

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1263 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

As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21320		² Pool Code 52860		³ Pool Name RUSTY GALLUP OIL POOL	
⁴ Property Code 322151		⁵ Property Name S ESCAVADA UNIT		⁶ Well Number 353H	
⁷ GRID No. 372286		⁸ Operator Name ENDURING RESOURCES, LLC		⁹ Elevation 6776'	

¹⁰ Surface Location

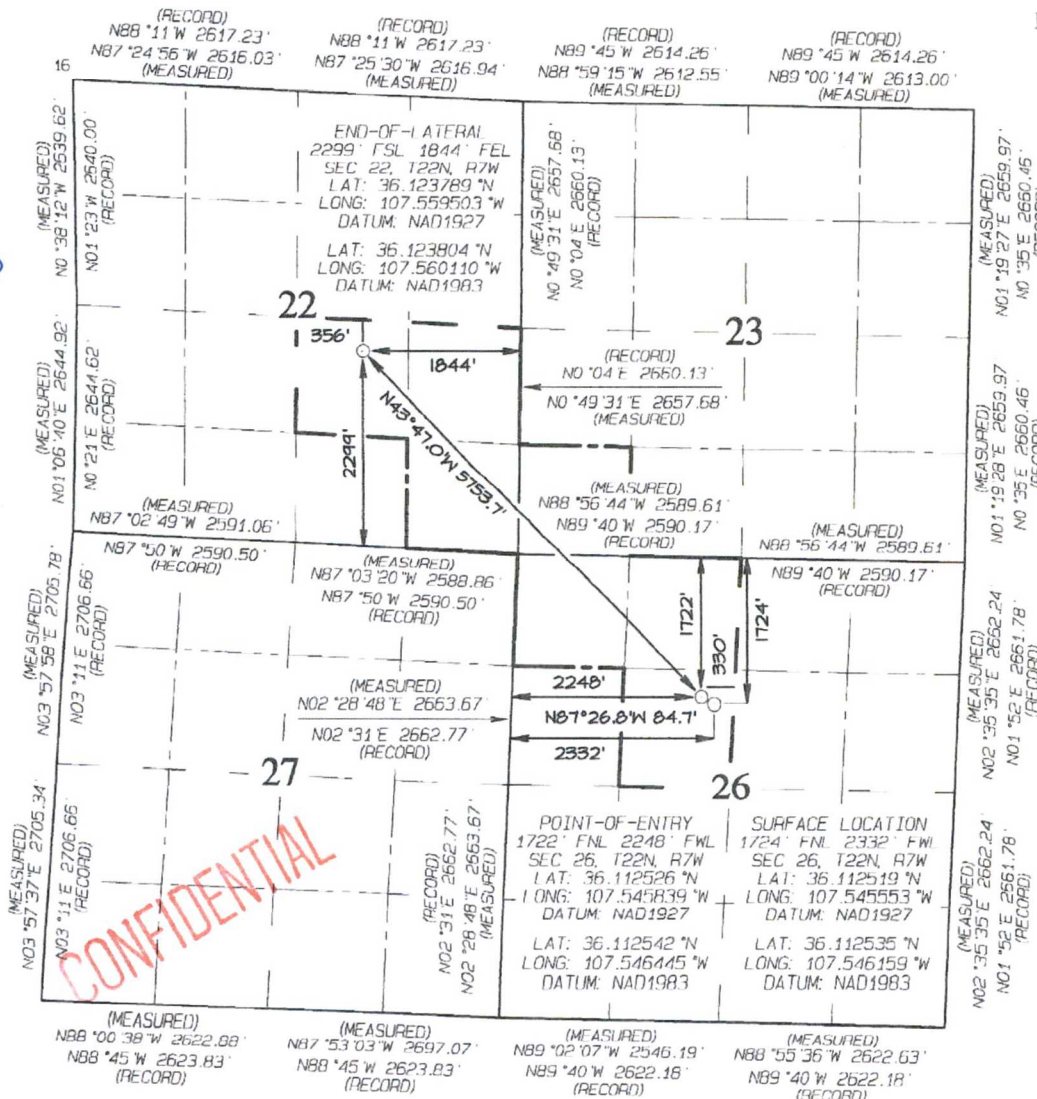
UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
F	26	22N	7W		1724	NORTH	2332	WEST	SANDOVAL

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
J	22	22N	7W		2299	SOUTH	1844	EAST	SANDOVAL

¹² Dedicated Acres 280.00 SW/4 SW/4 - Section 23 N/2 SE/4, SE/4 SE/4 - Section 22 N/2 NW/4, SE/4 NW/4 - Section 26				¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. R-14347	
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NO ALLOWABLE WILL BE ASSIGNED
TO THIS COMPLETION UNTIL ALL
INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS
BEEN APPROVED BY THE DIVISION



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.

