Received by OCD: 12/16/2024 3:34:17 PM

Form 3160-3 (June 2015) UNITED STATE	28	FORM APPRC OMB No. 1004 Expires: January 3	-0137	
DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIOR	5. Lease Serial No.		
APPLICATION FOR PERMIT TO	DRILL OR REENTER	6. If Indian, Allotee or Trib	e Name	
1a. Type of work: DRILL	REENTER	7. If Unit or CA Agreement	, Name and No.	
1b. Type of Well: Oil Well Gas Well	Other	9 Janes News and Well N		
1c. Type of Completion: Hydraulic Fracturing	Single Zone Multiple Zone	8. Lease Name and Well No	0.	
2. Name of Operator		9. API Well No. 30-045-3	8414	
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Expl		
4. Location of Well (Report location clearly and in accordance	with any State requirements.*)	11. Sec., T. R. M. or Blk. an	nd Survey or Area	
At surface				
At proposed prod. zone			10.0	
14. Distance in miles and direction from nearest town or post of	ffice*	12. County or Parish	13. State	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease 17. Spac	ing Unit dedicated to this well	 	
 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 	19. Proposed Depth 20. BLM	I/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 (as applicable)	of Onshore Oil and Gas Order No. 1, and the	Hydraulic Fracturing rule per	43 CFR 3162.3-3	
1. Well plat certified by a registered surveyor.		ns unless covered by an existir	ng bond on file (see	
 A Drilling Plan. A Surface Use Plan (if the location is on National Forest Syst SUPO must be filed with the appropriate Forest Service Office 		ormation and/or plans as may be	e requested by the	
25. Signature	Name (Printed/Typed)	Date		
Title	I	1		
Approved by (Signature)	Name (Printed/Typed)	Date		
Title	Office			
Application approval does not warrant or certify that the applicat applicant to conduct operations thereon. Conditions of approval, if any, are attached.	ant holds legal or equitable title to those rights	s in the subject lease which we	ould entitle the	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, of the United States any false, fictitious or fraudulent statements			artment or agency	
		-		



*(Instructions on page 2)

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(Continued on page 2)

Additional Operator Remarks

Location of Well

0. SHL: SWSW / 252 FSL / 394 FWL / TWSP: 24N / RANGE: 8W / SECTION: 25 / LAT: 36.278726 / LONG: -107.641023 (TVD: 0 feet, MD: 0 feet) PPP: NENE / 380 FNL / 81 FEL / TWSP: 24N / RANGE: 8W / SECTION: 35 / LAT: 36.276988 / LONG: -107.642627 (TVD: 5484 feet, MD: 5907 feet) PPP: NWNW / 380 FNL / 0 FWL / TWSP: 24N / RANGE: 8W / SECTION: 36 / LAT: 36.276986 / LONG: -107.642351 (TVD: 5590 feet, MD: 16606 feet) PPP: NWNW / 422 FNL / 0 FWL / TWSP: 24N / RANGE: 7W / SECTION: 31 / LAT: 36.276895 / LONG: -107.61542 (TVD: 5590 feet, MD: 16606 feet) PPP: NWNE / 400 FNL / 2605 FWL / TWSP: 24N / RANGE: 7W / SECTION: 31 / LAT: 36.27685 / LONG: -107.61542 (TVD: 5590 feet, MD: 16606 feet) BHL: NENE / 380 FNL / 100 FEL / TWSP: 24N / RANGE: 7W / SECTION: 31 / LAT: 36.276805 / LONG: -107.606993 (TVD: 5590 feet, MD: 16606 feet)

BLM Point of Contact

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

Santa Fe Main Office Phone: (505) 476-3441 Fax: (55) 476-3462 General Information Phone: (505) 629-6116 Online Phone Directory Visit: https://www.emnrd.nm.gov/ocd/contact-us/	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Submittal Type:	<u>C-102</u> Revised July 9, 2024 Submit Electronically via OCD Permitting ⊠Initial Submittal ☐ Amended Report ☐ As Drilled
	WELL LOCATION INFORMATION		

API Number	Pool Code	Pool Name	
30-045-38414	98101	LYBROOK UNIT NW HZ OIL	
Property Code	Property Name		Well Number
321252	NW LYBROOK UNIT		140H
OGRID No.	Operator Name		Ground Level Elevation
372286	ENDURING RESOURCES LLC	6847	
Surface Owner: \Box State \Box Fee \boxtimes Tribal \boxtimes Federal		Mineral Owner: \Box State \Box Fee \boxtimes Tribal \boxtimes Fe	ederal

	Surface Location									
UL M	Section 25	Township 24N	Range 8W	Lot	Ft. from N/S 252 SOUTH	Ft. from E/W 394 WEST	Latitude 36.278714	Longitude -107.640413	County SAN JUAN	
	Bottom Hole Location									
UL A	Section 31	Township 24N	Range 7W	Lot	Ft. from N/S 380 NORTH	Ft. from E/W 100 EAST	Latitude 36.276805	Longitude -107.606993	County RIO ARRIBA	
NE/4 N	Dedicated Acres Infill or Defining Well Defining Well API NE/4 NE/4-Sec 35. N/2 N/2-Sec 36. N/2 N/2-Sec 31. 360.63 Acres Defining Well API		Overlapping Spacing	Unit (Y/N) N	Consolidation Co UNIT	ode				
Order 1	Numbers. R-1	13921				Well setbacks are under Common Ownership: ⊠Yes □No				

	Kick Off Point (KOP)									
UL A	Section 35	Township 24N	Range 8W	Lot	Ft. from N/S 380 NORTH	Ft. from E/W 81 EAST	Latitude 36.276988	Longitude -107.642627	County SAN JUAN	
	First Take Point (FTP)									
UL A	Section 35	Township 24N	Range 8W	Lot	Ft. from N/S 380 NORTH	Ft. from E/W 81 EAST	Latitude 36.276988	Longitude -107.642627	County SAN JUAN	
	Last Take Point (LTP)									
UL A	Section 31	Township 24N	Range 7W	Lot	Ft. from N/S 380 NORTH	Ft. from E/W 100 EAST	Latitude 36.276805	Longitude -107.606993	County RIO ARRIBA	

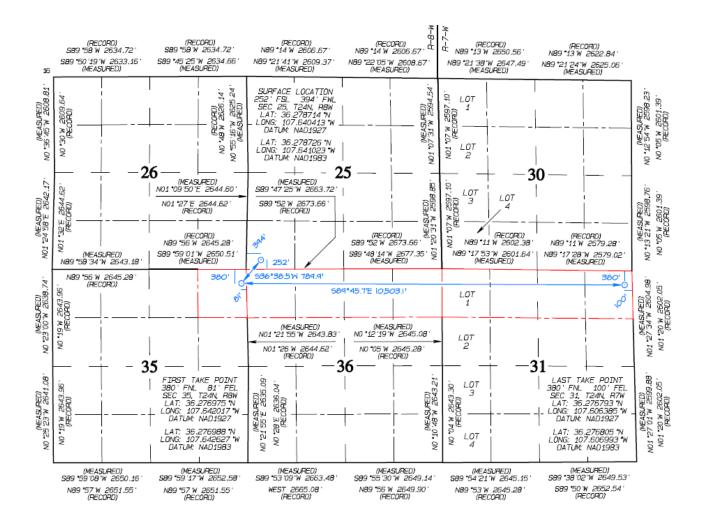
Unitized Area or Area of Uniform Interest NW LYBROOK UNIT	Spacing Unit Type 🛛 Horiz	zontal 🗆 Vertical	Ground Floor Elevation:
I hereby certify that the information contained herein is t my knowledge and belief, and, if the well is a vertical or organization either owns a working interest or unleased, including the proposed bottom hole location or has a rig location pursuant to a contract with an owner of a workin interest, or to a voluntary pooling agreement or a compu- entered by the division If this well is a horizontal well, I further certify that this of consent of at least one lessee or owner of a working inter- in each tract (in the target pool or formation) in which ar interval will be located or obtained a compulsory pooling	directional well, that this mineral interest in the land ht to drill this well at this g interest or unleased mineral lsory pooling order heretofore organization has received the est or unleased mineral interest my part of the well's completed g order from the division	I hereby certify t field notes of act the same is true a	SURVEYOR CERTIFICATION hat the well location shown on this plat was plotted from will surveys made by me or under my supervision, and that nd correct to the best of my belief.
Shaw-Maris Ford	12/16/2024		JASON C. EDWARDS
Shaw-Marie Ford Printed Name sford@enduringresources.com Email Address		Certificate Number 15269	Date of Survey FEBRUARY 4, 2023 Revised February 4, 2023

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

Received by OCD: 12/16/2024 3:34:17 PM ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



	Er	nergy, Minerals	and Natural Res	xico ources D	epartment	Subm Via E	it Electronically -permitting
		Oil C 1220	onservation Di South St. Fran nta Fe, NM 87	ivision cis Dr.	1		1 0
	N	ATURAL G	GAS MANA	GEME	NT PLAN		
This Natural Gas Management	t Plan mi	ist be submitted v	with each Applicat	tion for Pe	rmit to Drill (Al	PD) for a new or	recompleted well
			n 1 – Plan D Effective May 25,		ion		
I. Operator:Enduring Res	ources, I	LLC	OGRID:	_372286		Date: _12_	/_16_/_2024_
II. Type: 🛛 Original 🗆 Amo							
If Other, please describe:							
III. Well(s): Provide the follo be recompleted from a single v					r set of wells pr	oposed to be dril	led or proposed t
Well Name	API	ULSTR	Footages		Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Lybrook 2408-26 FED COM	TBD	M-25-24N-8W	266 FSL x 294 F	WL	255	760	102
NW Lybrook Unit 139H	TBD	M-25-24N-8W	263 FSL x 311 F		276	824	111
NW Lybrook Unit 140H	TBD	M-25-24N-8W	252 FSL x 394 F		412	1229	165
NW Lybrook Unit 141H	TBD	M-25-24N-8W	250 FSL x 414 F		417	1242	167
					3-year Decline	3-year Decline	3-year Decline
Lybrook 2408-26 FED COM	TBD	M-25-24N-8W	266 FSL x 294 F	WL	58	172	23
NW Lybrook Unit 139H	TBD	M-25-24N-8W	263 FSL x 311 F	WL	62	186	25
NW Lybrook Unit 140H	TBD	M-25-24N-8W	252 FSL x 394 F		93	278	37
NW Lybrook Unit 141H	TBD	M-25-24N-8W	250 FSL x 414 F	WL	94	280	38
IV. Central Delivery Point N	ame:	NW Lyb	prook 131H CDP_			[See 19.15.27.9	(D)(1) NMAC]
V. Anticipated Schedule: Pro proposed to be recompleted fr						et of wells propos	sed to be drilled o
Well Name	API	Spud Date	TD Reached	Car	mpletion	Initial Flow	First Production
W CH INAILIC	AFI	Spud Date	Date		ncement Date	Back Date	Date
Lybrook 2408-26 FED COM 138H	TBD	Q3 2025	Q3 2025	0	3 2025	Q3 2025	Q3 2025
-	TBD	Q3 2025 Q3 2025	Q3 2025		3 2023 3 2025	Q3 2023 Q3 2025	Q3 2023 Q3 2025
NW Lybrook Unit 139H					1 (11/)	$(J,J, \angle U \angle J)$	$\mathbf{V} \in \{A \mid A \}$
NW Lybrook Unit 139H NW Lybrook Unit 140H	TBD	Q3 2025 Q3 2025	Q3 2025		3 2025	Q3 2025	Q3 2025

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

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

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

Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

<u>Section 3 - Certifications</u> <u>Effective May 25, 2021</u>

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

 \boxtimes 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

 \Box 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. \Box 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. \Box 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: 12/16/2024

Phone: 505-716-3297

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

Approved By:

Title:

Approval Date:

Conditions of Approval:



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.



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



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 tall 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.



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, CO 80111

DRILLING PLAN: Drill, complete, equip single lateral Mancos formation Gallup member.

WELL INFORMATION:

Name:	NW LYBROOK UNIT 140H		
API Number:	Not assigned yet		
AFE Number:	Not assigned yet		
ER Well Number:	Not assigned yet		
State:	New Mexico		
County:	San Juan County		
Surface Elevation:	6,847 ft ASL (GL)	6,872 ft ASL (KB)	
Surface Location:	25-24-8 Sec-Twn-Rng	252 ft FSL	394 ft FWL
	36.278726 $^\circ$ N latitude	107.641023 [°] W longitude	(NAD 83)
BH Location:	31-24-7 Sec-Twn-Rng	380 ft FNL	100 ft FEL
	36.276805 $^\circ$ N latitude	107.606993 $^\circ$ W longitude	(NAD 83)
Driving Directions:	From the intersection of US H	WY 550 & US HWY 64 in Bloom	field, NM: South on US HWY 550 for 43.5 mles to MM
	108.3; Left (North) on County	Road #7998 for 0.5 miles to for	k; Left (North) continuing on Rd #7998 for 0.5 miles to
	T. Loft (North) Most) for 0.6 mi	las to passa ready Laft (Mast) fo	v 0.2 miles into NW/ Lubrook Unit 12111 Ded. The 12011

108.3; Left (North) on County Road #7998 for 0.5 miles to fork; Left (North) continuing on Rd #7998 for 0.5 miles to T; Left (NorthWest) for 0.6 miles to acces road; Left (West) for 0.3 miles into NW Lybrook Unit 131H Pad. The 138H will be one of 4 wells to be added to an existing, 3 well pad. The 138H will be the furthest west well and furthest from the location entrance. From east to west will be NW Lybrook 141H, NW Lybrook 140H, NW Lybrook 289H (existing well). NW Lybrook 131H (existing well), Lybrook 2408 237H (existing well), NW Lybrook 139H, NW Lybrook

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O/G/W	Pressure
	Nacimiento	0	0	0	0	0
	Ojo Alamo	5,650	1,222	1,222	W	normal
	Kirtland	5,520	1,352	1,354	W	normal
	Fruitland	5,300	1,572	1,580	G, W	sub
	Pictured Cliffs	4,991	1,881	1,912	G, W	sub
	Lewis	4,891	1,981	2,020	G, W	normal
	Chacra A	4,582	2,290	2,355	G, W	normal
	Cliff House Basal	3,490	3,382	3,536	G, W	sub
	Menefee	3,485	3,387	3,542	G, W	normal
	Point Lookout	2,647	4,225	4,446	G, W	normal
	Mancos	2,422	4,450	4,678	0,G	normal
	MNCS_A	2,057	4,815	5,045	0,G	sub (~.38)
	MNCS_B	1,972	4,900	5,130	0,G	sub (~.38)
	MNCS_C	1,857	5,015	5,246	0,G	sub (~.38)
	MNCS_Cms	1,804	5,068	5,313	0,G	sub (~.38)
	MNCS_D	1,694	5,178	5,419	0,G	sub (~.38)
	MNCS_E	1,607	5,265	5,522	0,G	sub (~.38)
	MNCS_F	1,546	5,326	5,603	0,G	sub (~.38)
	MNCS_G	1,468	5,404	5,732	0,G	sub (~.38)
	MNCS_H	1,425	5,447	5,816	0,G	sub (~.38)
	MNCS I TARGET (POE)	1,369	5,503	5,971	O,G	sub (~.38)
	FTP TARGET	1,388	5,484	5,907	O,G	sub (~.38)
	PROJECTED WELL TD (BHL)	1,282	5,590	16,606	O,G	sub (~.38)

Enduring Resources IV, LLC

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:								
	Maximum anticipated surface	1,190	psi						
Temperature:	Maximum anticipated BHT is	125 $^{\circ}$ F or le	SS						

H₂S INFORMATION:

*H*₂*S Zones:* Encountering hydrogen-sulfide bearing zones is **NOT** anticipated.

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

LOGGING, CORING, AND TESTING:

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

MWD surveys with inclination and azimuth in 100' stations (minimum) from drill out of 13-3/8" casing to TD;

MWD/LWD: Gamma Ray from drill out of 9-5/8" casing to TD; Gamma Ray optional in 12-1/4" intermediate hole

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

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

DRILLING RIG INFORMATION:

Contractor: Aztec Rig No.: 1000 Draw Works: E80 AC 1500HP

Mast: Hyduke 600K Cantilever Triple (136 ft, 600,000 lbs)

Top Drive: NOV IDS-350PE 1000 HP

Prime Movers: 4 GE Jenbachers 1000KW 480/240 volt Nat Gas

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

BOPE 1: Cameron double gate ram (13-5/8", 5,000 psi)

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

Choke 3", 5,000 psi

KB-GL (ft): 25

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

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

1) Rig will be equipped with upper and lower kelly cocks with handles available.

2)

Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well. 3) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain

minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.

- 4) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 5) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- 6) Manual locking devices (hand wheels) shall be intalled on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when the there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement:

	Pumps shall be equipped with stroke counters with displays in the dog-house. Slow pump speed shall be recorded daily and after mudding up, at a minimum, on the drilling report. A Pit Volume Totalizer will be installed and the readout will be displayed in the dog-house. Gas-detecting equipment will be installed at the shakers, and readouts will be available in the dog-house and the in the geologist's work-station (if geologist or mud-logger is on-site).
Closed-Loop System:	A fully, closed-loop system will be utilized. The system will consist of above-ground piping and above-ground storage tanks and bins. The system will not entail any earthen pits, below-grade storage, or drying pads. All equipment will
	be disassembled and removed from the site when drilling operations cease. The system will be capable of storing all
	fluids and generated cuttings and of preventing uncontrolled releases of the same. The system will be operated in an efficient manner to allow the recycling and reuse of as much fluid as possible and to minimize the amount of
	fluids and solids that require disposal.
Fluid Disposal :	Fluids that cannot be reused, recycled, or returned to the supplier will be hauled to and disposed of at an approved
	disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).

- Solids Disposal : Drilling solids will be stored (until haul-off) on-site in separate containers with no other waste, debris, or garbage products. Waste solids will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).
- *Fluid Program:* See "Detailed Drilling Plan" section for specifics and fluid program from Newpark. Sufficient weighting agent will be on location to weight up mud system to balance the maximum expected pressure gradient.

DETAILED DRILLING PLAN:

SURFACE: Drill vertically to casing setting depth, 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.

			FL		YP		
Fluid:	Туре	MW (ppg)	(mL/30 min)	PV (cp)	(lb/100 sqft)	рН	Comments
	Fresh Water	8.4	N/C	2 - 8	2 - 12	9.0	Spud mud
	47.4/21						

Hole Size: 17-1/2'

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, run deviation survey after drilling

Logging: None

Tail

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)	
Specs	13.375	54.5	J-55	BTC	1,130	2,730	853,000	909,000	
Loading					153	1,520	116,634	116,634	
Min. S.F.					7.39	1.80	7.31	7.79	
	Assumptions:	Burst : maximu intermediate h	7.391.807.317.79Collapse : partially evacuated casing with 8.4 ppg fluid outside casingBurst : maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drillingintermediate hole and 8.4 ppg equivalent external pressure gradientTension : buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull						

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

Make-up as per API Buttress Connection running procedure.

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

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

			Yield	Water	Ann Cap.		Planned TOC	Total Cmt
Cement:	Туре	Weight (ppg)	(cuft/sk)	(gal/sk)	(cuft/ft)	% Excess	(ft MD)	(sx)
	TYPE III	14.6	1.39	6.686	0.6946	100%	0	364
Annular Capacity	0.6946	cuft/ft	13-3/8" casing	x 17-1/2" hole	e annulus	Csg capacity	0.8680	ft3/ft

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

	Calcium Chloride	D-CD2 .3% BWOC	
ASTM Type III	2% BWOC	Dispersant/Friction	.25 lbs/sx Cello
Blend	Accelerator	reducer	Flake - seepage

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

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

<u>INTER</u>	MEDIATE:	Drill as per di		to casing settin					
			ft (MD)	to		ft (MD)		ection Length:	
		350	ft (TVD)	to	3,537	ft (TVD)	Ca	sing Required:	3,709 f
				FL		үр			
	Fluid:	Туре	MW (ppg)	(mL/30 min)	PV (cp)	(lb/100 sqft)	рН	Com	ments
		LSND (KCI)	8.8 - 9.5	20	8 - 14	8 - 14	9.0 - 9.5		
	Hole Size:	12-1/4"							
В	Bit / Motor:	PDC w/mud m	otor						
MW	D / Survey:	MWD with GR	, inclination, a	nd azimuth sur	vey (every 100	at a minimum)		
	Logging:	None							
Pre	essure Test:	NU BOPE and	test (as noted a	above); pressui	re test 13-3/8"	casing to	1,500	psi for 30 min	utes.
				e pressure whi		-	-	1,350	psi
								Tens. Body	Tens. Conn
Ca	ising Specs:	0.625	Wt (lb/ft)	Grade	Conn.	Collapse (psi)		(lbs)	(lbs)
	Specs	9.625	36.0	J55	LTC	2,020	3,520	564,000	453,000
	Loading					754	1,405	211,040	211,040
	Min. S.F.					2.68	2.50 ressure gradien	2.67	2.15
			hole and 8.4 p	ım anticipated pg equivalent e ed weight in 8.4	external pressu	re gradient	ı fluid inside cas ver-pull	sing while drill	ing productior
MU Tore	que (ft lbs):	Minumum:	3,400	Optimum:	4,530	Maximum:	5,660	DV depth	N/A
				Yield	Water		Planned TOC	Total Cmt	
	Cement:	Туре	Weight (ppg)	(cuft/sk)	(gal/sk)	% Excess	(ft MD)	(sx)	
Stage 1	Spacer	D-Mud Breaker	8.5				0	10 bbls	
		90:10 Type							
	Lead	III:POZ	12.5	2.140	12.05	70%	0	858	
	Tail	Type III	14.6	1.380	6.61	20%	3,209	150	
Dis	splacement		est bbls				_,		
	ar Capacity		cuft/ft	9-5/8" casina	x 13-3/8" casin	a annulus			1
		0.3132	cuft/ft		x 12-1/4" hole	-			
		0.4341	cuft/ft	9-5/8" casing		est shoe jt ft	ЛЛ		
			-				e only) noted in	table	
	Spacer	D-Mud Breaker	SAPP			(-)	,,		
	Lead	ASTM Type III 90/10 Poz	D-CSE 1 5.0% BWOC Strength Enhancer	D-MPA-1.4% BWOC Fluid Loss & Gas Migration Control D-MPA-1.4%	D-SA 1 1.4% BWOC Na Metasilicate	D-CD 2 .4% BWOC Dispersant	Cello Flace LCM .25 lb/sx	D-FP 1 .5% BWOC Defoamer	D-R1 .5% Retarde
	Tail	ASTM Type III Blend		BWOC Fluid Loss & Gas Migration Control	Cello Flace LCM .25 lb/sx				
		Cement must	-	i compressive	-	-	uct achieve EOO	nel commerci	uo otros ott

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

<u>PRODUCTION:</u> Drill to TD following directional plan, run casing, cement casing to surface.

				16,606	++ (M/D)	I Hole S	ection Length:	12 007
	3,709		to					
	3,537	ft (TVD)	to	5,590	ft (TVD)	Ca	sing Required:	16,606
	i							7
			timated KOP:		ft (MD)		ft (TVD)	4
	Estin	nated Landing I			ft (MD)	5,503	ft (TVD)	J
		Estimated Lo	ateral Length:	10,874	ft (MD)			
					-	-		7
					YP			
Fluid:	Туре	MW (ppg)	WPS ppm	HTHP	(lb/100 sqft)	ES	OWR	Comment
								WBM as
	OBM	8.0 - 9.0	120,000 CaCl	NC	±6	+300	80:20	contingenc
Hole Size:	8-1/2"							-
Bit / Motor:	PDC w/mud m	notor						
MWD / Survey:	MWD with GR	, inclination, ar	nd azimuth (sui	rvey every joint	from KOP to L	anding Point a	nd survey ever	y 100'
	minimum befo	ore KOP and aft	ter Landing Poi	nt)				
Logging:	GR MWD for e	entire section, r	no mud-log or d	uttings sampling	ng, no OH WL l	ogs		
Pressure Test:	NU BOPE and	test (as noted a	above); pressui	re test 9-5/8" ca	asing to	1,500	psi for 30 min	utes.
							Tens. Body	Tens. Conr
Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	(lbs)	(lbs)
	F F 00	17.0	P-110	LTC	7,460	10,640	546,000	445,000
Specs	5.500				,	,	,	
Specs Loadina	5.500	17.0			2.761	8.120	182.002	182.002
Loading	5.500	1/10			2,761 2,70	8,120	182,002 3.00	182,002 2.45
		Collapse: fully Burst: 8,500 ps fluid with 8.4 µ	si maximum su opg equivalent	rface treating p external pressu	2.70 g fluid in the ar pressure with 1 ure gradient	1.31 nnulus (floatin <u>a</u> 0.2 ppg equiva	3.00 g casing during	2.45 running)
Loading Min. S.F. U Torque (ft Ibs):	Assumptions: Minumum:	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoyo 3,470	si maximum su opg equivalent ed weight in 9. Optimum:	rface treating p external pressu 0 ppg fluid with 4,620	2.70 g fluid in the ar pressure with 1 ure gradient 100,000 lbs ov Maximum:	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780	3.00 g casing during lent mud weig	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs):	Assumptions:	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoyo 3,470	si maximum su opg equivalent ed weight in 9. Optimum: oent may be ad	rface treating p external presso 0 ppg fluid with 4,620 justed based or	2.70 g fluid in the ar pressure with 1 ure gradient n 100,000 lbs or Maximum: n well conditior	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille	3.00 g casing during lent mud weig d surveys (ARS	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers:	Assumptions: Minumum: Centralizer co	Collapse: fully Burst: 8,500 p: fluid with 8.4 p Tension: buoyo 3,470 unt and placem	si maximum su opg equivalent ed weight in 9. Optimum: nent may be ad Yield	rface treating p external presso 0 ppg fluid with 4,620 justed based of Water	2.70 g fluid in the ar pressure with 1 ure gradient n 100,000 lbs ov Maximum: n well condition % Excess	1.31 anulus (floating 0.2 ppg equiva ver-pull 5,780 as and as-drille Planned TOC	3.00 g casing during lent mud weig d surveys (ARS Total Cmt	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs):	Assumptions: Minumum:	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoyo 3,470	si maximum su opg equivalent ed weight in 9. Optimum: oent may be ad	rface treating p external presso 0 ppg fluid with 4,620 justed based of Water (gal/sk)	2.70 g fluid in the ar pressure with 1 ure gradient n 100,000 lbs or Maximum: n well conditior	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx)	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers:	Assumptions: Minumum: Centralizer co	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoyo 3,470 unt and placem Weight (ppg) 11	si maximum su opg equivalent ed weight in 9. Optimum: nent may be ad Yield (cuft/sk)	rface treating p external pressu 0 ppg fluid with 4,620 justed based or Water (gal/sk) 31.6	2.70 g fluid in the ar pressure with 1 ure gradient 100,000 lbs or Maximum: n well condition % Excess Open Hole	1.31 anulus (floating 0.2 ppg equiva ver-pull 5,780 as and as-drille Planned TOC	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement:	Assumptions: Minumum: Centralizer cou	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoyo 3,470 unt and placem Weight (ppg)	si maximum su opg equivalent ed weight in 9. Optimum: nent may be ad Yield	rface treating p external presso 0 ppg fluid with 4,620 justed based of Water (gal/sk)	2.70 g fluid in the ar pressure with 1 ure gradient n 100,000 lbs ov Maximum: n well condition % Excess	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD)	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx)	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3	si maximum su opg equivalent ed weight in 9. Optimum: nent may be ad Yield (cuft/sk)	rface treating p external pressu 0 ppg fluid with 4,620 justed based or Water (gal/sk) 31.6	2.70 g fluid in the ar pressure with 1 ure gradient 100,000 lbs or Maximum: n well condition % Excess Open Hole	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4	si maximum su opg equivalent ed weight in 9. Optimum: nent may be ad Yield (cuft/sk) 2.370	rface treating p external presso 0 ppg fluid with 4,620 justed based on Water (gal/sk) 31.6 13.40	2.70 g fluid in the ar pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50%	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 0	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3	si maximum su opg equivalent ed weight in 9.0 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570	rface treating p external presso 0 ppg fluid with 4,620 justed based on Water (gal/sk) 31.6 13.40	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10%	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 0	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement	Assumptions: Minumum: Centralizer cou Type IntegraGuard Star ASTM type I/II G:POZ blend 366	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoya 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls	si maximum su opg equivalent ed weight in 9. Optimum: nent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing .	rface treating p external presso 0 ppg fluid with 4,620 justed based on Water (gal/sk) 31.6 13.40 7.70	2.70 g fluid in the ar pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 0	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement	Assumptions: Minumum: Centralizer col IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoya 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft	si maximum su opg equivalent ed weight in 9. Optimum: nent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing .	rface treating p external pressu 0 ppg fluid with 4,620 justed based or Water (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole al	2.70 g fluid in the ar pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245	Collapse: fully Burst: 8,500 ps fluid with 8.4 µ Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft	si maximum su opg equivalent ed weight in 9.0 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5.1/2" casing 2 5-1/2" casing 2 5-1/2" casing 2	rface treating p external presso 0 ppg fluid with 4,620 justed based or Water (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement	Assumptions: Minumum: Centralizer cou Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft	si maximum su opg equivalent ed weight in 9.0 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1	rface treating p external presso 0 ppg fluid with 4,620 justed based or (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol hole and the ex	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoya 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft ment volumes a penting Liner &	si maximum su opg equivalent ed weight in 9.0 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 production Ble	rface treating p external presso 0 ppg fluid with 4,620 justed based or (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol hole and the ex- nd IntegraGuard Star	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs ov Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft cess noted in to	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement Annular Capacity	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr S-8 Silica Flour	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoya 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft ment volumes a	si maximum su opg equivalent ed weight in 9.0 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 production Ble	rface treating p external presso 0 ppg fluid with 4,620 justed based or (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol nole and the ex-	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement Annular Capacity	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoya 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft cuft/ft ment volumes a penting Liner & Avis 616 viscosifier	si maximum su opg equivalent ed weight in 9.0 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 5-1/2" casing 5-	rface treating p external presso 0 ppg fluid with 4,620 justed based on Water (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol hole and the ex- nd IntegraGuard Star Plus 3K LCM 15	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft cess noted in to SS201 Surfactant 1	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Cement: Spacer Lead Tail Displacement Annular Capacity	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr S-8 Silica Flour	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft ment volumes a henting Liner & Avis 616 viscosifier 11.6 lb/bbl	si maximum su opg equivalent ed weight in 9.4 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 5-1/2" casing 5-1/2" casing ssume gauge h Production Ble FP24 Defoamer .5 Ib/bbl Bentonite	rface treating p external presso 0 ppg fluid with 4,620 justed based on Water (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol nole and the ext nd IntegraGuard Star Plus 3K LCM 15 lb/bbl	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs on Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft cess noted in to SS201 Surfactant 1 gal/bbl IntegraGuard	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632 1,923	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Spacer Lead Tail Displacement Annular Capacity Spacer	Assumptions: Minumum: Centralizer cou Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr S-8 Silica Flour 163.7 lbs/bbl	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft cuft/ft ment volumes a henting Liner & Avis 616 viscosifier 11.6 lb/bbl	si maximum su opg equivalent ed weight in 9.4 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 FP24 Defoamer .5 Ib/bbl Bentonite Viscosifier 8%	rface treating p external pressu 0 ppg fluid with 4,620 justed based or Water (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole and the ext nole and the ext nole and the ext nol IntegraGuard Star Plus 3K LCM 15 lb/bbl FL24 Fluid Loss .5%	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft cess noted in to SS201 Surfactant 1 gal/bbl IntegraGuard GW86 Viscosifier	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678 100 able	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632 1,923	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Spacer Lead Tail Displacement Annular Capacity Spacer	Assumptions: Minumum: Centralizer col Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr S-8 Silica Flour	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft ment volumes a henting Liner & Avis 616 viscosifier 11.6 lb/bbl	si maximum su opg equivalent ed weight in 9.4 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 5-1/2" casing 5-1/2" casing ssume gauge H Production Ble FP24 Defoamer .5 Ib/bbl Bentonite	rface treating p external presso 0 ppg fluid with 4,620 justed based on Water (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol nole and the ext nd IntegraGuard Star Plus 3K LCM 15 lb/bbl	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs on Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft cess noted in to SS201 Surfactant 1 gal/bbl IntegraGuard	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632 1,923	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Spacer Lead Tail Displacement Annular Capacity Spacer	Assumptions: Minumum: Centralizer cou Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr S-8 Silica Flour 163.7 lbs/bbl	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft cuft/ft ment volumes a henting Liner & Avis 616 viscosifier 11.6 lb/bbl	si maximum su opg equivalent ed weight in 9.4 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 FP24 Defoamer .5 Ib/bbl Bentonite Viscosifier 8%	rface treating p external pressu 0 ppg fluid with 4,620 justed based or (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole and x 8-1/2" hole and the ext nole and the ext nol nole and the ext nol FL24 Fluid Loss .5% BWOB Bentonite	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft cess noted in to SS201 Surfactant 1 gal/bbl IntegraGuard GW86 Viscosifier .1% BWOB	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678 100 able R7C Retarder .2% BWOB	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632 1,923	2.45 running) ht sand lader
Loading Min. S.F. U Torque (ft Ibs): Centralizers: Spacer Lead Tail Displacement Annular Capacity Spacer Lead	Assumptions: Minumum: Centralizer cou Type IntegraGuard Star ASTM type I/II G:POZ blend 366 0.2691 0.2291 0.1245 Calculated cer American Cerr S-8 Silica Flour 163.7 lbs/bbl	Collapse: fully Burst: 8,500 ps fluid with 8.4 p Tension: buoye 3,470 unt and placem Weight (ppg) 11 12.4 13.3 est bbls cuft/ft cuft/ft cuft/ft cuft/ft ment volumes a henting Liner & Avis 616 viscosifier 11.6 lb/bbl	si maximum su opg equivalent ed weight in 9.4 Optimum: tent may be ad Yield (cuft/sk) 2.370 1.570 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 5-1/2" casing 1 FP24 Defoamer .5 Ib/bbl Bentonite Viscosifier 8%	rface treating p external pressu 0 ppg fluid with 4,620 justed based or (gal/sk) 31.6 13.40 7.70 x 9-5/8" casing x 8-1/2" hole an vol nole and the ex- nd IntegraGuard Star Plus 3K LCM 15 Ib/bbl FL24 Fluid Loss .5% BWOB	2.70 g fluid in the an pressure with 1 ure gradient n 100,000 lbs or Maximum: n well condition % Excess Open Hole 50% 10% annulus est shoe jt ft cess noted in to SS201 Surfactant 1 gal/bbl IntegraGuard GW86 Viscosifier	1.31 nnulus (floating 0.2 ppg equiva ver-pull 5,780 ns and as-drille Planned TOC (ft MD) 0 4,678 100 able R7C Retarder .2% BWOB	3.00 g casing during lent mud weig d surveys (ARS Total Cmt (sx) 60 bbls 632 1,923	2.45 running) ht sand lader

