

District I
1625 M. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

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

☐ AMENDED REPORT

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.

Signature: *[Signature]* Date: 7/31/15
Latoro Granillo
Printed Name
lgranillo@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: DECEMBER 17, 2018
Date of Survey: AUGUST 24, 2017
Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-35880	Pool Code 97232	Pool Name BASIN MANCOS
Property Code 321253	Property Name RODEO UNIT	Well Number 509H
GRID No. 372286	Operator Name ENDURING RESOURCES, LLC	Elevation 6883'

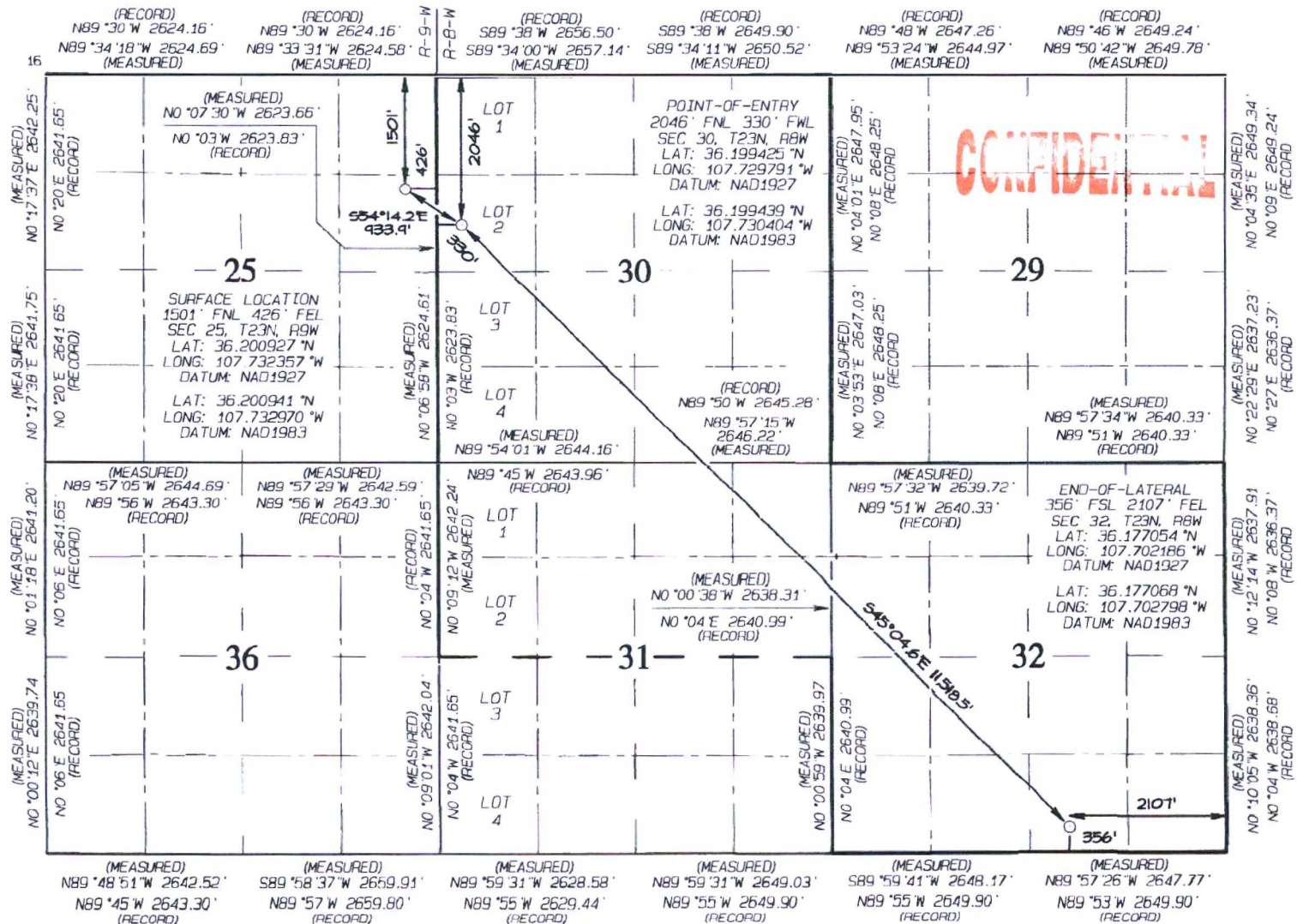
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	25	23N	9W		1501	NORTH	426	EAST	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
0	32	23N	8W		356	SOUTH	2107	EAST	SAN JUAN
Dedicated Acres 1604.85	Entire Section 30 N/2 - Section 31 Entire Section 32				Joint or Infill	Consolidation Code	Order No. R-14313		