10/8/18

Signature _____ Date _____

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: OCTOBER 3, 2018

Date of Survey: JUNE 6, 2017

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269



Well: S Escavada Unit 353 H
Site: S Escavada Unit
Project: Sandoval County, NM NAD83 NM C
Design: rev3
Rig: AZtec 1000

ANNOTATIONS SURVEYS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Annotation
334.00	0.17	126.32	334.00	-0.29	0.40	-0.49	MWD surveys
5145.00	83.20	313.37	4700.08	20.55	-102.70	85.70	330 FEL @ 5145 MD 4700 TVD
10876.00	88.62	315.58	4733.40	4157.57	-4065.69	5814.56	Sleeve depth @ 10876 MD 4733 TVD
10905.00	89.09	315.70	4733.98	4178.29	-4085.96	5843.55	330 FNL @ 10905 MD 4734 TVD
10986.00	89.90	315.41	4734.56	4236.25	-4142.55	5924.54	Survey @ 10986 MD 4734.56 TVD
11051.00	89.90	315.41	4734.67	4282.54	-4188.18	5989.53	Survey projected to 11051.00 MD 4734.67 TVD

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2"/100' build
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	Begin 12.86° tangent
3	1643.21	12.86	135.00	1637.82	-50.84	50.84	2.00	135.00	-71.88	Begin 6.36°/100' build/turn
4	3861.06	12.86	135.00	3800.00	-400.00	400.00	0.00	0.00	-565.51	Begin 13.39° tangent
5	3872.18	13.39	132.90	3810.83	-401.75	401.82	6.36	-43.51	-568.04	Begin 10.4°/100' build/turn
6	4069.56	13.39	132.90	4002.85	-432.86	435.29	0.00	0.00	-613.65	Begin 60.00° tangent
7	4775.08	60.00	310.30	4607.37	-267.63	233.81	10.40	177.65	-355.05	Begin 10.4°/100' build/turn
8	4835.08	60.00	310.30	4637.37	-234.02	194.18	0.00	0.00	-303.38	Begin 2.88°/100' build/turn
9	5115.98	89.21	310.78	4711.14	-59.83	-9.36	10.40	0.98	-36.88	Begin 89.70° lateral
0	5312.27	89.70	316.41	4713.01	75.47	-151.45	2.88	85.09	159.09	PBHL/TD
1	10974.58	89.70	316.41	4743.00	4176.76	-4055.32	0.00	0.00	5821.31	