Enduring Resources IV, LLC

Note: This well will not be considered an unorthodox well location as definted by NMAC19.15.16.15.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:

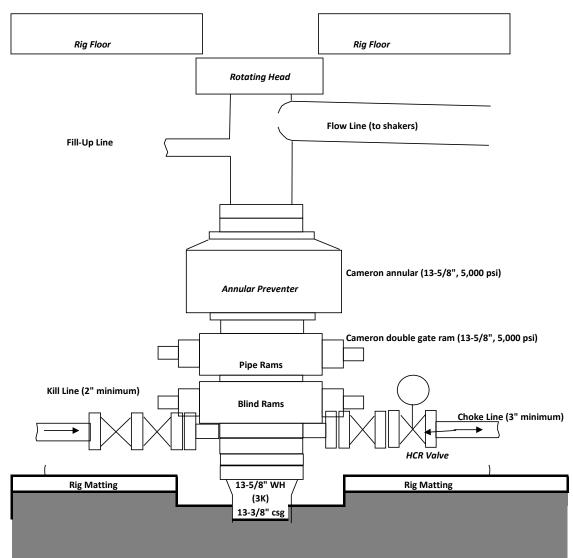
Est Lateral Length:	10,599					
Est Frac Inform:	44	Frac Stages	170,000	bbls slick water	13,780,000	lbs proppant
Flowback:	Flow back thro	ough production	tubing as pre	essures allow		
Production:	Produce through	gh production tu	ubing into pe	rmanent production a	and storage facilities	

ESTIMATED START DATES:

Drilling:	2/1/2024
Completion:	5/2/2024
Production:	7/1/2024

Prepared by: Greg Olson 8/9/2023 Updated by: NOTE: EXACT BOPE AND CHOKE CONFIRGURATION 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.

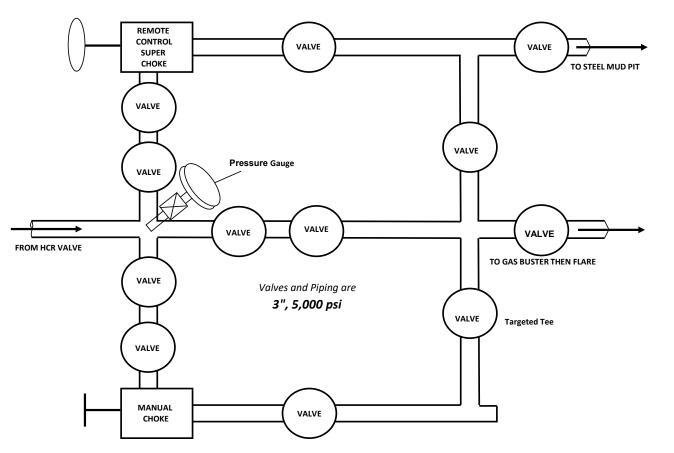
BOPE



BOPE & CHOKE MANIFOLD DIAGRAMS

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

CHOKE MANIFOLD



WELL NAME: NW LYBROOK UNIT 140H

OBJECTIVE:	Drill, compl	ete, equip single	lateral M	ancos formatio	n Gallup m	ember.			
API Number:	Not assigned	yet							
State:	New Mexico	Mexico							
County:	San Juan Cou	inty							
Surface Elev.:	6,847	ft ASL (GL)	6,872	ft ASL (KB)					
Surface Location:	25-24-8	Sec-Twn- Rng	252	ft FSL	394	ft FWL			
BH Location:	31-24-7	Sec-Twn- Rng	380	ft FNL	100	ft FEL			
Driving Directions:	From the inter	section of US HWY 5	50 & US HW	Y 64 in Bloomfield,	NM: South or	n US HWY 550 for			

43.5 mles to MM 108.3; Left (North) on County Road #7998 for 0.5 miles to fork; Left (North) continuing on Rd #7998 for 0.5 miles to T; Left (NorthWest) for 0.6 miles to acces road; Left (West) for 0.3 miles into NW Lybrook Unit 131H Pad. The 138H will be one of 4 wells to be added to an existing, 3 well pad. The 138H will be the furthest west well and furthest from the location entrance. From east to west will be NW Lybrook 141H, NW Lybrook 140H, NW Lybrook 289H (existing well). NW Lybrook 131H (existing well), Lybrook 2408 237H (existing well), NW Lybrook 139H, NW Lybrook 138H

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	3,709	9.625	36	J55	LTC	0	3,709
Production	8.500	16,606	5.500	17.0	P-110	LTC	0	16,606

CEMENT PROPERTIES SUMMARY:

						TOC		
	Туре	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	% Excess	(ft MD)	Total (sx)	Total Cu Ft
Surface	TYPE III	14.6	1.39	6.686	100%	0	364	505
Inter. (Lead Stg 1)	90:10 Type III:POZ	12.5	2.14	12.05	70%	0	858	1,836
Inter. (Tail Stg 1)	Type III	14.6	1.38	6.61	20%	3209	150	207
Prod. (Lead)	ASTM type I/II	12.4	2.37	13.40	50%	0	632	1,497
Prod. (Tail)	G:POZ blend	13.3	1.57	7.70	10%	4678	1923	3,018

COMPLETION / PRODUCTION SUMMARY:

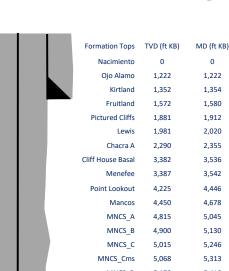
Frac: Flow back through production tubing as pressures allow

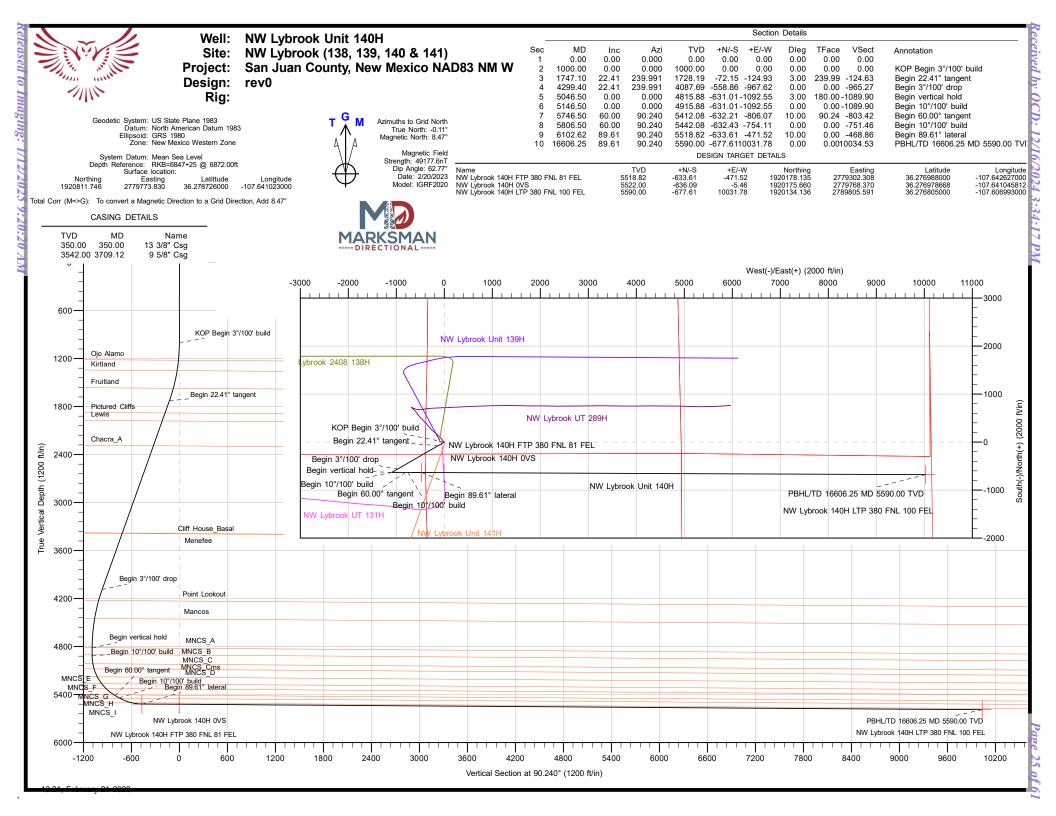
Flowback: Produce through production tubing into permanent production and storage facilities Production: 0

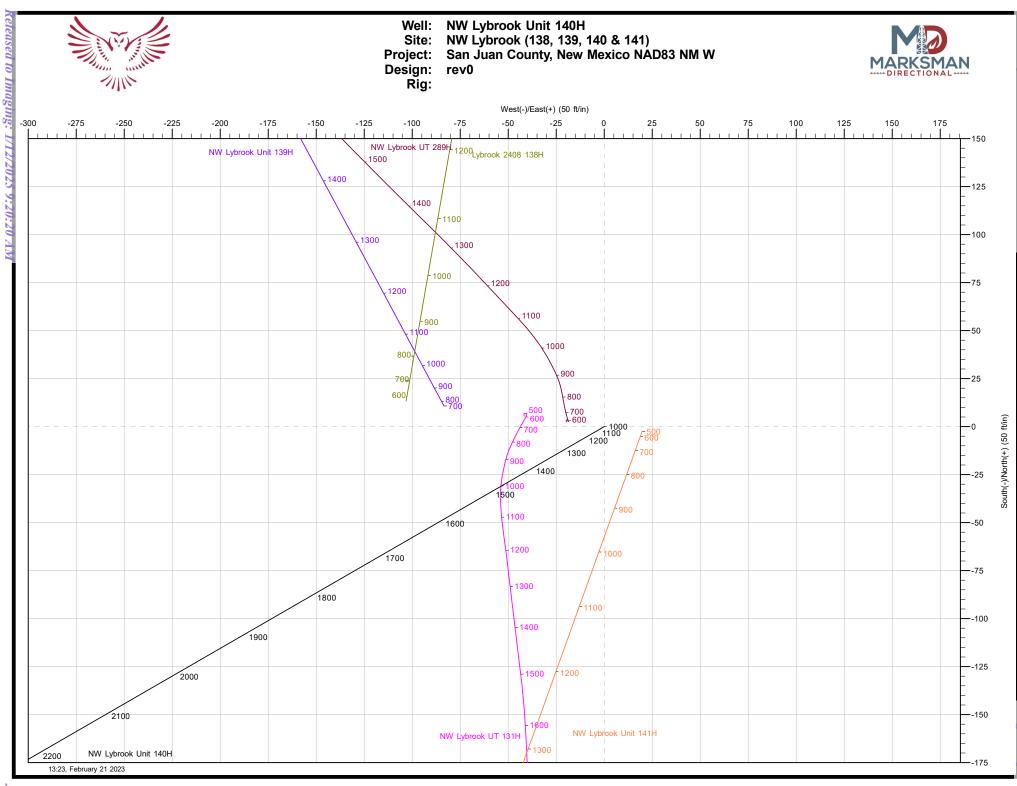
	QUI	CK REFERENC	E
	Sur TD (MD)	350	ft
	Int TD (MD)	3,709	ft
	KOP (MD)	5,150	ft
	KOP (TVD)	4,919	ft
	Target (TVD)	5,503	
	Curve BUR	10	°/100 ft
for	POE (MD)	5,732	ft
	TD (MD)	16,606	ft
od	Lat Len (ft)	10,874	ft

	Nacimiento	0	0
	Ojo Alamo	1,222	1,222
	Kirtland	1,352	1,354
	Fruitland	1,572	1,580
	Pictured Cliffs	1,881	1,912
	Lewis	1,981	2,020
	Chacra A	2,290	2,355
	Cliff House Basal	3,382	3,536
	Menefee	3,387	3,542
	Point Lookout	4,225	4,446
	Mancos	4,450	4,678
	MNCS_A	4,815	5,045
	MNCS_B	4,900	5,130
	MNCS_C	5,015	5,246
	MNCS_Cms	5,068	5,313
	MNCS_D	5,178	5,419
	MNCS_E	5,265	5,522
	MNCS_F	5,326	5,603
	MNCS_G	5,404	5,732
	MNCS_H	5,447	5,816
	MNCS I TARGET (POE)	5,503	5,971
	FTP TARGET	5,484	5,907
PRO.	IECTED WELL TD (BHL)	5,590	16,606

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OCD: 2/16/2024 4



Database: Company: Project:	DB_Decv0422v16 Enduring Resources San Juan County Ne	LLC ww. Mexico NAD83 NM W	TVD Reference	-	Well NW Lybrook U RKB=6847+25 @ 6	872.00ft	
Site:	NW Lybrook (138, 13		MD Reference: North Reference		RKB=6847+25 @ 6872.00ft Grid		
Well:	NW Lybrook Unit 140	,	Survey Calcula		Minimum Curvature		
Wellbore:	Original Hole		ourvey ouroun	alon metriou.			
Design:	rev0						
Project	San Juan County, New	w Mexico NAD83 NM W					
	US State Plane 1983		System Datum:		Mean Sea Level		
ooo batann	North American Datum						
Map Zone:	New Mexico Western Z	one					
Site	NW Lybrook (138, 139	9, 140 & 141)					
Site Position:		Northing:	1,920,822.50	1 usft Latitude:		36.278756000	
From:	Lat/Long	Easting:	2,779,690.39	•	le:	-107.641306000	
Position Uncertainty:	0.00 1	ft Slot Radius:	13-3/1	6 "			
Well	NW Lybrook Unit 140H	l, Surf loc: 252 FSL 394 F	WL Section 25-T24N-R	.08W			
Well Position	+N/-S 0.0	00 ft Northing:	1,920),811.746 usft	Latitude:	36.278726000	
	+E/-W 0.0	00 ft Easting:	2,779	,773.830 usft	Longitude:	-107.641023000	
Position Uncertainty	0.0	00 ft Wellhead Ele	vation:	ft	Ground Level:	6,847.00 ft	
Grid Convergence:	0.1	11 °				,	
Wellbore	Original Hole						
Magnetics	Model Name	Sample Date	Declination (°)	ſ	Dip Angle (°)	Field Strength (nT)	
	IGRF2020	2/20/2023		8.59	62.77	49,177.62691706	
Design	rev0						
Audit Notes:							
Version:		Phase:	PLAN	Tie On Depth	n: 0.0	0	
Vertical Section:	C	Depth From (TVD)	+N/-S	+E/-W	Directi	on	
		(ft) 0.00	(ft) 0.00	(ft) 0.00	(°) 90.24	0	
		0.00	0.00	0.00	30.24	0	
Plan Survey Tool Pro	gram Date	2/21/2023					
Depth From (ft)	Depth To (ft) Survey	(Wellbore)	Tool Name	Remar	ks		
1 0.00	16,606.25 rev0 (O	riginal Hole)	MWD				
1 0.00		inginiar rioro/	NITTE .				

Released to Imaging: 1/12/2025 9:20:20 AM

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Database:	DB Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,747.10	22.41	239.991	1,728.19	-72.15	-124.93	3.00	3.00	0.00	239.99	
4,299.40	22.41	239.991	4,087.69	-558.86	-967.62	0.00	0.00	0.00	0.00	
5,046.50	0.00	0.000	4,815.88	-631.01	-1,092.55	3.00	-3.00	0.00	180.00	
5,146.50	0.00	0.000	4,915.88	-631.01	-1,092.55	0.00	0.00	0.00	0.00	
5,746.50	60.00	90.240	5,412.08	-632.21	-806.07	10.00	10.00	0.00	90.24	
5,806.50	60.00	90.240	5,442.08	-632.43	-754.11	0.00	0.00	0.00	0.00	
6,102.62	89.61	90.240	5,518.82	-633.61	-471.52	10.00	10.00	0.00	0.00	
16,606.25	89.61	90.240	5,590.00	-677.61	10,031.78	0.00	0.00	0.00	0.00	NW Lybrook 140H I



Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
350.00	0.00	0.000	350.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8" Csg									
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3	3°/100' build								
1,100.00	3.00	239.991	1,099.95	-1.31	-2.27	-2.26	3.00	3.00	0.00
1,200.00	6.00	239.991	1,199.63	-5.23	-9.06	-9.04	3.00	3.00	0.00
1,222.43	6.67	239.991	1,221.92	-6.47	-11.20	-11.18	3.00	3.00	0.00
Ojo Alamo									
1,300.00	9.00	239.991	1,298.77	-11.76	-20.36	-20.31	3.00	3.00	0.00
1,353.83	10.61	239.991	1,351.81	-16.35	-28.30	-28.23	3.00	3.00	0.00
Kirtland									
1,400.00	12.00	239.991	1,397.08	-20.87	-36.14	-36.05	3.00	3.00	0.00
1,500.00	15.00	239.991	1,494.31	-32.55	-56.35	-56.22	3.00	3.00	0.00
1,580.38	17.41	239.991	1,571.49	-43.77	-75.78	-75.59	3.00	3.00	0.00
Fruitland									
1,600.00	18.00	239.991	1,590.18	-46.75	-80.94	-80.75	3.00	3.00	0.00
1,700.00	21.00	239.991	1,684.43	-63.44	-109.85	-109.58	3.00	3.00	0.00
1,747.10	22.41	239.991	1,728.19	-72.15	-124.93	-124.63	3.00	3.00	0.00
Begin 22.41°	' tangent								
1,800.00	22.41	239.991	1,777.10	-82.24	-142.40	-142.05	0.00	0.00	0.00
1,900.00	22.41	239.991	1,869.54	-101.31	-175.41	-174.99	0.00	0.00	0.00
1,912.16	22.41	239.991	1,880.78	-103.63	-179.43	-178.99	0.00	0.00	0.00
Pictured Clif			.,				0.00	0.00	0.00
2,000.00	22.41	239.991	1,961.99	-120.38	-208.43	-207.93	0.00	0.00	0.00
2,020.07	22.41	239.991	1,980.54	-124.21	-215.06	-214.53	0.00	0.00	0.00
Lewis									
2,100.00	22.41	239.991	2,054.43	-139.45	-241.45	-240.86	0.00	0.00	0.00
2,200.00	22.41	239.991	2,146.88	-158.52	-274.46	-273.80	0.00	0.00	0.00
2,300.00	22.41	239.991	2,239.33	-177.59	-307.48	-306.73	0.00	0.00	0.00
2,354.59	22.41	239.991	2,289.79	-188.00	-325.50	-324.71	0.00	0.00	0.00
Chacra_A			,						
2,400.00	22.41	239.991	2,331.77	-196.66	-340.50	-339.67	0.00	0.00	0.00
2,500.00	22.41	239.991	2,424.22	-215.73	-373.52	-372.61	0.00	0.00	0.00
2,600.00	22.41	239.991	2,516.66	-234.80	-406.53	-405.54	0.00	0.00	0.00
2,700.00	22.41	239.991	2,609.11	-253.86	-439.55	-438.48	0.00	0.00	0.00
2,800.00	22.41	239.991	2,701.56	-272.93	-472.57	-471.42	0.00	0.00	0.00
2,900.00	22.41	239.991	2,794.00	-292.00	-505.58	-504.35	0.00	0.00	0.00
3,000.00	22.41	239.991	2,886.45	-311.07	-538.60	-537.29	0.00	0.00	0.00
3,100.00	22.41	239.991	2,978.89	-330.14	-571.62	-570.23	0.00	0.00	0.00
3,200.00	22.41	239.991	3,071.34	-349.21	-604.63	-603.16	0.00	0.00	0.00
3,300.00	22.41	239.991	3,163.79	-368.28	-637.65	-636.10	0.00	0.00	0.00
3,400.00	22.41	239.991	3,256.23	-387.35	-670.67	-669.04	0.00	0.00	0.00
3,500.00	22.41	239.991	3,348.68	-406.42	-703.68	-701.97	0.00	0.00	0.00



D	atabase:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
С	ompany:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Ρ	roject:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
S	ite:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
v	/ell:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
W	/ellbore:	Original Hole		
D	esign:	rev0		

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)
3,536.20	22.41	239.991	3,382.14	-413.32	-715.63	-713.90	0.00	0.00	0.00
Cliff House_	Basal								
3,541.59	22.41	239.991	3,387.13	-414.35	-717.42	-715.67	0.00	0.00	0.00
Menefee			-,						
3,600.00	22.41	239.991	3,441.12	-425.49	-736.70	-734.91	0.00	0.00	0.00
3,700.00	22.41	239.991	3,533.57	-444.56	-769.72	-767.85	0.00	0.00	0.00
3,709.12	22.41	239.991	3,542.00	-446.29	-772.73	-770.85	0.00	0.00	0.00
9 5/8" Csg									
3,800.00	22.41	239.991	3,626.02	-463.62	-802.73	-800.78	0.00	0.00	0.00
3,900.00	22.41	239.991	3,718.46	-482.69	-835.75	-833.72	0.00	0.00	0.00
4,000.00	22.41	239.991	3,810.91	-501.76	-868.77	-866.66	0.00	0.00	0.00
4,100.00	22.41	239.991	3,903.35	-520.83	-901.78	-899.59	0.00	0.00	0.00
4,200.00	22.41	239.991	3,995.80	-539.90	-934.80	-932.53	0.00	0.00	0.00
4,299.40	22.41	239.991	4,087.69	-558.86	-967.62	-965.27	0.00	0.00	0.00
Begin 3°/100)' drop								
4,400.00	19.39	239.991	4,181.66	-576.81	-998.70	-996.27	3.00	-3.00	0.00
4,445.90	18.02	239.991	4,225.13	-584.17	-1,011.45	-1,008.99	3.00	-3.00	0.00
Point Looko	ut								
4,500.00	16.39	239.991	4,276.81	-592.17	-1,025.30	-1,022.81	3.00	-3.00	0.00
4,600.00	13.39	239.991	4,373.44	-605.03	-1,047.56	-1,045.02	3.00	-3.00	0.00
4,678.13	11.05	239.991	4,449.79	-613.30	-1,061.88	-1,059.30	3.00	-3.00	0.00
Mancos									
4,700.00	10.39	239.991	4,471.28	-615.33	-1,065.41	-1,062.82	3.00	-3.00	0.00
4,800.00	7.39	239.991	4,570.07	-623.07	-1,078.79	-1,076.17	3.00	-3.00	0.00
4,900.00	4.39	239.991	4,669.53	-628.20	-1,087.69	-1,085.05	3.00	-3.00	0.00
5,000.00	1.39	239.991	4,769.39	-630.73	-1,092.06	-1,089.41	3.00	-3.00	0.00
5,045.20	0.04	239.991	4,814.58	-631.01	-1,092.55	-1,089.90	3.00	-3.00	0.00
MNCS_A									
5,046.50	0.00	0.000	4,815.88	-631.01	-1,092.55	-1,089.90	3.00	-3.00	0.00
Begin vertic			,		,	,			
5,100.00	0.00	0.000	4,869.38	-631.01	-1,092.55	-1,089.90	0.00	0.00	0.00
5,130.20	0.00	0.000	4,899.58	-631.01	-1,092.55	-1,089.90	0.00	0.00	0.00
MNCS_B									
5,146.50	0.00	0.000	4,915.88	-631.01	-1,092.55	-1,089.90	0.00	0.00	0.00
Begin 10°/10									
5,150.00	0.35	90.240	4,919.38	-631.01	-1,092.54	-1,089.89	10.00	10.00	0.00
5,200.00	5.35	90.240	4,969.30	-631.02	-1,090.05	-1,087.40	10.00	10.00	0.00
5,200.00 5,245.75	9.93	90.240	5,014.64	-631.02	-1,090.05	-1,087.40	10.00	10.00	0.00
MNCS_C	0.00	50.210	0,011.07	001.00	.,000.07	.,	10.00	10.00	0.00
5,250.00	10.35	90.240	5,018.82	-631.05	-1,083.23	-1,080.57	10.00	10.00	0.00
5,300.00	15.35	90.240	5,067.55	-631.10	-1,072.11	-1,069.46	10.00	10.00	0.00
5,312.68	16.62	90.240	5,079.74	-631.11	-1,068.62	-1,065.97	10.00	10.00	0.00
MNCS_Cms			-,		,	,			
-		00.040	E 445 40	001 10	4 050 70	1 05 1 1 1	40.00	40.00	0.00
5,350.00	20.35	90.240	5,115.13	-631.16	-1,056.79	-1,054.14	10.00	10.00	0.00
5,400.00	25.35	90.240	5,161.19	-631.24	-1,037.38 -1,029.07	-1,034.73	10.00	10.00	0.00
5,418.76 MNCS_D	27.23	90.240	5,178.01	-631.28	-1,029.07	-1,026.42	10.00	10.00	0.00
5,450.00	30.35	90.240	5,205.39	-631.34	-1,014.03	-1,011.38	10.00	10.00	0.00
5,450.00 5,500.00	30.35 35.35	90.240 90.240	5,205.39 5,247.38	-631.34 -631.45	-1,014.03 -986.92	-1,011.38 -984.26	10.00	10.00	0.00
5,522.40	37.59	90.240	5,265.39	-631.51	-973.60	-970.95	10.00	10.00	0.00
MNCS_E					0.50.05	050			
5,550.00	40.35	90.240	5,286.85	-631.58	-956.25	-953.59	10.00	10.00	0.00



Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,600.00	45.35	90.240	5,323.49	-631.72	-922.25	-919.60	10.00	10.00	0.00
5,603.23	45.67	90.240	5,325.76	-631.73	-919.95	-917.29	10.00	10.00	0.00
MNCS_F									
5,650.00	50.35	90.240	5,357.03	-631.88	-885.19	-882.54	10.00	10.00	0.00
5,700.00	55.35	90.240	5,387.22	-632.05	-845.35	-842.70	10.00	10.00	0.00
5,731.57	58.51	90.240	5,404.44	-632.16	-818.90	-816.25	10.00	10.00	0.00
MNCS_G			,						
5,746.50	60.00	90.240	5,412.08	-632.21	-806.07	-803.42	10.00	10.00	0.00
Begin 60.00	° tangent								
5,806.50	60.00	90.240	5,442.08	-632.43	-754.11	-751.46	0.00	0.00	0.00
Begin 10°/1	00' build								
5,816.38	60.99	90.240	5,446.94	-632.46	-745.51	-742.86	10.00	10.00	0.00
MNCS_H									
5,850.00	64.35	90.240	5,462.38	-632.59	-715.65	-712.99	10.00	10.00	0.00
5,900.00	69.35	90.240	5,482.03	-632.78	-669.69	-667.03	10.00	10.00	0.00
5,950.00	74.35	90.240	5,497.60	-632.98	-622.19	-619.54	10.00	10.00	0.00
5,971.14	76.46	90.240	5,502.92	-633.07	-601.74	-599.09	10.00	10.00	0.00
MNCS_I									
6,000.00	79.35	90.240	5,508.97	-633.18	-573.52	-570.86	10.00	10.00	0.00
6,050.00	84.35	90.240	5,516.05	-633.39	-524.04	-521.38	10.00	10.00	0.00
6,102.62	89.61	90.240	5,518.82	-633.61	-471.52	-468.86	10.00	10.00	0.00
Begin 89.61		50.240	0,010.02	-000.01	-471.02	-400.00	10.00	10.00	0.00
6,200.00	89.61	90.240	5,519.48	-634.02	-374.14	-371.48	0.00	0.00	0.00
6,300.00	89.61	90.240	5,520.16	-634.44	-274.14	-271.48	0.00	0.00	0.00
6,400.00	89.61	90.240	5,520.84	-634.86	-174.14	-171.48	0.00	0.00	0.00
6,500.00 6,600.00	89.61 89.61	90.240 90.240	5,521.52 5,522.20	-635.28 -635.69	-74.15 25.85	-71.48 28.51	0.00 0.00	0.00 0.00	0.00 0.00
6,700.00	89.61	90.240	5,522.20	-636.11	125.85	128.51	0.00	0.00	0.00
6,800.00	89.61	90.240	5,523.55	-636.53	225.84	228.51	0.00	0.00	0.00
6,900.00	89.61	90.240	5,524.23	-636.95	325.84	328.51	0.00	0.00	0.00
7,000.00	89.61	90.240	5,524.91	-637.37	425.84	428.50	0.00	0.00	0.00
7,100.00	89.61	90.240	5,525.58	-637.79	525.83	428.50 528.50	0.00	0.00	0.00
7,200.00	89.61	90.240	5,526.26	-638.21	625.83	628.50	0.00	0.00	0.00
7,300.00	89.61	90.240	5,526.94	-638.63	725.83	728.50	0.00	0.00	0.00
7,400.00	89.61	90.240	5,527.62	-639.05	825.82	828.49	0.00	0.00	0.00
7,500.00	89.61	90.240	5,528.29	-639.47	925.82	928.49	0.00	0.00	0.00
7,600.00	89.61	90.240	5,528.97	-639.88	1,025.82	1,028.49	0.00	0.00	0.00
7,700.00	89.61	90.240	5,529.65	-640.30	1,125.82	1,128.49	0.00	0.00	0.00
7,800.00	89.61	90.240	5,530.33	-640.72	1,225.81	1,228.49	0.00	0.00	0.00
7,900.00	89.61	90.240	5,531.00	-641.14	1,325.81	1,328.48	0.00	0.00	0.00
8,000.00	89.61	90.240	5,531.68	-641.56	1,425.81	1,428.48	0.00	0.00	0.00
8,100.00	89.61	90.240	5,532.36	-641.98	1,525.80	1,528.48	0.00	0.00	0.00
8,200.00	89.61	90.240	5,533.04	-642.40	1,625.80	1,628.48	0.00	0.00	0.00
8,300.00	89.61	90.240	5,533.71	-642.82	1,725.80	1,728.47	0.00	0.00	0.00
8,400.00	89.61	90.240	5,534.39	-643.24	1,825.79	1,828.47	0.00	0.00	0.00
8,500.00	89.61	90.240	5,535.07	-643.65	1,925.79	1,928.47	0.00	0.00	0.00
8,600.00	89.61	90.240	5,535.75	-644.07	2,025.79	2,028.47	0.00	0.00	0.00
8,700.00	89.61	90.240	5,536.43	-644.49	2,125.78	2,128.46	0.00	0.00	0.00
8,800.00	89.61	90.240	5,537.10	-644.91	2,225.78	2,228.46	0.00	0.00	0.00
8,900.00	89.61	90.240	5,537.78	-645.33	2,325.78	2,328.46	0.00	0.00	0.00
9,000.00	89.61	90.240	5,538.46	-645.75	2,425.77	2,428.46	0.00	0.00	0.00
9,100.00	89.61	90.240	5,539.14	-646.17	2,525.77	2,528.46	0.00	0.00	0.00
9,200.00	89.61	90.240	5,539.81	-646.59	2,625.77	2,628.45	0.00	0.00	0.00



Databas	se:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Compa	ny:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project	:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:		NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:		NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbo	re:	Original Hole		
Designa	:	rev0		

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,300.00	89.61	90.240	5,540.49	-647.01	2,725.76	2,728.45	0.00	0.00	0.00
9,400.00	89.61	90.240	5,541.17	-647.42	2,825.76	2,828.45	0.00	0.00	0.00
3,400.00	05.01	30.240	5,541.17	-0+7.42	2,025.70	2,020.40	0.00	0.00	0.00
9,500.00	89.61	90.240	5,541.85	-647.84	2,925.76	2,928.45	0.00	0.00	0.00
9,600.00	89.61	90.240	5,542.52	-648.26	3,025.76	3,028.44	0.00	0.00	0.00
9,700.00	89.61	90.240	5,543.20	-648.68	3,125.75	3,128.44	0.00	0.00	0.00
9,800.00	89.61	90.240	5,543.88	-649.10	3,225.75	3,228.44	0.00	0.00	0.00
9,900.00	89.61	90.240	5,544.56	-649.52	3,325.75	3,328.44	0.00	0.00	0.00
3,300.00	03.01		3,344.00	-0+3.32	0,020.70	3,320.44			
10,000.00	89.61	90.240	5,545.23	-649.94	3,425.74	3,428.43	0.00	0.00	0.00
10,100.00	89.61	90.240	5,545.91	-650.36	3,525.74	3,528.43	0.00	0.00	0.00
10,200.00	89.61	90.240	5,546.59	-650.78	3,625.74	3,628.43	0.00	0.00	0.00
10,300.00	89.61	90.240	5,547.27	-651.19	3,725.73	3,728.43	0.00	0.00	0.00
10,400.00	89.61	90.240	5,547.94	-651.61	3,825.73	3,828.43	0.00	0.00	0.00
10,500.00	89.61	90.240	5,548.62	-652.03	3,925.73	3,928.42	0.00	0.00	0.00
10,600.00	89.61	90.240	5,549.30	-652.45	4,025.72	4,028.42	0.00	0.00	0.00
10,700.00	89.61	90.240	5,549.98	-652.87	4,125.72	4,128.42	0.00	0.00	0.00
10,800.00	89.61	90.240	5,550.66	-653.29	4,225.72	4,228.42	0.00	0.00	0.00
10,900.00	89.61	90.240	5,551.33	-653.71	4,325.71	4,328.41	0.00	0.00	0.00
11,000.00	89.61	90.240	5,552.01	-654.13	4,425.71	4,428.41	0.00	0.00	0.00
11,100.00	89.61	90.240	5,552.69	-654.55	4,525.71	4,528.41	0.00	0.00	0.00
11,200.00	89.61	90.240	5,553.37	-654.96	4,625.70	4,628.41	0.00	0.00	0.00
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11,300.00	89.61	90.240	5,554.04	-655.38	4,725.70	4,728.41	0.00	0.00	0.00
11,400.00	89.61	90.240	5,554.72	-655.80	4,825.70	4,828.40	0.00	0.00	0.00
11,500.00	89.61	90.240	5,555.40	-656.22	4,925.69	4,928.40	0.00	0.00	0.00
11,600.00	89.61	90.240	5,556.08	-656.64	5,025.69	5,028.40	0.00	0.00	0.00
11,700.00	89.61	90.240	5,556.75	-657.06	5,125.69	5,128.40	0.00	0.00	0.00
11,800.00	89.61	90.240	5,557.43	-657.48	5,225.69	5,228.39	0.00	0.00	0.00
11,900.00	89.61	90.240	5,558.11	-657.90	5,325.68	5,328.39	0.00	0.00	0.00
12,000.00	89.61	90.240	5,558.79	-658.32	5,425.68	5,428.39	0.00	0.00	0.00
12,100.00	89.61	90.240	5,559.46	-658.73	5,525.68	5,528.39	0.00	0.00	0.00
12,200.00	89.61	90.240	5,560.14	-659.15	5,625.67	5,628.38	0.00	0.00	0.00
12,300.00	89.61	90.240	5,560.82	-659.57	5,725.67	5,728.38	0.00	0.00	0.00
12,400.00	89.61	90.240	5,561.50	-659.99	5,825.67	5,828.38	0.00	0.00	0.00
12,500.00	89.61	90.240	5,562.18	-660.41	5,925.66	5,928.38	0.00	0.00	0.00
12,500.00	89.61	90.240	5,562.85	-660.83	6,025.66	6,028.38	0.00	0.00	0.00
12,700.00	89.61	90.240	5,563.53	-661.25	6,125.66	6,128.37	0.00	0.00	0.00
12,800.00	89.61	90.240	5,564.21	-661.67	6,225.65	6,228.37	0.00	0.00	0.00
12,900.00	89.61	90.240	5,564.89	-662.09	6,325.65	6,328.37	0.00	0.00	0.00
13,000.00	89.61	90.240	5,565.56	-662.50	6,425.65	6,428.37	0.00	0.00	0.00
13,100.00	89.61	90.240	5,566.24	-662.92	6,525.64	6,528.36	0.00	0.00	0.00
13,200.00	89.61	90.240	5,566.92	-663.34	6,625.64	6,628.36	0.00	0.00	0.00
13,300.00	89.61	90.240	5,567.60	-663.76	6,725.64	6,728.36	0.00	0.00	0.00
13,400.00	89.61	90.240	5,568.27	-664.18	6,825.63	6,828.36	0.00	0.00	0.00
13,500.00	89.61	90.240	5,568.95	-664.60	6,925.63	6,928.35	0.00	0.00	0.00
13,600.00	89.61	90.240	5,569.63	-665.02	7,025.63	7,028.35	0.00	0.00	0.00
13,700.00	89.61	90.240	5,570.31	-665.44	7,125.63	7,128.35	0.00	0.00	0.00
13,800.00	89.61	90.240	5,570.98	-665.86	7,225.62	7,228.35	0.00	0.00	0.00
13,900.00	89.61	90.240	5,571.66	-666.27	7,325.62	7,328.35	0.00	0.00	0.00
14,000.00	89.61	90.240	5,572.34	-666.69	7,425.62	7,428.34	0.00	0.00	0.00
14,100.00	89.61	90.240	5,573.02	-667.11	7,525.61	7,528.34	0.00	0.00	0.00
14,200.00		90.240	5,573.69		7,625.61	7,628.34			
	89.61			-667.53			0.00	0.00	0.00
14,300.00	89.61	90.240	5,574.37	-667.95	7,725.61	7,728.34	0.00	0.00	0.00
14,400.00	89.61	90.240	5,575.05	-668.37	7,825.60	7,828.33	0.00	0.00	0.00
14,500.00	89.61	90.240	5,575.73	-668.79	7,925.60	7,928.33	0.00	0.00	0.00
14,600.00	89.61	90.240	5,576.41	-669.21	8,025.60	8,028.33	0.00	0.00	0.00

2/21/2023 1:24:05PM

COMPASS 5000.16 Build 96

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Database:	DB Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Database.		Local co-orumate Reference.	
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,700.00	89.61	90.240	5,577.08	-669.63	8,125.59	8,128.33	0.00	0.00	0.00
14,800.00	89.61	90.240	5,577.76	-670.04	8,225.59	8,228.32	0.00	0.00	0.00
14,900.00	89.61	90.240	5,578.44	-670.46	8,325.59	8,328.32	0.00	0.00	0.00
15,000.00	89.61	90.240	5,579.12	-670.88	8,425.58	8,428.32	0.00	0.00	0.00
15,100.00	89.61	90.240	5,579.79	-671.30	8,525.58	8,528.32	0.00	0.00	0.00
15,200.00	89.61	90.240	5,580.47	-671.72	8,625.58	8,628.32	0.00	0.00	0.00
15,300.00	89.61	90.240	5,581.15	-672.14	8,725.57	8,728.31	0.00	0.00	0.00
15,400.00	89.61	90.240	5,581.83	-672.56	8,825.57	8,828.31	0.00	0.00	0.00
15,500.00	89.61	90.240	5,582.50	-672.98	8,925.57	8,928.31	0.00	0.00	0.00
15,600.00	89.61	90.240	5,583.18	-673.40	9,025.56	9,028.31	0.00	0.00	0.00
15,700.00	89.61	90.240	5,583.86	-673.81	9,125.56	9,128.30	0.00	0.00	0.00
15,800.00	89.61	90.240	5,584.54	-674.23	9,225.56	9,228.30	0.00	0.00	0.00
15,900.00	89.61	90.240	5,585.21	-674.65	9,325.56	9,328.30	0.00	0.00	0.00
16,000.00	89.61	90.240	5,585.89	-675.07	9,425.55	9,428.30	0.00	0.00	0.00
16,100.00	89.61	90.240	5,586.57	-675.49	9,525.55	9,528.29	0.00	0.00	0.00
16,200.00	89.61	90.240	5,587.25	-675.91	9,625.55	9,628.29	0.00	0.00	0.00
16,300.00	89.61	90.240	5,587.92	-676.33	9,725.54	9,728.29	0.00	0.00	0.00
16,400.00	89.61	90.240	5,588.60	-676.75	9,825.54	9,828.29	0.00	0.00	0.00
16,500.00	89.61	90.240	5,589.28	-677.17	9,925.54	9,928.29	0.00	0.00	0.00
16,606.25	89.61	90.240	5,590.00	-677.61	10,031.78	10,034.53	0.00	0.00	0.00
PBHL/TD 16	606.25 MD 5590.	.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
NW Lybrook 140H 0VS - plan misses target - Point	0.00 center by 0.52	0.000 2ft at 6568.69	5,522.00 9ft MD (5521	-636.09 .98 TVD, -635	-5.46 5.56 N, -5.46	1,920,175.660 E)	2,779,768.370	36.276978668	-107.641045812
NW Lybrook 140H FTP (- plan hits target cen - Point		0.000	5,518.82	-633.61	-471.52	1,920,178.135	2,779,302.308	36.276988000	-107.642627000
NW Lybrook 140H LTP 3 - plan hits target cen - Point		0.000	5,590.00	-677.61	10,031.78	1,920,134.136	2,789,805.591	36.276805000	-107.606993000

Casing Points							
	Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")	
	350.00	350.00	13 3/8" Csg		13-3/8	17-1/2	
	3,709.12	3,542.00	9 5/8" Csg		9-5/8	12-1/4	



Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,222.43	1,221.92	Ojo Alamo		0.39	90.240	
1,353.83	1,351.81			0.39	90.240	
1,580.38	1,571.49			0.39	90.240	
1,912.16		Pictured Cliffs		0.39	90.240	
2,020.07	1,980.54	Lewis		0.39	90.240	
2,354.59	2,289.79			0.39	90.240	
3,536.20	3,382.14	=		0.39	90.240	
3,541.59	3,387.13			0.39	90.240	
4,445.90	4,225.13	Point Lookout		0.39	90.240	
4,678.13	4,449.79	Mancos		0.39	90.240	
5,045.20		MNCS_A		0.39	90.240	
5,130.20	4,899.58			0.39	90.240	
5,245.75		 MNCS_C		0.39	90.240	
5,312.68	5,079.74			0.39	90.240	
5,418.76	5,178.01	—		0.39	90.240	
5,522.40	5,265.39			0.39	90.240	
5,603.23		 MNCS_F		0.39	90.240	
5,731.57	5,404.44			0.39	90.240	
5,816.38	5,446.94	_ MNCS_H		0.39	90.240	
5,971.14	5,502.92	—		0.39	90.240	

Plan Annotations

Measured	Vertical	Local Coor	dinates	
Depth (ft)	Depth (ft)	+N/-S	+E/-W	Comment
(11)	(11)	(ft)	(ft)	Comment
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build
1,747.10	1,728.19	-72.15	-124.93	Begin 22.41° tangent
4,299.40	4,087.69	-558.86	-967.62	Begin 3°/100' drop
5,046.50	4,815.88	-631.01	-1,092.55	Begin vertical hold
5,146.50	4,915.88	-631.01	-1,092.55	Begin 10°/100' build
5,746.50	5,412.08	-632.21	-806.07	Begin 60.00° tangent
5,806.50	5,442.08	-632.43	-754.11	Begin 10°/100' build
6,102.62	5,518.82	-633.61	-471.52	Begin 89.61° lateral
16,606.25	5,590.00	-677.61	10,031.78	PBHL/TD 16606.25 MD 5590.00 TVD



Database: Company: Project: Site: Well: Wellbore: Design:	DB_Decv0422v16 Enduring Resources LLC San Juan County, New Mexico NAD83 NM W NW Lybrook (138, 139, 140 & 141) NW Lybrook Unit 140H Original Hole rev0 San Juan County, New Mexico NAD83 NM W			TVD Reference MD Reference North Reference	ə:	Well NW Lybro RKB=6847+25 RKB=6847+25 Grid Minimum Curv	5@6872.00ft 5@6872.00ft	
-								
Project		•	ICO NAD83 NM W					
Geo Datum:	US State Plane North American New Mexico We	Datum 1983		System Datum	:	Mean Sea Level		
Site	NW Lybrook (1	138, 139, 140	& 141)					
Site Position: From: Position Uncertainty:	Lat/Long	0.00 ft	Northing: Easting: Slot Radius:	1,920,822.5 2,779,690.3 13-3			36.278 -107.641	
Well	NW Lybrook U	nit 140H, Surf	loc: 252 FSL 394 F	VL Section 25-T24N-	R08W			
Well Position	+N/-S +E/-W	0.00 ft 0.00 ft	Northing: Easting:		20,811.746 usft /9,773.830 usft	Latitude: Longitude:	36.278 -107.641	
Position Uncertainty Grid Convergence:		0.00 ft 0.11 °	Wellhead Elev	vation:	ft	Ground Level:	6,847	'.00 ft
Wellbore	Original Hole							
Magnetics	Model Na	me	Sample Date	Declination (°)	1	Dip Angle (°)	Field Strength (nT)	
	IGF	RF2020	2/20/2023		8.59	62.77	49,177.62691706	
Design	rev0							
Audit Notes: Version:			Phase:	PLAN	Tie On De	pth:	0.00	
Vertical Section:		Depth	From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	D	irection (°)	
			0.00	0.00	0.00		90.240	
Plan Survey Tool Pro	gram	Date 2/21	/2023					
Depth From (ft)	Depth To (ft)	Survey (Well	bore)	Tool Name	Rem	arks		
1 0.00	16,606.25	rev0 (Original	Hole)	MWD OWSG MWD - Si				



Databasa	DB Dem/04201/16	Level On andiante Defense	Well NW Lybrook Lipit 140L
Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,747.10	22.41	239.991	1,728.19	-72.15	-124.93	3.00	3.00	0.00	239.99	
4,299.40	22.41	239.991	4,087.69	-558.86	-967.62	0.00	0.00	0.00	0.00	
5,046.50	0.00	0.000	4,815.88	-631.01	-1,092.55	3.00	-3.00	0.00	180.00	
5,146.50	0.00	0.000	4,915.88	-631.01	-1,092.55	0.00	0.00	0.00	0.00	
5,746.50	60.00	90.240	5,412.08	-632.21	-806.07	10.00	10.00	0.00	90.24	
5,806.50	60.00	90.240	5,442.08	-632.43	-754.11	0.00	0.00	0.00	0.00	
6,102.62	89.61	90.240	5,518.82	-633.61	-471.52	10.00	10.00	0.00	0.00	
16,606.25	89.61	90.240	5,590.00	-677.61	10,031.78	0.00	0.00	0.00	0.00 NV	V Lybrook 140H L

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Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	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	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
100.00 200.00	0.00 0.00	0.000 0.000	100.00 200.00	0.00 0.00	0.00 0.00	1,920,811.746 1,920,811.746	2,779,773.830 2,779,773.830	36.278726000 36.278726000	-107.641023000 -107.641023000
300.00	0.00	0.000	300.00	0.00	0.00	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
350.00	0.00	0.000	350.00	0.00	0.00	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
13 3/8" C	sg								
400.00	0.00	0.000	400.00	0.00	0.00	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
500.00	0.00	0.000	500.00	0.00	0.00	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
600.00	0.00	0.000	600.00	0.00	0.00	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
700.00 800.00	0.00 0.00	0.000 0.000	700.00 800.00	0.00 0.00	0.00 0.00	1,920,811.746 1,920,811.746	2,779,773.830 2,779,773.830	36.278726000 36.278726000	-107.641023000 -107.641023000
900.00	0.00	0.000	900.00	0.00	0.00	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
1,000.00	0.00	0.000	1,000.00	0.00	0.00	1,920,811.746	2,779,773.830	36.278726000	-107.641023000
	qin 3°/100' bui								
1,100.00	3.00	239.991	1,099.95	-1.31	-2.27	1,920,810.437	2,779,771.564	36.278722416	-107.641030699
1,200.00	6.00	239.991	1,199.63	-5.23	-9.06	1,920,806.513	2,779,764.771	36.278711675	-107.641053774
1,222.43	6.67	239.991	1,221.92	-6.47	-11.20	1,920,805.275	2,779,762.627	36.278708286	-107.641061054
Ojo Alan		000.004	1 000 77	44.70	00.00	4 000 700 000	0 770 750 400	00.07000000	407.044000404
1,300.00 1,353.83	9.00 10.61	239.991 239.991	1,298.77 1,351.81	-11.76 -16.35	-20.36 -28.30	1,920,799.986 1,920,795.401	2,779,753.469 2,779,745.529	36.278693806 36.278681253	-107.641092161 -107.641119129
Kirtland	10.01	239.991	1,551.61	-10.55	-20.30	1,920,795.401	2,779,745.529	30.27 000 1233	-107.041119129
1,400.00	12.00	239.991	1,397.08	-20.87	-36.14	1,920,790.873	2,779,737.690	36.278668858	-107.641145756
1,500.00	15.00	239.991	1,494.31	-32.55	-56.35	1,920,779.199	2,779,717.477	36.278636899	-107.641214412
1,580.38	17.41	239.991	1,571.49	-43.77	-75.78	1,920,767.981	2,779,698.054	36.278606188	-107.641280387
Fruitland	ł								
1,600.00	18.00	239.991	1,590.18	-46.75	-80.94	1,920,764.996	2,779,692.886	36.278598017	-107.641297941
1,700.00	21.00	239.991	1,684.43	-63.44	-109.85	1,920,748.303	2,779,663.983	36.278552318	-107.641396112
1,747.10	22.41	239.991	1,728.19	-72.15	-124.93	1,920,739.591	2,779,648.900	36.278528468	-107.641447346
1,800.00	22.41° tangent 22.41	239.991	1,777.10	-82.24	-142.40	1,920,729.503	2,779,631.433	36.278500851	-107.641506674
1,900.00	22.41	239.991	1,869.54	-101.31	-175.41	1,920,710.434	2,779,598.416	36.278448647	-107.641618820
1,912.16	22.41	239.991	1,880.78	-103.63	-179.43	1,920,708.116	2,779,594.402	36.278442300	-107.641632455
Pictured	Cliffs								
2,000.00	22.41	239.991	1,961.99	-120.38	-208.43	1,920,691.365	2,779,565.400	36.278396443	-107.641730965
2,020.07	22.41	239.991	1,980.54	-124.21	-215.06	1,920,687.539	2,779,558.774	36.278385967	-107.641753471
Lewis									
2,100.00	22.41	239.991	2,054.43	-139.45	-241.45	1,920,672.296	2,779,532.383	36.278344239	-107.641843111
2,200.00 2,300.00	22.41 22.41	239.991 239.991	2,146.88 2,239.33	-158.52 -177.59	-274.46 -307.48	1,920,653.227 1,920,634.158	2,779,499.366 2,779,466.350	36.278292035 36.278239830	-107.641955256 -107.642067401
2,354.59	22.41	239.991	2,239.33	-188.00	-325.50	1,920,623.749	2,779,448.326	36.278211333	-107.642128619
Chacra			,			,,	, -,		
2,400.00	22.41	239.991	2,331.77	-196.66	-340.50	1,920,615.089	2,779,433.333	36.278187626	-107.642179546
2,500.00	22.41	239.991	2,424.22	-215.73	-373.52	1,920,596.020	2,779,400.316	36.278135421	-107.642291691
2,600.00	22.41	239.991	2,516.66	-234.80	-406.53	1,920,576.951	2,779,367.299	36.278083216	-107.642403836
2,700.00	22.41	239.991	2,609.11	-253.86	-439.55	1,920,557.882	2,779,334.283	36.278031011	-107.642515981
2,800.00	22.41 22.41	239.991 239.991	2,701.56	-272.93 -292.00	-472.57 -505.58	1,920,538.813	2,779,301.266	36.277978807 36.277926601	-107.642628125 -107.642740269
2,900.00 3,000.00	22.41	239.991 239.991	2,794.00 2,886.45	-292.00 -311.07	-505.56 -538.60	1,920,519.744 1,920,500.675	2,779,268.249 2,779,235.233	36.277926601 36.277874396	-107.642852414
3,100.00	22.41	239.991	2,000.40	-330.14	-571.62	1,920,481.606	2,779,202.216	36.277822191	-107.642964558
3,200.00	22.41	239.991	3,071.34	-349.21	-604.63	1,920,462.537	2,779,169.199	36.277769986	-107.643076701
3,300.00	22.41	239.991	3,163.79	-368.28	-637.65	1,920,443.468	2,779,136.182	36.277717780	-107.643188845
3,400.00	22.41	239.991	3,256.23	-387.35	-670.67	1,920,424.399	2,779,103.166	36.277665575	-107.643300989
3,500.00	22.41	239.991	3,348.68	-406.42	-703.68	1,920,405.330	2,779,070.149	36.277613369	-107.643413132

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Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	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
3,536.20	22.41	239.991	3,382.14	-413.32	-715.63	1,920,398.427	2,779,058.198	36.277594472	-107.643453725
Cliff Ho	use_Basal								
3,541.59	22.41	239.991	3,387.13	-414.35	-717.42	1,920,397.398	2,779,056.416	36.277591655	-107.643459776
Menefe	•								
3,600.00		239.991	3,441.12	-425.49	-736.70	1,920,386.261	2,779,037.132	36.277561163	-107.643525275
3,700.00		239.991	3,533.57	-444.56	-769.72	1,920,367.192	2,779,004.116	36.277508957	-107.643637418
3,709.12		239.991	3,542.00	-446.29	-772.73	1,920,365.453	2,779,001.105	36.277504196	-107.643647645
9 5/8" C 3,800.00	-	239.991	3,626.02	-463.62	-802.73	1,920,348.123	2,778,971.099	36.277456751	-107.643749561
3,900.00		239.991	3,718.46	-482.69	-835.75	1,920,329.054	2,778,938.082	36.277404545	-107.643861704
4,000.00		239.991	3,810.91	-501.76	-868.77	1,920,309.985	2,778,905.065	36.277352339	-107.643973847
4,100.00		239.991	3,903.35	-520.83	-901.78	1,920,290.916	2,778,872.049	36.277300132	-107.644085989
4,200.00	22.41	239.991	3,995.80	-539.90	-934.80	1,920,271.847	2,778,839.032	36.277247926	-107.644198132
4,299.40	22.41	239.991	4,087.69	-558.86	-967.62	1,920,252.892	2,778,806.213	36.277196033	-107.644309601
-	°/100' drop								
4,400.00		239.991	4,181.66	-576.81	-998.70	1,920,234.942	2,778,775.134	36.277146890	-107.644415161
4,445.90		239.991	4,225.13	-584.17	-1,011.45	1,920,227.580	2,778,762.387	36.277126734	-107.644458457
Point Lo		000.004	4 070 04	500.47	4 005 00	4 000 040 570	0 770 740 500	00.077404000	407.044505500
4,500.00		239.991	4,276.81	-592.17	-1,025.30	1,920,219.576 1,920,206.722	2,778,748.529	36.277104822	-107.644505526
4,600.00 4,678.13		239.991 239.991	4,373.44 4,449.79	-605.03 -613.30	-1,047.56 -1,061.88	1,920,208.722	2,778,726.273 2,778,711.950	36.277069629 36.277046982	-107.644581120 -107.644629767
Mancos		200.001	4,443.13	-010.00	-1,001.00	1,320,130.430	2,110,111.990	30.277040302	-107.044023707
4,700.00		239.991	4,471.28	-615.33	-1,065.41	1,920,196.414	2,778,708.426	36.277041410	-107.644641737
4,800.00		239.991	4,570.07	-623.07	-1,078.79	1,920,188.682	2,778,695.038	36.277020240	-107.644687209
4,900.00		239.991	4,669.53	-628.20	-1,087.69	1,920,183.546	2,778,686.146	36.277006179	-107.644717413
5,000.00	1.39	239.991	4,769.39	-630.73	-1,092.06	1,920,181.020	2,778,681.773	36.276999264	-107.644732266
5,045.20	0.04	239.991	4,814.58	-631.01	-1,092.55	1,920,180.737	2,778,681.283	36.276998490	-107.644733929
MNCS_	۹.								
5,046.50	0.00	0.000	4,815.88	-631.01	-1,092.55	1,920,180.737	2,778,681.283	36.276998489	-107.644733931
•	ertical hold								
5,100.00		0.000	4,869.38	-631.01	-1,092.55	1,920,180.737	2,778,681.283	36.276998489	-107.644733931
5,130.20		0.000	4,899.58	-631.01	-1,092.55	1,920,180.737	2,778,681.283	36.276998489	-107.644733931
MNCS_ 5,146.50		0.000	4,915.88	-631.01	-1,092.55	1,920,180.737	2,778,681.283	36.276998489	-107.644733931
	0.00 0°/100' build	0.000	4,915.00	-031.01	-1,092.55	1,920,100.737	2,770,001.203	30.270990409	-107.044755951
5,150.00		90.240	4,919.38	-631.01	-1,092.54	1,920,180.737	2,778,681.293	36.276998489	-107.644733894
5,200.00		90.240	4,969.30	-631.02	-1,090.05	1,920,180.727	2,778,683.779	36.276998447	-107.644725462
5,245.75		90.240	5,014.64	-631.05	-1,083.97	1,920,180.701	2,778,689.858	36.276998345	-107.644704836
MNCS	C								
5,250.00	10.35	90.240	5,018.82	-631.05	-1,083.23	1,920,180.698	2,778,690.606	36.276998332	-107.644702300
5,300.00	15.35	90.240	5,067.55	-631.10	-1,072.11	1,920,180.652	2,778,701.722	36.276998145	-107.644664586
5,312.68	16.62	90.240	5,079.74	-631.11	-1,068.62	1,920,180.637	2,778,705.215	36.276998086	-107.644652738
MNCS_									
5,350.00		90.240	5,115.13	-631.16	-1,056.79	1,920,180.587	2,778,717.044	36.276997886	-107.644612605
5,400.00		90.240	5,161.19	-631.24	-1,037.38	1,920,180.506	2,778,736.454	36.276997559	-107.644546754
5,418.76		90.240	5,178.01	-631.28	-1,029.07	1,920,180.471	2,778,744.763	36.276997419	-107.644518564
MNCS_ 5,450.00		90.240	5,205.39	-631.34	-1,014.03	1,920,180.408	2,778,759.804	36.276997165	-107.644467534
5,500.00		90.240 90.240	5,205.39	-631.45	-986.92	1,920,180.295	2,778,786.917	36.276996708	-107.644375548
5,522.40		90.240	5,265.39	-631.51	-973.60	1,920,180.239	2,778,800.232	36.276996483	-107.644330376
MNCS_			.,			,,	,		
5,550.00		90.240	5,286.85	-631.58	-956.25	1,920,180.166	2,778,817.587	36.276996191	-107.644271495
5,600.00		90.240	5,323.49	-631.72	-922.25	1,920,180.024	2,778,851.580	36.276995617	-107.644156168

