

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources

Form C-104  
Revised August 1, 2011

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

Submit one copy to appropriate District Office

AMENDED REPORT

**I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**

<sup>1</sup> Operator name and Address Enduring Resources IV LLC. 200 Energy Court Farmington NM 87401		<sup>2</sup> OGRID Number 372286	
		<sup>3</sup> Reason for Filing Code/ Effective Date NW	
<sup>4</sup> API Number 30-045-35875	<sup>5</sup> Pool Name BASIN MANCOS		<sup>6</sup> Pool Code 97232
<sup>7</sup> Property Code 321253	<sup>8</sup> Property Name RODEO UNIT		<sup>9</sup> Well Number #511H

**II. <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
N	25	23N	9W		191'	SOUTH	1365'	WEST	SAN JUAN

**<sup>11</sup> Bottom Hole Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	31	23N	8W		191'	SOUTH	2605'	EAST	SAN JUAN

<sup>12</sup> Lse Code	<sup>13</sup> Producing Method Code	<sup>14</sup> Gas Connection Date	<sup>15</sup> C-129 Permit Number	<sup>16</sup> C-129 Effective Date	<sup>17</sup> C-129 Expiration Date
F		1/27/2023			

**III. Oil and Gas Transporters**

<sup>18</sup> Transporter OGRID	<sup>19</sup> Transporter Name and Address	<sup>20</sup> O/G/W
248440	WESTERN REFINING COMPANY, LLC	O
373888	HARVEST FOUR CORNERS. LLC	G

**IV. Well Completion Data**

<sup>21</sup> Spud Date	<sup>22</sup> Ready Date	<sup>23</sup> TD	<sup>24</sup> PBDT	<sup>25</sup> Perforations	<sup>26</sup> DHC, MC
8/10/2022	1/27/2023	12047' MD 4622' TVD	11959' MD 4621' TVD	~ 5153' - 11959' MD ~ 4635' - 4621' TVD	R-14051

<sup>27</sup> Hole Size	<sup>28</sup> Casing & Tubing Size	<sup>29</sup> Depth Set	<sup>30</sup> Sacks Cement
17-1/2"	13-3/8", 54.5#, J-55	361' MD	350 sx - surface
12-1/4"	9-5/8", 36#, J-55	2760' MD	675 sx - surface
8-1/2"	5-1/2", 20#, P-110	12047' MD	1780 sx - surface
8-1/2"	2-7/8", 6.5#, L-80	5259'	1780 sx - surface

**V. Well Test Data**

<sup>31</sup> Date New Oil	<sup>32</sup> Gas Delivery Date	<sup>33</sup> Test Date	<sup>34</sup> Test Length	<sup>35</sup> Tbg. Pressure	<sup>36</sup> Csg. Pressure
2/6/2023	1/27/2023	2/6/2023	24 hr	184	804
<sup>37</sup> Choke Size	<sup>38</sup> Oil	<sup>39</sup> Water	<sup>40</sup> Gas	<sup>41</sup> Test Method	
64/64"	30.7	224	487	F	

<sup>42</sup> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Kayla White</i>	OIL CONSERVATION DIVISION Approved by: <b>PATRICIA MARTINEZ</b>
Printed name: Kayla White	Title: <b>PETROLEUM SPECIALIST</b>
Title: Environmental Engineer	Approval Date: <b>2/21/2024</b>
E-mail Address: kwhite@cdhconsult.com	
Date: 2/23/2023	Phone: 720-768-3575



*ENDURING RESOURCES IV LLC*

January 6, 2023

Re: *RODEO UNIT 511H-30-045-35875*

Pursuant to NMOCD rule 19.15.7.16(C) request is herein made to keep all data and accompanying attachments contained in form C-105 confidential.

Sincerely,

A handwritten signature in blue ink that reads "Heather Huntington". The signature is written in a cursive style.

Heather Huntington  
Permitting Technician  
Enduring Resources, LLC.  
[hhuntington@enduringresources.com](mailto:hhuntington@enduringresources.com)

District I  
611 S. First Street, Artesia, NM 88210  
Phone: (575) 393-6161 Fax: (575) 393-0720

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

AS-DRILLED WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-35875		<sup>2</sup> Pool Code 97232		<sup>3</sup> Pool Name BASIN MANCOS	
<sup>4</sup> Property Code 321253		<sup>5</sup> Property Name RODEO UNIT		<sup>6</sup> Well Number 511H	
<sup>7</sup> GRID No. 372286		<sup>8</sup> Operator Name ENDURING RESOURCES, LLC		<sup>9</sup> Elevation 6798'	

<sup>10</sup> Surface Location

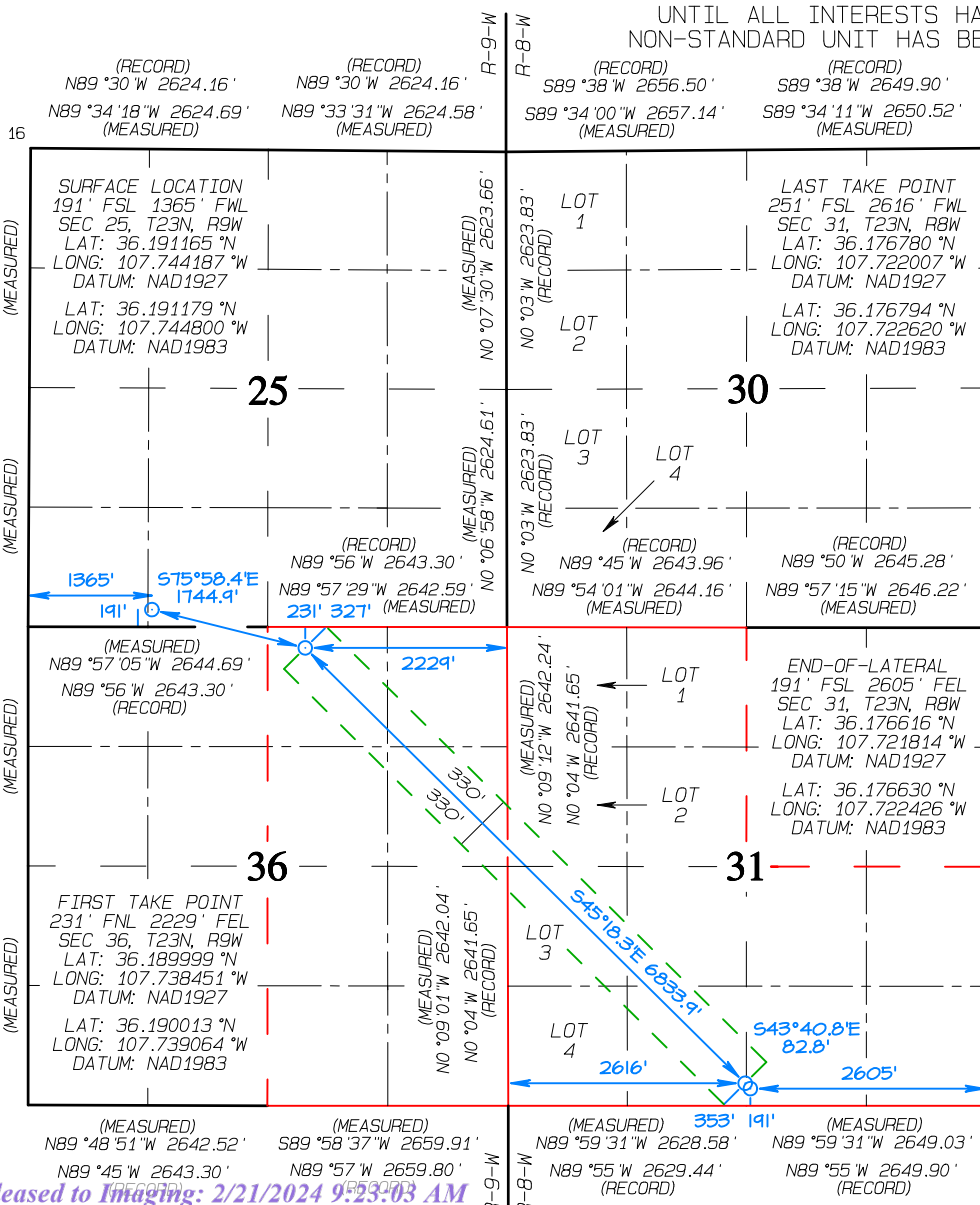
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	25	23N	9W		191	SOUTH	1365	WEST	SAN JUAN

<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
0	31	23N	8W		191	SOUTH	2605	EAST	SAN JUAN

<sup>12</sup> Dedicated Acres 801.48	W/2 - Sec 36, T23NR9W W/2, SE/4 - Sec 31, T23NR8W	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-14313
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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



**<sup>17</sup> 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.

*Khem Suthivan* 1/26/2023  
Signature Date  
**Khem Suthivan**  
Printed Name  
ksuthivan@enduringresources.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: JANUARY 26, 2023  
Survey Date: JANUARY 24, 2017

Signature and Seal of Professional Surveyor

**JASON C. EDWARDS**  
NEW MEXICO  
REGISTERED PROFESSIONAL SURVEYOR  
15269

**JASON C. EDWARDS**  
Certificate Number 15269

District I  
611 S. First Street, Artesia, NM 88210  
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AMENDED REPORT

AS-DRILLED WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-35875		<sup>2</sup> Pool Code 97232		<sup>3</sup> Pool Name BASIN MANCOS	
<sup>4</sup> Property Code 321253		<sup>5</sup> Property Name RODEO UNIT		<sup>6</sup> Well Number 511H	
<sup>7</sup> GRID No. 372286		<sup>8</sup> Operator Name ENDURING RESOURCES, LLC		<sup>9</sup> Elevation 6798'	

