	-3,743.72	4,465.00	5,804.45	0.00	0.00	0.00
9,600.00	90.53	135.000	3,959.05	-3,814.43	4,535.71	5,904.44	0.00	0.00	0.00
9,700.00	90.53	135.000	3,958.12	-3,885.14	4,606.42	6,004.44	0.00	0.00	0.00
9,800.00	90.53	135.000	3,957.19	-3,955.84	4,677.13	6,104.43	0.00	0.00	0.00
9,900.00	90.53	135.000	3,956.26	-4,026.55	4,747.84	6,204.43	0.00	0.00	0.00
10,000.00	90.53	135.000	3,955.33	-4,097.26	4,818.55	6,304.42	0.00	0.00	0.00
10,100.00	90.53	135.000	3,954.40	-4,167.96	4,889.25	6,404.42	0.00	0.00	0.00
10,200.00	90.53	135.000	3,953.47	-4,238.67	4,959.96	6,504.42	0.00	0.00	0.00
10,300.00	90.53	135.000	3,952.54	-4,309.38	5,030.67	6,604.41	0.00	0.00	0.00
10,400.00	90.53	135.000	3,951.60	-4,380.09	5,101.38	6,704.41	0.00	0.00	0.00
10,500.00	90.53	135.000	3,950.67	-4,450.79	5,172.09	6,804.40	0.00	0.00	0.00



Planning Report



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	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)
10,600.00	90.53	135.000	3,949.74	-4,521.50	5,242.79	6,904.40	0.00	0.00	0.00
10,700.00	90.53	135.000	3,948.81	-4,592.21	5,313.50	7,004.39	0.00	0.00	0.00
10,800.00	90.53	135.000	3,947.88	-4,662.91	5,384.21	7,104.39	0.00	0.00	0.00
10,900.00	90.53	135.000	3,946.95	-4,733.62	5,454.92	7,204.39	0.00	0.00	0.00
11,000.00	90.53	135.000	3,946.02	-4,804.33	5,525.63	7,304.38	0.00	0.00	0.00
11,100.00	90.53	135.000	3,945.09	-4,875.04	5,596.34	7,404.38	0.00	0.00	0.00
11,200.00	90.53	135.000	3,944.16	-4,945.74	5,667.04	7,504.37	0.00	0.00	0.00
11,300.00	90.53	135.000	3,943.23	-5,016.45	5,737.75	7,604.37	0.00	0.00	0.00
11,400.00	90.53	135.000	3,942.30	-5,087.16	5,808.46	7,704.36	0.00	0.00	0.00
11,500.00	90.53	135.000	3,941.37	-5,157.86	5,879.17	7,804.36	0.00	0.00	0.00
11,600.00	90.53	135.000	3,940.44	-5,228.57	5,949.88	7,904.36	0.00	0.00	0.00
11,700.00	90.53	135.000	3,939.51	-5,299.28	6,020.58	8,004.35	0.00	0.00	0.00
11,800.00	90.53	135.000	3,938.58	-5,369.99	6,091.29	8,104.35	0.00	0.00	0.00
11,900.00	90.53	135.000	3,937.65	-5,440.69	6,162.00	8,204.34	0.00	0.00	0.00
12,000.00	90.53	135.000	3,936.71	-5,511.40	6,232.71	8,304.34	0.00	0.00	0.00
12,100.00	90.53	135.000	3,935.78	-5,582.11	6,303.42	8,404.33	0.00	0.00	0.00
12,200.00	90.53	135.000	3,934.85	-5,652.81	6,374.12	8,504.33	0.00	0.00	0.00
12,300.00	90.53	135.000	3,933.92	-5,723.52	6,444.83	8,604.33	0.00	0.00	0.00
12,400.00	90.53	135.000	3,932.99	-5,794.23	6,515.54	8,704.32	0.00	0.00	0.00
12,500.00	90.53	135.000	3,932.06	-5,864.93	6,586.25	8,804.32	0.00	0.00	0.00
12,600.00	90.53	135.000	3,931.13	-5,935.64	6,656.96	8,904.31	0.00	0.00	0.00
12,700.00	90.53	135.000	3,930.20	-6,006.35	6,727.67	9,004.31	0.00	0.00	0.00
12,721.52	90.53	135.000	3,930.00	-6,021.56	6,742.88	9,025.83	0.00	0.00	0.00
PBHL/TD @ 12721.52 MD 3930.00 TVD									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	9-5/8" Surface Casing	9-5/8	12-1/4	
4,379.10	4,005.65	7" Intermediate Casing	7	8-3/4	



Planning Report



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
75.00	75.00	Ojo Alamo		-0.530	135.000	
158.00	158.00	Kirtland		-0.530	135.000	
393.00	393.00	Fruitland		-0.530	135.000	
783.00	783.00	Pictured Cliffs		-0.530	135.000	
948.00	948.00	Lewis		-0.530	135.000	
1,138.00	1,138.00	Chacra_A		-0.530	135.000	
2,179.58	2,142.38	Cliff House_Basal		-0.530	135.000	
2,195.84	2,157.36	Menefee		-0.530	135.000	
3,268.78	3,181.59	Point Lookout		-0.530	135.000	
3,430.78	3,343.58	Mancos		-0.530	135.000	
3,773.31	3,678.08	MNCS_A		-0.530	135.000	
3,885.81	3,774.55	MNCS_B		-0.530	135.000	
4,008.58	3,864.78	MNCS_C		-0.530	135.000	
4,079.67	3,908.26	MNCS_Cms		-0.530	135.000	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,200.00	1,200.00	0.00	0.00	KOP Begin 3°/100' build	
1,963.31	1,943.15	71.32	132.55	Begin 22.90° tangent	
2,558.15	2,491.11	180.99	336.37	Begin 3°/100' drop	
3,321.46	3,234.26	252.31	468.92	Begin vertical hold	
3,521.46	3,434.26	252.31	468.92	Begin 10°/100' build	
4,221.46	3,972.66	-14.27	735.50	70° inc @ 4221.46 MD 3972.66 TVD	
4,426.79	4,007.19	-156.60	877.83	Begin 90.53° lateral	
12,721.52	3,930.00	-6,021.56	6,742.88	PBHL/TD @ 12721.52 MD 3930.00 TVD	



Planning Report - Geographic



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	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 (36, 37, 38 & 39)				
Site Position:		Northing:	1,893,780.89 usft	Latitude:	36.20461900
From:	Lat/Long	Easting:	2,733,874.80 usft	Longitude:	-107.79678300
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Greater Lybrook Unit 37H, Surf loc: 196 FNL 1873 FWL Section 28-T23N-R09W					
Well Position	+N/-S	0.00 ft	Northing:	1,893,780.89 usft	Latitude:	36.20461900
	+E/-W	0.00 ft	Easting:	2,733,894.86 usft	Longitude:	-107.79671500
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,529.00 ft
Grid Convergence:		0.022 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/20/2024	8.479	62.646	48,965.95682605

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	135.000

Plan Survey Tool Program	Date	8/21/2024			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	12,721.52 rev0 (Original Hole)	MWD		
			OWSG MWD - Standard		



Planning Report - Geographic



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,963.31	22.90	61.717	1,943.15	71.32	132.55	3.00	3.00	0.00	61.717	
2,558.15	22.90	61.717	2,491.11	180.99	336.37	0.00	0.00	0.00	0.000	
3,321.46	0.00	0.000	3,234.26	252.31	468.92	3.00	-3.00	0.00	180.000	
3,521.46	0.00	0.000	3,434.26	252.31	468.92	0.00	0.00	0.00	0.000	
4,221.46	70.00	135.000	3,972.66	-14.27	735.50	10.00	10.00	0.00	135.000	
4,426.79	90.53	135.000	4,007.19	-156.60	877.83	10.00	10.00	0.00	-0.001	
12,721.52	90.53	135.000	3,930.00	-6,021.56	6,742.88	0.00	0.00	0.00	0.000	Greater Lybrook 37H



Planning Report - Geographic



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.000	0.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
75.00	0.00	0.000	75.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
Ojo Alamo									
100.00	0.00	0.000	100.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
158.00	0.00	0.000	158.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
Kirtland									
200.00	0.00	0.000	200.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
300.00	0.00	0.000	300.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
350.00	0.00	0.000	350.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
9-5/8" Surface Casing									
393.00	0.00	0.000	393.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
Fruitland									
400.00	0.00	0.000	400.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
500.00	0.00	0.000	500.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
600.00	0.00	0.000	600.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
700.00	0.00	0.000	700.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
783.00	0.00	0.000	783.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
Pictured Cliffs									
800.00	0.00	0.000	800.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
900.00	0.00	0.000	900.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
948.00	0.00	0.000	948.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
Lewis									
1,000.00	0.00	0.000	1,000.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
1,100.00	0.00	0.000	1,100.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
1,138.00	0.00	0.000	1,138.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
Chacra_A									
1,200.00	0.00	0.000	1,200.00	0.00	0.00	1,893,780.89	2,733,894.86	36.20461900	-107.79671500
KOP Begin 3°/100' build									
1,300.00	3.00	61.717	1,299.95	1.24	2.30	1,893,782.14	2,733,897.16	36.20462240	-107.79670718
1,400.00	6.00	61.717	1,399.63	4.96	9.21	1,893,785.85	2,733,904.07	36.20463261	-107.79668376
1,500.00	9.00	61.717	1,498.77	11.14	20.71	1,893,792.04	2,733,915.57	36.20464959	-107.79664479
1,600.00	12.00	61.717	1,597.08	19.78	36.75	1,893,800.67	2,733,931.61	36.20467329	-107.79659039
1,700.00	15.00	61.717	1,694.31	30.84	57.31	1,893,811.73	2,733,952.17	36.20470365	-107.79652071
1,800.00	18.00	61.717	1,790.18	44.29	82.32	1,893,825.19	2,733,977.18	36.20474059	-107.79643592
1,900.00	21.00	61.717	1,884.43	60.11	111.71	1,893,841.00	2,734,006.57	36.20478400	-107.79633627
1,963.31	22.90	61.717	1,943.15	71.32	132.55	1,893,852.21	2,734,027.41	36.20481478	-107.79626563
Begin 22.90° tangent									
2,000.00	22.90	61.717	1,976.95	78.08	145.12	1,893,858.98	2,734,039.98	36.20483335	-107.79622300
2,100.00	22.90	61.717	2,069.07	96.52	179.38	1,893,877.42	2,734,074.24	36.20488396	-107.79610683
2,179.58	22.90	61.717	2,142.38	111.19	206.65	1,893,892.09	2,734,101.51	36.20492424	-107.79601438
Cliff House_Basal									
2,195.84	22.90	61.717	2,157.36	114.19	212.23	1,893,895.09	2,734,107.09	36.20493247	-107.79599549
Menefee									
2,200.00	22.90	61.717	2,161.19	114.96	213.65	1,893,895.85	2,734,108.51	36.20493458	-107.79599066
2,300.00	22.90	61.717	2,253.31	133.40	247.92	1,893,914.29	2,734,142.78	36.20498519	-107.79587449
2,400.00	22.90	61.717	2,345.43	151.83	282.18	1,893,932.73	2,734,177.04	36.20503580	-107.79575832
2,500.00	22.90	61.717	2,437.54	170.27	316.45	1,893,951.16	2,734,211.31	36.20508642	-107.79564214
2,558.15	22.90	61.717	2,491.11	180.99	336.37	1,893,961.89	2,734,231.23	36.20511585	-107.79557459
Begin 3°/100' drop									
2,600.00	21.64	61.717	2,529.84	188.51	350.34	1,893,969.40	2,734,245.20	36.20513648	-107.79552724
2,700.00	18.64	61.717	2,623.71	204.82	380.66	1,893,985.72	2,734,275.52	36.20518127	-107.79542443
2,800.00	15.64	61.717	2,719.26	218.79	406.62	1,893,999.68	2,734,301.48	36.20521960	-107.79533644
2,900.00	12.64	61.717	2,816.21	230.36	428.13	1,894,011.26	2,734,322.99	36.20525138	-107.79526349



Planning Report - Geographic



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	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	
3,000.00	9.64	61.717	2,914.32	239.52	445.15	1,894,020.42	2,734,340.01	36.20527652	-107.79520580	
3,100.00	6.64	61.717	3,013.30	246.23	457.63	1,894,027.13	2,734,352.48	36.20529494	-107.79516351	
3,200.00	3.64	61.717	3,112.88	250.48	465.52	1,894,031.37	2,734,360.38	36.20530660	-107.79513674	
3,268.78	1.58	61.717	3,181.59	251.97	468.28	1,894,032.86	2,734,363.14	36.20531068	-107.79512739	
Point Lookout										
3,300.00	0.64	61.717	3,212.80	252.25	468.81	1,894,033.15	2,734,363.67	36.20531147	-107.79512558	
3,321.46	0.00	0.000	3,234.26	252.31	468.92	1,894,033.20	2,734,363.78	36.20531162	-107.79512522	
Begin vertical hold										
3,400.00	0.00	0.000	3,312.80	252.31	468.92	1,894,033.20	2,734,363.78	36.20531162	-107.79512522	
3,430.78	0.00	0.000	3,343.58	252.31	468.92	1,894,033.20	2,734,363.78	36.20531162	-107.79512522	
Mancos										
3,500.00	0.00	0.000	3,412.80	252.31	468.92	1,894,033.20	2,734,363.78	36.20531162	-107.79512522	
3,521.46	0.00	0.000	3,434.26	252.31	468.92	1,894,033.20	2,734,363.78	36.20531162	-107.79512522	
Begin 10°/100' build										
3,550.00	2.85	135.000	3,462.79	251.81	469.42	1,894,032.70	2,734,364.28	36.20531024	-107.79512351	
3,600.00	7.85	135.000	3,512.56	248.51	472.72	1,894,029.40	2,734,367.58	36.20530118	-107.79511234	
3,650.00	12.85	135.000	3,561.73	242.16	479.07	1,894,023.05	2,734,373.93	36.20528372	-107.79509082	
3,700.00	17.85	135.000	3,609.93	232.80	488.43	1,894,013.69	2,734,383.29	36.20525800	-107.79505911	
3,750.00	22.85	135.000	3,656.79	220.50	500.73	1,894,001.40	2,734,395.58	36.20522422	-107.79501745	
3,773.31	25.19	135.000	3,678.08	213.80	507.43	1,893,994.69	2,734,402.29	36.20520578	-107.79499472	
MNCS_A										
3,800.00	27.85	135.000	3,701.96	205.37	515.86	1,893,986.26	2,734,410.72	36.20518262	-107.79496617	
3,850.00	32.85	135.000	3,745.09	187.51	533.72	1,893,968.40	2,734,428.58	36.20513354	-107.79490566	
3,885.81	36.44	135.000	3,774.55	173.12	548.11	1,893,954.01	2,734,442.97	36.20509398	-107.79485689	
MNCS_B										
3,900.00	37.85	135.000	3,785.86	167.06	554.17	1,893,947.95	2,734,449.03	36.20507733	-107.79483636	
3,950.00	42.85	135.000	3,823.95	144.17	577.06	1,893,925.07	2,734,471.92	36.20501444	-107.79475882	
4,000.00	47.85	135.000	3,859.07	119.03	602.20	1,893,899.92	2,734,497.06	36.20494533	-107.79467362	
4,008.58	48.71	135.000	3,864.78	114.50	606.73	1,893,895.39	2,734,501.59	36.20493289	-107.79465828	
MNCS_C										
4,050.00	52.85	135.000	3,890.97	91.81	629.42	1,893,872.71	2,734,524.28	36.20487054	-107.79458141	
4,079.67	55.82	135.000	3,908.26	74.77	646.46	1,893,855.66	2,734,541.32	36.20482371	-107.79452366	
MNCS_Cms										
4,100.00	57.85	135.000	3,919.38	62.73	658.50	1,893,843.63	2,734,553.35	36.20479063	-107.79448289	
4,150.00	62.85	135.000	3,944.11	32.02	689.21	1,893,812.91	2,734,584.07	36.20470622	-107.79437881	
4,200.00	67.85	135.000	3,964.95	-0.11	721.34	1,893,780.79	2,734,616.20	36.20461793	-107.79426997	
4,221.46	70.00	135.000	3,972.66	-14.27	735.50	1,893,766.63	2,734,630.35	36.20457902	-107.79422200	
70° inc @ 4221.46 MD 3972.66 TVD										
4,250.00	72.85	135.000	3,981.75	-33.39	754.62	1,893,747.50	2,734,649.48	36.20452645	-107.79415718	
4,300.00	77.85	135.000	3,994.39	-67.59	788.82	1,893,713.30	2,734,683.68	36.20443248	-107.79404132	
4,350.00	82.85	135.000	4,002.77	-102.43	823.66	1,893,678.46	2,734,718.52	36.20433672	-107.79392326	
4,379.10	85.76	135.000	4,005.65	-122.91	844.14	1,893,657.99	2,734,739.00	36.20428045	-107.79385389	
7" Intermediate Casing										
4,400.00	87.85	135.000	4,006.82	-137.66	858.89	1,893,643.23	2,734,753.75	36.20423990	-107.79380390	
4,426.79	90.53	135.000	4,007.19	-156.60	877.83	1,893,624.29	2,734,772.69	36.20418785	-107.79373973	
Begin 90.53° lateral										
4,500.00	90.53	135.000	4,006.51	-208.37	929.60	1,893,572.53	2,734,824.46	36.20404559	-107.79356434	
4,600.00	90.53	135.000	4,005.58	-279.07	1,000.31	1,893,501.82	2,734,895.16	36.20385127	-107.79332477	
4,700.00	90.53	135.000	4,004.65	-349.78	1,071.01	1,893,431.11	2,734,965.87	36.20365695	-107.79308520	
4,800.00	90.53	135.000	4,003.72	-420.49	1,141.72	1,893,360.41	2,735,036.58	36.20346263	-107.79284563	
4,900.00	90.53	135.000	4,002.79	-491.19	1,212.43	1,893,289.70	2,735,107.29	36.20326831	-107.79260607	
5,000.00	90.53	135.000	4,001.86	-561.90	1,283.14	1,893,218.99	2,735,178.00	36.20307399	-107.79236650	
5,100.00	90.53	135.000	4,000.93	-632.61	1,353.85	1,893,148.29	2,735,248.70	36.20287967	-107.79212694	