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COMPASS 5000.16 Build 96

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Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey

5.80.23 4.5.67 00.240 5.325.76 -631.73 -910.96 1,920,180.014 2.778,853.886 38.276905578 -107.64418345 MNCS_F 5.770.00 50.35 50.240 5.877.02 453.88 485.19 1200,179.869 2.778,858.024 78.827690497 58.27690497 45.27690497 45.27690497 45.27690497 45.27690497 45.27690497 45.27690497 45.27690497 45.27690497 45.27690497 45.27690497 45.27690477 47.438985291 -107.6433955291 MNCS_G 00.00 00.240 5.442.08 -632.43 -754.11 1.920,179.537 2.778,967.758 38.27690253 -107.643395728 Begin 107100 build 5.671.03 60.09 90.240 5.442.38 -432.59 -715.65 1.920,179.263.20 38.27690279 -107.643395728 Begin 107100 build 5.371.14 1.920,178.263 2.779,051.12 38.27690279 -107.64337632 S 550.10 63.35 90.240 5.442.38 -432.59 -715.65 1.920,177.583 2.779,200.311 38.27	Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
MNCS_F	5,603.23	45.67	90.240	5,325.76	-631.73	-919.95	1,920,180.014	2,778,853.886	36.276995578	-107.644148345
5 5 90.240 5.387.12 -0.320.05 -0.445.35 1.920.177.05.21 7.778.924.788 38.276994378 -1.076.43808221 NMCS, G -	MNCS F									
5.731.57 78.54 90.240 5.404.44 -632.16 -818.90 1.920.178.951 2.778.954.928 36.276993873 -107.643805542 MNCS_G Begin for/00° tangent 5.406.50 60.00 90.240 5.442.08 -632.21 -806.07 1.920.179.320 2.778.967.758 36.276992779 -107.643365578 Begin for/00° tangent 5.406.38 60.39 90.240 5.446.94 -632.46 -745.51 1.920.179.284 2.779.083.320 36.276992633 -107.6433655237 Sa80.00 64.35 90.240 5.446.94 -632.26 -715.65 1.920.179.168 2.779.105.182 36.276992129 -107.643365237 Sa80.00 64.35 90.240 5.462.03 -632.79 -600.178.777 777.171.161.613 38.276990504 -107.643368783 MNCS_J U -733.52 1.920.178.653 2.779.240.919 38.276990504 -107.643368783 MNCS_J U -632.46 -733.52 1.920.178.763 2.779.249.790 38.276990507 -107.642079774 6.000.0 93.240	_		90.240	5,357.03	-631.88	-885.19	1,920,179.869	2,778,888.638	36.276994992	-107.644030444
MNCS G O <td>5,700.00</td> <td>55.35</td> <td>90.240</td> <td>5,387.22</td> <td>-632.05</td> <td>-845.35</td> <td>1,920,179.702</td> <td>2,778,928.478</td> <td>36.276994319</td> <td>-107.643895281</td>	5,700.00	55.35	90.240	5,387.22	-632.05	-845.35	1,920,179.702	2,778,928.478	36.276994319	-107.643895281
5.746.50 60.00 90.240 5.412.08 -632.21 -108.06.70 1.920.179.537 2.778.987.758 38.276993656 -107.643762014 Begin 000' tangent 5.480.63 90.000 90.240 5.442.08 -632.43 -754.11 1.920.179.320 2.779.019.719 36.276992633 -107.64356547 MACE_JI 5.480.03 64.35 90.240 5.442.38 -632.26 -775.55 1.920.179.166 2.779.028.320 36.276992633 -107.643365647 MACE_JI 5.890.00 64.35 90.240 5.422.59 -775.65 1.920.178.666 2.778.104.141 36.276980752 -107.64336974 5.950.00 74.35 80.240 5.508.97 -633.07 -601.74 1.920.178.563 2.778.104.141 36.276980727 -107.64207942 6.000.00 74.33 90.240 5.516.05 -633.39 -524.04 1.920.178.3663 2.778.249.790 36.276980500 -107.642079470 6.000.00 93.31 90.240 5.516.05 -633.39 -524.04 1.920.177.8153 2.778.399.647	5,731.57	58.51	90.240	5,404.44	-632.16	-818.90	1,920,179.591	2,778,954.928	36.276993873	-107.643805542
Begin 60 00*trangent 5.406.20 7.56.11 1.920,179.320 2.779,019.719 30.276902779 -107.643365728 Begin 10*/100* bald 5.442.08 6.32.43 -764.11 1.920,179.202 2.779,019.719 30.276902779 -107.643365728 Begin 10.7/100* bald 5.442.08 6.32.46 -745.51 1.920,179.264 2.779,058.182 36.276992129 -107.643365728 S.800.00 64.35 90.240 5.442.08 632.269 -716.65 1.920,179.169 2.779,104.141 36.276992129 -107.6434329314 S.801.00 74.35 90.240 5.542.08 -632.28 -632.28 -2778,104.141 36.27698050 -107.643066788 NMCS_J 6.000.00 73.35 90.240 5.518.48 -633.39 -24.04 1.920,178.365 2.779,200.311 36.276980727 -107.642269814 6.000.00 88.61 90.240 5.518.48 -633.44 -274.14 1.920,178.365 2.779.390.641 36.276980825 -107.64226894 6.000.00 88.61 90.240 5.518.48 -634.44	MNCS_G	ì								
5.806.50 00.00 90.240 5.442.08 -632.43 -754.11 1,922,173.320 2,779,019.719 38.27699273 -107.643365728 Begin 10700 build 00.240 5.446.94 -632.46 -745.51 1,920,179.284 2,779,028.320 38.276992129 -107.643365237 S.500.00 64.35 90.240 5.442.03 -632.78 -660.69 1,220,178.058 2,779,104.141 36.276992129 -107.643365237 S.500.00 94.33 90.240 5.447.00 -632.78 -660.69 2,779,171.14 70.48 2,779,141.141 36.2769982129 -107.643366788 MNCS_J - - -673.52 1,920,178.65 2,779,244.790 36.2769880727 -107.642027942 6,000.00 74.35 90.240 5,516.82 -633.18 -673.52 1,920,178.65 2,779,247.979.391 36.2769880727 -107.6420279442 6,000.00 86.15 90.240 5,516.82 -633.41 -192.177.728 2,779.249.790 36.276988646 -107.64167924 6,000.00 86.15 90.240	5,746.50	60.00	90.240	5,412.08	-632.21	-806.07	1,920,179.537	2,778,967.758	36.276993656	-107.643762014
Begin 107100*build 5.816.38 60.99 90.240 5.446.94 -632.46 -745.51 1,920,179.284 2,779,028.320 362.7699263 -107.643856347 5.800.00 64.38 90.240 5.462.38 -632.59 -716.65 1,920,179.169 2,779,058.182 362.76992129 -107.643435237 5.900.00 74.38 90.240 5.462.38 -669.59 1,920,178.165 2,779,104.141 362.76998122 -107.64336873 5.971.14 7.46 90.240 5.508.92 -633.31 -573.52 1,920,178.565 2,779,120.311 362.76998020 -107.64297342 6.000.00 74.35 90.240 5.518.82 -633.61 -471.52 1,920,178.565 2,779,320.213 362.76988020 -107.642865494 6.200.00 88.61 90.240 5.518.82 -633.61 -471.52 1,920,177.283 2,779,399.843 362.76988020 -107.642826494 6.200.00 88.61 90.240 5.520.16 -634.44 -271.14 1,920,177.283 2,778,399.873 362.76984354 -107	Begin 60	.00° tangent								
Srin S.3 60.99 9.0.240 5.446.94 -632.46 -745.51 1.920.179.284 2.779.028.320 36.276992633 -107.64356547 MNCS_H - <	5,806.50	60.00	90.240	5,442.08	-632.43	-754.11	1,920,179.320	2,779,019.719	36.276992779	-107.643585728
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7,700.0089.6190.2405,529.65-640.301,125.821,920,171.4442,780,899.64436.276960855-107.6372077797,800.0089.6190.2405,530.33-640.721,225.811,920,171.0262,780,999.64036.276959148-107.6368685257,900.0089.6190.2405,531.00-641.141,325.811,920,170.6072,781,099.63736.276957439-107.6366292708,000.0089.6190.2405,531.68-641.961,425.811,920,170.1882,781,199.63336.276955730-107.6365096168,100.0089.6190.2405,532.36-641.981,525.801,920,169.7692,781,299.63036.276952308-107.6357120578,300.0089.6190.2405,533.71-642.401,625.801,920,168.9312,781,499.62336.276950596-107.6357122528,400.0089.6190.2405,535.07-643.651,925.791,920,168.5122,781,599.62036.276948882-107.6348329978,500.0089.6190.2405,535.75-644.072,025.791,920,167.6742,781,799.61336.276945453-107.6344937438,600.0089.6190.2405,537.10-643.651,922.781,920,167.6742,781,99.61036.276943736-107.6338152348,700.0089.6190.2405,537.71-644.912,225.781,920,166.8372,781,99.61036.276943736-107.6334152348,600.0089.6190.2405,537.73-645.752,425.771,920,	7,500.00	89.61	90.240	5,528.29	-639.47	925.82	1,920,172.282	2,780,699.650	36.276964268	-107.637886289
7,800.0089.6190.2405,530.33-640.721,225.811,920,171.0262,780,999.64036.276959148-107.6368685257,900.0089.6190.2405,531.00-641.141,325.811,920,170.6072,781,099.63736.276957439-107.6365292708,000.0089.6190.2405,531.68-641.561,425.811,920,170.1882,781,199.63336.27695730-107.6361900168,100.0089.6190.2405,532.36-641.981,525.801,920,169.7692,781,299.63036.276954019-107.6358507618,200.0089.6190.2405,533.04-642.401,625.801,920,169.3502,781,399.62736.276955308-107.6355115078,300.0089.6190.2405,533.71-642.821,725.801,920,168.3122,781,499.62336.276950596-107.6348329978,500.0089.6190.2405,535.07-643.651,925.791,920,168.932,781,699.61636.276947168-107.6344937438,600.0089.6190.2405,535.75-644.072,025.791,920,167.6742,781,799.61336.276943736-107.634452448,700.0089.6190.2405,537.10-644.492,125.781,920,167.7552,781,899.61036.276943736-107.6338152348,600.0089.6190.2405,537.71-644.512,225.781,920,166.8372,781,99.60636.276943736-107.6338152348,000.0089.6190.2405,537.10-644.512,225.771,920,16	7,600.00	89.61	90.240	5,528.97	-639.88	1,025.82	1,920,171.863	2,780,799.647	36.276962562	-107.637547034
7,900.0089.6190.2405,531.00-641.141,325.811,920,170.6072,781,099.63736.276957439-107.6365292708,000.0089.6190.2405,531.68-641.561,425.811,920,170.1882,781,199.63336.276955730-107.6361900168,100.0089.6190.2405,532.36-641.981,525.801,920,169.7692,781,299.63036.276954019-107.6358507618,200.0089.6190.2405,533.04-642.401,625.801,920,169.3502,781,399.62736.276952308-107.6355115078,300.0089.6190.2405,533.71-642.821,725.801,920,168.9312,781,499.62336.276948882-107.6348329978,500.0089.6190.2405,535.07-643.651,925.791,920,168.5122,781,599.62036.276947168-107.6344324937438,600.0089.6190.2405,535.75-644.072,025.791,920,167.6742,781,799.61336.276947168-107.6344937438,700.0089.6190.2405,537.10-644.912,125.781,920,167.6742,781,99.61036.27694301-107.633475808,800.0089.6190.2405,537.78-645.332,325.781,920,166.8372,781,99.60636.27694301-107.633475829,000.0089.6190.2405,537.78-645.332,325.771,920,166.4182,782,199.60036.27694301-107.633475829,000.0089.6190.2405,537.78-645.752,425.771,920,165	7,700.00	89.61	90.240	5,529.65	-640.30	1,125.82	1,920,171.444	2,780,899.644	36.276960855	-107.637207779
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COMPASS 5000.16 Build 96



Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey

(P) (P) <th>Measured Depth</th> <th>Inclination</th> <th>Azimuth</th> <th>Vertical Depth</th> <th>+N/-S</th> <th>+E/-W</th> <th>Map Northing</th> <th>Map Easting</th> <th></th> <th></th>	Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
9,000,00 88.61 90.240 5,542.62 -448.68 3,025.76 1,920.163.463 2,782.799.579 382.7792.8271 -107.33078342891 9,600,00 88.61 90.240 5,543.88 -444.10 3,225.75 1,920.162.648 2,782.999.573 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.279 382.7769.1787 -107.3300.83.48 10,100,00 86.61 90.240 5,545.53 -465.10 3,825.74 1,920.160.532 -2783.399.550 382.7691787 -107.628287455 10,300,00 86.61 90.240 5,544.58 -465.03 3,927.199.546 382.7791477 -107.628287455 10,400,00 86.61 90.240 5,549.30 -462.30 3,825.74 1,920.160.53 -2783.499.549 382.7791479 -107.62894791 10,400,00 86.61 90.240 5,550.68 -462.29 -428.571 1,920.159712 -2783.499.549 382.779017971 -107.6289	-			-					Latitude	Longitude
9,700,00 88.61 90.240 5,543.20 446.86 3,125.75 1,920,162.064 2,722,999.573 362,779622374 -107,73002396 9,000,00 88.61 90.240 5,544.56 -469.42 3,257.5 1,920,162.23 2,733,999.563 362,779622066 -107,82074182 10,000,00 86.61 90.240 5,545.91 469.03 3,527.4 1,920,161.810 2,733,999.559 362,7791977 177,82206674 10,000,00 86.61 90.240 5,547.27 -661.19 3,725.73 1,920,160.53 2,783,499.550 362,7791977 177,82278450 10,000,00 86.61 90.240 5,547.24 -651.61 3,725.73 1,920,160.53 2,783,499.552 362,77919477 177,72768403 10,000,00 86.61 90.240 5,549.68 -652,24 2,721,249.156 2,783,499.552 362,77919473 1.07,72708403 10,000,00 86.61 90.240 5,550.68 -652,24 2,527,27 1,800,154.292 2,784,499.559 362,77890473 1.07,726786403 11,000,00	9,500.00	89.61	90.240	5,541.85	-647.84	2,925.76	1,920,163.904	2,782,699.583	36.276929972	-107.631101199
9.80.00 89.41 9.240 5.543.88 -49.10 3.225.75 1.920,162.284 7.783,099.569 382.27692479 -107.82094482 10.000.00 89.61 90.240 5.545.23 -490.94 3.255.74 1.920,161.391 2.783,199.566 382.276914277 -107.829440422 10.100.00 89.61 90.240 5.545.59 -650.78 3.525.74 1.920,160.573 2.783,399.556 382.27691447 -107.82847642 10.300.00 89.61 90.240 5.547.24 -651.61 3.825.73 1.920,160.714 2.783,399.543 382.27691444 -107.82847644 10.500.00 89.61 90.240 5.549.30 -652.45 4.025.72 1.920,165.877 2.783,399.542 382.27691049 -107.627394403 10.800.00 89.61 90.240 5.550.66 -653.29 4.225.71 1.920,156.877 2.783,399.542 382.27690737 -107.628597844 10.900.00 89.61 90.240 5.552.31 -653.27 4.925.71 1.920,156.761 2.744,199.523 382.276900573 -107.628597433	9,600.00	89.61	90.240	5,542.52	-648.26	3,025.76	1,920,163.485	2,782,799.579	36.276928247	-107.630761945
9.90.00 89.64 92.440 5.544.56 -64.942 3.325.75 1.920.167.229 2.783.096.566 32.27692338 -107.629444422 10.00.00 89.64 92.440 5.545.91 -650.38 3.525.74 1.920.161.310 2.783.296.556 32.276911807 -107.628066574 10.20.00 89.64 92.440 5.547.27 -651.18 3.725.73 1.920.160.353 2.783.496.556 32.276914413 -107.628378471 10.40.00 89.64 92.440 5.544.82 -652.273 1.920.160.715 2.783.496.543 32.27691443 -107.62837911 10.60.00 89.64 92.440 5.549.30 -652.47 4.125.72 1.920.156.400 2.784.096.53 32.276902473 -107.6227090443 10.80.00 89.64 92.440 5.562.69 -654.32 4.252.71 1.920.156.400 2.744.096.523 32.27690273 -107.62267333 11.90.00 89.64 92.440 5.562.69 4.252.71 1.920.156.342 2.744.996.523 32.27690257 -107.622647333 11.90.00 89.	9,700.00	89.61	90.240	5,543.20	-648.68	3,125.75	1,920,163.066	2,782,899.576	36.276926521	-107.630422691
10.00.00 89.64 92.440 5.45.63 -64.99.44 3.425.74 19.20.161 37.83.295.652 32.27691268 -107.629404624 10.200.00 89.64 90.240 5.54.6 59.78 3.625.74 19.02.100.553 27.83.395.556 32.27691464 -107.6228976424 10.300.00 89.64 90.240 5.54.7.24 -651.61 3.825.73 19.02.100.573 27.83.596.563 32.27691474 -107.622897664 10.500.00 89.64 90.240 5.54.8 -652.03 2.925.72 19.02.169.775 27.83.986.543 32.27691279 -107.622396403 10.700.00 89.64 90.240 5.54.93 -653.24 4.255.72 19.02.168.77 27.83.986.542 32.27690737 -107.623964034 10.800.00 89.64 90.240 5.552.01 -654.41 4.255.71 19.02.1158.70 27.44.986.533 32.27690737 -107.623956414 11.900.00 89.64 90.240 5.552.01 -654.43 4.255.71 19.02.1157.02 27.44.986.529 32.276900737 -107.6239564141	9,800.00	89.61	90.240	5,543.88	-649.10	3,225.75	1,920,162.648	2,782,999.573	36.276924794	-107.630083436
10.0.00 89.61 90.240 5.64.59 -650.78 3.62.74 1.920.160.372 7.83.299.559 32.27691528 -107.628096574 10.30.00 89.61 90.240 5.64.72 -651.19 3.725.73 1.920.160.753 2.783.499.559 32.276915146 -107.628397165 10.40.00 89.61 90.240 5.64.82 -652.03 3.925.73 1.920.160.715 2.783.699.543 32.276912479 -107.6227090657 10.60.00 89.61 90.240 5.64.93 -425.72 1.920.169.206 7.83.699.543 32.27691045 -107.6227090459 10.80.00 89.61 90.240 5.55.43 -653.71 4.325.71 1.920.165.404 2.781.995.54 32.27690273 -107.622671337 11.00.00 89.61 90.240 5.55.291 -654.53 4.725.71 1.920.165.234 2.744.995.23 32.27690278 -107.622671337 11.20.00 89.61 90.240 5.55.40 +655.70 4.525.70 1.920.165.344 2.744.995.53 32.276890287 -107.6224967333 11.20.00 <td>9,900.00</td> <td>89.61</td> <td>90.240</td> <td>5,544.56</td> <td>-649.52</td> <td>3,325.75</td> <td>1,920,162.229</td> <td>2,783,099.569</td> <td>36.276923066</td> <td>-107.629744182</td>	9,900.00	89.61	90.240	5,544.56	-649.52	3,325.75	1,920,162.229	2,783,099.569	36.276923066	-107.629744182
10.20.00 88.64 90.240 5.545.59 3.227.74 9.201.10.572 2.783.499.556 3.6276917477 -107.628274261 10.300.00 88.64 90.240 5.547.24 -651.61 3.225.73 1.920.110.134 2.783.499.556 3.627691747 -107.628274270 10.500.00 88.64 90.240 5.545.20 4.225.72 1.920.115.715 2.783.598.542 3.627691727 -107.627708457 10.700.00 88.64 90.240 5.550.66 -653.29 4.225.72 1.920.1158.475 2.783.598.542 36.276907473 -107.626809485 10.900.00 88.64 90.240 5.555.01 -654.13 4.425.71 1.920.1157.621 2.784.995.323 68.276907473 -107.626812487 11.000.00 88.64 90.240 5.555.37 -654.64 4.257.71 1.920.1157.621 2.784.995.225 68.276909726 -107.626812487 11.300.00 88.64 90.240 5.555.40 +654.64 5.257.61 1.920.1155.94 2.784.498.122 63.278897034 -107.6226874813 11.300.00	10,000.00	89.61	90.240	5,545.23	-649.94	3,425.74	1,920,161.810	2,783,199.566	36.276921338	-107.629404928
10.300.00 88.61 90.240 5.47.27 4651.19 3.225.73 1.202.105.53 2.783.599.552 36.27691443 -107.622047911 10.500.00 86.61 90.240 5.446.62 4652.03 3.225.73 1.202.152.954 2.783.599.552 36.276914279 -107.622709403 10.500.00 86.61 90.240 5.450.98 40.25.72 1.202.152.954 2.783.599.532 36.27890473 -107.62739403 11.800.00 86.61 90.240 5.561.93 4255.72 1.202.158.455 2.783.599.532 36.278904735 -107.62579441 11.800.00 86.61 90.240 5.552.01 664.15 4.425.71 1.202.157.621 2.784.198.523 36.278904753 -107.62573133 11.000.00 86.61 90.240 5.552.89 -664.55 4.225.70 1.202.157.83 2.743.498.523 36.278904764 -107.625494625 11.000.00 86.61 90.240 5.556.49 4.257.01 1.202.157.83 2.744.498.523 36.278904704 -107.625494625 11.000.00 86.61 9	10,100.00	89.61	90.240	5,545.91	-650.36	3,525.74	1,920,161.391	2,783,299.562	36.276919608	-107.629065674
10.400.00 88.61 90.240 54.47.94 -651.61 3.262.73 1.920.160.114 2.783.699.549 362.761 -107.627700657 10.600.00 88.61 90.240 5.446.30 -652.45 4.025.72 1.200.158.276 2.783.599.442 362.7590.10945 -107.627730149 10.700.00 88.61 90.240 5.549.84 -652.25 1.200.158.877 2.783.899.542 362.278907473 -107.622780149 10.800.00 88.61 90.240 5.552.01 -654.13 4.225.71 1.920.157.640 2.774.199.532 362.278907473 -107.62289.12387 11.100.00 88.61 90.240 5.552.01 -654.13 4.225.71 1.920.157.202 2.764.199.522 362.278900257 -107.62283787 11.200.00 88.61 90.240 5.554.27 -855.34 4.225.70 1.920.155.34 2.764.399.122 362.778907877 -107.622465371 11.200.00 88.61 90.240 5.556.7 -857.06 5.125.69 1.200.155.24 2.748.499.512 362.77891794 -107.6227897104 -107.62278	10,200.00	89.61	90.240	5,546.59	-650.78	3,625.74	1,920,160.972	2,783,399.559	36.276917877	-107.628726420
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14,800.00 89.61 90.240 5,577.76 -670.04 8,225.59 1,920,141.703 2,787,999.404 36.276837226 -107.613120750	14,700.00	89.61					1,920,142.121			
14,900.00 89.61 90.240 5,578.44 -670.46 8,325.59 1.920.141.284 2.788.099.400 36.276835450 -107.612781497	14,800.00	89.61	90.240	5,577.76	-670.04	8,225.59	1,920,141.703	2,787,999.404	36.276837226	-107.613120750
,	14,900.00	89.61	90.240	5,578.44	-670.46	8,325.59	1,920,141.284	2,788,099.400	36.276835450	-107.612781497

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COMPASS 5000.16 Build 96



Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,000.00	89.61	90.240	5,579.12	-670.88	8,425.58	1,920,140.865	2,788,199.397	36.276833673	-107.612442244
15,100.00	89.61	90.240	5,579.79	-671.30	8,525.58	1,920,140.446	2,788,299.394	36.276831895	-107.612102991
15,200.00	89.61	90.240	5,580.47	-671.72	8,625.58	1,920,140.027	2,788,399.390	36.276830116	-107.611763738
15,300.00	89.61	90.240	5,581.15	-672.14	8,725.57	1,920,139.608	2,788,499.387	36.276828336	-107.611424485
15,400.00	89.61	90.240	5,581.83	-672.56	8,825.57	1,920,139.189	2,788,599.383	36.276826556	-107.611085232
15,500.00	89.61	90.240	5,582.50	-672.98	8,925.57	1,920,138.770	2,788,699.380	36.276824774	-107.610745979
15,600.00	89.61	90.240	5,583.18	-673.40	9,025.56	1,920,138.351	2,788,799.377	36.276822991	-107.61040672
15,700.00	89.61	90.240	5,583.86	-673.81	9,125.56	1,920,137.932	2,788,899.373	36.276821208	-107.61006747
15,800.00	89.61	90.240	5,584.54	-674.23	9,225.56	1,920,137.514	2,788,999.370	36.276819423	-107.60972821
15,900.00	89.61	90.240	5,585.21	-674.65	9,325.56	1,920,137.095	2,789,099.367	36.276817638	-107.60938896
16,000.00	89.61	90.240	5,585.89	-675.07	9,425.55	1,920,136.676	2,789,199.363	36.276815851	-107.60904971
16,100.00	89.61	90.240	5,586.57	-675.49	9,525.55	1,920,136.257	2,789,299.360	36.276814064	-107.60871046
16,200.00	89.61	90.240	5,587.25	-675.91	9,625.55	1,920,135.838	2,789,399.356	36.276812275	-107.60837120
16,300.00	89.61	90.240	5,587.92	-676.33	9,725.54	1,920,135.419	2,789,499.353	36.276810486	-107.60803195
16,400.00	89.61	90.240	5,588.60	-676.75	9,825.54	1,920,135.000	2,789,599.350	36.276808696	-107.60769270
16,500.00	89.61	90.240	5,589.28	-677.17	9,925.54	1,920,134.581	2,789,699.347	36.276806904	-107.60735344
16,606.25	89.61	90.240	5,590.00	-677.61	10,031.78	1,920,134.136	2,789,805.591	36.276805000	-107.60699300
PBHL/TD	16606.25 MD	5590.00 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
NW Lybrook 140H 0VS - plan misses target - Point	0.00 center by 0.52	0.000 2ft at 6568.69	5,522.00 9ft MD (5521	-636.09 .98 TVD, -635	-5.46 5.56 N, -5.46	1,920,175.660 E)	2,779,768.370	36.276978668	-107.641045812
NW Lybrook 140H FTP (- plan hits target cer - Point		0.000	5,518.82	-633.61	-471.52	1,920,178.135	2,779,302.308	36.276988000	-107.642627000
NW Lybrook 140H LTP 3 - plan hits target cer - Point		0.000	5,590.00	-677.61	10,031.78	1,920,134.136	2,789,805.591	36.276805000	-107.606993000

Casing Points							
	Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")	
	350.00	350.00	13 3/8" Csg		13-3/8	17-1/2	
	3,709.12	3,542.00	9 5/8" Csg		9-5/8	12-1/4	

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Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6847+25 @ 6872.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6847+25 @ 6872.00ft
Site:	NW Lybrook (138, 139, 140 & 141)	North Reference:	Grid
Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,222.43	1,221.92	Ojo Alamo		0.39	90.240
1,353.83	1,351.81	Kirtland		0.39	90.240
1,580.38	1,571.49	Fruitland		0.39	90.240
1,912.16	1,880.78	Pictured Cliffs		0.39	90.240
2,020.07	1,980.54	Lewis		0.39	90.240
2,354.59	2,289.79	Chacra_A		0.39	90.240
3,536.20	3,382.14	Cliff House_Basal		0.39	90.240
3,541.59	3,387.13	Menefee		0.39	90.240
4,445.90	4,225.13	Point Lookout		0.39	90.240
4,678.13	4,449.79	Mancos		0.39	90.240
5,045.20	4,814.58	MNCS_A		0.39	90.240
5,130.20	4,899.58	MNCS_B		0.39	90.240
5,245.75	5,014.64	MNCS_C		0.39	90.240
5,312.68	5,079.74	MNCS_Cms		0.39	90.240
5,418.76	5,178.01	MNCS_D		0.39	90.240
5,522.40	5,265.39	MNCS_E		0.39	90.240
5,603.23	5,325.76	MNCS_F		0.39	90.240
5,731.57	5,404.44	MNCS_G		0.39	90.240
5,816.38	5,446.94	MNCS_H		0.39	90.240
5,971.14	5,502.92	MNCS_I		0.39	90.240

Plan Annotations

Measured	Vertical	Local Coor	dinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build
1,747.10	1,728.19	-72.15	-124.93	Begin 22.41° tangent
4,299.40	4,087.69	-558.86	-967.62	Begin 3°/100' drop
5,046.50	4,815.88	-631.01	-1,092.55	Begin vertical hold
5,146.50	4,915.88	-631.01	-1,092.55	Begin 10°/100' build
5,746.50	5,412.08	-632.21	-806.07	Begin 60.00° tangent
5,806.50	5,442.08	-632.43	-754.11	Begin 10°/100' build
6,102.62	5,518.82	-633.61	-471.52	Begin 89.61° lateral
16,606.25	5,590.00	-677.61	10,031.78	PBHL/TD 16606.25 MD 5590.00 TVD



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum
Reference	rev0		

Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference					
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA			
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D			
Results Limited by:	Maximum centre distance of 1,860.62ft	Error Surface:	Ellipsoid Separation			
Warning Levels Evaluate	d at: 2.00 Sigma	Casing Method:	Not applied			

Survey Tool Program		Date 2/21/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	16,606.25	rev0 (Original Hole)	MWD	OWSG MWD - Standard