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



CONFIDENTIAL



Well: Rodeo Unit #509H
Site: Rodeo Unit
Project: San Juan County, New Mexico NAD83 NM W
Design: Surveys Original Hole
Rig: Axtec 1000

ANNOTATIONS SURVEYS

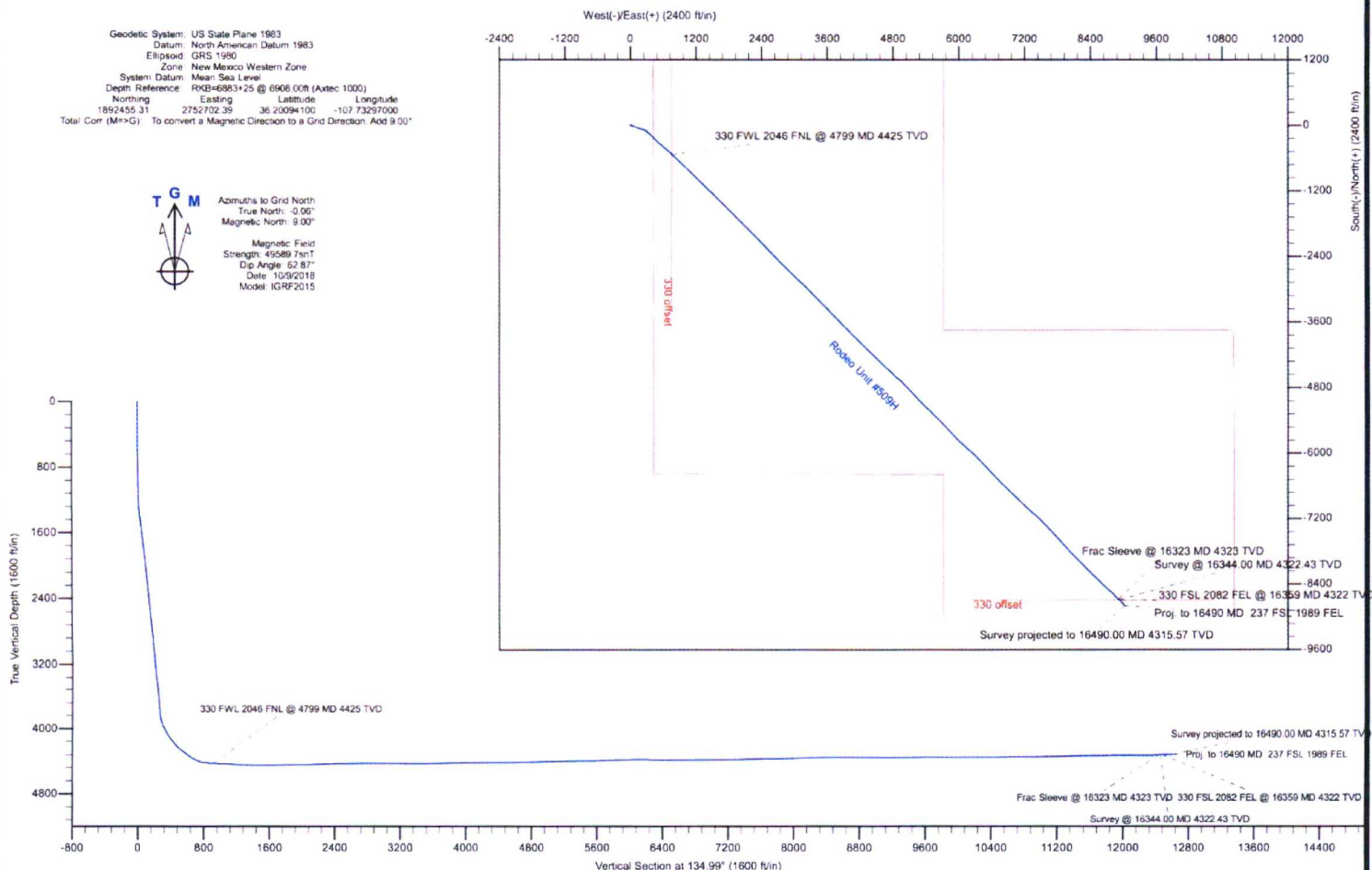
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Annotation
324.00	1.04	311.53	323.98	1.95	-2.20	-2.94	MWD surveys
4799.00	87.28	134.42	4425.00	-545.97	757.76	921.90	330 FWL 2046 FNL @ 4799 MD 4425 TVD
16323.00	92.52	135.04	4323.38	-8679.80	8913.57	12440.42	Frac Sleeve @ 16323 MD 4323 TVD
16344.00	92.69	135.15	4322.43	-8694.66	8828.38	12461.39	Survey @ 16344 MD 4322.43 TVD
16359.00	92.69	135.15	4321.72	-8705.28	8938.94	12476.38	330 FSL 2082 FEL @ 16359 MD 4322 TVD
16490.00	92.69	135.15	4315.57	-8798.05	9031.23	12607.23	Survey projected to 16490 MD 4315.57 TVD
16490.00	92.69	135.15	4315.57	-8798.05	9031.23	12607.23	Proj. to 16490 MD 237 FSL 1989 FEL