<sup>10</sup> Surface Location

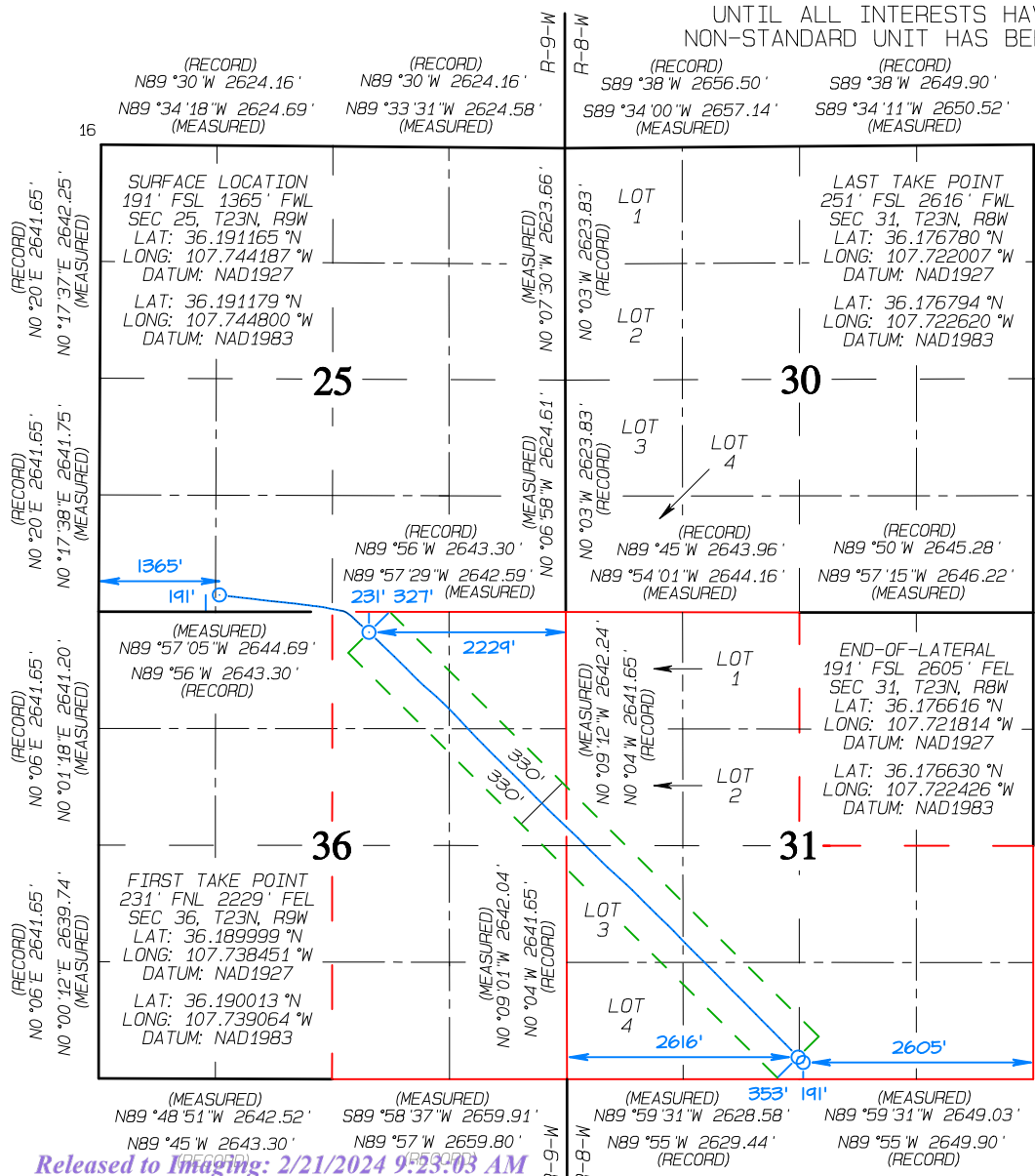
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	25	23N	9W		191	SOUTH	1365	WEST	SAN JUAN

<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
0	31	23N	8W		191	SOUTH	2605	EAST	SAN JUAN

<sup>12</sup> Dedicated Acres 801.48	W/2 - Sec 36, T23NR9W W/2, SE/4 - Sec 31, T23NR8W	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-14313
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<sup>17</sup> 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.

*Khem Suthivan* 1/26/2023  
Signature Date  
**Khem Suthivan**  
Printed Name  
[ksuthivan@enduringresources.com](mailto:ksuthivan@enduringresources.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: JANUARY 26, 2023  
Survey Date: JANUARY 24, 2017

Signature and Seal of Professional Surveyor

**JASON C. EDWARDS**  
Certificate Number 15269

District I Phone: (575) 393-6161 Fax: (575) 393-0720
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OIL CONSERVATION DIVISION 1220 South St. Francis Drive Santa Fe, NM 87505

AMENDED REPORT

AS-DRILLED WELL LOCATION AND ACREAGE DEDICATION PLAT

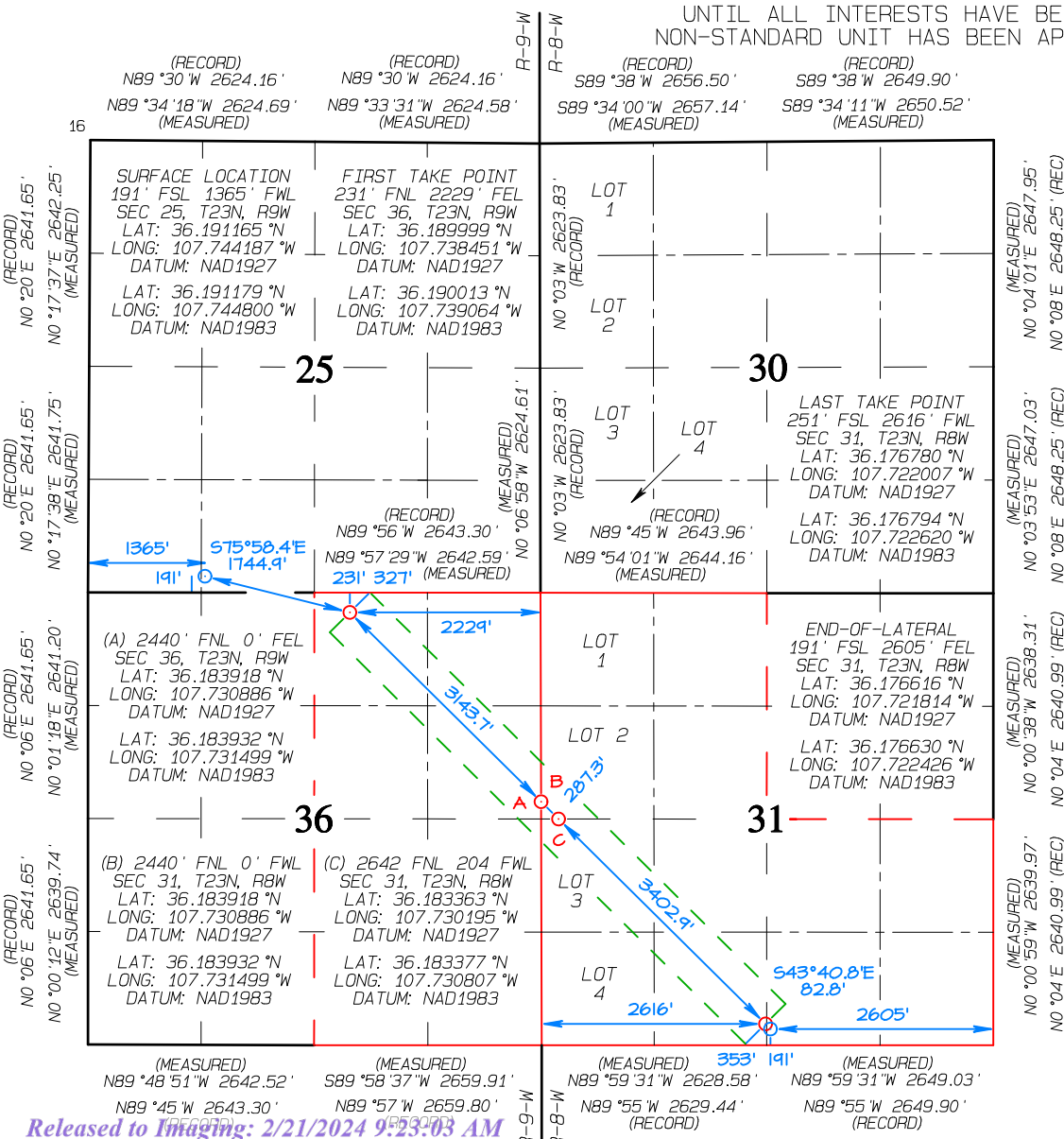
Table with 3 columns: API Number (30-045-35875), Pool Code (97232), Pool Name (BASIN MANCOS), Property Code (321253), Property Name (RODEO UNIT), Well Number (511H), OGRID No. (372286), Operator Name (ENDURING RESOURCES, LLC), Elevation (6798')

Table for Surface Location: UL or lot no. (N), Section (25), Township (23N), Range (9W), Lot Idn, Feet from the (191), North/South line (SOUTH), Feet from the (1365), East/West line (WEST), County (SAN JUAN)

Table for Bottom Hole Location: UL or lot no. (0), Section (31), Township (23N), Range (8W), Lot Idn, Feet from the (191), North/South line (SOUTH), Feet from the (2605), East/West line (EAST), County (SAN JUAN)

Table for Acres and Order No.: Dedicated Acres (801.48), W/2 - Sec 36, T23NR9W; W/2, SE/4 - Sec 31, T23NR8W; Joint or Infill, Consolidation Code, Order No. (R-14313)

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



17 OPERATOR CERTIFICATION: I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief... Signature: Khem Suthiwan, Date: 1/26/2023, E-mail Address: ksuthiwan@enduringresources.com

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... Date Revised: JANUARY 26, 2023, Survey Date: JANUARY 24, 2017



JASON C. EDWARDS Certificate Number 15269



**Well:** Rodeo Unit #511H  
**Site:** Rodeo Unit 511 pad (511, 512 & 513)  
**Project:** San Juan County, New Mexico NAD83 NM W  
**Design:** Surveys Original Hole  
**Rig:** Ensign 145

ANNOTATIONS SURVEYS

MD	Inc	Azi	TVD	+N/-S	+E/-W	V Sect	Annotation
412.00	0.21	72.690	412.00	0.22	0.72	0.34	MWD surveys
2760.00	27.20	95.691	2610.37	-75.74	641.62	499.50	9 5/8" Casing @ 2760 MD 2610.37 TVD
5123.66	69.77	132.541	4627.00	-423.01	1692.91	1478.74	FTP @ 5123.66 MD 4627.00 TVD
5143.00	71.71	132.692	4633.38	-435.38	1706.35	1496.96	330 perp @ 5143 MD 4633.38 TVD
11944.00	89.39	136.320	4621.36	-5215.00	6536.84	8290.41	Survey @ 11944 MD 4621.36 TVD
11964.20	89.39	136.320	4621.58	-5229.61	6550.79	8310.61	LTP @ 11964.20 MD 4621.58 TVD
11995.00	89.39	136.320	4621.91	-5251.88	6572.06	8341.40	330 perp @ 11995 MD 4621.91 TVD
12047.00	89.39	136.320	4622.46	-5289.49	6607.97	8393.40	Survey proj. to 12047.00 MD 4622.46 TVD