Planning Report - Geographic



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,200.00	90.53	135.000	4,000.00	-703.32	1,424.56	1,893,077.58	2,735,319.41	36.20268535	-107.79188737
5,300.00	90.53	135.000	3,999.07	-774.02	1,495.26	1,893,006.87	2,735,390.12	36.20249103	-107.79164781
5,400.00	90.53	135.000	3,998.14	-844.73	1,565.97	1,892,936.17	2,735,460.83	36.20229670	-107.79140825
5,500.00	90.53	135.000	3,997.21	-915.44	1,636.68	1,892,865.46	2,735,531.54	36.20210238	-107.79116869
5,600.00	90.53	135.000	3,996.27	-986.14	1,707.39	1,892,794.75	2,735,602.24	36.20190806	-107.79092913
5,700.00	90.53	135.000	3,995.34	-1,056.85	1,778.10	1,892,724.05	2,735,672.95	36.20171373	-107.79068958
5,800.00	90.53	135.000	3,994.41	-1,127.56	1,848.80	1,892,653.34	2,735,743.66	36.20151941	-107.79045002
5,900.00	90.53	135.000	3,993.48	-1,198.27	1,919.51	1,892,582.63	2,735,814.37	36.20132508	-107.79021047
6,000.00	90.53	135.000	3,992.55	-1,268.97	1,990.22	1,892,511.92	2,735,885.08	36.20113076	-107.78997091
6,100.00	90.53	135.000	3,991.62	-1,339.68	2,060.93	1,892,441.22	2,735,955.78	36.20093643	-107.78973136
6,200.00	90.53	135.000	3,990.69	-1,410.39	2,131.64	1,892,370.51	2,736,026.49	36.20074210	-107.78949181
6,300.00	90.53	135.000	3,989.76	-1,481.09	2,202.34	1,892,299.80	2,736,097.20	36.20054778	-107.78925226
6,400.00	90.53	135.000	3,988.83	-1,551.80	2,273.05	1,892,229.10	2,736,167.91	36.20035345	-107.78901271
6,500.00	90.53	135.000	3,987.90	-1,622.51	2,343.76	1,892,158.39	2,736,238.62	36.20015912	-107.78877316
6,600.00	90.53	135.000	3,986.97	-1,693.22	2,414.47	1,892,087.68	2,736,309.32	36.19996479	-107.78853362
6,700.00	90.53	135.000	3,986.04	-1,763.92	2,485.18	1,892,016.98	2,736,380.03	36.19977046	-107.78829407
6,800.00	90.53	135.000	3,985.11	-1,834.63	2,555.89	1,891,946.27	2,736,450.74	36.19957613	-107.78805453
6,900.00	90.53	135.000	3,984.18	-1,905.34	2,626.59	1,891,875.56	2,736,521.45	36.19938180	-107.78781498
7,000.00	90.53	135.000	3,983.25	-1,976.04	2,697.30	1,891,804.85	2,736,592.16	36.19918747	-107.78757544
7,100.00	90.53	135.000	3,982.32	-2,046.75	2,768.01	1,891,734.15	2,736,662.86	36.19899314	-107.78733590
7,200.00	90.53	135.000	3,981.38	-2,117.46	2,838.72	1,891,663.44	2,736,733.57	36.19879881	-107.78709636
7,300.00	90.53	135.000	3,980.45	-2,188.17	2,909.43	1,891,592.73	2,736,804.28	36.19860448	-107.78685683
7,400.00	90.53	135.000	3,979.52	-2,258.87	2,980.13	1,891,522.03	2,736,874.99	36.19841014	-107.78661729
7,500.00	90.53	135.000	3,978.59	-2,329.58	3,050.84	1,891,451.32	2,736,945.70	36.19821581	-107.78637775
7,600.00	90.53	135.000	3,977.66	-2,400.29	3,121.55	1,891,380.61	2,737,016.40	36.19802148	-107.78613822
7,700.00	90.53	135.000	3,976.73	-2,470.99	3,192.26	1,891,309.91	2,737,087.11	36.19782714	-107.78589868
7,800.00	90.53	135.000	3,975.80	-2,541.70	3,262.97	1,891,239.20	2,737,157.82	36.19763281	-107.78565915
7,900.00	90.53	135.000	3,974.87	-2,612.41	3,333.67	1,891,168.49	2,737,228.53	36.19743847	-107.78541962
8,000.00	90.53	135.000	3,973.94	-2,683.12	3,404.38	1,891,097.79	2,737,299.24	36.19724414	-107.78518009
8,100.00	90.53	135.000	3,973.01	-2,753.82	3,475.09	1,891,027.08	2,737,369.94	36.19704980	-107.78494056
8,200.00	90.53	135.000	3,972.08	-2,824.53	3,545.80	1,890,956.37	2,737,440.65	36.19685547	-107.78470104
8,300.00	90.53	135.000	3,971.15	-2,895.24	3,616.51	1,890,885.66	2,737,511.36	36.19666113	-107.78446151
8,400.00	90.53	135.000	3,970.22	-2,965.94	3,687.22	1,890,814.96	2,737,582.07	36.19646679	-107.78422198
8,500.00	90.53	135.000	3,969.29	-3,036.65	3,757.92	1,890,744.25	2,737,652.78	36.19627245	-107.78398246
8,600.00	90.53	135.000	3,968.36	-3,107.36	3,828.63	1,890,673.54	2,737,723.48	36.19607811	-107.78374294
8,700.00	90.53	135.000	3,967.43	-3,178.06	3,899.34	1,890,602.84	2,737,794.19	36.19588378	-107.78350342
8,800.00	90.53	135.000	3,966.49	-3,248.77	3,970.05	1,890,532.13	2,737,864.90	36.19568944	-107.78326390
8,900.00	90.53	135.000	3,965.56	-3,319.48	4,040.76	1,890,461.42	2,737,935.61	36.19549510	-107.78302438
9,000.00	90.53	135.000	3,964.63	-3,390.19	4,111.46	1,890,390.72	2,738,006.32	36.19530076	-107.78278486
9,100.00	90.53	135.000	3,963.70	-3,460.89	4,182.17	1,890,320.01	2,738,077.02	36.19510642	-107.78254534
9,200.00	90.53	135.000	3,962.77	-3,531.60	4,252.88	1,890,249.30	2,738,147.73	36.19491207	-107.78230583
9,300.00	90.53	135.000	3,961.84	-3,602.31	4,323.59	1,890,178.59	2,738,218.44	36.19471773	-107.78206631
9,400.00	90.53	135.000	3,960.91	-3,673.01	4,394.30	1,890,107.89	2,738,289.15	36.19452339	-107.78182680
9,500.00	90.53	135.000	3,959.98	-3,743.72	4,465.00	1,890,037.18	2,738,359.86	36.19432905	-107.78158729
9,600.00	90.53	135.000	3,959.05	-3,814.43	4,535.71	1,889,966.47	2,738,430.56	36.19413470	-107.78134778
9,700.00	90.53	135.000	3,958.12	-3,885.14	4,606.42	1,889,895.77	2,738,501.27	36.19394036	-107.78110827
9,800.00	90.53	135.000	3,957.19	-3,955.84	4,677.13	1,889,825.06	2,738,571.98	36.19374602	-107.78086876
9,900.00	90.53	135.000	3,956.26	-4,026.55	4,747.84	1,889,754.35	2,738,642.69	36.19355167	-107.78062925
10,000.00	90.53	135.000	3,955.33	-4,097.26	4,818.55	1,889,683.65	2,738,713.40	36.19335733	-107.78038974
10,100.00	90.53	135.000	3,954.40	-4,167.96	4,889.25	1,889,612.94	2,738,784.10	36.19316298	-107.78015024
10,200.00	90.53	135.000	3,953.47	-4,238.67	4,959.96	1,889,542.23	2,738,854.81	36.19296863	-107.77991074
10,300.00	90.53	135.000	3,952.54	-4,309.38	5,030.67	1,889,471.52	2,738,925.52	36.19277429	-107.77967123
10,400.00	90.53	135.000	3,951.60	-4,380.09	5,101.38	1,889,400.82	2,738,996.23	36.19257994	-107.77943173
10,500.00	90.53	135.000	3,950.67	-4,450.79	5,172.09	1,889,330.11	2,739,066.94	36.19238559	-107.77919223
10,600.00	90.53	135.000	3,949.74	-4,521.50	5,242.79	1,889,259.40	2,739,137.64	36.19219124	-107.77895273



Planning Report - Geographic



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	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	
10,700.00	90.53	135.000	3,948.81	-4,592.21	5,313.50	1,889,188.70	2,739,208.35	36.19199690	-107.77871323	
10,800.00	90.53	135.000	3,947.88	-4,662.91	5,384.21	1,889,117.99	2,739,279.06	36.19180255	-107.77847374	
10,900.00	90.53	135.000	3,946.95	-4,733.62	5,454.92	1,889,047.28	2,739,349.77	36.19160820	-107.77823424	
11,000.00	90.53	135.000	3,946.02	-4,804.33	5,525.63	1,888,976.58	2,739,420.48	36.19141385	-107.77799475	
11,100.00	90.53	135.000	3,945.09	-4,875.04	5,596.34	1,888,905.87	2,739,491.18	36.19121950	-107.77775525	
11,200.00	90.53	135.000	3,944.16	-4,945.74	5,667.04	1,888,835.16	2,739,561.89	36.19102515	-107.77751576	
11,300.00	90.53	135.000	3,943.23	-5,016.45	5,737.75	1,888,764.46	2,739,632.60	36.19083079	-107.77727627	
11,400.00	90.53	135.000	3,942.30	-5,087.16	5,808.46	1,888,693.75	2,739,703.31	36.19063644	-107.77703678	
11,500.00	90.53	135.000	3,941.37	-5,157.86	5,879.17	1,888,623.04	2,739,774.02	36.19044209	-107.77679729	
11,600.00	90.53	135.000	3,940.44	-5,228.57	5,949.88	1,888,552.33	2,739,844.72	36.19024774	-107.77655781	
11,700.00	90.53	135.000	3,939.51	-5,299.28	6,020.58	1,888,481.63	2,739,915.43	36.19005338	-107.77631832	
11,800.00	90.53	135.000	3,938.58	-5,369.99	6,091.29	1,888,410.92	2,739,986.14	36.18985903	-107.77607884	
11,900.00	90.53	135.000	3,937.65	-5,440.69	6,162.00	1,888,340.21	2,740,056.85	36.18966468	-107.77583935	
12,000.00	90.53	135.000	3,936.71	-5,511.40	6,232.71	1,888,269.51	2,740,127.56	36.18947032	-107.77559987	
12,100.00	90.53	135.000	3,935.78	-5,582.11	6,303.42	1,888,198.80	2,740,198.26	36.18927597	-107.77536039	
12,200.00	90.53	135.000	3,934.85	-5,652.81	6,374.12	1,888,128.09	2,740,268.97	36.18908161	-107.77512091	
12,300.00	90.53	135.000	3,933.92	-5,723.52	6,444.83	1,888,057.39	2,740,339.68	36.18888725	-107.77488144	
12,400.00	90.53	135.000	3,932.99	-5,794.23	6,515.54	1,887,986.68	2,740,410.39	36.18869290	-107.77464196	
12,500.00	90.53	135.000	3,932.06	-5,864.93	6,586.25	1,887,915.97	2,740,481.10	36.18849854	-107.77440249	
12,600.00	90.53	135.000	3,931.13	-5,935.64	6,656.96	1,887,845.26	2,740,551.80	36.18830418	-107.77416301	
12,700.00	90.53	135.000	3,930.20	-6,006.35	6,727.67	1,887,774.56	2,740,622.51	36.18810982	-107.77392354	
12,721.52	90.53	135.000	3,930.00	-6,021.56	6,742.88	1,887,759.34	2,740,637.73	36.18806800	-107.77387200	
PBHL/TD @ 12721.52 MD 3930.00 TVD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Greater Lybrook 37H LTI - plan hits target center - Point	0.00	0.000	3,930.00	-6,021.56	6,742.88	1,887,759.34	2,740,637.73	36.18806800	-107.77387200	
Greater Lybrook 37H FT - plan misses target center by 34.34ft at 4233.06ft MD (3976.52 TVD, -22.00 N, 743.23 E) - Point	0.00	0.000	4,009.07	-14.27	735.50	1,893,766.62	2,734,630.35	36.20457900	-107.79422200	
Greater Lybrook 37H vs: - plan misses target center by 356.34ft at 3900.00ft MD (3785.86 TVD, 167.06 N, 554.17 E) - Point	0.00	0.000	4,014.00	360.61	360.61	1,894,141.50	2,734,255.47	36.20560925	-107.79549220	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	9-5/8" Surface Casing	9-5/8	12-1/4	
4,379.10	4,005.65	7" Intermediate Casing	7	8-3/4	



Planning Report - Geographic



Database:	DT_Jul1724_v17	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site:	Greater Lybrook (36, 37, 38 & 39)	North Reference:	Grid
Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
75.00	75.00	Ojo Alamo		-0.530	135.000	
158.00	158.00	Kirtland		-0.530	135.000	
393.00	393.00	Fruitland		-0.530	135.000	
783.00	783.00	Pictured Cliffs		-0.530	135.000	
948.00	948.00	Lewis		-0.530	135.000	
1,138.00	1,138.00	Chacra_A		-0.530	135.000	
2,179.58	2,142.38	Cliff House_Basal		-0.530	135.000	
2,195.84	2,157.36	Menefee		-0.530	135.000	
3,268.78	3,181.59	Point Lookout		-0.530	135.000	
3,430.78	3,343.58	Mancos		-0.530	135.000	
3,773.31	3,678.08	MNCS_A		-0.530	135.000	
3,885.81	3,774.55	MNCS_B		-0.530	135.000	
4,008.58	3,864.78	MNCS_C		-0.530	135.000	
4,079.67	3,908.26	MNCS_Cms		-0.530	135.000	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,200.00	1,200.00	0.00	0.00	KOP Begin 3°/100' build	
1,963.31	1,943.15	71.32	132.55	Begin 22.90° tangent	
2,558.15	2,491.11	180.99	336.37	Begin 3°/100' drop	
3,321.46	3,234.26	252.31	468.92	Begin vertical hold	
3,521.46	3,434.26	252.31	468.92	Begin 10°/100' build	
4,221.46	3,972.66	-14.27	735.50	70° inc @ 4221.46 MD 3972.66 TVD	
4,426.79	4,007.19	-156.60	877.83	Begin 90.53° lateral	
12,721.52	3,930.00	-6,021.56	6,742.88	PBHL/TD @ 12721.52 MD 3930.00 TVD	



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference	rev0		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,472.15ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	8/21/2024		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	12,721.52	rev0 (Original Hole)	MWD	OWSG MWD - Standard	