Summary

	Reference	Offset	Dista	nce		
Site Name Offset Well - Wellbore - Design	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
NW Lybrook (138, 139, 140 & 141)						
Lybrook 2408 138H - Original Hole - rev0	632.43	632.54	103.93	99.85	25.434	CC
Lybrook 2408 138H - Original Hole - rev0	700.00	699.75	104.10	99.53	22.773	ES
Lybrook 2408 138H - Original Hole - rev0	1,000.00	990.15	119.97	113.21	17.750	SF
NW Lybrook Unit 139H - Original Hole - rev0	700.00	700.00	84.12	79.55	18.406	CC, ES
NW Lybrook Unit 139H - Original Hole - rev0	1,000.00	990.26	99.15	92.49	14.876	SF
NW Lybrook Unit 141H - Original Hole - rev0	628.24	628.33	19.44	15.41	4.819 (CC, ES
NW Lybrook Unit 141H - Original Hole - rev0	16,606.25	16,743.70	1,844.39	1,298.27	3.377 \$	SF
NW Lybrook UT 131H - Original Hole - MWD	564.79	552.81	40.80	37.19	11.300 (CC
NW Lybrook UT 131H - Original Hole - MWD	600.00	587.54	41.01	37.15	10.637 I	ES
NW Lybrook UT 131H - Original Hole - MWD	1,300.00	1,280.27	75.77	67.06	8.700 \$	SF
NW Lybrook UT 289H - Original Hole - Gyro & MWD	547.84	535.85	18.82	15.68	6.001 (CC
NW Lybrook UT 289H - Original Hole - Gyro & MWD	600.00	587.83	19.05	15.67	5.630 I	ES
NW Lybrook UT 289H - Original Hole - Gyro & MWD	12,600.00	11,996.27	1,425.67	1,086.82	4.207 \$	SF

Irvey Progr Refei		/WD Off	sot	Somi N	lajor Axis		Offset Wellb	ore Centre	Dist	Rule Assig	gned:		Offset Well Error:	0.00
Aeasured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-82.68	13.26	-103.19	104.04					
100.00	100.00	100.00	100.00	0.13	0.13	-82.68	13.26	-103.19	104.04	103.77	0.27	386.962		
200.00	200.00	200.00	200.00	0.49	0.49	-82.68	13.26	-103.19	104.04	103.05	0.99	105.535		
300.00	300.00	300.00	300.00	0.85	0.85	-82.68	13.26	-103.19	104.04	102.33	1.70	61.099		
400.00	400.00	400.00	400.00	1.21	1.21	-82.68	13.26	-103.19	104.04	101.62	2.42	42.996		
500.00	500.00	500.00	500.00	1.57	1.57	-82.68	13.26	-103.19	104.04	100.90	3.14	33.168		
600.00	600.00	600.15	600.10	1.93	1.93	-81.23	15.85	-102.74	103.95	100.10	3.85	26.977		
632.43	632.43	632.54	632.43	2.04	2.05	-80.14	17.79	-102.40	103.93	99.85	4.09	25.434 CC		
700.00	700.00	699.75	699.39	2.29	2.29	-76.93	23.55	-101.40	104.10	99.53	4.57	22.773 ES		
800.00	800.00	798.27	797.06	2.64	2.66	-69.97	36.17	-99.21	105.63	100.34	5.30	19.943		
900.00	900.00	895.23	892.41	3.00	3.04	-60.96	53.41	-96.21	110.30	104.27	6.03	18.290		
1,000.00	1,000.00	990.15	984.79	3.36	3.45	-51.00	74.89	-92.48	119.97	113.21	6.76	17.750 SF		
1,100.00	1,099.95	1,082.15	1,073.17	3.71	3.88	79.15	100.00	-88.12	135.47	128.03	7.43	18.223		
1,200.00	1,199.63	1,169.96	1,156.30	4.05	4.34	89.16	127.85	-83.28	158.42	150.39	8.03	19.730		
1,300.00	1,298.77	1,253.53	1,234.14	4.40	4.81	97.87	157.81	-78.07	190.43	181.85	8.57	22.213		



Offset Site Error:

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: NW Lybrook (138, 139, 140 & 141) - Lybrook 2408 138H - Original Hole - rev0

													onset one Error.	0.00 11
Survey Progr		D-MWD								Rule Assi	gned:		Offset Well Error:	0.00 ft
Refer Measured	rence Vertical	Off Measured	set Vertical	Semi N Reference	laior Axis Offset	Highside	Offset Wellbo	re Centre	Dist Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
1,400.00	1,397.08	3 1,340.02	1,314.13	4.77	5.34	105.38	190.22	-72.44	229.69	220.49	9.20	24.978		
1,500.00	1,494.31	1,424.25	1,392.04	5.18	5.86	111.21	221.77	-66.96	274.32	264.48	9.84	27.871		
1,600.00	1,590.18	3 1,506.00	1,467.65	5.63	6.38	115.76	252.40	-61.63	323.85	313.34	10.51	30.806		
1,700.00	1,684.43	3 1,585.04	1,540.75	6.13	6.89	119.31	282.01	-56.49	377.93	366.72	11.20	33.732		
1,800.00	1,777.10	1,661.58	1,611.54	6.69	7.40	122.98	310.68	-51.51	435.96	424.05	11.91	36.597		
1,900.00	1,869.54	1,737.79	1,682.02	7.30	7.90	126.59	339.23	-46.54	495.83	483.21	12.63	39.269		
2,000.00	1,961.99	1,814.00	1,752.51	7.92	8.41	129.47	367.78	-41.58	556.80	543.45	13.35	41.703		
2,100.00	2,054.43	3 1,890.21	1,822.99	8.57	8.92	131.82	396.34	-36.62	618.53	604.45	14.08	43.915		
2,200.00	2,146.88	3 1,966.41	1,893.47	9.24	9.43	133.76	424.89	-31.66	680.83	666.00	14.83	45.924		
2,300.00	2,239.33	3 2,042.62	1,963.96	9.92	9.95	135.39	453.44	-26.70	743.54	727.97	15.57	47.753		
2,400.00	2,331.77	2,118.83	2,034.44	10.61	10.47	136.77	481.99	-21.74	806.58	790.26	16.32	49.420		
2,500.00	2,424.22	2,195.04	2,104.93	11.31	10.99	137.96	510.54	-16.78	869.87	852.79	17.08	50.943		
2,600.00	2,516.66	6 2,271.25	2,175.41	12.01	11.51	138.99	539.09	-11.82	933.35	915.52	17.83	52.337		
2,700.00	2,609.11	2,347.46	2,245.89	12.73	12.03	139.90	567.64	-6.86	997.00	978.41	18.59	53.618		
2,800.00	2,701.56	6 2,423.67	2,316.38	13.44	12.55	140.69	596.19	-1.90	1,060.78	1,041.43	19.36	54.797		
2,900.00	2,794.00	2,499.87	2,386.86	14.16	13.08	141.40	624.74	3.07	1,124.68	1,104.55	20.12	55.885		
3,000.00	2,886.45	5 2,576.08	2,457.35	14.89	13.60	142.04	653.29	8.03	1,188.66	1,167.77	20.89	56.891		
3,100.00	2,978.89	2,652.29	2,527.83	15.62	14.13	142.61	681.84	12.99	1,252.73	1,231.06	21.66	57.824		
3,200.00	3,071.34	2,728.50	2,598.32	16.35	14.66	143.12	710.39	17.95	1,316.86	1,294.42	22.44	58.691		
3,300.00	3,163.79	2,804.71	2,668.80	17.08	15.18	143.59	738.94	22.91	1,381.04	1,357.83	23.21	59.498		
3,400.00	3,256.23	3 2,880.92	2,739.28	17.81	15.71	144.01	767.49	27.87	1,445.28	1,421.29	23.99	60.250		
3,500.00	3,348.68	3 2,957.13	2,809.77	18.55	16.24	144.41	796.04	32.83	1,509.56	1,484.80	24.77	60.954		
3,600.00	3,441.12	3,033.33	2,880.25	19.29	16.77	144.76	824.59	37.79	1,573.88	1,548.34	25.54	61.613		
3,700.00	3,533.57	3,109.54	2,950.74	20.03	17.30	145.10	853.14	42.75	1,638.24	1,611.91	26.32	62.232		
3,800.00	3,626.02		3,021.22	20.77	17.83	145.40	881.69	47.72	1,702.62	1,675.51	27.11	62.813		
3,900.00	3,718.46		3,091.70	21.51	18.36	145.69	910.24	52.68	1,767.03	1,739.14	27.89	63.360		
4,000.00	3,810.91	3,338.17	3,162.19	22.26	18.89	145.95	938.79	57.64	1,831.46	1,802.79	28.67	63.875		

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



Offset Site Error:

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Des	sian:	NW Lybrook	(138, 13	39, 140 & 141) - NW Lybrook	Unit 139H - OI	iginal Hole - rev0

Barbor Barbo														Offset Site Error:	0.00 π
Depting Depting <t< th=""><th></th><th></th><th></th><th></th><th>• • •</th><th></th><th></th><th>04</th><th></th><th>-</th><th></th><th>gned:</th><th></th><th>Offset Well Error:</th><th>0.00 ft</th></t<>					• • •			04		-		gned:		Offset Well Error:	0.00 ft
Depth Depth Depth Tables 44-55 44-55 Centre allow							Highside	Offset Wellb	ore Centre			Minimum	Separation	Warning	
0 0 0.00<											Ellipses	Separation		5	
1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 2000 <th< th=""><th>(ft)</th><th>(ft)</th><th>(ft)</th><th>(ft)</th><th>(ft)</th><th>(ft)</th><th>(°)</th><th>(ft)</th><th>(ft)</th><th>(ft)</th><th>(ft)</th><th>(ft)</th><th></th><th></th><th></th></th<>	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
2000 2000 <th< td=""><td>0.00</td><td>0.0</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>-82.65</td><td>10.76</td><td>-83.43</td><td>84.12</td><td></td><td></td><td></td><td></td><td></td></th<>	0.00	0.0	0.00	0.00	0.00	0.00	-82.65	10.76	-83.43	84.12					
3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 121 121 121 121 4343 8412 8170 2.42 3470 6000 60000 60000 1000 123 123 4265 1076 4343 8412 8002 3.62 2.800 60000 60000 60000 60000 100000 10000 10000 1	100.00	100.0	00 100.00	100.00	0.13	0.13	-82.65	10.76	-83.43	84.12	83.86	0.27	312.901		
400.00 400.00 400.00 400.00 121 121 121 426 1076 4343 84.12 81.70 2.42 34.707 600.00 600.00 600.00 133 133 4265 11076 4344 84.12 87.52 4.57 14.840 60.21 600.00 600.00 707.00 700.00 700.00 2.29 2.24 42.65 11076 43.44 84.12 67.55 4.57 18.440 60.55 16.521 600.00 600.00 604.44 604.00 2.69 7.744 10.66 111.22 10.66 16.733 15.69 11.00.00 1.066.5 1.07.78 4.64 4.49 70.84 4.20 -152.80 146.76 13.73 15.69 1.00.00 1.87.84 1.47.98 4.40 4.49 70.84 4.22 14.67 14.67.6 14.57.5 14.53 14.53 14.53 14.53 14.53 14.53 14.53 14.53 14.53	200.00	200.0	200.00	200.00	0.49	0.49	-82.65	10.76	-83.43	84.12	83.14	0.99	85.337		
00.00 00.00 00.00 00.00 157 157 157 126 1076 4843 4412 00.07 335 2180 00.00 00.00 700.00	300.00	300.0	300.00	300.00	0.85	0.85	-82.65	10.76	-83.43	84.12	82.42	1.70	49.405		
60000 600.00 600.00 1.03 1.03 42.65 10.76 48.43 64.12 80.27 3.85 21.630 700.00 700.00 700.00 700.00 700.00 700.00 700.00 700.00 2.28 2.28 4.26 10.76 48.43 64.12 6.27 5.28 6.271 800.00 800.00 800.44 84.40 804.0 3.03 2.7218 10.16 48.10 90.15 9.44.45 6.687 14.767 6F 11000.00 1.086.07 1.122.07 1.284.31 4.40 4.49 70.16 81.177 1.56 6.681 1.769 1.5680 1.300.00 1.286.31 1.404 4.49 70.89 1.33.68 1.774 8.82 1.792 1.346 8.69 1.882 1.400.00 1.296.30 1.486.41 1.285.01 1.490.61 1.522 1.640.41 2.056.7 1.804.81 1.242 2.167 1.400.00 1.296.31 1.491.44 4.407 <td>400.00</td> <td>400.0</td> <td>400.00</td> <td>400.00</td> <td>1.21</td> <td>1.21</td> <td>-82.65</td> <td>10.76</td> <td>-83.43</td> <td>84.12</td> <td>81.70</td> <td>2.42</td> <td>34.767</td> <td></td> <td></td>	400.00	400.0	400.00	400.00	1.21	1.21	-82.65	10.76	-83.43	84.12	81.70	2.42	34.767		
0000 70000 70000 70000 70000 70000 70000 70000 70000 70000 70000 70000 70000 70000 70000 77738 2242 2239 4263 4840 9445 653	500.00	500.0	500.00	500.00	1.57	1.57	-82.65	10.76	-83.43	84.12	80.99	3.14	26.820		
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B00.00 F07-20 F07-20<															
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1.000.00 900.26 980.14 3.36 3.34 -72.18 30.16 -93.83 90.15 92.49 6.67 14.870 SF 1.000.00 1.099.55 1.094.67 1.071.65 4.49 70.84 4.470 -101.66 11.102 103.69 7.32 15.660 1.000.00 1.296.37 1.286.39 1.255.13 4.40 4.49 70.89 64.22 -122.80 146.14 137.64 8.52 17.152 1.0000.01 1.076.13 1.352.60 1.440.61 5.18 5.37 64.78 133.52 -140.41 205.77 1160.60 9.68 21.260 1.0000.01 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.077.10 1.064.38 1.067.73 2.07.10 2.27.11 2.27.11 2.27.11 2.27.11 2.27.11 2.27.11 2.27.11 2.27.11 2.27.11 2.27															
1,100.00 1,099.05 1,084.67 1,002.07 3,71 3,70 54.53 44.70 -101.86 111.02 103.69 7,32 15.185 1,200.00 1,299.05 1,275.02 1,275.02 1,275.02 1,275.02 1,275.02 1,275.02 1,275.02 1,275.02 1,255.03 1,275.02 1,255.05 1,275.02 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,275.05 1,255.05 1,277.10 1,225.25 2,247.71 1,255.05 1,277.10 1,225.25 2,247.71 1,275.15 2,257.11 2,257.61 1,255.25 2,247.71 2,257.61 1,255.25 2,247.71 2,255.31 1,141.45 3,048.3 2,257.61 1,255.25 2,277.11 1,255.25 2,277.11 1,255.25 2,277.13 1,255.25 2,277.13 1,245.23 3,048.3 2,268.93 2,269.93 3,246.83 2,269.93 3,246.83 2,269.93 3,246.83 2,269.9															
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1 30000 1.286.77 1.286.37 1.266.39 1.426.00 107.64 8.52 17.162 1.40000 1.960.16 1.305.89 1.265.80 1125.57 1125.65 1103.48 9.068 21.260 1.600.00 1.860.16 1.477.06 5.18 5.37 84.78 133.92 -149.41 205.76 196.06 9.68 21.260 1.600.00 1.860.18 1.477.06 5.13 6.42 95.18 192.44 -149.41 205.76 196.06 9.68 21.260 1.600.00 1.666.41 1.777.16 1.772.67 1.777.10 1.726.7 100.15 250.24 -211.71 379.06 365.22 13.06.82 29.74 2.000.00 1.661.47 1.788.13 8.57 8.66 1107.51 270.10 -227.17 47.61 413.48 14.03 30.463 2.000.00 2.044.48 2.013.48 1.047.7 1.881.3 8.57 8.66 1107.21 270.10 -277.17 47.61 413.48 14.03 30.463 2.000.00 2.044.48 2.013.5 1.067.7	1,100.00	1,099.9	95 1,084.67	1,082.07	3.71	3.70	54.53	44.79	-101.66	111.02	103.69	7.32	15.165		
$ \begin{array}{c} 1.400.00 & 1.397.08 & 1.337.68 & 1.338.08 & 4.77 & 4.93 & 77.44 & 106.08 & -105.57 & 107.26 & 103.48 & 9.09 & 16.992 \\ 1.500.00 & 1.484.43 & 1.435.08 & 1.417.06 & 5.18 & 5.37 & 84.78 & 133.52 & -149.41 & 205.76 & 166.08 & 9.68 & 21.260 \\ 1.000.00 & 1.500.18 & 1.520.80 & 1.466.19 & 5.18 & 5.47 & 84.78 & 133.52 & -149.41 & 205.76 & 166.08 & 9.68 & 21.260 \\ 1.000.00 & 1.500.18 & 1.520.80 & 1.466.19 & 5.18 & 5.42 & 96.18 & 192.44 & -160.75 & 248.81 & 275.56 & 11.25 & 27.17 \\ 1.000.00 & 1.507.10 & 107.25 & 1.54.44 & 6.69 & 6.89 & 98.8 & 221.38 & -160.25 & 331.88 & 139.71 & 12.15 & 27.347 \\ 1.000.00 & 1.861.99 & 1.861.97 & 1.310.50 & 7.92 & 8.09 & 107.51 & 277.10 & 427.51 & 413.44 & 14.03 & 30.465 \\ 2.000.00 & 1.861.99 & 1.861.97 & 1.310.50 & 7.92 & 8.09 & 107.51 & 277.10 & 427.51 & 413.44 & 14.63 & 30.465 \\ 2.000.00 & 2.054.43 & 1.944.77 & 1.880.13 & 8.57 & 8.66 & 110.22 & 307.96 & -227.15 & 473.46 & 14.63 & 30.465 \\ 2.000.00 & 2.054.43 & 1.944.77 & 1.880.13 & 1.877 & 2.44 & 9.24 & 112.43 & 338.83 & -280.09 & 27.13 & 511.14 & 15.08 & 32.085 \\ 2.000.00 & 2.054.33 & 1.067.37 & 2.44 & 9.24 & 112.43 & 336.83 & -280.01 & 62.82 & 610.86 & 17.07 & 34.969 \\ 2.500.00 & 2.054.64 & 2.044.22 & 2.208.00 & 2.202.66 & 11.31 & 11.02 & 114.82 & 394.55 & -280.01 & 62.82 & 610.86 & 17.07 & 34.969 \\ 2.500.00 & 2.045.16 & 2.377.18 & 2.208.20 & 12.01 & 116.22 & 119.28 & 441.14 & -365.39 & 773.50 & 772.50 & 21.00 & 37.318 \\ 2.600.00 & 2.071.56 & 2.447.62 & 2.355.53 & 12.73 & 12.22 & 110.28 & 451.14 & -365.39 & 773.50 & 772.50 & 21.00 & 37.318 \\ 2.000.00 & 2.771.50 & 2.246.52 & 2.565.53 & 12.73 & 12.22 & 110.28 & 451.14 & -365.39 & 773.50 & 772.50 & 21.06 & 37.734 \\ 2.000.00 & 2.771.50 & 2.246.52 & 2.356.51 & 12.73 & 12.22 & 110.28 & 451.14 & 365.39 & 772.50 & 21.06 & 37.318 \\ 2.000.00 & 2.771.50 & 2.246.52 & 2.365.51 & 12.73 & 12.22 & 102.55 & 51.00 & 50.352 & 30.482 & 22.10 & 37.54 \\ 2.000.00 & 2.771.80 & 2.777.80 & 2.778.5 & 777.73 & -381.76 & 99.81 & 915.55 & 24.16 & 93.071 \\ 3.0000 & 3.071.34 & 2.475.64 & 2.487.29 & 11.31 & 11$	1,200.00	1,199.0	63 1,176.92	1,171.98	4.05	4.09	62.62	62.97	-111.40	126.06	118.13	7.93	15.890		
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1.600.00 1.550.18 1.520.80 1.486.19 5.63 5.88 90.39 162.99 -164.86 244.72 234.31 10.41 23.508 1.700.00 1.684.43 1.607.34 1.570.02 6.13 6.42 65.18 1102.44 -160.75 3316.81 112.5 22.317 1.800.00 1.686.54 1.777.16 1.732.67 7.30 7.52 10.415 2250.24 -211.71 437.60 365.82 13.08 28.674 2.000.00 1.686.74 1.819.97 1.819.97 1.819.97 9.24 9.24 9.247.51 411.44 16.00 31.765 2.000.00 2.054.43 1.946.77 1.889.13 8.67 8.66 110.22 307.96 2.273.55 507.77 500.81 1.697 34.047 2.400.00 2.331.77 2.201.20 2.123.83 10.61 10.42 115.82 349.455 -280.61 661.19 18.87 35.853 2.600.00 2.242.22 2.266.00 2.303.43 2.246.20 2.305.3 17.73 12.22 111.16 452.41 -304.47	1,400.00	1,397.0	1,352.58	1,339.96	4.77	4.93	78.44	108.08	-135.57	172.56	163.48	9.09	18.992		
170000 1.884.43 1.807.24 1.776.02 6.13 6.42 95.18 192.44 -160.25 238.81 275.56 11.25 25.47 1.800.00 1.777.10 1692.35 1.684.43 1.777.16 1.732.57 7.30 7.52 104.15 250.24 -211.71 373.00 365.92 13.08 28974 2.000.00 1.891.59 1.891.57 1.619.07 7.82 8.09 107.51 279.10 -227.17 427.51 413.48 143.03 30.483 2.100.00 2.054.43 1.946.77 1.898.13 8.57 8.66 10.22 307.96 -227.17 427.51 411.41 15.98 32.485 2.000.00 2.164.83 2.015.60 9.92 9.83 114.27 366.69 273.35 577.78 560.81 16.697 34.047 2.400.00 2.317.7 2.210.20 2.120.83 10.41 11.82 34.55 -289.01 626.82 610.86 17.97 34.999 2.500.00 2.516.66 2.370.81 2.280.29 12.01 11.62 118.27 34.52	1,500.00	1,494.3	31 1,435.08	1,417.06	5.18	5.37	84.78	133.92	-149.41	205.76	196.08	9.68	21.260		
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1.900.00 1.889.54 1.777.16 1.732.67 7.30 7.52 104.15 2502.4 -2171.1 379.00 365.92 13.08 28874 2.000.00 1.961.99 1.861.97 1.801.97 1.8	1,700.00	1,684.4	43 1,607.34	1,576.02	6.13	6.42	95.18	192.44	-180.75	286.81	275.56	11.25	25.497		
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$ \begin{array}{c} 2.100.00 & 2.054.43 & 1.946.77 & 1.889.13 & 8.57 & 8.66 & 110.22 & 307.96 & -242.63 & 476.97 & 461.97 & 15.00 & 31.795 \\ 2.200.00 & 2.239.33 & 2.116.39 & 2.045.60 & 9.92 & 9.83 & 114.27 & 365.69 & 527.13 & 511.14 & 15.98 & 32.985 \\ 2.300.00 & 2.239.33 & 2.116.39 & 2.045.60 & 9.92 & 9.83 & 114.27 & 365.69 & -273.55 & 577.78 & 560.81 & 16.97 & 34.047 \\ 2.400.00 & 2.424.22 & 2.286.00 & 2.202.06 & 11.31 & 11.02 & 117.15 & 423.41 & -304.47 & 680.16 & 661.19 & 18.97 & 35.853 \\ 2.600.00 & 2.642.42 & 2.286.00 & 2.202.06 & 11.31 & 11.02 & 117.15 & 423.41 & -304.47 & 680.16 & 661.19 & 18.97 & 35.853 \\ 2.600.00 & 2.645.62 & 2.356.52 & 12.73 & 112.22 & 119.28 & 441.4 & -335.39 & 738.50 & 762.50 & 21.00 & 37.318 \\ 2.600.00 & 2.701.56 & 2.540.43 & 2.436.76 & 13.44 & 12.82 & 120.15 & 510.00 & -350.85 & 835.42 & 813.40 & 22.01 & 37.949 \\ 2.900.00 & 2.704.00 & 2.625.23 & 2.514.99 & 14.16 & 13.43 & 120.92 & 538.66 & 3866.31 & 887.46 & 864.42 & 23.04 & 88.524 \\ 2.900.00 & 2.794.00 & 2.625.23 & 2.514.99 & 14.03 & 122.21 & 156.77 & -381.76 & 939.61 & 915.55 & 24.06 & 39.049 \\ 3.100.00 & 2.978.89 & 2.794.85 & 2.671.45 & 15.62 & 14.64 & 122.22 & 596.59 & -397.22 & 91.85 & 966.75 & 25.09 & 39.530 \\ 3.000.00 & 3.071.34 & 2.879.65 & 2.748.66 & 15.52 & 12.78 & 625.45 & -142.68 & 1.044.16 & 1.018.04 & 26.12 & 39.671 \\ 3.300.00 & 3.265.23 & 3.049.27 & 2.906.15 & 17.81 & 15.86 & 123.28 & 654.31 & -428.14 & 1.098.54 & 1.098.38 & 27.16 & 40.378 \\ 3.400.00 & 3.265.23 & 3.049.27 & 2.906.15 & 17.81 & 16.88 & 123.74 & 683.18 & -436.00 & 1.146.97 & 1.120.72 & 2.92.3 & 41.103 \\ 3.600.00 & 3.441.12 & 3.218.88 & 3.062.61 & 17.92 & 17.70 & 124.54 & 740.90 & 1.201.45 & 1.172.22 & 2.92.3 & 41.103 \\ 3.600.00 & 3.656.23 & 3.049.27 & 2.906.15 & 17.81 & 16.88 & 123.74 & 683.18 & -436.00 & 1.146.97 & 1.120.78 & 28.19 & 40.754 \\ 3.0000 & 3.2652.3 & 3.3049 & 3.140.85 & 20.07 & 18.39 & 125.21 & 770.06 & 1.201.45 & 1.172.22 & 2.92.3 & 41.103 \\ 3.600.00 & 3.845.8 & 3.134.08 & 2.209.77 & 18.39 & 125.21 & 790.76 & 489.99 & 1.201.45 & 1.1727.53 & 33.14 & 472$	1,900.00	1,869.	54 1,777.16	5 1,732.67	7.30	7.52	104.15	250.24	-211.71	379.00	365.92	13.08	28.974		
2.200.00 2.448.8 2.03158 1.967.37 9.24 12.44 112.43 336.83 -258.09 527.13 511.14 15.88 32.865 2.300.00 2.239.33 2.116.39 2.045.60 99.2 9.83 114.27 365.69 -273.55 577.78 560.81 16.97 34.047 2.400.00 2.424.22 2.208.00 2.202.06 11.31 11.02 117.15 423.41 -304.47 680.16 661.19 19.97 35.853 2.600.00 2.516.66 2.370.81 2.280.29 12.01 116.22 119.28 441.14 -335.97 782.50 21.00 37.316 2.600.00 2.516.66 2.370.81 2.280.66 13.44 12.82 120.15 510.00 -350.85 835.42 813.40 22.01 37.346 2.600.00 2.774.80 2.657.45 15.62 14.64 122.22 596.59 -397.22 991.85 966.75 25.09 39.530 3.100.00 2.974.85 2.671.45 15.62 14.64 122.22 596.59 -397.22 991.85	2,000.00	1,961.9	99 1,861.97	1,810.90	7.92	8.09	107.51	279.10	-227.17	427.51	413.48	14.03	30.463		
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2,800.00 2,701.56 2,540.43 2,436.76 13.44 12.82 120.15 510.00 -350.85 835.42 813.40 22.01 37.949 2,000.00 2,784.06 2,625.23 2,514.99 14.16 13.43 120.92 538.86 -366.31 887.46 864.42 23.04 38.524 3,000.00 2,886.45 2,710.04 2,593.22 14.89 14.03 121.61 567.73 -381.76 939.61 915.55 24.06 39.049 3,100.00 2,978.89 2,774.85 2,671.45 15.62 124.14 122.27 665.54 -412.68 1.044.16 1.018.04 2612 39.971 3,300.00 3,163.79 2,964.46 2,827.92 17.08 15.86 123.28 654.31 -428.14 1,066.54 1,069.38 27.16 40.378 3,400.00 3,248.68 3,140.82 2,984.38 18.55 17.09 124.15 712.04 -4450.06 1,201.45 1,172.22 292.33 41.103 3,600.00 3,441.12 3,218.88 3,062.61 19.29 17.70 <	2,600.00	2,516.0	66 2,370.81	2,280.29	12.01	11.62	118.29	452.28	-319.93	731.74	711.76	19.98	36.622		
2,900.00 2,794.00 2,625.23 2,514.99 14.16 13.43 120.92 538.86 -366.31 887.46 864.42 23.04 38.524 3,000.00 2,886.45 2,710.04 2,593.22 14.89 14.03 121.61 567.73 -381.76 939.61 915.55 24.06 39.049 3,100.00 2,978.89 2,794.85 2,671.45 15.62 14.64 122.22 596.59 -397.22 991.85 966.75 25.09 39.530 3,200.00 3,071.34 2,879.66 2,749.69 16.35 15.25 122.78 625.45 -412.68 1,044.16 1,018.04 26.12 39.971 3,300.00 3,265.23 3,049.27 2,906.15 1.7.81 16.48 123.28 654.31 -428.14 1,066.34 1,029.7 16 40.376 3,400.00 3,248.68 3,140.85 2,003 18.32 124.89 769.76 -489.98 1,306.54 1,275.23 31.31 41.727 3,600.00 3,748.68 3,473.31 3,277.31 23.277 12.51 195.51 827	2,700.00	2,609.	11 2,455.62	2,358.53	12.73	12.22	119.28	481.14	-335.39	783.50	762.50	21.00	37.318		
3,000.00 2,886.45 2,710.04 2,593.22 14.89 14.03 121.61 567.73 -381.76 939.61 915.55 24.06 390.49 3,100.00 2,978.89 2,794.85 2,671.45 15.62 14.64 122.22 596.59 -397.22 991.85 966.75 25.09 395.30 3,200.00 3,071.34 2,879.65 2,749.69 16.35 15.25 122.78 625.45 -412.68 1,044.16 1,018.04 26.12 39.971 3,300.00 3,163.79 2,964.46 2,827.92 17.08 15.86 123.28 654.31 -428.14 1,006.54 1,069.38 27.16 40.378 3,600.00 3,348.68 3,134.08 2,984.38 18.55 17.09 124.15 712.04 -459.06 1,201.45 1,172.22 29.23 41.103 3,600.00 3,441.12 3,218.88 3,062.61 19.29 17.70 124.54 740.90 -474.52 1,253.98 1,223.71 30.27 41.426 3,600.00 3,626.02 3,388.50 3,219.08 20.77 18.93	2,800.00	2,701.	56 2,540.43	2,436.76	13.44	12.82	120.15	510.00	-350.85	835.42	813.40	22.01	37.949		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2,900.00	2,794.0	2,625.23	2,514.99	14.16	13.43	120.92	538.86	-366.31	887.46	864.42	23.04	38.524		
3,200.00 3,071.34 2,879.65 2,749.69 16.35 15.25 122.78 625.45 -412.68 1,044.16 1,018.04 26.12 39.971 3,300.00 3,163.79 2,964.46 2,827.92 17.08 15.86 123.28 654.31 -428.14 1,006.54 1,069.38 27.16 40.378 3,400.00 3,256.23 3,049.27 2,906.15 17.11 16.48 123.74 683.18 -443.60 1,148.97 1,120.78 28.19 40.754 3,500.00 3,446.83 3,134.08 2,984.38 18.55 17.09 124.15 712.04 -459.06 1,201.45 1,172.22 29.23 41.103 3,600.00 3,441.12 3,218.88 3,062.61 19.29 17.70 124.54 740.90 -474.52 1,253.98 1,223.71 30.27 41.426 3,700.00 3,636.02 3,388.50 3,219.08 20.07 18.93 125.251 786.2 -505.44 1,359.14 1,356.78 33.40 42.271 4,000.00 3,819.03 3,642.92 3,453.77 23.00 20.78 <td>3,000.00</td> <td>2,886.4</td> <td>45 2,710.04</td> <td>2,593.22</td> <td>14.89</td> <td>14.03</td> <td>121.61</td> <td>567.73</td> <td>-381.76</td> <td>939.61</td> <td>915.55</td> <td>24.06</td> <td>39.049</td> <td></td> <td></td>	3,000.00	2,886.4	45 2,710.04	2,593.22	14.89	14.03	121.61	567.73	-381.76	939.61	915.55	24.06	39.049		
3,200.00 3,071.34 2,879.65 2,749.69 16.35 15.25 122.78 625.45 -412.68 1,044.16 1,018.04 26.12 39.971 3,300.00 3,163.79 2,964.46 2,827.92 17.08 15.86 123.28 654.31 -428.14 1,006.54 1,069.38 27.16 40.378 3,400.00 3,256.23 3,049.27 2,906.15 17.11 16.48 123.74 683.18 -443.60 1,148.97 1,120.78 28.19 40.754 3,500.00 3,446.83 3,134.08 2,984.38 18.55 17.09 124.15 712.04 -459.06 1,201.45 1,172.22 29.23 41.103 3,600.00 3,441.12 3,218.88 3,062.61 19.29 17.70 124.54 740.90 -474.52 1,253.98 1,223.71 30.27 41.426 3,700.00 3,636.02 3,388.50 3,219.08 20.07 18.93 125.251 786.2 -505.44 1,359.14 1,356.78 33.40 42.271 4,000.00 3,819.03 3,642.92 3,453.77 23.00 20.78 <td>2 100 00</td> <td>2 079</td> <td>20 2704 06</td> <td>2 671 / 5</td> <td>15.62</td> <td>14.64</td> <td>100.00</td> <td>506 50</td> <td>207 22</td> <td>001 95</td> <td>066 75</td> <td>25.00</td> <td>20 520</td> <td></td> <td></td>	2 100 00	2 079	20 2704 06	2 671 / 5	15.62	14.64	100.00	506 50	207 22	001 95	066 75	25.00	20 520		
3,300.00 3,163.79 2,964.46 2,827.92 17.08 15.86 123.28 654.31 -428.14 1,066.54 1,069.38 27.16 40.378 3,400.00 3,256.23 3,049.27 2,906.15 17.81 16.48 123.74 683.18 -443.60 1,148.97 1,120.78 28.19 40.754 3,500.00 3,446.88 3,134.08 2,984.38 18.55 17.09 124.15 712.04 -459.06 1,201.45 1,172.22 29.23 41.103 3,600.00 3,441.12 3,218.88 3,062.61 19.29 17.70 124.54 740.90 -474.52 1,253.98 1,223.71 30.27 41.426 3,700.00 3,633.57 3,303.69 3,140.85 20.03 18.32 125.21 798.62 -505.44 1,359.14 1,326.78 32.35 42.008 3,900.00 3,614.61 3,473.31 3,297.31 21.51 19.55 125.51 827.49 -502.90 1,411.76 1,378.36 33.40 42.271 4,000.00 3,810.91 3,558.11 3,375.54 22.26 20.17 <td></td>															
3,400.00 3,256.23 3,049.27 2,906.15 17.81 16.48 123.74 683.18 -443.60 1,148.97 1,120.78 28.19 40.754 3,500.00 3,348.68 3,134.08 2,984.38 18.55 17.09 124.15 712.04 -459.06 1,201.45 1,172.22 29.23 41.103 3,600.00 3,441.12 3,218.88 3,062.61 19.29 17.70 124.54 740.90 -474.52 1,253.98 1,223.71 30.27 41.426 3,700.00 3,533.57 3,303.69 3,140.85 20.03 18.32 124.89 769.76 -489.98 1,306.54 1,275.23 31.31 41.727 3,800.00 3,626.02 3,388.50 3,219.08 20.77 18.93 125.21 798.62 -505.44 1,359.14 1,326.78 32.35 42.008 3,900.00 3,718.46 3,473.31 3,297.31 21.51 19.55 125.51 827.49 -520.90 1,411.76 1,378.36 33.40 42.271 4,000.00 3,903.35 3,642.92 3,453.77 23.00 20.78 <td></td>															
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3,600.00 3,441.12 3,218.88 3,062.61 19.29 17.70 124.54 740.90 -474.52 1,253.98 1,223.71 30.27 41.426 3,700.00 3,533.57 3,303.69 3,140.85 20.03 18.32 124.89 769.76 -489.98 1,306.54 1,275.23 31.31 41.727 3,800.00 3,626.02 3,388.50 3,219.08 20.77 18.93 125.21 798.62 -505.44 1,359.14 1,326.78 32.35 42.008 3,900.00 3,718.46 3,473.31 3,297.31 21.51 19.55 125.51 827.49 -520.90 1,411.76 1,378.36 33.40 42.271 4,000.00 3,810.91 3,558.11 3,375.54 22.26 20.17 125.79 856.35 -536.36 1,464.41 1,429.97 34.44 42.516 4,100.00 3,903.35 3,642.92 3,453.77 23.00 20.78 126.05 885.21 -51.82 1,517.09 1,481.60 35.49 42.747 4,200.00 3,995.80 3,727.73 3,532.01 23.75 21.40 <td></td>															
3,700.00 3,533.57 3,303.69 3,140.85 20.03 18.32 124.89 769.76 -489.98 1,306.54 1,275.23 31.31 41.727 3,800.00 3,626.02 3,388.50 3,219.08 20.77 18.93 125.21 798.62 -505.44 1,359.14 1,326.78 32.35 42.008 3,900.00 3,718.46 3,473.31 3.297.31 21.51 19.55 125.51 827.49 -520.90 1,411.76 1,378.36 33.40 42.271 4,000.00 3,810.91 3,558.11 3,375.54 22.26 20.17 125.79 856.35 -536.36 1,464.41 1,429.97 34.44 42.516 4,100.00 3,903.35 3,642.92 3,453.77 23.00 20.78 126.05 885.21 -551.82 1,517.09 1,481.60 35.49 42.747 4,200.00 3,995.80 3,727.73 3,532.01 23.75 21.40 126.29 914.07 -567.28 1,569.78 1,533.25 36.54 42.964 4,300.00 4,088.25 3,812.54 3,610.24 24.49 22.02 <td>3,300.00</td> <td>5,540.0</td> <td>50 5,154.00</td> <td>2,304.30</td> <td>10.55</td> <td>17.05</td> <td>124.15</td> <td>712.04</td> <td>-433.00</td> <td>1,201.40</td> <td>1,172.22</td> <td>23.25</td> <td>41.105</td> <td></td> <td></td>	3,300.00	5,540.0	50 5,154.00	2,304.30	10.55	17.05	124.15	712.04	-433.00	1,201.40	1,172.22	23.25	41.105		
3,800.00 3,626.02 3,388.50 3,219.08 20.77 18.93 125.21 798.62 -505.44 1,359.14 1,326.78 32.35 42.008 3,900.00 3,718.46 3,473.31 3,297.31 21.51 19.55 125.51 827.49 -520.90 1,411.76 1,378.36 33.40 42.271 4,000.00 3,810.91 3,558.11 3,375.54 22.26 20.17 125.79 856.35 -536.36 1,464.41 1,429.97 34.44 42.516 4,100.00 3,903.35 3,642.92 3,453.77 23.00 20.78 126.05 885.21 -551.82 1,517.09 1,481.60 35.49 42.747 4,200.00 3,995.80 3,727.73 3,532.01 23.75 21.40 126.29 914.07 -567.28 1,569.78 1,533.25 36.54 42.964 4,300.00 4,088.25 3,812.54 3,610.24 24.49 22.02 126.53 942.94 -582.74 1,622.50 1,584.91 37.59 43.168 4,400.00 4,181.66 3,898.26 3,689.32 25.20 22.65 <td>3,600.00</td> <td>3,441.</td> <td>12 3,218.88</td> <td>3,062.61</td> <td>19.29</td> <td>17.70</td> <td>124.54</td> <td>740.90</td> <td>-474.52</td> <td>1,253.98</td> <td>1,223.71</td> <td>30.27</td> <td>41.426</td> <td></td> <td></td>	3,600.00	3,441.	12 3,218.88	3,062.61	19.29	17.70	124.54	740.90	-474.52	1,253.98	1,223.71	30.27	41.426		
3,900.00 3,718.46 3,473.31 3,297.31 21.51 19.55 125.51 827.49 -520.90 1,411.76 1,378.36 33.40 42.271 4,000.00 3,810.91 3,558.11 3,375.54 22.26 20.17 125.79 856.35 -536.36 1,464.41 1,429.97 34.44 42.516 4,100.00 3,903.35 3,642.92 3,453.77 23.00 20.78 126.05 885.21 -551.82 1,517.09 1,481.60 35.49 42.747 4,200.00 3,995.80 3,727.73 3,532.01 23.75 21.40 126.29 914.07 -567.28 1,569.78 1,533.25 36.54 42.964 4,300.00 4,088.25 3,812.54 3,610.24 24.49 22.02 126.53 942.94 -582.74 1,622.50 1,584.91 37.59 43.168 4,400.00 4,181.66 3,898.26 3,689.32 25.20 22.65 128.08 972.11 -598.37 1,673.86 1,635.24 38.62 43.344 4,500.00 4,276.81 3,985.66 3,769.94 25.84 23.28 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1,306.54</td> <td></td> <td>31.31</td> <td></td> <td></td> <td></td>										1,306.54		31.31			
4,000.003,810.913,558.113,375.5422.2620.17125.79856.35-536.361,464.411,429.9734.4442.5164,100.003,903.353,642.923,453.7723.0020.78126.05885.21-551.821,517.091,481.6035.4942.7474,200.003,995.803,727.733,532.0123.7521.40126.29914.07-567.281,569.781,533.2536.5442.9644,300.004,088.253,812.543,610.2424.4922.02126.53942.94-582.741,622.501,584.9137.5943.1684,400.004,181.663,898.263,689.3225.2022.65128.08972.11-598.371,673.861,635.2438.6243.3444,500.004,276.813,985.663,769.9425.8423.28129.351,001.86-614.301,722.431,682.8139.6243.4784,600.004,373.444,074.483,851.8726.4023.93130.351,032.08-630.491,768.081,727.5040.5843.5714,700.004,471.284,164.483,934.9026.8824.59131.101,062.71-646.901,810.721,769.2141.5143.626	3,800.00	3,626.0	3,388.50	3,219.08	20.77	18.93	125.21	798.62	-505.44	1,359.14	1,326.78	32.35	42.008		
4,000.003,810.913,558.113,375.5422.2620.17125.79856.35-536.361,464.411,429.9734.4442.5164,100.003,903.353,642.923,453.7723.0020.78126.05885.21-551.821,517.091,481.6035.4942.7474,200.003,995.803,727.733,532.0123.7521.40126.29914.07-567.281,569.781,533.2536.5442.9644,300.004,088.253,812.543,610.2424.4922.02126.53942.94-582.741,622.501,584.9137.5943.1684,400.004,181.663,898.263,689.3225.2022.65128.08972.11-598.371,673.861,635.2438.6243.3444,500.004,276.813,985.663,769.9425.8423.28129.351,001.86-614.301,722.431,682.8139.6243.4784,600.004,373.444,074.483,851.8726.4023.93130.351,032.08-630.491,768.081,727.5040.5843.5714,700.004,471.284,164.483,934.9026.8824.59131.101,062.71-646.901,810.721,769.2141.5143.626	3,900.00	3,718.4	46 3,473.31	3,297.31	21.51	19.55	125.51	827.49	-520.90	1,411.76	1,378.36	33.40	42.271		
4,200.00 3,995.80 3,727.73 3,532.01 23.75 21.40 126.29 914.07 -567.28 1,569.78 1,533.25 36.54 42.964 4,300.00 4,088.25 3,812.54 3,610.24 24.49 22.02 126.53 942.94 -582.74 1,622.50 1,584.91 37.59 43.168 4,400.00 4,181.66 3,898.26 3,689.32 25.20 22.65 128.08 972.11 -598.37 1,673.86 1,635.24 38.62 43.344 4,500.00 4,276.81 3,985.66 3,769.94 25.84 23.28 129.35 1,001.86 -614.30 1,722.43 1,682.81 39.62 43.478 4,600.00 4,373.44 4,074.48 3,851.87 26.40 23.93 130.35 1,032.08 -630.49 1,768.08 1,727.50 40.58 43.571 4,700.00 4,471.28 4,164.48 3,934.90 26.88 24.59 131.10 1,062.71 -684.690 1,810.72 1,769.21 41.51 43.626		3,810.9	91 3,558.11		22.26	20.17		856.35	-536.36	1,464.41	1,429.97	34.44	42.516		
4,200.00 3,995.80 3,727.73 3,532.01 23.75 21.40 126.29 914.07 -567.28 1,569.78 1,533.25 36.54 42.964 4,300.00 4,088.25 3,812.54 3,610.24 24.49 22.02 126.53 942.94 -582.74 1,622.50 1,584.91 37.59 43.168 4,400.00 4,181.66 3,898.26 3,689.32 25.20 22.65 128.08 972.11 -598.37 1,673.86 1,635.24 38.62 43.344 4,500.00 4,276.81 3,985.66 3,769.94 25.84 23.28 129.35 1,001.86 -614.30 1,722.43 1,682.81 39.62 43.478 4,600.00 4,373.44 4,074.48 3,851.87 26.40 23.93 130.35 1,032.08 -630.49 1,768.08 1,727.50 40.58 43.571 4,700.00 4,471.28 4,164.48 3,934.90 26.88 24.59 131.10 1,062.71 -684.690 1,810.72 1,769.21 41.51 43.626															
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4,400.00 4,181.66 3,898.26 3,689.32 25.20 22.65 128.08 972.11 -598.37 1,673.86 1,635.24 38.62 43.344 4,500.00 4,276.81 3,985.66 3,769.94 25.84 23.28 129.35 1,001.86 -614.30 1,722.43 1,682.81 39.62 43.478 4,600.00 4,373.44 4,074.48 3,851.87 26.40 23.93 130.35 1,032.08 -630.49 1,768.08 1,727.50 40.58 43.571 4,700.00 4,471.28 4,164.48 3,934.90 26.88 24.59 131.10 1,062.71 -646.90 1,810.72 1,769.21 41.51 43.626	4,200.00	3,995.8	3,727.73	3,532.01	23.75	21.40	126.29	914.07	-567.28	1,569.78	1,533.25	36.54	42.964		
4,500.00 4,276.81 3,985.66 3,769.94 25.84 23.28 129.35 1,001.86 -614.30 1,722.43 1,682.81 39.62 43.478 4,600.00 4,373.44 4,074.48 3,851.87 26.40 23.93 130.35 1,032.08 -630.49 1,768.08 1,727.50 40.58 43.571 4,700.00 4,471.28 4,164.48 3,934.90 26.88 24.59 131.10 1,062.71 -646.90 1,810.72 1,769.21 41.51 43.626	4,300.00	4,088.2	25 3,812.54	3,610.24		22.02	126.53	942.94	-582.74		1,584.91	37.59	43.168		
4,600.00 4,373.44 4,074.48 3,851.87 26.40 23.93 130.35 1,032.08 -630.49 1,768.08 1,727.50 40.58 43.571 4,700.00 4,471.28 4,164.48 3,934.90 26.88 24.59 131.10 1,062.71 -646.90 1,810.72 1,769.21 41.51 43.626	4,400.00	4,181.0	3,898.26	3,689.32	25.20	22.65	128.08	972.11	-598.37	1,673.86	1,635.24	38.62	43.344		
4,700.00 4,471.28 4,164.48 3,934.90 26.88 24.59 131.10 1,062.71 -646.90 1,810.72 1,769.21 41.51 43.626	4,500.00	4,276.8	3,985.66	3,769.94	25.84	23.28	129.35	1,001.86	-614.30	1,722.43	1,682.81	39.62	43.478		
4,700.00 4,471.28 4,164.48 3,934.90 26.88 24.59 131.10 1,062.71 -646.90 1,810.72 1,769.21 41.51 43.626	4 600 00	4 272	14 / 07/ 40	3 851 97	26.40	22 02	130 35	1 032 08	-630 10	1 768 09	1 727 50	10 58	43 571		
פאט.64 צנ.24 טב.100ן 14,600 ט.600ן 14,600 ט.600ן דע.101 ב.2000 ט.200ן דע.101 ב.2000 ט.200ן דע.101 ב.2000 ט.200ן א															
	4,000.00	4,570.0	→,200.42		21.30	20.20	101.04	1,095.00	-003.47	1,000.28	1,007.80	+2.33	40.048		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation 2/21/2023 1:25:35PM