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=6963+25 @ 6906.00ft (Axtec 1000)
Northing: 1862455.31 Easting: 2752702.35 Date: 10/9/2018
Longitude: -107.73297000
Total Corr: (M to G) To convert a Magnetic Direction to a Grid Direction: Add 9.00°



Azimuths to Grid North
True North: 0.06°
Magnetic North: 9.00°

Magnetic Field
Strength: 49589.7 nT
Dip Angle: 62.87°
Date: 10/9/2018
Model: IGRF2015





Survey Report



Company: Enduring Resources LLC
Project: San Juan County, New Mexico NAD83 NM W
Site: Rodeo Unit
Well: Rodeo Unit #509H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Rodeo Unit #509H
TVD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
MD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

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

System Datum: Mean Sea Level

CONFIDENTIAL

Site Rodeo Unit

Site Position: Northing: 1,892,465.48 usft Latitude: 36.20096900
From: Lat/Long Easting: 2,752,685.27 usft Longitude: -107.73302800
Position Uncertainty: 0.00 ft Slot Radius: 13-3/16 " Grid Convergence: 0.06 °

Well Rodeo Unit #509H, Surf loc: 1501 FNL 426 FEL Section 25-T23N-R09W

Well Position +N/-S 0.00 ft Northing: 1,892,455.31 usft Latitude: 36.20094100
 +E/-W 0.00 ft Easting: 2,752,702.39 usft Longitude: -107.73297000
Position Uncertainty 0.00 ft Wellhead Elevation: ft Ground Level: 6,883.00 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/9/2018	9.05	62.87	49,589.68355830

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 0.00 134.99

Survey Program Date 12/7/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
324.00	2,729.00	MWD surf (Original Hole)	MWD	OWSG MWD - Standard
2,886.00	16,344.00	MWD (Original Hole)	MWD	OWSG MWD - Standard
16,490.00	16,490.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
324.00	1.04	311.53	323.98	1.95	-2.20	-2.94	0.32	0.32	0.00
MWD surveys									
416.00	1.00	110.96	415.98	2.22	-2.08	-3.04	2.18	-0.04	173.29
506.00	1.72	121.60	505.95	1.23	-0.19	-1.00	0.84	0.80	11.82
599.00	1.72	123.97	598.91	-0.28	2.15	1.72	0.08	0.00	2.55
689.00	1.50	119.75	688.87	-1.62	4.30	4.19	0.28	-0.24	-4.69
780.00	1.33	129.74	779.85	-2.89	6.14	6.39	0.33	-0.19	10.98
872.00	0.78	130.57	871.83	-3.98	7.44	8.07	0.60	-0.60	0.90



Survey Report



Company: Enduring Resources LLC
Project: San Juan County, New Mexico NAD83 NM W
Site: Rodeo Unit
Well: Rodeo Unit #509H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Rodeo Unit #509H
TVD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
MD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