Summary						
	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Site Name Offset Well - Wellbore - Design						
Greater Lybrook (36, 37, 38 & 39)						
Greater Lybrook Unit 36H - Original Hole - rev0	1,000.00	1,000.00	20.06	13.06	2.866	CC, ES
Greater Lybrook Unit 36H - Original Hole - rev0	12,721.52	13,550.63	729.47	416.98	2.334	SF
Greater Lybrook Unit 38H - Original Hole - rev0	1,000.00	1,000.00	20.06	13.06	2.866	CC, ES, SF
Greater Lybrook Unit 39H - Original Hole - rev0	500.00	500.00	39.83	36.41	11.658	CC, ES
Greater Lybrook Unit 39H - Original Hole - rev0	12,721.52	13,236.24	1,200.11	789.52	2.923	SF
Kimbeto Wash 772 Pad (772, 774, 793, 794 & 795)						
Kimbeto Wash Unit 772H - Original Hole - Surveys Origin	4,641.80	4,167.20	316.74	278.83	8.355	CC, ES
Kimbeto Wash Unit 772H - Original Hole - Surveys Origin	4,700.00	4,147.46	321.39	280.74	7.906	SF
Kimbeto Wash Unit 774H - Original Hole - Surveys Origin	1,970.74	1,977.18	267.39	252.69	18.191	CC, ES
Kimbeto Wash Unit 774H - Original Hole - Surveys Origin	2,000.00	1,998.21	268.05	253.09	17.928	SF
Kimbeto Wash Unit 793H - Original Hole - Surveys Origin	2,443.10	2,392.99	251.86	233.82	13.961	CC, ES
Kimbeto Wash Unit 793H - Original Hole - Surveys Origin	3,788.41	3,724.63	314.53	289.17	12.403	SF

Offset Design:	Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 36H - 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			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)	Minimum Separation (ft)			
0.00	0.00	0.00	0.00	0.00	0.00	-90.022	-0.01	-20.06	20.06					
100.00	100.00	100.00	100.00	0.27	0.27	-90.022	-0.01	-20.06	20.06	19.51	0.55	36.578		
200.00	200.00	200.00	200.00	0.63	0.63	-90.022	-0.01	-20.06	20.06	18.80	1.27	15.854		
300.00	300.00	300.00	300.00	0.99	0.99	-90.022	-0.01	-20.06	20.06	18.08	1.98	10.120		
400.00	400.00	400.00	400.00	1.35	1.35	-90.022	-0.01	-20.06	20.06	17.36	2.70	7.432		
500.00	500.00	500.00	500.00	1.71	1.71	-90.022	-0.01	-20.06	20.06	16.65	3.42	5.872		
600.00	600.00	600.00	600.00	2.07	2.07	-90.022	-0.01	-20.06	20.06	15.93	4.13	4.854		
700.00	700.00	700.00	700.00	2.43	2.43	-90.022	-0.01	-20.06	20.06	15.21	4.85	4.136		
800.00	800.00	800.00	800.00	2.78	2.78	-90.022	-0.01	-20.06	20.06	14.49	5.57	3.604		
900.00	900.00	900.00	900.00	3.14	3.14	-90.022	-0.01	-20.06	20.06	13.78	6.28	3.192		
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.50	-90.022	-0.01	-20.06	20.06	13.06	7.00	2.866 CC, ES		
1,100.00	1,100.00	1,099.02	1,098.98	3.86	3.85	-86.581	1.33	-22.25	22.32	14.61	7.70	2.897		
1,200.00	1,200.00	1,197.52	1,197.16	4.22	4.20	-79.545	5.31	-28.77	29.39	21.01	8.38	3.507		
1,300.00	1,299.95	1,294.72	1,293.56	4.57	4.56	-137.155	11.82	-39.43	43.53	34.50	9.03	4.818		
1,400.00	1,399.63	1,391.63	1,389.09	4.93	4.92	-137.134	20.25	-53.25	65.16	55.45	9.71	6.708		

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 36H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,500.00	1,498.77	1,488.21	1,484.28	5.29	5.30	-139.070	28.78	-67.22	90.84	80.42	10.42	8.720	
1,600.00	1,597.08	1,583.54	1,578.23	5.66	5.68	-141.502	37.20	-81.01	120.53	109.41	11.12	10.836	
1,700.00	1,694.31	1,677.36	1,670.70	6.06	6.06	-143.900	45.48	-94.59	154.42	142.58	11.83	13.050	
1,800.00	1,790.18	1,769.42	1,761.42	6.50	6.44	-146.078	53.61	-107.91	192.61	180.07	12.54	15.355	
1,900.00	1,884.43	1,859.45	1,850.15	6.98	6.82	-147.981	61.56	-120.93	235.16	221.90	13.26	17.741	
2,000.00	1,976.95	1,947.38	1,936.81	7.52	7.19	-149.874	69.33	-133.65	281.78	267.82	13.97	20.175	
2,100.00	2,069.07	2,034.84	2,023.00	8.10	7.56	-151.701	77.05	-146.31	329.51	314.84	14.67	22.464	
2,200.00	2,161.19	2,122.29	2,109.19	8.71	7.93	-153.068	84.78	-158.96	377.43	362.05	15.38	24.544	
2,300.00	2,253.31	2,209.75	2,195.38	9.34	8.31	-154.128	92.50	-171.61	425.48	409.39	16.09	26.436	
2,400.00	2,345.43	2,297.21	2,281.57	9.99	8.68	-154.974	100.22	-184.27	473.62	456.80	16.82	28.162	
2,500.00	2,437.54	2,384.66	2,367.76	10.65	9.06	-155.665	107.95	-196.92	521.82	504.28	17.55	29.740	
2,600.00	2,529.84	2,472.33	2,454.16	11.33	9.44	-156.490	115.69	-209.60	569.71	551.43	18.28	31.169	
2,700.00	2,623.71	2,561.90	2,542.43	11.96	9.83	-157.360	123.60	-222.56	614.07	595.06	19.02	32.293	
2,800.00	2,719.26	2,653.54	2,632.75	12.55	10.23	-157.915	131.69	-235.82	654.06	634.30	19.76	33.101	
2,900.00	2,816.21	2,747.00	2,724.86	13.07	10.64	-158.214	139.95	-249.34	689.56	669.06	20.51	33.624	
3,000.00	2,914.32	2,842.03	2,818.51	13.55	11.06	-158.297	148.34	-263.09	720.49	699.23	21.26	33.894	
3,100.00	3,013.30	2,955.18	2,930.15	13.96	11.55	-158.144	157.93	-278.81	746.35	724.21	22.14	33.709	
3,200.00	3,112.88	3,098.50	3,072.65	14.33	12.12	-157.994	165.70	-291.53	762.85	739.66	23.19	32.900	
3,300.00	3,212.80	3,238.74	3,212.80	14.64	12.60	-158.015	167.91	-295.16	768.62	744.53	24.09	31.907	
3,400.00	3,312.80	3,338.74	3,312.80	14.92	12.92	-96.303	167.91	-295.16	768.73	743.98	24.75	31.060	
3,500.00	3,412.80	3,438.74	3,412.80	15.20	13.25	-96.303	167.91	-295.16	768.73	743.32	25.41	30.250	
3,600.00	3,512.56	3,538.49	3,512.56	15.49	13.57	128.744	167.91	-295.16	772.10	746.03	26.07	29.620	
3,700.00	3,609.93	3,635.86	3,609.93	15.82	13.89	128.878	167.91	-295.16	786.28	759.58	26.70	29.452	
3,800.00	3,701.96	3,727.90	3,701.96	16.21	14.20	128.871	167.91	-295.16	811.89	784.60	27.29	29.752	
3,900.00	3,785.86	3,811.80	3,785.86	16.67	14.47	128.350	167.91	-295.16	849.33	821.51	27.83	30.522	
4,000.00	3,859.07	4,870.55	4,416.05	17.23	19.90	124.342	-308.43	181.20	818.65	790.59	28.07	29.169	
4,100.00	3,919.38	4,949.66	4,415.41	17.94	21.00	124.854	-364.37	237.14	778.46	747.76	30.70	25.360	
4,200.00	3,964.95	5,038.16	4,414.68	18.85	22.34	124.683	-426.95	299.71	749.81	716.25	33.56	22.340	
4,300.00	3,994.39	5,133.35	4,413.90	19.97	23.89	124.309	-494.25	367.02	732.08	695.53	36.55	20.028	
4,400.00	4,006.82	5,232.34	4,413.09	21.27	25.61	124.078	-564.25	437.02	724.58	685.07	39.50	18.342	
4,490.40	4,008.29	5,322.71	4,412.35	22.58	27.24	123.961	-628.14	500.92	723.34	681.22	42.12	17.174	
4,500.00	4,006.51	5,332.33	4,412.27	22.73	27.42	124.072	-634.95	507.72	724.29	681.93	42.36	17.100	
4,600.00	4,005.58	5,432.33	4,411.45	24.32	29.30	124.080	-705.66	578.43	724.35	679.01	45.34	15.977	
4,700.00	4,004.65	5,532.33	4,410.64	26.02	31.23	124.087	-776.36	649.14	724.41	675.98	48.44	14.956	
4,800.00	4,003.72	5,632.33	4,409.82	27.81	33.22	124.094	-847.07	719.85	724.48	672.85	51.63	14.032	
4,900.00	4,002.79	5,732.33	4,409.00	29.67	35.24	124.102	-917.78	790.56	724.54	669.64	54.90	13.198	
5,000.00	4,001.86	5,832.33	4,408.18	31.59	37.29	124.109	-988.49	861.27	724.60	666.38	58.23	12.445	
5,100.00	4,000.93	5,932.33	4,407.36	33.56	39.36	124.116	-1,059.19	931.98	724.66	663.06	61.60	11.763	
5,200.00	4,000.00	6,032.33	4,406.54	35.56	41.47	124.124	-1,129.90	1,002.69	724.73	659.71	65.02	11.146	
5,300.00	3,999.07	6,132.33	4,405.72	37.61	43.59	124.131	-1,200.61	1,073.39	724.79	656.32	68.47	10.585	
5,400.00	3,998.14	6,232.33	4,404.91	39.68	45.72	124.138	-1,271.32	1,144.10	724.85	652.91	71.95	10.075	
5,500.00	3,997.21	6,332.33	4,404.09	41.77	47.87	124.146	-1,342.02	1,214.81	724.91	649.47	75.44	9.609	
5,600.00	3,996.27	6,432.33	4,403.27	43.88	50.04	124.153	-1,412.73	1,285.52	724.98	646.02	78.96	9.182	
5,700.00	3,995.34	6,532.33	4,402.45	46.01	52.21	124.160	-1,483.44	1,356.23	725.04	642.56	82.48	8.790	
5,800.00	3,994.41	6,632.33	4,401.63	48.16	54.40	124.168	-1,554.15	1,426.94	725.10	639.08	86.02	8.430	
5,900.00	3,993.48	6,732.33	4,400.81	50.32	56.59	124.175	-1,624.85	1,497.65	725.16	635.60	89.56	8.097	
6,000.00	3,992.55	6,832.33	4,399.99	52.49	58.80	124.183	-1,695.56	1,568.36	725.23	632.12	93.11	7.789	
6,100.00	3,991.62	6,932.33	4,399.18	54.67	61.00	124.190	-1,766.27	1,639.07	725.29	628.62	96.67	7.503	
6,200.00	3,990.69	7,032.33	4,398.36	56.87	63.22	124.197	-1,836.98	1,709.78	725.35	625.13	100.22	7.238	
6,300.00	3,989.76	7,132.33	4,397.54	59.06	65.44	124.205	-1,907.68	1,780.48	725.42	621.64	103.78	6.990	
6,400.00	3,988.83	7,232.33	4,396.72	61.27	67.66	124.212	-1,978.39	1,851.19	725.48	618.14	107.34	6.759	
6,500.00	3,987.90	7,332.33	4,395.90	63.48	69.89	124.219	-2,049.10	1,921.90	725.54	614.65	110.89	6.543	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 36H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
6,600.00	3,986.97	7,432.33	4,395.08	65.70	72.12	124.227	-2,119.81	1,992.61	725.60	611.16	114.44	6.340	
6,700.00	3,986.04	7,532.33	4,394.26	67.92	74.36	124.234	-2,190.51	2,063.32	725.67	607.68	117.99	6.150	
6,800.00	3,985.11	7,632.33	4,393.45	70.15	76.60	124.241	-2,261.22	2,134.03	725.73	604.19	121.54	5.971	
6,900.00	3,984.18	7,732.33	4,392.63	72.38	78.85	124.249	-2,331.93	2,204.74	725.79	600.72	125.07	5.803	
7,000.00	3,983.25	7,832.33	4,391.81	74.62	81.09	124.256	-2,402.64	2,275.45	725.85	597.24	128.61	5.644	
7,100.00	3,982.32	7,932.33	4,390.99	76.85	83.34	124.263	-2,473.34	2,346.16	725.92	593.78	132.14	5.494	
7,200.00	3,981.38	8,032.33	4,390.17	79.10	85.59	124.270	-2,544.05	2,416.87	725.98	590.32	135.66	5.351	
7,300.00	3,980.45	8,132.33	4,389.35	81.34	87.85	124.278	-2,614.76	2,487.58	726.04	586.87	139.18	5.217	
7,400.00	3,979.52	8,232.33	4,388.53	83.59	90.10	124.285	-2,685.47	2,558.28	726.11	583.42	142.69	5.089	
7,500.00	3,978.59	8,332.33	4,387.72	85.84	92.36	124.292	-2,756.17	2,628.99	726.17	579.98	146.19	4.967	
7,600.00	3,977.66	8,432.33	4,386.90	88.09	94.62	124.300	-2,826.88	2,699.70	726.23	576.55	149.68	4.852	
7,700.00	3,976.73	8,532.33	4,386.08	90.35	96.88	124.307	-2,897.59	2,770.41	726.29	573.13	153.16	4.742	
7,800.00	3,975.80	8,632.33	4,385.26	92.60	99.14	124.314	-2,968.30	2,841.12	726.36	569.72	156.64	4.637	
7,900.00	3,974.87	8,732.33	4,384.44	94.86	101.41	124.322	-3,039.00	2,911.83	726.42	566.32	160.10	4.537	
8,000.00	3,973.94	8,832.33	4,383.62	97.12	103.67	124.329	-3,109.71	2,982.54	726.48	562.92	163.56	4.442	
8,100.00	3,973.01	8,932.33	4,382.80	99.38	105.94	124.336	-3,180.42	3,053.25	726.55	559.54	167.01	4.350	
8,200.00	3,972.08	9,032.33	4,381.99	101.65	108.20	124.344	-3,251.13	3,123.96	726.61	556.17	170.44	4.263	
8,300.00	3,971.15	9,132.33	4,381.17	103.91	110.47	124.351	-3,321.83	3,194.67	726.67	552.80	173.87	4.179	
8,400.00	3,970.22	9,232.33	4,380.35	106.18	112.74	124.358	-3,392.54	3,265.37	726.73	549.45	177.29	4.099	
8,500.00	3,969.29	9,332.33	4,379.53	108.44	115.01	124.366	-3,463.25	3,336.08	726.80	546.11	180.69	4.022	
8,600.00	3,968.36	9,432.33	4,378.71	110.71	117.29	124.373	-3,533.96	3,406.79	726.86	542.77	184.09	3.948	
8,700.00	3,967.43	9,532.33	4,377.89	112.98	119.56	124.380	-3,604.66	3,477.50	726.92	539.45	187.47	3.878	
8,800.00	3,966.49	9,632.33	4,377.07	115.25	121.83	124.388	-3,675.37	3,548.21	726.99	536.15	190.84	3.809	
8,900.00	3,965.56	9,732.33	4,376.26	117.52	124.10	124.395	-3,746.08	3,618.92	727.05	532.85	194.20	3.744	
9,000.00	3,964.63	9,832.33	4,375.44	119.79	126.38	124.402	-3,816.79	3,689.63	727.11	529.56	197.55	3.681	
9,100.00	3,963.70	9,932.33	4,374.62	122.07	128.65	124.409	-3,887.49	3,760.34	727.18	526.29	200.89	3.620	
9,200.00	3,962.77	10,032.33	4,373.80	124.34	130.93	124.417	-3,958.20	3,831.05	727.24	523.03	204.21	3.561	
9,300.00	3,961.84	10,132.33	4,372.98	126.61	133.21	124.424	-4,028.91	3,901.76	727.30	519.78	207.52	3.505	
9,400.00	3,960.91	10,232.33	4,372.16	128.89	135.48	124.431	-4,099.62	3,972.46	727.36	516.54	210.82	3.450	
9,500.00	3,959.98	10,332.33	4,371.34	131.16	137.76	124.439	-4,170.32	4,043.17	727.43	513.32	214.11	3.397	
9,600.00	3,959.05	10,432.33	4,370.53	133.44	140.04	124.446	-4,241.03	4,113.88	727.49	510.10	217.39	3.347	
9,700.00	3,958.12	10,532.33	4,369.71	135.72	142.32	124.453	-4,311.74	4,184.59	727.55	506.91	220.65	3.297	
9,800.00	3,957.19	10,632.33	4,368.89	137.99	144.60	124.461	-4,382.45	4,255.30	727.62	503.72	223.90	3.250	
9,900.00	3,956.26	10,732.33	4,368.07	140.27	146.88	124.468	-4,453.15	4,326.01	727.68	500.55	227.13	3.204	
10,000.00	3,955.33	10,832.33	4,367.25	142.55	149.16	124.475	-4,523.86	4,396.72	727.74	497.39	230.35	3.159	
10,100.00	3,954.40	10,932.33	4,366.43	144.83	151.44	124.482	-4,594.57	4,467.43	727.81	494.24	233.56	3.116	
10,200.00	3,953.47	11,032.33	4,365.61	147.11	153.72	124.490	-4,665.28	4,538.14	727.87	491.11	236.76	3.074	
10,300.00	3,952.54	11,132.33	4,364.80	149.39	156.00	124.497	-4,735.98	4,608.85	727.93	487.99	239.94	3.034	
10,400.00	3,951.60	11,232.33	4,363.98	151.67	158.28	124.504	-4,806.69	4,679.56	728.00	484.89	243.11	2.995	
10,500.00	3,950.67	11,332.33	4,363.16	153.95	160.57	124.512	-4,877.40	4,750.26	728.06	481.80	246.26	2.956	
10,600.00	3,949.74	11,432.33	4,362.34	156.23	162.85	124.519	-4,948.11	4,820.97	728.12	478.72	249.40	2.919	
10,700.00	3,948.81	11,532.33	4,361.52	158.51	165.13	124.526	-5,018.81	4,891.68	728.19	475.66	252.53	2.884	
10,800.00	3,947.88	11,632.33	4,360.70	160.79	167.41	124.533	-5,089.52	4,962.39	728.25	472.61	255.64	2.849	
10,900.00	3,946.95	11,732.33	4,359.88	163.08	169.70	124.541	-5,160.23	5,033.10	728.31	469.58	258.74	2.815	
11,000.00	3,946.02	11,832.33	4,359.07	165.36	171.98	124.548	-5,230.94	5,103.81	728.38	466.56	261.82	2.782	
11,100.00	3,945.09	11,932.33	4,358.25	167.64	174.27	124.555	-5,301.64	5,174.52	728.44	463.55	264.89	2.750	
11,200.00	3,944.16	12,032.33	4,357.43	169.93	176.55	124.562	-5,372.35	5,245.23	728.50	460.56	267.94	2.719	
11,300.00	3,943.23	12,132.33	4,356.61	172.21	178.83	124.570	-5,443.06	5,315.94	728.57	457.59	270.98	2.689	
11,400.00	3,942.30	12,232.33	4,355.79	174.49	181.12	124.577	-5,513.77	5,386.65	728.63	454.62	274.00	2.659	
11,500.00	3,941.37	12,332.33	4,354.97	176.78	183.40	124.584	-5,584.47	5,457.35	728.69	451.68	277.01	2.631	
11,600.00	3,940.44	12,432.33	4,354.15	179.06	185.69	124.592	-5,655.18	5,528.06	728.76	448.75	280.01	2.603	
11,700.00	3,939.51	12,532.33	4,353.34	181.35	187.97	124.599	-5,725.89	5,598.77	728.82	445.83	282.99	2.575	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 36H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,800.00	3,938.58	12,632.33	4,352.52	183.63	190.26	124.606	-5,796.60	5,669.48	728.88	442.93	285.95	2.549	
11,900.00	3,937.65	12,732.33	4,351.70	185.91	192.55	124.613	-5,867.30	5,740.19	728.95	440.04	288.90	2.523	
12,000.00	3,936.71	12,832.33	4,350.88	188.20	194.83	124.621	-5,938.01	5,810.90	729.01	437.17	291.84	2.498	
12,100.00	3,935.78	12,932.33	4,350.06	190.49	197.12	124.628	-6,008.72	5,881.61	729.07	434.31	294.76	2.473	
12,200.00	3,934.85	13,032.33	4,349.24	192.77	199.40	124.635	-6,079.43	5,952.32	729.14	431.47	297.67	2.450	
12,300.00	3,933.92	13,132.33	4,348.42	195.06	201.69	124.642	-6,150.13	6,023.03	729.20	428.64	300.56	2.426	
12,400.00	3,932.99	13,232.33	4,347.61	197.34	203.98	124.650	-6,220.84	6,093.74	729.26	425.83	303.43	2.403	
12,500.00	3,932.06	13,332.33	4,346.79	199.63	206.26	124.657	-6,291.55	6,164.44	729.33	423.03	306.29	2.381	
12,600.00	3,931.13	13,432.33	4,345.97	201.92	208.55	124.664	-6,362.26	6,235.15	729.39	420.25	309.14	2.359	
12,700.00	3,930.20	13,532.33	4,345.15	204.20	210.84	124.671	-6,432.96	6,305.86	729.45	417.48	311.97	2.338	
12,700.97	3,930.19	13,533.30	4,345.14	204.22	210.86	124.672	-6,433.65	6,306.55	729.45	417.45	312.00	2.338	
12,721.52	3,930.00	13,550.63	4,345.00	204.69	211.26	124.673	-6,445.90	6,318.80	729.47	416.98	312.49	2.334 SF	