Offset Site Error:

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: NW Lybrook (138, 139, 140 & 141) - NW Lybrook Unit 141H - Original Hole - rev0

rvey Progr Refer	ram: 0- rence	MWD Off	set	Sami M	lajor Axis		Offset Wellb	ore Centre	Diet	Rule Assig tance	gned:		Offset Well Error:	0.
easured	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation	Warning	
epth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor		
0.00	0.00	0.00	0.00	0.00	0.00	97.24	-2.51	19.75	19.91					
100.00	100.00	100.00	100.00	0.13	0.13	97.24	-2.51	19.75	19.91	19.64	0.27	74.061		
200.00	200.00	200.00	200.00	0.49	0.49	97.24	-2.51	19.75	19.91	18.93	0.99	20.198		
300.00	300.00	300.00	300.00	0.85	0.85	97.24	-2.51	19.75	19.91	18.21	1.70	11.694		
400.00	400.00	400.00	400.00	1.21	1.21	97.24	-2.51	19.75	19.91	17.49	2.42	8.229		
500.00	500.00	500.00	500.00	1.57	1.57	97.24	-2.51	19.75	19.91	16.77	3.14	6.348		
600.00	600.00	600.13	600.09	1.93	1.91	104.78	-4.98	18.87	19.51	15.68	3.84	5.085		
628.24	628.24	628.33	628.24	2.03	2.01	109.74	-6.57	18.30	19.44	15.41	4.03	4.819 CC,	ES	
700.00	700.00	699.72	699.36	2.29	2.25	127.22	-12.33	16.23	20.39	15.86	4.53	4.500		
800.00	800.00	798.23	797.02	2.64	2.60	153.98	-24.38	11.90	27.29	22.07	5.23	5.223		
900.00	900.00	895.17	892.35	3.00	2.98	171.65	-40.85	5.99	41.99	36.10	5.90	7.123		
000.00	1,000.00	990.08	984.72	3.36	3.39	-178.72	-61.37	-1.37	63.26	56.72	6.54	9.670		
100.00	1,099.95	1,083.12	1,074.10	3.71	3.84	-53.99	-85.65	-10.08	88.56	81.40	7.16	12.373		
,200.00	1,199.63	1,174.63	1,160.69	4.05	4.33	-52.62	-113.50	-20.08	115.58	107.83	7.76	14.900		
300.00	1,298.77	1,264.55	1,244.29	4.40	4.87	-52.71	-144.63	-31.25	144.02	135.67	8.35	17.240		
400.00	1,397.08	1,352.80	1,324.74	4.77	5.45	-53.48	-178.76	-43.50	173.83	164.84	8.98	19.355		
500.00	1,494.31	1,439.36	1,401.94	5.18	6.07	-54.57	-215.59	-56.71	205.03	195.39	9.64	21.268		
600.00	1,590.18	1,524.19	1,475.80	5.63	6.74	-55.79	-254.85	-70.80	237.68	227.33	10.35	22.961		
700.00	1,684.43	1,609.87	1,548.51	6.13	7.45	-57.10	-297.49	-86.10	271.69	260.51	11.18	24.301		
800.00	1,777.10	1,703.37	1,627.26	6.69	8.27	-59.23	-344.95	-103.13	304.97	292.71	12.27	24.863		
900.00	1,869.54	1,796.92	1,706.04	7.30	9.11	-61.37	-392.43	-120.17	338.43	325.00	13.42	25.209		
000.00	1,961.99	1,890.47	1,784.82	7.92	9.96	-63.13	-439.91	-137.21	372.23	357.60	14.63	25.446		
100.00	2,054.43	1,984.01	1,863.60	8.57	10.82	-64.59	-487.39	-154.25	406.30	390.43	14.03	25.608		
200.00	2,146.88	2,077.56	1,942.38	9.24	11.68	-65.84	-534.86	-171.29	440.57	423.44	17.13	25.716		
300.00	2,239.33	2,077.30	2,021.17	9.92	12.55	-66.90	-582.34	-188.32	474.99	456.57	18.42	25.788		
400.00	2,331.77	2,264.65	2,099.95	10.61	13.42	-67.82	-629.82	-205.36	509.54	489.82	19.72	25.833		
		0.050.00	0 170 70			~~~~~	077.00	000.40	544.00	500.45		05.000		
,500.00	2,424.22	2,358.20	2,178.73	11.31	14.30	-68.62	-677.30	-222.40	544.20	523.15	21.04	25.860		
600.00	2,516.66	2,451.74	2,257.51	12.01	15.18	-69.33	-724.78	-239.44	578.93	556.56	22.38	25.873		
,700.00	2,609.11	2,545.29	2,336.29	12.73	16.07	-69.96	-772.25	-256.48	613.74	590.02	23.72	25.876		
800.00 900.00	2,701.56 2,794.00	2,638.83 2,732.38	2,415.07 2,493.85	13.44 14.16	16.95 17.84	-70.52 -71.02	-819.73 -867.21	-273.51 -290.55	648.60 683.52	623.53 657.09	25.07 26.43	25.873 25.865		
			2,100.00			11.02	001.21	200.00				20.000		
000.00	2,886.45	2,825.93	2,572.63	14.89	18.73	-71.48	-914.69	-307.59	718.47	690.68	27.79	25.853		
100.00	2,978.89	2,919.47	2,651.41	15.62	19.62	-71.89	-962.17	-324.63	753.46	724.30	29.16	25.839		
200.00	3,071.34	3,013.02	2,730.19	16.35	20.51	-72.27	-1,009.65	-341.66	788.49	757.95	30.53	25.824		
300.00 400.00	3,163.79 3,256.23	3,106.56 3,200.11	2,808.97 2,887.75	17.08 17.81	21.40 22.30	-72.61 -72.93	-1,057.12 -1,104.60	-358.70 -375.74	823.54 858.61	791.62 825.32	31.91 33.29	25.807 25.790		
400.00	0,200.20	0,200.11	2,001.10	11.01	22.00	12.00	1,104.00	-010.14	000.01	020.02	00.20	20.700		
500.00	3,348.68	3,293.66	2,966.53	18.55	23.19	-73.22	-1,152.08	-392.78	893.71	859.03	34.68	25.773		
600.00	3,441.12	3,387.20	3,045.31	19.29	24.09	-73.49	-1,199.56	-409.82	928.82	892.76	36.06	25.755		
700.00	3,533.57	3,480.75	3,124.10	20.03	24.98	-73.74	-1,247.04	-426.85	963.95	926.50	37.45	25.738		
800.00 900.00	3,626.02 3,718.46	3,574.29 3,667.84	3,202.88 3,281.66	20.77 21.51	25.88 26.78	-73.97 -74.19	-1,294.51 -1,341.99	-443.89 -460.93	999.10 1,034.26	960.25 994.02	38.84 40.24	25.720 25.703		
500.00	5,7 10.40	5,007.04	5,201.00	21.01	20.70	-14.13	-1,341.33	-400.85	1,004.20	004.UZ	40.24	20.100		
00.00	3,810.91	3,761.39	3,360.44	22.26	27.67	-74.39	-1,389.47	-477.97	1,069.43	1,027.79	41.63	25.686		
100.00	3,903.35	3,854.93	3,439.22	23.00	28.57	-74.58	-1,436.95	-495.01	1,104.61	1,061.58	43.03	25.670		
200.00	3,995.80	3,948.48	3,518.00	23.75	29.47	-74.76	-1,484.43	-512.04	1,139.80	1,095.37	44.43	25.654		
300.00	4,088.25	4,042.02	3,596.78	24.49	30.37	-74.93	-1,531.91	-529.08	1,175.00	1,129.17	45.83	25.639		
400.00	4,181.66	4,135.37	3,675.39	25.20	31.27	-76.08	-1,579.28	-546.08	1,210.84	1,163.68	47.16	25.675		
500.00	4,276.81	4,228.15	3,753.52	25.84	32.16	-77.01	-1,626.37	-562.98	1,247.85	1,199.50	48.35	25.809		
600.00	4,373.44	4,320.10	3,830.96	26.40	33.04	-77.77	-1,673.04	-579.73	1,286.00	1,236.61	49.39	26.035		
700.00	4,471.28	4,410.98	3,907.50	26.88	33.92	-78.36	-1,719.16	-596.28	1,325.28	1,274.98	50.30	26.349		
800.00	4,570.07	4,500.54	3,982.92	27.30	34.78	-78.82	-1,764.62	-612.59	1,365.73	1,314.68	51.06	26.750		
900.00	4,669.53	4,588.52	4,057.02	27.65	35.62	-79.17	-1,809.27	-628.62	1,407.42	1,355.75	51.68	27.236		
000.00	4,769.39	4,674.70	4,129.60	27.93	36.45	-79.44	-1,853.01	-644.31	1,450.45	1,398.29	52.16	27.808		



Offset Site Error:

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: NW Lybrook (138, 139, 140 & 141) - NW Lybrook Unit 141H - Original Hole - rev0

														0.0
Irvey Prog		MWD	4	0			0.00	O t	Die	Rule Assi	gned:		Offset Well Error:	0.0
Refe /leasured	erence Vertical	Off Measured	set Vertical	Semi M Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Dis Between	tance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	5	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
5,100.00	4,869.38	4,759.15	4,200.71	28.14	37.27	161.11	-1,895.87	-659.69	1,494.78	1,442.25	52.53	28.458		
5,200.00	4,969.30	4,842.85	4,271.20	28.33	38.07	69.67	-1,938.35	-674.94	1,539.09	1,486.26	52.83	29.134		
5,300.00	5,067.55	4,922.36	4,338.16	28.41	38.84	67.14	-1,978.71	-689.42	1,579.41	1,526.58	52.82	29.899		
5,400.00	5,161.19	4,994.97	4,399.31	28.41	39.54	65.37	-2,015.56	-702.64	1,615.19	1,562.67	52.52	30.752		
5,500.00	5,247.38	5,058.46	4,452.78	28.38	40.15	64.11	-2,047.79	-714.21	1,646.74	1,594.75	51.99	31.675		
5,600.00	5,323.49	5,110.92	4,496.96	28.34	40.65	63.09	-2,074.41	-723.76	1,674.48	1,623.18	51.30	32.638		
5,700.00	5,387.22	5,150.75	4,530.51	28.34	41.04	62.13	-2,094.63	-731.02	1,698.87	1,648.31	50.57	33.596		
5,800.00	5,438.83	5,178.80	4,554.13	28.43	41.31	62.12	-2,108.86	-736.13	1,721.39	1,671.48	49.91	34.487		
5,900.00	5,482.03	5,198.97	4,571.12	28.64	41.50	60.83	-2,119.10	-739.80	1,744.65	1,695.21	49.44	35.287		
6,000.00	5,508.97	5,204.35	4,575.65	28.99	41.55	59.21	-2,121.83	-740.78	1,764.97	1,715.81	49.16	35.901		
6,100.00	5,518.80	5,194.74	4,567.55	29.49	41.46	57.43	-2,116.95	-739.03	1,781.96	1,732.87	49.09	36.298		
0,100.00	0,010.00	0,104.14	4,007.00	20.40	+1.+0	01.40	-2,110.00	-100.00	1,701.00	1,102.01	40.00	00.200		
6,200.00	5,519.48	5,177.32	4,552.88	30.16	41.29	56.84	-2,108.11	-735.86	1,799.48	1,750.20	49.28	36.517		
6,300.00	5,520.16	5,159.89	4,538.20	31.04	41.13	56.28	-2,099.26	-732.68	1,822.15	1,772.41	49.74	36.632		
6,400.00	5,520.84	6,539.03	5,484.99	32.12	46.17	88.89	-2,477.40	-180.31	1,842.90	1,783.35	59.55	30.948		
6,422.18	5,520.99	6,559.90	5,485.69	32.40	46.14	88.90	-2,477.49	-159.45	1,842.89	1,782.89	60.00	30.712		
6,500.00	5,521.52	6,637.46	5,486.30	33.39	46.03	88.90	-2,477.82	-81.89	1,842.90	1,781.11	61.79	29.825		
6,600.00	5,522.20	6,737.46	5,487.06	34.82	45.91	88.91	-2,478.26	18.10	1,842.92	1,778.56	64.36	28.636		
6,700.00	5,522.87	6,837.46	5,487.82	36.39	45.82	88.91	-2,478.69	118.10	1,842.93	1,775.72	67.21	27.421		
6,800.00	5,523.55	6,937.46	5,488.59	38.08	45.77	88.91	-2,479.13	218.09	1,842.94	1,772.63	70.32	26.209		
6,900.00	5,524.23	7,037.46	5,489.35	39.87	45.76	88.92	-2,479.56	318.09	1,842.96	1,769.32	73.64	25.026		
7,000.00	5,524.91	7,137.46	5,490.12	41.75	45.80	88.92	-2,480.00	418.09	1,842.97	1,765.81	77.16	23.884		
7 100 00	E E 0 E E 0	7,237.46	E 400.00	42.70	45.00	88.00	2 490 42	E10.00	1 9 4 2 0 0	1 760 14	90.95	22 705		
7,100.00 7,200.00	5,525.58 5,526.26	7,237.46	5,490.88 5,491.65	43.70 45.72	45.92 46.17	88.92 88.92	-2,480.43 -2,480.87	518.08 618.08	1,842.99 1,843.00	1,762.14 1,758.32	80.85 84.68	22.795 21.764		
7,300.00	5,526.94	7,437.46	5,491.03	45.72	46.61	88.93	-2,480.87	718.07	1,843.00	1,754.37	88.65	20.791		
7,400.00	5,527.62	7,537.46		49.90	40.01	88.93	-2,481.30	818.07	1,843.02	1,750.32	92.72	19.878		
7,500.00	5,528.29	7,637.46	5,493.18 5,493.94	49.90 52.06	47.33	88.93	-2,481.74	918.07	1,843.05	1,746.16	96.88	19.078		
7,500.00	5,526.29	7,037.40	5,495.94	52.06	40.44	00.93	-2,402.10	910.07	1,043.05	1,740.10	90.00	19.025		
7,600.00	5,528.97	7,737.46	5,494.71	54.25	49.87	88.93	-2,482.61	1,018.06	1,843.06	1,741.93	101.14	18.224		
7,700.00	5,529.65	7,837.46	5,495.47	56.47	51.56	88.94	-2,483.05	1,118.06	1,843.08	1,737.61	105.46	17.476		
7,800.00	5,530.33	7,937.46	5,496.24	58.72	53.43	88.94	-2,483.48	1,218.06	1,843.09	1,733.23	109.86	16.777		
7,900.00	5,531.00	8,037.46	5,497.00	60.99	55.42	88.94	-2,483.92	1,318.05	1,843.10	1,728.80	114.31	16.124		
8,000.00	5,531.68	8,137.46	5,497.77	63.28	57.49	88.95	-2,484.35	1,418.05	1,843.12	1,724.31	118.81	15.513		
8,100.00	5,532.36	8,237.46	5,498.53	65.59	59.62	88.95	-2,484.79	1,518.04	1,843.13	1,719.78	123.36	14.941		
8,200.00	5,533.04	8,337.46	5,499.30	67.92	61.79	88.95	-2,485.22	1,618.04	1,843.15	1,715.20	127.95	14.406		
8,300.00	5,533.71	8,437.46	5,500.06	70.27	64.00	88.95	-2,485.66	1,718.04	1,843.16	1,710.59	132.57	13.903		
8,400.00	5,534.39	8,537.46	5,500.83	72.62	66.25	88.96	-2,486.09	1,818.03	1,843.18	1,705.95	137.23	13.431		
8,500.00	5,535.07	8,637.46	5,501.59	74.99	68.51	88.96	-2,486.53	1,918.03	1,843.19	1,701.28	141.92	12.988		
	5 505 7 5	0 707 40	5 500 00		70.00		0 400 00	0.040.00	1 0 10 0 1	1 000 50	1 4 9 9 9	10 570		
8,600.00	5,535.75	8,737.46	5,502.36	77.37	70.80	88.96	-2,486.96	2,018.02	1,843.21	1,696.58	146.63	12.570		
8,700.00	5,536.43	8,837.46	5,503.12	79.76	73.11	88.96	-2,487.40	2,118.02	1,843.22	1,691.85	151.37	12.177		
8,800.00	5,537.10	8,937.46	5,503.88	82.17	75.43	88.97	-2,487.83	2,218.02	1,843.24	1,687.11	156.13	11.806		
8,900.00	5,537.78	9,037.46	5,504.65	84.57	77.77 80.12	88.97	-2,488.27	2,318.01	1,843.25	1,682.34	160.91	11.455 11.124		
9,000.00	5,538.46	9,137.46	5,505.41	86.99	00.12	88.97	-2,488.70	2,418.01	1,843.27	1,677.56	165.71	11.124		
9,100.00	5,539.14	9,237.46	5,506.18	89.41	82.49	88.98	-2,489.14	2,518.00	1,843.28	1,672.76	170.52	10.810		
9,200.00	5,539.81	9,337.46	5,506.94	91.84	84.86	88.98	-2,489.57	2,618.00	1,843.29	1,667.94	175.35	10.512		
9,300.00	5,540.49	9,437.46	5,507.71	94.28	87.24	88.98	-2,490.01	2,718.00	1,843.31	1,663.11	180.20	10.229		
9,400.00	5,541.17	9,537.46	5,508.47	96.72	89.64	88.98	-2,490.44	2,817.99	1,843.32	1,658.27	185.05	9.961		
9,500.00	5,541.85	9,637.46	5,509.24	99.17	92.04	88.99	-2,490.88	2,917.99	1,843.34	1,653.42	189.92	9.706		
					-									
9,600.00	5,542.52	9,737.46	5,510.00	101.62	94.44	88.99	-2,491.31	3,017.98	1,843.35	1,648.55	194.80	9.463		
9,700.00	5,543.20	9,837.46	5,510.77	104.07	96.86	88.99	-2,491.75	3,117.98	1,843.37	1,643.67	199.69	9.231		
9,800.00	5,543.88	9,937.46	5,511.53	106.53	99.28	88.99	-2,492.18	3,217.98	1,843.38	1,638.79	204.59	9.010		
9,900.00	5,544.56	10,037.46	5,512.30	109.00	101.71	89.00	-2,492.62	3,317.97	1,843.40	1,633.89	209.50	8.799		
10,000.00	5,545.23	10,137.46	5,513.06	111.46	104.14	89.00	-2,493.05	3,417.97	1,843.41	1,628.99	214.42	8.597		
											- /			
0,100.00	5,545.91	10,237.46	5,513.83	113.94	106.58	89.00	-2,493.49	3,517.97	1,843.43	1,624.08	219.35	8.404		



