

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 RT	
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 1/25/2023		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 1/25/2023	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

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method

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: 		OIL CONSERVATION DIVISION Approved by: 	
Printed name: Kayla White		Title: Petroleum Engineer	
Title: Environmental Engineer		Approval Date: 01/27/23	
E-mail Address: kwhite@cdhconsult.com		COA: RT expires on 04/25/23	
Date: 1/9/2023	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".

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

District I
 811 S. First Street, Artesia, NM 88210
 Phone: (505) 334-6178 Fax: (505) 334-6170

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

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

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

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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

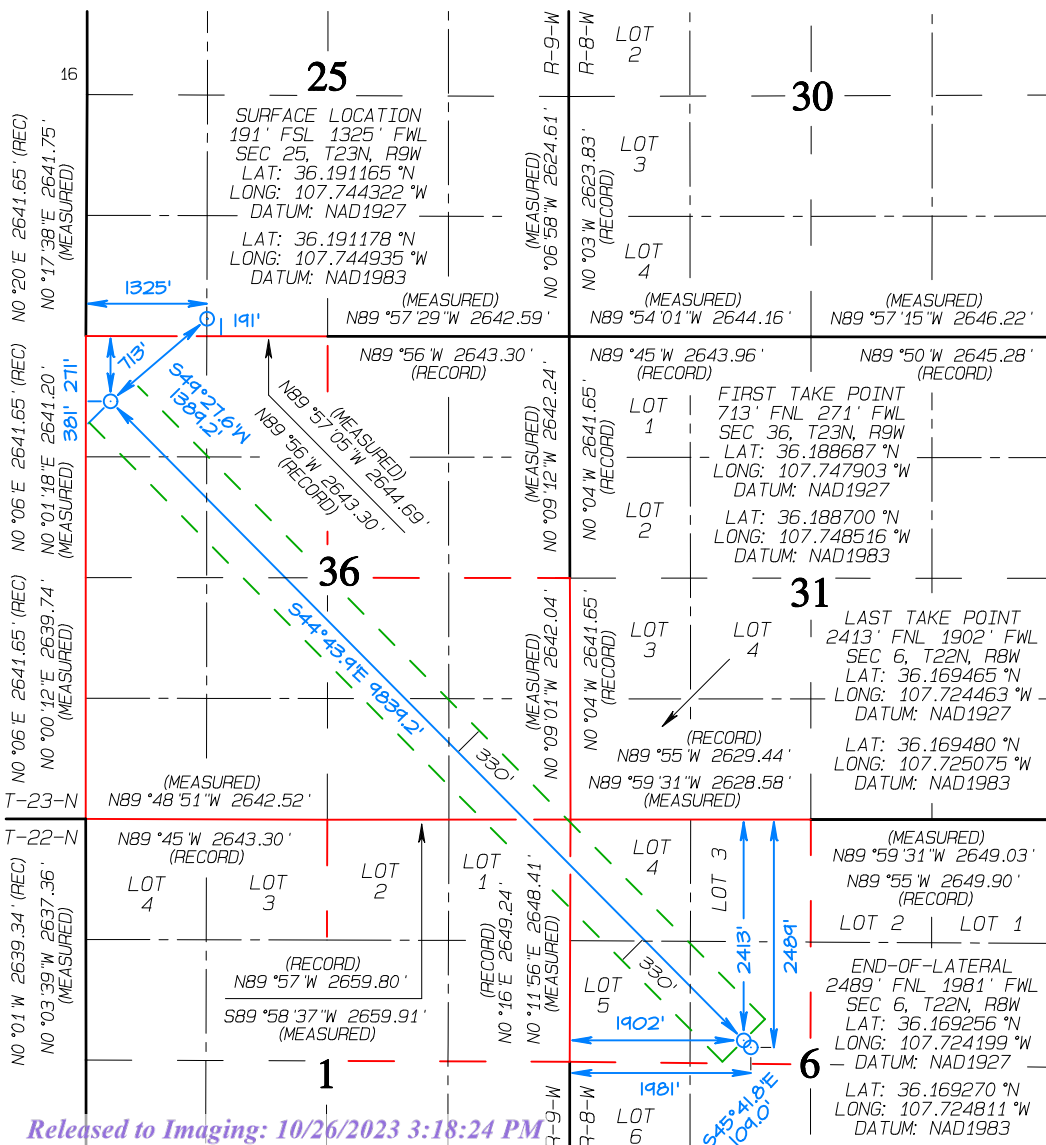
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	25	23N	9W		191	SOUTH	1325	WEST	SAN JUAN

