

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

¹ Operator name and Address Enduring Resources IV LLC. 200 Energy Court Farmington NM 87401		² OGRID Number 372286	
		³ Reason for Filing Code/ Effective Date NW	
⁴ API Number 30-045-35873	⁵ Pool Name BASIN MANCOS		⁶ Pool Code 97232
⁷ Property Code 321253	⁸ Property Name RODEO UNIT		⁹ Well Number #513H

II. ¹⁰ 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 1325'	East/West line WEST	County SAN JUAN
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¹¹ Bottom Hole Location

UL or lot no. F	Section 6	Township 22N	Range 8W	Lot Idn	Feet from the 2489'	North/South line NORTH	Feet from the 1981'	East/West line WEST	County SAN JUAN
¹² Lse Code F	¹³ Producing Method Code		¹⁴ Gas Connection Date 1/27/2023		¹⁵ C-129 Permit Number		¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date

III. Oil and Gas Transporters

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

IV. Well Completion Data

²¹ Spud Date 8/15/2022	²² Ready Date 1/27/2023	²³ TD 15103' MD 4555' TVD	²⁴ PBDT 14988' MD 4554' TVD	²⁵ Perforations ~ 5190' - 14988' MD ~ 4615' -4554' TVD	²⁶ DHC, MC R-14051	
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set		³⁰ Sacks Cement
17-1/2"		13-3/8",54.5#, J-55		360' MD		350 sx - surface
12-1/4"		9-5/8",36#, J-55		2806' MD		672 sx- surface
8-1/2"		5-1/2",20#, P-110		15103' MD		2283 sx- surface
8-1/2"		2-7/8",6.5#, L-80		5259'		NA

V. Well Test Data

³¹ Date New Oil 2/6/2023	³² Gas Delivery Date 1/27/2023	³³ Test Date 2/6/2023	³⁴ Test Length 24 hr	³⁵ Tbg. Pressure 200	³⁶ Csg. Pressure 795
³⁷ Choke Size 64/64"	³⁸ Oil 36.4	³⁹ Water 194	⁴⁰ Gas 504		⁴¹ Test Method F

⁴² 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: <i>PATRICIA MARTINEZ</i>
Printed name: Kayla White	Title: <i>PETROLEUM SPECIALIST</i>
Title: Environmental Engineer	Approval Date: <i>10/26/2023</i>
E-mail Address: kwhite@cdhconsult.com	
Date: 2/26/2023	Phone: 720-768-3575



ENDURING RESOURCES IV LLC

January 9, 2023

Re: *RODEO UNIT 513H-30-045-35873*

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, appearing to read "Heather Huntington". The signature is fluid and cursive, with a long horizontal stroke at the end.

Heather Huntington
Permitting Technician
Enduring Resources, LLC.
hhuntington@enduringresources.com

District I
811 S. First Street, Artesia, NM 88210
Phone: (505) 393-6161 Fax: (505) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 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

¹ API Number 30-045-35873		² Pool Code 97232		³ Pool Name BASIN MANCOS	
⁴ Property Code 321253		⁵ Property Name RODEO UNIT			⁶ Well Number 513H
⁷ OGRID No. 372286		⁸ Operator Name ENDURING RESOURCES, LLC			⁹ Elevation 6798'

¹⁰ Surface Location

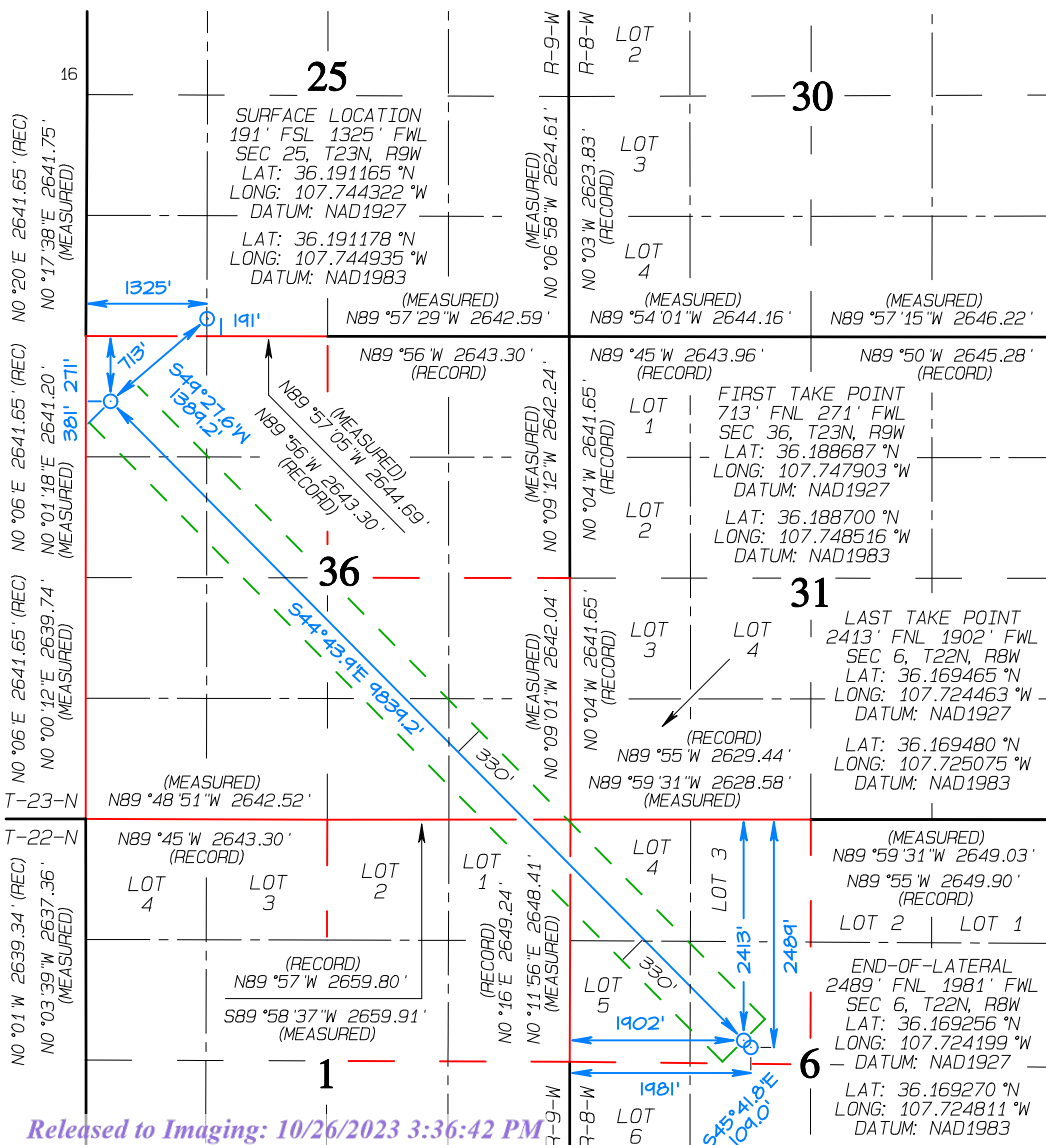
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	25	23N	9W		191	SOUTH	1325	WEST	SAN JUAN

¹¹ 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
F	6	22N	8W		2489	NORTH	1981	WEST	SAN JUAN

¹² Dedicated Acres 800.50 NE/4 - Sec 1, T22NR9W NW/4 - Sec 6, T22NR8W W/2, NE/4 - Sec 36, T23NR9W	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-14313
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION			

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, 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 Khem Suthiwan Date _____

Printed Name
ksuthiwan@enduringresources.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: JANUARY 26, 2023
Survey Date: JANUARY 24, 2017

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number	15269
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District I
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170District II
811 S. First Street, Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-9720District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462Submit one copy to
Appropriate District OfficeOIL CONSERVATION DIVISION
1220 South St. Francis Drive
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AS-DRILLED WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35873		² Pool Code 97232		³ Pool Name BASIN MANCOS	
⁴ Property Code 321253		⁵ Property Name RODEO UNIT			⁶ Well Number 513H
⁷ GRID No. 372286		⁸ Operator Name ENDURING RESOURCES, LLC			⁹ Elevation 6798'

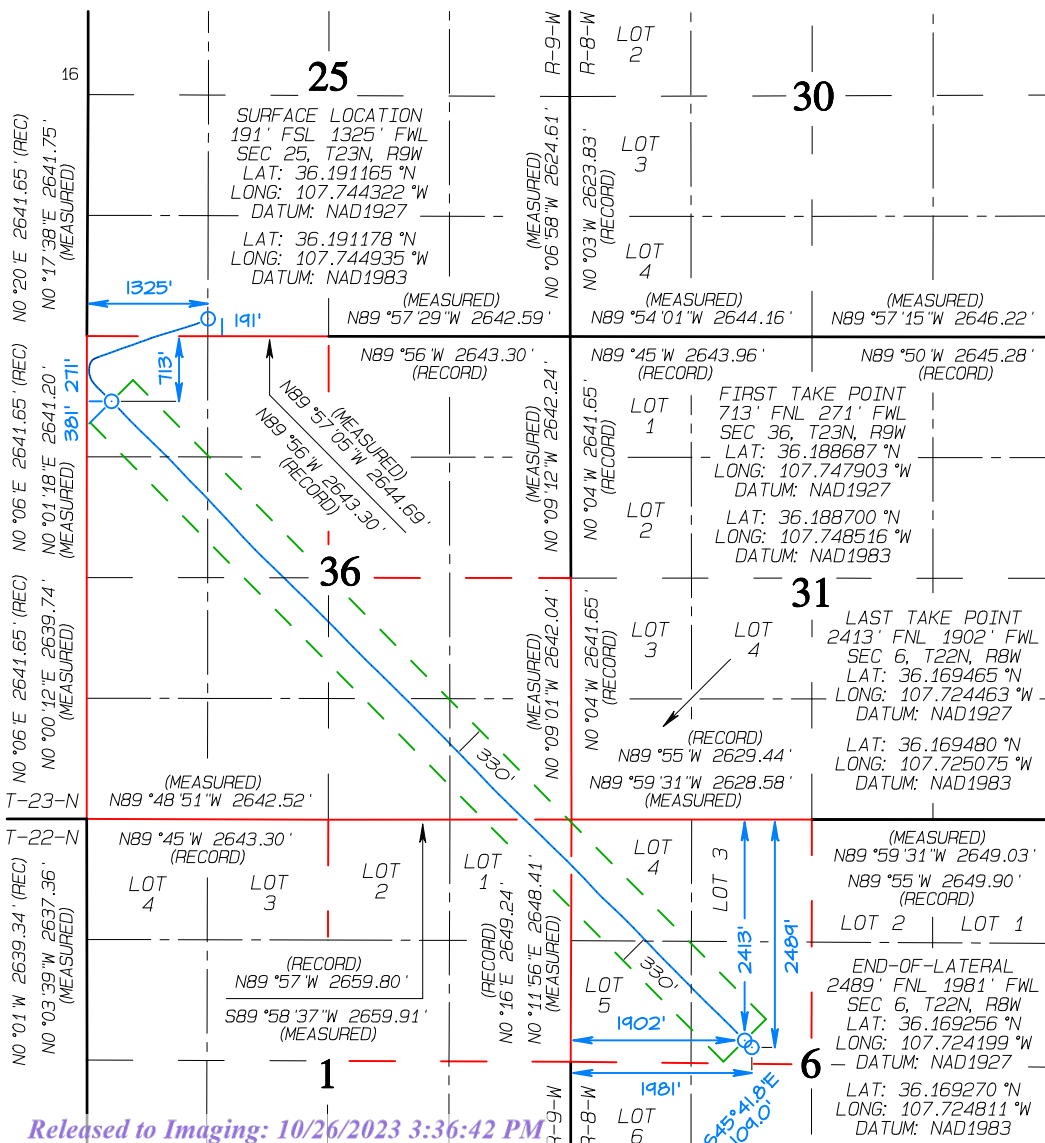
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NE/4 - Sec 1, T22NR9W							
NW/4 - Sec 6, T22NR8W							
W/2, NE/4 - Sec 36, T23NR9W							

