

Form 3160-3  
(June 2015)

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

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

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address	3b. Phone No. (include area code)	9. API Well No. 30-043-21514
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area
		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Well plat certified by a registered surveyor.</li> <li>2. A Drilling Plan.</li> <li>3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).</li> </ul> | <ul style="list-style-type: none"> <li>4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).</li> <li>5. Operator certification.</li> <li>6. Such other site specific information and/or plans as may be requested by the BLM.</li> </ul> |
|---|---|

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

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

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



(Continued on page 2)

\*(Instructions on page 2)

## INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48( d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to a new evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

0. SHL: NWNE / 293 FNL / 2192 FEL / TWSP: 22N / RANGE: 7W / SECTION: 22 / LAT: 36.131287 / LONG: -107.561279 ( TVD: 0 feet, MD: 0 feet )  
PPP: NWNE / 1187 FNL / 2458 FEL / TWSP: 22N / RANGE: 7W / SECTION: 22 / LAT: 36.128855 / LONG: -107.562188 ( TVD: 4805 feet, MD: 5215 feet )  
PPP: SWNW / 1590 FNL / 0 FWL / TWSP: 22N / RANGE: 7W / SECTION: 23 / LAT: 36.127533 / LONG: -107.55387 ( TVD: 4847 feet, MD: 7900 feet )  
PPP: SWNE / 2251 FNL / 0 FEL / TWSP: 22N / RANGE: 7W / SECTION: 23 / LAT: 36.125659 / LONG: -107.536239 ( TVD: 4861 feet, MD: 11500 feet )  
PPP: SWNW / 2251 FNL / 0 FWL / TWSP: 22N / RANGE: 7W / SECTION: 24 / LAT: 36.125659 / LONG: -107.536239 ( TVD: 4861 feet, MD: 11500 feet )  
PPP: SWNE / 2272 FNL / 2596 FWL / TWSP: 22N / RANGE: 7W / SECTION: 24 / LAT: 36.125605 / LONG: -107.527449 ( TVD: 4862 feet, MD: 11600 feet )  
BHL: SENE / 2284 FNL / 1101 FEL / TWSP: 22N / RANGE: 7W / SECTION: 24 / LAT: 36.125574 / LONG: -107.522389 ( TVD: 4910 feet, MD: 17279 feet )

### BLM Point of Contact

Name: DAVE J MANKIEWICZ

Title: AFM-Minerals

Phone: (505) 564-7761

Email: DMANKIEW@BLM.GOV

CONFIDENTIAL

District II  
 811 S. First Street, Artesia, NM 88210  
 Phone: (575) 748-1283 Fax: (575) 748-9720

District III  
 1000 Rio Brazos Road, Aztec, NM 87410  
 Phone: (505) 334-6178 Fax: (505) 334-6170

District IV  
 1220 S. St. Francis Drive, Santa Fe, NM 87505  
 Phone: (505) 476-3460 Fax: (505) 476-3462

Submit one copy to  
 Appropriate District Office

**OIL CONSERVATION DIVISION**  
 1220 South St. Francis Drive  
 Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-043-21514</b>		<sup>2</sup> Pool Code 52860	<sup>3</sup> Pool Name RUSTY GALLUP OIL POOL
<sup>4</sup> Property Code 322151	<sup>5</sup> Property Name S ESCAVADA UNIT		<sup>6</sup> Well Number 346H
<sup>7</sup> GRID No. 372286	<sup>8</sup> Operator Name ENDURING RESOURCES, LLC		<sup>9</sup> Elevation 6867'

<sup>10</sup>Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	22	22N	7W		293	NORTH	2192	EAST	SANDOVAL

<sup>11</sup>Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	24	22N	7W		2284	NORTH	1101	EAST	SANDOVAL

<sup>12</sup> Dedicated Acres 520.00	NE/4 - Section 22 S/2 N/2 - Section 24 W/2 NW/4, SE/4 NW/4, S/2 NE/4 - Section 23	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-14347
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*Shaw-Marie Ford* 1/31/24  
 Signature Date  
 Shaw-Marie Ford  
 Printed Name  
 sford@djrlc.com  
 E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION  
 I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  
 Date Revised: JULY 26, 2023  
 Survey Date: JANUARY 21, 2022  
 Signature and Seal of Professional Surveyor



**JASON C. EDWARDS**  
 Certificate Number 15269

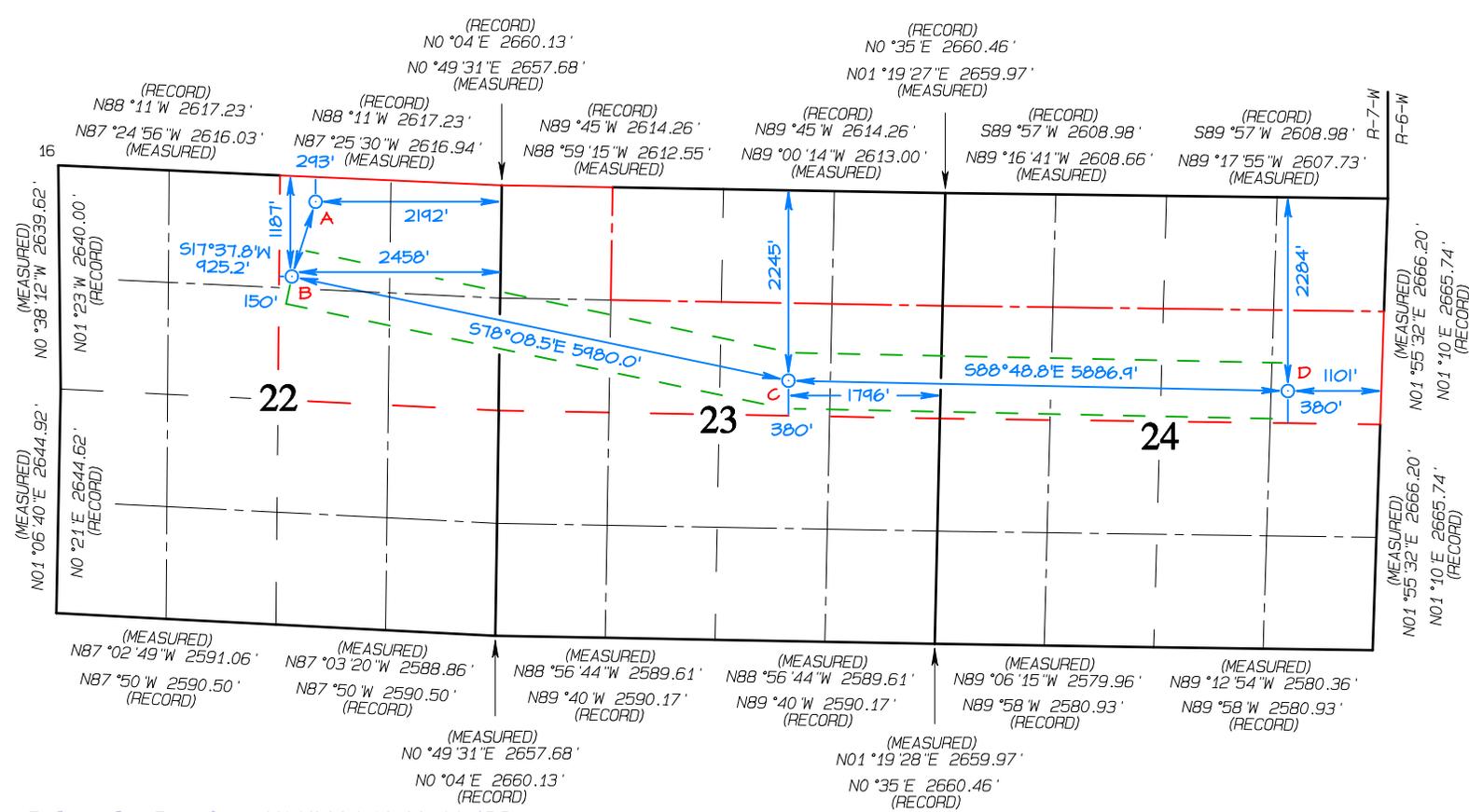
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

**SURFACE LOCATION (A)**  
 293' FNL 2192' FEL  
 SEC 22, T22N, R7W  
 LAT 36.131287°N  
 LONG -107.561279°W  
 DATUM: NAD1983

**FIRST TAKE POINT (B)**  
 1187' FNL 2458' FEL  
 SEC 22, T22N, R7W  
 LAT 36.128855°N  
 LONG -107.562188°W  
 DATUM: NAD1983

**ANGLE POINT (C)**  
 2245' FNL 1796' FEL  
 SEC 23, T22N, R7W  
 LAT 36.125696°N  
 LONG -107.542319°W  
 DATUM: NAD1983

**LAST TAKE POINT (D)**  
 2284' FNL 1101' FEL  
 SEC 24, T22N, R7W  
 LAT 36.125574°N  
 LONG -107.522389°W  
 DATUM: NAD1983



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 811 S. First Street, Artesia, NM 88210  
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 1220 South St. Francis Drive  
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Submit one copy to  
 Appropriate District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number		<sup>2</sup> Pool Code 52860		<sup>3</sup> Pool Name RUSTY GALLUP OIL POOL	
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<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	22	22N	7W		293	NORTH	2192	EAST	SANDOVAL

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	24	22N	7W		2284	NORTH	1101	EAST	SANDOVAL

<sup>12</sup> Dedicated Acres 520.00	NE/4 - Section 22 S/2 N/2 - Section 24 W/2 NW/4, SE/4 NW/4, S/2 NE/4 - Section 23	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-14347
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**17 OPERATOR CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Shaw-Marie Ford* 1/31/24  
 Signature Date  
 Shaw-Marie Ford  
 Printed Name  
 sford@djrlc.com  
 E-mail Address

**18 SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

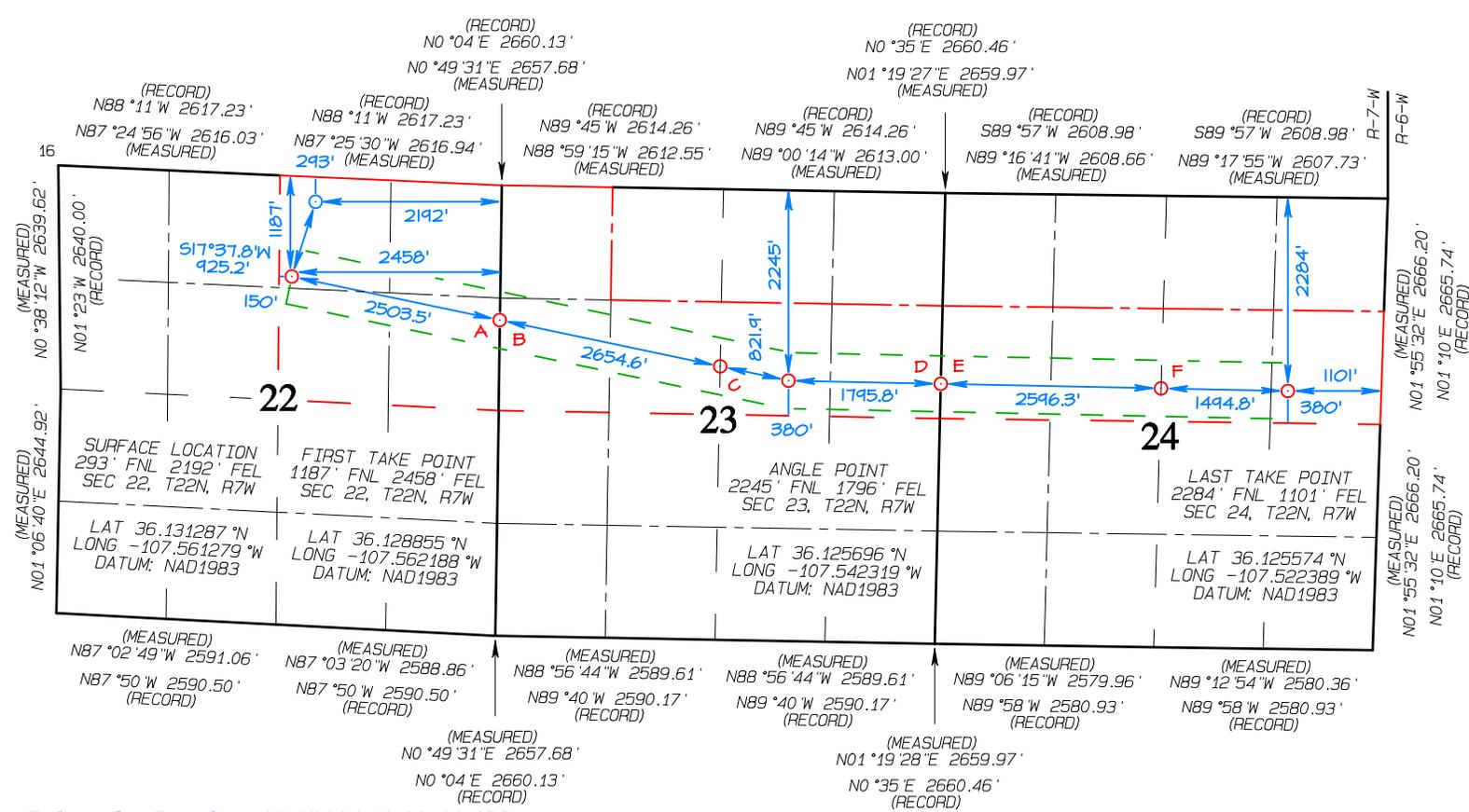
Date Revised: JULY 26, 2023  
 Survey Date: JANUARY 21, 2022