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



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 38H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.978	0.01	20.06	20.06				
100.00	100.00	100.00	100.00	0.27	0.27	89.978	0.01	20.06	20.06	19.51	0.55	36.578	
200.00	200.00	200.00	200.00	0.63	0.63	89.978	0.01	20.06	20.06	18.80	1.27	15.854	
300.00	300.00	300.00	300.00	0.99	0.99	89.978	0.01	20.06	20.06	18.08	1.98	10.120	
400.00	400.00	400.00	400.00	1.35	1.35	89.978	0.01	20.06	20.06	17.36	2.70	7.432	
500.00	500.00	500.00	500.00	1.71	1.71	89.978	0.01	20.06	20.06	16.65	3.42	5.872	
600.00	600.00	600.00	600.00	2.07	2.07	89.978	0.01	20.06	20.06	15.93	4.13	4.854	
700.00	700.00	700.00	700.00	2.43	2.43	89.978	0.01	20.06	20.06	15.21	4.85	4.136	
800.00	800.00	800.00	800.00	2.78	2.78	89.978	0.01	20.06	20.06	14.49	5.57	3.604	
900.00	900.00	900.00	900.00	3.14	3.14	89.978	0.01	20.06	20.06	13.78	6.28	3.192	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.50	89.978	0.01	20.06	20.06	13.06	7.00	2.866 CC, ES, SF	
1,100.00	1,100.00	1,098.98	1,098.94	3.86	3.85	86.990	1.17	22.34	22.40	14.70	7.70	2.908	
1,200.00	1,200.00	1,197.44	1,197.09	4.22	4.20	80.935	4.65	29.14	29.65	21.27	8.38	3.539	
1,300.00	1,299.95	1,295.20	1,294.03	4.57	4.55	14.684	10.37	40.33	39.56	30.53	9.02	4.384	
1,400.00	1,399.63	1,392.47	1,389.72	4.93	4.92	12.122	18.30	55.84	49.50	39.87	9.64	5.138	
1,500.00	1,498.77	1,489.25	1,483.92	5.29	5.32	10.540	28.38	75.55	59.38	49.15	10.23	5.806	
1,600.00	1,597.08	1,585.57	1,576.44	5.66	5.74	9.513	40.55	99.37	69.13	58.33	10.79	6.404	
1,700.00	1,694.31	1,681.43	1,667.07	6.06	6.21	8.830	54.76	127.16	78.70	67.35	11.35	6.934	
1,800.00	1,790.18	1,779.36	1,758.24	6.50	6.74	8.439	71.03	158.98	87.25	75.25	12.00	7.269	
1,900.00	1,884.43	1,879.28	1,851.10	6.98	7.32	8.558	87.82	191.81	91.08	78.33	12.75	7.141	
2,000.00	1,976.95	1,979.26	1,944.03	7.52	7.92	9.154	104.61	224.67	90.09	76.56	13.53	6.660	
2,100.00	2,069.07	2,079.24	2,036.95	8.10	8.54	9.877	121.41	257.52	88.07	73.75	14.32	6.151	
2,200.00	2,161.19	2,179.21	2,129.86	8.71	9.18	10.634	138.20	290.37	86.06	70.94	15.13	5.689	
2,300.00	2,253.31	2,279.18	2,222.78	9.34	9.83	11.428	155.00	323.22	84.08	68.12	15.95	5.270	
2,400.00	2,345.43	2,379.16	2,315.70	9.99	10.49	12.259	171.79	356.07	82.11	65.31	16.80	4.888	
2,500.00	2,437.54	2,479.13	2,408.61	10.65	11.16	13.131	188.59	388.92	80.15	62.50	17.66	4.540	
2,596.48	2,526.81	2,575.59	2,498.27	11.30	11.82	13.832	204.80	420.61	79.28	60.78	18.50	4.286	
2,600.00	2,529.84	2,579.11	2,501.53	11.33	11.84	13.963	205.39	421.77	78.66	60.14	18.53	4.246	
2,700.00	2,623.71	2,679.06	2,594.43	11.96	12.52	14.065	222.18	454.61	81.41	62.02	19.38	4.200	
2,800.00	2,719.26	2,778.74	2,687.07	12.55	13.21	13.375	238.92	487.37	89.23	69.02	20.21	4.416	
2,900.00	2,816.21	2,877.87	2,779.20	13.07	13.89	12.184	255.58	519.94	102.14	81.15	21.00	4.865	
3,000.00	2,914.32	2,976.17	2,870.57	13.55	14.58	10.812	272.09	552.24	120.18	98.41	21.76	5.522	
3,100.00	3,013.30	3,073.39	2,960.93	13.96	15.26	9.481	288.42	584.19	143.32	120.80	22.51	6.366	
3,200.00	3,112.88	3,169.26	3,050.02	14.33	15.93	8.298	304.53	615.69	171.53	148.28	23.25	7.378	
3,300.00	3,212.80	3,263.50	3,137.62	14.64	16.60	7.296	320.36	646.65	204.74	180.77	23.97	8.543	
3,400.00	3,312.80	3,356.49	3,224.04	14.92	17.25	68.114	335.98	677.21	241.38	216.71	24.67	9.785	
3,500.00	3,412.80	3,449.43	3,310.42	15.20	17.91	67.426	351.60	707.75	278.17	252.80	25.37	10.963	
3,600.00	3,512.56	3,542.75	3,397.16	15.49	18.57	-66.414	367.27	738.41	313.07	287.01	26.06	12.012	
3,700.00	3,609.93	3,635.77	3,483.61	15.82	19.23	-67.437	382.90	768.98	342.33	315.54	26.80	12.776	
3,800.00	3,701.96	3,725.71	3,567.20	16.21	19.87	-70.465	398.01	798.53	367.66	339.91	27.75	13.248	
3,900.00	3,785.86	3,809.84	3,645.39	16.67	20.47	-74.525	412.14	826.18	392.15	362.99	29.16	13.448	
4,000.00	3,859.07	3,885.60	3,715.81	17.23	21.02	-78.586	424.87	851.07	419.52	388.34	31.18	13.453	
4,100.00	3,919.38	3,950.70	3,776.30	17.94	21.48	-81.602	435.81	872.46	453.25	419.49	33.76	13.426	
4,200.00	3,964.95	4,003.14	3,825.04	18.85	21.86	-82.650	444.62	889.69	495.68	459.11	36.57	13.555	
4,300.00	3,994.39	4,041.34	3,860.55	19.97	22.13	-81.028	451.03	902.24	547.49	508.29	39.20	13.966	
4,400.00	4,006.82	4,064.14	3,881.74	21.27	22.29	-76.330	454.86	909.73	607.71	566.37	41.34	14.699	
4,500.00	4,006.51	4,075.21	3,892.03	22.73	22.37	-75.465	456.72	913.37	675.07	632.17	42.90	15.736	
4,600.00	4,005.58	4,954.14	4,424.51	24.32	30.01	-124.923	149.00	1,420.63	731.72	695.57	36.15	20.241	
4,700.00	4,004.65	5,057.93	4,424.95	26.02	31.29	-125.014	75.60	1,494.02	732.49	693.77	38.72	18.918	
4,800.00	4,003.72	5,157.92	4,425.35	27.81	32.64	-125.099	4.90	1,564.73	733.25	691.54	41.71	17.581	
4,900.00	4,002.79	5,257.91	4,425.75	29.67	34.09	-125.184	-65.80	1,635.43	734.02	689.29	44.72	16.412	
5,000.00	4,001.86	5,357.91	4,426.15	31.59	35.64	-125.268	-136.51	1,706.13	734.79	686.96	47.82	15.365	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 38H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,000.93	5,457.90	4,426.55	33.56	37.26	-125.353	-207.21	1,776.84	735.55	684.57	50.99	14.426	
5,200.00	4,000.00	5,557.89	4,426.95	35.56	38.96	-125.437	-277.91	1,847.54	736.32	682.12	54.21	13.583	
5,300.00	3,999.07	5,657.88	4,427.35	37.61	40.72	-125.522	-348.62	1,918.25	737.10	679.63	57.47	12.826	
5,400.00	3,998.14	5,757.87	4,427.75	39.68	42.53	-125.606	-419.32	1,988.95	737.87	677.10	60.76	12.143	
5,500.00	3,997.21	5,857.86	4,428.15	41.77	44.40	-125.690	-490.03	2,059.65	738.64	674.56	64.08	11.526	
5,600.00	3,996.27	5,957.85	4,428.55	43.88	46.30	-125.773	-560.73	2,130.36	739.42	672.00	67.42	10.967	
5,700.00	3,995.34	6,057.84	4,428.95	46.01	48.24	-125.857	-631.43	2,201.06	740.20	669.43	70.77	10.459	
5,800.00	3,994.41	6,157.83	4,429.35	48.16	50.21	-125.940	-702.14	2,271.77	740.98	666.85	74.13	9.996	
5,900.00	3,993.48	6,257.83	4,429.75	50.32	52.21	-126.023	-772.84	2,342.47	741.76	664.26	77.50	9.572	
6,000.00	3,992.55	6,357.82	4,430.15	52.49	54.23	-126.107	-843.54	2,413.17	742.54	661.68	80.86	9.183	
6,100.00	3,991.62	6,457.81	4,430.54	54.67	56.28	-126.189	-914.25	2,483.88	743.33	659.09	84.23	8.825	
6,200.00	3,990.69	6,557.80	4,430.94	56.87	58.34	-126.272	-984.95	2,554.58	744.11	656.51	87.60	8.495	
6,300.00	3,989.76	6,657.79	4,431.34	59.06	60.42	-126.355	-1,055.66	2,625.29	744.90	653.94	90.96	8.190	
6,400.00	3,988.83	6,757.78	4,431.74	61.27	62.52	-126.437	-1,126.36	2,695.99	745.69	651.37	94.31	7.906	
6,500.00	3,987.90	6,857.77	4,432.14	63.48	64.63	-126.519	-1,197.06	2,766.70	746.48	648.82	97.66	7.644	
6,600.00	3,986.97	6,957.76	4,432.54	65.70	66.76	-126.601	-1,267.77	2,837.40	747.27	646.27	101.00	7.399	
6,700.00	3,986.04	7,057.76	4,432.94	67.92	68.89	-126.683	-1,338.47	2,908.10	748.06	643.73	104.33	7.170	
6,800.00	3,985.11	7,157.75	4,433.34	70.15	71.04	-126.764	-1,409.17	2,978.81	748.86	641.20	107.65	6.956	
6,900.00	3,984.18	7,257.74	4,433.74	72.38	73.19	-126.846	-1,479.88	3,049.51	749.66	638.69	110.96	6.756	
7,000.00	3,983.25	7,357.73	4,434.14	74.62	75.36	-126.927	-1,550.58	3,120.22	750.45	636.19	114.26	6.568	
7,100.00	3,982.32	7,457.72	4,434.54	76.85	77.53	-127.008	-1,621.28	3,190.92	751.25	633.70	117.55	6.391	
7,200.00	3,981.38	7,557.71	4,434.94	79.10	79.71	-127.089	-1,691.99	3,261.62	752.05	631.23	120.82	6.224	
7,300.00	3,980.45	7,657.70	4,435.34	81.34	81.89	-127.170	-1,762.69	3,332.33	752.86	628.77	124.08	6.067	
7,400.00	3,979.52	7,757.69	4,435.74	83.59	84.08	-127.250	-1,833.40	3,403.03	753.66	626.33	127.33	5.919	
7,500.00	3,978.59	7,857.68	4,436.14	85.84	86.28	-127.331	-1,904.10	3,473.74	754.47	623.90	130.56	5.779	
7,600.00	3,977.66	7,957.68	4,436.54	88.09	88.48	-127.411	-1,974.80	3,544.44	755.27	621.49	133.78	5.646	
7,700.00	3,976.73	8,057.67	4,436.93	90.35	90.69	-127.491	-2,045.51	3,615.14	756.08	619.10	136.98	5.520	
7,800.00	3,975.80	8,157.66	4,437.33	92.60	92.90	-127.571	-2,116.21	3,685.85	756.89	616.72	140.17	5.400	
7,900.00	3,974.87	8,257.65	4,437.73	94.86	95.11	-127.651	-2,186.91	3,756.55	757.70	614.36	143.34	5.286	
8,000.00	3,973.94	8,357.64	4,438.13	97.12	97.33	-127.730	-2,257.62	3,827.26	758.52	612.02	146.50	5.178	
8,100.00	3,973.01	8,457.63	4,438.53	99.38	99.55	-127.810	-2,328.32	3,897.96	759.33	609.70	149.63	5.075	
8,200.00	3,972.08	8,557.62	4,438.93	101.65	101.78	-127.889	-2,399.02	3,968.66	760.15	607.39	152.76	4.976	
8,300.00	3,971.15	8,657.61	4,439.33	103.91	104.01	-127.968	-2,469.73	4,039.37	760.96	605.10	155.86	4.882	
8,400.00	3,970.22	8,757.60	4,439.73	106.18	106.24	-128.047	-2,540.43	4,110.07	761.78	602.83	158.95	4.792	
8,500.00	3,969.29	8,857.60	4,440.13	108.44	108.47	-128.126	-2,611.14	4,180.78	762.60	600.58	162.03	4.707	
8,600.00	3,968.36	8,957.59	4,440.53	110.71	110.71	-128.204	-2,681.84	4,251.48	763.42	598.34	165.08	4.625	
8,700.00	3,967.43	9,057.58	4,440.93	112.98	112.95	-128.283	-2,752.54	4,322.18	764.25	596.13	168.12	4.546	
8,800.00	3,966.49	9,157.57	4,441.33	115.25	115.19	-128.361	-2,823.25	4,392.89	765.07	593.93	171.14	4.470	
8,900.00	3,965.56	9,257.56	4,441.73	117.52	117.43	-128.439	-2,893.95	4,463.59	765.90	591.76	174.14	4.398	
9,000.00	3,964.63	9,357.55	4,442.13	119.79	119.68	-128.517	-2,964.65	4,534.30	766.72	589.60	177.13	4.329	
9,100.00	3,963.70	9,457.54	4,442.53	122.07	121.92	-128.594	-3,035.36	4,605.00	767.55	587.46	180.09	4.262	
9,200.00	3,962.77	9,557.53	4,442.93	124.34	124.17	-128.672	-3,106.06	4,675.71	768.38	585.34	183.04	4.198	
9,300.00	3,961.84	9,657.53	4,443.33	126.61	126.42	-128.749	-3,176.76	4,746.41	769.21	583.24	185.98	4.136	
9,400.00	3,960.91	9,757.52	4,443.72	128.89	128.67	-128.826	-3,247.47	4,817.11	770.05	581.16	188.89	4.077	
9,500.00	3,959.98	9,857.51	4,444.12	131.16	130.93	-128.903	-3,318.17	4,887.82	770.88	579.10	191.78	4.020	
9,600.00	3,959.05	9,957.50	4,444.52	133.44	133.18	-128.980	-3,388.88	4,958.52	771.72	577.05	194.66	3.964	
9,700.00	3,958.12	10,057.49	4,444.92	135.72	135.44	-129.057	-3,459.58	5,029.23	772.55	575.03	197.52	3.911	
9,800.00	3,957.19	10,157.48	4,445.32	137.99	137.69	-129.134	-3,530.28	5,099.93	773.39	573.03	200.36	3.860	
9,900.00	3,956.26	10,257.47	4,445.72	140.27	139.95	-129.210	-3,600.99	5,170.63	774.23	571.05	203.19	3.810	
10,000.00	3,955.33	10,357.46	4,446.12	142.55	142.21	-129.286	-3,671.69	5,241.34	775.07	569.08	205.99	3.763	
10,100.00	3,954.40	10,457.45	4,446.52	144.83	144.47	-129.362	-3,742.39	5,312.04	775.92	567.14	208.78	3.716	
10,200.00	3,953.47	10,557.45	4,446.92	147.11	146.74	-129.438	-3,813.10	5,382.75	776.76	565.21	211.55	3.672	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 38H - Original Hole - rev0												Offset Site Error: 0.00 ft	
Survey Program: 0-MWD				Rule Assigned:								Offset Well Error: 0.00 ft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,300.00	3,952.54	10,657.44	4,447.32	149.39	149.00	-129.514	-3,883.80	5,453.45	777.61	563.31	214.30	3.629	
10,400.00	3,951.60	10,757.43	4,447.72	151.67	151.26	-129.589	-3,954.50	5,524.15	778.45	561.42	217.03	3.587	
10,500.00	3,950.67	10,857.42	4,448.12	153.95	153.53	-129.665	-4,025.21	5,594.86	779.30	559.56	219.74	3.546	
10,600.00	3,949.74	10,957.41	4,448.52	156.23	155.79	-129.740	-4,095.91	5,665.56	780.15	557.71	222.44	3.507	
10,700.00	3,948.81	11,057.40	4,448.92	158.51	158.06	-129.815	-4,166.62	5,736.27	781.00	555.88	225.12	3.469	
10,800.00	3,947.88	11,157.39	4,449.32	160.79	160.32	-129.890	-4,237.32	5,806.97	781.85	554.07	227.78	3.433	
10,900.00	3,946.95	11,257.38	4,449.72	163.08	162.59	-129.965	-4,308.02	5,877.67	782.71	552.28	230.42	3.397	
11,000.00	3,946.02	11,357.38	4,450.11	165.36	164.86	-130.039	-4,378.73	5,948.38	783.56	550.51	233.05	3.362	
11,100.00	3,945.09	11,457.37	4,450.51	167.64	167.13	-130.113	-4,449.43	6,019.08	784.42	548.76	235.65	3.329	
11,200.00	3,944.16	11,557.36	4,450.91	169.93	169.40	-130.188	-4,520.13	6,089.79	785.27	547.03	238.24	3.296	
11,300.00	3,943.23	11,657.35	4,451.31	172.21	171.67	-130.262	-4,590.84	6,160.49	786.13	545.32	240.82	3.264	
11,400.00	3,942.30	11,757.34	4,451.71	174.49	173.94	-130.336	-4,661.54	6,231.19	786.99	543.62	243.37	3.234	
11,500.00	3,941.37	11,857.33	4,452.11	176.78	176.21	-130.409	-4,732.24	6,301.90	787.85	541.95	245.91	3.204	
11,600.00	3,940.44	11,957.32	4,452.51	179.06	178.48	-130.483	-4,802.95	6,372.60	788.72	540.29	248.43	3.175	
11,700.00	3,939.51	12,057.31	4,452.91	181.35	180.76	-130.556	-4,873.65	6,443.31	789.58	538.65	250.93	3.147	
11,800.00	3,938.58	12,157.30	4,453.31	183.63	183.03	-130.630	-4,944.36	6,514.01	790.44	537.03	253.42	3.119	
11,900.00	3,937.65	12,257.30	4,453.71	185.91	185.30	-130.703	-5,015.06	6,584.72	791.31	535.43	255.89	3.092	
12,000.00	3,936.71	12,357.29	4,454.11	188.20	187.58	-130.776	-5,085.76	6,655.42	792.18	533.84	258.34	3.066	
12,100.00	3,935.78	12,457.28	4,454.51	190.49	189.85	-130.849	-5,156.47	6,726.12	793.05	532.27	260.77	3.041	
12,200.00	3,934.85	12,557.27	4,454.91	192.77	192.13	-130.921	-5,227.17	6,796.83	793.92	530.72	263.19	3.016	
12,300.00	3,933.92	12,657.26	4,455.31	195.06	194.40	-130.994	-5,297.87	6,867.53	794.79	529.19	265.60	2.992	
12,400.00	3,932.99	12,757.25	4,455.71	197.34	196.68	-131.066	-5,368.58	6,938.24	795.66	527.68	267.98	2.969	
12,500.00	3,932.06	12,857.24	4,456.11	199.63	198.96	-131.138	-5,439.28	7,008.94	796.54	526.18	270.36	2.946	
12,600.00	3,931.13	12,957.23	4,456.51	201.92	201.23	-131.210	-5,509.99	7,079.64	797.41	524.70	272.71	2.924	
12,700.00	3,930.20	13,057.22	4,456.90	204.20	203.51	-131.282	-5,580.69	7,150.35	798.29	523.24	275.05	2.902	
12,721.52	3,930.00	13,078.74	4,456.99	204.69	204.00	-131.297	-5,595.90	7,165.56	798.48	522.92	275.55	2.898	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 39H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.978	0.02	39.83	39.83				