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Khem Suthiwan 1/26/2023

Signature Date

Khem Suthiwan

Printed Name

ksuthiwan@enduringresources.com

E-mail Address

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

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

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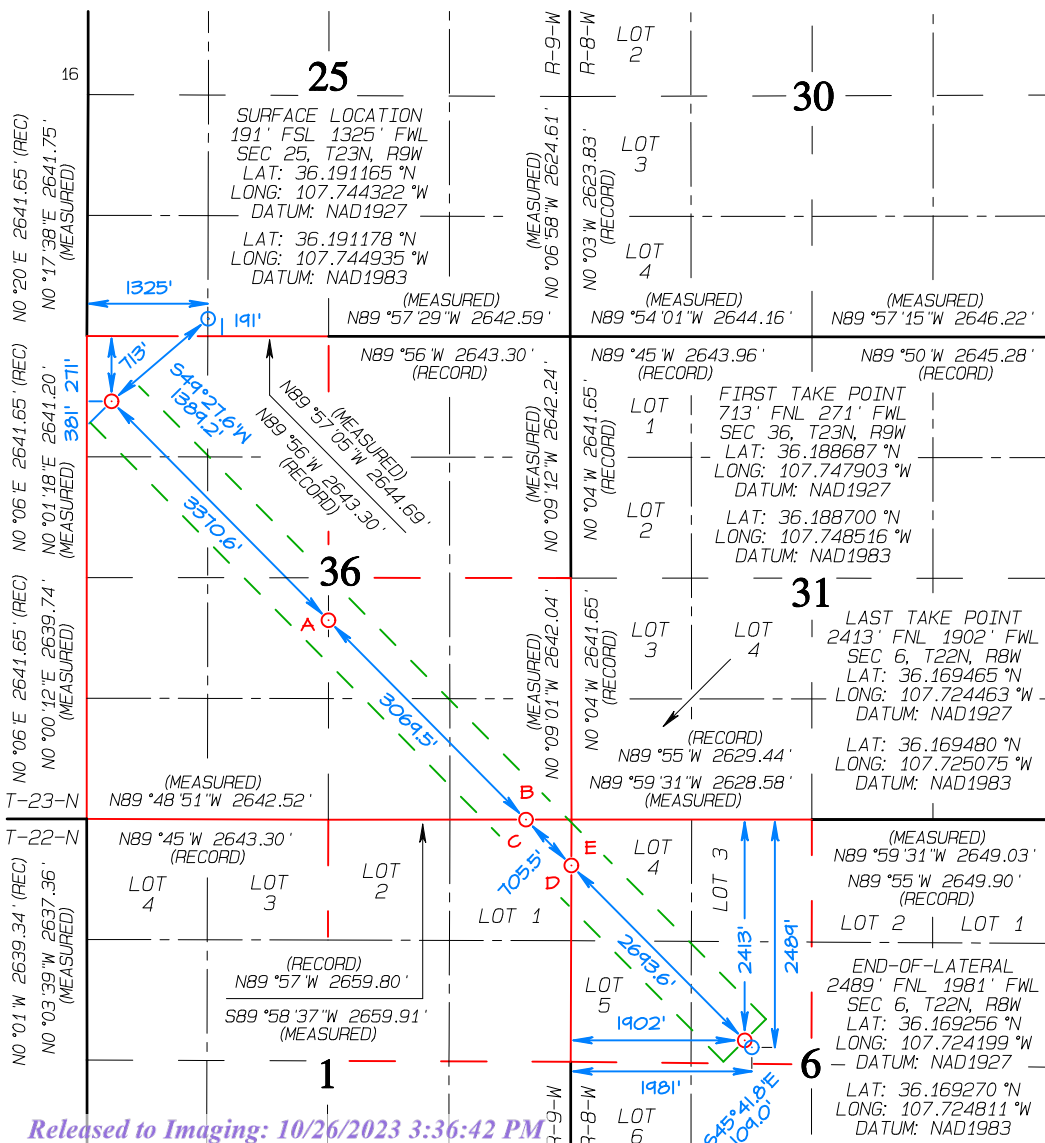
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Khem Suthiwan 1/26/2023

Signature Date

Khem Suthiwan

Printed Name
ksuthiwan@enduringresources.com

E-mail Address

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

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

(A) 2181' FSL 2653' FEL
SEC 36, T23N, R9W
LAT: 36.182103 °N
LONG: 107.739872 °W
DATUM: NAD1927

LAT: 36.182116 °N
LONG: 107.740484 °W
DATUM: NAD1983

(B) 0' FSL 498' FEL
SEC 36, T23N, R9W
LAT: 36.176106 °N
LONG: 107.732559 °W
DATUM: NAD1927

LAT: 36.176120 °N
LONG: 107.733172 °W
DATUM: NAD1983

(C) 0' FNL 498' FEL
SEC 1, T22N, R9W
LAT: 36.176106 °N
LONG: 107.732559 °W
DATUM: NAD1927

LAT: 36.176120 °N
LONG: 107.733172 °W
DATUM: NAD1983

(D) 501' FNL 0' FEL
SEC 1, T22N, R9W
LAT: 36.174728 °N
LONG: 107.730879 °W
DATUM: NAD1927

LAT: 36.174742 °N
LONG: 107.731491 °W
DATUM: NAD1983

(E) 501' FNL 0' FWL
SEC 6, T22N, R8W
LAT: 36.174728 °N
LONG: 107.730879 °W
DATUM: NAD1927

LAT: 36.174742 °N
LONG: 107.731491 °W
DATUM: NAD1983



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

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 @ 6811.00ft (Ensign 145)
 Surface location:
 Northing 1888897.946 Easting 2749175.527 Latitude 36.191178000 Longitude -107.744935000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.59°

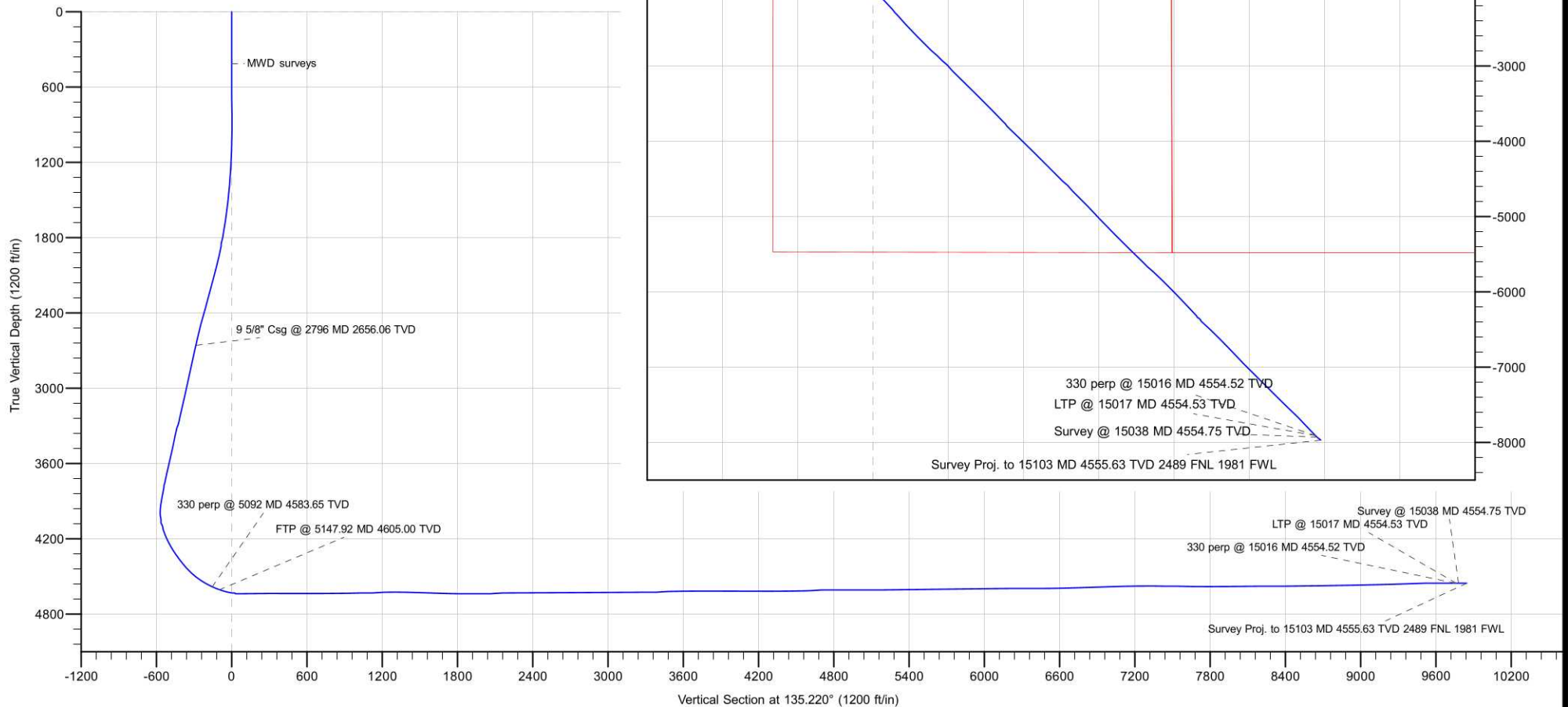


Azimuths to Grid North
 True North: -0.05°
 Magnetic North: 8.59°

Magnetic Field
 Strength: 49142.1nT
 Dip Angle: 62.69°
 Date: 11/18/2022
 Model: IGRF2020

ANNOTATIONS SURVEYS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Annotation
412.00	0.56	217.700	411.99	-1.59	-1.23	0.26	MWD surveys
2796.00	28.05	251.246	2656.06	-208.59	-615.17	-285.26	9 5/8" Csg @ 2796 MD 2656.06 TVD
5092.00	64.68	134.069	4583.65	-866.78	-1092.80	-154.50	330 perp @ 5092 MD 4583.65 TVD
5147.92	70.15	134.605	4605.00	-902.84	-1055.81	-102.85	FTP @ 5147.92 MD 4605.00 TVD
15016.00	89.56	134.383	4554.52	-7908.12	5884.65	9758.38	330 perp @ 15016 MD 4554.52 TVD
15017.00	89.54	134.377	4554.53	-7908.82	5885.37	9759.38	LTP @ 15017 MD 4554.53 TVD
15038.00	89.23	134.250	4554.75	-7923.49	5900.39	9780.38	Survey @ 15038 MD 4554.75 TVD
15103.00	89.23	134.250	4555.63	-7968.84	5946.95	9845.37	Survey Proj. to 15103 MD 4555.63 TVD 2489 FNL 1981 FWL





Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Project	San Juan County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

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

Well	Rodeo Unit #513H, Surf loc: 191 FSL 1325 FWL Section 25-T23N-R07W					
Well Position	+N/-S	0.00 ft	Northing:	1,888,897.946 usft	Latitude:	36.191178000
	+E/-W	0.00 ft	Easting:	2,749,175.527 usft	Longitude:	-107.744935000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,798.00 ft
Grid Convergence:		0.05 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/18/2022	8.65	62.69	49,142.13157349

Design	Surveys Original Hole				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	135.220	

Survey Program	Date	12/23/2022			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
412.00	2,654.00	MWD surf (Original Hole)	MWD	OWSG MWD - Standard	
2,745.00	15,038.00	MWD (Original Hole)	MWD	OWSG MWD - Standard	
15,103.00	15,103.00	Projection (Original Hole)	MWD	OWSG MWD - Standard	

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
412.00	0.56	217.700	411.99	-1.59	-1.23	0.26	0.14	0.14	0.00
MWD surveys									
503.00	0.68	209.390	502.99	-2.42	-1.77	0.47	0.16	0.13	-9.13
594.00	0.66	207.120	593.98	-3.35	-2.27	0.78	0.04	-0.02	-2.49
685.00	0.73	214.000	684.98	-4.30	-2.84	1.05	0.12	0.08	7.56
776.00	0.62	217.780	775.97	-5.17	-3.46	1.23	0.13	-0.12	4.15
866.00	0.54	226.710	865.96	-5.84	-4.07	1.28	0.13	-0.09	9.92