Signature and Seal of Professional Surveyor



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

- LEASE X-ING (A)  
1590' FNL 0' FEL  
SEC 22, T22N, R7W  
LAT 36.127533°N  
LONG -107.553870°W  
DATUM: NAD1983
- LEASE X-ING (B)  
1590' FNL 0' FWL  
SEC 23, T22N, R7W  
LAT 36.127533°N  
LONG -107.553870°W  
DATUM: NAD1983
- LEASE X-ING (C)  
2090' FNL 2606' FWL  
SEC 23, T22N, R7W  
LAT 36.126130°N  
LONG -107.545050°W  
DATUM: NAD1983
- LEASE X-ING (D)  
2251' FNL 0' FEL  
SEC 23, T22N, R7W  
LAT 36.125659°N  
LONG -107.536239°W  
DATUM: NAD1983
- LEASE X-ING (E)  
2251' FNL 0' FWL  
SEC 24, T22N, R7W  
LAT 36.125659°N  
LONG -107.536239°W  
DATUM: NAD1983
- LEASE X-ING (F)  
2272' FNL 2596' FWL  
SEC 24, T22N, R7W  
LAT 36.125605°N  
LONG -107.527449°W  
DATUM: NAD1983



State of New Mexico  
 Energy, Minerals and Natural Resources Department

Submit Electronically  
 Via E-permitting

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

## NATURAL GAS MANAGEMENT PLAN

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

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** Enduring Resources, LLC OGRID: 372286 **Date:** 03 / 22 / 2024

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

If Other, please describe: \_\_\_\_\_

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
S Escavada Unit 337H	TBD	B-22-22N-07W	306 FNL x 2207 FEL	599	2138	1026
S Escavada Unit 345H	TBD	B-22-22N-07W	279 FNL x 2177 FEL	692	2472	986
S Escavada Unit 346H	TBD	B-22-22N-07W	293 FNL x 2192 FEL	826	2949	1016

**IV. Central Delivery Point Name:** South Escavada CDP [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
S Escavada Unit 337H	TBD	4/10/2024	5/11/2024	8/26/2024	9/12/2024	9/17/2024
S Escavada Unit 345H	TBD	4/11/2024	5/12/2024	8/26/2024	9/12/2024	9/17/2024
S Escavada Unit 346H	TBD	4/12/2024	5/13/2024	8/26/2024	9/12/2024	9/17/2024

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

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

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

**Section 2 – Enhanced Plan**

**EFFECTIVE APRIL 1, 2022**

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

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

**IX. Anticipated Natural Gas Production:**

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

**X. Natural Gas Gathering System (NGGS):**

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

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

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

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

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

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

### Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

### Section 4 - Notices

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

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

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

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

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

Signature: <i>Shaw-Marie Ford</i>
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@enduringresources.com
Date: 3/22/2024
Phone: 505-716-3297
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:



**ENDURING RESOURCES, LLC**  
OGRID NO: 372286  
NATURAL GAS MANAGEMENT PLAN  
S Escavada Unit 337H, 345H, 346H  
NWNE B-22-22N-07W

**SEPARATION EQUIPMENT**

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

Separation equipment will be set as follows:

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

Heater treaters will be set as follows:

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

Vapor Recovery Equipment will be set as follows:

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

Production storage tanks will be set as follows:

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



**ENDURING RESOURCES, LLC**  
OGRID NO: 372286  
NATURAL GAS MANAGEMENT PLAN  
S Escavada Unit 337H, 345H, 346H  
NWNE B-22-22N-07W

**VENTING and FLARING**

Enduring Resources, LLC (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:

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

**OPERATIONAL PRACTICES**

**19.15.27.8 A. Venting and Flaring of Natural Gas**

Enduring Resources, LLC (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.



**ENDURING RESOURCES, LLC**  
OGRID NO: 372286  
NATURAL GAS MANAGEMENT PLAN  
S Escavada Unit 337H, 345H, 346H  
NWNE B-22-22N-07W

**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:



**ENDURING RESOURCES, LLC**  
OGRID NO: 372286  
NATURAL GAS MANAGEMENT PLAN  
S Escavada Unit 337H, 345H, 346H  
NWNE B-22-22N-07W

- 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.



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OGRID NO: 372286  
NATURAL GAS MANAGEMENT PLAN  
S Escavada Unit 337H, 345H, 346H  
NWNE B-22-22N-07W

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.



**ENDURING RESOURCES, LLC**  
OGRID NO: 372286  
NATURAL GAS MANAGEMENT PLAN  
S Escavada Unit 337H, 345H, 346H  
NWNE B-22-22N-07W

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 Resources, LLC (Enduring) utilizes the following Best Management Practices to minimize venting during active and planned maintenance.

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

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

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

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

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

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

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



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

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

**WELL INFORMATION:**

**Name:** S ESCAVADA UNIT 346H

**API Number:** not yet assigned

**State:** New Mexico

**County:** Sandoval

**Surface Elevation:** 6,867 ft ASL (GL) 6,895 ft ASL (KB)  
**Surface Location:** 22-22N-7 Sec-Twn-Rng 293 ft FNL 2,192 ft FEL  
 36.131287 ° N latitude 107.561279 ° W longitude (NAD 83)  
**BH Location:** 24-22N-7 Sec-Twn-Rng 2,284 ft FNL 1,101 ft FEL  
 36.125574 ° N latitude 107.522389 ° W longitude (NAD 83)

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

South on US Hwy 550 for 48.9 miles to MM 103.0; Right (South) on Atkins Road for 4.3 miles to 4-way intersection; Straight (South) on Atkins Road for 1.6 mi to 4-way, Straight (South) on Atkins Road for 1.8 mi to fork, Right (South-West) exiting Atkins Road for 0.4 miles to 4-way; Right (North-West) on access road for 0.2 miles to new access on the right side of the road for 0.3 miles to S Escavada Unit 345H PAD (WELLS: 345H, 346H, 337H). The 346H well will be

**GEOLOGIC AND RESERVOIR INFORMATION:**

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	6,166	725	725	W	normal
	Kirtland	6,076	815	815	W	normal
	Fruitland	5,941	950	950	G, W	sub
	Pictured Cliffs	5,641	1,250	1,250	G, W	sub
	Lewis	5,506	1,385	1,386	G, W	normal
	Chacra	5,251	1,640	1,647	G, W	normal
	Cliff House	4,161	2,730	2,820	G, W	sub
	Menefee	4,124	2,767	2,860	G, W	normal
	Point Lookout	3,224	3,667	3,831	G, W	normal
	Mancos	3,096	3,795	3,969	O,G	sub (~0.38)
	Gallup (MNCS_A)	2,776	4,115	4,314	O,G	sub (~0.38)
	MNCS_B	2,676	4,215	4,819	O,G	sub (~0.38)
	MNCS_C	2,584	4,307	4,514	O,G	sub (~0.38)
	MNCS_Cms	2,541	4,350	4,559	O,G	sub (~0.38)
	MNCS_D	2,408	4,483	4,703	O,G	sub (~0.38)
	MNCS_E	2,266	4,625	4,878	O,G	sub (~0.38)
	MNCS_F	2,218	4,673	4,949	O,G	sub (~0.38)
	MNCS_G	2,144	4,747	5,082	O,G	sub (~0.38)
	MNCS_H	2,086	4,805	5,215	O,G	sub (~0.38)
	MNCS_I	0	NA	0	O,G	sub (~0.38)
	<b>FTP TARGET</b>	<b>2,086</b>	<b>4,805</b>	<b>5,215</b>	<b>O,G</b>	<b>sub (~0.38)</b>
	<b>PROJECTED LTP</b>	<b>1,981</b>	<b>4,910</b>	<b>17,279</b>	<b>O,G</b>	<b>sub (~0.38)</b>

**Surface:** Nacimiento

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

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

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

**Maximum anticipated BH pressure, assuming maximum pressure gradient: 2,120 psi**

**Maximum anticipated surface pressure, assuming partially evacuated hole: 1,040 psi**

**Temperature:** Maximum anticipated BHT is 125° F or less

**H<sub>2</sub>S INFORMATION:**

**H<sub>2</sub>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 / LWD:** Gamma Ray from drillout of 13-3/8" casing to TD

**Open Hole Logs:** None planned

**Testing:** None planned

**Coring:** None planned

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

**DRILLING RIG INFORMATION:**

**Contractor:** Aztec

**Rig No.:** 1000

**Draw Works:** E80 AC 1,500 hp

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

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

**Prime Movers:** 4 - GE Jenbacher Natural Gas Generator

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

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

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

**Choke** 3", 5,000 psi

**KB-GL (ft):** 25

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

**BOPE REQUIREMENTS:**

See attached diagram for details regarding BOPE specifications and configuration.

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

**DETAILED DRILLING PLAN:**

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

<b>0 ft (MD)</b>	<b>to</b>	<b>350 ft (MD)</b>	<b>Hole Section Length:</b>	<b>350 ft</b>
<b>0 ft (TVD)</b>	<b>to</b>	<b>350 ft (TVD)</b>	<b>Casing Required:</b>	<b>350 ft</b>

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

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

Hole Size: 17-1/2"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, deviation survey

Logging: None

Casing Specs:	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	13.375	J-55	BTC	1,130	2,730	853,000	909,000
Loading				153	633	116,634	116,634
Min. S.F.				<b>7.39</b>	<b>4.32</b>	<b>7.31</b>	<b>7.79</b>

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	Hole Cap. (cuft/ft)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)
	TYPE III	14.6	1.39	6.686	0.6946	100%	0	364

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

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

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

<b>Cu Ft Slurry</b>
505.3

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

<b>350 ft (MD)</b>	<b>to</b>	<b>3,022 ft (MD)</b>	<b>Hole Section Length:</b>	<b>2,672 ft</b>
<b>350 ft (TVD)</b>	<b>to</b>	<b>2,917 ft (TVD)</b>	<b>Casing Required:</b>	<b>3,022 ft</b>

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

Hole Size: 12-1/4"

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

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

Logging: None

Casing Specs:	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	9.625	J-55	LTC	2,020	3,520	564,000	453,000
Loading				1,274	1,207	191,576	191,576
Min. S.F.				<b>1.59</b>	<b>2.92</b>	<b>2.94</b>	<b>2.36</b>

Assumptions: Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient  
 Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient  
 Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

Stage 1

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	D-Mud Breaker	8.5				0	10 bbls	
Lead	90:10 Type III:POZ	12.5	2.140	12.05	70%	0	600	1,283
Tail	Type III	14.6	1.380	6.64	20%	2,522	150	207
Displacement	230	est bbls						

Annular Capacity 0.3627 cuft/ft 9-5/8" casing x 13-3/8" casing annulus  
 0.3132 cuft/ft 9-5/8" casing x 12-1/4" hole annulus 9-5/8" 36# ID 8.921  
 0.4341 cuft/ft 9-5/8" casing vol est shoe jt ft 44

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

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

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

<b>3,022 ft (MD)</b>	<b>to</b>	<b>17,279 ft (MD)</b>	<b>Hole Section Length:</b>	<b>14,257 ft</b>
<b>2,917 ft (TVD)</b>	<b>to</b>	<b>4,910 ft (TVD)</b>	<b>Casing Required:</b>	<b>17,279 ft</b>

<b>Estimated KOP:</b>	<b>4,300 ft (MD)</b>	<b>4,102 ft (TVD)</b>
<b>Estimated Landing Point (FTP):</b>	<b>5,215 ft (MD)</b>	<b>4,805 ft (TVD)</b>
<b>Estimated Lateral Length:</b>	<b>12,064 ft (MD)</b>	

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

Hole Size: 8-1/2"

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

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

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

Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	5.500	17.0	P-110	LTC	7,460	10,640	546,000	445,000
Loading					2,426	8,960	353,471	353,471
Min. S.F.					<b>3.08</b>	<b>1.19</b>	<b>1.54</b>	<b>1.26</b>

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

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

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	IntegraGuard Star	11		31.6		0	60 bbls	
Lead	ASTM type I/II	12.4	2.370	13.40	50%	0	480	1,139
Tail	G:POZ blend	13.3	1.570	7.70	10%	3,969	2,144	3,367

Displacement 381 est bbls  
 Annular Capacity 0.2691 cuft/ft 5-1/2" casing x 9-5/8" casing annulus  
 0.2291 cuft/ft 5-1/2" casing x 8-1/2" hole annulus  
 0.1245 cuft/ft 5-1/2" casing vol est shoe jt ft 100

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

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

**COMPLETION AND PRODUCTION PLAN:**

Est Lateral Length: 11,964  
Est Frac Inform: 50 Frac Stages 192,000 bbls slick water 15,560,000 lbs proppant  
Flowback: Flow back through production tubing as pressures allow  
Production: Produce through production tubing via gas-lift into permanent production and storage facilities