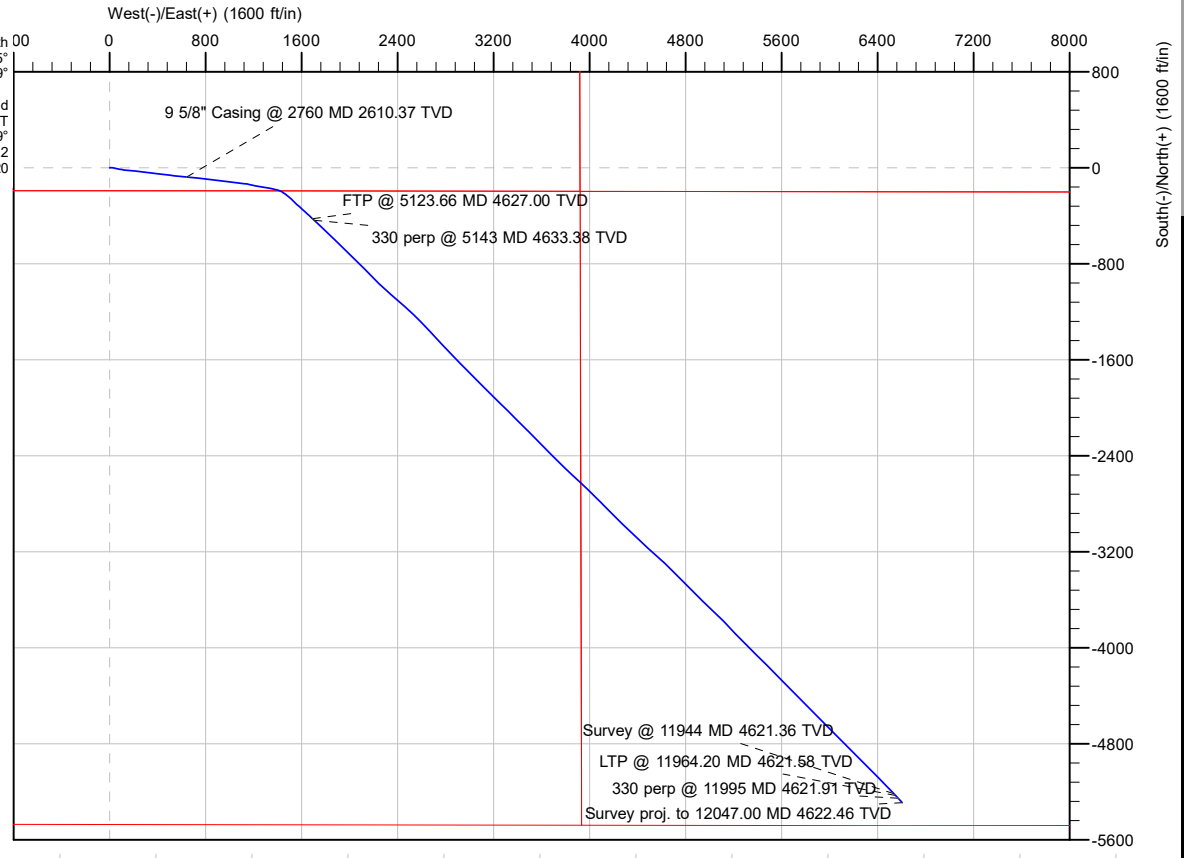
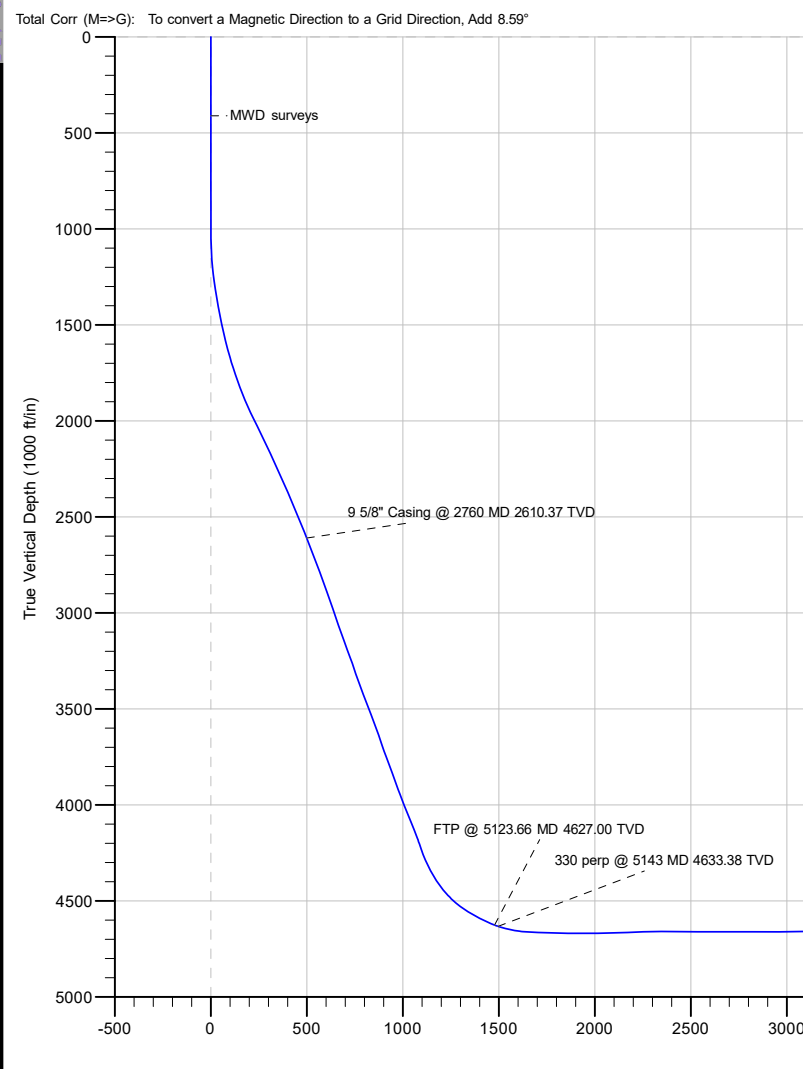
Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Western Zone

System Datum: Mean Sea Level  
 Depth Reference: RKB=6798+13 @ 6813.00ft (Ensign 145)

Surface location:  
 Northing 1888898.346 Easting 2749215.361 Latitude 36.191179000 Longitude -107.744800000



Azimuths to Grid North 00  
 True North: -0.05°  
 Magnetic North: 8.59°  
 Magnetic Field  
 Strength: 49142.1nT  
 Dip Angle: 62.69°  
 Date: 11/18/2022  
 Model: IGRF2020





Survey Report



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

<b>Project</b>	San Juan County, New Mexico NAD83 NM W		
<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 Western Zone		

<b>Site</b>	Rodeo Unit 511 pad (511, 512 & 513)				
<b>Site Position:</b>		<b>Northing:</b>	1,888,898.347 usft	<b>Latitude:</b>	36.191179000
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,749,215.362 usft	<b>Longitude:</b>	-107.744800000
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	Rodeo Unit #511H, Surf loc: 191 FSL 1365 FWL Section 25-T23N-R09W					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,888,898.347 usft	<b>Latitude:</b>	36.191179000
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,749,215.362 usft	<b>Longitude:</b>	-107.744800000
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	6,798.00 ft
<b>Grid Convergence:</b>	0.05 °					

<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	11/18/2022	8.65	62.69	49,142.13436349

<b>Design</b>	Surveys Original Hole				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	136.096	

<b>Survey Program</b>	<b>Date</b>	12/8/2022			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
412.00	2,654.00	MWD surf (Original Hole)	MWD	OWSG MWD - Standard	
2,709.00	11,944.00	MWD (Original Hole)	MWD	OWSG MWD - Standard	
12,047.00	12,047.00	Projection (Original Hole)	MWD	OWSG MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
412.00	0.21	72.690	412.00	0.22	0.72	0.34	0.05	0.05	0.00	
<b>MWD surveys</b>										
503.00	0.14	61.740	503.00	0.33	0.98	0.44	0.08	-0.08	-12.03	
594.00	0.09	17.630	594.00	0.45	1.10	0.44	0.11	-0.05	-48.47	
685.00	0.18	276.660	685.00	0.53	0.98	0.29	0.24	0.10	-110.96	
776.00	0.05	287.620	776.00	0.56	0.80	0.15	0.14	-0.14	12.04	
866.00	0.20	213.660	866.00	0.44	0.67	0.15	0.21	0.17	-82.18	