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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	0.40	218.010	956.96	-6.39	-4.58	1.31	0.17	-0.15	-9.56
1,051.00	3.76	250.270	1,050.89	-7.69	-7.68	0.05	3.65	3.57	34.32
1,146.00	6.49	251.960	1,145.50	-10.40	-15.72	-3.69	2.88	2.87	1.78
1,240.00	8.67	249.280	1,238.67	-14.56	-27.40	-8.97	2.35	2.32	-2.85
1,334.00	12.01	247.570	1,331.13	-20.80	-43.07	-15.58	3.57	3.55	-1.82
1,429.00	15.28	245.030	1,423.44	-29.85	-63.56	-23.58	3.50	3.44	-2.67
1,523.00	18.56	246.610	1,513.36	-41.02	-88.52	-33.24	3.52	3.49	1.68
1,617.00	19.01	250.400	1,602.35	-52.10	-116.68	-45.21	1.38	0.48	4.03
1,711.00	18.71	251.500	1,691.31	-62.02	-145.40	-58.39	0.49	-0.32	1.17
1,806.00	19.79	252.270	1,781.00	-71.75	-175.17	-72.46	1.17	1.14	0.81
1,900.00	22.79	252.600	1,868.57	-82.04	-207.71	-88.07	3.19	3.19	0.35
1,994.00	26.21	252.750	1,954.09	-93.65	-244.91	-106.04	3.64	3.64	0.16
2,089.00	28.88	252.990	2,038.32	-106.58	-286.89	-126.43	2.81	2.81	0.25
2,183.00	29.29	252.670	2,120.46	-120.07	-330.55	-147.61	0.47	0.44	-0.34
2,277.00	29.45	252.960	2,202.38	-133.69	-374.59	-168.96	0.23	0.17	0.31
2,371.00	29.64	252.540	2,284.16	-147.44	-418.86	-190.39	0.30	0.20	-0.45
2,466.00	30.00	253.370	2,366.58	-161.28	-464.03	-212.37	0.58	0.38	0.87
2,560.00	29.36	253.130	2,448.25	-174.70	-508.60	-234.25	0.69	-0.68	-0.26
2,654.00	28.15	252.500	2,530.66	-188.05	-551.80	-255.20	1.33	-1.29	-0.67
2,745.00	27.84	252.040	2,611.01	-201.06	-592.48	-274.62	0.42	-0.34	-0.51
2,796.00	28.05	251.246	2,656.06	-208.59	-615.17	-285.26	0.84	0.42	-1.56
9 5/8" Csg @ 2796 MD 2656.06 TVD									
2,823.00	28.17	250.830	2,679.87	-212.72	-627.20	-290.80	0.84	0.43	-1.54
2,887.00	28.82	250.190	2,736.12	-222.91	-655.98	-303.84	1.12	1.02	-1.00
2,981.00	27.88	248.440	2,818.85	-238.67	-697.74	-322.07	1.33	-1.00	-1.86
3,075.00	28.83	251.100	2,901.57	-254.08	-739.63	-340.63	1.68	1.01	2.83
3,170.00	28.58	249.960	2,984.90	-269.29	-782.64	-360.14	0.63	-0.26	-1.20
3,263.00	27.49	249.060	3,066.98	-284.59	-823.59	-378.12	1.26	-1.17	-0.97
3,358.00	28.25	252.080	3,150.97	-299.34	-865.46	-397.14	1.69	0.80	3.18
3,452.00	26.80	251.520	3,234.33	-312.90	-906.73	-416.59	1.57	-1.54	-0.60
3,547.00	29.00	250.610	3,318.28	-327.34	-948.77	-435.95	2.36	2.32	-0.96
3,641.00	26.57	248.200	3,401.44	-342.71	-989.79	-453.93	2.85	-2.59	-2.56
3,735.00	29.93	250.090	3,484.23	-358.51	-1,031.37	-472.01	3.70	3.57	2.01
3,830.00	30.31	250.660	3,566.40	-374.52	-1,076.27	-492.27	0.50	0.40	0.60
3,924.00	27.82	249.760	3,648.56	-389.97	-1,119.24	-511.57	2.69	-2.65	-0.96
4,018.00	28.17	251.250	3,731.56	-404.69	-1,160.83	-530.42	0.83	0.37	1.59
4,112.00	22.79	249.290	3,816.39	-418.27	-1,198.90	-547.60	5.79	-5.72	-2.09
4,143.00	21.08	249.090	3,845.15	-422.38	-1,209.73	-552.30	5.52	-5.52	-0.65
4,174.00	21.69	247.930	3,874.01	-426.52	-1,220.24	-556.77	2.39	1.97	-3.74
4,206.00	23.79	247.390	3,903.52	-431.23	-1,231.68	-561.49	6.59	6.56	-1.69
4,237.00	24.63	243.830	3,931.80	-436.48	-1,243.25	-565.91	5.43	2.71	-11.48
4,268.00	25.17	235.570	3,959.92	-443.06	-1,254.49	-569.16	11.34	1.74	-26.65
4,300.00	25.88	226.370	3,988.81	-451.73	-1,265.17	-570.52	12.57	2.22	-28.75
4,331.00	26.70	217.090	4,016.62	-461.96	-1,274.27	-569.67	13.51	2.65	-29.94



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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)
4,363.00	27.66	208.900	4,045.09	-474.20	-1,282.19	-566.57	12.06	3.00	-25.59
4,394.00	28.93	202.630	4,072.39	-487.42	-1,288.56	-561.66	10.42	4.10	-20.23
4,426.00	29.99	197.150	4,100.26	-502.21	-1,293.90	-554.92	9.05	3.31	-17.13
4,457.00	31.01	192.280	4,126.98	-517.42	-1,297.88	-546.94	8.62	3.29	-15.71
4,488.00	32.07	187.720	4,153.40	-533.38	-1,300.68	-537.58	8.42	3.42	-14.71
4,520.00	33.03	183.110	4,180.38	-550.51	-1,302.30	-526.56	8.31	3.00	-14.41
4,551.00	33.93	178.420	4,206.24	-567.60	-1,302.52	-514.59	8.83	2.90	-15.13
4,583.00	34.57	174.740	4,232.69	-585.57	-1,301.44	-501.07	6.77	2.00	-11.50
4,614.00	35.21	170.040	4,258.12	-603.13	-1,299.09	-486.95	8.91	2.06	-15.16
4,646.00	35.83	165.300	4,284.17	-621.28	-1,295.11	-471.26	8.82	1.94	-14.81
4,677.00	36.32	160.900	4,309.23	-638.74	-1,289.81	-455.14	8.50	1.58	-14.19
4,709.00	37.02	155.330	4,334.91	-656.45	-1,282.68	-437.54	10.62	2.19	-17.41
4,740.00	37.99	150.000	4,359.51	-673.20	-1,274.01	-419.55	10.92	3.13	-17.19
4,771.00	38.45	145.010	4,383.87	-689.36	-1,263.72	-400.82	10.07	1.48	-16.10
4,803.00	39.63	141.230	4,408.72	-705.47	-1,251.62	-380.87	8.30	3.69	-11.81
4,834.00	41.86	139.170	4,432.21	-721.01	-1,238.66	-360.71	8.40	7.19	-6.65
4,866.00	44.09	137.190	4,455.62	-737.26	-1,224.11	-338.93	8.15	6.97	-6.19
4,897.00	46.81	135.770	4,477.37	-753.27	-1,208.90	-316.85	9.36	8.77	-4.58
4,929.00	49.73	134.770	4,498.67	-770.23	-1,192.09	-292.97	9.42	9.13	-3.13
4,960.00	53.03	133.990	4,518.01	-787.17	-1,174.78	-268.76	10.83	10.65	-2.52
4,991.00	57.21	133.860	4,535.74	-804.80	-1,156.47	-243.34	13.49	13.48	-0.42
5,023.00	61.38	134.500	4,552.07	-823.98	-1,136.74	-215.83	13.14	13.03	2.00
5,054.00	62.52	134.280	4,566.65	-843.11	-1,117.19	-188.48	3.73	3.68	-0.71
5,085.00	63.93	134.040	4,580.62	-862.39	-1,097.34	-160.81	4.60	4.55	-0.77
5,092.00	64.68	134.069	4,583.65	-866.78	-1,092.80	-154.50	10.79	10.78	0.42
330 perp @ 5092 MD 4583.65 TVD									
5,117.00	67.38	134.170	4,593.80	-882.68	-1,076.41	-131.66	10.79	10.78	0.40
5,147.92	70.15	134.605	4,605.00	-902.84	-1,055.81	-102.85	9.06	8.97	1.41
FTP @ 5147.92 MD 4605.00 TVD									
5,149.00	70.25	134.620	4,605.37	-903.56	-1,055.09	-101.83	9.06	8.97	1.38
5,180.00	73.62	135.210	4,614.98	-924.36	-1,034.22	-72.36	11.02	10.87	1.90
5,212.00	76.50	135.040	4,623.23	-946.27	-1,012.41	-41.45	9.01	9.00	-0.53
5,243.00	79.58	135.340	4,629.65	-967.78	-991.04	-11.13	9.98	9.94	0.97
5,274.00	82.75	135.950	4,634.41	-989.68	-969.63	19.50	10.41	10.23	1.97
5,306.00	86.80	136.780	4,637.33	-1,012.74	-947.64	51.35	12.92	12.66	2.59
5,337.00	88.97	136.950	4,638.47	-1,035.35	-926.46	82.32	7.02	7.00	0.55
5,431.00	91.27	136.460	4,638.27	-1,103.76	-862.01	176.28	2.50	2.45	-0.52
5,525.00	89.96	135.190	4,637.26	-1,171.17	-796.51	270.27	1.94	-1.39	-1.35
5,619.00	90.25	133.970	4,637.09	-1,237.15	-729.56	364.26	1.33	0.31	-1.30
5,714.00	92.23	133.010	4,635.04	-1,302.51	-660.66	459.19	2.32	2.08	-1.01
5,809.00	89.53	134.660	4,633.58	-1,368.29	-592.15	554.14	3.33	-2.84	1.74
5,903.00	89.39	134.700	4,634.46	-1,434.38	-525.31	648.13	0.15	-0.15	0.04
5,997.00	89.74	134.070	4,635.18	-1,500.13	-458.13	742.11	0.77	0.37	-0.67