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)
965.00	0.80	139.24	964.82	-4.88	8.34	9.35	0.13	0.02	9.32
1,059.00	0.89	128.06	1,058.81	-5.83	9.35	10.73	0.20	0.10	-11.89
1,154.00	0.84	128.19	1,153.80	-6.72	10.48	12.16	0.05	-0.05	0.14
1,248.00	2.75	115.14	1,247.75	-8.10	13.06	14.96	2.06	2.03	-13.88
1,343.00	5.14	110.98	1,342.52	-10.59	19.10	20.99	2.53	2.52	-4.38
1,438.00	7.36	107.82	1,436.95	-13.98	28.86	30.30	2.36	2.34	-3.33
1,533.00	7.68	107.00	1,531.13	-17.70	40.73	41.31	0.36	0.34	-0.86
1,627.00	7.54	108.11	1,624.30	-21.45	52.60	52.36	0.22	-0.15	1.18
1,722.00	7.89	107.49	1,718.44	-25.35	64.74	63.70	0.38	0.37	-0.65
1,816.00	7.88	108.05	1,811.55	-29.28	77.02	75.17	0.08	-0.01	0.60
1,911.00	7.75	106.59	1,905.67	-33.13	89.35	86.61	0.25	-0.14	-1.54
2,005.00	7.11	107.94	1,998.88	-36.73	100.96	97.37	0.71	-0.68	1.44
2,100.00	7.14	109.79	2,093.15	-40.54	112.11	107.95	0.24	0.03	1.95
2,194.00	6.23	112.28	2,186.51	-44.45	122.32	117.94	1.02	-0.97	2.65
2,289.00	6.02	112.42	2,280.97	-48.31	131.70	127.29	0.22	-0.22	0.15
2,383.00	5.99	112.86	2,374.45	-52.09	140.77	136.39	0.06	-0.03	0.47
2,478.00	6.02	113.46	2,468.93	-56.00	149.91	145.61	0.07	0.03	0.63
2,572.00	6.02	114.57	2,562.41	-60.01	158.92	154.82	0.12	0.00	1.18
2,667.00	5.89	113.27	2,656.90	-64.01	167.92	164.01	0.20	-0.14	-1.37
2,729.00	5.63	114.59	2,718.59	-66.53	173.61	169.82	0.47	-0.42	2.13
2,886.00	5.50	105.58	2,874.85	-71.76	187.86	183.59	0.56	-0.08	-5.74
2,981.00	5.78	105.44	2,969.39	-74.25	196.86	191.72	0.30	0.29	-0.15
3,075.00	5.75	103.31	3,062.91	-76.60	206.00	199.85	0.23	-0.03	-2.27
3,170.00	5.91	110.38	3,157.42	-79.40	215.22	208.34	0.77	0.17	7.44
3,264.00	5.94	111.46	3,250.92	-82.86	224.28	217.20	0.12	0.03	1.15
3,358.00	6.08	109.37	3,344.40	-86.29	233.51	226.15	0.28	0.15	-2.22
3,453.00	6.06	113.98	3,438.87	-90.00	242.83	235.37	0.51	-0.02	4.85
3,547.00	6.54	96.60	3,532.31	-92.63	252.69	244.20	2.08	0.51	-18.49
3,641.00	5.44	96.82	3,625.80	-93.77	262.43	251.89	1.17	-1.17	0.23
3,735.00	4.57	117.48	3,719.45	-96.03	270.18	258.97	2.11	-0.93	21.98
3,830.00	4.82	122.77	3,814.13	-99.94	276.89	266.48	0.53	0.26	5.57
3,862.00	8.99	125.42	3,845.89	-102.12	280.06	270.26	13.07	13.03	8.28
3,893.00	13.23	126.01	3,876.30	-105.61	284.90	276.16	13.68	13.68	1.90
3,925.00	17.41	127.61	3,907.16	-110.68	291.66	284.52	13.13	13.06	5.00
3,956.00	20.78	128.42	3,936.45	-116.93	299.65	294.59	10.90	10.87	2.61
3,987.00	22.77	129.07	3,965.23	-124.13	308.61	306.02	6.47	6.42	2.10
4,019.00	24.97	129.81	3,994.50	-132.36	318.61	318.91	6.94	6.88	2.31
4,050.00	27.47	130.67	4,022.30	-141.21	329.06	332.56	8.16	8.06	2.77
4,082.00	30.09	132.68	4,050.35	-151.46	340.56	347.93	8.73	8.19	6.28
4,114.00	32.50	134.39	4,077.69	-162.91	352.60	364.55	8.03	7.53	5.34
4,145.00	34.37	135.02	4,103.56	-174.93	364.74	381.63	6.14	6.03	2.03
4,176.00	36.00	134.72	4,128.90	-187.53	377.40	399.49	5.29	5.26	-0.97
4,208.00	37.85	135.41	4,154.48	-201.14	390.98	418.71	5.92	5.78	2.16



Survey Report



Company: Enduring Resources LLC
Project: San Juan County, New Mexico NAD83 NM W
Site: Rodeo Unit
Well: Rodeo Unit #509H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Rodeo Unit #509H
TVD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
MD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