Survey Report



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

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)	
957.00	0.32	217.480	957.00	0.11	0.43	0.22	0.13	0.13	4.20	
1,051.00	2.44	72.050	1,050.97	0.52	2.17	1.14	2.88	2.26	-154.71	
1,146.00	6.21	81.480	1,145.68	1.90	9.18	5.00	4.03	3.97	9.93	
1,240.00	9.26	93.820	1,238.82	2.15	21.76	13.54	3.68	3.24	13.13	
1,334.00	11.11	103.520	1,331.35	-0.47	38.11	26.77	2.68	1.97	10.32	
1,429.00	12.17	103.140	1,424.39	-4.89	56.77	42.89	1.12	1.12	-0.40	
1,523.00	14.68	101.610	1,515.82	-9.54	78.09	61.02	2.70	2.67	-1.63	
1,617.00	18.29	98.480	1,605.94	-14.11	104.35	82.53	3.95	3.84	-3.33	
1,712.00	22.02	96.050	1,695.11	-18.19	136.82	107.98	4.02	3.93	-2.56	
1,806.00	24.04	96.030	1,781.61	-22.06	173.38	136.13	2.15	2.15	-0.02	
1,900.00	27.35	96.570	1,866.30	-26.54	213.89	167.44	3.53	3.52	0.57	
1,994.00	31.66	96.600	1,948.09	-31.85	259.87	203.15	4.59	4.59	0.03	
2,089.00	32.71	96.210	2,028.49	-37.49	310.15	242.09	1.13	1.11	-0.41	
2,183.00	30.97	96.300	2,108.35	-42.89	359.44	280.16	1.85	-1.85	0.10	
2,277.00	31.05	97.270	2,188.91	-48.61	407.53	317.63	0.54	0.09	1.03	
2,371.00	30.81	97.220	2,269.55	-54.71	455.46	355.26	0.26	-0.26	-0.05	
2,466.00	29.88	96.760	2,351.53	-60.55	503.10	392.50	1.01	-0.98	-0.48	
2,560.00	28.72	96.350	2,433.50	-65.80	548.80	427.98	1.25	-1.23	-0.44	
2,654.00	27.82	96.060	2,516.29	-70.62	593.06	462.14	0.97	-0.96	-0.31	
2,709.00	27.34	96.150	2,565.04	-73.33	618.38	481.65	0.88	-0.87	0.16	
2,760.00	27.20	95.691	2,610.37	-75.74	641.62	499.50	0.50	-0.28	-0.90	
<b>9 5/8" Casing @ 2760 MD 2610.37 TVD</b>										
2,791.00	27.11	95.410	2,637.96	-77.11	655.70	510.25	0.50	-0.28	-0.91	
2,886.00	26.53	95.030	2,722.74	-81.01	698.38	542.66	0.64	-0.61	-0.40	
2,981.00	25.75	97.240	2,808.02	-85.47	739.99	574.73	1.31	-0.82	2.33	
3,075.00	24.77	96.160	2,893.03	-90.15	779.83	605.73	1.15	-1.04	-1.15	
3,169.00	23.86	94.940	2,978.69	-93.90	818.35	635.14	1.11	-0.97	-1.30	
3,263.00	24.85	97.240	3,064.33	-98.03	856.88	664.84	1.46	1.05	2.45	
3,357.00	24.41	95.980	3,149.78	-102.54	895.80	695.07	0.73	-0.47	-1.34	
3,451.00	26.04	98.510	3,234.81	-107.62	935.52	726.28	2.08	1.73	2.69	
3,546.00	24.04	95.970	3,320.88	-112.72	975.40	757.61	2.39	-2.11	-2.67	
3,640.00	24.32	99.250	3,406.64	-117.82	1,013.55	787.74	1.46	0.30	3.49	
3,734.00	26.58	96.970	3,491.51	-123.49	1,053.53	819.55	2.62	2.40	-2.43	
3,829.00	26.60	96.740	3,576.47	-128.56	1,095.75	852.48	0.11	0.02	-0.24	
3,923.00	23.24	95.300	3,661.70	-132.75	1,135.13	882.80	3.63	-3.57	-1.53	
4,018.00	24.66	101.500	3,748.54	-138.43	1,173.22	913.31	3.04	1.49	6.53	
4,111.00	23.73	100.920	3,833.36	-145.84	1,210.60	944.58	1.03	-1.00	-0.62	
4,205.00	23.98	102.330	3,919.34	-153.51	1,247.84	975.92	0.66	0.27	1.50	
4,299.00	25.83	100.320	4,004.59	-161.25	1,286.65	1,008.41	2.16	1.97	-2.14	
4,393.00	26.60	101.490	4,088.92	-169.11	1,327.42	1,042.35	0.99	0.82	1.24	
4,487.00	24.96	100.100	4,173.57	-176.79	1,367.57	1,075.72	1.86	-1.74	-1.48	
4,519.00	23.02	98.780	4,202.80	-178.92	1,380.40	1,086.16	6.29	-6.06	-4.13	
4,551.00	22.65	102.490	4,232.29	-181.21	1,392.60	1,096.27	4.64	-1.16	11.59	
4,582.00	23.96	107.350	4,260.77	-184.38	1,404.44	1,106.76	7.50	4.23	15.68	





Survey Report



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

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)
4,613.00	25.59	112.690	4,288.92	-188.84	1,416.63	1,118.42	8.93	5.26	17.23
4,645.00	27.39	118.700	4,317.56	-195.04	1,429.46	1,131.79	10.08	5.63	18.78
4,676.00	28.70	122.080	4,344.92	-202.42	1,442.03	1,145.82	6.64	4.23	10.90
4,708.00	31.19	124.000	4,372.65	-211.14	1,455.41	1,161.38	8.34	7.78	6.00
4,739.00	33.93	127.030	4,398.77	-220.84	1,468.97	1,177.78	10.28	8.84	9.77
4,771.00	36.95	128.490	4,424.84	-232.21	1,483.64	1,196.14	9.80	9.44	4.56
4,802.00	40.25	130.890	4,449.07	-244.57	1,498.50	1,215.35	11.69	10.65	7.74
4,833.00	43.25	133.520	4,472.20	-258.44	1,513.78	1,235.94	11.20	9.68	8.48
4,865.00	46.61	133.250	4,494.85	-273.96	1,530.20	1,258.51	10.52	10.50	-0.84
4,896.00	50.18	133.480	4,515.43	-289.87	1,547.05	1,281.66	11.53	11.52	0.74
4,928.00	54.14	133.280	4,535.05	-307.23	1,565.42	1,306.90	12.38	12.38	-0.63
4,959.00	58.25	132.590	4,552.30	-324.77	1,584.27	1,332.61	13.39	13.26	-2.23
4,991.00	60.97	132.170	4,568.49	-343.37	1,604.66	1,360.16	8.58	8.50	-1.31
5,022.00	61.01	132.260	4,583.52	-361.59	1,624.74	1,387.20	0.28	0.13	0.29
5,053.00	62.19	131.950	4,598.26	-379.87	1,644.97	1,414.41	3.91	3.81	-1.00
5,085.00	65.60	131.630	4,612.34	-399.01	1,666.40	1,443.06	10.69	10.66	-1.00
5,116.00	69.00	132.480	4,624.30	-418.17	1,687.63	1,471.58	11.26	10.97	2.74
5,123.66	69.77	132.541	4,627.00	-423.01	1,692.91	1,478.74	10.06	10.03	0.79
<b>FTP @ 5123.66 MD 4627.00 TVD</b>									
5,143.00	71.71	132.692	4,633.38	-435.38	1,706.35	1,496.96	10.06	10.03	0.78
<b>330 perp @ 5143 MD 4633.38 TVD</b>									
5,148.00	72.21	132.730	4,634.93	-438.60	1,709.84	1,501.70	10.06	10.03	0.77
5,180.00	75.70	133.470	4,643.77	-459.61	1,732.29	1,532.41	11.13	10.91	2.31
5,211.00	78.66	134.140	4,650.65	-480.53	1,754.10	1,562.61	9.78	9.55	2.16
5,242.00	81.18	133.760	4,656.07	-501.71	1,776.07	1,593.11	8.22	8.13	-1.23
5,274.00	84.28	134.460	4,660.12	-523.81	1,798.86	1,624.83	9.93	9.69	2.19
5,305.00	87.18	134.110	4,662.43	-545.39	1,820.99	1,655.72	9.42	9.35	-1.13
5,336.00	87.61	133.820	4,663.84	-566.89	1,843.28	1,686.67	1.67	1.39	-0.94
5,430.00	87.77	133.710	4,667.63	-631.85	1,911.11	1,780.52	0.21	0.17	-0.12
5,524.00	89.82	134.060	4,669.61	-697.00	1,978.84	1,874.42	2.21	2.18	0.37
5,619.00	89.74	134.620	4,669.97	-763.39	2,046.78	1,969.37	0.60	-0.08	0.59
5,713.00	92.36	135.300	4,668.25	-829.80	2,113.28	2,063.33	2.88	2.79	0.72
5,808.00	92.05	135.220	4,664.59	-897.23	2,180.10	2,158.25	0.34	-0.33	-0.08
5,902.00	91.98	135.110	4,661.29	-963.85	2,246.34	2,252.18	0.14	-0.07	-0.12
5,996.00	89.84	130.960	4,659.79	-1,027.97	2,315.02	2,346.01	4.97	-2.28	-4.41
6,091.00	89.24	130.260	4,660.56	-1,089.80	2,387.13	2,440.57	0.97	-0.63	-0.74
6,186.00	89.91	133.180	4,661.26	-1,153.01	2,458.03	2,535.28	3.15	0.71	3.07
6,280.00	89.80	132.460	4,661.50	-1,216.91	2,526.98	2,629.12	0.77	-0.12	-0.77
6,374.00	90.27	135.940	4,661.44	-1,282.43	2,594.36	2,723.06	3.74	0.50	3.70
6,469.00	89.99	136.520	4,661.23	-1,351.03	2,660.08	2,818.06	0.68	-0.29	0.61
6,563.00	89.65	137.150	4,661.52	-1,419.59	2,724.38	2,912.05	0.76	-0.36	0.67
6,657.00	91.05	136.590	4,660.95	-1,488.19	2,788.64	3,006.03	1.60	1.49	-0.60
6,751.00	90.51	137.030	4,659.67	-1,556.72	2,852.97	3,100.02	0.74	-0.57	0.47