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

NW Lybrook (138, 139, 140 & 141) - NW Lybrook Unit 141H - Original Hole - rev0 Offset Design: Offset Site Error: 0.00 ft 0.00 ft 0-MWD Offset Well Error: Survey Program: Reference Offset A Vertical Rule Assigned: Distance Den Between Semi Major Axis ence Offset ence Vertical Offset Wellbore Centre Measured Measured Reference Highside Betw Minimum Separation Warning +N/-S +E/-W Separation Depth Depth Depth Depth Toolface Centres Ellipses Factor (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft) (°) (ft) (ft) (ft) 5,546.59 10,337.46 -2,493.92 3,617.96 1,843.44 10,200.00 5,514.59 116.41 109.02 89.01 1,619.16 224.28 8.219 10.300.00 5.547.27 10.437.46 5.515.36 118.89 111.46 89.01 -2.494.36 3.717.96 1.843.46 1.614.24 229.22 8.042 10,400.00 5,547.94 10,537.46 5,516.12 121.37 113.91 -2,494.79 3,817.95 1,843.47 1,609.31 234.16 7.873 89.01 10.500.00 5 548 62 10.637.46 5 516 89 123.85 116.37 89.01 -2 495 23 3 917 95 1 843 48 1 604 37 239 11 7 7 1 0 10,600.00 5,549.30 10,737.46 5,517.65 126.33 118.82 89.02 -2,495.66 4,017.95 1,843.50 1,599.43 244.07 7.553 10,700.00 5,549.98 10,837.46 5,518.41 128.82 121.29 89.02 -2,496.10 4,117.94 1,843.51 1,594.48 249.03 7.403 10,937.46 -2.496.53 1,589.53 10,800.00 5,550.66 5.519.18 131.31 123.75 89.02 4.217.94 1,843.53 254.00 7.258 10,900.00 5,551.33 11,037.46 5,519.94 133.80 126.22 89.02 -2,496.97 4,317.93 1,843.54 1,584.58 258.97 7.119 11,137.46 5,520.71 128.69 -2,497.40 4,417.93 1,843.56 1,579.62 6.985 11,000.00 5,552.01 136.29 89.03 263.94 11.100.00 5.552.69 11.237.46 5.521.47 138.78 131.16 89.03 -2.497.844.517.93 1.843.57 1.574.65 268.92 6.855 5,553.37 1,569.68 11,200.00 11,337.46 5,522.24 -2,498.27 4,617.92 1,843.59 273.90 6.731 141.28 133.64 89.03 11.437.46 -2.498.71 4.717.92 1.843.60 11.300.00 5.554.04 5.523.00 143.78 136.11 89.04 1.564.71 278.89 6.610 11,400.00 5.554.72 11.537.46 5.523.77 146.28 138.59 89 04 -2.499.14 4.817.91 1.843.62 1.559.73 283.88 6 4 9 4 11,500.00 5,555.40 11,637.46 5,524.53 148.78 141.08 89.04 -2,499.58 4,917.91 1,843.63 1,554.76 288.88 6.382 11,600.00 5,556.08 11,737.46 5,525.30 151.28 143.56 89.04 -2,500.01 5,017.91 1,843.65 1,549.77 293.87 6.274 11.700.00 5.556.75 11.837.46 5.526.06 153.79 146.05 89.05 -2.500.455.117.90 1.843.66 1.544.79 298.87 6.169 -2.500.88 5.217.90 11.800.00 5.557.43 11.937.46 5.526.83 156.29 148.53 89.05 1.843.68 1.539.80 303.88 6.067 12,037.46 5,527.59 -2,501.32 1,843.69 11,900.00 5,558.11 158.80 151.02 89.05 5,317.90 1,534.81 308.88 5.969 12 000 00 5 558 79 12 137 46 5 528 36 161.30 153 51 89.05 -2 501 75 5 4 1 7 8 9 1 843 71 1 529 82 313.89 5 874 5,559.46 5,529.12 12,237.46 156.01 -2,502.19 5,517.89 1,843.72 12,100.00 163.81 89.06 1,524.82 318.90 5.782 12,200.00 5,560.14 12,337.46 5,529.89 166.32 158.50 89.06 -2,502.62 5,617.88 1,843.73 1,519.82 323.91 5.692 12,300.00 5.560.82 12.437.46 5.530.65 168.83 161.00 89.06 -2.503.06 5.717.88 1.843.75 1.514.82 328.93 5.605 12,400.00 5,561.50 12,537.46 5,531.42 171.34 163.49 89.07 -2,503.49 5,817.88 1,843.76 1,509.82 333.95 5.521 12,500.00 5,562.18 12,637.46 5.532.18 173.86 165.99 89.07 -2,503.93 5.917.87 1,843.78 1,504.81 338.96 5.439 12.600.00 5.562.85 12.737.46 5.532.94 176.37 168.49 89.07 -2.504.366.017.87 1.843.79 1.499.81 343.99 5.360 6,117.86 12,700.00 5,563.53 12,837.46 5,533.71 170.99 89.07 -2,504.80 1,843.81 349.01 5.283 178.88 1,494.80 -2,505.23 12,800.00 5,564.21 12,937.46 5,534.47 181.40 173.50 89.08 6,217.86 1,843.82 1,489.79 354.03 5.208 12.900.00 5 564 89 13.037.46 5 535 24 183.91 176.00 89.08 -2.505.67 6.317.86 1.843.84 1.484.78 359.06 5 135 13,000.00 5,565.56 13,137.46 5,536.00 186.43 178.50 89.08 -2,506.10 6,417.85 1,843.85 1,479.76 364.09 5.064 13,100.00 5,566.24 13,237.46 5,536.77 188.95 181.01 89.08 -2,506.54 6,517.85 1,843.87 1,474.75 369.12 4.995 13.200.00 5.566.92 13.337.46 5.537.53 191.47 183.52 89.09 -2.506.97 6.617.84 1.843.88 1.469.73 374.15 4.928 13,300.00 5,567.60 13,437.46 5,538.30 193.98 186.02 89.09 -2,507.41 6,717.84 1,843.90 1,464.72 379.18 4.863 13,400.00 5,568.27 13,537.46 5,539.06 188.53 -2,507.84 6,817.84 1,843.91 1,459.70 384.22 4.799 196.50 89.09 13.500.00 5.568.95 13.637.46 5.539.83 199.02 191.04 89.10 -2.508.28 6.917.83 1.843.93 1.454.67 389.25 4.737 13,600.00 5,569.63 13,737.46 5,540.59 201.54 193.55 -2,508.71 7,017.83 1,843.94 1,449.65 394.29 4.677 89.10 13,700.00 5,570.31 13,837.46 5,541.36 204.06 196.06 89.10 -2,509.15 7,117.82 1,843.96 1,444.63 399.33 4.618 13,800.00 5,570.98 13,937.46 5,542.12 206.59 198.57 89.10 -2.509.58 7.217.82 1,843.97 1,439.61 404.37 4.560 14,037.46 5,542.89 13,900.00 5,571.66 209.11 201.09 89.11 -2,510.02 7,317.82 1,843.99 1,434.58 409.41 4.504 14,000.00 5,572.34 14,137.46 5,543.65 203.60 -2,510.45 7,417.81 1,844.00 1,429.55 414.45 4.449 211.63 89.11 14.100.00 5.573.02 14.237.46 5.544.42 214.15 206.11 89.11 -2.510.897.517.81 1.844.02 1.424.53 419.49 4.396 14,200.00 5,573.69 14,337.46 5,545.18 216.68 208.63 -2,511.33 7,617.81 1,844.03 1,419.50 424.53 4.344 89.11 5,574.37 14,437.46 5,545.95 219.20 211.14 -2,511.76 7,717.80 1,844.05 1,414.47 429.58 4.293 14,300.00 89.12 14.400.00 5.575.05 14.537.46 5 546 71 221 72 213.66 89 12 -2.512.20 7 817 80 1 844 06 1 409 44 434 62 4 243 5,547.48 14,637.46 -2,512.63 1,844.08 439.67 14,500.00 5,575.73 224.25 216.18 89.12 7,917.79 1,404.41 4.194 14,600.00 5,576.41 14,737.45 5,548.24 226.77 218.69 89.12 -2,513.07 8,017.79 1,844.09 1,399.37 444.72 4.147 14.700.00 5.577.08 14.837.45 5.549.00 229.30 221.21 -2.513.50 8.117.79 1.844.10 1.394.34 449.76 4.100 89.13 -2,513.94 1,844.12 14,800.00 5,577.76 14,937.45 5,549.77 231.83 223.73 89.13 8,217.78 1,389.31 454.81 4.055 15,037.45 14,900.00 5,578.44 5,550.53 234.35 226.25 89.13 -2,514.37 8,317.78 1,844.13 1,384.27 459.86 4.010 15.000.00 5.579.12 15.137.45 5.551.30 236.88 228.77 89.14 -2.514.818.417.77 1.844.15 1.379.24 464.91 3.967 15,100.00 5,579.79 15,237.45 5,552.06 239.41 231.29 89.14 -2,515.24 8,517.77 1,844.16 1,374.20 469.96 3.924 15,200.00 5,580.47 15,337.45 5,552.83 241.93 233.81 89.14 -2,515.68 8,617.77 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Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Des	sign: NV	/ Lybrook (138, 139,	140 & 141)	- NW Lyl	brook Unit 1	41H - Original	Hole - rev0					Offset Site Error:	0.00 ft
	rence	/WD Off:			lajor Axis		Offset Wellb	ore Centre		Rule Assi tance	-		Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
15,400.00	5,581.83	15,537.45	5,554.36	246.99	238.85	89.15	-2,516.55	8,817.76	1,844.21	1,359.09	485.12	3.802		
15,500.00	5,582.50	15,637.45	5,555.12	249.52	241.37	89.15	-2,516.98	8,917.75	1,844.22	1,354.05	490.17	3.762		
15,600.00	5,583.18	15,737.45	5,555.89	252.05	243.89	89.15	-2,517.42	9,017.75	1,844.24	1,349.01	495.23	3.724		
15,700.00	5,583.86	15,837.45	5,556.65	254.57	246.42	89.15	-2,517.85	9,117.75	1,844.25	1,343.97	500.28	3.686		
15,800.00	5,584.54	15,937.45	5,557.42	257.10	248.94	89.16	-2,518.29	9,217.74	1,844.27	1,338.93	505.34	3.650		
15,900.00	5,585.21	16,037.45	5,558.18	259.63	251.46	89.16	-2,518.72	9,317.74	1,844.28	1,333.89	510.40	3.613		
16,000.00	5,585.89	16,137.45	5,558.95	262.16	253.98	89.16	-2,519.16	9,417.73	1,844.30	1,328.85	515.45	3.578		
16,100.00	5,586.57	16,237.45	5,559.71	264.69	256.51	89.17	-2,519.59	9,517.73	1,844.31	1,323.80	520.51	3.543		
16,200.00	5,587.25	16,337.45	5,560.48	267.22	259.03	89.17	-2,520.03	9,617.73	1,844.33	1,318.76	525.57	3.509		
16,300.00	5,587.92	16,437.45	5,561.24	269.75	261.56	89.17	-2,520.46	9,717.72	1,844.34	1,313.72	530.63	3.476		
16,400.00	5,588.60	16,537.45	5,562.01	272.28	264.08	89.17	-2,520.90	9,817.72	1,844.36	1,308.67	535.69	3.443		
16,500.00	5,589.28	16,637.45	5,562.77	274.81	266.61	89.18	-2,521.33	9,917.72	1,844.37	1,303.63	540.74	3.411		
16,600.00	5,589.96	16,737.45	5,563.53	277.35	269.13	89.18	-2,521.77	10,017.71	1,844.39	1,298.58	545.80	3.379		
16,606.25	5,590.00	16,743.70	5,563.58	277.50	269.29	89.18	-2,521.79	10,023.96	1,844.39	1,298.27	546.12	3.377 SF		



Offset Site Error:

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: NW Lybrook (138, 139, 140 & 141) - NW Lybrook UT 131H - Or

														0.0
vey Progr		-MWD	ent	Som: N	laior Axis			oro Contro	Die	Rule Assig	gned:		Offset Well Error:	0.0
Reference	rence Vertical	Off: Measured	set Vertical	Reference	Offset	Highside	Offset Wellb		Between	tance Between	Minimum	Separation	Warning	
epth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor		
0.00	0.00	0.00	0.00	0.00	0.00	(°) -82.63	5.38	-41.57	43.60	(11)	(11)			
0.00	100.00	87.87	87.87	0.13	0.18	-82.06	5.82	-41.74	42.15	41.84	0.31	136.043		
00.00	200.00	187.97	187.96	0.49	0.53	-81.17	6.50	-41.82	42.32	41.29	1.03	41.229		
00.00	300.00	288.13	288.12	0.85	0.89	-80.68	6.83	-41.63	42.19	40.45	1.74	24.264		
00.00	400.00	388.19	388.19	1.21	1.24	-80.38	7.00	-41.28	41.87	39.42	2.45	17.106		
00.00	500.00	488.34	488.33	1.57	1.59	-80.50	6.81	-40.68	41.24	38.09	3.16	13.069		
64.79	564.79	552.81	552.79	1.80	1.81	-81.33	6.15	-40.33	40.80	37.19	3.61	11.300 CC		
00.00	600.00	587.54	587.50	1.93	1.93	-82.80	5.14	-40.68	41.01	37.15	3.86	10.637 ES		
00.00	700.00	686.49	686.26	2.29	2.27	-90.37	-0.28	-43.77	43.80	39.25	4.55	9.622		
00.00	800.00	786.19	785.60	2.64	2.62	-99.22	-7.74	-47.68	48.36	43.10	5.26	9.195		
00.00	900.00	885.57	884.50	3.00	2.98	-108.22	-16.83	-51.15	53.96	47.99	5.97	9.037		
00.00	1,000.00	984.52	982.52	3.36	3.36	-119.22	-30.05	-53.72	61.80	55.12	6.68	9.248		
00.00	1,099.95	1,084.60	1,081.31	3.71	3.76	-11.02	-46.07	-53.63	68.45	61.07	7.39	9.266		
00.00	1,199.63	1,183.17	1,178.44	4.05	4.16	-23.38	-62.71	-51.46	72.02	63.95	8.06	8.934		
00.00	1,298.77	1,280.27	1,273.85	4.40	4.57	-36.58	-80.58	-49.32	75.77	67.06	8.71	8.700 SF		
00.00	1,397.08	1,376.34	1,367.90	4.77	5.00	-50.81	-100.03	-46.97	81.72	72.36	9.36	8.727		
00.00	1,494.31	1,470.61	1,459.60	5.18	5.44	-64.95	-121.72	-44.33	92.80	82.74	10.07	9.219		
00.00	1,590.18	1,564.85	1,550.79	5.63	5.90	-77.59	-145.36	-41.76	109.59	98.69	10.91	10.049		
00.00	1,684.43	1,656.13	1,638.48	6.13	6.38	-87.31	-170.61	-40.32	132.18	120.36	11.82	11.180		
00.00	1,777.10	1,748.30	1,726.42	6.69	6.88	-95.51	-198.17	-38.67	160.30	147.43	12.86	12.460		
00.00	1,869.54	1,840.20	1,814.23	7.30	7.39	-102.11	-225.15	-35.78	191.59	177.67	13.93	13.757		
00.00	1,961.99	1,932.45	1,902.27	7.92	7.90	-106.93	-252.48	-32.43	225.17	210.17	15.00	15.016		
00.00	2,054.43	2,029.63	1,994.96	8.57	8.46	-110.46	-281.56	-30.16	259.02	242.88	16.14	16.045		
00.00	2,146.88	2,122.47	2,083.89	9.24	8.98	-113.24	-308.15	-28.22	292.62	275.40	17.22	16.991		
00.00	2,239.33	2,219.45	2,176.92	9.92	9.52	-115.60	-335.50	-26.28	326.42	308.07	18.36	17.782		
00.00	2,331.77	2,315.29	2,268.51	10.61	10.08	-117.17	-363.72	-26.01	359.78	340.29	19.49	18.460		
00.00	2,424.22	2,405.68	2,354.71	11.31	10.61	-118.29	-390.91	-26.13	393.28	372.72	20.56	19.127		
00.00	2,516.66	2,497.25	2,442.01	12.01	11.15	-119.32	-418.51	-25.13	427.96	406.30	21.65	19.765		
00.00	2,609.11	2,588.14	2,528.79	12.73	11.68	-120.27	-445.53	-23.66	463.00	440.27	22.73	20.368		
00.00	2,701.56	2,675.86	2,612.40	13.44	12.20	-121.05	-471.96	-21.58	498.95	475.18	23.77	20.988		
00.00	2,794.00	2,770.79	2,702.82	14.16	12.77	-121.76	-500.81	-19.50	534.92	510.00	24.92	21.467		
00.00	2,886.45	2,866.04	2,793.64	14.89	13.34	-122.43	-529.40	-16.94	571.25	545.18	26.07	21.915		
00.00	2,978.89	2,951.40	2,875.05	15.62	13.85	-122.98	-554.92	-14.26	607.95	580.87	27.08	22.449		
00.00	3,071.34	3,042.97	2,962.47	16.35	14.39	-123.58	-581.93	-10.63	645.28	617.10	28.17	22.903		
00.00	3,163.79	3,144.04	3,059.05	17.08	15.00	-124.17	-611.50	-7.01	682.24	652.85	29.40	23.209		
00.00	3,256.23	3,247.21	3,157.36	17.81	15.62	-124.54	-642.76	-5.62	717.68	687.02	30.66	23.409		
00.00	3,348.68	3,334.94	3,240.85	18.55	16.15	-124.80	-669.69	-4.53	753.20	721.46	31.73	23.736		
00.00	3,441.12	3,416.07	3,318.02	19.29	16.65	-125.03	-694.65	-2.88	789.49	756.77	32.72	24.131		
00.00	3,533.57	3,526.03	3,422.47	20.03	17.33	-125.27	-728.95	-0.94	825.66	791.57	34.09	24.222		
00.00	3,626.02	3,616.81	3,508.87	20.77	17.88	-125.47	-756.78	-0.27	860.78	825.57	35.21	24.448		
00.00	3,718.46	3,701.40	3,588.89	21.51	18.42	-125.54	-784.22	0.74	896.91	860.64	36.27	24.732		
00.00	3,810.91	3,798.32	3,680.55	22.26	19.03	-125.63	-815.67	2.12	933.27	895.78	37.49	24.895		
00.00	3,903.35	3,889.55	3,767.12	23.00	19.60	-125.75	-844.43	3.48	969.36	930.74	38.63	25.096		
00.00	3,995.80	3,982.66	3,855.69	23.75	20.17	-125.92	-873.09	5.28	1,005.57	965.80	39.78	25.280		
00.00	4,088.25	4,075.52	3,944.31	24.49	20.74	-126.16	-900.71	7.73	1,042.06	1,001.15	40.91	25.471		
00.00	4,181.66	4,165.14	4,029.79	25.20	21.28	-127.14	-927.51	10.06	1,077.10	1,035.12	41.98	25.655		
00.00	4,276.81	4,278.10	4,137.34	25.84	21.97	-127.70	-961.95	12.50	1,109.07	1,065.75	43.32	25.603		
00.00	4,373.44	4,393.59	4,246.98	26.40	22.69	-127.78	-998.25	12.01	1,135.96	1,091.31	44.65	25.439		
00.00	4,471.28	4,488.01	4,336.21	26.88	23.29	-127.61	-1,029.07	10.47	1,159.24	1,113.53	45.71	25.362		
00.00	4,570.07	4,585.00	4,428.00	27.30	23.91	-127.20	-1,060.36	8.74	1,179.35	1,132.61	46.74	25.232		
00.00	4,669.53	6,596.74	5,495.26	27.65	37.06	-59.20	-1,334.92	-1,153.61	1,097.99	1,063.05	34.94	31.422		
00.00	4,769.39	6,600.79	5,495.27	27.93	37.12	-55.88	-1,334.53	-1,157.64	1,021.82	984.41	37.40	27.318		

2/21/2023 1:25:35PM

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Offset Site Error:

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design:	NW Lybrook (138, 139, 140 & 141) - NW Lybrook UT 131H - Original Hole - MWD
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													011001 0110 211011	
Survey Prog		i4-MWD								Rule Assi	gned:		Offset Well Error:	0.00 ft
Refe Measured	erence Vertical	Off Measured	set Vertical	Reference	lajor Axis Offset	Highside	Offset Wellb	ore Centre	Between	ance Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
5,100.00	4,869.38	6,601.56	5,495.27	28.14	37.13	-174.65	-1,334.45	-1,158.41	951.88	911.67	40.21	23.673		
5,200.00	4,969.30	6,599.56	5,495.26	28.33	37.10	99.14	-1,334.65	-1,156.42	888.20	844.90	43.30	20.513		
5,300.00	5,067.55	6,582.68	5,495.23	28.41	36.85	104.21	-1,336.27	-1,139.62	833.75	787.48	46.27	18.017		
5,400.00	5,161.19	6,549.62	5,495.29	28.41	36.36	106.37	-1,339.42	-1,106.70	791.27	742.43	48.83	16.203		
5,500.00	5,247.38	6,503.00	5,495.56	28.38	35.70	106.27	-1,343.93	-1,060.31	762.05	711.35	50.70	15.030		
5,600.00	5,323.49	6,443.00	5,496.34	28.34	34.92	104.40	-1,350.09	-1,000.63	745.89	694.14	51.76	14.411		
5,700.00	5,387.22	6,371.86	5,497.79	28.34	34.09	101.46	-1,357.81	-929.93	740.88	688.82	52.06	14.230		
5,704.92	5,390.01	6,368.39	5,497.87	28.34	34.06	101.31	-1,358.20	-926.48	740.88	688.81	52.07	14.229		
5,800.00	5,438.83	6,297.92	5,499.70	28.43	33.36	98.51	-1,366.70	-856.55	744.22	692.35	51.87	14.346		
5,900.00	5,482.03	6,211.16	5,502.23	28.64	32.67	94.95	-1,378.22	-770.59	752.93	701.32	51.61	14.589		
6,000.00	5,508.97	6,118.56	5,503.60	28.99	32.10	91.92	-1,390.80	-678.87	764.94	713.66	51.28	14.917		
6,100.00	5,518.80	5,782.24	5,443.51	29.49	30.58	85.14	-1,394.92	-352.44	773.58	721.07	52.51	14.732		
6,200.00	5,519.48		5,382.18	30.16	29.95	80.24	-1,368.52	-246.27	756.01	703.47	52.54	14.389		
6,300.00	5,520.16	5,576.49	5,329.61	31.04	29.55	75.91	-1,348.59	-189.59	740.97	688.50	52.48	14.120		
6,400.00	5,520.84	5,526.00	5,292.34	32.12	29.30	72.83	-1,335.89	-158.02	733.88	681.26	52.62	13.948		
6,422.86	5,520.99	5,516.93	5,285.33	32.41	29.26	72.25	-1,333.65	-152.72	733.62	680.92	52.70	13.920		
6,500.00	5,521.52	5,469.53	5,247.69	33.39	29.03	69.15	-1,321.61	-126.56	736.45	683.63	52.82	13.944		
6,600.00	5,522.20		5,211.81	34.82	28.80	66.20	-1,309.53	-105.02	748.48	695.23	53.24	14.058		
6,700.00	5,522.87	5,400.00	5,189.82	36.39	28.67	64.40	-1,302.37	-93.23	771.34	717.31	54.03	14.277		
6,800.00	5,523.55		5,163.02	38.08	28.50	62.25	-1,293.78	-80.21	804.44	749.70	54.73	14.697		
6,900.00	5,524.23		5,143.38	39.87	28.39	60.69	-1,287.53	-71.63	846.92	791.40	55.52	15.253		
7,000.00	5,524.91	5,327.67	5,126.41	41.75	28.29	59.36	-1,282.23	-64.93	897.82	841.57	56.25	15.962		
7,100.00	5,525.58		5,106.85	43.70	28.17	57.85	-1,276.16	-57.84	955.83	899.05	56.78	16.834		
7,200.00	5,526.26		5,086.95	45.72	28.05	56.32	-1,269.75	-51.22	1,019.72	962.55	57.17	17.838		
7,300.00	5,526.94	5,258.84	5,064.05	47.79	27.90	54.57	-1,261.83	-44.19	1.088.39	1,031.02	57.37	18.970		
7,400.00	5,527.62		5,020.78	49.90	27.62	51.32	-1,246.24	-31.05	1,160.94	1,103.86	57.08	20.338		
7,500.00	5,528.29	5,191.38	5,003.12	52.06	27.50	50.01	-1,239.70	-25.55	1,236.42	1,179.21	57.21	21.612		
7,600.00	5,528.29	5,180.00	4,992.86	54.25	27.30	49.27	-1,235.86	-23.33	1,230.42	1,179.21	57.40	22.908		
7,700.00	5,529.65		4,992.80	56.47	27.43	49.27	-1,239.42	-17.60	1,314.84	1,338.31	57.40	22.908		
7,800.00	5,530.33	5,149.00	4,975.87	58.72	27.32	48.04	-1,225.19	-17.00	1,478.72	1,421.26	57.40	25.734		
7,800.00	5,531.00	5,137.91	4,904.83	60.99	27.24	47.23	-1,223.19	-14.01	1,563.55	1,506.05	57.50	27.193		
8 000 00	E E24 00	E 107 70	4.045.40	62.00	07.14	45.90	1 017 00	0.62	1 640 02	1 502 40	E7 E4	20,600		
8,000.00	5,531.68		4,945.48	63.28	27.11	45.89	-1,217.83	-9.63	1,649.93	1,592.42	57.51	28.688		
8,100.00	5,532.36		4,936.62	65.59	27.05	45.28	-1,214.53	-7.46	1,737.66	1,680.15	57.51	30.215		
8,200.00	5,533.04	5,118.00	4,936.62	67.92	27.05	45.28	-1,214.53	-7.46	1,826.58	1,768.98	57.60	31.710		