Annotation

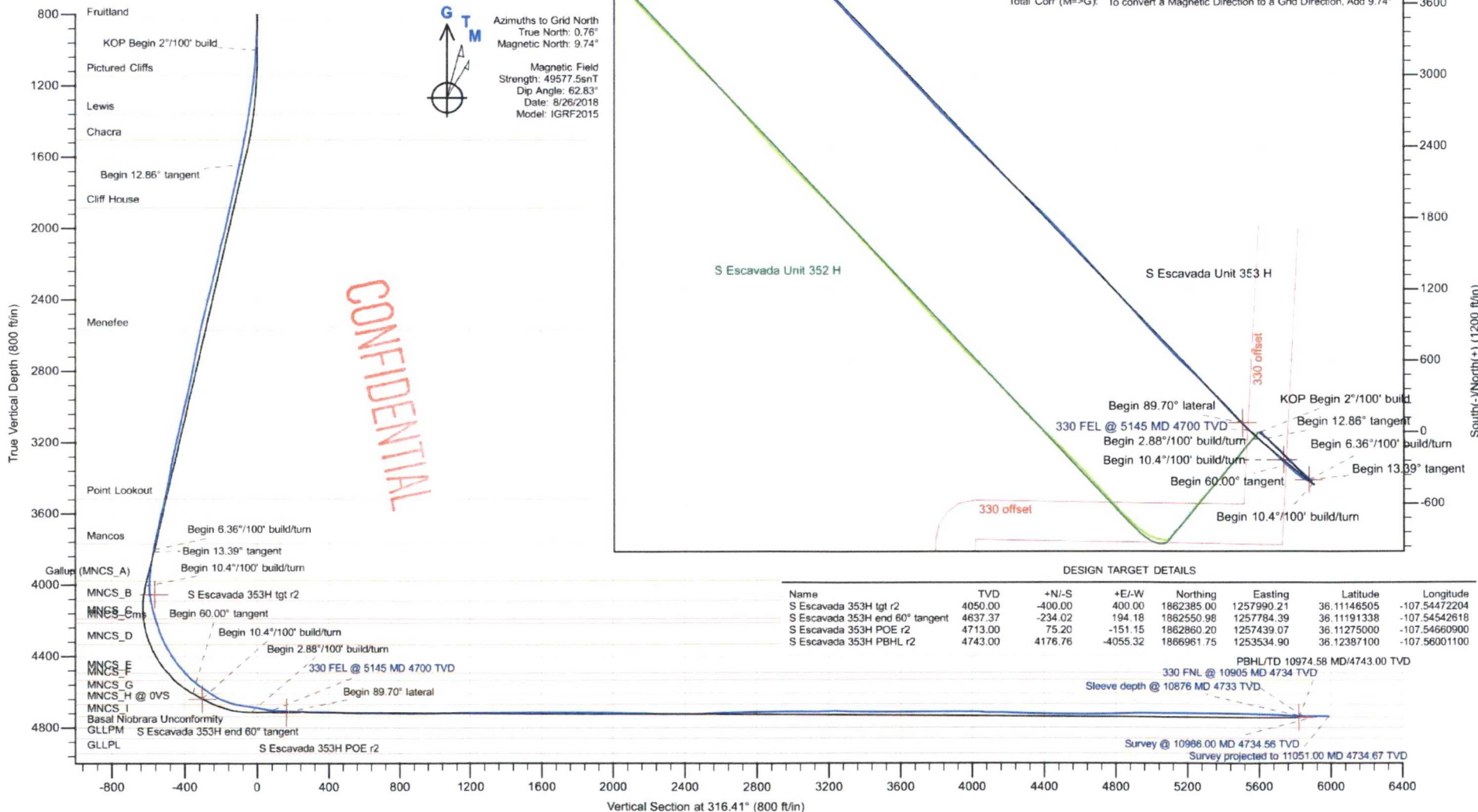
Azimuths to Grid North
True North: 0.76°
Magnetic North: 9.74°

Magnetic Field
Strength: 49577.5nT
Dip Angle: 62.83°
Date: 8/26/2018
Model: IGRF2015

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

System Datum: Mean Sea Level
Depth Reference: RKB-6776+22 @ 6798.00ft (AZtec 1000)
Northing: 1862785.00 Easting: 1257590.21 Latitude: 36.11254900 Longitude: -107.54609400

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 9.74°



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
S Escavada 353H tgt r2	4050.00	-400.00	400.00	1862385.00	1257990.21	36.11146505	-107.54472204
S Escavada 353H end 60° tangent	4637.37	-234.02	194.18	1862550.98	1257784.39	36.11191338	-107.54542618
S Escavada 353H POE r2	4713.00	75.20	-151.15	1862860.20	1257439.07	36.11275000	-107.54660900
S Escavada 353H PBHL r2	4743.00	4176.76	-4055.32	1869691.75	1253534.90	36.12387100	-107.56001100

PBHL/TD 10974.58 MD/4743.00 TVD
330 FNL @ 10905 MD 4734 TVD
Sleeve depth @ 10876 MD 4733 TVD

Survey @ 10986 MD 4734.56 TVD
Survey projected to 11051.00 MD 4734.67 TVD



Survey Report

MARKSMAN
DIRECTIONAL

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

Project Sandoval County, New Mexico NAD83 NM C

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Central Zone
System Datum: Mean Sea Level

Site S Escavada Unit

Site Position:
From: Lat/Long
Position Uncertainty: 0.00 ft
Northing: 1,862,785.00 usft
Easting: 1,257,590.21 usft
Slot Radius: 13-3/16 "
Latitude: 36.11254900
Longitude: -107.54609400
Grid Convergence: -0.76 °