Survey Report



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

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)	
6,846.00	91.20	135.140	4,658.25	-1,625.14	2,918.85	3,195.00	2.12	0.73	-1.99	
6,940.00	90.37	135.380	4,656.96	-1,691.90	2,985.01	3,288.98	0.92	-0.88	0.26	
7,035.00	92.11	135.290	4,654.91	-1,759.45	3,051.77	3,383.95	1.83	1.83	-0.09	
7,130.00	92.01	134.910	4,651.49	-1,826.70	3,118.79	3,478.87	0.41	-0.11	-0.40	
7,224.00	91.78	134.930	4,648.38	-1,893.04	3,185.31	3,572.80	0.25	-0.24	0.02	
7,318.00	91.18	134.120	4,645.96	-1,958.93	3,252.31	3,666.73	1.07	-0.64	-0.86	
7,413.00	91.11	134.600	4,644.06	-2,025.34	3,320.21	3,761.67	0.51	-0.07	0.51	
7,507.00	90.62	134.610	4,642.64	-2,091.34	3,387.13	3,855.63	0.52	-0.52	0.01	
7,601.00	90.55	135.390	4,641.68	-2,157.80	3,453.59	3,949.60	0.83	-0.07	0.83	
7,696.00	90.01	135.830	4,641.21	-2,225.69	3,520.05	4,044.60	0.73	-0.57	0.46	
7,790.00	91.82	135.210	4,639.71	-2,292.75	3,585.90	4,138.58	2.04	1.93	-0.66	
7,884.00	91.52	134.880	4,636.97	-2,359.24	3,652.29	4,232.52	0.47	-0.32	-0.35	
7,979.00	91.01	135.380	4,634.88	-2,426.55	3,719.29	4,327.49	0.75	-0.54	0.53	
8,073.00	91.01	132.730	4,633.22	-2,491.89	3,786.83	4,421.40	2.82	0.00	-2.82	
8,168.00	90.90	134.000	4,631.64	-2,557.12	3,855.88	4,516.28	1.34	-0.12	1.34	
8,262.00	90.15	133.290	4,630.77	-2,621.99	3,923.90	4,610.19	1.10	-0.80	-0.76	
8,356.00	89.97	133.710	4,630.68	-2,686.69	3,992.09	4,704.09	0.49	-0.19	0.45	
8,450.00	89.94	134.360	4,630.75	-2,752.03	4,059.66	4,798.03	0.69	-0.03	0.69	
8,544.00	90.97	135.750	4,630.00	-2,818.56	4,126.06	4,892.01	1.84	1.10	1.48	
8,639.00	90.29	134.320	4,628.96	-2,885.77	4,193.19	4,986.98	1.67	-0.72	-1.51	
8,733.00	90.25	134.440	4,628.52	-2,951.51	4,260.37	5,080.94	0.13	-0.04	0.13	
8,827.00	90.68	135.300	4,627.75	-3,017.83	4,326.99	5,174.91	1.02	0.46	0.91	
8,921.00	89.98	132.160	4,627.21	-3,082.80	4,394.91	5,268.82	3.42	-0.74	-3.34	
9,016.00	90.41	132.340	4,626.89	-3,146.67	4,465.23	5,363.61	0.49	0.45	0.19	
9,110.00	90.39	132.260	4,626.23	-3,209.93	4,534.75	5,457.40	0.09	-0.02	-0.09	
9,204.00	91.17	132.720	4,624.95	-3,273.42	4,604.06	5,551.20	0.96	0.83	0.49	
9,299.00	88.92	134.290	4,624.88	-3,338.81	4,672.96	5,646.09	2.89	-2.37	1.65	
9,393.00	90.48	135.640	4,625.37	-3,405.24	4,739.46	5,740.07	2.19	1.66	1.44	
9,488.00	90.52	135.360	4,624.54	-3,472.99	4,806.04	5,835.06	0.30	0.04	-0.29	
9,582.00	89.50	134.340	4,624.52	-3,539.28	4,872.68	5,929.04	1.53	-1.09	-1.09	
9,677.00	90.07	134.510	4,624.88	-3,605.78	4,940.53	6,024.00	0.63	0.60	0.18	
9,771.00	90.59	134.440	4,624.34	-3,671.64	5,007.60	6,117.96	0.56	0.55	-0.07	
9,866.00	89.68	132.930	4,624.12	-3,737.25	5,076.30	6,212.87	1.86	-0.96	-1.59	
9,961.00	90.70	136.730	4,623.80	-3,804.21	5,143.66	6,307.83	4.14	1.07	4.00	
10,055.00	91.33	136.990	4,622.14	-3,872.79	5,207.92	6,401.80	0.73	0.67	0.28	
10,149.00	89.34	135.550	4,621.59	-3,940.71	5,272.90	6,495.79	2.61	-2.12	-1.53	
10,243.00	88.84	134.750	4,623.08	-4,007.34	5,339.18	6,589.77	1.00	-0.53	-0.85	
10,338.00	88.15	134.120	4,625.57	-4,073.83	5,406.99	6,684.69	0.98	-0.73	-0.66	
10,433.00	90.02	135.340	4,627.09	-4,140.67	5,474.47	6,779.65	2.35	1.97	1.28	
10,527.00	89.76	135.070	4,627.27	-4,207.38	5,540.70	6,873.64	0.40	-0.28	-0.29	
10,622.00	89.45	135.340	4,627.93	-4,274.79	5,607.63	6,968.62	0.43	-0.33	0.28	
10,716.00	89.39	136.040	4,628.88	-4,342.05	5,673.29	7,062.61	0.75	-0.06	0.74	
10,810.00	90.49	135.040	4,628.98	-4,409.14	5,739.13	7,156.61	1.58	1.17	-1.06	
10,905.00	90.31	135.290	4,628.31	-4,476.51	5,806.11	7,251.59	0.32	-0.19	0.26	



Survey Report



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,999.00	91.34	135.030	4,626.96	-4,543.15	5,872.38	7,345.57	1.13	1.10	-0.28
11,094.00	90.94	135.010	4,625.07	-4,610.34	5,939.52	7,440.53	0.42	-0.42	-0.02
11,188.00	90.66	135.190	4,623.76	-4,676.92	6,005.86	7,534.51	0.35	-0.30	0.19
11,282.00	90.34	135.630	4,622.94	-4,743.85	6,071.85	7,628.50	0.58	-0.34	0.47
11,377.00	89.82	135.270	4,622.80	-4,811.55	6,138.50	7,723.49	0.67	-0.55	-0.38
11,471.00	91.16	135.050	4,622.00	-4,878.20	6,204.78	7,817.47	1.44	1.43	-0.23
11,566.00	90.81	135.480	4,620.37	-4,945.68	6,271.63	7,912.45	0.58	-0.37	0.45
11,660.00	89.82	134.610	4,619.85	-5,012.20	6,338.04	8,006.43	1.40	-1.05	-0.93
11,755.00	89.82	135.730	4,620.15	-5,079.57	6,405.02	8,101.42	1.18	0.00	1.18
11,849.00	89.66	135.520	4,620.58	-5,146.76	6,470.75	8,195.41	0.28	-0.17	-0.22
11,944.00	89.39	136.320	4,621.36	-5,215.00	6,536.84	8,290.41	0.89	-0.28	0.84
<b>Survey @ 11944 MD 4621.36 TVD</b>									
11,964.20	89.39	136.320	4,621.58	-5,229.61	6,550.79	8,310.61	0.00	0.00	0.00
<b>LTP @ 11964.20 MD 4621.58 TVD</b>									
11,995.00	89.39	136.320	4,621.91	-5,251.88	6,572.06	8,341.40	0.00	0.00	0.00
<b>330 perp @ 11995 MD 4621.91 TVD</b>									
12,047.00	89.39	136.320	4,622.46	-5,289.49	6,607.97	8,393.40	0.00	0.00	0.00
<b>Survey proj. to 12047.00 MD 4622.46 TVD</b>									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
412.00	412.00	0.22	0.72	MWD surveys
2,760.00	2,610.37	-75.74	641.62	9 5/8" Casing @ 2760 MD 2610.37 TVD
5,123.66	4,627.00	-423.01	1,692.91	FTP @ 5123.66 MD 4627.00 TVD
5,143.00	4,633.38	-435.38	1,706.35	330 perp @ 5143 MD 4633.38 TVD
11,944.00	4,621.36	-5,215.00	6,536.84	Survey @ 11944 MD 4621.36 TVD
11,964.20	4,621.58	-5,229.61	6,550.79	LTP @ 11964.20 MD 4621.58 TVD
11,995.00	4,621.91	-5,251.88	6,572.06	330 perp @ 11995 MD 4621.91 TVD
12,047.00	4,622.46	-5,289.49	6,607.97	Survey proj. to 12047.00 MD 4622.46 TVD



Survey Report - Geographic



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

<b>Project</b>	San Juan County, New Mexico NAD83 NM W		
<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 Western Zone		

<b>Site</b>	Rodeo Unit 511 pad (511, 512 & 513)				
<b>Site Position:</b>		<b>Northing:</b>	1,888,898.347 usft	<b>Latitude:</b>	36.191179000
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,749,215.362 usft	<b>Longitude:</b>	-107.744800000
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.05 °

<b>Well</b>	Rodeo Unit #511H, Surf loc: 191 FSL 1365 FWL Section 25-T23N-R09W					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,888,898.347 usft	<b>Latitude:</b>	36.191179000
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,749,215.362 usft	<b>Longitude:</b>	-107.744800000
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	6,798.00 ft

<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>
	IGRF2020	11/18/2022	(°)	(°)	(nT)
			8.65	62.69	49,142.13436349

<b>Design</b>	Surveys Original Hole				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	136.096	

<b>Survey Program</b>	<b>Date</b>	12/8/2022			
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
(ft)	(ft)				
412.00	2,654.00	MWD surf (Original Hole)	MWD	OWSG MWD - Standard	
2,709.00	11,944.00	MWD (Original Hole)	MWD	OWSG MWD - Standard	
12,047.00	12,047.00	Projection (Original Hole)	MWD	OWSG MWD - Standard	

<b>Survey</b>										
<b>Measured</b>	<b>Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Map</b>	<b>Map</b>	<b>Latitude</b>	<b>Longitude</b>
	(ft)	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting		
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
	0.00	0.00	0.000	0.00	0.00	0.00	1,888,898.347	2,749,215.362	36.191179000	-107.744800000
	412.00	0.21	72.690	412.00	0.22	0.72	1,888,898.571	2,749,216.083	36.191179615	-107.744797557
	<b>MWD surveys</b>									
	503.00	0.14	61.740	503.00	0.33	0.98	1,888,898.674	2,749,216.340	36.191179895	-107.744796685
	594.00	0.09	17.630	594.00	0.45	1.10	1,888,898.794	2,749,216.459	36.191180227	-107.744796279
	685.00	0.18	276.660	685.00	0.53	0.98	1,888,898.879	2,749,216.339	36.191180460	-107.744796687
	776.00	0.05	287.620	776.00	0.56	0.80	1,888,898.908	2,749,216.159	36.191180539	-107.744797296
	866.00	0.20	213.660	866.00	0.44	0.67	1,888,898.789	2,749,216.035	36.191180212	-107.744797718
	957.00	0.32	217.480	957.00	0.11	0.43	1,888,898.455	2,749,215.792	36.191179296	-107.744798542
	1,051.00	2.44	72.050	1,050.97	0.52	2.17	1,888,898.863	2,749,217.536	36.191180413	-107.744792630