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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)	
6,092.00	90.52	136.810	4,634.96	-1,567.81	-391.48	837.10	3.00	0.82	2.88	
6,186.00	92.95	137.590	4,632.11	-1,636.75	-327.65	931.00	2.71	2.59	0.83	
6,281.00	89.91	136.270	4,629.74	-1,706.11	-262.81	1,025.91	3.49	-3.20	-1.39	
6,375.00	89.72	135.320	4,630.05	-1,773.50	-197.27	1,119.91	1.03	-0.20	-1.01	
6,470.00	91.29	134.970	4,629.21	-1,840.84	-130.27	1,214.90	1.69	1.65	-0.37	
6,564.00	88.96	136.120	4,629.01	-1,907.93	-64.44	1,308.89	2.76	-2.48	1.22	
6,658.00	91.19	137.060	4,628.88	-1,976.21	0.15	1,402.85	2.57	2.37	1.00	
6,751.00	88.21	136.810	4,629.37	-2,044.15	63.65	1,495.80	3.22	-3.20	-0.27	
6,845.00	87.61	136.500	4,632.80	-2,112.46	128.13	1,589.71	0.72	-0.64	-0.33	
6,939.00	90.19	136.770	4,634.60	-2,180.78	192.65	1,683.65	2.76	2.74	0.29	
7,034.00	89.72	137.260	4,634.68	-2,250.27	257.42	1,778.61	0.71	-0.49	0.52	
7,129.00	88.90	138.630	4,635.82	-2,320.80	321.05	1,873.49	1.68	-0.86	1.44	
7,223.00	89.99	136.820	4,636.73	-2,390.35	384.28	1,967.39	2.25	1.16	-1.93	
7,317.00	90.94	135.780	4,635.97	-2,458.30	449.22	2,061.37	1.50	1.01	-1.11	
7,412.00	90.55	136.270	4,634.73	-2,526.66	515.17	2,156.35	0.66	-0.41	0.52	
7,506.00	90.86	133.650	4,633.58	-2,593.08	581.68	2,250.33	2.81	0.33	-2.79	
7,601.00	89.80	134.070	4,633.03	-2,658.90	650.17	2,345.30	1.20	-1.12	0.44	
7,695.00	88.96	134.630	4,634.05	-2,724.60	717.39	2,439.29	1.07	-0.89	0.60	
7,789.00	91.40	133.780	4,633.75	-2,790.14	784.76	2,533.26	2.75	2.60	-0.90	
7,883.00	90.85	134.410	4,631.91	-2,855.53	852.26	2,627.23	0.89	-0.59	0.67	
7,978.00	89.76	134.750	4,631.40	-2,922.21	919.92	2,722.22	1.20	-1.15	0.36	
8,072.00	90.93	134.220	4,630.83	-2,988.08	986.98	2,816.21	1.37	1.24	-0.56	
8,167.00	90.00	134.260	4,630.06	-3,054.35	1,055.04	2,911.19	0.98	-0.98	0.04	
8,261.00	91.32	134.540	4,628.98	-3,120.12	1,122.20	3,005.17	1.44	1.40	0.30	
8,355.00	90.69	134.990	4,627.33	-3,186.30	1,188.93	3,099.15	0.82	-0.67	0.48	
8,449.00	89.36	135.290	4,627.29	-3,252.93	1,255.23	3,193.15	1.45	-1.41	0.32	
8,543.00	91.05	134.940	4,626.95	-3,319.53	1,321.56	3,287.15	1.84	1.80	-0.37	
8,638.00	91.74	135.130	4,624.64	-3,386.72	1,388.67	3,382.12	0.75	0.73	0.20	
8,732.00	91.33	136.050	4,622.12	-3,453.85	1,454.43	3,476.08	1.07	-0.44	0.98	
8,826.00	90.79	136.680	4,620.38	-3,521.87	1,519.28	3,570.04	0.88	-0.57	0.67	
8,921.00	90.82	135.020	4,619.05	-3,590.02	1,585.45	3,665.02	1.75	0.03	-1.75	
9,015.00	90.13	135.270	4,618.27	-3,656.66	1,651.74	3,759.02	0.78	-0.73	0.27	
9,109.00	89.68	135.670	4,618.43	-3,723.67	1,717.66	3,853.02	0.64	-0.48	0.43	
9,204.00	90.72	133.770	4,618.09	-3,790.51	1,785.16	3,948.01	2.28	1.09	-2.00	
9,298.00	90.38	133.990	4,617.19	-3,855.66	1,852.91	4,041.98	0.43	-0.36	0.23	
9,392.00	90.13	134.490	4,616.77	-3,921.24	1,920.26	4,135.96	0.59	-0.27	0.53	
9,487.00	89.70	135.100	4,616.91	-3,988.17	1,987.67	4,230.96	0.79	-0.45	0.64	
9,582.00	90.88	134.370	4,616.43	-4,055.04	2,055.15	4,325.95	1.46	1.24	-0.77	
9,676.00	90.28	134.700	4,615.48	-4,120.96	2,122.15	4,419.94	0.73	-0.64	0.35	
9,771.00	91.29	134.810	4,614.18	-4,187.84	2,189.61	4,514.93	1.07	1.06	0.12	
9,865.00	90.82	135.060	4,612.45	-4,254.22	2,256.14	4,608.91	0.57	-0.50	0.27	
9,960.00	90.25	135.360	4,611.56	-4,321.64	2,323.07	4,703.91	0.68	-0.60	0.32	
10,054.00	89.80	136.110	4,611.52	-4,388.95	2,388.68	4,797.90	0.93	-0.48	0.80	
10,148.00	91.16	134.860	4,610.73	-4,455.97	2,454.57	4,891.89	1.97	1.45	-1.33	



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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)
10,242.00	90.79	135.020	4,609.13	-4,522.36	2,521.10	4,985.88	0.43	-0.39	0.17
10,337.00	90.33	135.700	4,608.21	-4,589.96	2,587.85	5,080.87	0.86	-0.48	0.72
10,432.00	89.76	136.240	4,608.13	-4,658.26	2,653.88	5,175.86	0.83	-0.60	0.57
10,526.00	90.39	135.070	4,608.01	-4,725.48	2,719.58	5,269.86	1.41	0.67	-1.24
10,621.00	89.86	135.780	4,607.80	-4,793.15	2,786.25	5,364.86	0.93	-0.56	0.75
10,715.00	91.96	135.670	4,606.31	-4,860.44	2,851.86	5,458.84	2.24	2.23	-0.12
10,809.00	91.67	136.580	4,603.33	-4,928.17	2,916.98	5,552.78	1.02	-0.31	0.97
10,904.00	90.97	136.910	4,601.14	-4,997.34	2,982.06	5,647.72	0.81	-0.74	0.35
10,998.00	89.85	136.580	4,600.47	-5,065.80	3,046.47	5,741.68	1.24	-1.19	-0.35
11,093.00	90.84	135.330	4,599.90	-5,134.08	3,112.51	5,836.67	1.68	1.04	-1.32
11,187.00	90.11	135.080	4,599.12	-5,200.78	3,178.74	5,930.66	0.82	-0.78	-0.27
11,282.00	91.46	134.630	4,597.82	-5,267.78	3,246.08	6,025.65	1.50	1.42	-0.47
11,376.00	90.84	134.520	4,595.93	-5,333.74	3,313.02	6,119.62	0.67	-0.66	-0.12
11,470.00	90.05	133.960	4,595.20	-5,399.32	3,380.36	6,213.61	1.03	-0.84	-0.60
11,565.00	90.79	134.100	4,594.50	-5,465.34	3,448.66	6,308.58	0.79	0.78	0.15
11,659.00	89.17	133.460	4,594.54	-5,530.38	3,516.53	6,402.55	1.85	-1.72	-0.68
11,754.00	90.86	134.430	4,594.51	-5,596.30	3,584.93	6,497.52	2.05	1.78	1.02
11,848.00	90.17	134.830	4,593.67	-5,662.33	3,651.82	6,591.51	0.85	-0.73	0.43
11,943.00	92.10	134.180	4,591.79	-5,728.91	3,719.56	6,686.48	2.14	2.03	-0.68
12,036.00	91.78	134.330	4,588.64	-5,793.77	3,786.13	6,779.41	0.38	-0.34	0.16
12,131.00	91.65	134.320	4,585.79	-5,860.12	3,854.06	6,874.36	0.14	-0.14	-0.01
12,225.00	92.11	134.220	4,582.71	-5,925.70	3,921.33	6,968.30	0.50	0.49	-0.11
12,320.00	90.76	135.630	4,580.33	-5,992.77	3,988.57	7,063.26	2.05	-1.42	1.48
12,414.00	90.45	135.920	4,579.34	-6,060.12	4,054.13	7,157.25	0.45	-0.33	0.31
12,508.00	90.60	136.740	4,578.48	-6,128.11	4,119.03	7,251.23	0.89	0.16	0.87
12,603.00	89.14	136.950	4,578.69	-6,197.41	4,184.01	7,346.19	1.55	-1.54	0.22
12,697.00	88.88	137.400	4,580.32	-6,266.35	4,247.90	7,440.12	0.55	-0.28	0.48
12,792.00	90.08	134.410	4,581.18	-6,334.56	4,313.99	7,535.10	3.39	1.26	-3.15
12,887.00	88.12	131.950	4,582.67	-6,399.55	4,383.25	7,630.01	3.31	-2.06	-2.59
12,981.00	89.94	133.970	4,584.26	-6,463.60	4,452.02	7,723.92	2.89	1.94	2.15
13,076.00	89.92	134.250	4,584.38	-6,529.72	4,520.24	7,818.90	0.30	-0.02	0.29
13,170.00	91.44	135.190	4,583.26	-6,595.86	4,587.02	7,912.88	1.90	1.62	1.00
13,264.00	90.84	135.580	4,581.39	-6,662.76	4,653.03	8,006.86	0.76	-0.64	0.41
13,359.00	90.27	136.100	4,580.47	-6,730.91	4,719.21	8,101.85	0.81	-0.60	0.55
13,453.00	89.88	137.040	4,580.35	-6,799.17	4,783.83	8,195.83	1.08	-0.41	1.00
13,547.00	90.35	136.080	4,580.16	-6,867.42	4,848.46	8,289.80	1.14	0.50	-1.02
13,642.00	89.64	136.670	4,580.17	-6,936.19	4,914.00	8,384.78	0.97	-0.75	0.62
13,735.00	91.03	135.060	4,579.63	-7,002.93	4,978.76	8,477.77	2.29	1.49	-1.73
13,830.00	90.42	135.100	4,578.42	-7,070.19	5,045.83	8,572.76	0.64	-0.64	0.04
13,924.00	91.54	135.060	4,576.82	-7,136.74	5,112.20	8,666.74	1.19	1.19	-0.04
14,018.00	90.62	135.800	4,575.04	-7,203.69	5,178.15	8,760.72	1.26	-0.98	0.79
14,113.00	91.41	135.220	4,573.36	-7,271.45	5,244.72	8,855.71	1.03	0.83	-0.61
14,207.00	90.77	135.950	4,571.57	-7,338.58	5,310.49	8,949.69	1.03	-0.68	0.78



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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)
14,301.00	90.92	134.840	4,570.19	-7,405.50	5,376.49	9,043.67	1.19	0.16	-1.18
14,396.00	90.11	135.060	4,569.33	-7,472.61	5,443.72	9,138.67	0.88	-0.85	0.23
14,490.00	92.05	133.820	4,567.56	-7,538.41	5,510.82	9,232.64	2.45	2.06	-1.32
14,585.00	92.62	134.230	4,563.69	-7,604.38	5,579.07	9,327.54	0.74	0.60	0.43
14,680.00	91.98	134.850	4,559.88	-7,670.96	5,646.73	9,422.45	0.94	-0.67	0.65
14,774.00	91.27	135.000	4,557.21	-7,737.31	5,713.25	9,516.41	0.77	-0.76	0.16
14,868.00	90.84	135.150	4,555.48	-7,803.86	5,779.62	9,610.40	0.48	-0.46	0.16
14,962.00	90.37	134.710	4,554.49	-7,870.24	5,846.17	9,704.39	0.68	-0.50	-0.47
15,016.00	89.56	134.383	4,554.52	-7,908.12	5,884.65	9,758.38	1.62	-1.50	-0.61
330 perp @ 15016 MD 4554.52 TVD									
15,017.00	89.55	134.377	4,554.53	-7,908.82	5,885.37	9,759.38	1.62	-1.50	-0.61
LTP @ 15017 MD 4554.53 TVD									
15,038.00	89.23	134.250	4,554.75	-7,923.49	5,900.39	9,780.38	1.62	-1.50	-0.61
Survey @ 15038 MD 4554.75 TVD									
15,103.00	89.23	134.250	4,555.63	-7,968.84	5,946.95	9,845.37	0.00	0.00	0.00
Survey Proj. to 15103 MD 4555.63 TVD 2489 FNL 1981 FWL									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
412.00	411.99	-1.59	-1.23	MWD surveys
2,796.00	2,656.06	-208.59	-615.17	9 5/8" Csg @ 2796 MD 2656.06 TVD
5,092.00	4,583.65	-866.78	-1,092.80	330 perp @ 5092 MD 4583.65 TVD
5,147.92	4,605.00	-902.84	-1,055.81	FTP @ 5147.92 MD 4605.00 TVD
15,016.00	4,554.52	-7,908.12	5,884.65	330 perp @ 15016 MD 4554.52 TVD
15,017.00	4,554.53	-7,908.82	5,885.37	LTP @ 15017 MD 4554.53 TVD
15,038.00	4,554.75	-7,923.49	5,900.39	Survey @ 15038 MD 4554.75 TVD
15,103.00	4,555.63	-7,968.84	5,946.95	Survey Proj. to 15103 MD 4555.63 TVD 2489 FNL 1981 FWL