100.00	100.00	100.00	100.00	0.27	0.27	89.978	0.02	39.83	39.83	39.28	0.55	72.618	
200.00	200.00	200.00	200.00	0.63	0.63	89.978	0.02	39.83	39.83	38.56	1.27	31.474	
300.00	300.00	300.00	300.00	0.99	0.99	89.978	0.02	39.83	39.83	37.85	1.98	20.091	
400.00	400.00	400.00	400.00	1.35	1.35	89.978	0.02	39.83	39.83	37.13	2.70	14.755	
500.00	500.00	500.00	500.00	1.71	1.71	89.978	0.02	39.83	39.83	36.41	3.42	11.658 CC, ES	
600.00	600.00	598.51	598.47	2.07	2.06	87.413	1.88	41.56	41.63	37.50	4.13	10.090	
700.00	700.00	696.51	696.16	2.43	2.42	80.972	7.42	46.70	47.44	42.61	4.83	9.824	
800.00	800.00	793.47	792.32	2.78	2.77	73.326	16.51	55.13	58.06	52.54	5.52	10.517	
900.00	900.00	888.94	886.25	3.14	3.15	66.529	28.95	66.67	73.97	67.78	6.20	11.940	
1,000.00	1,000.00	982.47	977.36	3.50	3.55	61.256	44.46	81.05	95.18	88.33	6.85	13.901	
1,100.00	1,100.00	1,073.70	1,065.11	3.86	3.98	57.381	62.71	97.99	121.46	113.98	7.48	16.248	
1,200.00	1,200.00	1,162.31	1,149.12	4.22	4.44	54.563	83.37	117.15	152.52	144.45	8.08	18.885	
1,300.00	1,299.95	1,248.88	1,229.83	4.57	4.94	-9.194	106.28	138.41	185.67	177.03	8.64	21.485	
1,400.00	1,399.63	1,334.17	1,307.90	4.93	5.49	-10.917	131.46	161.76	218.38	209.20	9.18	23.779	
1,500.00	1,498.77	1,418.26	1,383.29	5.29	6.07	-12.442	158.76	187.09	250.62	240.90	9.71	25.801	
1,600.00	1,597.08	1,500.00	1,454.93	5.66	6.69	-13.810	187.60	213.84	282.37	272.16	10.21	27.647	
1,700.00	1,694.31	1,591.00	1,533.06	6.06	7.44	-15.268	221.80	245.57	312.90	302.01	10.89	28.729	
1,800.00	1,790.18	1,687.00	1,615.33	6.50	8.26	-16.762	258.08	279.22	339.19	327.52	11.67	29.059	
1,900.00	1,884.43	1,784.05	1,698.49	6.98	9.11	-18.297	294.76	313.25	360.91	348.41	12.49	28.886	
2,000.00	1,976.95	1,881.83	1,782.28	7.52	9.98	-19.973	331.71	347.53	378.41	365.05	13.36	28.323	
2,100.00	2,069.07	1,979.75	1,866.18	8.10	10.86	-21.660	368.72	381.86	395.28	381.01	14.27	27.692	
2,200.00	2,161.19	2,077.67	1,950.09	8.71	11.75	-23.208	405.72	416.18	412.46	397.24	15.22	27.094	
2,300.00	2,253.31	2,175.59	2,033.99	9.34	12.64	-24.634	442.73	450.51	429.92	413.71	16.21	26.529	
2,400.00	2,345.43	2,273.50	2,117.90	9.99	13.55	-25.948	479.73	484.84	447.61	430.39	17.22	25.999	
2,500.00	2,437.54	2,371.42	2,201.80	10.65	14.45	-27.163	516.74	519.17	465.52	447.26	18.26	25.499	
2,600.00	2,529.84	2,469.28	2,285.66	11.33	15.36	-28.378	553.72	553.48	484.01	464.70	19.32	25.056	
2,700.00	2,623.71	2,566.52	2,368.98	11.96	16.26	-29.486	590.47	587.56	506.38	486.02	20.36	24.876	
2,800.00	2,719.26	2,662.77	2,451.45	12.55	17.16	-30.322	626.84	621.31	533.21	511.87	21.35	24.977	
2,900.00	2,816.21	2,757.77	2,532.86	13.07	18.05	-30.920	662.74	654.61	564.39	542.11	22.28	25.331	
3,000.00	2,914.32	2,851.26	2,612.97	13.55	18.93	-31.320	698.08	687.39	599.80	576.65	23.15	25.911	
3,100.00	3,013.30	2,942.98	2,691.57	13.96	19.79	-31.567	732.74	719.55	639.38	615.42	23.95	26.694	
3,200.00	3,112.88	3,032.69	2,768.44	14.33	20.63	-31.705	766.64	751.00	683.05	658.36	24.69	27.662	
3,300.00	3,212.80	3,120.13	2,843.37	14.64	21.46	-31.774	799.69	781.65	730.78	705.40	25.38	28.797	
3,400.00	3,312.80	3,205.88	2,916.85	14.92	22.26	30.593	832.10	811.71	781.31	755.28	26.03	30.019	
3,500.00	3,412.80	3,291.57	2,990.27	15.20	23.07	31.343	864.48	841.76	832.04	805.36	26.68	31.184	
3,600.00	3,512.56	3,376.95	3,063.43	15.49	23.88	-98.694	896.75	871.69	883.80	856.40	27.40	32.261	
3,700.00	3,609.93	3,459.95	3,134.56	15.82	24.66	-93.267	928.12	900.79	937.80	909.52	28.28	33.161	
3,800.00	3,701.96	3,538.06	3,201.49	16.21	25.40	-88.519	957.64	928.17	993.16	963.81	29.35	33.835	
3,900.00	3,785.86	3,608.91	3,262.20	16.67	26.07	-84.178	984.41	953.01	1,049.45	1,018.81	30.64	34.251	
4,000.00	3,859.07	3,670.33	3,314.83	17.23	26.65	-79.916	1,007.62	974.54	1,106.54	1,074.38	32.16	34.408	
4,100.00	3,919.38	3,720.47	3,357.80	17.94	27.13	-75.435	1,026.57	992.12	1,164.33	1,130.44	33.89	34.351	
4,200.00	3,964.95	4,715.58	4,006.67	18.85	34.00	-91.926	851.55	1,566.60	1,200.63	1,163.38	37.25	32.231	
4,300.00	3,994.39	4,815.75	4,009.70	19.97	34.61	-90.714	780.80	1,637.35	1,200.00	1,160.02	39.98	30.018	
4,400.00	4,006.82	4,914.75	4,008.96	21.27	35.34	-90.103	710.80	1,707.35	1,199.91	1,156.98	42.93	27.950	
4,446.56	4,008.05	4,961.28	4,008.62	21.94	35.72	-90.027	677.90	1,740.25	1,199.90	1,155.53	44.38	27.039	
4,500.00	4,006.51	5,014.74	4,008.22	22.73	36.19	-90.082	640.10	1,778.05	1,199.91	1,153.86	46.04	26.060	
4,600.00	4,005.58	5,114.74	4,007.48	24.32	37.17	-90.090	569.39	1,848.76	1,199.91	1,150.52	49.39	24.297	
4,700.00	4,004.65	5,214.74	4,006.73	26.02	38.26	-90.099	498.69	1,919.47	1,199.91	1,146.99	52.92	22.676	
4,800.00	4,003.72	5,314.74	4,005.99	27.81	39.47	-90.108	427.98	1,990.18	1,199.91	1,143.30	56.61	21.196	
4,900.00	4,002.79	5,414.74	4,005.24	29.67	40.77	-90.117	357.27	2,060.89	1,199.91	1,139.41	60.51	19.831	
5,000.00	4,001.86	5,514.74	4,004.50	31.59	42.18	-90.126	286.56	2,131.60	1,199.91	1,135.67	64.25	18.677	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 39H - 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)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,000.93	5,614.74	4,003.75	33.56	43.67	-90.135	215.86	2,202.31	1,199.91	1,131.66	68.26	17.580	
5,200.00	4,000.00	5,714.74	4,003.01	35.56	45.24	-90.144	145.15	2,273.02	1,199.92	1,127.59	72.32	16.591	
5,300.00	3,999.07	5,814.74	4,002.26	37.61	46.88	-90.153	74.44	2,343.73	1,199.92	1,123.47	76.44	15.697	
5,400.00	3,998.14	5,914.74	4,001.52	39.68	48.58	-90.162	3.73	2,414.44	1,199.92	1,119.30	80.62	14.884	
5,500.00	3,997.21	6,014.74	4,000.77	41.77	50.33	-90.170	-66.97	2,485.15	1,199.92	1,115.09	84.83	14.145	
5,600.00	3,996.27	6,114.74	4,000.03	43.88	52.14	-90.179	-137.68	2,555.86	1,199.92	1,110.84	89.08	13.470	
5,700.00	3,995.34	6,214.74	3,999.28	46.01	53.98	-90.188	-208.39	2,626.57	1,199.92	1,106.56	93.36	12.853	
5,800.00	3,994.41	6,314.74	3,998.54	48.16	55.87	-90.197	-279.10	2,697.28	1,199.93	1,102.26	97.67	12.286	
5,900.00	3,993.48	6,414.74	3,997.80	50.32	57.78	-90.206	-349.80	2,767.99	1,199.93	1,097.93	102.00	11.764	
6,000.00	3,992.55	6,514.74	3,997.05	52.49	59.73	-90.215	-420.51	2,838.70	1,199.93	1,093.57	106.36	11.282	
6,100.00	3,991.62	6,614.74	3,996.31	54.67	61.71	-90.224	-491.22	2,909.41	1,199.93	1,089.20	110.73	10.837	
6,200.00	3,990.69	6,714.74	3,995.56	56.87	63.70	-90.233	-561.92	2,980.12	1,199.93	1,084.82	115.12	10.424	
6,300.00	3,989.76	6,814.74	3,994.82	59.06	65.72	-90.241	-632.63	3,050.83	1,199.93	1,080.41	119.52	10.040	
6,400.00	3,988.83	6,914.74	3,994.07	61.27	67.76	-90.250	-703.34	3,121.54	1,199.94	1,076.00	123.94	9.682	
6,500.00	3,987.90	7,014.74	3,993.33	63.48	69.82	-90.259	-774.05	3,192.25	1,199.94	1,071.57	128.37	9.348	
6,600.00	3,986.97	7,114.74	3,992.58	65.70	71.89	-90.268	-844.75	3,262.96	1,199.94	1,067.13	132.81	9.035	
6,700.00	3,986.04	7,214.74	3,991.84	67.92	73.98	-90.277	-915.46	3,333.67	1,199.94	1,062.69	137.25	8.742	
6,800.00	3,985.11	7,314.74	3,991.09	70.15	76.08	-90.286	-986.17	3,404.38	1,199.94	1,058.23	141.71	8.467	
6,900.00	3,984.18	7,414.74	3,990.35	72.38	78.19	-90.295	-1,056.88	3,475.09	1,199.95	1,053.77	146.18	8.209	
7,000.00	3,983.25	7,514.74	3,989.60	74.62	80.31	-90.304	-1,127.58	3,545.80	1,199.95	1,049.30	150.65	7.965	
7,100.00	3,982.32	7,614.74	3,988.86	76.85	82.44	-90.312	-1,198.29	3,616.51	1,199.95	1,044.82	155.13	7.735	
7,200.00	3,981.38	7,714.74	3,988.12	79.10	84.58	-90.321	-1,269.00	3,687.22	1,199.95	1,040.34	159.61	7.518	
7,300.00	3,980.45	7,814.74	3,987.37	81.34	86.73	-90.330	-1,339.71	3,757.93	1,199.95	1,035.85	164.11	7.312	
7,400.00	3,979.52	7,914.73	3,986.63	83.59	88.89	-90.339	-1,410.41	3,828.64	1,199.96	1,031.36	168.60	7.117	
7,500.00	3,978.59	8,014.73	3,985.88	85.84	91.05	-90.348	-1,481.12	3,899.35	1,199.96	1,026.86	173.10	6.932	
7,600.00	3,977.66	8,114.73	3,985.14	88.09	93.22	-90.357	-1,551.83	3,970.06	1,199.96	1,022.36	177.61	6.756	
7,700.00	3,976.73	8,214.73	3,984.39	90.35	95.40	-90.366	-1,622.53	4,040.77	1,199.96	1,017.85	182.11	6.589	
7,800.00	3,975.80	8,314.73	3,983.65	92.60	97.58	-90.375	-1,693.24	4,111.48	1,199.97	1,013.34	186.63	6.430	
7,900.00	3,974.87	8,414.73	3,982.90	94.86	99.77	-90.384	-1,763.95	4,182.19	1,199.97	1,008.83	191.14	6.278	
8,000.00	3,973.94	8,514.73	3,982.16	97.12	101.96	-90.392	-1,834.66	4,252.90	1,199.97	1,004.31	195.66	6.133	
8,100.00	3,973.01	8,614.73	3,981.41	99.38	104.16	-90.401	-1,905.36	4,323.61	1,199.97	999.79	200.18	5.994	
8,200.00	3,972.08	8,714.73	3,980.67	101.65	106.36	-90.410	-1,976.07	4,394.32	1,199.97	995.27	204.70	5.862	
8,300.00	3,971.15	8,814.73	3,979.92	103.91	108.57	-90.419	-2,046.78	4,465.03	1,199.98	990.75	209.23	5.735	
8,400.00	3,970.22	8,914.73	3,979.18	106.18	110.77	-90.428	-2,117.49	4,535.74	1,199.98	986.22	213.76	5.614	
8,500.00	3,969.29	9,014.73	3,978.44	108.44	112.99	-90.437	-2,188.19	4,606.45	1,199.98	981.69	218.29	5.497	
8,600.00	3,968.36	9,114.73	3,977.69	110.71	115.20	-90.446	-2,258.90	4,677.16	1,199.98	977.16	222.83	5.385	
8,700.00	3,967.43	9,214.73	3,976.95	112.98	117.42	-90.455	-2,329.61	4,747.87	1,199.99	972.63	227.36	5.278	
8,800.00	3,966.49	9,314.73	3,976.20	115.25	119.64	-90.463	-2,400.32	4,818.58	1,199.99	968.09	231.90	5.175	
8,900.00	3,965.56	9,414.73	3,975.46	117.52	121.87	-90.472	-2,471.02	4,889.29	1,199.99	963.55	236.44	5.075	
9,000.00	3,964.63	9,514.73	3,974.71	119.79	124.10	-90.481	-2,541.73	4,960.00	1,199.99	959.02	240.98	4.980	
9,100.00	3,963.70	9,614.73	3,973.97	122.07	126.33	-90.490	-2,612.44	5,030.71	1,200.00	954.48	245.52	4.888	
9,200.00	3,962.77	9,714.73	3,973.22	124.34	128.56	-90.499	-2,683.14	5,101.42	1,200.00	949.94	250.06	4.799	
9,300.00	3,961.84	9,814.73	3,972.48	126.61	130.79	-90.508	-2,753.85	5,172.13	1,200.00	945.39	254.61	4.713	
9,400.00	3,960.91	9,914.73	3,971.73	128.89	133.03	-90.517	-2,824.56	5,242.84	1,200.00	940.85	259.16	4.630	
9,500.00	3,959.98	10,014.73	3,970.99	131.16	135.27	-90.526	-2,895.27	5,313.55	1,200.01	936.30	263.70	4.551	
9,600.00	3,959.05	10,114.73	3,970.24	133.44	137.51	-90.535	-2,965.97	5,384.26	1,200.01	931.76	268.25	4.473	
9,700.00	3,958.12	10,214.73	3,969.50	135.72	139.75	-90.543	-3,036.68	5,454.97	1,200.01	927.21	272.80	4.399	
9,800.00	3,957.19	10,314.73	3,968.76	137.99	141.99	-90.552	-3,107.39	5,525.68	1,200.02	922.66	277.35	4.327	
9,900.00	3,956.26	10,414.73	3,968.01	140.27	144.24	-90.561	-3,178.10	5,596.39	1,200.02	918.11	281.90	4.257	
10,000.00	3,955.33	10,514.73	3,967.27	142.55	146.49	-90.570	-3,248.80	5,667.09	1,200.02	913.56	286.46	4.189	
10,100.00	3,954.40	10,614.73	3,966.52	144.83	148.73	-90.579	-3,319.51	5,737.80	1,200.02	909.01	291.01	4.124	
10,200.00	3,953.47	10,714.73	3,965.78	147.11	150.98	-90.588	-3,390.22	5,808.51	1,200.03	904.46	295.57	4.060	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Greater Lybrook (36, 37, 38 & 39) - Greater Lybrook Unit 39H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference	Offset	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	
10,300.00	3,952.54	10,814.73	3,965.03	149.39	153.24	-90.597	-3,460.93	5,879.22	1,200.03	899.91	300.12	3.999		
10,400.00	3,951.60	10,914.73	3,964.29	151.67	155.49	-90.606	-3,531.63	5,949.93	1,200.03	895.36	304.68	3.939		
10,500.00	3,950.67	11,014.73	3,963.54	153.95	157.74	-90.614	-3,602.34	6,020.64	1,200.04	890.80	309.23	3.881		
10,600.00	3,949.74	11,114.73	3,962.80	156.23	160.00	-90.623	-3,673.05	6,091.35	1,200.04	886.25	313.79	3.824		
10,700.00	3,948.81	11,214.73	3,962.05	158.51	162.25	-90.632	-3,743.76	6,162.06	1,200.04	881.70	318.35	3.770		
10,800.00	3,947.88	11,314.73	3,961.31	160.79	164.51	-90.641	-3,814.46	6,232.77	1,200.05	877.14	322.91	3.716		
10,900.00	3,946.95	11,414.73	3,960.56	163.08	166.77	-90.650	-3,885.17	6,303.48	1,200.05	872.58	327.47	3.665		
11,000.00	3,946.02	11,514.73	3,959.82	165.36	169.03	-90.659	-3,955.88	6,374.19	1,200.05	868.03	332.02	3.614		
11,100.00	3,945.09	11,614.73	3,959.08	167.64	171.29	-90.668	-4,026.58	6,444.90	1,200.06	863.47	336.59	3.565		
11,200.00	3,944.16	11,714.73	3,958.33	169.93	173.55	-90.677	-4,097.29	6,515.61	1,200.06	858.91	341.15	3.518		
11,300.00	3,943.23	11,814.73	3,957.59	172.21	175.81	-90.685	-4,168.00	6,586.32	1,200.06	854.35	345.71	3.471		
11,400.00	3,942.30	11,914.73	3,956.84	174.49	178.07	-90.694	-4,238.71	6,657.03	1,200.06	849.80	350.27	3.426		
11,500.00	3,941.37	12,014.73	3,956.10	176.78	180.34	-90.703	-4,309.41	6,727.74	1,200.07	845.24	354.83	3.382		
11,600.00	3,940.44	12,114.73	3,955.35	179.06	182.60	-90.712	-4,380.12	6,798.45	1,200.07	840.68	359.39	3.339		
11,700.00	3,939.51	12,214.73	3,954.61	181.35	184.87	-90.721	-4,450.83	6,869.16	1,200.07	836.12	363.96	3.297		
11,800.00	3,938.58	12,314.73	3,953.86	183.63	187.13	-90.730	-4,521.54	6,939.87	1,200.08	831.56	368.52	3.256		
11,900.00	3,937.65	12,414.73	3,953.12	185.91	189.40	-90.739	-4,592.24	7,010.58	1,200.08	827.00	373.09	3.217		
12,000.00	3,936.71	12,514.73	3,952.37	188.20	191.66	-90.748	-4,662.95	7,081.29	1,200.09	822.44	377.65	3.178		
12,100.00	3,935.78	12,614.73	3,951.63	190.49	193.93	-90.757	-4,733.66	7,152.00	1,200.09	817.88	382.21	3.140		
12,200.00	3,934.85	12,714.73	3,950.88	192.77	196.20	-90.765	-4,804.37	7,222.71	1,200.09	813.31	386.78	3.103		
12,300.00	3,933.92	12,814.73	3,950.14	195.06	198.47	-90.774	-4,875.07	7,293.42	1,200.10	808.75	391.34	3.067		
12,400.00	3,932.99	12,914.73	3,949.40	197.34	200.74	-90.783	-4,945.78	7,364.13	1,200.10	804.19	395.91	3.031		
12,500.00	3,932.06	13,014.73	3,948.65	199.63	203.01	-90.792	-5,016.49	7,434.84	1,200.10	799.63	400.47	2.997		
12,600.00	3,931.13	13,114.73	3,947.91	201.92	205.28	-90.801	-5,087.19	7,505.55	1,200.11	795.07	405.04	2.963		
12,700.00	3,930.20	13,214.73	3,947.16	204.20	207.55	-90.810	-5,157.90	7,576.26	1,200.11	790.51	409.60	2.930		
12,721.52	3,930.00	13,236.24	3,947.00	204.69	208.04	-90.812	-5,173.12	7,591.48	1,200.11	789.52	410.59	2.923 SF		