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	Date
-----------	------

Khem Suthiwan
Printed Name
ksuthiwan@enduringresources.com

F-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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Submit one copy to
Appropriate District OfficeOIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505☐ AMENDED REPORT

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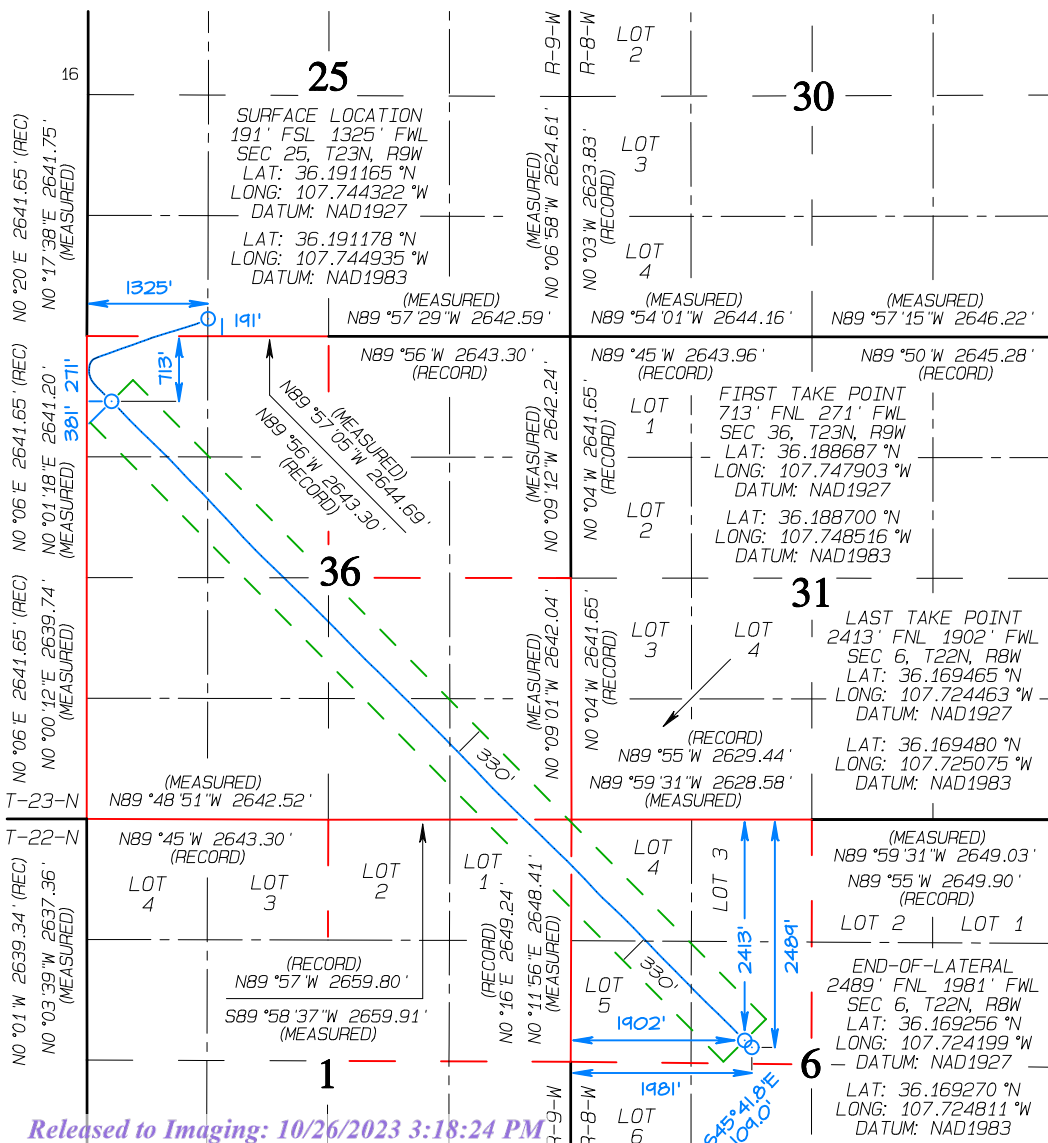
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NE/4 - Sec 1, T22NR9W							
NW/4 - Sec 6, T22NR8W							
W/2, NE/4 - Sec 36, T23NR9W							