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)
4,239.00	40.23	134.39	4,178.55	-214.92	404.81	438.24	7.95	7.68	-3.29
4,270.00	43.17	133.76	4,201.70	-229.26	419.62	458.85	9.58	9.48	-2.03
4,302.00	46.19	133.95	4,224.45	-244.85	435.85	481.35	9.45	9.44	0.59
4,333.00	49.24	133.31	4,245.30	-260.67	452.45	504.27	9.96	9.84	-2.06
4,364.00	51.33	132.90	4,265.11	-276.96	469.86	528.10	6.82	6.74	-1.32
4,396.00	53.19	132.91	4,284.69	-294.19	488.39	553.39	5.81	5.81	0.03
4,427.00	55.26	132.31	4,302.82	-311.21	506.90	578.52	6.86	6.68	-1.94
4,459.00	55.66	131.96	4,320.96	-328.90	526.45	604.85	1.54	1.25	-1.09
4,490.00	55.40	131.88	4,338.51	-345.97	545.47	630.37	0.87	-0.84	-0.26
4,521.00	58.19	131.85	4,355.48	-363.28	564.78	656.26	9.00	9.00	-0.10
4,553.00	62.29	131.83	4,371.36	-381.81	585.47	684.00	12.81	12.81	-0.06
4,584.00	66.84	132.43	4,384.67	-400.58	606.23	711.95	14.78	14.68	1.94
4,616.00	71.76	133.19	4,395.98	-420.92	628.18	741.85	15.53	15.38	2.38
4,647.00	75.73	133.69	4,404.65	-441.38	649.78	771.60	12.90	12.81	1.61
4,679.00	78.69	133.84	4,411.74	-462.97	672.32	802.79	9.26	9.25	0.47
4,711.00	81.39	133.83	4,417.27	-484.79	695.05	834.30	8.44	8.44	-0.03
4,742.00	83.94	134.22	4,421.23	-506.16	717.15	865.04	8.32	8.23	1.26
4,774.00	87.01	134.57	4,423.75	-528.47	739.94	896.93	9.66	9.59	1.09
4,799.00	87.28	134.42	4,425.00	-545.97	757.76	921.90	1.22	1.06	-0.61
330 FWL 2046 FNL @ 4799 MD 4425 TVD									
4,868.00	88.01	134.00	4,427.84	-594.04	807.17	990.84	1.22	1.06	-0.61
4,963.00	87.68	133.47	4,431.41	-659.67	875.77	1,085.75	0.66	-0.35	-0.56
5,057.00	87.34	132.98	4,435.49	-723.99	944.20	1,179.61	0.63	-0.36	-0.52
5,151.00	87.51	132.64	4,439.72	-787.80	1,013.09	1,273.45	0.40	0.18	-0.36
5,246.00	87.61	131.91	4,443.76	-851.65	1,083.31	1,368.26	0.77	0.11	-0.77
5,340.00	89.43	134.31	4,446.19	-915.86	1,151.91	1,462.16	3.20	1.94	2.55
5,434.00	89.63	133.75	4,446.96	-981.19	1,219.49	1,556.15	0.63	0.21	-0.60
5,529.00	89.29	133.47	4,447.86	-1,046.72	1,288.27	1,651.11	0.46	-0.36	-0.29
5,623.00	90.34	135.58	4,448.16	-1,112.63	1,355.28	1,745.10	2.51	1.12	2.24
5,718.00	91.11	134.67	4,446.96	-1,179.94	1,422.30	1,840.09	1.25	0.81	-0.96
5,812.00	91.58	134.51	4,444.75	-1,245.91	1,489.23	1,934.07	0.53	0.50	-0.17
5,907.00	91.88	134.93	4,441.88	-1,312.73	1,556.70	2,029.02	0.54	0.32	0.44
6,001.00	91.92	134.19	4,438.77	-1,378.65	1,623.64	2,122.97	0.79	0.04	-0.79
6,095.00	91.85	132.75	4,435.67	-1,443.28	1,691.82	2,216.88	1.53	-0.07	-1.53
6,189.00	90.84	135.16	4,433.47	-1,508.50	1,759.46	2,310.83	2.78	-1.07	2.56
6,284.00	90.98	136.38	4,431.96	-1,576.56	1,825.72	2,405.81	1.29	0.15	1.28
6,379.00	91.48	135.70	4,429.92	-1,644.93	1,891.65	2,500.77	0.89	0.53	-0.72
6,473.00	91.21	134.28	4,427.71	-1,711.37	1,958.11	2,594.74	1.54	-0.29	-1.51
6,568.00	91.75	134.38	4,425.26	-1,777.73	2,026.04	2,689.70	0.58	0.57	0.11
6,662.00	91.01	132.82	4,423.00	-1,842.53	2,094.09	2,783.64	1.84	-0.79	-1.66
6,756.00	89.76	135.68	4,422.36	-1,908.12	2,161.41	2,877.62	3.32	-1.33	3.04
6,851.00	89.39	135.02	4,423.07	-1,975.70	2,228.17	2,972.62	0.80	-0.39	-0.69
6,945.00	89.13	134.00	4,424.28	-2,041.59	2,295.20	3,066.60	1.12	-0.28	-1.09
7,040.00	89.87	136.79	4,425.11	-2,109.22	2,361.90	3,161.59	3.04	0.78	2.94



Survey Report



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Project: San Juan County, New Mexico NAD83 NM W
Site: Rodeo Unit
Well: Rodeo Unit #509H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Rodeo Unit #509H
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MD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