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Kimbeto Wash 772 Pad (772, 774, 793, 794 & 795) - Kimbeto Wash Unit 772H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 405-MWD, 2492-MWD, 11616-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Rule Assigned:		Distance		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	9.61	9.61	0.00	0.02	88.160	16.21	504.78	505.04				
100.00	100.00	110.73	110.73	0.27	0.19	88.165	16.17	504.64	504.90	504.44	0.46	1,099.601	
200.00	200.00	211.86	211.86	0.63	0.35	88.175	16.06	504.29	504.55	503.56	0.99	511.471	
300.00	300.00	312.98	312.98	0.99	0.52	88.193	15.89	503.70	503.97	502.45	1.51	332.931	
400.00	400.00	413.55	413.54	1.35	0.71	88.217	15.65	502.91	503.17	501.11	2.06	244.807	
479.35	479.35	488.85	488.85	1.63	0.97	88.218	15.64	502.61	502.85	500.25	2.60	193.366	
500.00	500.00	509.19	509.18	1.71	1.04	88.214	15.68	502.62	502.86	500.12	2.74	183.221	
600.00	600.00	609.85	609.84	2.07	1.38	88.221	15.61	502.63	502.87	499.42	3.45	145.758	
700.00	700.00	709.97	709.97	2.43	1.73	88.192	15.86	502.47	502.72	498.56	4.16	120.930	
720.86	720.86	730.37	730.36	2.50	1.80	88.188	15.90	502.46	502.71	498.41	4.30	116.842	
800.00	800.00	808.65	808.65	2.78	2.07	88.191	15.87	502.56	502.81	497.96	4.86	103.528	
900.00	900.00	909.41	909.40	3.14	2.42	88.150	16.24	502.68	502.94	497.38	5.56	90.381	
958.51	958.51	968.02	968.01	3.35	2.63	88.158	16.16	502.66	502.92	496.94	5.98	84.119	
1,000.00	1,000.00	1,008.46	1,008.45	3.50	2.77	88.161	16.14	502.70	502.96	496.69	6.27	80.243	
1,100.00	1,100.00	1,107.91	1,107.91	3.86	3.11	88.144	16.30	503.02	503.29	496.32	6.97	72.192	
1,200.00	1,200.00	1,209.88	1,209.87	4.22	3.47	88.144	16.31	503.19	503.45	495.77	7.69	65.509	
1,300.00	1,299.95	1,297.02	1,297.01	4.57	3.77	26.565	16.27	503.94	502.01	493.67	8.34	60.186	
1,400.00	1,399.63	1,374.26	1,374.16	4.93	4.04	26.964	15.87	507.41	499.55	490.60	8.95	55.837	
1,500.00	1,498.77	1,449.06	1,448.60	5.29	4.31	27.639	14.85	514.57	497.47	487.94	9.53	52.227	
1,600.00	1,597.08	1,524.68	1,523.40	5.66	4.58	28.667	12.68	525.45	495.78	485.69	10.09	49.125	
1,700.00	1,694.31	1,607.00	1,604.12	6.06	4.89	30.138	9.33	541.15	494.47	483.77	10.69	46.234	
1,800.00	1,790.18	1,678.30	1,673.36	6.50	5.18	31.675	5.89	557.78	493.46	482.23	11.22	43.973	
1,900.00	1,884.43	1,758.54	1,750.49	6.98	5.53	33.623	1.99	579.56	492.79	480.96	11.83	41.662	
1,988.82	1,966.87	1,831.90	1,820.37	7.46	5.88	35.465	-0.78	601.73	492.59	480.19	12.40	39.719	
2,000.00	1,976.95	1,841.17	1,829.15	7.52	5.92	35.743	-1.11	604.66	492.13	479.66	12.48	39.444	
2,100.00	2,069.07	1,920.57	1,903.96	8.10	6.33	37.756	-3.89	631.10	494.59	481.46	13.13	37.661	
2,200.00	2,161.19	1,985.00	1,963.69	8.71	6.69	39.354	-6.60	655.10	502.50	488.86	13.64	36.836	
2,300.00	2,253.31	2,080.00	2,049.96	9.34	7.29	41.636	-11.70	694.52	515.57	501.03	14.54	35.459	
2,400.00	2,345.43	2,167.53	2,128.65	9.99	7.89	43.640	-17.00	732.50	531.50	516.11	15.39	34.524	
2,500.00	2,437.54	2,272.22	2,223.30	10.65	8.63	45.943	-23.30	776.79	547.22	530.71	16.51	33.137	
2,600.00	2,529.84	2,364.56	2,306.91	11.33	9.31	48.001	-28.84	815.59	563.66	546.15	17.51	32.184	
2,700.00	2,623.71	2,462.07	2,395.10	11.96	9.84	50.049	-34.86	856.74	583.78	565.41	18.37	31.772	
2,800.00	2,719.26	2,560.52	2,484.27	12.55	10.28	51.753	-41.19	898.00	607.30	588.22	19.09	31.819	
2,900.00	2,816.21	2,682.31	2,595.57	13.07	10.78	53.268	-48.90	946.79	632.43	612.51	19.92	31.755	
3,000.00	2,914.32	2,792.13	2,697.50	13.55	11.25	54.287	-54.85	987.24	657.07	636.47	20.60	31.895	
3,100.00	3,013.30	2,883.86	2,782.94	13.96	11.67	55.007	-60.28	1,020.16	684.06	662.96	21.10	32.423	
3,200.00	3,112.88	2,962.06	2,855.38	14.33	12.06	55.604	-66.04	1,049.04	715.53	694.09	21.44	33.377	
3,300.00	3,212.80	3,065.50	2,950.84	14.64	12.60	55.884	-74.30	1,088.02	750.83	728.88	21.95	34.205	
3,400.00	3,312.80	3,195.59	3,072.52	14.92	13.26	116.779	-82.93	1,133.19	784.87	762.24	22.64	34.671	
3,500.00	3,412.80	3,306.03	3,177.36	15.20	13.80	116.041	-88.96	1,167.35	815.02	791.85	23.17	35.175	
3,600.00	3,512.56	3,392.95	3,259.84	15.49	14.23	-18.857	-95.18	1,194.04	840.94	817.41	23.53	35.743	
3,700.00	3,609.93	3,562.72	3,422.13	15.82	15.04	-20.211	-106.52	1,242.34	849.97	825.63	24.34	34.926	
3,800.00	3,701.96	5,047.92	4,429.25	16.21	18.32	-136.233	405.09	745.28	779.58	763.83	15.75	49.502	
3,900.00	3,785.86	4,996.39	4,427.34	16.67	17.67	-140.813	369.32	782.34	701.69	685.43	16.26	43.160	
4,000.00	3,859.07	4,922.70	4,424.51	17.23	16.86	-142.394	317.78	834.92	634.60	617.86	16.75	37.888	
4,100.00	3,919.38	4,610.15	4,346.27	17.94	15.39	-126.125	108.39	1,047.38	572.30	555.14	17.17	33.335	
4,200.00	3,964.95	4,552.20	4,315.66	18.85	15.39	-127.757	75.03	1,083.57	503.27	484.85	18.42	27.316	
4,300.00	3,994.39	4,363.57	4,190.21	19.97	15.61	-112.476	-19.55	1,185.91	441.25	418.90	22.35	19.739	
4,400.00	4,006.82	4,291.04	4,129.97	21.27	15.73	-108.858	-47.52	1,214.91	384.44	358.92	25.51	15.067	
4,500.00	4,006.51	4,230.12	4,076.26	22.73	15.82	-100.983	-67.44	1,235.62	342.25	312.30	29.95	11.426	
4,600.00	4,005.58	4,183.54	4,033.79	24.32	15.89	-93.443	-80.60	1,249.47	319.10	283.52	35.58	8.968	
4,641.80	4,005.19	4,167.20	4,018.60	25.02	15.91	-90.708	-84.73	1,253.87	316.74	278.83	37.91	8.355 CC, ES	