Survey Report - Geographic



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
1,146.00	6.21	81.480	1,145.68	1.90	9.18	1,888,900.248	2,749,224.544	36.191184201	-107.744768876	
1,240.00	9.26	93.820	1,238.82	2.15	21.76	1,888,900.498	2,749,237.122	36.191184854	-107.744726248	
1,334.00	11.11	103.520	1,331.35	-0.47	38.11	1,888,897.876	2,749,253.476	36.191177612	-107.744670831	
1,429.00	12.17	103.140	1,424.39	-4.89	56.77	1,888,893.460	2,749,272.128	36.191165433	-107.744607636	
1,523.00	14.68	101.610	1,515.82	-9.54	78.09	1,888,888.810	2,749,293.447	36.191152604	-107.744535399	
1,617.00	18.29	98.480	1,605.94	-14.11	104.35	1,888,884.236	2,749,319.712	36.191139974	-107.744446402	
1,712.00	22.02	96.050	1,695.11	-18.19	136.82	1,888,880.159	2,749,352.178	36.191128693	-107.744336388	
1,806.00	24.04	96.030	1,781.61	-22.06	173.38	1,888,876.290	2,749,388.745	36.191117972	-107.744212471	
1,900.00	27.35	96.570	1,866.30	-26.54	213.89	1,888,871.807	2,749,429.249	36.191105554	-107.744075220	
1,994.00	31.66	96.600	1,948.09	-31.85	259.87	1,888,866.499	2,749,475.227	36.191090855	-107.743919416	
2,089.00	32.71	96.210	2,028.49	-37.49	310.15	1,888,860.856	2,749,525.513	36.191075227	-107.743749016	
2,183.00	30.97	96.300	2,108.35	-42.89	359.44	1,888,855.454	2,749,574.805	36.191060263	-107.743581981	
2,277.00	31.05	97.270	2,188.91	-48.61	407.53	1,888,849.733	2,749,622.892	36.191044422	-107.743419032	
2,371.00	30.81	97.220	2,269.55	-54.71	455.46	1,888,843.639	2,749,670.821	36.191027562	-107.743256620	
2,466.00	29.88	96.760	2,351.53	-60.55	503.10	1,888,837.796	2,749,718.458	36.191011388	-107.743095198	
2,560.00	28.72	96.350	2,433.50	-65.80	548.80	1,888,832.542	2,749,764.158	36.190996837	-107.742940338	
2,654.00	27.82	96.060	2,516.29	-70.62	593.06	1,888,827.728	2,749,808.417	36.190983500	-107.742790359	
2,709.00	27.34	96.150	2,565.04	-73.33	618.38	1,888,825.020	2,749,833.737	36.190975996	-107.742704559	
2,760.00	27.20	95.691	2,610.37	-75.74	641.62	1,888,822.610	2,749,856.978	36.190969315	-107.742625803	
<b>9 5/8" Casing @ 2760 MD 2610.37 TVD</b>										
2,791.00	27.11	95.410	2,637.96	-77.11	655.70	1,888,821.241	2,749,871.059	36.190965519	-107.742578086	
2,886.00	26.53	95.030	2,722.74	-81.01	698.38	1,888,817.340	2,749,913.743	36.190954693	-107.742433441	
2,981.00	25.75	97.240	2,808.02	-85.47	739.99	1,888,812.879	2,749,955.351	36.190942331	-107.742292446	
3,075.00	24.77	96.160	2,893.03	-90.15	779.83	1,888,808.193	2,749,995.187	36.190929354	-107.742157459	
3,169.00	23.86	94.940	2,978.69	-93.90	818.35	1,888,804.443	2,750,033.707	36.190918952	-107.742026926	
3,263.00	24.85	97.240	3,064.33	-98.03	856.88	1,888,800.316	2,750,072.244	36.190907516	-107.741896338	
3,357.00	24.41	95.980	3,149.78	-102.54	895.80	1,888,795.803	2,750,111.156	36.190895018	-107.741764480	
3,451.00	26.04	98.510	3,234.81	-107.62	935.52	1,888,790.726	2,750,150.883	36.190880967	-107.741629861	
3,546.00	24.04	95.970	3,320.88	-112.72	975.40	1,888,785.627	2,750,190.757	36.190866856	-107.741494747	
3,640.00	24.32	99.250	3,406.64	-117.82	1,013.55	1,888,780.524	2,750,228.905	36.190852738	-107.741365478	
3,734.00	26.58	96.970	3,491.51	-123.49	1,053.53	1,888,774.860	2,750,268.891	36.190837074	-107.741229987	
3,829.00	26.60	96.740	3,576.47	-128.56	1,095.75	1,888,769.784	2,750,311.109	36.190823022	-107.741086926	
3,923.00	23.24	95.300	3,661.70	-132.75	1,135.13	1,888,765.600	2,750,350.486	36.190811424	-107.740953492	
4,018.00	24.66	101.500	3,748.54	-138.43	1,173.22	1,888,759.917	2,750,388.577	36.190795711	-107.740824420	
4,111.00	23.73	100.920	3,833.36	-145.84	1,210.60	1,888,752.503	2,750,425.964	36.190775249	-107.740697741	
4,205.00	23.98	102.330	3,919.34	-153.51	1,247.84	1,888,744.841	2,750,463.196	36.190754102	-107.740571584	
4,299.00	25.83	100.320	4,004.59	-161.25	1,286.65	1,888,737.093	2,750,502.008	36.190732715	-107.740440077	
4,393.00	26.60	101.490	4,088.92	-169.11	1,327.42	1,888,729.232	2,750,542.779	36.190711013	-107.740301932	
4,487.00	24.96	100.100	4,173.57	-176.79	1,367.57	1,888,721.562	2,750,582.931	36.190689835	-107.740165883	
4,519.00	23.02	98.780	4,202.80	-178.92	1,380.40	1,888,719.422	2,750,595.763	36.190683924	-107.740122402	
4,551.00	22.65	102.490	4,232.29	-181.21	1,392.60	1,888,717.135	2,750,607.963	36.190677607	-107.740081064	
4,582.00	23.96	107.350	4,260.77	-184.38	1,404.44	1,888,713.966	2,750,619.800	36.190668872	-107.740040958	
4,613.00	25.59	112.690	4,288.92	-188.84	1,416.63	1,888,709.506	2,750,631.987	36.190656587	-107.739999670	
4,645.00	27.39	118.700	4,317.56	-195.04	1,429.46	1,888,703.303	2,750,644.823	36.190639514	-107.739956190	
4,676.00	28.70	122.080	4,344.92	-202.42	1,442.03	1,888,695.925	2,750,657.386	36.190619212	-107.739913639	
4,708.00	31.19	124.000	4,372.65	-211.14	1,455.41	1,888,687.209	2,750,670.768	36.190595234	-107.739868315	
4,739.00	33.93	127.030	4,398.77	-220.84	1,468.97	1,888,677.508	2,750,684.333	36.190568546	-107.739822375	
4,771.00	36.95	128.490	4,424.84	-232.21	1,483.64	1,888,666.140	2,750,698.995	36.190537281	-107.739772725	
4,802.00	40.25	130.890	4,449.07	-244.57	1,498.50	1,888,653.782	2,750,713.863	36.190503290	-107.739722376	
4,833.00	43.25	133.520	4,472.20	-258.44	1,513.78	1,888,639.908	2,750,729.140	36.190465138	-107.739670649	
4,865.00	46.61	133.250	4,494.85	-273.96	1,530.20	1,888,624.388	2,750,745.563	36.190422459	-107.739615042	
4,896.00	50.18	133.480	4,515.43	-289.87	1,547.05	1,888,608.473	2,750,762.411	36.190378695	-107.739557997	
4,928.00	54.14	133.280	4,535.05	-307.23	1,565.42	1,888,591.120	2,750,780.776	36.190330976	-107.739495816	
4,959.00	58.25	132.590	4,552.30	-324.77	1,584.27	1,888,573.581	2,750,799.633	36.190282743	-107.739431968	
4,991.00	60.97	132.170	4,568.49	-343.37	1,604.66	1,888,554.978	2,750,820.022	36.190231585	-107.739362930	



Survey Report - Geographic



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,022.00	61.01	132.260	4,583.52	-361.59	1,624.74	1,888,536.762	2,750,840.101	36.190181490	-107.739294944	
5,053.00	62.19	131.950	4,598.26	-379.87	1,644.97	1,888,518.479	2,750,860.332	36.190131211	-107.739226441	
5,085.00	65.60	131.630	4,612.34	-399.01	1,666.40	1,888,499.333	2,750,881.755	36.190078558	-107.739153904	
5,116.00	69.00	132.480	4,624.30	-418.17	1,687.63	1,888,480.178	2,750,902.984	36.190025880	-107.739082021	
5,123.66	69.77	132.541	4,627.00	-423.01	1,692.91	1,888,475.333	2,750,908.269	36.190012557	-107.739064127	
<b>FTP @ 5123.66 MD 4627.00 TVD</b>										
5,143.00	71.71	132.692	4,633.38	-435.38	1,706.35	1,888,462.972	2,750,921.704	36.189978563	-107.739018637	
<b>330 perp @ 5143 MD 4633.38 TVD</b>										
5,148.00	72.21	132.730	4,634.93	-438.60	1,709.84	1,888,459.747	2,750,925.198	36.189969695	-107.739006809	
5,180.00	75.70	133.470	4,643.77	-459.61	1,732.29	1,888,438.736	2,750,947.648	36.189911917	-107.738930796	
5,211.00	78.66	134.140	4,650.65	-480.53	1,754.10	1,888,417.815	2,750,969.459	36.189854384	-107.738856947	
5,242.00	81.18	133.760	4,656.07	-501.71	1,776.07	1,888,396.634	2,750,991.432	36.189796140	-107.738782554	
5,274.00	84.28	134.460	4,660.12	-523.81	1,798.86	1,888,374.542	2,751,014.220	36.189735390	-107.738705400	
5,305.00	87.18	134.110	4,662.43	-545.39	1,820.99	1,888,352.960	2,751,036.348	36.189676042	-107.738630480	
5,336.00	87.61	133.820	4,663.84	-566.89	1,843.28	1,888,331.461	2,751,058.637	36.189616923	-107.738555013	
5,430.00	87.77	133.710	4,667.63	-631.85	1,911.11	1,888,266.494	2,751,126.467	36.189438270	-107.738325358	
5,524.00	89.82	134.060	4,669.61	-697.00	1,978.84	1,888,201.350	2,751,194.197	36.189259130	-107.738096043	
5,619.00	89.74	134.620	4,669.97	-763.39	2,046.78	1,888,134.954	2,751,262.141	36.189076551	-107.737866009	
5,713.00	92.36	135.300	4,668.25	-829.80	2,113.28	1,888,068.550	2,751,328.638	36.188893952	-107.737640878	
5,808.00	92.05	135.220	4,664.59	-897.23	2,180.10	1,888,001.121	2,751,395.458	36.188708536	-107.737414658	
5,902.00	91.98	135.110	4,661.29	-963.85	2,246.34	1,887,934.503	2,751,461.693	36.188525350	-107.737190418	
5,996.00	89.84	130.960	4,659.79	-1,027.97	2,315.02	1,887,870.380	2,751,530.374	36.188349010	-107.736957881	
6,091.00	89.24	130.260	4,660.56	-1,089.80	2,387.13	1,887,808.547	2,751,602.491	36.188178950	-107.736713695	
6,186.00	89.91	133.180	4,661.26	-1,153.01	2,458.03	1,887,745.334	2,751,673.389	36.188005105	-107.736473644	
6,280.00	89.80	132.460	4,661.50	-1,216.91	2,526.98	1,887,681.443	2,751,742.336	36.187829401	-107.736240207	
6,374.00	90.27	135.940	4,661.44	-1,282.43	2,594.36	1,887,615.920	2,751,809.715	36.187649216	-107.736012092	
6,469.00	89.99	136.520	4,661.23	-1,351.03	2,660.08	1,887,547.319	2,751,875.432	36.187460581	-107.735789621	
6,563.00	89.65	137.150	4,661.52	-1,419.59	2,724.38	1,887,478.758	2,751,939.737	36.187272058	-107.735571936	
6,657.00	91.05	136.590	4,660.95	-1,488.19	2,788.64	1,887,410.160	2,752,003.997	36.187083433	-107.735354403	
6,751.00	90.51	137.030	4,659.67	-1,556.72	2,852.97	1,887,341.632	2,752,068.326	36.186895003	-107.735136639	
6,846.00	91.20	135.140	4,658.25	-1,625.14	2,918.85	1,887,273.208	2,752,134.207	36.186706852	-107.734913618	
6,940.00	90.37	135.380	4,656.96	-1,691.90	2,985.01	1,887,206.446	2,752,200.365	36.186523265	-107.734689649	
7,035.00	92.11	135.290	4,654.91	-1,759.45	3,051.77	1,887,138.898	2,752,267.128	36.186337516	-107.734463636	
7,130.00	92.01	134.910	4,651.49	-1,826.70	3,118.79	1,887,071.650	2,752,334.142	36.186152590	-107.734236771	
7,224.00	91.78	134.930	4,648.38	-1,893.04	3,185.31	1,887,005.311	2,752,400.667	36.185970163	-107.734011565	
7,318.00	91.18	134.120	4,645.96	-1,958.93	3,252.31	1,886,939.419	2,752,467.660	36.185788963	-107.733784769	
7,413.00	91.11	134.600	4,644.06	-2,025.34	3,320.21	1,886,873.012	2,752,535.567	36.185606345	-107.733554878	
7,507.00	90.62	134.610	4,642.64	-2,091.34	3,387.13	1,886,807.012	2,752,602.484	36.185424846	-107.733328343	
7,601.00	90.55	135.390	4,641.68	-2,157.80	3,453.59	1,886,740.548	2,752,668.948	36.185242074	-107.733103346	
7,696.00	90.01	135.830	4,641.21	-2,225.69	3,520.05	1,886,672.663	2,752,735.403	36.185055397	-107.732878386	
7,790.00	91.82	135.210	4,639.71	-2,292.75	3,585.90	1,886,605.606	2,752,801.253	36.184870998	-107.732655472	
7,884.00	91.52	134.880	4,636.97	-2,359.24	3,652.29	1,886,539.114	2,752,867.641	36.184688149	-107.732430738	
7,979.00	91.01	135.380	4,634.88	-2,426.55	3,719.29	1,886,471.804	2,752,934.646	36.184503048	-107.732203912	
8,073.00	91.01	132.730	4,633.22	-2,491.89	3,786.83	1,886,406.457	2,753,002.185	36.184323340	-107.731975274	
8,168.00	90.90	134.000	4,631.64	-2,557.12	3,855.88	1,886,341.237	2,753,071.238	36.184143974	-107.731741505	
8,262.00	90.15	133.290	4,630.77	-2,621.99	3,923.90	1,886,276.363	2,753,139.255	36.183965563	-107.731511245	
8,356.00	89.97	133.710	4,630.68	-2,686.69	3,992.09	1,886,211.658	2,753,207.440	36.183787614	-107.731280418	
8,450.00	89.94	134.360	4,630.75	-2,752.03	4,059.66	1,886,146.319	2,753,275.018	36.183607927	-107.731051653	
8,544.00	90.97	135.750	4,630.00	-2,818.56	4,126.06	1,886,079.792	2,753,341.417	36.183424978	-107.730826885	
8,639.00	90.29	134.320	4,628.96	-2,885.77	4,193.19	1,886,012.582	2,753,408.545	36.183240150	-107.730599652	
8,733.00	90.25	134.440	4,628.52	-2,951.51	4,260.37	1,885,946.838	2,753,475.728	36.183059349	-107.730372230	
8,827.00	90.68	135.300	4,627.75	-3,017.83	4,326.99	1,885,880.524	2,753,542.343	36.182876983	-107.730146732	
8,921.00	89.98	132.160	4,627.21	-3,082.80	4,394.91	1,885,815.556	2,753,610.258	36.182698308	-107.729916828	
9,016.00	90.41	132.340	4,626.89	-3,146.67	4,465.23	1,885,751.682	2,753,680.578	36.182522633	-107.729678770	
9,110.00	90.39	132.260	4,626.23	-3,209.93	4,534.75	1,885,688.420	2,753,750.101	36.182348643	-107.729443411	