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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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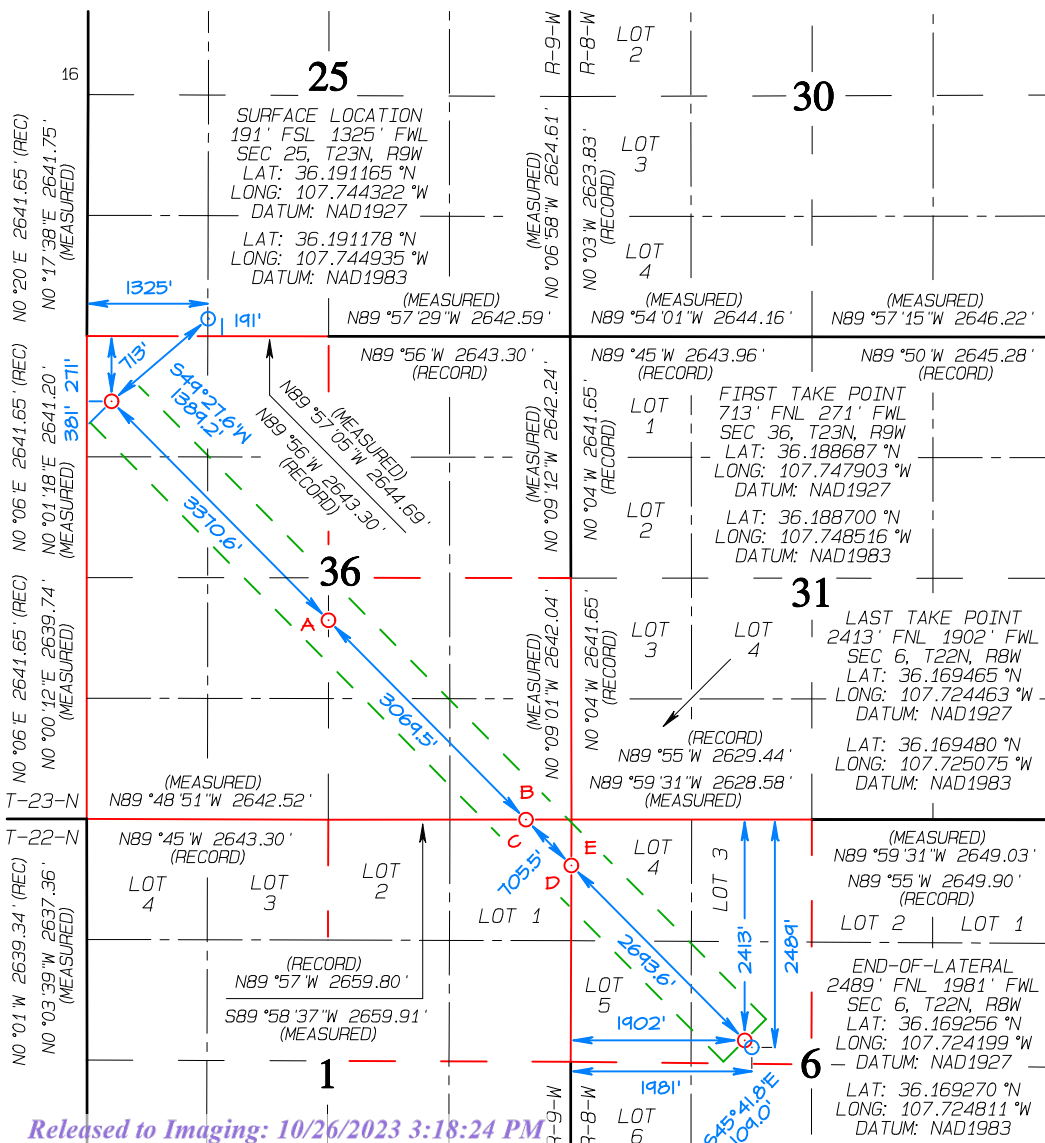
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Khem Suthiwan 1/26/2023