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



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Kimbeto Wash 772 Pad (772, 774, 793, 794 & 795) - Kimbeto Wash Unit 772H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 405-MWD, 2492-MWD, 11616-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
4,700.00	4,004.65	4,147.46	4,000.05	26.02	15.94	-87.367	-89.32	1,258.78	321.39	280.74	40.65	7.906 SF	
4,800.00	4,003.72	4,119.00	3,972.94	27.81	15.96	-82.526	-95.30	1,265.04	350.11	306.76	43.35	8.076	
4,900.00	4,002.79	4,096.35	3,951.10	29.67	15.98	-78.698	-99.53	1,269.30	400.47	356.67	43.80	9.143	
5,000.00	4,001.86	4,079.10	3,934.34	31.59	15.99	-75.821	-102.43	1,272.11	466.01	422.88	43.12	10.806	
5,100.00	4,000.93	4,065.41	3,920.95	33.56	15.99	-73.571	-104.53	1,274.08	541.52	499.41	42.11	12.860	
5,200.00	4,000.00	4,056.00	3,911.71	35.56	16.00	-72.046	-105.85	1,275.30	623.54	582.43	41.11	15.168	
5,300.00	3,999.07	4,045.73	3,901.60	37.61	16.00	-70.407	-107.17	1,276.51	709.92	669.72	40.20	17.660	
5,400.00	3,998.14	4,038.45	3,894.41	39.68	16.00	-69.260	-108.02	1,277.29	799.31	759.88	39.43	20.272	
5,500.00	3,997.21	4,024.00	3,880.10	41.77	16.00	-67.030	-109.48	1,278.67	890.94	852.20	38.73	23.001	
5,600.00	3,996.27	4,024.00	3,880.10	43.88	16.00	-67.030	-109.48	1,278.67	983.94	945.72	38.21	25.748	
5,700.00	3,995.34	4,024.00	3,880.10	46.01	16.00	-67.030	-109.48	1,278.67	1,078.19	1,040.42	37.77	28.547	
5,800.00	3,994.41	4,024.00	3,880.10	48.16	16.00	-67.030	-109.48	1,278.67	1,173.40	1,136.01	37.39	31.386	
5,900.00	3,993.48	4,024.00	3,880.10	50.32	16.00	-67.030	-109.48	1,278.67	1,269.34	1,232.29	37.05	34.258	
6,000.00	3,992.55	4,010.98	3,867.17	52.49	15.99	-65.076	-110.54	1,279.70	1,365.65	1,328.93	36.72	37.194	
6,100.00	3,991.62	4,008.04	3,864.25	54.67	15.99	-64.644	-110.75	1,279.90	1,462.53	1,426.08	36.46	40.116	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Kimbeto Wash 772 Pad (772, 774, 793, 794 & 795) - Kimbeto Wash Unit 774H - Original Hole - Surveys Original Hole													Offset Site Error: 0.00 ft
Survey Program: 406-MWD, 3554-MWD, 20066-MWD													Offset Well Error: 0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	9.61	9.61	0.00	0.02	88.004	16.20	464.65	464.93				
100.00	100.00	110.76	110.76	0.27	0.19	88.003	16.19	464.50	464.79	464.33	0.46	1,012.122	
200.00	200.00	211.91	211.91	0.63	0.35	88.003	16.18	464.10	464.39	463.41	0.99	470.726	
300.00	300.00	313.06	313.06	0.99	0.52	88.002	16.17	463.45	463.75	462.23	1.51	306.341	
400.00	400.00	414.24	414.24	1.35	0.71	88.000	16.15	462.55	462.86	460.80	2.06	225.017	
500.00	500.00	515.28	515.27	1.71	1.07	87.996	16.14	461.35	461.67	458.89	2.78	166.206	
600.00	600.00	614.20	614.18	2.07	1.43	88.009	16.00	460.26	460.56	457.07	3.49	131.943	
700.00	700.00	713.20	713.17	2.43	1.78	88.003	16.02	459.30	459.60	455.39	4.20	109.330	
800.00	800.00	811.15	811.12	2.78	2.13	88.000	16.02	458.77	459.05	454.13	4.91	93.431	
900.00	900.00	910.73	910.70	3.14	2.49	88.006	15.96	458.52	458.80	453.17	5.63	81.523	
1,000.00	1,000.00	1,016.67	1,016.64	3.50	2.87	88.090	15.26	457.80	458.11	451.75	6.36	71.992	
1,100.00	1,100.00	1,132.92	1,132.76	3.86	3.28	88.547	11.52	454.20	454.94	447.81	7.13	63.787	
1,200.00	1,200.00	1,257.78	1,256.93	4.22	3.75	89.625	2.91	444.69	447.22	439.30	7.92	56.439	
1,300.00	1,299.95	1,381.48	1,378.81	4.57	4.24	30.038	-9.73	427.88	431.33	422.63	8.70	49.565	
1,400.00	1,399.63	1,489.17	1,483.63	4.93	4.70	33.330	-24.99	408.52	407.30	397.84	9.46	43.068	
1,500.00	1,498.77	1,588.21	1,578.89	5.29	5.16	38.065	-43.04	388.38	378.30	368.07	10.23	36.983	
1,600.00	1,597.08	1,683.85	1,669.38	5.66	5.66	44.898	-65.01	366.61	346.32	335.25	11.07	31.285	
1,700.00	1,694.31	1,768.69	1,748.42	6.06	6.14	53.287	-87.34	345.36	314.53	302.54	11.99	26.225	
1,800.00	1,790.18	1,846.31	1,820.55	6.50	6.60	62.732	-108.28	325.79	288.08	275.10	12.98	22.186	
1,900.00	1,884.43	1,923.82	1,893.35	6.98	7.07	73.154	-127.67	307.57	271.33	257.32	14.01	19.368	
1,970.74	1,950.17	1,977.18	1,943.36	7.36	7.39	80.765	-141.13	294.72	267.39	252.69	14.70	18.191 CC, ES	
2,000.00	1,976.95	1,998.21	1,963.02	7.52	7.52	83.944	-146.51	289.54	268.05	253.09	14.95	17.928 SF	
2,100.00	2,069.07	2,070.66	2,030.65	8.10	7.97	94.351	-165.18	271.50	281.55	265.87	15.68	17.955	
2,200.00	2,161.19	2,143.64	2,098.79	8.71	8.44	103.997	-184.04	253.36	310.08	293.87	16.21	19.128	
2,300.00	2,253.31	2,220.34	2,170.63	9.34	8.92	112.744	-203.53	234.86	349.55	332.86	16.69	20.947	
2,400.00	2,345.43	2,297.72	2,243.55	9.99	9.41	120.056	-222.28	217.07	395.73	378.57	17.16	23.067	
2,500.00	2,437.54	2,369.21	2,310.85	10.65	9.87	125.748	-239.57	200.24	447.24	429.68	17.56	25.474	
2,600.00	2,529.84	2,435.61	2,373.02	11.33	10.30	130.900	-256.09	183.80	503.06	485.14	17.91	28.082	
2,700.00	2,623.71	2,510.57	2,442.89	11.96	10.80	136.287	-275.24	164.50	559.83	541.44	18.39	30.440	
2,800.00	2,719.26	2,595.46	2,522.16	12.55	11.37	140.786	-296.57	142.92	614.66	595.67	19.00	32.358	
2,900.00	2,816.21	2,686.59	2,607.66	13.07	11.97	144.355	-318.50	120.26	666.03	646.36	19.67	33.860	
3,000.00	2,914.32	2,772.40	2,688.49	13.55	12.53	146.914	-338.81	99.83	713.51	693.24	20.27	35.192	
3,100.00	3,013.30	2,854.08	2,765.10	13.96	13.07	148.860	-358.78	79.74	758.45	737.63	20.82	36.425	
3,200.00	3,112.88	2,955.99	2,861.02	14.33	13.74	150.528	-383.11	55.39	798.72	777.12	21.60	36.981	
3,300.00	3,212.80	3,049.91	2,949.46	14.64	14.35	151.712	-405.37	32.95	834.80	812.53	22.27	37.490	
3,400.00	3,312.80	3,168.45	3,061.76	14.92	15.10	-145.904	-431.85	5.78	866.29	843.09	23.19	37.348	
3,500.00	3,412.80	3,323.30	3,210.51	15.20	16.01	-145.310	-461.53	-25.18	893.62	869.18	24.44	36.567	
3,600.00	3,512.56	3,451.32	3,335.30	15.49	16.66	78.824	-481.92	-45.18	914.67	889.33	25.35	36.087	
3,700.00	3,609.93	3,640.75	3,522.17	15.82	17.11	80.506	-504.21	-65.98	927.37	901.26	26.11	35.524	
3,800.00	3,701.96	3,805.38	3,686.44	16.21	17.23	84.202	-513.00	-71.28	928.13	901.60	26.52	34.992	
3,900.00	3,785.86	3,898.81	3,779.85	16.67	17.27	87.493	-514.66	-72.05	925.81	898.86	26.95	34.357	
3,937.02	3,814.33	3,930.13	3,811.14	16.87	17.29	88.815	-514.11	-73.30	925.55	898.40	27.15	34.090	
4,000.00	3,859.07	3,977.43	3,858.03	17.23	17.31	91.008	-510.23	-77.86	926.59	899.13	27.46	33.745	
4,100.00	3,919.38	4,019.34	3,898.96	17.94	17.33	92.530	-503.90	-84.19	934.64	906.55	28.09	33.268	
4,200.00	3,964.95	4,037.57	3,916.56	18.85	17.34	91.770	-500.51	-87.51	952.88	924.04	28.85	33.032	
4,300.00	3,994.39	4,039.53	3,918.45	19.97	17.34	88.920	-500.13	-87.88	981.32	951.65	29.68	33.067	
4,400.00	4,006.82	4,026.00	3,905.41	21.27	17.34	84.111	-502.70	-85.37	1,018.42	987.90	30.53	33.359	
4,500.00	4,006.51	4,013.45	3,893.25	22.73	17.33	82.161	-504.92	-83.19	1,062.43	1,031.04	31.39	33.849	
4,600.00	4,005.58	3,995.00	3,875.27	24.32	17.32	81.074	-507.86	-80.28	1,113.35	1,081.16	32.20	34.581	
4,700.00	4,004.65	3,995.00	3,875.27	26.02	17.32	81.074	-507.86	-80.28	1,170.36	1,137.38	32.98	35.487	
4,800.00	4,003.72	3,980.95	3,861.50	27.81	17.31	80.246	-509.80	-78.31	1,232.67	1,199.03	33.65	36.636	
4,900.00	4,002.79	3,973.42	3,854.08	29.67	17.31	79.801	-510.71	-77.36	1,299.60	1,265.35	34.25	37.946	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Kimbeto Wash 772 Pad (772, 774, 793, 794 & 795) - Kimbeto Wash Unit 774H - Original Hole - Surveys Original Hole													Offset Site Error:	0.00 ft
Survey Program: 406-MWD, 3554-MWD, 20066-MWD													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.00	4,001.86	3,963.00	3,843.79	31.59	17.31	79.186	-511.82	-76.14	1,370.49	1,335.73	34.76	39.425		
5,100.00	4,000.93	3,963.00	3,843.79	33.56	17.31	79.186	-511.82	-76.14	1,444.73	1,409.50	35.23	41.008		