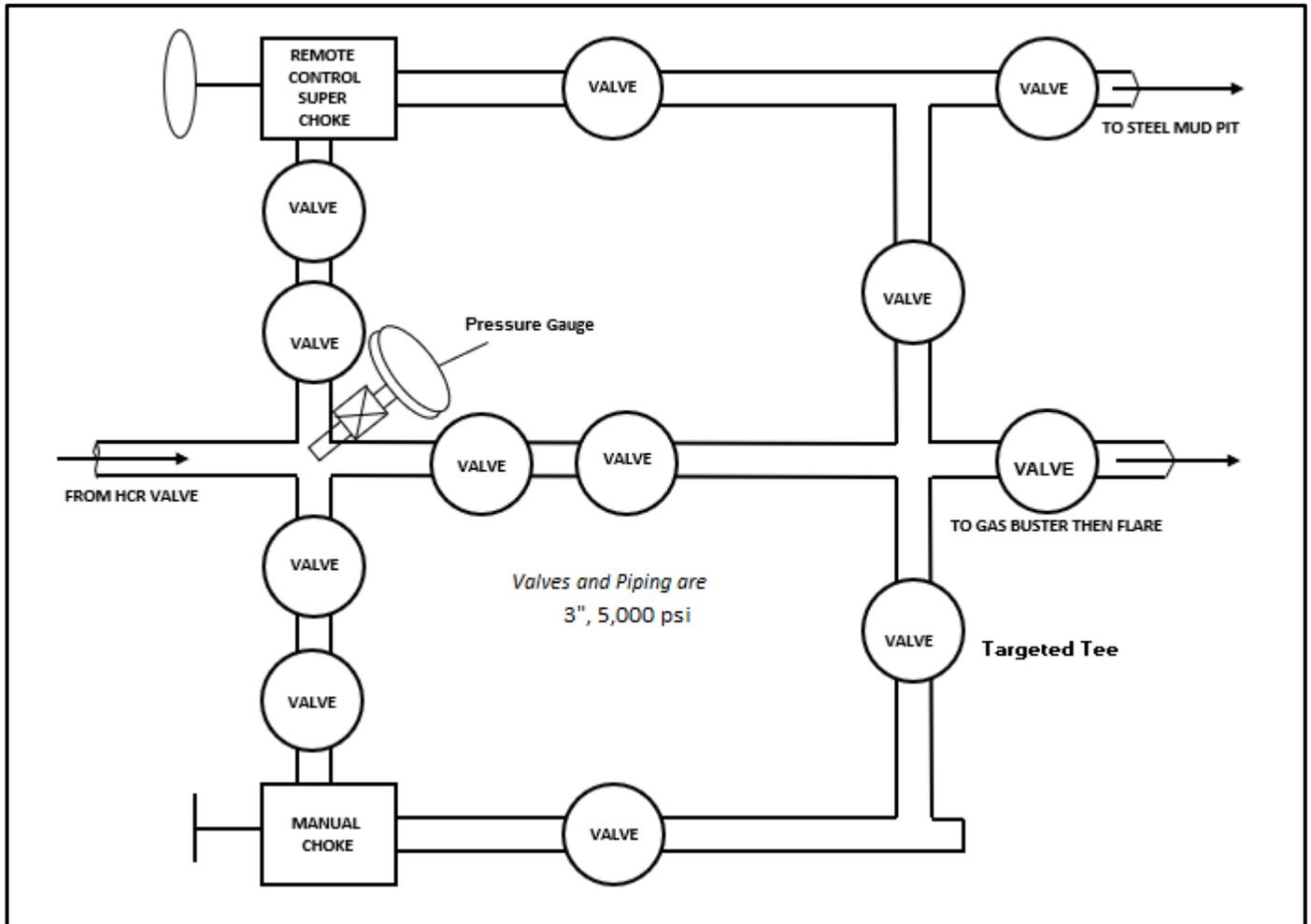
**ESTIMATED START DATES:**

Drilling: 11/1/2023  
Completion: 12/31/2023  
Production: 2/14/2024

Prepared by: Alec Bridge 12/20/2021  
Updated: Greg Olson 2/20/2023  
Greg Olson 3/27/2023  
G Olson 8/23/2023

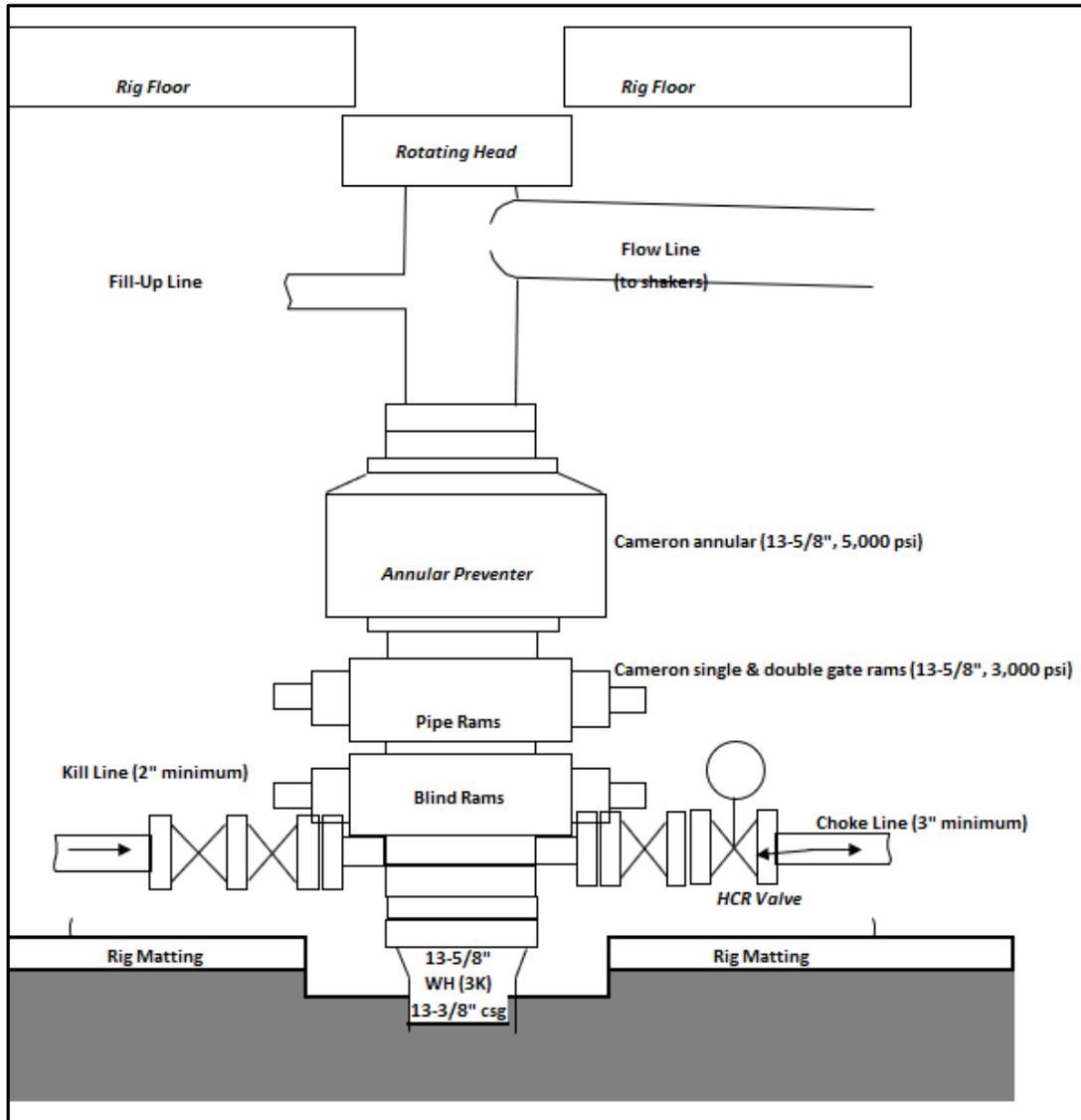


### Enduring Resources IV, LLC CHOKE MANIFOLD





### Enduring Resources IV, LLC BOPE Diagram



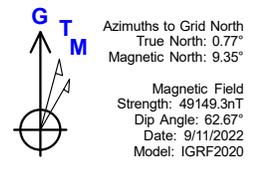


**Well:** S Escavada Unit 346H  
**Site:** S Escavada Unit 337, 345 & 346  
**Project:** Sandoval County, New Mexico NAD83 NM C  
**Design:** rev0  
**Rig:**

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Central Zone  
 System Datum: Mean Sea Level  
 Depth Reference: RKB=6867+28 @ 6895.00ft

Surface location:  
 Northing 1869666.513 Easting 1253196.836 Latitude 36.131287000 Longitude -107.561279000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 9.35°

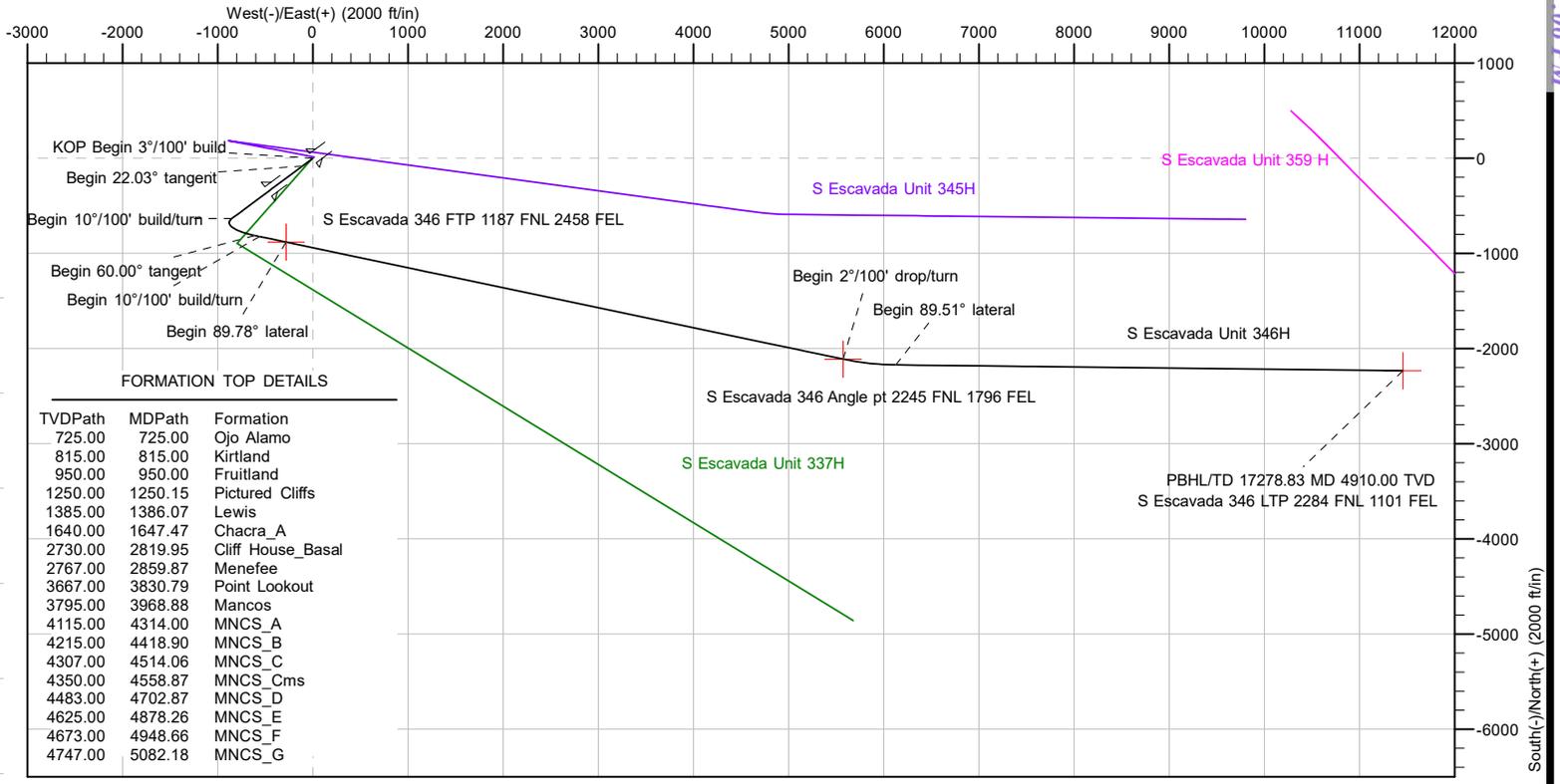
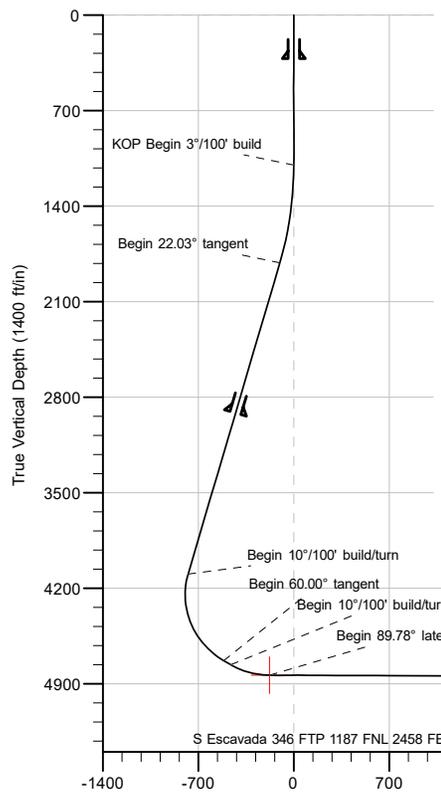


Section Details										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	1100.00	0.00	0.000	1100.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	1834.50	22.03	233.363	1816.52	-83.25	-111.94	3.00	233.36	-101.69	Begin 22.03° tangent
4	4294.35	22.03	233.363	4096.70	-633.96	-852.48	0.00	0.00	-774.42	Begin 10°/100' build/turn
5	5050.66	60.00	101.856	4731.24	-812.63	-609.46	10.00	-137.97	-512.56	Begin 60.00° tangent
6	5110.66	60.00	101.856	4761.24	-823.31	-558.61	0.00	0.00	-460.82	Begin 10°/100' build/turn
7	5408.46	89.78	101.856	4838.00	-881.72	-280.40	10.00	0.00	-177.76	Begin 89.78° lateral
8	11388.59	89.78	101.856	4861.00	-2110.36	5572.11	0.00	0.00	5776.84	Begin 2°/100' drop/turn
9	11948.68	89.51	90.657	4864.48	-2171.31	6127.97	2.00	-91.41	6336.03	Begin 89.51° lateral
10	17278.83	89.51	90.657	4910.00	-2232.46	11457.57	0.00	0.00	11637.67	PBHL/TD 17278.83 MD 4910.00 TVD

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
S Escavada 346 FTP 1187 FNL 2458 FEL	4838.00	-881.72	-280.40	1868784.794	1252916.438	36.128855000	-107.562188000
S Escavada 346 Angle pt 2245 FNL 1796 FEL	4861.00	-2110.36	5572.11	1867556.152	1258768.934	36.125696000	-107.542319000
S Escavada 346 LTP 2284 FNL 1101 FEL	4910.00	-2232.46	11457.57	1867434.060	1264654.382	36.125574000	-107.522389000