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)
7,134.00	89.56	135.94	4,425.58	-2,177.25	2,426.77	3,255.56	0.96	-0.33	-0.90
7,229.00	89.73	135.21	4,426.17	-2,245.09	2,493.26	3,350.55	0.79	0.18	-0.77
7,323.00	89.80	135.52	4,426.55	-2,311.98	2,559.30	3,444.55	0.34	0.07	0.33
7,417.00	90.47	135.72	4,426.33	-2,379.16	2,625.05	3,538.54	0.74	0.71	0.21
7,511.00	90.87	135.43	4,425.23	-2,446.29	2,690.84	3,632.53	0.53	0.43	-0.31
7,557.00	90.81	135.95	4,424.56	-2,479.20	2,722.97	3,678.52	1.14	-0.13	1.13
7,651.00	91.28	135.51	4,422.84	-2,546.50	2,788.58	3,772.50	0.68	0.50	-0.47
7,746.00	90.97	135.42	4,420.98	-2,614.21	2,855.19	3,867.48	0.34	-0.33	-0.09
7,840.00	91.11	134.73	4,419.27	-2,680.75	2,921.56	3,961.46	0.75	0.15	-0.73
7,934.00	91.04	134.67	4,417.51	-2,746.86	2,988.36	4,055.44	0.10	-0.07	-0.06
8,029.00	90.84	134.14	4,415.95	-2,813.32	3,056.22	4,150.42	0.60	-0.21	-0.56
8,123.00	90.54	132.98	4,414.82	-2,878.09	3,124.33	4,244.39	1.27	-0.32	-1.23
8,217.00	89.97	134.88	4,414.40	-2,943.30	3,192.03	4,338.37	2.11	-0.61	2.02
8,311.00	90.27	134.13	4,414.20	-3,009.19	3,259.07	4,432.36	0.86	0.32	-0.80
8,405.00	91.04	136.41	4,413.13	-3,075.97	3,325.21	4,526.35	2.56	0.82	2.43
8,500.00	91.58	135.84	4,410.96	-3,144.43	3,391.04	4,621.30	0.83	0.57	-0.60
8,594.00	91.61	135.82	4,408.34	-3,211.83	3,456.51	4,715.26	0.04	0.03	-0.02
8,688.00	91.14	135.53	4,406.08	-3,279.05	3,522.17	4,809.22	0.59	-0.50	-0.31
8,783.00	90.84	135.92	4,404.44	-3,347.06	3,588.48	4,904.20	0.52	-0.32	0.41
8,877.00	90.77	135.22	4,403.12	-3,414.18	3,654.28	4,998.18	0.75	-0.07	-0.74
8,972.00	91.04	134.77	4,401.62	-3,481.34	3,721.45	5,093.17	0.55	0.28	-0.47
9,067.00	91.14	133.80	4,399.81	-3,547.66	3,789.45	5,188.15	1.03	0.11	-1.02
9,162.00	91.75	136.70	4,397.42	-3,615.10	3,856.30	5,283.11	3.12	0.64	3.05
9,256.00	91.31	136.12	4,394.91	-3,683.16	3,921.09	5,377.04	0.77	-0.47	-0.62
9,350.00	91.82	136.13	4,392.34	-3,750.89	3,986.21	5,470.99	0.54	0.54	0.01
9,444.00	91.68	135.63	4,389.47	-3,818.34	4,051.62	5,564.93	0.55	-0.15	-0.53
9,539.00	91.99	135.72	4,386.43	-3,886.27	4,117.97	5,659.88	0.34	0.33	0.09
9,633.00	91.01	135.50	4,383.97	-3,953.42	4,183.70	5,753.84	1.07	-1.04	-0.23
9,728.00	91.55	134.60	4,381.85	-4,020.63	4,250.80	5,848.81	1.10	0.57	-0.95
9,822.00	91.01	133.93	4,379.75	-4,086.23	4,318.10	5,942.78	0.92	-0.57	-0.71
9,916.00	90.37	133.17	4,378.61	-4,150.98	4,386.22	6,036.74	1.06	-0.68	-0.81
10,010.00	90.00	133.00	4,378.31	-4,215.19	4,454.87	6,130.69	0.43	-0.39	-0.18
10,104.00	89.60	134.26	4,378.64	-4,280.05	4,522.91	6,224.66	1.41	-0.43	1.34
10,199.00	89.56	134.00	4,379.34	-4,346.20	4,591.09	6,319.65	0.28	-0.04	-0.27
10,293.00	89.63	133.52	4,380.00	-4,411.21	4,658.98	6,413.62	0.52	0.07	-0.51
10,388.00	89.06	133.47	4,381.09	-4,476.59	4,727.89	6,508.59	0.60	-0.60	-0.05
10,482.00	89.43	132.92	4,382.32	-4,540.93	4,796.42	6,602.53	0.71	0.39	-0.59
10,577.00	90.64	135.31	4,382.27	-4,607.05	4,864.61	6,697.51	2.82	1.27	2.52
10,672.00	90.57	134.63	4,381.26	-4,674.19	4,931.82	6,792.51	0.72	-0.07	-0.72
10,766.00	90.40	133.97	4,380.47	-4,739.84	4,999.09	6,886.49	0.73	-0.18	-0.70
10,860.00	90.34	136.50	4,379.86	-4,806.57	5,065.28	6,980.48	2.69	-0.06	2.69
10,955.00	90.87	136.21	4,378.86	-4,875.31	5,130.84	7,075.45	0.64	0.56	-0.31
11,050.00	89.73	135.59	4,378.36	-4,943.53	5,196.95	7,170.44	1.37	-1.20	-0.65