Well S Escavada Unit 353 H, Surf loc: 1719 FNL 2352 FWL Section 26-T22N-R07W

Well Position +N/-S 0.00 ft **Northing:** 1,862,785.00 usft **Latitude:** 36.11254900
+E/-W 0.00 ft **Easting:** 1,257,590.21 usft **Longitude:** -107.54609400
Position Uncertainty 0.00 ft **Wellhead Elevation:** ft **Ground Level:** 6,776.00 ft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/26/2018	8.98	62.83	49,577.51487974

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	316.41

Survey Program Date 9/15/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
334.00	2,663.00	MWD Surf (Original Hole)	MWD	OWSG MWD - Standard
2,790.00	10,986.00	MWD (Original Hole)	MWD	OWSG MWD - Standard
11,051.00	11,051.00	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
334.00	0.17	126.32	334.00	-0.29	0.40	-0.49	0.05	0.05	0.00
MWD surveys									
426.00	0.43	235.85	426.00	-0.57	0.22	-0.57	0.56	0.28	119.05
520.00	0.46	230.77	520.00	-1.00	-0.36	-0.48	0.05	0.03	-5.40
611.00	0.55	221.70	610.99	-1.56	-0.93	-0.49	0.13	0.10	-9.97
702.00	0.54	227.48	701.99	-2.18	-1.54	-0.51	0.06	-0.01	6.35
794.00	0.77	224.50	793.98	-2.91	-2.29	-0.53	0.25	0.25	-3.24
885.00	1.35	171.16	884.97	-4.41	-2.56	-1.43	1.19	0.64	-58.62



Survey Report

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 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)
977.00	3.04	141.94	976.90	-7.40	-0.89	-4.75	2.15	1.84	-31.76
1,071.00	4.46	137.50	1,070.70	-12.06	3.12	-10.88	1.54	1.51	-4.72
1,166.00	5.94	135.36	1,165.30	-18.28	9.07	-19.49	1.57	1.56	-2.25
1,260.00	7.57	132.06	1,258.65	-25.89	17.08	-30.53	1.78	1.73	-3.51
1,355.00	8.92	133.25	1,352.66	-35.13	27.09	-44.12	1.43	1.42	1.25
1,450.00	9.71	131.00	1,446.41	-45.43	38.51	-59.45	0.92	0.83	-2.37
1,545.00	10.80	130.19	1,539.89	-56.43	51.35	-76.28	1.16	1.15	-0.85
1,639.00	12.22	131.72	1,632.00	-68.73	65.51	-94.95	1.55	1.51	1.63
1,734.00	12.80	131.30	1,724.74	-82.37	80.92	-115.45	0.62	0.61	-0.44
1,828.00	11.64	130.87	1,816.61	-95.45	95.91	-135.26	1.24	-1.23	-0.46
1,923.00	12.70	132.18	1,909.48	-108.73	110.90	-155.22	1.15	1.12	1.38
2,018.00	13.37	133.77	2,002.03	-123.34	126.57	-176.60	0.80	0.71	1.67
2,113.00	13.62	134.01	2,094.40	-138.71	142.54	-198.75	0.27	0.26	0.25
2,207.00	13.70	134.25	2,185.75	-154.17	158.48	-220.93	0.10	0.09	0.26
2,302.00	13.63	135.12	2,278.06	-169.95	174.43	-243.36	0.23	-0.07	0.92
2,396.00	13.62	134.42	2,369.41	-185.54	190.15	-265.50	0.18	-0.01	-0.74
2,491.00	13.50	135.27	2,461.76	-201.25	205.95	-287.76	0.24	-0.13	0.89
2,586.00	12.48	137.07	2,554.33	-216.64	220.74	-309.11	1.15	-1.07	1.89
2,663.00	11.15	138.36	2,629.70	-228.30	231.36	-324.87	1.76	-1.73	1.68
2,790.00	9.86	136.60	2,754.57	-245.38	246.99	-348.02	1.05	-1.02	-1.39
2,885.00	10.96	135.49	2,848.00	-257.73	258.91	-365.19	1.18	1.16	-1.17
2,979.00	13.48	131.88	2,939.87	-271.42	273.33	-385.05	2.80	2.68	-3.84
3,074.00	13.50	133.10	3,032.25	-286.39	289.67	-407.15	0.30	0.02	1.28
3,168.00	12.77	133.97	3,123.79	-301.10	305.16	-428.49	0.80	-0.78	0.93
3,262.00	11.96	134.54	3,215.60	-315.14	319.58	-448.60	0.87	-0.86	0.61
3,357.00	11.24	136.64	3,308.66	-328.78	332.95	-467.70	0.88	-0.76	2.21
3,452.00	10.08	131.01	3,402.03	-340.96	345.58	-485.23	1.64	-1.22	-5.93
3,546.00	11.64	131.25	3,494.34	-352.62	358.92	-502.87	1.66	1.66	0.26
3,641.00	13.07	132.66	3,587.14	-366.21	374.03	-523.13	1.54	1.51	1.48
3,735.00	12.02	132.04	3,678.89	-379.97	389.11	-543.50	1.13	-1.12	-0.66
3,830.00	10.63	131.69	3,772.04	-392.42	403.00	-562.10	1.46	-1.46	-0.37
3,924.00	8.82	131.46	3,864.68	-402.96	414.88	-577.92	1.93	-1.93	-0.24
3,988.00	7.38	134.28	3,928.04	-409.08	421.50	-586.91	2.33	-2.25	4.41
4,020.00	4.76	154.01	3,959.87	-411.71	423.55	-590.24	10.35	-8.19	61.66
4,051.00	3.36	209.41	3,990.80	-413.66	423.67	-591.73	12.81	-4.52	178.71
4,083.00	5.38	255.95	4,022.71	-414.84	421.75	-591.26	12.24	6.31	145.44
4,114.00	8.56	272.69	4,053.48	-415.08	418.04	-588.88	12.07	10.26	54.00
4,146.00	12.23	282.23	4,084.95	-414.25	412.34	-584.35	12.63	11.47	29.81
4,177.00	14.91	288.92	4,115.09	-412.27	405.36	-578.09	10.01	8.65	21.58
4,208.00	15.75	290.79	4,144.98	-409.48	397.65	-570.76	3.14	2.71	6.03
4,240.00	15.83	293.30	4,175.78	-406.21	389.59	-562.83	2.15	0.25	7.84
4,271.00	17.10	296.16	4,205.51	-402.53	381.61	-554.67	4.86	4.10	9.23
4,303.00	18.84	299.81	4,235.95	-397.89	372.90	-545.30	6.47	5.44	11.41