**CASING DETAILS**

TVD	MD	Name
320.00	320.00	13 3/8" Casing
2917.00	3021.69	9 5/8" Casing



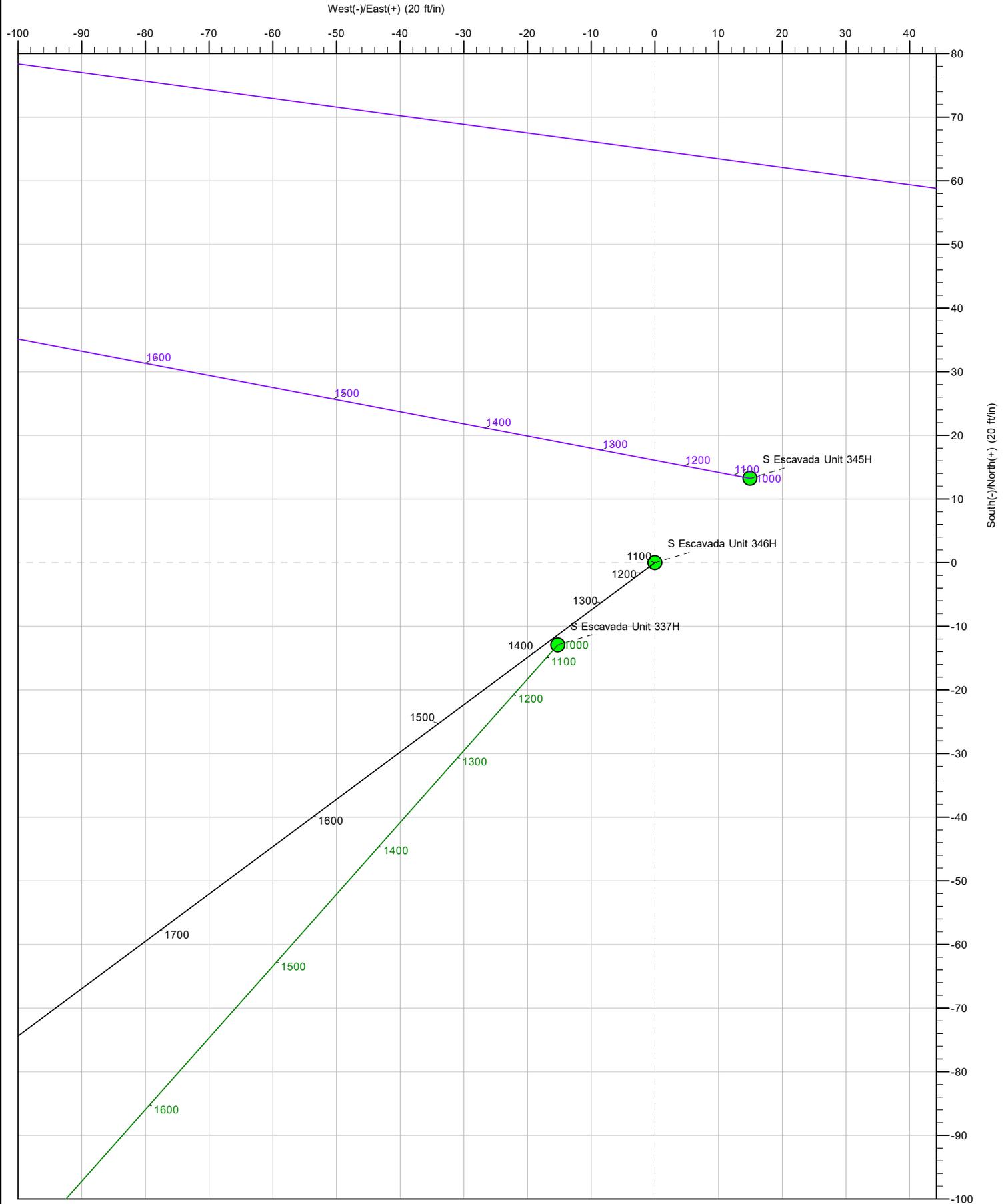
**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
725.00	725.00	Ojo Alamo
815.00	815.00	Kirtland
950.00	950.00	Fruitland
1250.00	1250.15	Pictured Cliffs
1385.00	1386.07	Lewis
1640.00	1647.47	Chacra_A
2730.00	2819.95	Cliff House_Basal
2767.00	2859.87	Menefee
3667.00	3830.79	Point Lookout
3795.00	3968.88	Mancos
4115.00	4314.00	MNCS_A
4215.00	4418.90	MNCS_B
4307.00	4514.06	MNCS_C
4350.00	4558.87	MNCS_Cms
4483.00	4702.87	MNCS_D
4625.00	4878.26	MNCS_E
4673.00	4948.66	MNCS_F
4747.00	5082.18	MNCS_G

Vertical Section at 96.565° (1400 ft/in)



Well: S Escavada Unit 346H  
 Site: S Escavada Unit 337, 345 & 346  
 Project: Sandoval County, New Mexico NAD83 NM C  
 Design: rev0  
 Rig:





Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

<b>Project</b>	Sandoval County, New Mexico NAD83 NM C		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Central Zone		

<b>Site</b>	S Escavada Unit 337, 345 & 346				
<b>Site Position:</b>		<b>Northing:</b>	1,869,666.513 usft	<b>Latitude:</b>	36.131287000
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,253,196.837 usft	<b>Longitude:</b>	-107.561279000
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	S Escavada Unit 346H, Surf loc: 293 FNL 2192 FEL Section 22-T22N-R07W					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,869,666.513 usft	<b>Latitude:</b>	36.131287000
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,253,196.837 usft	<b>Longitude:</b>	-107.561279000
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	6,867.00 ft
<b>Grid Convergence:</b>		-0.77 °				

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	9/11/2022	8.58	62.67	49,149.25702523

<b>Design</b>	rev0			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	96.565

<b>Plan Survey Tool Program</b>	<b>Date</b>	9/13/2022		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,278.83 rev0 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,834.50	22.03	233.363	1,816.52	-83.25	-111.94	3.00	3.00	0.00	233.36	
4,294.35	22.03	233.363	4,096.70	-633.96	-852.48	0.00	0.00	0.00	0.00	
5,050.66	60.00	101.856	4,731.24	-812.63	-609.46	10.00	5.02	-17.39	-137.97	
5,110.66	60.00	101.856	4,761.24	-823.31	-558.61	0.00	0.00	0.00	0.00	
5,408.46	89.78	101.856	4,838.00	-881.72	-280.40	10.00	10.00	0.00	0.00	
11,388.59	89.78	101.856	4,861.00	-2,110.36	5,572.11	0.00	0.00	0.00	0.00	S Escavada 346 Angl
11,948.68	89.51	90.657	4,864.48	-2,171.31	6,127.97	2.00	-0.05	-2.00	-91.41	
17,278.83	89.51	90.657	4,910.00	-2,232.46	11,457.57	0.00	0.00	0.00	0.00	S Escavada 346 LTP



Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
320.00	0.00	0.000	320.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>13 3/8" Casing</b>										
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	
725.00	0.00	0.000	725.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Ojo Alamo</b>										
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
815.00	0.00	0.000	815.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Kirtland</b>										
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
950.00	0.00	0.000	950.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Fruitland</b>										
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>KOP Begin 3°/100' build</b>										
1,200.00	3.00	233.363	1,199.95	-1.56	-2.10	-1.91	3.00	3.00	0.00	
1,250.15	4.50	233.363	1,250.00	-3.52	-4.73	-4.30	3.00	3.00	0.00	
<b>Pictured Cliffs</b>										
1,300.00	6.00	233.363	1,299.63	-6.24	-8.40	-7.63	3.00	3.00	0.00	
1,386.07	8.58	233.363	1,385.00	-12.76	-17.16	-15.59	3.00	3.00	0.00	
<b>Lewis</b>										
1,400.00	9.00	233.363	1,398.77	-14.03	-18.87	-17.14	3.00	3.00	0.00	
1,500.00	12.00	233.363	1,497.08	-24.90	-33.49	-30.42	3.00	3.00	0.00	
1,600.00	15.00	233.363	1,594.31	-38.83	-52.22	-47.44	3.00	3.00	0.00	
1,647.47	16.42	233.363	1,640.00	-46.50	-62.53	-56.81	3.00	3.00	0.00	
<b>Chacra_A</b>										
1,700.00	18.00	233.363	1,690.18	-55.78	-75.01	-68.14	3.00	3.00	0.00	
1,800.00	21.00	233.363	1,784.43	-75.70	-101.79	-92.47	3.00	3.00	0.00	
1,834.50	22.03	233.363	1,816.52	-83.25	-111.94	-101.69	3.00	3.00	0.00	
<b>Begin 22.03° tangent</b>										
1,900.00	22.03	233.363	1,877.24	-97.91	-131.66	-119.61	0.00	0.00	0.00	
2,000.00	22.03	233.363	1,969.94	-120.30	-161.77	-146.95	0.00	0.00	0.00	
2,100.00	22.03	233.363	2,062.63	-142.69	-191.87	-174.30	0.00	0.00	0.00	
2,200.00	22.03	233.363	2,155.33	-165.08	-221.98	-201.65	0.00	0.00	0.00	
2,300.00	22.03	233.363	2,248.03	-187.46	-252.08	-229.00	0.00	0.00	0.00	
2,400.00	22.03	233.363	2,340.72	-209.85	-282.19	-256.35	0.00	0.00	0.00	
2,500.00	22.03	233.363	2,433.42	-232.24	-312.29	-283.70	0.00	0.00	0.00	
2,600.00	22.03	233.363	2,526.11	-254.63	-342.40	-311.04	0.00	0.00	0.00	
2,700.00	22.03	233.363	2,618.81	-277.02	-372.50	-338.39	0.00	0.00	0.00	
2,800.00	22.03	233.363	2,711.50	-299.40	-402.61	-365.74	0.00	0.00	0.00	
2,819.95	22.03	233.363	2,730.00	-303.87	-408.62	-371.20	0.00	0.00	0.00	
<b>Cliff House_Basal</b>										
2,859.87	22.03	233.363	2,767.00	-312.81	-420.63	-382.11	0.00	0.00	0.00	
<b>Menefee</b>										
2,900.00	22.03	233.363	2,804.20	-321.79	-432.71	-393.09	0.00	0.00	0.00	
3,000.00	22.03	233.363	2,896.89	-344.18	-462.82	-420.44	0.00	0.00	0.00	
3,021.69	22.03	233.363	2,917.00	-349.04	-469.35	-426.37	0.00	0.00	0.00	



Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>9 5/8" Casing</b>									
3,100.00	22.03	233.363	2,989.59	-366.57	-492.92	-447.78	0.00	0.00	0.00
3,200.00	22.03	233.363	3,082.29	-388.96	-523.03	-475.13	0.00	0.00	0.00
3,300.00	22.03	233.363	3,174.98	-411.34	-553.13	-502.48	0.00	0.00	0.00
3,400.00	22.03	233.363	3,267.68	-433.73	-583.24	-529.83	0.00	0.00	0.00
3,500.00	22.03	233.363	3,360.37	-456.12	-613.34	-557.18	0.00	0.00	0.00
3,600.00	22.03	233.363	3,453.07	-478.51	-643.45	-584.52	0.00	0.00	0.00
3,700.00	22.03	233.363	3,545.76	-500.90	-673.55	-611.87	0.00	0.00	0.00
3,800.00	22.03	233.363	3,638.46	-523.28	-703.66	-639.22	0.00	0.00	0.00
3,830.79	22.03	233.363	3,667.00	-530.18	-712.93	-647.64	0.00	0.00	0.00
<b>Point Lookout</b>									
3,900.00	22.03	233.363	3,731.15	-545.67	-733.76	-666.57	0.00	0.00	0.00
3,968.88	22.03	233.363	3,795.00	-561.09	-754.50	-685.41	0.00	0.00	0.00
<b>Mancos</b>									
4,000.00	22.03	233.363	3,823.85	-568.06	-763.87	-693.92	0.00	0.00	0.00
4,100.00	22.03	233.363	3,916.55	-590.45	-793.98	-721.27	0.00	0.00	0.00
4,200.00	22.03	233.363	4,009.24	-612.84	-824.08	-748.61	0.00	0.00	0.00
4,294.35	22.03	233.363	4,096.70	-633.96	-852.48	-774.42	0.00	0.00	0.00
<b>Begin 10°/100' build/turn</b>									
4,300.00	21.62	232.336	4,101.94	-635.23	-854.16	-775.94	10.00	-7.37	-18.17
4,314.00	20.62	229.625	4,115.00	-638.40	-858.08	-779.47	10.00	-7.17	-19.37
<b>MNCS_A</b>									
4,350.00	18.27	221.407	4,148.96	-646.74	-866.64	-787.02	10.00	-6.53	-22.82
4,400.00	15.77	206.520	4,196.78	-658.70	-874.86	-793.82	10.00	-4.98	-29.78
4,418.90	15.15	199.825	4,215.00	-663.33	-876.85	-795.26	10.00	-3.30	-35.43
<b>MNCS_B</b>									
4,450.00	14.59	187.880	4,245.07	-671.03	-878.76	-796.28	10.00	-1.79	-38.41
4,500.00	15.03	168.307	4,293.44	-683.63	-878.31	-794.40	10.00	0.88	-39.15
4,514.06	15.44	163.188	4,307.00	-687.21	-877.40	-793.08	10.00	2.91	-36.41
<b>MNCS_C</b>									
4,550.00	16.97	151.498	4,341.52	-696.40	-873.51	-788.17	10.00	4.25	-32.53
4,558.87	17.44	148.948	4,350.00	-698.68	-872.21	-786.61	10.00	5.28	-28.73
<b>MNCS_Cms</b>									
4,600.00	19.97	138.810	4,388.96	-709.24	-864.40	-777.65	10.00	6.16	-24.65
4,650.00	23.63	129.610	4,435.39	-722.07	-851.05	-762.92	10.00	7.33	-18.40
4,700.00	27.70	122.863	4,480.46	-734.77	-833.56	-744.09	10.00	8.13	-13.49
4,702.87	27.94	122.532	4,483.00	-735.49	-832.43	-742.88	10.00	8.43	-11.53
<b>MNCS_D</b>									
4,750.00	32.01	117.766	4,523.82	-747.26	-812.06	-721.30	10.00	8.64	-10.11
4,800.00	36.48	113.783	4,565.15	-759.43	-786.71	-694.73	10.00	8.94	-7.97
4,850.00	41.06	110.569	4,604.12	-771.20	-757.72	-664.58	10.00	9.16	-6.43
4,878.26	43.68	109.005	4,625.00	-777.64	-739.80	-646.04	10.00	9.28	-5.53
<b>MNCS_E</b>									
4,900.00	45.71	107.901	4,640.45	-782.48	-725.29	-631.08	10.00	9.34	-5.08
4,948.66	50.29	105.684	4,673.00	-792.90	-690.68	-595.50	10.00	9.41	-4.56
<b>MNCS_F</b>									
4,950.00	50.42	105.627	4,673.86	-793.18	-689.68	-594.48	10.00	9.45	-4.24
5,000.00	55.16	103.644	4,704.09	-803.22	-651.16	-555.07	10.00	9.49	-3.97
5,050.66	60.00	101.856	4,731.24	-812.63	-609.46	-512.56	10.00	9.55	-3.53
<b>Begin 60.00° tangent</b>									
5,082.18	60.00	101.856	4,747.00	-818.24	-582.75	-485.38	0.00	0.00	0.00
<b>MNCS_G</b>									



Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,100.00	60.00	101.856	4,755.91	-821.41	-567.65	-470.02	0.00	0.00	0.00	
5,110.66	60.00	101.856	4,761.24	-823.31	-558.61	-460.82	0.00	0.00	0.00	
<b>Begin 10°/100' build/turn</b>										
5,150.00	63.93	101.856	4,779.72	-830.44	-524.63	-426.25	10.00	10.00	0.00	
5,200.00	68.93	101.856	4,799.71	-839.86	-479.80	-380.63	10.00	10.00	0.00	
5,250.00	73.93	101.856	4,815.62	-849.59	-433.42	-333.45	10.00	10.00	0.00	
5,300.00	78.93	101.856	4,827.35	-859.57	-385.87	-285.07	10.00	10.00	0.00	
5,350.00	83.93	101.856	4,834.79	-869.73	-337.50	-235.85	10.00	10.00	0.00	
5,400.00	88.93	101.856	4,837.90	-879.98	-288.68	-186.18	10.00	10.00	0.00	
5,408.46	89.78	101.856	4,838.00	-881.72	-280.40	-177.76	10.00	10.00	0.00	
<b>Begin 89.78° lateral</b>										
5,500.00	89.78	101.856	4,838.35	-900.52	-190.81	-86.61	0.00	0.00	0.00	
5,600.00	89.78	101.856	4,838.73	-921.07	-92.94	12.97	0.00	0.00	0.00	
5,700.00	89.78	101.856	4,839.12	-941.61	4.92	112.54	0.00	0.00	0.00	
5,800.00	89.78	101.856	4,839.50	-962.16	102.79	212.11	0.00	0.00	0.00	
5,900.00	89.78	101.856	4,839.89	-982.71	200.65	311.69	0.00	0.00	0.00	
6,000.00	89.78	101.856	4,840.27	-1,003.25	298.52	411.26	0.00	0.00	0.00	
6,100.00	89.78	101.856	4,840.66	-1,023.80	396.38	510.83	0.00	0.00	0.00	
6,200.00	89.78	101.856	4,841.04	-1,044.34	494.25	610.41	0.00	0.00	0.00	
6,300.00	89.78	101.856	4,841.43	-1,064.89	592.12	709.98	0.00	0.00	0.00	
6,400.00	89.78	101.856	4,841.81	-1,085.43	689.98	809.55	0.00	0.00	0.00	
6,500.00	89.78	101.856	4,842.20	-1,105.98	787.85	909.12	0.00	0.00	0.00	
6,600.00	89.78	101.856	4,842.58	-1,126.52	885.71	1,008.70	0.00	0.00	0.00	
6,700.00	89.78	101.856	4,842.97	-1,147.07	983.58	1,108.27	0.00	0.00	0.00	
6,800.00	89.78	101.856	4,843.35	-1,167.62	1,081.45	1,207.84	0.00	0.00	0.00	
6,900.00	89.78	101.856	4,843.73	-1,188.16	1,179.31	1,307.42	0.00	0.00	0.00	
7,000.00	89.78	101.856	4,844.12	-1,208.71	1,277.18	1,406.99	0.00	0.00	0.00	
7,100.00	89.78	101.856	4,844.50	-1,229.25	1,375.04	1,506.56	0.00	0.00	0.00	
7,200.00	89.78	101.856	4,844.89	-1,249.80	1,472.91	1,606.14	0.00	0.00	0.00	
7,300.00	89.78	101.856	4,845.27	-1,270.34	1,570.78	1,705.71	0.00	0.00	0.00	
7,400.00	89.78	101.856	4,845.66	-1,290.89	1,668.64	1,805.28	0.00	0.00	0.00	
7,500.00	89.78	101.856	4,846.04	-1,311.43	1,766.51	1,904.86	0.00	0.00	0.00	
7,600.00	89.78	101.856	4,846.43	-1,331.98	1,864.37	2,004.43	0.00	0.00	0.00	
7,700.00	89.78	101.856	4,846.81	-1,352.53	1,962.24	2,104.00	0.00	0.00	0.00	
7,800.00	89.78	101.856	4,847.20	-1,373.07	2,060.10	2,203.57	0.00	0.00	0.00	
7,900.00	89.78	101.856	4,847.58	-1,393.62	2,157.97	2,303.15	0.00	0.00	0.00	
8,000.00	89.78	101.856	4,847.97	-1,414.16	2,255.84	2,402.72	0.00	0.00	0.00	
8,100.00	89.78	101.856	4,848.35	-1,434.71	2,353.70	2,502.29	0.00	0.00	0.00	
8,200.00	89.78	101.856	4,848.74	-1,455.25	2,451.57	2,601.87	0.00	0.00	0.00	
8,300.00	89.78	101.856	4,849.12	-1,475.80	2,549.43	2,701.44	0.00	0.00	0.00	
8,400.00	89.78	101.856	4,849.50	-1,496.34	2,647.30	2,801.01	0.00	0.00	0.00	
8,500.00	89.78	101.856	4,849.89	-1,516.89	2,745.17	2,900.59	0.00	0.00	0.00	
8,600.00	89.78	101.856	4,850.27	-1,537.43	2,843.03	3,000.16	0.00	0.00	0.00	
8,700.00	89.78	101.856	4,850.66	-1,557.98	2,940.90	3,099.73	0.00	0.00	0.00	
8,800.00	89.78	101.856	4,851.04	-1,578.53	3,038.76	3,199.31	0.00	0.00	0.00	
8,900.00	89.78	101.856	4,851.43	-1,599.07	3,136.63	3,298.88	0.00	0.00	0.00	
9,000.00	89.78	101.856	4,851.81	-1,619.62	3,234.50	3,398.45	0.00	0.00	0.00	
9,100.00	89.78	101.856	4,852.20	-1,640.16	3,332.36	3,498.03	0.00	0.00	0.00	
9,200.00	89.78	101.856	4,852.58	-1,660.71	3,430.23	3,597.60	0.00	0.00	0.00	
9,300.00	89.78	101.856	4,852.97	-1,681.25	3,528.09	3,697.17	0.00	0.00	0.00	
9,400.00	89.78	101.856	4,853.35	-1,701.80	3,625.96	3,796.74	0.00	0.00	0.00	
9,500.00	89.78	101.856	4,853.74	-1,722.34	3,723.83	3,896.32	0.00	0.00	0.00	
9,600.00	89.78	101.856	4,854.12	-1,742.89	3,821.69	3,995.89	0.00	0.00	0.00	
9,700.00	89.78	101.856	4,854.50	-1,763.44	3,919.56	4,095.46	0.00	0.00	0.00	



Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,800.00	89.78	101.856	4,854.89	-1,783.98	4,017.42	4,195.04	0.00	0.00	0.00	
9,900.00	89.78	101.856	4,855.27	-1,804.53	4,115.29	4,294.61	0.00	0.00	0.00	
10,000.00	89.78	101.856	4,855.66	-1,825.07	4,213.15	4,394.18	0.00	0.00	0.00	
10,100.00	89.78	101.856	4,856.04	-1,845.62	4,311.02	4,493.76	0.00	0.00	0.00	
10,200.00	89.78	101.856	4,856.43	-1,866.16	4,408.89	4,593.33	0.00	0.00	0.00	
10,300.00	89.78	101.856	4,856.81	-1,886.71	4,506.75	4,692.90	0.00	0.00	0.00	
10,400.00	89.78	101.856	4,857.20	-1,907.25	4,604.62	4,792.48	0.00	0.00	0.00	
10,500.00	89.78	101.856	4,857.58	-1,927.80	4,702.48	4,892.05	0.00	0.00	0.00	
10,600.00	89.78	101.856	4,857.97	-1,948.35	4,800.35	4,991.62	0.00	0.00	0.00	
10,700.00	89.78	101.856	4,858.35	-1,968.89	4,898.22	5,091.20	0.00	0.00	0.00	
10,800.00	89.78	101.856	4,858.74	-1,989.44	4,996.08	5,190.77	0.00	0.00	0.00	
10,900.00	89.78	101.856	4,859.12	-2,009.98	5,093.95	5,290.34	0.00	0.00	0.00	
11,000.00	89.78	101.856	4,859.51	-2,030.53	5,191.81	5,389.91	0.00	0.00	0.00	
11,100.00	89.78	101.856	4,859.89	-2,051.07	5,289.68	5,489.49	0.00	0.00	0.00	
11,200.00	89.78	101.856	4,860.27	-2,071.62	5,387.55	5,589.06	0.00	0.00	0.00	
11,300.00	89.78	101.856	4,860.66	-2,092.16	5,485.41	5,688.63	0.00	0.00	0.00	
11,388.59	89.78	101.856	4,861.00	-2,110.36	5,572.11	5,776.84	0.00	0.00	0.00	
<b>Begin 2°/100' drop/turn</b>										
11,400.00	89.77	101.628	4,861.04	-2,112.69	5,583.28	5,788.21	2.00	-0.05	-2.00	
11,500.00	89.73	99.629	4,861.48	-2,131.13	5,681.56	5,887.95	2.00	-0.05	-2.00	
11,600.00	89.68	97.629	4,862.00	-2,146.13	5,780.42	5,987.88	2.00	-0.05	-2.00	
11,700.00	89.63	95.630	4,862.61	-2,157.68	5,879.75	6,087.87	2.00	-0.05	-2.00	
11,800.00	89.58	93.630	4,863.30	-2,165.75	5,979.41	6,187.81	2.00	-0.05	-2.00	
11,900.00	89.53	91.631	4,864.07	-2,170.34	6,079.30	6,287.56	2.00	-0.05	-2.00	
11,948.68	89.51	90.657	4,864.48	-2,171.31	6,127.97	6,336.03	2.00	-0.05	-2.00	
<b>Begin 89.51° lateral</b>										
12,000.00	89.51	90.657	4,864.92	-2,171.90	6,179.28	6,387.07	0.00	0.00	0.00	
12,100.00	89.51	90.657	4,865.77	-2,173.05	6,279.27	6,486.54	0.00	0.00	0.00	
12,200.00	89.51	90.657	4,866.63	-2,174.19	6,379.26	6,586.00	0.00	0.00	0.00	
12,300.00	89.51	90.657	4,867.48	-2,175.34	6,479.25	6,685.47	0.00	0.00	0.00	
12,400.00	89.51	90.657	4,868.33	-2,176.49	6,579.24	6,784.93	0.00	0.00	0.00	
12,500.00	89.51	90.657	4,869.19	-2,177.63	6,679.23	6,884.40	0.00	0.00	0.00	
12,600.00	89.51	90.657	4,870.04	-2,178.78	6,779.22	6,983.86	0.00	0.00	0.00	
12,700.00	89.51	90.657	4,870.90	-2,179.93	6,879.21	7,083.33	0.00	0.00	0.00	
12,800.00	89.51	90.657	4,871.75	-2,181.08	6,979.20	7,182.79	0.00	0.00	0.00	
12,900.00	89.51	90.657	4,872.60	-2,182.22	7,079.19	7,282.26	0.00	0.00	0.00	
13,000.00	89.51	90.657	4,873.46	-2,183.37	7,179.18	7,381.72	0.00	0.00	0.00	
13,100.00	89.51	90.657	4,874.31	-2,184.52	7,279.17	7,481.19	0.00	0.00	0.00	
13,200.00	89.51	90.657	4,875.17	-2,185.66	7,379.16	7,580.65	0.00	0.00	0.00	
13,300.00	89.51	90.657	4,876.02	-2,186.81	7,479.15	7,680.12	0.00	0.00	0.00	
13,400.00	89.51	90.657	4,876.87	-2,187.96	7,579.14	7,779.59	0.00	0.00	0.00	
13,500.00	89.51	90.657	4,877.73	-2,189.11	7,679.13	7,879.05	0.00	0.00	0.00	
13,600.00	89.51	90.657	4,878.58	-2,190.25	7,779.12	7,978.52	0.00	0.00	0.00	
13,700.00	89.51	90.657	4,879.44	-2,191.40	7,879.11	8,077.98	0.00	0.00	0.00	
13,800.00	89.51	90.657	4,880.29	-2,192.55	7,979.10	8,177.45	0.00	0.00	0.00	
13,900.00	89.51	90.657	4,881.14	-2,193.69	8,079.09	8,276.91	0.00	0.00	0.00	
14,000.00	89.51	90.657	4,882.00	-2,194.84	8,179.08	8,376.38	0.00	0.00	0.00	
14,100.00	89.51	90.657	4,882.85	-2,195.99	8,279.07	8,475.84	0.00	0.00	0.00	
14,200.00	89.51	90.657	4,883.71	-2,197.14	8,379.06	8,575.31	0.00	0.00	0.00	
14,300.00	89.51	90.657	4,884.56	-2,198.28	8,479.05	8,674.77	0.00	0.00	0.00	
14,400.00	89.51	90.657	4,885.41	-2,199.43	8,579.04	8,774.24	0.00	0.00	0.00	
14,500.00	89.51	90.657	4,886.27	-2,200.58	8,679.03	8,873.70	0.00	0.00	0.00	
14,600.00	89.51	90.657	4,887.12	-2,201.73	8,779.02	8,973.17	0.00	0.00	0.00	
14,700.00	89.51	90.657	4,887.98	-2,202.87	8,879.01	9,072.63	0.00	0.00	0.00	



Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,800.00	89.51	90.657	4,888.83	-2,204.02	8,979.00	9,172.10	0.00	0.00	0.00
14,900.00	89.51	90.657	4,889.68	-2,205.17	9,078.99	9,271.57	0.00	0.00	0.00
15,000.00	89.51	90.657	4,890.54	-2,206.31	9,178.98	9,371.03	0.00	0.00	0.00
15,100.00	89.51	90.657	4,891.39	-2,207.46	9,278.97	9,470.50	0.00	0.00	0.00
15,200.00	89.51	90.657	4,892.25	-2,208.61	9,378.95	9,569.96	0.00	0.00	0.00
15,300.00	89.51	90.657	4,893.10	-2,209.76	9,478.94	9,669.43	0.00	0.00	0.00
15,400.00	89.51	90.657	4,893.95	-2,210.90	9,578.93	9,768.89	0.00	0.00	0.00
15,500.00	89.51	90.657	4,894.81	-2,212.05	9,678.92	9,868.36	0.00	0.00	0.00
15,600.00	89.51	90.657	4,895.66	-2,213.20	9,778.91	9,967.82	0.00	0.00	0.00
15,700.00	89.51	90.657	4,896.52	-2,214.34	9,878.90	10,067.29	0.00	0.00	0.00
15,800.00	89.51	90.657	4,897.37	-2,215.49	9,978.89	10,166.75	0.00	0.00	0.00
15,900.00	89.51	90.657	4,898.22	-2,216.64	10,078.88	10,266.22	0.00	0.00	0.00
16,000.00	89.51	90.657	4,899.08	-2,217.79	10,178.87	10,365.68	0.00	0.00	0.00
16,100.00	89.51	90.657	4,899.93	-2,218.93	10,278.86	10,465.15	0.00	0.00	0.00
16,200.00	89.51	90.657	4,900.79	-2,220.08	10,378.85	10,564.61	0.00	0.00	0.00
16,300.00	89.51	90.657	4,901.64	-2,221.23	10,478.84	10,664.08	0.00	0.00	0.00
16,400.00	89.51	90.657	4,902.49	-2,222.38	10,578.83	10,763.55	0.00	0.00	0.00
16,500.00	89.51	90.657	4,903.35	-2,223.52	10,678.82	10,863.01	0.00	0.00	0.00
16,600.00	89.51	90.657	4,904.20	-2,224.67	10,778.81	10,962.48	0.00	0.00	0.00
16,700.00	89.51	90.657	4,905.06	-2,225.82	10,878.80	11,061.94	0.00	0.00	0.00
16,800.00	89.51	90.657	4,905.91	-2,226.96	10,978.79	11,161.41	0.00	0.00	0.00
16,900.00	89.51	90.657	4,906.76	-2,228.11	11,078.78	11,260.87	0.00	0.00	0.00
17,000.00	89.51	90.657	4,907.62	-2,229.26	11,178.77	11,360.34	0.00	0.00	0.00
17,100.00	89.51	90.657	4,908.47	-2,230.41	11,278.76	11,459.80	0.00	0.00	0.00
17,200.00	89.51	90.657	4,909.33	-2,231.55	11,378.75	11,559.27	0.00	0.00	0.00
17,278.83	89.51	90.657	4,910.00	-2,232.46	11,457.57	11,637.67	0.00	0.00	0.00
PBHL/TD 17278.83 MD 4910.00 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
S Escavada 346 FTP 11 - plan hits target center - Point	0.00	357.842	4,838.00	-881.72	-280.40	1,868,784.795	1,252,916.438	36.128855000	-107.562188000
S Escavada 346 Angle ꞑ - plan hits target center - Point	0.00	357.842	4,861.00	-2,110.36	5,572.11	1,867,556.152	1,258,768.935	36.125696000	-107.542319000
S Escavada 346 LTP 22 - plan hits target center - Point	0.00	357.842	4,910.00	-2,232.46	11,457.57	1,867,434.060	1,264,654.382	36.125574000	-107.522389000

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
320.00	320.00	13 3/8" Casing	13-5/8	17-1/2	
3,021.69	2,917.00	9 5/8" Casing	9-5/8	12-1/4	



Planning Report

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
725.00	725.00	Ojo Alamo				
815.00	815.00	Kirtland				
950.00	950.00	Fruitland				
1,250.15	1,250.00	Pictured Cliffs				
1,386.07	1,385.00	Lewis				
1,647.47	1,640.00	Chacra_A				
2,819.95	2,730.00	Cliff House_Basal				
2,859.87	2,767.00	Menefee				
3,830.79	3,667.00	Point Lookout				
3,968.88	3,795.00	Mancos				
4,314.00	4,115.00	MNCS_A				
4,418.90	4,215.00	MNCS_B				
4,514.06	4,307.00	MNCS_C				
4,558.87	4,350.00	MNCS_Cms				
4,702.87	4,483.00	MNCS_D				
4,878.26	4,625.00	MNCS_E				
4,948.66	4,673.00	MNCS_F				
5,082.18	4,747.00	MNCS_G				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,100.00	1,100.00	0.00	0.00	KOP Begin 3°/100' build	
1,834.50	1,816.52	-83.25	-111.94	Begin 22.03° tangent	
4,294.35	4,096.70	-633.96	-852.48	Begin 10°/100' build/turn	
5,050.66	4,731.24	-812.63	-609.46	Begin 60.00° tangent	
5,110.66	4,761.24	-823.31	-558.61	Begin 10°/100' build/turn	
5,408.46	4,838.00	-881.72	-280.40	Begin 89.78° lateral	
11,388.59	4,861.00	-2,110.36	5,572.11	Begin 2°/100' drop/turn	
11,948.68	4,864.48	-2,171.31	6,127.97	Begin 89.51° lateral	
17,278.83	4,910.00	-2,232.46	11,457.57	PBHL/TD 17278.83 MD 4910.00 TVD	



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

<b>Project</b>	Sandoval County, New Mexico NAD83 NM C		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Central Zone		

<b>Site</b>	S Escavada Unit 337, 345 & 346				
<b>Site Position:</b>		<b>Northing:</b>	1,869,666.513 usft	<b>Latitude:</b>	36.131287000
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,253,196.837 usft	<b>Longitude:</b>	-107.561279000
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	S Escavada Unit 346H, Surf loc: 293 FNL 2192 FEL Section 22-T22N-R07W					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,869,666.513 usft	<b>Latitude:</b>	36.131287000
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,253,196.837 usft	<b>Longitude:</b>	-107.561279000
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	6,867.00 ft	
<b>Grid Convergence:</b>						

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2020	9/11/2022	8.58	62.67	49,149.25702523

<b>Design</b>	rev0			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	96.565

Plan Survey Tool Program		Date		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,278.83 rev0 (Original Hole)		



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,834.50	22.03	233.363	1,816.52	-83.25	-111.94	3.00	3.00	0.00	233.36	
4,294.35	22.03	233.363	4,096.70	-633.96	-852.48	0.00	0.00	0.00	0.00	
5,050.66	60.00	101.856	4,731.24	-812.63	-609.46	10.00	5.02	-17.39	-137.97	
5,110.66	60.00	101.856	4,761.24	-823.31	-558.61	0.00	0.00	0.00	0.00	
5,408.46	89.78	101.856	4,838.00	-881.72	-280.40	10.00	10.00	0.00	0.00	
11,388.59	89.78	101.856	4,861.00	-2,110.36	5,572.11	0.00	0.00	0.00	0.00	S Escavada 346 Angl
11,948.68	89.51	90.657	4,864.48	-2,171.31	6,127.97	2.00	-0.05	-2.00	-91.41	
17,278.83	89.51	90.657	4,910.00	-2,232.46	11,457.57	0.00	0.00	0.00	0.00	S Escavada 346 LTP



Planning Report - Geographic

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<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
100.00	0.00	0.000	100.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
200.00	0.00	0.000	200.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
300.00	0.00	0.000	300.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
320.00	0.00	0.000	320.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
<b>13 3/8" Casing</b>										
400.00	0.00	0.000	400.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
500.00	0.00	0.000	500.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
600.00	0.00	0.000	600.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
700.00	0.00	0.000	700.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
725.00	0.00	0.000	725.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
<b>Ojo Alamo</b>										
800.00	0.00	0.000	800.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
815.00	0.00	0.000	815.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
<b>Kirtland</b>										
900.00	0.00	0.000	900.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
950.00	0.00	0.000	950.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
<b>Fruitland</b>										
1,000.00	0.00	0.000	1,000.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	1,869,666.513	1,253,196.837	36.131287000	-107.561279000	
<b>KOP Begin 3"/100' build</b>										
1,200.00	3.00	233.363	1,199.95	-1.56	-2.10	1,869,664.951	1,253,194.737	36.131282632	-107.561286039	
1,250.15	4.50	233.363	1,250.00	-3.52	-4.73	1,869,662.992	1,253,192.103	36.131277155	-107.561294867	
<b>Pictured Cliffs</b>										
1,300.00	6.00	233.363	1,299.63	-6.24	-8.40	1,869,660.269	1,253,188.442	36.131269542	-107.561307138	
1,386.07	8.58	233.363	1,385.00	-12.76	-17.16	1,869,653.752	1,253,179.677	36.131251317	-107.561336512	
<b>Lewis</b>										
1,400.00	9.00	233.363	1,398.77	-14.03	-18.87	1,869,652.481	1,253,177.969	36.131247764	-107.561342238	
1,500.00	12.00	233.363	1,497.08	-24.90	-33.49	1,869,641.608	1,253,163.347	36.131217358	-107.561391244	
1,600.00	15.00	233.363	1,594.31	-38.83	-52.22	1,869,627.679	1,253,144.617	36.131178408	-107.561454021	
1,647.47	16.42	233.363	1,640.00	-46.50	-62.53	1,869,620.009	1,253,134.303	36.131156960	-107.561488590	
<b>Chacra_A</b>										
1,700.00	18.00	233.363	1,690.18	-55.78	-75.01	1,869,610.733	1,253,121.829	36.1311131021	-107.561530396	
1,800.00	21.00	233.363	1,784.43	-75.70	-101.79	1,869,590.815	1,253,095.047	36.131075326	-107.561620161	
1,834.50	22.03	233.363	1,816.52	-83.25	-111.94	1,869,583.265	1,253,084.894	36.131054213	-107.561654190	
<b>Begin 22.03° tangent</b>										
1,900.00	22.03	233.363	1,877.24	-97.91	-131.66	1,869,568.600	1,253,065.174	36.131013206	-107.561720282	
2,000.00	22.03	233.363	1,969.94	-120.30	-161.77	1,869,546.212	1,253,035.069	36.130950602	-107.561821182	
2,100.00	22.03	233.363	2,062.63	-142.69	-191.87	1,869,523.824	1,253,004.964	36.130887998	-107.561922081	
2,200.00	22.03	233.363	2,155.33	-165.08	-221.98	1,869,501.437	1,252,974.859	36.130825394	-107.562022981	
2,300.00	22.03	233.363	2,248.03	-187.46	-252.08	1,869,479.049	1,252,944.754	36.130762790	-107.562123880	
2,400.00	22.03	233.363	2,340.72	-209.85	-282.19	1,869,456.661	1,252,914.649	36.130700186	-107.562224779	
2,500.00	22.03	233.363	2,433.42	-232.24	-312.29	1,869,434.273	1,252,884.544	36.130637582	-107.562325678	
2,600.00	22.03	233.363	2,526.11	-254.63	-342.40	1,869,411.885	1,252,854.439	36.130574978	-107.562426576	
2,700.00	22.03	233.363	2,618.81	-277.02	-372.50	1,869,389.497	1,252,824.334	36.130512373	-107.562527475	
2,800.00	22.03	233.363	2,711.50	-299.40	-402.61	1,869,367.109	1,252,794.229	36.130449769	-107.562628373	
2,819.95	22.03	233.363	2,730.00	-303.87	-408.62	1,869,362.642	1,252,788.221	36.130437276	-107.562648507	
<b>Cliff House_Basal</b>										
2,859.87	22.03	233.363	2,767.00	-312.81	-420.63	1,869,353.706	1,252,776.205	36.130412287	-107.562688781	
<b>Menefee</b>										
2,900.00	22.03	233.363	2,804.20	-321.79	-432.71	1,869,344.721	1,252,764.124	36.130387164	-107.562729271	
3,000.00	22.03	233.363	2,896.89	-344.18	-462.82	1,869,322.333	1,252,734.019	36.130324560	-107.562830169	