Survey Report - Geographic



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,204.00	91.17	132.720	4,624.95	-3,273.42	4,604.06	1,885,624.933	2,753,819.409	36.182174034	-107.729208783
9,299.00	88.92	134.290	4,624.88	-3,338.81	4,672.96	1,885,559.540	2,753,888.307	36.181994188	-107.728975553
9,393.00	90.48	135.640	4,625.37	-3,405.24	4,739.46	1,885,493.117	2,753,954.811	36.181811521	-107.728750440
9,488.00	90.52	135.360	4,624.54	-3,472.99	4,806.04	1,885,425.361	2,754,021.395	36.181625191	-107.728525062
9,582.00	89.50	134.340	4,624.52	-3,539.28	4,872.68	1,885,359.069	2,754,088.035	36.181442882	-107.728299490
9,677.00	90.07	134.510	4,624.88	-3,605.78	4,940.53	1,885,292.573	2,754,155.880	36.181260006	-107.728069837
9,771.00	90.59	134.440	4,624.34	-3,671.64	5,007.60	1,885,226.718	2,754,222.953	36.181078896	-107.727842798
9,866.00	89.68	132.930	4,624.12	-3,737.25	5,076.30	1,885,161.105	2,754,291.649	36.180898445	-107.727610259
9,961.00	90.70	136.730	4,623.80	-3,804.21	5,143.66	1,885,094.143	2,754,359.009	36.180714292	-107.727382252
10,055.00	91.33	136.990	4,622.14	-3,872.79	5,207.92	1,885,025.564	2,754,423.274	36.180525705	-107.727164741
10,149.00	89.34	135.550	4,621.59	-3,940.71	5,272.90	1,884,957.646	2,754,488.247	36.180338931	-107.726944832
10,243.00	88.84	134.750	4,623.08	-4,007.34	5,339.18	1,884,891.013	2,754,554.531	36.180155684	-107.726720472
10,338.00	88.15	134.120	4,625.57	-4,073.83	5,406.99	1,884,824.527	2,754,622.341	36.179972836	-107.726490945
10,433.00	90.02	135.340	4,627.09	-4,140.67	5,474.47	1,884,757.682	2,754,689.819	36.179789001	-107.726262545
10,527.00	89.76	135.070	4,627.27	-4,207.38	5,540.70	1,884,690.977	2,754,756.048	36.179605554	-107.726038376
10,622.00	89.45	135.340	4,627.93	-4,274.79	5,607.63	1,884,623.564	2,754,822.981	36.179420159	-107.725811828
10,716.00	89.39	136.040	4,628.88	-4,342.05	5,673.29	1,884,556.304	2,754,888.640	36.179235190	-107.725589597
10,810.00	90.49	135.040	4,628.98	-4,409.14	5,739.13	1,884,489.215	2,754,954.476	36.179050687	-107.725366763
10,905.00	90.31	135.290	4,628.31	-4,476.51	5,806.11	1,884,421.849	2,755,021.456	36.178865419	-107.725140059
10,999.00	91.34	135.030	4,626.96	-4,543.15	5,872.38	1,884,355.203	2,755,087.730	36.178682133	-107.724915743
11,094.00	90.94	135.010	4,625.07	-4,610.34	5,939.52	1,884,288.017	2,755,154.868	36.178497363	-107.724688503
11,188.00	90.66	135.190	4,623.76	-4,676.92	6,005.86	1,884,221.440	2,755,221.213	36.178314264	-107.724463948
11,282.00	90.34	135.630	4,622.94	-4,743.85	6,071.85	1,884,154.501	2,755,287.201	36.178130171	-107.724240607
11,377.00	89.82	135.270	4,622.80	-4,811.55	6,138.50	1,884,086.801	2,755,353.846	36.177943986	-107.724015043
11,471.00	91.16	135.050	4,622.00	-4,878.20	6,204.78	1,884,020.151	2,755,420.124	36.177760688	-107.723790719
11,566.00	90.81	135.480	4,620.37	-4,945.68	6,271.63	1,883,952.677	2,755,486.978	36.177575120	-107.723564450
11,660.00	89.82	134.610	4,619.85	-5,012.20	6,338.04	1,883,886.159	2,755,553.391	36.177392182	-107.723339670
11,755.00	89.82	135.730	4,620.15	-5,079.57	6,405.02	1,883,818.786	2,755,620.365	36.177206894	-107.723112994
11,849.00	89.66	135.520	4,620.58	-5,146.76	6,470.75	1,883,751.598	2,755,686.103	36.177022115	-107.722890506
11,944.00	89.39	136.320	4,621.36	-5,215.00	6,536.84	1,883,683.356	2,755,752.188	36.176834440	-107.722666849
<b>Survey @ 11944 MD 4621.36 TVD</b>									
11,964.20	89.39	136.320	4,621.58	-5,229.61	6,550.79	1,883,668.748	2,755,766.138	36.176794267	-107.722619637
<b>LTP @ 11964.20 MD 4621.58 TVD</b>									
11,995.00	89.39	136.320	4,621.91	-5,251.88	6,572.06	1,883,646.475	2,755,787.408	36.176733012	-107.722547652
<b>330 perp @ 11995 MD 4621.91 TVD</b>									
12,047.00	89.39	136.320	4,622.46	-5,289.49	6,607.97	1,883,608.870	2,755,823.319	36.176629596	-107.722426119
<b>Survey proj. to 12047.00 MD 4622.46 TVD</b>									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
412.00	412.00	0.22	0.72	MWD surveys	
2,760.00	2,610.37	-75.74	641.62	9 5/8" Casing @ 2760 MD 2610.37 TVD	
5,123.66	4,627.00	-423.01	1,692.91	FTP @ 5123.66 MD 4627.00 TVD	
5,143.00	4,633.38	-435.38	1,706.35	330 perp @ 5143 MD 4633.38 TVD	
11,944.00	4,621.36	-5,215.00	6,536.84	Survey @ 11944 MD 4621.36 TVD	
11,964.20	4,621.58	-5,229.61	6,550.79	LTP @ 11964.20 MD 4621.58 TVD	
11,995.00	4,621.91	-5,251.88	6,572.06	330 perp @ 11995 MD 4621.91 TVD	
12,047.00	4,622.46	-5,289.49	6,607.97	Survey proj. to 12047.00 MD 4622.46 TVD	



Survey Report - Geographic



<b>Company:</b>	Enduring Resources LLC	<b>Local Co-ordinate Reference:</b>	Well Rodeo Unit #511H
<b>Project:</b>	San Juan County, New Mexico NAD83 NM W	<b>TVD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Site:</b>	Rodeo Unit 511 pad (511, 512 & 513)	<b>MD Reference:</b>	RKB=6798+13 @ 6813.00ft (Ensign 145)
<b>Well:</b>	Rodeo Unit #511H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original Hole	<b>Database:</b>	DB_Decv0422v16

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



**WELL NAME: RODEO UNIT 511H**

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

**API Number:** 30-045-35875

**State:** New Mexico

**County:** San Juan

**Surface Elev.:** 6,798 ft ASL (GL) 6,811 ft ASL (KB)

**Surface Location:** 25-23N-09W Sec-Twn- Rng 191 ft FSL 1,365 ft FWL

**BH Location:** 31-23N-08W Sec-Twn- Rng 234 ft FSL 2646 ft FWL

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

South on US Hwy 550 for 37.8 miles to MM 113.4; Right (Southwest) on CR #7890 for 0.8 miles to fork; Left (South) remaining on CR #7890 for 1.3 miles to 4-way intersection; Left (Southeast) remaining on CR #7890 for 0.6 miles to fork; Right (Southwest) on CR #7890 for 1.5 miles to access road; Left on access road for 0.5 mile to Rodeo Unit 511H Pad (three wells planned to be drilled: 511H, 512H, 513H).