Survey Report



Company: Enduring Resources LLC
Project: San Juan County, New Mexico NAD83 NM W
Site: Rodeo Unit
Well: Rodeo Unit #509H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Rodeo Unit #509H
TVD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
MD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

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)
11,144.00	89.46	135.93	4,379.02	-5,010.87	5,262.53	7,264.43	0.46	-0.29	0.36
11,239.00	91.81	137.36	4,377.97	-5,079.94	5,327.74	7,359.37	2.90	2.47	1.51
11,333.00	92.02	135.79	4,374.83	-5,148.17	5,392.32	7,453.28	1.68	0.22	-1.67
11,428.00	91.68	135.23	4,371.76	-5,215.90	5,458.86	7,548.23	0.69	-0.36	-0.59
11,523.00	91.48	134.50	4,369.14	-5,282.89	5,526.17	7,643.19	0.80	-0.21	-0.77
11,617.00	91.34	134.55	4,366.83	-5,348.79	5,593.16	7,737.16	0.16	-0.15	0.05
11,711.00	91.58	133.33	4,364.44	-5,413.99	5,660.83	7,831.11	1.32	0.26	-1.30
11,805.00	91.88	136.49	4,361.60	-5,480.32	5,727.36	7,925.05	3.38	0.32	3.36
11,900.00	92.39	135.96	4,358.06	-5,548.86	5,793.04	8,019.96	0.77	0.54	-0.56
11,994.00	91.82	136.16	4,354.61	-5,616.50	5,858.22	8,113.88	0.64	-0.61	0.21
12,090.00	91.55	136.24	4,351.78	-5,685.76	5,924.64	8,209.82	0.29	-0.28	0.08
12,184.00	91.08	135.58	4,349.63	-5,753.26	5,990.02	8,303.78	0.86	-0.50	-0.70
12,279.00	91.08	135.00	4,347.83	-5,820.76	6,056.84	8,398.77	0.61	0.00	-0.61
12,374.00	90.50	133.94	4,346.52	-5,887.30	6,124.63	8,493.75	1.27	-0.61	-1.12
12,469.00	90.00	131.92	4,346.11	-5,952.01	6,194.18	8,588.68	2.19	-0.53	-2.13
12,563.00	89.43	134.81	4,346.58	-6,016.54	6,262.51	8,682.63	3.13	-0.61	3.07
12,658.00	89.43	135.21	4,347.52	-6,083.73	6,329.67	8,777.63	0.42	0.00	0.42
12,753.00	89.02	135.33	4,348.81	-6,151.21	6,396.52	8,872.62	0.45	-0.43	0.13
12,848.00	88.65	135.22	4,350.74	-6,218.69	6,463.36	8,967.60	0.41	-0.39	-0.12
12,943.00	90.00	136.20	4,351.86	-6,286.69	6,529.69	9,062.58	1.76	1.42	1.03
13,037.00	90.57	136.96	4,351.39	-6,354.96	6,594.30	9,156.54	1.01	0.61	0.81
13,132.00	90.47	137.01	4,350.53	-6,424.42	6,659.11	9,251.48	0.12	-0.11	0.05
13,226.00	90.27	135.82	4,349.92	-6,492.51	6,723.91	9,345.45	1.28	-0.21	-1.27
13,320.00	90.40	136.19	4,349.37	-6,560.13	6,789.20	9,439.43	0.42	0.14	0.39
13,415.00	90.37	136.25	4,348.73	-6,628.72	6,854.93	9,534.41	0.07	-0.03	0.06
13,509.00	90.44	134.80	4,348.07	-6,695.79	6,920.78	9,628.40	1.54	0.07	-1.54
13,603.00	89.93	133.50	4,347.77	-6,761.26	6,988.23	9,722.39	1.49	-0.54	-1.38
13,698.00	90.34	134.36	4,347.54	-6,827.17	7,056.64	9,817.37	1.00	0.43	0.91
13,792.00	90.61	133.90	4,346.76	-6,892.62	7,124.11	9,911.35	0.57	0.29	-0.49
13,887.00	90.30	132.76	4,346.01	-6,957.80	7,193.21	10,006.31	1.24	-0.33	-1.20
13,981.00	89.97	130.75	4,345.79	-7,020.40	7,263.33	10,100.15	2.17	-0.35	-2.14
14,076.00	90.10	131.32	4,345.73	-7,082.77	7,334.99	10,194.93	0.62	0.14	0.60
14,170.00	89.93	133.84	4,345.70	-7,146.37	7,404.20	10,288.84	2.69	-0.18	2.68
14,265.00	90.44	135.50	4,345.40	-7,213.15	7,471.76	10,383.83	1.83	0.54	1.75
14,359.00	90.77	136.14	4,344.40	-7,280.56	7,537.27	10,477.82	0.77	0.35	0.68
14,454.00	90.91	135.32	4,343.01	-7,348.58	7,603.57	10,572.80	0.88	0.15	-0.86
14,548.00	91.55	134.87	4,340.99	-7,415.14	7,669.91	10,666.77	0.83	0.68	-0.48
14,643.00	90.17	136.49	4,339.57	-7,483.09	7,736.27	10,761.75	2.24	-1.45	1.71
14,737.00	89.76	137.45	4,339.63	-7,551.81	7,800.42	10,855.69	1.11	-0.44	1.02
14,832.00	90.30	138.27	4,339.58	-7,622.25	7,864.16	10,950.57	1.03	0.57	0.86
14,927.00	90.81	138.37	4,338.66	-7,693.20	7,927.33	11,045.41	0.55	0.54	0.11
15,021.00	91.04	138.32	4,337.14	-7,763.42	7,989.79	11,139.23	0.25	0.24	-0.05
15,115.00	90.74	137.19	4,335.68	-7,833.00	8,052.98	11,233.11	1.24	-0.32	-1.20