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Kimbeto Wash 772 Pad (772, 774, 793, 794 & 795) - Kimbeto Wash Unit 793H - Original Hole - Surveys Original Hole													Offset Site Error: 0.00 ft
Survey Program: 405-MWD, 3457-MWD, 18922-MWD													Offset Well Error: 0.00 ft
Reference	Offset	Semi Major Axis		Rule Assigned:		Distance		Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	9.52	9.52	0.00	0.02	88.085	16.20	484.71	484.99				
100.00	100.00	109.74	109.74	0.27	0.18	88.086	16.20	484.69	484.96	484.50	0.46	1,060.369	
200.00	200.00	209.97	209.97	0.63	0.35	88.088	16.18	484.61	484.88	483.90	0.98	493.247	
300.00	300.00	310.19	310.19	0.99	0.52	88.092	16.14	484.50	484.76	483.26	1.51	321.304	
400.00	400.00	410.28	410.28	1.35	0.69	88.097	16.09	484.33	484.60	482.56	2.04	237.090	
435.17	435.17	444.67	444.67	1.48	0.82	88.109	15.99	484.31	484.57	482.28	2.29	211.537	
500.00	500.00	508.13	508.13	1.71	1.04	88.173	15.45	484.42	484.67	481.92	2.75	176.545	
600.00	600.00	607.61	607.60	2.07	1.38	88.272	14.63	484.87	485.10	481.65	3.45	140.622	
700.00	700.00	709.10	709.09	2.43	1.74	88.332	14.12	484.95	485.16	480.99	4.17	116.479	
800.00	800.00	807.59	807.58	2.78	2.08	88.358	13.91	485.36	485.56	480.69	4.87	99.740	
900.00	900.00	907.92	907.91	3.14	2.44	88.394	13.62	485.59	485.79	480.21	5.58	87.086	
1,000.00	1,000.00	1,005.34	1,005.33	3.50	2.78	88.403	13.55	486.17	486.37	480.10	6.28	77.490	
1,100.00	1,100.00	1,104.07	1,104.06	3.86	3.12	88.426	13.39	487.20	487.41	480.43	6.98	69.826	
1,200.00	1,200.00	1,205.08	1,205.05	4.22	3.48	88.482	12.94	488.28	488.47	480.78	7.69	63.480	
1,300.00	1,299.95	1,305.06	1,305.03	4.57	3.83	26.944	12.78	489.16	487.01	478.61	8.40	57.965	
1,400.00	1,399.63	1,405.87	1,405.83	4.93	4.19	27.508	12.38	490.00	480.85	471.74	9.11	52.775	
1,500.00	1,498.77	1,503.82	1,503.78	5.29	4.54	28.485	11.58	490.77	470.09	460.27	9.81	47.896	
1,600.00	1,597.08	1,620.32	1,620.20	5.66	4.95	30.513	7.94	489.74	453.35	442.76	10.58	42.834	
1,700.00	1,694.31	1,734.79	1,734.08	6.06	5.36	34.128	-1.44	483.36	428.34	417.01	11.34	37.784	
1,800.00	1,790.18	1,834.07	1,832.54	6.50	5.72	38.548	-10.37	474.31	397.15	385.08	12.06	32.928	
1,900.00	1,884.43	1,921.55	1,919.40	6.98	6.03	43.559	-17.15	466.33	363.83	351.04	12.80	28.425	
2,000.00	1,976.95	2,007.39	2,004.65	7.52	6.35	49.591	-23.87	459.02	330.54	316.95	13.60	24.308	
2,100.00	2,069.07	2,093.94	2,090.63	8.10	6.67	56.314	-30.77	451.85	300.97	286.49	14.48	20.783	
2,200.00	2,161.19	2,179.45	2,175.59	8.71	6.99	63.973	-37.75	445.15	277.38	261.92	15.46	17.942	
2,300.00	2,253.31	2,267.50	2,263.14	9.34	7.32	72.704	-44.61	438.73	260.95	244.44	16.52	15.798	
2,400.00	2,345.43	2,354.89	2,350.07	9.99	7.65	81.964	-51.15	432.58	252.67	235.08	17.59	14.365	
2,443.10	2,385.13	2,392.99	2,387.97	10.28	7.80	86.103	-54.03	429.90	251.86	233.82	18.04	13.961 CC, ES	
2,500.00	2,437.54	2,443.41	2,438.12	10.65	7.99	91.570	-57.76	426.32	253.28	234.67	18.60	13.615	
2,600.00	2,529.84	2,530.66	2,524.92	11.33	8.32	100.811	-64.23	420.18	262.61	243.13	19.48	13.482	
2,700.00	2,623.71	2,622.12	2,615.91	11.96	8.67	109.278	-71.00	414.01	278.37	258.14	20.23	13.760	
2,800.00	2,719.26	2,714.92	2,708.29	12.55	9.03	116.179	-77.40	407.91	296.90	276.01	20.89	14.213	
2,900.00	2,816.21	2,808.95	2,801.88	13.07	9.39	121.646	-83.93	401.66	316.31	294.81	21.50	14.712	
3,000.00	2,914.32	2,915.07	2,907.62	13.55	9.79	126.115	-90.17	395.28	333.84	311.64	22.20	15.041	
3,100.00	3,013.30	3,026.05	3,018.48	13.96	10.19	129.148	-92.86	390.98	345.61	322.70	22.91	15.086	
3,200.00	3,112.88	3,129.48	3,121.90	14.33	10.55	130.735	-93.42	389.20	352.27	328.70	23.57	14.947	
3,300.00	3,212.80	3,241.03	3,233.34	14.64	10.93	131.911	-91.03	385.67	353.38	329.14	24.24	14.581	
3,400.00	3,312.80	3,351.10	3,342.83	14.92	11.29	-164.775	-83.45	377.54	348.58	323.74	24.83	14.037	
3,500.00	3,412.80	3,443.90	3,434.81	15.20	11.49	-162.871	-75.90	367.77	343.67	318.44	25.23	13.619	
3,600.00	3,512.56	3,557.67	3,546.52	15.49	11.55	67.066	-64.45	350.44	336.89	311.48	25.40	13.261	
3,700.00	3,609.93	3,664.70	3,645.55	15.82	11.65	78.916	-39.89	318.70	322.26	296.86	25.40	12.685	
3,788.41	3,691.66	3,724.63	3,696.88	16.16	11.75	88.265	-19.20	295.82	314.53	289.17	25.36	12.403 SF	
3,800.00	3,701.96	3,729.57	3,700.94	16.21	11.76	89.044	-17.30	293.73	314.70	289.38	25.32	12.429	
3,900.00	3,785.86	3,759.48	3,724.88	16.67	11.82	92.424	-5.31	280.41	331.09	306.51	24.59	13.466	
4,000.00	3,859.07	3,772.00	3,734.57	17.23	11.85	89.936	-0.01	274.51	373.51	350.06	23.45	15.929	
4,100.00	3,919.38	3,772.00	3,734.57	17.94	11.85	82.130	-0.01	274.51	434.90	412.36	22.54	19.296	
4,200.00	3,964.95	3,755.62	3,721.85	18.85	11.81	69.370	-6.91	282.19	506.66	484.73	21.92	23.109	
4,300.00	3,994.39	3,741.00	3,710.21	19.97	11.78	56.989	-12.83	288.77	582.49	560.57	21.92	26.576	
4,400.00	4,006.82	3,709.00	3,683.87	21.27	11.72	44.956	-25.04	302.20	658.12	636.16	21.96	29.969	
4,500.00	4,006.51	3,693.18	3,670.42	22.73	11.69	41.796	-30.67	308.34	732.78	710.27	22.52	32.543	
4,600.00	4,005.58	3,678.00	3,657.26	24.32	11.67	40.720	-35.73	313.96	811.37	788.36	23.01	35.255	
4,700.00	4,004.65	3,646.00	3,628.84	26.02	11.63	38.514	-45.30	325.11	893.06	869.84	23.21	38.470	
4,800.00	4,003.72	3,633.97	3,617.94	27.81	11.62	37.707	-48.51	329.08	977.24	953.62	23.62	41.374	

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 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Kimbeto Wash 772 Pad (772, 774, 793, 794 & 795) - Kimbeto Wash Unit 793H - Original Hole - Surveys Original Hole													Offset Site Error:	0.00 ft
Survey Program:		405-MWD, 3457-MWD, 18922-MWD					Rule Assigned:						Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.00	4,002.79	3,614.00	3,599.63	29.67	11.60	36.397	-53.37	335.38	1,063.58	1,039.70	23.88	44.543		
5,000.00	4,001.86	3,614.00	3,599.63	31.59	11.60	36.397	-53.37	335.38	1,151.68	1,127.41	24.27	47.452		
5,100.00	4,000.93	3,594.46	3,581.44	33.56	11.58	35.161	-57.62	341.12	1,241.07	1,216.63	24.45	50.763		
5,200.00	4,000.00	3,583.00	3,570.65	35.56	11.57	34.461	-59.92	344.23	1,331.78	1,307.12	24.66	54.003		
5,300.00	3,999.07	3,583.00	3,570.65	37.61	11.57	34.461	-59.92	344.23	1,423.58	1,398.67	24.91	57.145		



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6529+23.5 @ 6552.50ft

Offset Depths are relative to Offset Datum

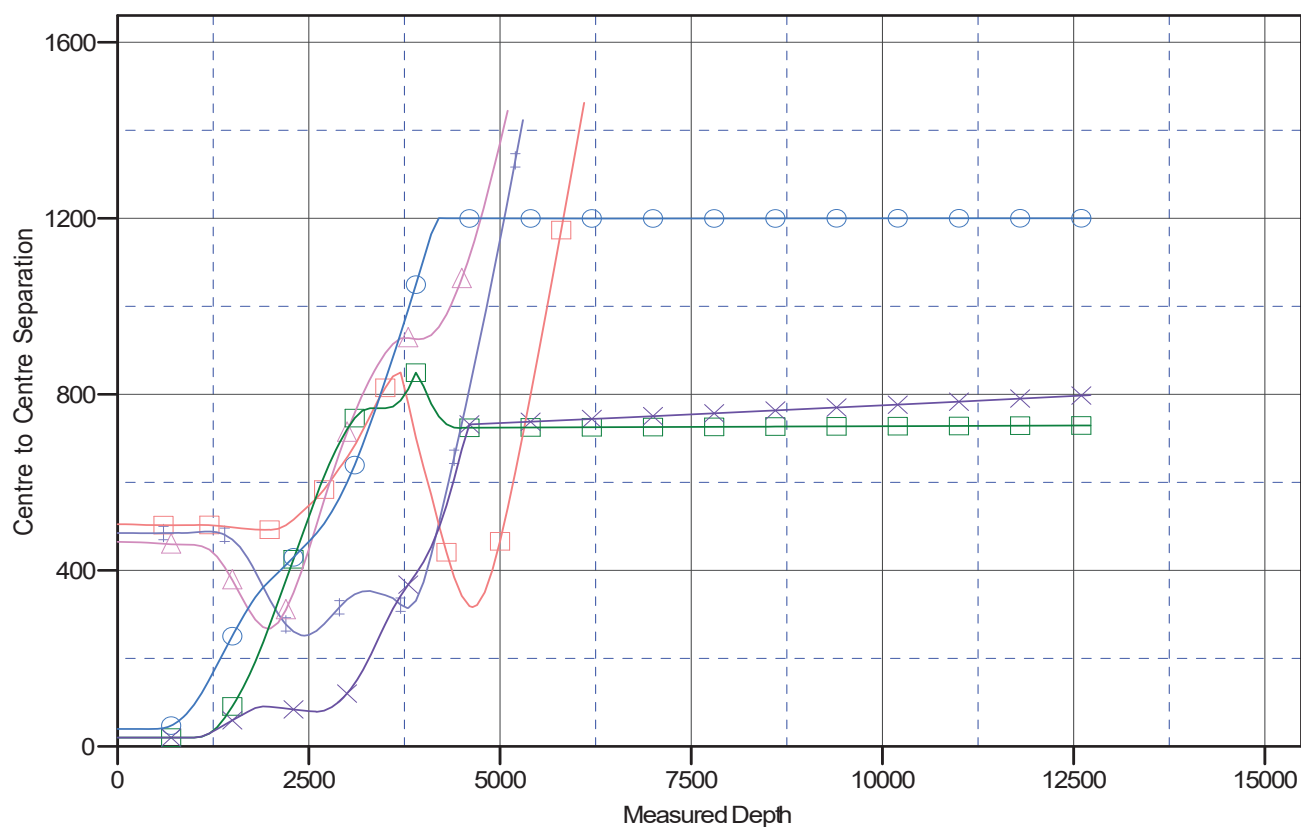
Central Meridian is -107.8333333

Coordinates are relative to: Greater Lybrook Unit 37H

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

Grid Convergence at Surface is: 0.022°

Ladder Plot



LEGEND

Kimbet Wash Unit 753H Original Hole Survey Original Hole V0
 Kimbet Wash Unit 772H Original Hole Survey Original Hole V0
 Greater Lybrook Unit 36H Original Hole Survey Original Hole V0
 Kimbet Wash Unit 774H Original Hole Survey Original Hole V0
 Greater Lybrook Unit 38H Original Hole Survey Original Hole V0
 Greater Lybrook Unit 39H Original Hole Survey Original Hole V0

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



Anticollision Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Greater Lybrook Unit 37H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6529+23.5 @ 6552.50ft
Reference Site:	Greater Lybrook (36, 37, 38 & 39)	MD Reference:	RKB=6529+23.5 @ 6552.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Greater Lybrook Unit 37H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Jul1724_v17
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6529+23.5 @ 6552.50ft

Offset Depths are relative to Offset Datum

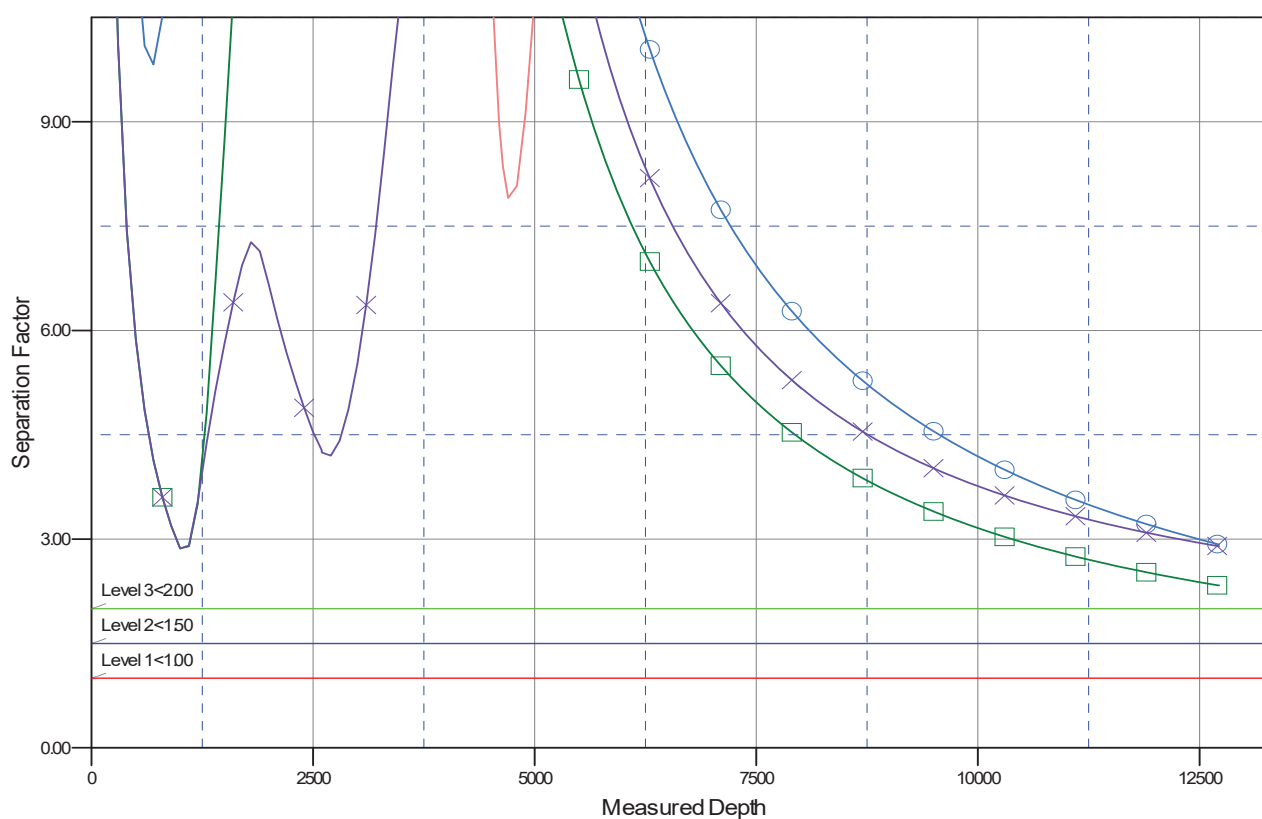
Central Meridian is -107.8333333

Coordinates are relative to: Greater Lybrook Unit 37H

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

Grid Convergence at Surface is: 0.022°

Separation Factor Plot



LEGEND

Kimbet Wash Unit 793H Original Hole Survey Original Hole V0
 Kimbet Wash Unit 772H Original Hole Survey Original Hole V0
 Greater Lybrook Unit 37H Original Hole Survey V0
 Greater Lybrook Unit 37H Original Hole Survey V0



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
#037H GREATER LYBROOK UNIT
Lease: NMNM136267 Agreement: NMNM144419X

SH: NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 28, T. 23N., R. 09W.
San Juan County, New Mexico
BH: NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 34, 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/ocd/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 524897

ACKNOWLEDGMENTS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 524897
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☒	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
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Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.enmrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 524897

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286 Action Number: 524897 Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)
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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