Checked By: _____ Approved By: _____ Date: _____



Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Project	San Juan County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

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

Well	Rodeo Unit #513H, Surf loc: 191 FSL 1325 FWL Section 25-T23N-R07W					
Well Position	+N/-S	0.00 ft	Northing:	1,888,897.946 usft	Latitude:	36.191178000
	+E/-W	0.00 ft	Easting:	2,749,175.527 usft	Longitude:	-107.744935000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,798.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	11/18/2022	8.65	62.69	49,142.13157349

Design	Surveys Original Hole				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	135.220	

Survey Program	Date	12/23/2022			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
412.00	2,654.00	MWD surf (Original Hole)	MWD	OWSG MWD - Standard	
2,745.00	15,038.00	MWD (Original Hole)	MWD	OWSG MWD - Standard	
15,103.00	15,103.00	Projection (Original Hole)	MWD	OWSG MWD - Standard	

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	1,888,897.946	2,749,175.527	36.191178000	-107.744935000
412.00	0.56	217.700	411.99	-1.59	-1.23	1,888,896.353	2,749,174.296	36.191173626	-107.744939178
MWD surveys									
503.00	0.68	209.390	502.99	-2.42	-1.77	1,888,895.531	2,749,173.759	36.191171369	-107.744941000
594.00	0.66	207.120	593.98	-3.35	-2.27	1,888,894.594	2,749,173.255	36.191168796	-107.744942711
685.00	0.73	214.000	684.98	-4.30	-2.84	1,888,893.647	2,749,172.692	36.191166196	-107.744944622
776.00	0.62	217.780	775.97	-5.17	-3.46	1,888,892.777	2,749,172.066	36.191163808	-107.744946745
866.00	0.54	226.710	865.96	-5.84	-4.07	1,888,892.101	2,749,171.459	36.191161953	-107.744948805
957.00	0.40	218.010	956.96	-6.39	-4.58	1,888,891.557	2,749,170.952	36.191160459	-107.744950527
1,051.00	3.76	250.270	1,050.89	-7.69	-7.68	1,888,890.258	2,749,167.847	36.191156898	-107.744961051



Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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	6.49	251.960	1,145.50	-10.40	-15.72	1,888,887.543	2,749,159.809	36.191149460	-107.744988302
1,240.00	8.67	249.280	1,238.67	-14.56	-27.40	1,888,883.391	2,749,148.130	36.191138082	-107.745027896
1,334.00	12.01	247.570	1,331.13	-20.80	-43.07	1,888,877.151	2,749,132.458	36.191120980	-107.745081025
1,429.00	15.28	245.030	1,423.44	-29.85	-63.56	1,888,868.093	2,749,111.969	36.191096147	-107.745150493
1,523.00	18.56	246.610	1,513.36	-41.02	-88.52	1,888,856.922	2,749,087.003	36.191065522	-107.745235137
1,617.00	19.01	250.400	1,602.35	-52.10	-116.68	1,888,845.847	2,749,058.849	36.191035168	-107.745330585
1,711.00	18.71	251.500	1,691.31	-62.02	-145.40	1,888,835.927	2,749,030.129	36.191007990	-107.745427947
1,806.00	19.79	252.270	1,781.00	-71.75	-175.17	1,888,826.195	2,749,000.360	36.190981327	-107.745528864
1,900.00	22.79	252.600	1,868.57	-82.04	-207.71	1,888,815.902	2,748,967.823	36.190953134	-107.745639163
1,994.00	26.21	252.750	1,954.09	-93.65	-244.91	1,888,804.299	2,748,930.615	36.190921350	-107.745765296
2,089.00	28.88	252.990	2,038.32	-106.58	-286.89	1,888,791.364	2,748,888.634	36.190885921	-107.745907608
2,183.00	29.29	252.670	2,120.46	-120.07	-330.55	1,888,777.874	2,748,844.977	36.190848971	-107.746055602
2,277.00	29.45	252.960	2,202.38	-133.69	-374.59	1,888,764.253	2,748,800.933	36.190811662	-107.746204907
2,371.00	29.64	252.540	2,284.16	-147.44	-418.86	1,888,750.508	2,748,756.667	36.190774010	-107.746354968
2,466.00	30.00	253.370	2,366.58	-161.28	-464.03	1,888,736.662	2,748,711.501	36.190736087	-107.746508076
2,560.00	29.36	253.130	2,448.25	-174.70	-508.60	1,888,723.249	2,748,666.931	36.190699349	-107.746659162
2,654.00	28.15	252.500	2,530.66	-188.05	-551.80	1,888,709.894	2,748,623.730	36.190662766	-107.746805611
2,745.00	27.84	252.040	2,611.01	-201.06	-592.48	1,888,696.887	2,748,583.044	36.190627134	-107.746943534
2,796.00	28.05	251.246	2,656.06	-208.59	-615.17	1,888,689.359	2,748,560.360	36.190606509	-107.747020434
9 5/8" Csg @ 2796 MD 2656.06 TVD									
2,823.00	28.17	250.830	2,679.87	-212.72	-627.20	1,888,685.225	2,748,548.328	36.190595182	-107.747061222
2,887.00	28.82	250.190	2,736.12	-222.91	-655.98	1,888,675.036	2,748,519.545	36.190567263	-107.747158796
2,981.00	27.88	248.440	2,818.85	-238.67	-697.74	1,888,659.281	2,748,477.787	36.190524083	-107.747300360
3,075.00	28.83	251.100	2,901.57	-254.08	-739.63	1,888,643.862	2,748,435.902	36.190481828	-107.747442354
3,170.00	28.58	249.960	2,984.90	-269.29	-782.64	1,888,628.656	2,748,392.884	36.190440159	-107.747588186
3,263.00	27.49	249.060	3,066.98	-284.59	-823.59	1,888,613.361	2,748,351.938	36.190398244	-107.747726997
3,358.00	28.25	252.080	3,150.97	-299.34	-865.46	1,888,598.607	2,748,310.066	36.190357812	-107.747868944
3,452.00	26.80	251.520	3,234.33	-312.90	-906.73	1,888,585.044	2,748,268.798	36.190320654	-107.748008839
3,547.00	29.00	250.610	3,318.28	-327.34	-948.77	1,888,570.608	2,748,226.758	36.190281099	-107.748151354
3,641.00	26.57	248.200	3,401.44	-342.71	-989.79	1,888,555.234	2,748,185.738	36.190238962	-107.748290415
3,735.00	29.93	250.090	3,484.23	-358.51	-1,031.37	1,888,539.436	2,748,144.158	36.190195664	-107.748431377
3,830.00	30.31	250.660	3,566.40	-374.52	-1,076.27	1,888,523.426	2,748,099.255	36.190151791	-107.748583598
3,924.00	27.82	249.760	3,648.56	-389.97	-1,119.24	1,888,507.980	2,748,056.286	36.190109462	-107.748729262
4,018.00	28.17	251.250	3,731.56	-404.69	-1,160.83	1,888,493.259	2,748,014.695	36.190069122	-107.748870257
4,112.00	22.79	249.290	3,816.39	-418.27	-1,198.90	1,888,479.678	2,747,976.626	36.190031905	-107.748999310
4,143.00	21.08	249.090	3,845.15	-422.38	-1,209.73	1,888,475.565	2,747,965.802	36.190020632	-107.749036006
4,174.00	21.69	247.930	3,874.01	-426.52	-1,220.24	1,888,471.423	2,747,955.285	36.190009278	-107.749071659
4,206.00	23.79	247.390	3,903.52	-431.23	-1,231.68	1,888,466.719	2,747,943.846	36.189996383	-107.749110440
4,237.00	24.63	243.830	3,931.80	-436.48	-1,243.25	1,888,461.466	2,747,932.275	36.189981980	-107.749149667
4,268.00	25.17	235.570	3,959.92	-443.06	-1,254.49	1,888,454.888	2,747,921.037	36.189963936	-107.749187773
4,300.00	25.88	226.370	3,988.81	-451.73	-1,265.17	1,888,446.218	2,747,910.365	36.189940144	-107.749223965
4,331.00	26.70	217.090	4,016.62	-461.96	-1,274.27	1,888,435.990	2,747,901.264	36.189912068	-107.749254838
4,363.00	27.66	208.900	4,045.09	-474.20	-1,282.19	1,888,423.748	2,747,893.336	36.189878457	-107.749281742
4,394.00	28.93	202.630	4,072.39	-487.42	-1,288.56	1,888,410.524	2,747,886.972	36.189842146	-107.749303349
4,426.00	29.99	197.150	4,100.26	-502.21	-1,293.90	1,888,395.735	2,747,881.634	36.189801531	-107.749321481
4,457.00	31.01	192.280	4,126.98	-517.42	-1,297.88	1,888,380.527	2,747,877.650	36.189759761	-107.749335026
4,488.00	32.07	187.720	4,153.40	-533.38	-1,300.68	1,888,364.566	2,747,874.846	36.189715922	-107.749344577
4,520.00	33.03	183.110	4,180.38	-550.51	-1,302.30	1,888,347.436	2,747,873.231	36.189668869	-107.749350099
4,551.00	33.93	178.420	4,206.24	-567.60	-1,302.52	1,888,330.348	2,747,873.011	36.189621927	-107.749350894
4,583.00	34.57	174.740	4,232.69	-585.57	-1,301.44	1,888,312.378	2,747,874.090	36.189572559	-107.749347292
4,614.00	35.21	170.040	4,258.12	-603.13	-1,299.09	1,888,294.815	2,747,876.442	36.189524305	-107.749339371
4,646.00	35.83	165.300	4,284.17	-621.28	-1,295.11	1,888,276.666	2,747,880.416	36.189474437	-107.749325959
4,677.00	36.32	160.900	4,309.23	-638.74	-1,289.81	1,888,259.211	2,747,885.723	36.189426475	-107.749308024
4,709.00	37.02	155.330	4,334.91	-656.45	-1,282.68	1,888,241.497	2,747,892.847	36.189377795	-107.749283934
4,740.00	37.99	150.000	4,359.51	-673.20	-1,274.01	1,888,224.749	2,747,901.515	36.189331766	-107.749254607



Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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
4,771.00	38.45	145.010	4,383.87	-689.36	-1,263.72	1,888,208.586	2,747,911.815	36.189287341	-107.749219749
4,803.00	39.63	141.230	4,408.72	-705.47	-1,251.62	1,888,192.476	2,747,923.913	36.189243055	-107.749178798
4,834.00	41.86	139.170	4,432.21	-721.01	-1,238.66	1,888,176.939	2,747,936.868	36.189200342	-107.749134938
4,866.00	44.09	137.190	4,455.62	-737.26	-1,224.11	1,888,160.690	2,747,951.417	36.189155672	-107.749085682
4,897.00	46.81	135.770	4,477.37	-753.27	-1,208.90	1,888,144.677	2,747,966.632	36.189111647	-107.749034167
4,929.00	49.73	134.770	4,498.67	-770.23	-1,192.09	1,888,127.717	2,747,983.440	36.189065015	-107.748977256
4,960.00	53.03	133.990	4,518.01	-787.17	-1,174.78	1,888,110.782	2,748,000.751	36.189018452	-107.748918641
4,991.00	57.21	133.860	4,535.74	-804.80	-1,156.47	1,888,093.145	2,748,019.064	36.188969956	-107.748856632
5,023.00	61.38	134.500	4,552.07	-823.98	-1,136.74	1,888,073.972	2,748,038.788	36.188917240	-107.748789843
5,054.00	62.52	134.280	4,566.65	-843.11	-1,117.19	1,888,054.834	2,748,058.339	36.188864619	-107.748723646
5,085.00	63.93	134.040	4,580.62	-862.39	-1,097.34	1,888,035.554	2,748,078.193	36.188811606	-107.748656418
5,092.00	64.68	134.069	4,583.65	-866.78	-1,092.80	1,888,031.168	2,748,082.727	36.188799546	-107.748641068
330 perp @ 5092 MD 4583.65 TVD									
5,117.00	67.38	134.170	4,593.80	-882.68	-1,076.41	1,888,015.266	2,748,099.125	36.188755823	-107.748585544
5,147.92	70.15	134.605	4,605.00	-902.84	-1,055.81	1,887,995.107	2,748,119.718	36.188700394	-107.748515815
FTP @ 5147.92 MD 4605.00 TVD									
5,149.00	70.25	134.620	4,605.37	-903.56	-1,055.09	1,887,994.393	2,748,120.441	36.188698432	-107.748513366
5,180.00	73.62	135.210	4,614.98	-924.36	-1,034.22	1,887,973.586	2,748,141.308	36.188641224	-107.748442713
5,212.00	76.50	135.040	4,623.23	-946.27	-1,012.41	1,887,951.679	2,748,163.120	36.188580989	-107.748368857
5,243.00	79.58	135.340	4,629.65	-967.78	-991.04	1,887,930.166	2,748,184.491	36.188521838	-107.748296500
5,274.00	82.75	135.950	4,634.41	-989.68	-969.63	1,887,908.265	2,748,205.902	36.188461625	-107.748224003
5,306.00	86.80	136.780	4,637.33	-1,012.74	-947.64	1,887,885.206	2,748,227.887	36.188398225	-107.748149568
5,337.00	88.97	136.950	4,638.47	-1,035.35	-926.46	1,887,862.601	2,748,249.067	36.188336075	-107.748077860
5,431.00	91.27	136.460	4,638.27	-1,103.76	-862.01	1,887,794.190	2,748,313.523	36.188147987	-107.747859630
5,525.00	89.96	135.190	4,637.26	-1,171.17	-796.51	1,887,726.778	2,748,379.020	36.187962642	-107.747637869
5,619.00	90.25	133.970	4,637.09	-1,237.15	-729.56	1,887,660.801	2,748,445.972	36.187781233	-107.747411176
5,714.00	92.23	133.010	4,635.04	-1,302.51	-660.66	1,887,595.439	2,748,514.873	36.187601507	-107.747177877
5,809.00	89.53	134.660	4,633.58	-1,368.29	-592.15	1,887,529.659	2,748,583.383	36.187420637	-107.746945906
5,903.00	89.39	134.700	4,634.46	-1,434.38	-525.31	1,887,463.566	2,748,650.218	36.187238909	-107.746719612
5,997.00	89.74	134.070	4,635.18	-1,500.13	-458.13	1,887,397.818	2,748,717.393	36.187058127	-107.746492167
6,092.00	90.52	136.810	4,634.96	-1,567.81	-391.48	1,887,330.136	2,748,784.044	36.186872034	-107.746266507
6,186.00	92.95	137.590	4,632.11	-1,636.75	-327.65	1,887,261.203	2,748,847.877	36.186682510	-107.746050398
6,281.00	89.91	136.270	4,629.74	-1,706.11	-262.81	1,887,191.836	2,748,912.723	36.186491790	-107.745830860
6,375.00	89.72	135.320	4,630.05	-1,773.50	-197.27	1,887,124.453	2,748,978.261	36.186306521	-107.745608971
6,470.00	91.29	134.970	4,629.21	-1,840.84	-130.27	1,887,057.113	2,749,045.261	36.186121364	-107.745382129
6,564.00	88.96	136.120	4,629.01	-1,907.93	-64.44	1,886,990.022	2,749,111.088	36.185936893	-107.745159262
6,658.00	91.19	137.060	4,628.88	-1,976.21	0.15	1,886,921.741	2,749,175.681	36.185749155	-107.744940581
6,751.00	88.21	136.810	4,629.37	-2,044.15	63.65	1,886,853.806	2,749,239.175	36.185562371	-107.744725623
6,845.00	87.61	136.500	4,632.80	-2,112.46	128.13	1,886,785.492	2,749,303.653	36.185374543	-107.744507337
6,939.00	90.19	136.770	4,634.60	-2,180.78	192.65	1,886,717.173	2,749,368.179	36.185186701	-107.744288884
7,034.00	89.72	137.260	4,634.68	-2,250.27	257.42	1,886,647.678	2,749,432.951	36.184995628	-107.744069608
7,129.00	88.90	138.630	4,635.82	-2,320.80	321.05	1,886,577.147	2,749,496.579	36.184801713	-107.743854208
7,223.00	89.99	136.820	4,636.73	-2,390.35	384.28	1,886,507.602	2,749,559.805	36.184610504	-107.743640169
7,317.00	90.94	135.780	4,635.97	-2,458.30	449.22	1,886,439.647	2,749,624.744	36.184423659	-107.743420323
7,412.00	90.55	136.270	4,634.73	-2,526.66	515.17	1,886,371.287	2,749,690.701	36.184235699	-107.743197030
7,506.00	90.86	133.650	4,633.58	-2,593.08	581.68	1,886,304.877	2,749,757.204	36.184053092	-107.742971879
7,601.00	89.80	134.070	4,633.03	-2,658.90	650.17	1,886,239.054	2,749,825.700	36.183872094	-107.742739976
7,695.00	88.96	134.630	4,634.05	-2,724.60	717.39	1,886,173.349	2,749,892.913	36.183691423	-107.742512421
7,789.00	91.40	133.780	4,633.75	-2,790.14	784.76	1,886,107.815	2,749,960.291	36.183511222	-107.742284308
7,883.00	90.85	134.410	4,631.91	-2,855.53	852.26	1,886,042.419	2,750,027.787	36.183331397	-107.742055795
7,978.00	89.76	134.750	4,631.40	-2,922.21	919.92	1,885,975.740	2,750,095.450	36.183148048	-107.741826720
8,072.00	90.93	134.220	4,630.83	-2,988.08	986.98	1,885,909.875	2,750,162.510	36.182966935	-107.741599687
8,167.00	90.00	134.260	4,630.06	-3,054.35	1,055.04	1,885,843.600	2,750,230.567	36.182784693	-107.741369278
8,261.00	91.32	134.540	4,628.98	-3,120.12	1,122.20	1,885,777.837	2,750,297.721	36.182603862	-107.741141928
8,355.00	90.69	134.990	4,627.33	-3,186.30	1,188.93	1,885,711.653	2,750,364.451	36.182421873	-107.740916021



Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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
8,449.00	89.36	135.290	4,627.29	-3,252.93	1,255.23	1,885,645.025	2,750,430.754	36.182238663	-107.740691558
8,543.00	91.05	134.940	4,626.95	-3,319.53	1,321.56	1,885,578.426	2,750,497.086	36.182055537	-107.740467003
8,638.00	91.74	135.130	4,624.64	-3,386.72	1,388.67	1,885,511.231	2,750,564.199	36.181870766	-107.740239799
8,732.00	91.33	136.050	4,622.12	-3,453.85	1,454.43	1,885,444.107	2,750,629.955	36.181686196	-107.740017199
8,826.00	90.79	136.680	4,620.38	-3,521.87	1,519.28	1,885,376.087	2,750,694.809	36.181499166	-107.739797658
8,921.00	90.82	135.020	4,619.05	-3,590.02	1,585.45	1,885,307.932	2,750,760.971	36.181311761	-107.739573684
9,015.00	90.13	135.270	4,618.27	-3,656.66	1,651.74	1,885,241.298	2,750,827.268	36.181128537	-107.739349251
9,109.00	89.68	135.670	4,618.43	-3,723.67	1,717.66	1,885,174.288	2,750,893.188	36.180944276	-107.739126097
9,204.00	90.72	133.770	4,618.09	-3,790.51	1,785.16	1,885,107.446	2,750,960.686	36.180760475	-107.738897597
9,298.00	90.38	133.990	4,617.19	-3,855.66	1,852.91	1,885,042.294	2,751,028.437	36.180581311	-107.738668234
9,392.00	90.13	134.490	4,616.77	-3,921.24	1,920.26	1,884,976.714	2,751,095.780	36.180400977	-107.738440257
9,487.00	89.70	135.100	4,616.91	-3,988.17	1,987.67	1,884,909.780	2,751,163.194	36.180216921	-107.738212043
9,582.00	90.88	134.370	4,616.43	-4,055.04	2,055.15	1,884,842.919	2,751,230.677	36.180033065	-107.737983600
9,676.00	90.28	134.700	4,615.48	-4,120.96	2,122.15	1,884,776.997	2,751,297.678	36.179851787	-107.737756784
9,771.00	91.29	134.810	4,614.18	-4,187.84	2,189.61	1,884,710.117	2,751,365.132	36.179667878	-107.737528438
9,865.00	90.82	135.060	4,612.45	-4,254.22	2,256.14	1,884,643.736	2,751,431.664	36.179485342	-107.737303217
9,960.00	90.25	135.360	4,611.56	-4,321.64	2,323.07	1,884,576.318	2,751,498.589	36.179299956	-107.737076668
10,054.00	89.80	136.110	4,611.52	-4,388.95	2,388.68	1,884,509.004	2,751,564.198	36.179114857	-107.736854579
10,148.00	91.16	134.860	4,610.73	-4,455.97	2,454.57	1,884,441.981	2,751,630.096	36.178930558	-107.736631512
10,242.00	90.79	135.020	4,609.13	-4,522.36	2,521.10	1,884,375.592	2,751,696.624	36.178747999	-107.736406310
10,337.00	90.33	135.700	4,608.21	-4,589.96	2,587.85	1,884,307.999	2,751,763.371	36.178562133	-107.736180366
10,432.00	89.76	136.240	4,608.13	-4,658.26	2,653.88	1,884,239.697	2,751,829.399	36.178374318	-107.735956867
10,526.00	90.39	135.070	4,608.01	-4,725.48	2,719.58	1,884,172.476	2,751,895.101	36.178189471	-107.735734467
10,621.00	89.86	135.780	4,607.80	-4,793.15	2,786.25	1,884,104.805	2,751,961.775	36.178003388	-107.735508777
10,715.00	91.96	135.670	4,606.31	-4,860.44	2,851.86	1,884,037.514	2,752,027.385	36.177818350	-107.735286694
10,809.00	91.67	136.580	4,603.33	-4,928.17	2,916.98	1,883,969.788	2,752,092.501	36.177632120	-107.735066283
10,904.00	90.97	136.910	4,601.14	-4,997.34	2,982.06	1,883,900.618	2,752,157.582	36.177441920	-107.734846001
10,998.00	89.85	136.580	4,600.47	-5,065.80	3,046.47	1,883,832.159	2,752,221.992	36.177253678	-107.734627989
11,093.00	90.84	135.330	4,599.90	-5,134.08	3,112.51	1,883,763.878	2,752,288.035	36.177065915	-107.734404445
11,187.00	90.11	135.080	4,599.12	-5,200.78	3,178.74	1,883,697.175	2,752,354.262	36.176882491	-107.734180274
11,282.00	91.46	134.630	4,597.82	-5,267.78	3,246.08	1,883,630.178	2,752,421.599	36.176698254	-107.733952343
11,376.00	90.84	134.520	4,595.93	-5,333.74	3,313.02	1,883,564.219	2,752,488.544	36.176516868	-107.733725737
11,470.00	90.05	133.960	4,595.20	-5,399.32	3,380.36	1,883,498.641	2,752,555.885	36.176336528	-107.733497790
11,565.00	90.79	134.100	4,594.50	-5,465.34	3,448.66	1,883,432.615	2,752,624.185	36.176154955	-107.733266594
11,659.00	89.17	133.460	4,594.54	-5,530.38	3,516.53	1,883,367.580	2,752,692.050	36.175976104	-107.733036870
11,754.00	90.86	134.430	4,594.51	-5,596.30	3,584.93	1,883,301.657	2,752,760.448	36.175794810	-107.732805348
11,848.00	90.17	134.830	4,593.67	-5,662.33	3,651.82	1,883,235.622	2,752,827.340	36.175613216	-107.732578926
11,943.00	92.10	134.180	4,591.79	-5,728.91	3,719.56	1,883,169.047	2,752,895.076	36.175430132	-107.732349649
12,036.00	91.78	134.330	4,588.64	-5,793.77	3,786.13	1,883,104.184	2,752,961.648	36.175251756	-107.732124311
12,131.00	91.65	134.320	4,585.79	-5,860.12	3,854.06	1,883,037.835	2,753,029.579	36.175069293	-107.731894374
12,225.00	92.11	134.220	4,582.71	-5,925.70	3,921.33	1,882,972.254	2,753,096.852	36.174888943	-107.731666665
12,320.00	90.76	135.630	4,580.33	-5,992.77	3,988.57	1,882,905.191	2,753,164.090	36.174704520	-107.731439080
12,414.00	90.45	135.920	4,579.34	-6,060.12	4,054.13	1,882,837.835	2,753,229.649	36.174519294	-107.731217187
12,508.00	90.60	136.740	4,578.48	-6,128.11	4,119.03	1,882,769.845	2,753,294.553	36.174332332	-107.730997517
12,603.00	89.14	136.950	4,578.69	-6,197.41	4,184.01	1,882,700.544	2,753,359.529	36.174141767	-107.730777611
12,697.00	88.88	137.400	4,580.32	-6,266.35	4,247.90	1,882,631.612	2,753,423.416	36.173952217	-107.730561389
12,792.00	90.08	134.410	4,581.18	-6,334.56	4,313.99	1,882,563.397	2,753,489.511	36.173764629	-107.730337690
12,887.00	88.12	131.950	4,582.67	-6,399.55	4,383.25	1,882,498.405	2,753,558.768	36.173585887	-107.730103264
12,981.00	89.94	133.970	4,584.26	-6,463.60	4,452.02	1,882,434.360	2,753,627.543	36.173409747	-107.729870468
13,076.00	89.92	134.250	4,584.38	-6,529.72	4,520.24	1,882,368.237	2,753,695.753	36.173227899	-107.729639596
13,170.00	91.44	135.190	4,583.26	-6,595.86	4,587.02	1,882,302.102	2,753,762.538	36.173046023	-107.729413554
13,264.00	90.84	135.580	4,581.39	-6,662.76	4,653.03	1,882,235.202	2,753,828.544	36.172862049	-107.729190154
13,359.00	90.27	136.100	4,580.47	-6,730.91	4,719.21	1,882,167.053	2,753,894.723	36.172674641	-107.728966172
13,453.00	89.88	137.040	4,580.35	-6,799.17	4,783.83	1,882,098.790	2,753,959.344	36.172486924	-107.728747472
13,547.00	90.35	136.080	4,580.16	-6,867.42	4,848.46	1,882,030.539	2,754,023.977	36.172299237	-107.728528734



Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #513H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #513H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	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
13,642.00	89.64	136.670	4,580.17	-6,936.19	4,914.00	1,881,961.772	2,754,089.520	36.172110132	-107.728306914
13,735.00	91.03	135.060	4,579.63	-7,002.93	4,978.76	1,881,895.031	2,754,154.276	36.171926594	-107.728087755
13,830.00	90.42	135.100	4,578.42	-7,070.19	5,045.83	1,881,827.768	2,754,221.351	36.171741615	-107.727860740
13,924.00	91.54	135.060	4,576.82	-7,136.74	5,112.20	1,881,761.218	2,754,287.715	36.171558597	-107.727636133
14,018.00	90.62	135.800	4,575.04	-7,203.69	5,178.15	1,881,694.266	2,754,353.670	36.171374475	-107.727412917
14,113.00	91.41	135.220	4,573.36	-7,271.45	5,244.72	1,881,626.507	2,754,420.233	36.171188135	-107.727187642
14,207.00	90.77	135.950	4,571.57	-7,338.58	5,310.49	1,881,559.377	2,754,486.006	36.171003523	-107.726965043
14,301.00	90.92	134.840	4,570.19	-7,405.50	5,376.49	1,881,492.461	2,754,552.006	36.170819498	-107.726741676
14,396.00	90.11	135.060	4,569.33	-7,472.61	5,443.72	1,881,425.348	2,754,619.236	36.170634927	-107.726514142
14,490.00	92.05	133.820	4,567.56	-7,538.41	5,510.82	1,881,359.548	2,754,686.334	36.170453967	-107.726287053
14,585.00	92.62	134.230	4,563.69	-7,604.38	5,579.07	1,881,293.582	2,754,754.585	36.170272541	-107.726056057
14,680.00	91.98	134.850	4,559.88	-7,670.96	5,646.73	1,881,227.002	2,754,822.242	36.170089435	-107.725827079
14,774.00	91.27	135.000	4,557.21	-7,737.31	5,713.25	1,881,160.649	2,754,888.769	36.169906951	-107.725601927
14,868.00	90.84	135.150	4,555.48	-7,803.86	5,779.62	1,881,094.105	2,754,955.139	36.169723946	-107.725377312
14,962.00	90.37	134.710	4,554.49	-7,870.24	5,846.17	1,881,027.723	2,755,021.684	36.169541382	-107.725152103
15,016.00	89.56	134.383	4,554.52	-7,908.12	5,884.65	1,880,989.843	2,755,060.168	36.169437204	-107.725021859
330 perp @ 15016 MD 4554.52 TVD									
15,017.00	89.55	134.377	4,554.53	-7,908.82	5,885.37	1,880,989.143	2,755,060.883	36.169435281	-107.725019441
LTP @ 15017 MD 4554.53 TVD									
15,038.00	89.23	134.250	4,554.75	-7,923.49	5,900.39	1,880,974.474	2,755,075.908	36.169394936	-107.724968590
Survey @ 15038 MD 4554.75 TVD									
15,103.00	89.23	134.250	4,555.63	-7,968.84	5,946.95	1,880,929.122	2,755,122.463	36.169270206	-107.724811029
Survey Proj. to 15103 MD 4555.63 TVD 2489 FNL 1981 FWL									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
412.00	411.99	-1.59	-1.23	MWD surveys
2,796.00	2,656.06	-208.59	-615.17	9 5/8" Csg @ 2796 MD 2656.06 TVD
5,092.00	4,583.65	-866.78	-1,092.80	330 perp @ 5092 MD 4583.65 TVD
5,147.92	4,605.00	-902.84	-1,055.81	FTP @ 5147.92 MD 4605.00 TVD
15,016.00	4,554.52	-7,908.12	5,884.65	330 perp @ 15016 MD 4554.52 TVD
15,017.00	4,554.53	-7,908.82	5,885.37	LTP @ 15017 MD 4554.53 TVD
15,038.00	4,554.75	-7,923.49	5,900.39	Survey @ 15038 MD 4554.75 TVD
15,103.00	4,555.63	-7,968.84	5,946.95	Survey Proj. to 15103 MD 4555.63 TVD 2489 FNL 1981 FWL

Checked By: _____ Approved By: _____ Date: _____

WELL NAME: **RODEO UNIT 513H**
OBJECTIVE: **Drill, complete, and equip single lateral in the Mancos-I formation**
API Number: 30-045-35873
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 1,325 ft FWL
BH Location: 6-22N-08W Sec-Twn- Rng 2433 ft FNL 1917 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)	360 ft
Int TD (MD)	2,806 ft
KOP (MD)	4,283 ft
KOP (TVD)	3,973 ft
Target (TVD)	4,666 ft
Curve BUR	10 °/100 ft
POE (MD)	5,201 ft
TD (MD)	15,103 ft
Lat Len (ft)	9,907 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	360	13.375	54.5	J-55	BTC	0	360
Intermediate	12.250	2,806	9.625	36.0	J-55	LTC	0	2,806
Production	8.500	15,103	5.500	17.0	P-110	LTC	0	15,103

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	535
Inter. (Tail)	Type III	14.6	1.37	6.63	0.3132	20%	2,261	137
Prod. (Lead)	Type I / II	12.4	2.360	13.40	0.2691	65%	0	613
Prod. (Tail)	G:POZ blend	13.3	1.560	7.70	0.2291	10%	3,828	1,822

COMPLETION / PRODUCTION SUMMARY:

Frac: 40 plug-and-perf stages with 360,000 bbls slickwater fluid and 15,000,000 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

Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	356	356
Kirtland	441	441
Fruitland	671	671
Pictured Cliffs	1,021	1,021
Lewis	1,146	1,146
Chacra	1,406	1,409
Cliff House	2,431	2,540
Menefee	2,466	2,580
Point Lookout	3,416	3,658
Mancos	3,566	3,828
Gallup (MNCS_A)	3,901	4,208
MNCS_B	4,006	4,327
MNCS_C	4,091	4,420
MNCS_Cms	4,131	4,464
MNCS_D	4,256	4,601
MNCS_E	4,406	4,776
MNCS_F	4,461	4,849
MNCS_G	4,531	4,953
MNCS_H	4,576	5,033
MNCS_I	4,626	5,135
FTP (LP) TARGET	4,666	5,201
LTP (TD) TARGET	4,582	15,108

Well Name: RODEO UNIT	Well Location: T23N / R9W / SEC 25 / SESW / 36.191178 / -107.744935	County or Parish/State: SAN JUAN / NM
Well Number: 513H	Type of Well: OIL WELL	Allottee or Tribe Name: EASTERN NAVAJO
Lease Number: NOG13121859	Unit or CA Name:	Unit or CA Number: NMNM136328A, NMNM136328X
US Well Number: 3004535873	Well Status: Producing Oil Well	Operator: ENDURING RESOURCES LLC

Subsequent Report

Sundry ID: 2718748

Type of Submission: Subsequent Report	Type of Action: Hydraulic Fracturing
Date Sundry Submitted: 03/02/2023	Time Sundry Submitted: 04:54
Date Operation Actually Began: 12/30/2022	

Actual Procedure: 12/30/2022 thru 1/5/2023- Pre frac site set up, MIRU, Pressure test 1/5/2023 thru 1/13/2023- 24 hour Frac Ops. 41 total stages, total holes 1722. Perfed interval 5190' - 14988' MD. Perfed w 0.31" holes with SFT-NE45B, FRP-48H, CSA-2400, Bardac 2250M, SCI-28H-W, Sour-N8R & 12,933,980 lbs total proppant 1/22/2023 thru 1/25/2023 – Drilling out operations 1/25/2023 - tubing landed at 4259'

SR Attachments

Actual Procedure

5_completion_RODEO_513H_20230302165413.pdf

Received by OCD: 3/13/2023 5:04:23 PM

Page 21 of 33

Well Name: RODEO UNIT	Well Location: T23N / R9W / SEC 25 / SESW / 36.191178 / -107.744935	County or Parish/State: SAN JUAN / NM
Well Number: 513H	Type of Well: OIL WELL	Allottee or Tribe Name: EASTERN NAVAJO
Lease Number: N0G13121859	Unit or CA Name:	Unit or CA Number: NMNM136328A, NMNM136328X
US Well Number: 3004535873	Well Status: Producing Oil Well	Operator: ENDURING RESOURCES LLC

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: KAYLA WHITE	Signed on: MAR 02, 2023 04:54 PM
Name: ENDURING RESOURCES LLC	
Title: Staff Engineer	
Street Address: 9446 CLERMONT ST	
City: THORNTON	State: CO
Phone: (720) 768-3575	
Email address: KWHITE@CDHCONSULT.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5055647742	BLM POC Email Address: krennick@blm.gov
Disposition: Accepted	Disposition Date: 03/06/2023
Signature: Kenneth Rennick	



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Well Completion Print

03/13/2023

Operator Name ENDURING RESOURCES LLC	Well Name RODEO UNIT	Well Number 513H	US Well Number 3004535873
SHL SESW Sec 25 23N 9W	County SAN JUAN	State NM	Lease Number(s) N0G13121859
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM136328X, NMNM136328A ID 10400027505
Allottee/Tribe Name EASTERN NAVAJO	Well Pad Name RODEO UNIT	Well Pad Number 511H 512H 513H	

Section 1 - General

Well Completion Report Id: 87516**Submission Date:** 03-02-2023**BLM Office:** Farmington Field Office**User:** KAYLA WHITE**Title:** Staff Engineer**Federal/Indian:** INDIAN**Lease Number:** N0G13121859**Lease Acres:****Agreement in place?:** YES**Federal or Indian Agreement:****Agreement Number:****Agreement Name:****Keep this Well Completion Report confidential?:****APD Operator:** ENDURING
RESOURCES LLC