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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	
3,021.69	22.03	233.363	2,917.00	-349.04	-469.35	1,869,317.477	1,252,727.489	36.130310981	-107.562852054	
<b>9 5/8" Casing</b>										
3,100.00	22.03	233.363	2,989.59	-366.57	-492.92	1,869,299.946	1,252,703.914	36.130261955	-107.562931067	
3,200.00	22.03	233.363	3,082.29	-388.96	-523.03	1,869,277.558	1,252,673.808	36.130199350	-107.563031965	
3,300.00	22.03	233.363	3,174.98	-411.34	-553.13	1,869,255.170	1,252,643.703	36.130136745	-107.563132862	
3,400.00	22.03	233.363	3,267.68	-433.73	-583.24	1,869,232.782	1,252,613.598	36.130074141	-107.563233760	
3,500.00	22.03	233.363	3,360.37	-456.12	-613.34	1,869,210.394	1,252,583.493	36.130011536	-107.563334657	
3,600.00	22.03	233.363	3,453.07	-478.51	-643.45	1,869,188.006	1,252,553.388	36.129948930	-107.563435554	
3,700.00	22.03	233.363	3,545.76	-500.90	-673.55	1,869,165.618	1,252,523.283	36.129886325	-107.563536451	
3,800.00	22.03	233.363	3,638.46	-523.28	-703.66	1,869,143.230	1,252,493.178	36.129823720	-107.563637347	
3,830.79	22.03	233.363	3,667.00	-530.18	-712.93	1,869,136.337	1,252,483.908	36.129804443	-107.563668414	
<b>Point Lookout</b>										
3,900.00	22.03	233.363	3,731.15	-545.67	-733.76	1,869,120.842	1,252,463.073	36.129761115	-107.563738244	
3,968.88	22.03	233.363	3,795.00	-561.09	-754.50	1,869,105.422	1,252,442.337	36.129717994	-107.563807738	
<b>Mancos</b>										
4,000.00	22.03	233.363	3,823.85	-568.06	-763.87	1,869,098.455	1,252,432.968	36.129698509	-107.563839140	
4,100.00	22.03	233.363	3,916.55	-590.45	-793.98	1,869,076.067	1,252,402.863	36.129635904	-107.563940037	
4,200.00	22.03	233.363	4,009.24	-612.84	-824.08	1,869,053.679	1,252,372.758	36.129573298	-107.564040933	
4,294.35	22.03	233.363	4,096.70	-633.96	-852.48	1,869,032.557	1,252,344.355	36.129514232	-107.564136124	
<b>Begin 10°/100' build/turn</b>										
4,300.00	21.62	232.336	4,101.94	-635.23	-854.16	1,869,031.287	1,252,342.679	36.129510684	-107.564141738	
4,314.00	20.62	229.625	4,115.00	-638.40	-858.08	1,869,028.116	1,252,338.761	36.129501828	-107.564154858	
<b>MNCS_A</b>										
4,350.00	18.27	221.407	4,148.96	-646.74	-866.64	1,869,019.775	1,252,330.198	36.129478603	-107.564183467	
4,400.00	15.77	206.520	4,196.78	-658.70	-874.86	1,869,007.810	1,252,321.975	36.129445435	-107.564210756	
4,418.90	15.15	199.825	4,215.00	-663.33	-876.85	1,869,003.188	1,252,319.991	36.129432667	-107.564217263	
<b>MNCS_B</b>										
4,450.00	14.59	187.880	4,245.07	-671.03	-878.76	1,868,995.482	1,252,318.075	36.129411431	-107.564223397	
4,500.00	15.03	168.307	4,293.44	-683.63	-878.31	1,868,982.885	1,252,318.526	36.129376851	-107.564221294	
4,514.06	15.44	163.188	4,307.00	-687.21	-877.40	1,868,979.308	1,252,319.436	36.129367062	-107.564218047	
<b>MNCS_C</b>										
4,550.00	16.97	151.498	4,341.52	-696.40	-873.51	1,868,970.115	1,252,323.324	36.129341959	-107.564204463	
4,558.87	17.44	148.948	4,350.00	-698.68	-872.21	1,868,967.838	1,252,324.628	36.129335753	-107.564199944	
<b>MNCS_Cms</b>										
4,600.00	19.97	138.810	4,388.96	-709.24	-864.40	1,868,957.270	1,252,332.435	36.129307018	-107.564173032	
4,650.00	23.63	129.610	4,435.39	-722.07	-851.05	1,868,944.447	1,252,345.787	36.129272297	-107.564127240	
4,700.00	27.70	122.863	4,480.46	-734.77	-833.56	1,868,931.744	1,252,363.280	36.129238057	-107.564067436	
4,702.87	27.94	122.532	4,483.00	-735.49	-832.43	1,868,931.019	1,252,364.409	36.129236109	-107.564063581	
<b>MNCS_D</b>										
4,750.00	32.01	117.766	4,523.82	-747.26	-812.06	1,868,919.257	1,252,384.780	36.129204561	-107.563994075	
4,800.00	36.48	113.783	4,565.15	-759.43	-786.71	1,868,907.082	1,252,410.124	36.129172063	-107.563907715	
4,850.00	41.06	110.569	4,604.12	-771.20	-757.72	1,868,895.310	1,252,439.119	36.129140811	-107.563809014	
4,878.26	43.68	109.005	4,625.00	-777.64	-739.80	1,868,888.870	1,252,457.041	36.129123787	-107.563748046	
<b>MNCS_E</b>										
4,900.00	45.71	107.901	4,640.45	-782.48	-725.29	1,868,884.033	1,252,471.544	36.129111042	-107.563698723	
4,948.66	50.29	105.684	4,673.00	-792.90	-690.68	1,868,873.614	1,252,506.156	36.129083712	-107.563581069	
<b>MNCS_F</b>										
4,950.00	50.42	105.627	4,673.86	-793.18	-689.68	1,868,873.335	1,252,507.153	36.129082982	-107.563577681	
5,000.00	55.16	103.644	4,704.09	-803.22	-651.16	1,868,863.298	1,252,545.674	36.129056846	-107.563446809	
5,050.66	60.00	101.856	4,731.24	-812.63	-609.46	1,868,853.880	1,252,587.374	36.129032529	-107.563305201	
<b>Begin 60.00° tangent</b>										
5,082.18	60.00	101.856	4,747.00	-818.24	-582.75	1,868,848.272	1,252,614.089	36.129018118	-107.563214501	
<b>MNCS_G</b>										



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,100.00	60.00	101.856	4,755.91	-821.41	-567.65	1,868,845.101	1,252,629.191	36.129009971	-107.563163228	
5,110.66	60.00	101.856	4,761.24	-823.31	-558.61	1,868,843.204	1,252,638.227	36.129005097	-107.563132550	
<b>Begin 10°/100' build/turn</b>										
5,150.00	63.93	101.856	4,779.72	-830.44	-524.63	1,868,836.072	1,252,672.203	36.128986768	-107.563017199	
5,200.00	68.93	101.856	4,799.71	-839.86	-479.80	1,868,826.659	1,252,717.042	36.128962580	-107.562864970	
5,250.00	73.93	101.856	4,815.62	-849.59	-433.42	1,868,816.924	1,252,763.414	36.128937564	-107.562707533	
5,300.00	78.93	101.856	4,827.35	-859.57	-385.87	1,868,806.941	1,252,810.966	36.128911911	-107.562546086	
5,350.00	83.93	101.856	4,834.79	-869.73	-337.50	1,868,796.786	1,252,859.338	36.128885816	-107.562381859	
5,400.00	88.93	101.856	4,837.90	-879.98	-288.68	1,868,786.536	1,252,908.161	36.128859476	-107.562216100	
5,408.46	89.78	101.856	4,838.00	-881.72	-280.40	1,868,784.799	1,252,916.438	36.128855011	-107.562188001	
<b>Begin 89.78° lateral</b>										
5,500.00	89.78	101.856	4,838.35	-900.52	-190.81	1,868,765.991	1,253,006.027	36.128806679	-107.561883840	
5,600.00	89.78	101.856	4,838.73	-921.07	-92.94	1,868,745.446	1,253,103.892	36.128753880	-107.561551577	
5,700.00	89.78	101.856	4,839.12	-941.61	4.92	1,868,724.900	1,253,201.758	36.128701081	-107.561219316	
5,800.00	89.78	101.856	4,839.50	-962.16	102.79	1,868,704.355	1,253,299.624	36.128648280	-107.560887054	
5,900.00	89.78	101.856	4,839.89	-982.71	200.65	1,868,683.809	1,253,397.489	36.128595479	-107.560554793	
6,000.00	89.78	101.856	4,840.27	-1,003.25	298.52	1,868,663.264	1,253,495.355	36.128542677	-107.560222533	
6,100.00	89.78	101.856	4,840.66	-1,023.80	396.38	1,868,642.718	1,253,593.221	36.128489873	-107.559890273	
6,200.00	89.78	101.856	4,841.04	-1,044.34	494.25	1,868,622.173	1,253,691.086	36.128437069	-107.559558013	
6,300.00	89.78	101.856	4,841.43	-1,064.89	592.12	1,868,601.627	1,253,788.952	36.128384264	-107.559225754	
6,400.00	89.78	101.856	4,841.81	-1,085.43	689.98	1,868,581.082	1,253,886.818	36.128331458	-107.558893495	
6,500.00	89.78	101.856	4,842.20	-1,105.98	787.85	1,868,560.536	1,253,984.684	36.128278651	-107.558561237	
6,600.00	89.78	101.856	4,842.58	-1,126.52	885.71	1,868,539.991	1,254,082.549	36.128225843	-107.558228979	
6,700.00	89.78	101.856	4,842.97	-1,147.07	983.58	1,868,519.445	1,254,180.415	36.128173034	-107.557896721	
6,800.00	89.78	101.856	4,843.35	-1,167.62	1,081.45	1,868,498.900	1,254,278.281	36.128120225	-107.557564464	
6,900.00	89.78	101.856	4,843.73	-1,188.16	1,179.31	1,868,478.354	1,254,376.146	36.128067414	-107.557232207	
7,000.00	89.78	101.856	4,844.12	-1,208.71	1,277.18	1,868,457.809	1,254,474.012	36.128014602	-107.556899951	
7,100.00	89.78	101.856	4,844.50	-1,229.25	1,375.04	1,868,437.263	1,254,571.878	36.127961790	-107.556567695	
7,200.00	89.78	101.856	4,844.89	-1,249.80	1,472.91	1,868,416.718	1,254,669.743	36.127908976	-107.556235439	
7,300.00	89.78	101.856	4,845.27	-1,270.34	1,570.78	1,868,396.172	1,254,767.609	36.127856162	-107.555903184	
7,400.00	89.78	101.856	4,845.66	-1,290.89	1,668.64	1,868,375.627	1,254,865.475	36.127803346	-107.555570930	
7,500.00	89.78	101.856	4,846.04	-1,311.43	1,766.51	1,868,355.081	1,254,963.340	36.127750530	-107.555238676	
7,600.00	89.78	101.856	4,846.43	-1,331.98	1,864.37	1,868,334.536	1,255,061.206	36.127697713	-107.554906422	
7,700.00	89.78	101.856	4,846.81	-1,352.53	1,962.24	1,868,313.990	1,255,159.072	36.127644895	-107.554574168	
7,800.00	89.78	101.856	4,847.20	-1,373.07	2,060.10	1,868,293.445	1,255,256.938	36.127592076	-107.554241915	
7,900.00	89.78	101.856	4,847.58	-1,393.62	2,157.97	1,868,272.899	1,255,354.803	36.127539256	-107.553909663	
8,000.00	89.78	101.856	4,847.97	-1,414.16	2,255.84	1,868,252.354	1,255,452.669	36.127486435	-107.553577411	
8,100.00	89.78	101.856	4,848.35	-1,434.71	2,353.70	1,868,231.808	1,255,550.535	36.127433613	-107.553245159	
8,200.00	89.78	101.856	4,848.74	-1,455.25	2,451.57	1,868,211.263	1,255,648.400	36.127380790	-107.552912908	
8,300.00	89.78	101.856	4,849.12	-1,475.80	2,549.43	1,868,190.718	1,255,746.266	36.127327966	-107.552580657	
8,400.00	89.78	101.856	4,849.50	-1,496.34	2,647.30	1,868,170.172	1,255,844.132	36.127275142	-107.552248406	
8,500.00	89.78	101.856	4,849.89	-1,516.89	2,745.17	1,868,149.627	1,255,941.997	36.127222316	-107.551916156	
8,600.00	89.78	101.856	4,850.27	-1,537.43	2,843.03	1,868,129.081	1,256,039.863	36.127169490	-107.551583907	
8,700.00	89.78	101.856	4,850.66	-1,557.98	2,940.90	1,868,108.536	1,256,137.729	36.127116662	-107.551251657	
8,800.00	89.78	101.856	4,851.04	-1,578.53	3,038.76	1,868,087.990	1,256,235.595	36.127063834	-107.550919409	
8,900.00	89.78	101.856	4,851.43	-1,599.07	3,136.63	1,868,067.445	1,256,333.460	36.127011004	-107.550587160	
9,000.00	89.78	101.856	4,851.81	-1,619.62	3,234.50	1,868,046.899	1,256,431.326	36.126958174	-107.550254912	
9,100.00	89.78	101.856	4,852.20	-1,640.16	3,332.36	1,868,026.354	1,256,529.192	36.126905343	-107.549922665	
9,200.00	89.78	101.856	4,852.58	-1,660.71	3,430.23	1,868,005.808	1,256,627.057	36.126852511	-107.549590417	
9,300.00	89.78	101.856	4,852.97	-1,681.25	3,528.09	1,867,985.263	1,256,724.923	36.126799678	-107.549258171	
9,400.00	89.78	101.856	4,853.35	-1,701.80	3,625.96	1,867,964.717	1,256,822.789	36.126746844	-107.548925924	
9,500.00	89.78	101.856	4,853.74	-1,722.34	3,723.83	1,867,944.172	1,256,920.654	36.126694009	-107.548593679	
9,600.00	89.78	101.856	4,854.12	-1,742.89	3,821.69	1,867,923.626	1,257,018.520	36.126641173	-107.548261433	
9,700.00	89.78	101.856	4,854.50	-1,763.44	3,919.56	1,867,903.081	1,257,116.386	36.126588336	-107.547929188	