Survey Report



Company: Enduring Resources LLC
Project: San Juan County, New Mexico NAD83 NM W
Site: Rodeo Unit
Well: Rodeo Unit #509H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Rodeo Unit #509H
TVD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
MD Reference: RKB=6883+25 @ 6908.00ft (Axtec 1000)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

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)
15,210.00	91.28	136.77	4,334.00	-7,902.44	8,117.79	11,328.04	0.72	0.57	-0.44
15,304.00	92.02	136.58	4,331.30	-7,970.80	8,182.25	11,421.96	0.81	0.79	-0.20
15,399.00	90.10	135.08	4,329.54	-8,038.92	8,248.43	11,516.93	2.56	-2.02	-1.58
15,494.00	90.47	134.87	4,329.07	-8,106.07	8,315.64	11,611.92	0.45	0.39	-0.22
15,588.00	90.94	135.43	4,327.91	-8,172.70	8,381.93	11,705.92	0.78	0.50	0.60
15,683.00	91.28	133.75	4,326.07	-8,239.38	8,449.56	11,800.89	1.80	0.36	-1.77
15,777.00	91.78	132.83	4,323.56	-8,303.81	8,517.96	11,894.82	1.11	0.53	-0.98
15,871.00	89.06	133.25	4,322.87	-8,367.96	8,586.66	11,988.75	2.93	-2.89	0.45
15,966.00	87.98	132.62	4,325.32	-8,432.65	8,656.18	12,083.66	1.32	-1.14	-0.66
16,060.00	88.72	132.89	4,328.03	-8,496.43	8,725.17	12,177.54	0.84	0.79	0.29
16,155.00	90.77	134.18	4,328.45	-8,561.86	8,794.04	12,272.51	2.55	2.16	1.36
16,249.00	91.92	134.67	4,326.25	-8,627.64	8,861.15	12,366.47	1.33	1.22	0.52
16,323.00	92.52	135.04	4,323.38	-8,679.80	8,913.57	12,440.42	0.95	0.81	0.51
Frac Sleeve @ 16323 MD 4323 TVD									
16,344.00	92.69	135.15	4,322.43	-8,694.66	8,928.38	12,461.40	0.95	0.81	0.51
Survey @ 16344.00 MD 4322.43 TVD									
16,359.00	92.69	135.15	4,321.72	-8,705.28	8,938.94	12,476.38	0.00	0.00	0.00
330 FSL 2082 FEL @ 16359 MD 4322 TVD									
16,490.00	92.69	135.15	4,315.57	-8,798.05	9,031.23	12,607.23	0.00	0.00	0.00
Survey projected to 16490.00 MD 4315.57 TVD - Proj. to 16490 MD 237 FSL 1989 FEL									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
324.00	323.98	1.95	-2.20	MWD surveys
4,799.00	4,425.00	-545.97	757.76	330 FWL 2046 FNL @ 4799 MD 4425 TVD
16,323.00	4,323.38	-8,679.80	8,913.57	Frac Sleeve @ 16323 MD 4323 TVD
16,344.00	4,322.43	-8,694.66	8,928.38	Survey @ 16344.00 MD 4322.43 TVD
16,359.00	4,321.72	-8,705.28	8,938.94	330 FSL 2082 FEL @ 16359 MD 4322 TVD
16,490.00	4,315.57	-8,798.05	9,031.23	Survey projected to 16490.00 MD 4315.57 TVD
16,490.00	4,315.57	-8,798.05	9,031.23	Proj. to 16490 MD 237 FSL 1989 FEL