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

NW Lybrook (138, 139, 140 & 141) - NW Lybrook UT 289H - Original Hole - Gyro & MWD Offset Design: Offset Site Error: 0.00 ft Survey Program: Reference Measured Vertical 64-GYRO-NS, 464-MWD 0.00 ft Offset Well Error: Rule Assigned: S, 40 Offset → Vertical Distance Den Between Semi Major Axis ence Offset Offset Wellbore Centre Measured Reference Highside Betw Minimum Separation Warning +N/-S +E/-W Separation Depth Depth Depth Depth Toolface Centres Ellipses Factor (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft) (°) (ft) (ft) (ft) 0.00 0.00 0.00 0.00 2.51 -19.75 23.25 0.00 0.00 -82.76 100.00 100.00 87.97 87.97 0.13 0.17 -82.15 2.73 -19.82 20.00 19.70 0.31 65.397 200.00 200.00 188.04 188.04 0.52 -80.68 18.97 1.01 19.711 0.49 3.24 -19.72 19.99 300.00 300.00 288.09 288.09 0.85 0.87 -79 54 3 56 -19 29 19.62 17 89 1 72 11 393 7.967 400.00 400.00 388.07 388.07 1.21 1.20 -79.69 3.44 -18.89 19.20 16.79 2.41 500.00 500.00 488.05 488.04 1.57 1.36 -81.25 2.87 -18.68 18.90 15.97 2.93 6.459 547.84 535.85 1.74 1.40 2.51 18.82 3.14 6.001 CC 547.84 535.84 -82.35 -18.65 15.68 600.00 600.00 587.83 587.82 1.93 1.46 -81.06 2.96 -18.82 19.05 15.67 3.38 5.630 ES 700.00 687.37 687.24 2.29 7.34 17.41 3.92 5.445 700.00 1.64 -69.85 -20.00 21.32 800.00 800.00 786.59 786.14 2.64 1.86 -54.75 15.21 -21.52 26.42 21.92 4.50 5.876 900.00 900.00 884.54 883.42 3.00 -43.20 26.11 -24.52 5.10 7.075 2.14 36.11 31.01 1.000.00 1.000.00 979.13 2.46 39.45 45.57 5.72 981.43 3.36 -38.66 -31.56 51.29 8.961 1,100.00 1.099.95 1,077.72 1.073.66 3.71 2.82 83 26 53 94 -42 62 69.89 63.55 6.34 11.021 1,200.00 1,199.63 1,172.72 1,166.29 4.05 3.21 85.82 69.31 -57.04 91.18 84.22 6.96 13.101 1,300.00 1,298.77 1,266.23 1,256.75 4.40 3.64 89.27 86.54 -73.30 115.61 108.01 7.60 15.206 1.400.00 1.397.08 1.358.09 1.344.74 4.77 4.10 92.53 105.22 -91.92 143.66 135.37 8.29 17.338 1.500.00 1.494.31 1.451.51 1.433.74 5.18 4.61 95.90 125.16 -112.10 174.18 165.11 9.07 19.214 1,600.00 145.39 207.06 197.16 20.908 1,590.18 1,542.76 1,520.43 5.63 5.13 99.28 -132.14 9.90 1 700 00 1 684 43 1 635 58 1 608 38 6 13 5 68 102 57 166 23 -153 28 242.36 231 51 10.85 22 341 1,777.10 1,736.58 1,704.31 6.27 106.25 186.46 -177.53 277.72 265.76 23.222 1,800.00 6.69 11.96 1,900.00 1,869.54 1,833.71 1,797.05 7.30 6.84 109.43 203.54 -200.78 311.82 298.77 13.05 23.892 -221.96 14.14 2.000.00 1.961.99 1.929.32 1.888.93 7.92 7.37 112.23 219.40 345.49 331.36 24.440 2,100.00 2,054.43 2,020.28 1,976.63 8.57 7.87 114.64 234.44 -240.77 379.64 364.47 15.18 25.016 2,200.00 2,146.88 2,104.25 2,057.65 9.24 8.34 116.72 249.68 -256.76 415.82 399.67 16.14 25.762 2.300.00 2.239.33 2.196.51 2.146.55 9.92 8.85 118.68 267.23 -274.08 453.33 436.14 17.19 26.377 2,400.00 2,331.77 2,277.04 2,224.12 10.61 9.30 120.22 283.30 -288.58 492.14 474.04 27.185 18.10 2,500.00 2,424.22 2,366.24 2,309.94 11.31 9.81 121.81 302.51 -303.51 532.85 513.75 19.11 27.891 2.600.00 2.516.66 2.457.88 2 398 14 12.01 10.32 123.18 321.76 -319 25 573.35 553 21 20.14 28 474 2,700.00 2,609.11 2,546.85 2,483.59 12.73 10.83 124.27 340.86 -335.06 614.41 593.26 21.14 29.060 2,800.00 2,701.56 2,642.21 2,575.17 13.44 11.38 125.27 361.01 -352.37 655.30 633.07 22.23 29.483 2.900.00 2.794.00 2.734.00 2.663.29 14.16 11.91 126.07 380.03 -369.61 695.85 672.58 23.27 29.898 398.89 3,000.00 2,886.45 2,823.58 2,749.13 14.89 12.44 126.71 -386.95 736.72 712.41 24.31 30.309 3,100.00 2,978.89 2,915.48 2,837.13 15.62 127.28 418.16 -405.10 777.51 752.14 30.646 12.98 25.37 3.200.00 3.071.34 3.008.32 2.925.91 16.35 13.54 127.76 437.87 -423.79 818.54 792.09 26.45 30.944 3,163.79 3,300.00 3,105.34 3,018.89 17.08 14.11 128.23 457.55 -443.31 858.73 27.58 31.138 831.15 3,400.00 3,256.23 3,205.56 3,115.13 17.81 14.69 128.69 477.13 -463.28 898.33 869.60 28.73 31.265 3,205.48 3,500.00 3.348.68 3.299.50 18.55 15.23 129.11 494.96 -481.82 937.51 907.69 29.81 31.445 3,441.12 3,382.41 3,285.49 3,600.00 19.29 15.70 129.51 510.14 -497.37 976.37 945.61 30.77 31.736 3,533.57 3,441.15 3,342.01 20.03 16.03 129.81 522.56 -507.45 1,018.01 986.57 31.43 32.385 3,700.00 3.800.00 3.626.02 3.527.04 3.424.26 20.77 16.54 130.19 542.42 -522.17 1.061.53 1.029.12 32.41 32.752 3,900.00 3,718.46 3,616.50 3,509.95 21.51 17.06 130.55 562.84 -537.77 1,104.78 1,071.35 33.43 33.043 4,000.00 3,810.91 3,709.91 3,599.30 22.26 17.62 130.86 584.31 -554.54 1,148.10 1,113.59 34.51 33.267 4.100.00 3.903.35 3.802.02 3 687 27 23.00 18 17 131 11 605 47 -571 78 1.191.26 1.155.68 35 58 33 478 629.46 -590.94 1,233.56 4,200.00 3,995.80 3,913.08 3,793.99 23.75 18.81 131.49 1,196.72 36.85 33.480 4,300.00 4,088.25 4,028.81 3,906.22 24.49 19.43 132.03 651.72 -608.32 1,274.33 1,236.23 38.10 33.448 4.400.00 4.181.66 4.178.04 4.051.73 25.20 20.19 133.40 675.56 1.310.50 1.270.90 39.60 33.091 -631.17 4,500.00 4,296.37 690.65 1,340.39 4,276.81 4,167.72 25.84 20.75 134.31 -649.00 1,299.66 40.73 32.906

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4,570.07

4,669.53

4,769.39

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5,000.00

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation Page 10

702.75

710.12

714.38

718.43

721.85

-662.51

-669.82

-672.99

-676.01

-678.94

1,365.05

1.384.01

1,398.23

1,408.61

1,414.51

1,323.27

1.341.37

1,354.90

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1,369.90

41.78

42.64

43.33

43.97

44.60

32.674

32.456

32.271

32.036

31.714

COMPASS 5000.16 Build 96

4,422.01

4.543.03

4,648.42

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4,861.84

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135.14

135.91

136.50

136.85

136.97



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

ey Prog	ram: 64 rence	-GYRO-NS, 46 Offs		Somi M	ajor Axis		Offset Wellb	oro Contro	Die	Rule Assi tance	gned:		Offset Well Error:	
sured	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft) 100.00	(ft) 4,869.38	(ft) 4,971.02	(ft) 4,840.16	(ft) 28.14	(ft) 22.90	(°) 16.87	(ft) 724.40	(ft) -681.61	(ft) 1,416.44	(ft) 1,371.25	(ft) 45.19	31.344		
200.00	4,969.30	5,132.24	5,000.56	28.33	22.90	-73.23	724.40	-671.07	1,414.95	1,369.21	45.74	30.934		
300.00	4,909.30 5,067.55	5,253.32	5,114.77	28.33	23.20	-73.23	702.84	-635.76	1,404.74	1,358.91	45.83	30.648		
100.00	5,161.19	5,301.00	5,156.01	28.41	23.23	-73.34	694.24	-613.51	1,391.63	1,345.75	45.87	30.336		
\$00.00	5,247.38	5,350.29	5,195.07	28.38	23.22	-74.22	685.36	-584.84	1,391.03	1,345.75	45.86	30.038		
600.00	5,323.49	5,395.00	5,227.93	28.34	23.16	-76.56	678.65	-555.30	1,363.34	1,317.46	45.88	29.715		
00.00	5,387.22	5,415.13	5,242.42	28.34	23.16	-77.98	676.49	-541.50	1,349.90	1,303.87	46.03	29.325		
300.00	5,438.83	5,439.82	5,260.05	28.43	23.16	-78.78	674.94	-524.28	1,338.81	1,292.45	46.36	28.879		
900.00	5,482.03	5,458.00	5,272.93	28.64	23.16	-79.68	674.66	-511.45	1,331.65	1,284.80	46.85	28.423		
00.00	5,508.97	5,490.00	5,295.22	28.99	23.17	-80.76	676.27	-488.56	1,327.63	1,280.00	47.63	27.873		
64.70	5,517.31	5,490.00	5,295.22	29.31	23.17	-80.86	676.27	-488.56	1,326.63	1,278.45	48.19	27.531		
00.00	5,518.80	5,504.29	5,304.99	29.49	23.18	-81.26	677.72	-478.25	1,326.77	1,278.22	48.55	27.328		
200.00	5,519.48	5,556.76	5,340.72	30.16	23.20	-82.81	683.98	-440.33	1,330.15	1,280.39	49.77	26.727		
00.00	5,520.16	5,615.00	5,380.46	31.04	23.23	-84.53	691.48	-398.43	1,337.84	1,286.71	51.14	26.162		
00.00	5,520.84	5,807.81	5,484.96	32.12	23.47	-89.00	706.72	-238.15	1,343.32	1,289.79	53.53	25.094		
500.00	5,521.52	5,909.88	5,521.25	33.39	23.81	-90.52	711.51	-142.93	1,348.59	1,292.84	55.76	24.188		
00.00	5,522.20	6,030.43	5,543.99	34.82	24.55	-91.45	716.72	-24.85	1,353.79	1,295.26	58.53	23.130		
00.00	5,522.87	6,118.92	5,550.16	36.39	25.40	-91.68	720.21	63.32	1,358.33	1,297.06	61.27	22.169		
800.00	5,523.55	6,209.75	5,551.01	38.08	26.49	-91.68	724.73	154.04	1,363.72	1,299.46	64.27	21.220		
00.00	5,524.23	6,322.02	5,551.04	39.87	28.13	-91.65	729.64	266.20	1,368.45	1,300.61	67.84	20.172		
00.00	5,524.91	6,413.02	5,551.02	41.75	29.63	-91.61	733.99	357.10	1,373.61	1,302.33	71.28	19.271		
00.00	5 505 50	0.540.04	5 5 40 70	40.70	04.40	04 50	700.44	450.04	4 070 05	4 000 00	75.00	40.000		
00.00	5,525.58 5,526.26	6,516.01 6,621.16	5,549.72 5,548.46	43.70 45.72	31.46 33.45	-91.52 -91.44	739.11 743.76	459.94 564.98	1,378.95 1,383.73	1,303.86 1,304.62	75.09 79.12	18.363 17.490		
200.00	5,526.20	6,728.35	5,547.58	47.79	35.57	-91.44	748.39	672.07	1,388.44	1,304.02	83.31	16.665		
00.00	5,527.62	6,837.25	5,546.30	49.90	37.81	-91.28	752.23	780.89	1,392.34	1,303.13	87.67	15.882		
00.00	5,528.29	6,943.64	5,545.41	52.06	40.07	-91.21	755.39	887.23	1,395.69	1,303.62	92.07	15.159		
600.00	5,528.97	7,059.46	5,544.53	54.25	42.58	-91.14	757.92	1,003.02	1,398.27	1,301.51	96.75	14.452		
700.00	5,529.65	7,168.01	5,543.92	56.47	44.99	-91.08	759.35	1,111.56	1,399.97	1,298.61	101.36	13.811		
300.00	5,530.33	7,248.26	5,544.35	58.72	46.79	-91.07	760.66	1,191.79	1,402.04	1,296.60	105.43	13.298		
00.00	5,531.00	7,403.89	5,545.99	60.99	50.34	-91.10	762.35	1,347.38	1,403.92	1,292.79	111.13	12.633		
00.00	5,531.68	7,500.57	5,546.26	63.28	52.57	-91.08	760.91	1,444.05	1,402.84	1,287.17	115.67	12.128		
00.00	5,532.36	7,608.26	5,543.82	65.59	55.08	-90.95	759.18	1,551.70	1,401.59	1,281.13	120.46	11.635		
00.00	5,533.04	7,713.05	5,542.23	67.92	57.54	-90.86	756.73	1,656.45	1,399.62	1,274.38	125.24	11.176		
800.00	5,533.71	7,812.83	5,542.26	70.27	59.90	-90.84	754.34	1,756.20	1,397.64	1,267.69	129.95	10.755		
91.85	5,534.34	7,880.00	5,542.30	72.43	61.49	-90.82	753.45	1,823.36	1,396.80	1,263.01	133.80	10.440		
00.00	5,534.39	7,885.83	5,542.32	72.62	61.63	-90.82	753.43	1,829.19	1,396.81	1,262.68	134.13	10.414		
00.00	5,535.07	7,959.98	5,543.38	74.99	63.40	-90.84	753.95	1,903.33	1,397.93	1,259.62	138.31	10.107		
00.00	5,535.75	8,081.86	5,544.41	77.37	66.32	-90.85	754.66	2,025.18	1,398.88	1,255.30	143.58	9.743		
00.00	5,536.43	8,212.27	5,542.23	79.76	69.46	-90.72	753.15	2,155.56	1,398.07	1,249.06	149.01	9.382		
00.00	5,537.10	8,311.98	5,540.30	82.17	71.88	-90.62	750.85	2,255.22	1,396.16	1,242.32	153.84	9.076		
00.00	5,537.78	8,391.18	5,539.82	84.57	73.80	-90.58	749.72	2,334.41	1,395.14	1,236.90	158.25	8.816		
10.00	E E07.00	9 400 50	E E20 74	04.07	74.00	00.57	740.07	0.040.75	4 905 40	1 000 05	450 70	0 707		
12.22	5,537.86	8,400.52	5,539.74	84.87	74.03	-90.57	749.67	2,343.75	1,395.13	1,236.35	158.78	8.787		
00.00	5,538.46	8,483.78	5,537.98	86.99	76.05	-90.47	749.52	2,426.99	1,395.32	1,232.38	162.94	8.563		
00.00	5,539.14 5,539.81	8,573.17 8,660.00	5,535.32 5,533.00	89.41 91.84	78.23 80.35	-90.34 -90.22	749.71 750.40	2,516.33 2,603.13	1,395.94 1,397.18	1,228.37 1,225.05	167.56 172.12	8.331 8.117		
00.00	5,539.61	8,747.41	5,533.00 5,532.91	91.64	80.35 82.49	-90.22	750.40	2,603.13	1,397.18	1,223.05	172.12	7.922		
	2,210.10	-,	-,	0.1.20			. 02.20	_,	.,	.,0.02				
00.00	5,541.17	8,873.87	5,532.85	96.72	85.59	-90.15	754.23	2,816.96	1,401.68	1,219.45	182.23	7.692		
00.00	5,541.85	8,991.16	5,532.15	99.17	88.48	-90.09	753.65	2,934.25	1,401.52	1,213.99	187.53	7.474		
24.45	5,542.01	9,012.98	5,532.09	99.77	89.02	-90.08	753.54	2,956.06	1,401.50	1,212.82	188.68	7.428		
00.00	5,542.52	9,067.42	5,532.51	101.62	90.36	-90.09	753.59	3,010.51	1,401.94	1,210.03	191.91	7.305		
00.00	5,543.20	9,154.14	5,535.29	104.07	92.50	-90.18	755.42	3,097.15	1,404.40	1,207.90	196.50	7.147		
00.00	5,543.88	9,290.34	5,536.72	106.53	95.87	-90.20	756.40	3,233.34	1,405.52	1,203.24	202.29	6.948		



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Des	sign: ^{NV}	V Lybrook (138, 139,	140 & 141) -	- NW Ly	brook UT 28	9H - Original H	ole - Gyro	& MWD				Offset Site Error:	0.00 ft
Survey Progr	ram: 64	-GYRO-NS, 46	64-MWD							Rule Assi	gned:		Offset Well Error:	0.00 ft
Refer Measured	rence Vertical	Off Measured	set Vertical	Semi M Reference	ajor Axis Offset	Highside	Offset Wellbo	ore Centre	Dist Between	ance Between	Minimum	Separation	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor	warning	
9,806.53	5,543.92	9,298.96	5,536.71	106.69	96.08	-90.19	756.34	3,241.96	1,405.51	1,202.86	202.65	6.936		
9,900.00	5,544.56	9,365.56	5,536.94	109.00	97.73	-90.18	757.01	3,308.55	1,406.64	1,199.99	206.65	6.807		
10,000.00	5,545.23	9,521.58	5,534.90	111.46	101.60	-90.06	754.64	3,464.53	1,405.12	1,192.32	212.80	6.603		
10,100.00	5,545.91	9,602.00	5,534.27	113.94	103.60	-90.01	753.07	3,544.92	1,403.56	1,186.17	217.38	6.457		
10,200.00	5,546.59	9,693.84	5,535.27	116.41	105.88	-90.03	752.17	3,636.75	1,402.99	1,180.82	222.18	6.315		
10,234.54	5,546.82	9,723.23	5,535.69	117.26	106.61	-90.04	752.00	3,666.14	1,402.93	1,179.15	223.78	6.269		
10,300.00	5,547.27	9,784.58	5,535.89	118.89	108.14	-90.03	751.84	3,727.49	1,403.04	1,176.09	226.94	6.182		
10,400.00	5,547.94	9,890.18	5,534.13	121.37	110.77	-89.93	751.31	3,833.07	1,402.94	1,170.90	232.04	6.046		
10,415.96	5,548.05	9,904.70	5,533.89	121.76	111.13	-89.91	751.24	3,847.59	1,402.93	1,170.13	232.80	6.026		
10,500.00	5,548.62	9,985.66	5,532.56	123.85	113.15	-89.83	750.99	3,928.54	1,403.03	1,166.12	236.91	5.922		
10,600.00	5,549.30	10,074.95	5,531.27	126.33	115.38	-89.76	751.12	4,017.82	1,403.61	1,161.97	241.64	5.809		
10,700.00	5,549.98	10,165.22	5,530.03	128.82	117.63	-89.68	751.97	4,108.08	1,404.98	1,158.60	246.38	5.702		
10,800.00	5,550.66	10,257.50	5,528.41	131.31	119.93	-89.59	753.37	4,200.33	1,406.93	1,155.77	251.16	5.602		
10,900.00	5,551.33	10,396.47	5,525.21	133.80	123.41	-89.42	754.52	4,339.25	1,408.36	1,151.29	257.07	5.478		
11,000.00	5,552.01	10,483.00	5,524.18	136.29	125.57	-89.36	753.55	4,425.77	1,407.76	1,145.99	261.77	5.378		
11,003.54	5,552.03	10,491.99	5,524.16	136.38	125.80	-89.35	753.50	4,434.76	1,407.75	1,145.67	262.07	5.372		
11,100.00	5,552.69	10,573.23	5,524.73	138.78	127.83	-89.36	753.72	4,515.99	1,408.39	1,141.85	266.54	5.284		
11,200.00	5,553.37	10,723.21	5,523.47	141.28	131.59	-89.26	752.53	4,665.94	1,408.18	1,135.62	272.57	5.166		
11,300.00	5,554.04	10,817.52	5,520.25	143.78	133.95	-89.10	749.78	4,760.16	1,405.76	1,128.29	277.47	5.066		
11,400.00	5,554.72	10,891.79	5,518.53	146.28	135.81	-89.01	748.47	4,834.38	1,404.51	1,122.54	281.97	4.981		
11,407.68	5,554.77	10,896.83	5,518.36	146.47	135.94	-89.00	748.44	4,839.43	1,404.50	1,122.20	282.29	4.975		
11,500.00	5,555.40	10,992.09	5,514.00	148.78	138.33	-88.80	748.32	4,934.58	1,404.88	1,117.92	286.96	4.896		
11,600.00	5,556.08	11,133.43	5,507.98	151.28	141.87	-88.51	745.50	5,075.76	1,403.50	1,110.81	292.68	4.795		
11,700.00	5,556.75	11,237.00	5,498.48	153.79	144.45	-88.09	741.17	5,178.79	1,400.01	1,102.34	297.67	4.703		
11,800.00	5,557.43	11,301.00	5,492.62	156.29	146.05	-87.83	739.85	5,242.51	1,398.43	1,096.40	302.03	4.630		
11,900.00	5,558.11	11,407.32	5,486.23	158.80	148.72	-87.54	737.72	5,348.59	1,397.09	1,089.99	307.09	4.549		
11,935.34	5,558.35	11,426.00	5,485.91	159.68	149.18	-87.52	737.45	5,367.27	1,396.82	1,088.30	308.52	4.527		
12,000.00	5,558.79	11,460.94	5,485.74	161.30	150.06	-87.50	737.55	5,402.21	1,397.39	1,086.38	311.01	4.493		
12,100.00	5,559.46	11,538.68	5,486.33	163.81	152.01	-87.51	740.14	5,479.90	1,400.95	1,085.61	315.35	4.443		
12,200.00	5,560.14	11,652.28	5,487.49	166.32	154.87	-87.53	743.58	5,593.44	1,404.41	1,083.62	320.79	4.378		
12,300.00	5,560.82	11,742.00	5,488.39	168.83	157.12	-87.55	745.88	5,683.13	1,407.39	1,081.90	325.49	4.324		
12,400.00	5,561.50	11,805.00	5,489.65	171.34	158.70	-87.59	749.24	5,746.02	1,412.75	1,083.58	329.18	4.292		
12,500.00	5,562.18	11,902.85	5,490.73	173.86	161.15	-87.62	755.12	5,843.69	1,419.15	1,085.05	334.10	4.248		
12,600.00	5,562.85	11,996.27	5,491.88	176.37	163.48	-87.65	760.85	5,936.92	1,425.67	1,086.82	338.85	4.207 SF		
12,700.00	5,563.53	12,029.00	5,492.32	178.88	164.30	-87.66	762.91	5,969.58	1,433.91	1,093.36	340.55	4.211		
12,800.00	5,564.21	12,029.00	5,492.32	181.40	164.30	-87.66	762.91	5,969.58	1,448.65	1,109.73	338.92	4.274		
12,900.00	5,564.89	12,029.00	5,492.32	183.91	164.30	-87.66	762.91	5,969.58	1,470.06	1,134.66	335.39	4.383		
13,000.00	5,565.56	12,029.00	5,492.32	186.43	164.30	-87.66	762.91	5,969.58	1,497.85	1,167.62	330.23	4.536		
13,100.00	5,566.24	12,029.00	5,492.32	188.95	164.30	-87.66	762.91	5,969.58	1,531.68	1,207.94	323.74	4.731		
13,200.00	5,566.92	12,029.00	5,492.32	191.47	164.30	-87.66	762.91	5,969.58	1,571.15	1,254.91	316.25	4.968		
13,300.00	5,567.60	12,029.00	5,492.32	193.98	164.30	-87.66	762.91	5,969.58	1,615.86	1,307.82	308.05	5.246		
13,400.00	5,568.27	12,029.00	5,492.32	196.50	164.30	-87.66	762.91	5,969.58	1,665.38	1,365.97	299.41	5.562		
13,500.00	5,568.95	12,029.00	5,492.32	199.02	164.30	-87.66	762.91	5,969.58	1,719.30	1,428.74	290.56	5.917		
13,600.00	5,569.63	12,029.00	5,492.32	201.54	164.30	-87.66	762.91	5,969.58	1,777.21	1,495.53	281.68	6.309		
13,700.00	5,570.31	12,029.00	5,492.32	204.06	164.30	-87.66	762.91	5,969.58	1,838.74	1,565.83	272.91	6.738		

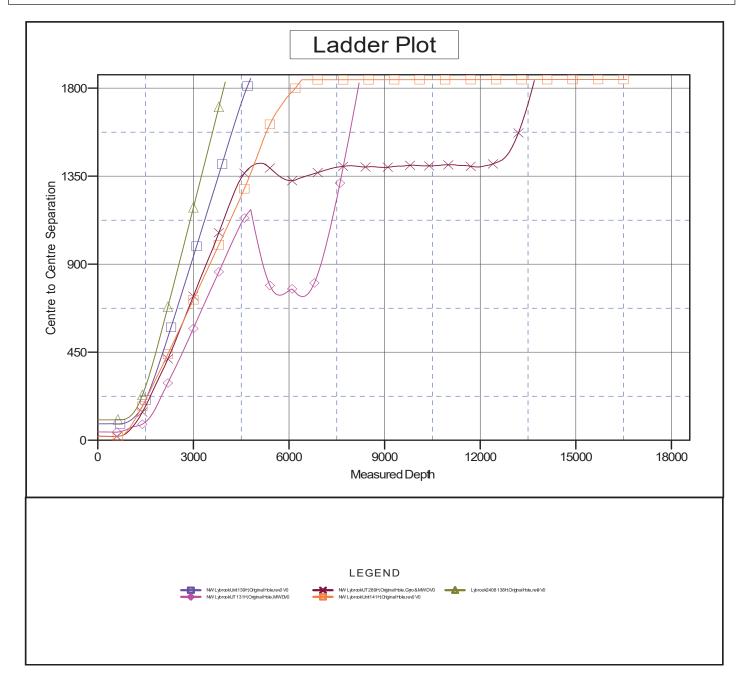
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation 2/21/2023 1:25:35PM

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Reference Depths are relative to RKB=6847+25 @ 6872.00ft Offset Depths are relative to Offset Datum Central Meridian is -107.8333333333 Coordinates are relative to: NW Lybrook Unit 140H Coordinate System is US State Plane 1983, New Mexico Western Zone Grid Convergence at Surface is: 0.11°

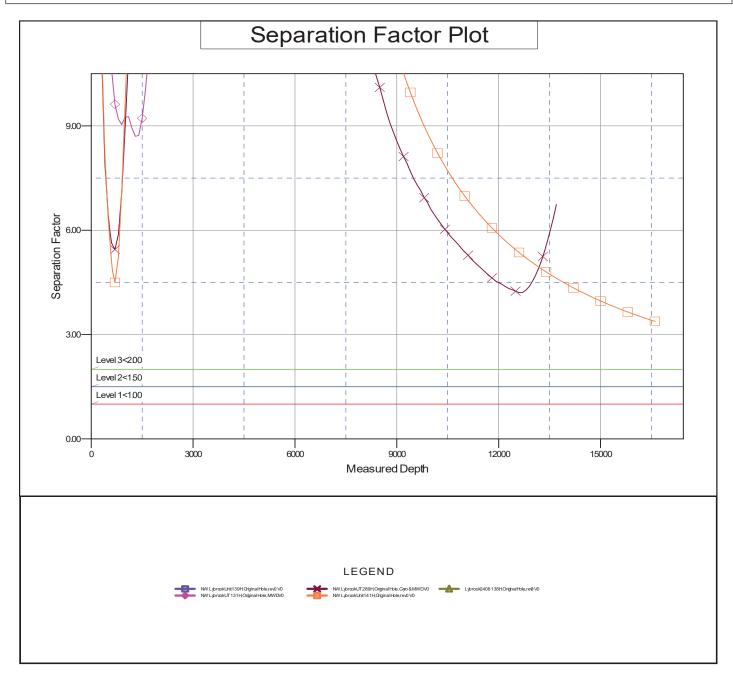


Received by OCD: 12/16/2024 3:34:17 PM



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well NW Lybrook Unit 140H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6847+25 @ 6872.00ft
Reference Site:	NW Lybrook (138, 139, 140 & 141)	MD Reference:	RKB=6847+25 @ 6872.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	NW Lybrook Unit 140H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6847+25 @ 6872.00ft Offset Depths are relative to Offset Datum Central Meridian is -107.8333333333 Coordinates are relative to: NW Lybrook Unit 140H Coordinate System is US State Plane 1983, New Mexico Western Zone Grid Convergence at Surface is: 0.11°



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



United States Department of the Interior

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



In Reply Refer To: 3162.3-1(NMF0110)

* Enduring Resources LLC

#140H NW LYBROOK UNIT

Lease: NOG02071608 Agreement: NMNM133482A SH: SW¼SW¼ Section 25, T. 24N., R. 8W. San Juan County, New Mexico BH: NE¼NE¼ Section 31, T. 24N., R. 7W. 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. \boxtimes 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. <u>GENERAL</u>

- 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 $8-1/2 \times 11$ inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).
- F. BOP equipment (except the annular preventer) shall be tested utilizing a test plug to full working pressure for 10 minutes. No bleed-off of pressure is acceptable. (See 43 CFR 3172.6(b)(9)(ii)).
- G. The operator shall have sufficient weighting materials and lost circulation materials on location in the event of a pressure kick or in the event of lost circulation. (See 43 CFR 3172.8(a)).
- H. The flare line(s) discharge shall be located not less than 100 feet from the well head, having straight lines unless turns are targeted with running tees, and shall be positioned downwind of the prevailing wind direction and shall be anchored. The flare system shall have an effective method for ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare. (See 43 CFR 3172.8(b)(7)).
- I. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a Notice of Intent sundry within three business days. Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to Virgil Lucero at 505-793-1836.
- J. The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.
- K. Unless drilling operations are commenced within three years according to 43 CFR 3171.14, approval of the Application for Permit to Drill will expire. No extensions will be granted.

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

II. <u>REPORTING REQUIREMENTS</u>

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

III. DRILLER'S LOG

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

IV. GAS FLARING

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

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

V. SAFETY

A. All rig heating stoves are to be of the explosion-proof type.

B. Rig safety lines are to be installed.

C. Hard hats and other Personal Protective Equipment (PPE) must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

A. Any changes of plans required to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.I.

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

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

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/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

Operator:	OGRID:
ENDURING RESOURCES, LLC	372286
6300 S Syracuse Way	Action Number:
Centennial, CO 80111	412586
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
sford	Cement is required to circulate on both surface and intermediate1 strings of casing.	12/16/2024
sford	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	12/16/2024
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	1/12/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	1/12/2025
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.	1/12/2025
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.	1/12/2025

CONDITIONS

Action 412586

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