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,800.00	89.78	101.856	4,854.89	-1,783.98	4,017.42	1,867,882.535	1,257,214.251	36.126535498	-107.547596943	
9,900.00	89.78	101.856	4,855.27	-1,804.53	4,115.29	1,867,861.990	1,257,312.117	36.126482660	-107.547264699	
10,000.00	89.78	101.856	4,855.66	-1,825.07	4,213.15	1,867,841.444	1,257,409.983	36.126429820	-107.546932455	
10,100.00	89.78	101.856	4,856.04	-1,845.62	4,311.02	1,867,820.899	1,257,507.849	36.126376980	-107.546600212	
10,200.00	89.78	101.856	4,856.43	-1,866.16	4,408.89	1,867,800.353	1,257,605.714	36.126324138	-107.546267969	
10,300.00	89.78	101.856	4,856.81	-1,886.71	4,506.75	1,867,779.808	1,257,703.580	36.126271296	-107.545935727	
10,400.00	89.78	101.856	4,857.20	-1,907.25	4,604.62	1,867,759.262	1,257,801.446	36.126218453	-107.545603485	
10,500.00	89.78	101.856	4,857.58	-1,927.80	4,702.48	1,867,738.717	1,257,899.311	36.126165608	-107.545271243	
10,600.00	89.78	101.856	4,857.97	-1,948.35	4,800.35	1,867,718.171	1,257,997.177	36.126112763	-107.544939002	
10,700.00	89.78	101.856	4,858.35	-1,968.89	4,898.22	1,867,697.626	1,258,095.043	36.126059917	-107.544606761	
10,800.00	89.78	101.856	4,858.74	-1,989.44	4,996.08	1,867,677.080	1,258,192.908	36.126007070	-107.544274520	
10,900.00	89.78	101.856	4,859.12	-2,009.98	5,093.95	1,867,656.535	1,258,290.774	36.125954222	-107.543942280	
11,000.00	89.78	101.856	4,859.51	-2,030.53	5,191.81	1,867,635.990	1,258,388.640	36.125901373	-107.543610041	
11,100.00	89.78	101.856	4,859.89	-2,051.07	5,289.68	1,867,615.444	1,258,486.506	36.125848523	-107.543277801	
11,200.00	89.78	101.856	4,860.27	-2,071.62	5,387.55	1,867,594.899	1,258,584.371	36.125795673	-107.542945563	
11,300.00	89.78	101.856	4,860.66	-2,092.16	5,485.41	1,867,574.353	1,258,682.237	36.125742821	-107.542613324	
11,388.59	89.78	101.856	4,861.00	-2,110.36	5,572.11	1,867,556.152	1,258,768.935	36.125696000	-107.542319000	
<b>Begin 2°/100' drop/turn</b>										
11,400.00	89.77	101.628	4,861.04	-2,112.69	5,583.28	1,867,553.830	1,258,780.107	36.125690030	-107.542281072	
11,500.00	89.73	99.629	4,861.48	-2,131.13	5,681.56	1,867,535.387	1,258,878.386	36.125642967	-107.541947533	
11,600.00	89.68	97.629	4,862.00	-2,146.13	5,780.42	1,867,520.385	1,258,977.247	36.125605372	-107.541612174	
11,700.00	89.63	95.630	4,862.61	-2,157.68	5,879.75	1,867,508.841	1,259,076.571	36.125577292	-107.541275405	
11,800.00	89.58	93.630	4,863.30	-2,165.75	5,979.41	1,867,500.769	1,259,176.237	36.125558761	-107.540937634	
11,900.00	89.53	91.631	4,864.07	-2,170.34	6,079.30	1,867,496.180	1,259,276.124	36.125549802	-107.540599275	
11,948.68	89.51	90.657	4,864.48	-2,171.31	6,127.97	1,867,495.208	1,259,324.795	36.125548907	-107.540434461	
<b>Begin 89.51° lateral</b>										
12,000.00	89.51	90.657	4,864.92	-2,171.90	6,179.28	1,867,494.619	1,259,376.106	36.125549162	-107.540260726	
12,100.00	89.51	90.657	4,865.77	-2,173.05	6,279.27	1,867,493.472	1,259,476.096	36.125549657	-107.539922172	
12,200.00	89.51	90.657	4,866.63	-2,174.19	6,379.26	1,867,492.325	1,259,576.085	36.125550152	-107.539583618	
12,300.00	89.51	90.657	4,867.48	-2,175.34	6,479.25	1,867,491.178	1,259,676.075	36.125550645	-107.539245064	
12,400.00	89.51	90.657	4,868.33	-2,176.49	6,579.24	1,867,490.030	1,259,776.065	36.125551137	-107.538906510	
12,500.00	89.51	90.657	4,869.19	-2,177.63	6,679.23	1,867,488.883	1,259,876.054	36.125551629	-107.538567955	
12,600.00	89.51	90.657	4,870.04	-2,178.78	6,779.22	1,867,487.736	1,259,976.044	36.125552119	-107.538229401	
12,700.00	89.51	90.657	4,870.90	-2,179.93	6,879.21	1,867,486.589	1,260,076.033	36.125552609	-107.537890847	
12,800.00	89.51	90.657	4,871.75	-2,181.08	6,979.20	1,867,485.442	1,260,176.023	36.125553098	-107.537552293	
12,900.00	89.51	90.657	4,872.60	-2,182.22	7,079.19	1,867,484.294	1,260,276.012	36.125553585	-107.537213738	
13,000.00	89.51	90.657	4,873.46	-2,183.37	7,179.18	1,867,483.147	1,260,376.002	36.125554072	-107.536875184	
13,100.00	89.51	90.657	4,874.31	-2,184.52	7,279.17	1,867,482.000	1,260,475.991	36.125554558	-107.536536629	
13,200.00	89.51	90.657	4,875.17	-2,185.66	7,379.16	1,867,480.853	1,260,575.981	36.125555042	-107.536198075	
13,300.00	89.51	90.657	4,876.02	-2,186.81	7,479.15	1,867,479.706	1,260,675.971	36.125555526	-107.535859521	
13,400.00	89.51	90.657	4,876.87	-2,187.96	7,579.14	1,867,478.558	1,260,775.960	36.125556009	-107.535520966	
13,500.00	89.51	90.657	4,877.73	-2,189.11	7,679.13	1,867,477.411	1,260,875.950	36.125556491	-107.535182412	
13,600.00	89.51	90.657	4,878.58	-2,190.25	7,779.12	1,867,476.264	1,260,975.939	36.125556972	-107.534843857	
13,700.00	89.51	90.657	4,879.44	-2,191.40	7,879.11	1,867,475.117	1,261,075.929	36.125557452	-107.534505302	
13,800.00	89.51	90.657	4,880.29	-2,192.55	7,979.10	1,867,473.969	1,261,175.918	36.125557931	-107.534166748	
13,900.00	89.51	90.657	4,881.14	-2,193.69	8,079.09	1,867,472.822	1,261,275.908	36.125558409	-107.533828193	
14,000.00	89.51	90.657	4,882.00	-2,194.84	8,179.08	1,867,471.675	1,261,375.898	36.125558886	-107.533489638	
14,100.00	89.51	90.657	4,882.85	-2,195.99	8,279.07	1,867,470.528	1,261,475.887	36.125559362	-107.533151084	
14,200.00	89.51	90.657	4,883.71	-2,197.14	8,379.06	1,867,469.381	1,261,575.877	36.125559837	-107.532812529	
14,300.00	89.51	90.657	4,884.56	-2,198.28	8,479.05	1,867,468.233	1,261,675.866	36.125560312	-107.532473974	
14,400.00	89.51	90.657	4,885.41	-2,199.43	8,579.04	1,867,467.086	1,261,775.856	36.125560785	-107.532135419	
14,500.00	89.51	90.657	4,886.27	-2,200.58	8,679.03	1,867,465.939	1,261,875.845	36.125561257	-107.531796864	
14,600.00	89.51	90.657	4,887.12	-2,201.73	8,779.02	1,867,464.792	1,261,975.835	36.125561729	-107.531458310	
14,700.00	89.51	90.657	4,887.98	-2,202.87	8,879.01	1,867,463.645	1,262,075.825	36.125562199	-107.531119755	



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
<b>Company:</b>	Enduring Resources LLC	<b>TVD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,800.00	89.51	90.657	4,888.83	-2,204.02	8,979.00	1,867,462.497	1,262,175.814	36.125562669	-107.530781200	
14,900.00	89.51	90.657	4,889.68	-2,205.17	9,078.99	1,867,461.350	1,262,275.804	36.125563137	-107.530442645	
15,000.00	89.51	90.657	4,890.54	-2,206.31	9,178.98	1,867,460.203	1,262,375.793	36.125563605	-107.530104090	
15,100.00	89.51	90.657	4,891.39	-2,207.46	9,278.97	1,867,459.056	1,262,475.783	36.125564071	-107.529765535	
15,200.00	89.51	90.657	4,892.25	-2,208.61	9,378.95	1,867,457.908	1,262,575.772	36.125564537	-107.529426979	
15,300.00	89.51	90.657	4,893.10	-2,209.76	9,478.94	1,867,456.761	1,262,675.762	36.125565001	-107.529088424	
15,400.00	89.51	90.657	4,893.95	-2,210.90	9,578.93	1,867,455.614	1,262,775.752	36.125565465	-107.528749869	
15,500.00	89.51	90.657	4,894.81	-2,212.05	9,678.92	1,867,454.467	1,262,875.741	36.125565928	-107.528411314	
15,600.00	89.51	90.657	4,895.66	-2,213.20	9,778.91	1,867,453.320	1,262,975.731	36.125566390	-107.528072759	
15,700.00	89.51	90.657	4,896.52	-2,214.34	9,878.90	1,867,452.172	1,263,075.720	36.125566851	-107.527734203	
15,800.00	89.51	90.657	4,897.37	-2,215.49	9,978.89	1,867,451.025	1,263,175.710	36.125567310	-107.527395648	
15,900.00	89.51	90.657	4,898.22	-2,216.64	10,078.88	1,867,449.878	1,263,275.699	36.125567769	-107.527057093	
16,000.00	89.51	90.657	4,899.08	-2,217.79	10,178.87	1,867,448.731	1,263,375.689	36.125568227	-107.526718537	
16,100.00	89.51	90.657	4,899.93	-2,218.93	10,278.86	1,867,447.584	1,263,475.679	36.125568684	-107.526379982	
16,200.00	89.51	90.657	4,900.79	-2,220.08	10,378.85	1,867,446.436	1,263,575.668	36.125569140	-107.526041427	
16,300.00	89.51	90.657	4,901.64	-2,221.23	10,478.84	1,867,445.289	1,263,675.658	36.125569596	-107.525702871	
16,400.00	89.51	90.657	4,902.49	-2,222.38	10,578.83	1,867,444.142	1,263,775.647	36.125570050	-107.525364316	
16,500.00	89.51	90.657	4,903.35	-2,223.52	10,678.82	1,867,442.995	1,263,875.637	36.125570503	-107.525025760	
16,600.00	89.51	90.657	4,904.20	-2,224.67	10,778.81	1,867,441.847	1,263,975.626	36.125570955	-107.524687205	
16,700.00	89.51	90.657	4,905.06	-2,225.82	10,878.80	1,867,440.700	1,264,075.616	36.125571406	-107.524348649	
16,800.00	89.51	90.657	4,905.91	-2,226.96	10,978.79	1,867,439.553	1,264,175.605	36.125571857	-107.524010093	
16,900.00	89.51	90.657	4,906.76	-2,228.11	11,078.78	1,867,438.406	1,264,275.595	36.125572306	-107.523671538	
17,000.00	89.51	90.657	4,907.62	-2,229.26	11,178.77	1,867,437.259	1,264,375.585	36.125572754	-107.523332982	
17,100.00	89.51	90.657	4,908.47	-2,230.41	11,278.76	1,867,436.111	1,264,475.574	36.125573202	-107.522994426	
17,200.00	89.51	90.657	4,909.33	-2,231.55	11,378.75	1,867,434.964	1,264,575.564	36.125573648	-107.522655871	
17,278.83	89.51	90.657	4,910.00	-2,232.46	11,457.57	1,867,434.060	1,264,654.382	36.125574000	-107.522389000	
<b>PBHL/TD 17278.83 MD 4910.00 TVD</b>										

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	
S Escavada 346 FTP 11 - plan hits target center - Point	0.00	357.842	4,838.00	-881.72	-280.40	1,868,784.795	1,252,916.438	36.128855000	-107.562188000	
S Escavada 346 Angle ρ - plan hits target center - Point	0.00	357.842	4,861.00	-2,110.36	5,572.11	1,867,556.152	1,258,768.935	36.125696000	-107.542319000	
S Escavada 346 LTP 22 - plan hits target center - Point	0.00	357.842	4,910.00	-2,232.46	11,457.57	1,867,434.060	1,264,654.382	36.125574000	-107.522389000	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
320.00	320.00	13 3/8" Casing	13-5/8	17-1/2		
3,021.69	2,917.00	9 5/8" Casing	9-5/8	12-1/4		



Planning Report - Geographic

<b>Database:</b>	DB_Feb2822	<b>Local Co-ordinate Reference:</b>	Well S Escavada Unit 346H
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<b>Project:</b>	Sandoval County, New Mexico NAD83 NM C	<b>MD Reference:</b>	RKB=6867+28 @ 6895.00ft
<b>Site:</b>	S Escavada Unit 337, 345 & 346	<b>North Reference:</b>	Grid
<b>Well:</b>	S Escavada Unit 346H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
725.00	725.00	Ojo Alamo				
815.00	815.00	Kirtland				
950.00	950.00	Fruitland				
1,250.15	1,250.00	Pictured Cliffs				
1,386.07	1,385.00	Lewis				
1,647.47	1,640.00	Chacra_A				
2,819.95	2,730.00	Cliff House_Basal				
2,859.87	2,767.00	Menefee				
3,830.79	3,667.00	Point Lookout				
3,968.88	3,795.00	Mancos				
4,314.00	4,115.00	MNCS_A				
4,418.90	4,215.00	MNCS_B				
4,514.06	4,307.00	MNCS_C				
4,558.87	4,350.00	MNCS_Cms				
4,702.87	4,483.00	MNCS_D				
4,878.26	4,625.00	MNCS_E				
4,948.66	4,673.00	MNCS_F				
5,082.18	4,747.00	MNCS_G				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,100.00	1,100.00	0.00	0.00	KOP Begin 3°/100' build	
1,834.50	1,816.52	-83.25	-111.94	Begin 22.03° tangent	
4,294.35	4,096.70	-633.96	-852.48	Begin 10°/100' build/turn	
5,050.66	4,731.24	-812.63	-609.46	Begin 60.00° tangent	
5,110.66	4,761.24	-823.31	-558.61	Begin 10°/100' build/turn	
5,408.46	4,838.00	-881.72	-280.40	Begin 89.78° lateral	
11,388.59	4,861.00	-2,110.36	5,572.11	Begin 2°/100' drop/turn	
11,948.68	4,864.48	-2,171.31	6,127.97	Begin 89.51° lateral	
17,278.83	4,910.00	-2,232.46	11,457.57	PBHL/TD 17278.83 MD 4910.00 TVD	

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 325957

**CONDITIONS**

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way Centennial, CO 80111	OGRID: 372286
	Action Number: 325957
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	4/16/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	4/16/2024
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	4/16/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	4/16/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	4/16/2024
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	4/16/2024