Section 2 - Well

Field/Pool or Exploratory:**Pool Name:** MANCOS W**Field Name:** BASIN MANCOS**Well Type:** OIL WELL**Spud Date:** 08-15-2022**Date Total Measured Depth Reached:** 12-17-2022**Drill & Abandon or Ready To Produce:** READY TO**Well Class:** HORIZONTAL

Section 3 - Geologic

Formation Name	Lithology	Describe Lithology	Elevation	TVD	MD	Mineral Resources	Describe Mineral
NACIMIENTO	SANDSTONE, SHALE		6798	0	0	USEABLE WATER	
OJO ALAMO	SANDSTONE, SHALE		6374	424	424	USEABLE WATER	

Operator Name ENDURING RESOURCES LLC SHL SESW Sec 25 23N 9W	Well Name RODEO UNIT	Well Number 513H	US Well Number 3004535873
	County SAN JUAN	State NM	Lease Number(s) N0G13121859
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM136328X, NMNM136328A ID 10400027505
Allottee/Tribe Name EASTERN NAVAJO	Well Pad Name RODEO UNIT	Well Pad Number 511H 512H 513H	

Section 3 - Geologic

Formation Name	Lithology	Describe Lithology	Elevation	TVD	MD	Mineral Resources	Describe Mineral
KIRTLAND	COAL, SHALE		6266	532	532	COAL, NATURAL GAS	
PICTURED CLIFFS	SANDSTONE		5740	1058	1064	NATURAL GAS	
LEWIS	SHALE		5622	1176	1186	NATURAL GAS	
CHACRA	SANDSTONE, SHALE		5396	1402	1424	NATURAL GAS	
CLIFFHOUSE	SANDSTONE		4419	2379	2493	NATURAL GAS	
MENEFEE	COAL, SANDSTONE, SHALE		4362	2436	2556	NATURAL GAS	
POINT LOOKOUT	SANDSTONE, SHALE		3384	3414	3630	NATURAL GAS	
MANCOS	SHALE		3246	3552	3781	NATURAL GAS, OIL	
GALLUP	SHALE		2898	3900	4163	NATURAL GAS, OIL	

Completion and Completed

Completion Data

Wellbore Code	Completion Code	Interval Number	Case Number	Lease Number	Well Completion Type	Describe Well Completion Type	Completion Status	Date Completed	Date First Produced	Formation	Interval Top (MD)	Interval Bottom (MD)	Interval Perforated?	Perforation Size	Number of Holes	Status of Interval
00	S1	1	NMNM136328A	N0G13121859	NEW		POW	01-27-2023	01-27-2023	MANCOS	4206	15016	Y	.31	1722	OPEN

Operator Name ENDURING RESOURCES LLC SHL SESW Sec 25 23N 9W	Well Name RODEO UNIT	Well Number 513H	US Well Number 3004535873
	County SAN JUAN	State NM	Lease Number(s) N0G13121859
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM136328X, NMNM136328A ID 10400027505
Allottee/Tribe Name EASTERN NAVAJO	Well Pad Name RODEO UNIT	Well Pad Number 511H 512H 513H	

Treatment Data

Wellbore Code	Completion Code	Interval Number	Interval Treated?	Treatment Type	Tottle Fluid (bbls)	Total Proppant (lbs)	Treatment Remarks
00	S1	1	N				

Production Data

Wellbore Code	Completion Code	Interval Number	API Oil Gravity	Gas Gravity	Production Method	Describe Production	Disposition of Gas	Describe Disposition
00	S1	1			FLows FROM WELL		SOLD	

Test Data

Wellbore Code	Completion Code	Interval Number	Test Date	Hours Tested	24-Hour Rate Oil (bbls)	24-Hour Rate Gas (MCF)	24-Hour Rate Water(BWPD)	Gas-Oil Ratio (SCF/Bbl)	Choke Size	Tubing Pressure	Tubing Pressure Shut-In (psi)	Casing Pressure (psi)
00	S1	1	02/06/2023	24	364	504	194	1384	64/64	200		795

Operator Name ENDURING RESOURCES LLC SHL SESW Sec 25 23N 9W	Well Name RODEO UNIT	Well Number 513H	US Well Number 3004535873
	County SAN JUAN	State NM	Lease Number(s) N0G13121859
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM136328X, NMNM136328A ID 10400027505
Allottee/Tribe Name EASTERN NAVAJO	Well Pad Name RODEO UNIT	Well Pad Number 511H 512H 513H	

Well Location

Survey Type: RECTANGULAR

Survey Number: 15269

Datum: NAD83

Vertical Datum: NGVD29

Reference Datum:

	State	Meridian	County	Latitude	Longitude	Elevation (MSL)	Lease Type	Lease Number	Plug TVD (ft)	Plug MD (ft)	Plug Type	NS-Foot	NS-Indicator	EW-Foot	EW-Indicator	Township	Range	Section	Aliquo/Lot/Tract
SHL	NEW MEXICO	NEW MEXICO PRINCIPAL	SAN JUAN	36.191178	-107.744935	6798	INDIAN	NMNM 36949				191	FSL	1325	FWL	23N	9W	25	SESW
KOP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	SAN JUAN	36.191178	-107.744935	6798	INDIAN	NMNM 36949				191	FSL	1325	FWL	23N	9W	25	SESW
PPP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	SAN JUAN	36.1887	-107.748516	2853		STATE				713	FNL	271	FWL	23N	9W	36	NWNW
EXIT Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	SAN JUAN	36.16948	-107.725075	2192	FEDERAL	NMNM 130771				2413	FNL	1902	FWL	22N	8W	6	SENW
BHL Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	SAN JUAN	36.16927	-107.724811	2192	FEDERAL	NMNM 130771				2489	FNL	1981	FWL	22N	8W	6	SENW

Casing, Liner and Tubing

Operator Name ENDURING RESOURCES LLC SHL SESW Sec 25 23N 9W	Well Name RODEO UNIT	Well Number 513H	US Well Number 3004535873
	County SAN JUAN	State NM	Lease Number(s) N0G13121859
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM136328X, NMNM136328A ID 10400027505
Allottee/Tribe Name EASTERN NAVAJO	Well Pad Name RODEO UNIT	Well Pad Number 511H 512H 513H	

Casing and Liner

Wellbore Code	Casing String Type	Hole Size	Top Setting Depth (MD)	Bottom Setting Depth (MD)	Casing Size	Wt(lbs/ft)	Casing Grade	Describe Other Casing Grade	Joint	Other Joint	Amount Pulled (ft)
00	SURFACE	17.5	0	360	12.25	54.5	J-55		BUTT		
00	INTERMEDIATE	12.25	0	2806	9.625	36	J-55		BUTT		
00	PRODUCTION	8.5	0	15070	5.5	20	P-110		LT&C		

Cementing

Wellbore Code	Casing String Type	Stage Tool Depth	Cement Lead Type	Cement Lead Qty (sks)	Cement Lead Yield (cu.ft/sks)	Cement Lead Top (MD)	Cement Tail Type	Cement Tail Qty (sks)	Cement Tail Yield (cu.ft/sks)	Cement Tail Top (MD)	Total (Lead + Tail) Cement Slurry Volume
00	SURFACE	360	I-II Neat G	350	1.39	0					86.6
00	INTERMEDIATE	2806	HalCem	535	2.14	0	VariCem	137	1.38	2130	237.6
00	PRODUCTION	15070	Class G	480	2.39	0	Class G	1803	1.58	2796	711.7

Tubing

Wellbore Code	Tubing Size	Describe Other	Tubing Setting Depth (MD/ft)	Packer Depth (MD/ft)	Tubing Weight	Tubing Grade	Describe Other	Tubing Coupling	Describe Other
00	2.875		4259		6	L-80		OTHER	EUE

Operator Name ENDURING RESOURCES LLC SHL SESW Sec 25 23N 9W	Well Name RODEO UNIT	Well Number 513H	US Well Number 3004535873
	County SAN JUAN	State NM	Lease Number(s) N0G13121859
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM136328X, NMNM136328A ID 10400027505
Allottee/Tribe Name EASTERN NAVAJO	Well Pad Name RODEO UNIT	Well Pad Number 511H 512H 513H	

Logs

Wellbore Code	Log Upload	Was Well Cored?	Was DST Run?	Directional Survey?	Geologic Report	Wellbore Diagram
00	NO	NO	NO	YES	NO	YES

Operator

I hereby certify that the foregoing and attached information is complete and correct as determined from all available records. 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 any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Well Completion Reports through this system satisfies regulations requiring a submission of Form 3160-4 or a Well Completion Report.

Name: ENDURING RESOURCES LLC**Signed By:** KAYLA WHITE**Title:** Staff Engineer**Signed on:** 03/02/2023**Street Address:** 9446 CLERMONT ST**City:** THORNTON**State:** CO**Zip:** 80229**Phone:** (720)768-3575**Email address:** KWHITE@CDHCONSULT.COM**Field****Representative Name:****Street Address:****City:****State:****Zip:****Phone:****Extension:****Email address:****Attachments**

Operator Name ENDURING RESOURCES LLC SHL SESW Sec 25 23N 9W	Well Name RODEO UNIT	Well Number 513H	US Well Number 3004535873
	County SAN JUAN	State NM	Lease Number(s) N0G13121859
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM136328X, NMNM136328A ID 10400027505
Allottee/Tribe Name EASTERN NAVAJO	Well Pad Name RODEO UNIT	Well Pad Number 511H 512H 513H	

Enduring_Rodeo__513H_svys_dec2322__12097__20230302165234.pdf

Rodeo_Unit__513H_Detailed_As_Drilled_C_102_Platt__signed_KS_20230302165248.pdf

List_of_Leases_Rodeo_513H_20230302165253.pdf

RODU_513H_WBD_11082022_20230302165257.pdf

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED
OMB NO. 1004-
0137

Expires: January 31, 2018

5. Lease Serial No.

N0-G-1312-1859

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 513H

3. Address

200 Energy Court Farmington NM 87402

3a. Phone No. (Include area code)

505-636-9743

9. API Well No.

30-045-35873

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

At surface

SHL: 191' FSL & 1325' FWL, Sec 25 T23N, R9W

BHL: 2433' FNL & 1917' FWL, Sec 6 T22N, R8W

At top prod. interval reported below At total depth

10. Field and Pool or Exploratory Mancos/Basin Mancos

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

8/15/2022

15. Date T.D. Reached

12/17/2022

16. Date Completed 1/27/2023

☐ D & A

☒ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)*

6813' KB

18. Total Depth: **15,103' MD**

4,555' TVD

19. Plug Back T.D.: **14,988' MD**

4,554' TVD

20. Depth Bridge Plug Set:

MD

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 Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2"	13-3/8", J-55	54.5	0	360' MD		350	86.6	surface	
12-1/4"	9-5/8", J-55	36	0	2806' MD		672	237	surface	
8-1/2"	5-1/2", P-110	20	0	15103' MD		2283	711	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	4259'							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
MNCS_A	3903' TVD	4703' TVD	5190' - 14988' MD	.31	1722	

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
5190' - 14988' MD	24 hour Frac Ops. 41 total stages, total holes 1722. Perfed interval 5190' - 14988' MD. Perfed w 0.31" holes with SFT-NE45B, FRP-48H, CSA-2400, Bardac 2250M, SCI-28H-W, Sour-N8R & 12,933,980 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	➡	36.4	504	194			Flowing
Choke Size	Tbg. Press.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
64/64"	200	795	➡					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
------------	-------------------	-------------	------------------	---------	---------	-----------	---------------	-------------

*(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 312
 KRLD 431
 FRLD 663
 PCCF 1015
 CLFH_BASAL 2436
 MENF 2459
 PNLC 3430
 MNCS 3573
 Gallup (MNCS_A) 3903

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 194139

ACKNOWLEDGMENTS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 194139
	Action Type: [C-104] Tight Hole Completion Packet (C-104CT)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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 194139

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CONDITIONS

Created By	Condition	Condition Date
plmartinez	None	10/26/2023