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°

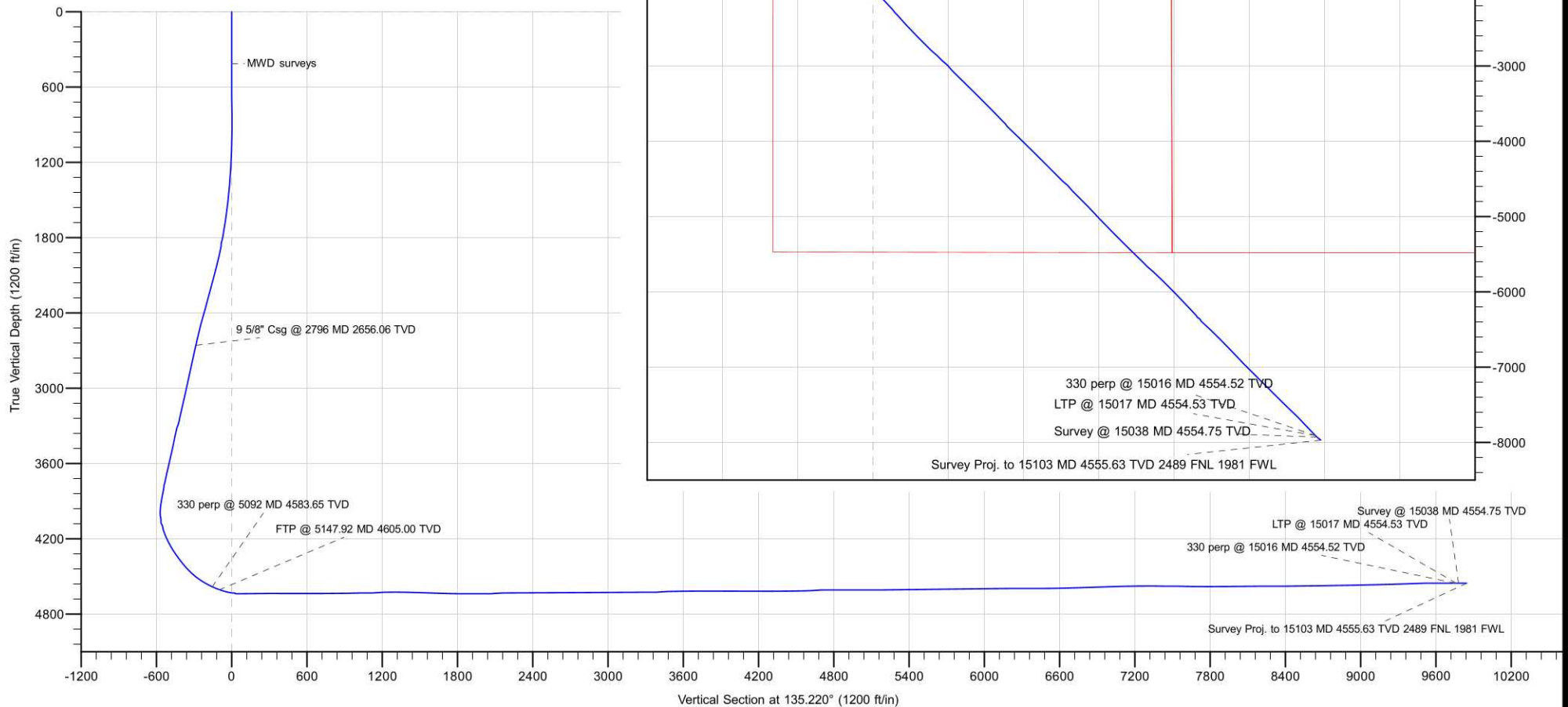


Azimuths to Grid North
 True North: -0.05°
 Magnetic North: 8.59°

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



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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			
		+N/-S (ft)	+E/-W (ft)	Comment	
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:

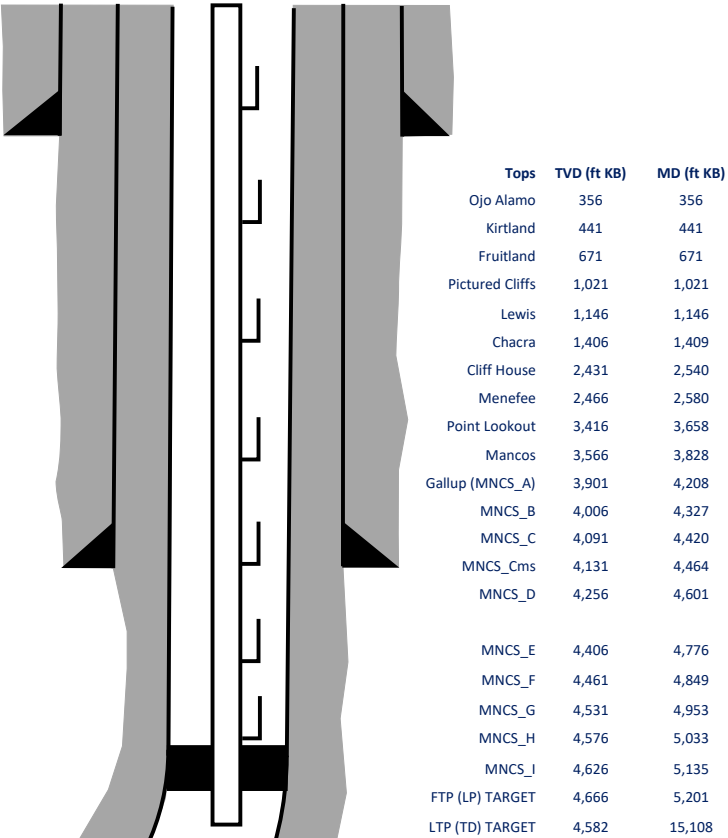
	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	360	13.375	54.5	J-55	BTC	0	360
Intermediate	12.250	2,806	9.625	36.0	J-55	LTC	0	2,806
Production	8.500	15,103	5.500	17.0	P-110	LTC	0	15,103

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



This document will be submitted with the completion package after the well has been completed.

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 180362

ACKNOWLEDGMENTS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 180362
	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.

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COMMENTS

Action 180362

COMMENTS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 180362
	Action Type: [C-104] Tight Hole Completion Packet (C-104CT)

COMMENTS

Created By	Comment	Comment Date
llowe	COA: RT expires on 04/25/23	1/27/2023

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CONDITIONS

Action 180362

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CONDITIONS

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