QUICK REFERENCE	
Sur TD (MD)	361 ft
Int TD (MD)	2,760 ft
KOP (MD)	4,620 ft
KOP (TVD)	4,303 ft
Target (TVD)	4,659 ft
Curve BUR	10 °/100 ft
POE (MD)	5,252 ft
TD (MD)	12,047ft
Lat Len (ft)	6,696 ft

**WELL CONSTRUCTION SUMMARY:**

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	361	13.375	54.5	J-55	BTC	0	361
Intermediate	12.250	2,760	9.625	36.0	J-55	LTC	0	2,760
Production	8.500	12,047	5.500	17.0	P-110	LTC	0	12,047

**CEMENT PROPERTIES SUMMARY:**

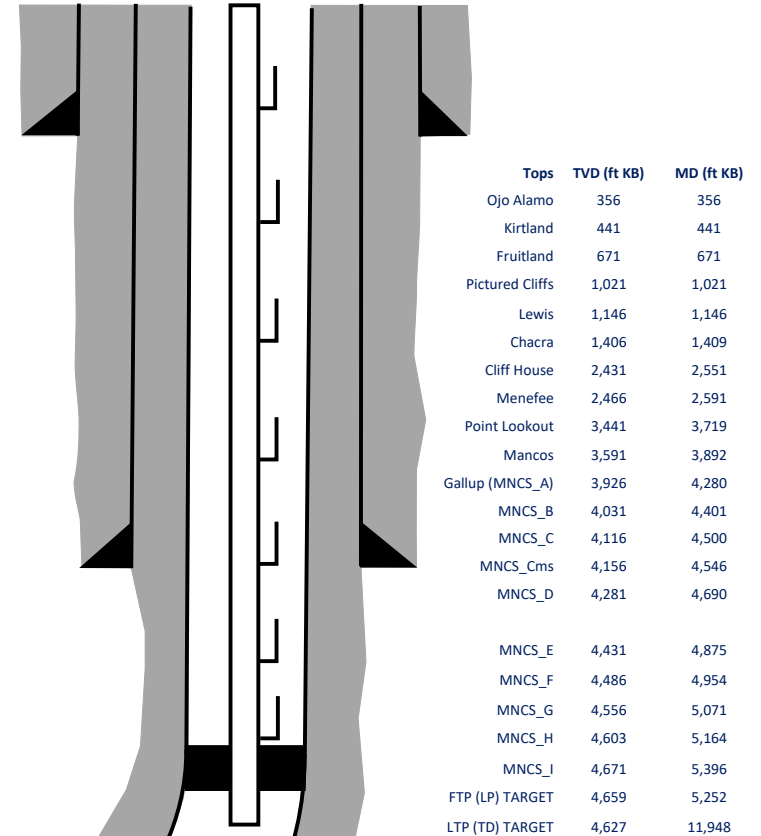
	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)
Surface	TYPE III	14.6	1.39	6.686	0.6946	100%	0	350
Inter. (Lead)	10 Type III:P	12.5	2.14	12.05	0.3627	70%	0	531
Inter. (Tail)	Type III	14.6	1.38	6.64	0.3132	20%	2,248	136
Prod. (Lead)	Type I / II	12.4	2.360	13.40	0.2691	65%	0	623
Prod. (Tail)	G:POZ blend	13.3	1.560	7.70	0.2291	10%	3,892	1,301

**COMPLETION / PRODUCTION SUMMARY:**

**Frac:** 30 plug-and-perf stages with 270,000 bbls slickwater fluid and 11,000,000 lbs of proppant (estimated)

**Flowback:** Flow back through production tubing as pressures allow (ESP may be used for load recovery assistance)

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



Form 3160-5  
(June 2015)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.  
**NO-G-1402-1893**

6. If Indian, Allottee or Tribe Name  
Eastern Navajo

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

Oil Well     Gas Well     Other

2. Name of Operator  
**Enduring Resources IV LLC**

3a. Address  
**200 Energy Court Farmington NM 87401**

3b. Phone No. (include area code)  
**505-636-9743**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**SHL: 191' FSL & 1365' FWL, Sec 25 T23N, R9W**  
**BHL: 234' FSL & 2646' FEL, Sec 31 T23N, R8W**

7. If Unit of CA/Agreement, Name and/or No.  
**NMNM136328A, NMNM136328X**

8. Well Name and No.  
**Rodeo Unit 511H**

9. API Well No.  
**30-045-35875**

10. Field and Pool or Exploratory Area  
**Mancos/Basin Mancos**

11. Country or Parish, State  
**San Juan, NM**

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water ShutOff
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Completion</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

**12/30/2022 thru 1/6/2023-** Pre frac site set up, MIRU, Pressure test

**1/6/2023 thru 1/11/2023-** 24 hour Frac Ops. 28 total stages, total holes 1176. Perfed interval 5153' - 11959' MD. Perfed w 0.31" holes with SFT-NE45B, FRP-48H, CSA-2400, SCI-28H-W, & 8,803,860 lbs total proppant

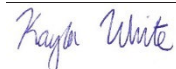
**1/16/2023 thru 1/18/2023** – Drilling out operations

**1/18/2023** - tubing landed at 5259'

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

**Kayla White**

Title: Environmental Engineer



Date: 2/23/2023

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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.

DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED

OMB NO. 1004-

0137

Expires: January 31, 2018

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.

**N0-G-1402-1893**

1a. Type of Well  Oil Well  Well  Dry  Other  
 b. Type of Completion  New Well  Work Over  Deepen  Plug Back  Diff. Zones  Hydraulic Fracturing  
 Other: \_\_\_\_\_

6. If Indian, Allottee or Tribe Name – Eastern Navajo

7. Unit or CA Agreement Name and No.  
**NMNM136328A, NMNM136328X**

2. Name of Operator  
**Enduring Resources IV LLC**

8. Lease Name and Well No.  
**Rodeo 511H**

3. Address **200 Energy Court Farmington NM 87402** 3a. Phone No. (Include area code) 505-636-9743

9. API Well No.  
**30-045-35875**

4. Location of Well (Report location clearly and in accordance with Federal requirements) \*

10. Field and Pool or Exploratory Mancos/Basin Mancos

At surface  
**SHL: 191' FSL & 1365' FWL, Sec 25 T23N, R9W**  
**BHL: 234' FSL & 2646' FEL, Sec 31 T23N, R8W**  
At top prod. interval reported below At total depth

11. Sec., T., R., M., on Block and Survey or Area  
**Sec 25 T23N R9W**

12. County or Parish **San Juan** 13. State **NM**

14. Date Spudded **8/10/2022** 15. Date T.D. Reached 12/1/2022 16. Date Completed 1/27/2023  
 D & A  Ready to Prod.

17. Elevations (DF, RKB, RT, GL)\* 6811' KB

18. Total Depth: **12,047' MD** 19. Plug Back T.D.: **11,959' MD** 20. Depth Bridge Plug Set: MD  
**4,622' TVD** **4,621' TVD** TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) 22. Was well cored?  No  Yes (Submit analysis)  
Was DST run?  No  Yes (Submit report)  
Directional Survey?  No  Yes (Submit copy)

Form 3160-4  
(June 2015)

UNITED STATES

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2"	<b>13-3/8", J-55</b>	54.5	0	<b>361' MD</b>		350	86.6	surface	
12-1/4"	<b>9-5/8", J-55</b>	36	0	<b>2760' MD</b>		675	235	surface	
8-1/2"	<b>5-1/2", P-110</b>	20	0	<b>12047' MD</b>		1780	572	surface	

24. Tubing Record

Size	Dept Set (MD)	Packer Dept (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2-7/8", 6.5#, L-80	<b>5259'</b>							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
<b>MNCS_A</b>	<b>3921' TVD</b>	<b>4721' TVD</b>	5153' - 11959' MD	<b>.31</b>	<b>1176</b>	

26. Perforation Record

27. Acid, Fracture, Treatment, Cement Squeeze, Post hydraulic fracturing chemical disclosures on FracFocus.org

Depth Interval	Amount, Type of Material and Date of Chemical Disclosure upload on FracFocus.org
5153' - 11959' MD	24 hour Frac Ops. 28 total stages, total holes 1176. Perfed interval 5153' - 11959' MD. Perfed w 0.31" holes with SFT-NE45B, FRP-48H, CSA-2400, SCI-28H-W, & 8,803,860 lbs total proppant

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
1/27/2023	2/6/2023	24 hr	➔	30.7	487	224			Flowing
Choke Size	Tbg. Press.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
64/64"	184	804	➔					Producing	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
			➔						

Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
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\*(See instructions and spaces for additional data on page 2)

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28. Disposition of Gas (Solid, used for fuel, vented, etc.) Sold

30. Summary of Porous Zones (Include Aquifers):  
 Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, fl and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
OJAM		320			
KRLD		439			
FRLD		687			
PCCF		1042			
CLFH_BASAL		2454			
MENF		2480			
PNLK		3445			
MNCS		3595			
Gallup (MNCS_A)		3921			

32. Additional remarks (include plugging procedure).

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- Electrical/Mechanical Logs (1 full set req'd.)     
  Geologic Report     
  DST Report     
  Directional Survey  
 Sundry Notice for plugging and cement verification     
  Core Analysis     
  Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions) \*

Name (please print) Kayla White Title Environmental Engineer  
 Signature *Kayla White* Date: 2/23/2023



**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**

ACKNOWLEDGMENTS

Action 196551

**ACKNOWLEDGMENTS**

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 196551
	Action Type: [C-104] Tight Hole Completion Packet (C-104CT)

**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
<input checked="" type="checkbox"/>	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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**Oil Conservation Division**  
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**Santa Fe, NM 87505**

CONDITIONS

Action 196551

**CONDITIONS**

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 196551
	Action Type: [C-104] Tight Hole Completion Packet (C-104CT)

**CONDITIONS**

Created By	Condition	Condition Date
plmartinez	File 3160-5 Completion Sundry within 10 days of BLM approval.	2/21/2024