Survey Report

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 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)
4,334.00	21.14	303.53	4,265.08	-392.31	363.90	-535.05	8.47	7.42	12.00
4,365.00	23.44	305.36	4,293.76	-385.65	354.21	-523.55	7.75	7.42	5.90
4,397.00	26.25	305.45	4,322.79	-377.86	343.25	-510.35	8.78	8.78	0.28
4,428.00	28.95	304.81	4,350.26	-369.60	331.51	-496.27	8.76	8.71	-2.06
4,460.00	31.29	305.51	4,377.94	-360.35	318.38	-480.52	7.39	7.31	2.19
4,492.00	33.52	306.63	4,404.96	-350.25	304.52	-463.65	7.22	6.97	3.50
4,523.00	36.06	308.57	4,430.41	-339.46	290.52	-446.18	8.94	8.19	6.26
4,555.00	38.39	311.20	4,455.89	-327.04	275.68	-426.95	8.82	7.28	8.22
4,586.00	40.83	312.55	4,479.78	-313.84	260.97	-407.25	8.35	7.87	4.35
4,618.00	43.37	311.67	4,503.52	-299.46	245.05	-385.86	8.15	7.94	-2.75
4,650.00	46.28	311.51	4,526.21	-284.49	228.18	-363.38	9.10	9.09	-0.50
4,681.00	48.54	312.00	4,547.19	-269.29	211.16	-340.63	7.38	7.29	1.58
4,712.00	51.02	313.75	4,567.21	-253.18	193.82	-317.01	9.09	8.00	5.65
4,744.00	53.54	315.63	4,586.78	-235.38	175.83	-291.71	9.14	7.88	5.88
4,776.00	56.57	316.99	4,605.11	-216.41	157.72	-265.49	10.09	9.47	4.25
4,807.00	59.79	316.13	4,621.45	-197.29	139.60	-239.15	10.65	10.39	-2.77
4,839.00	63.62	313.95	4,636.62	-177.36	119.69	-210.99	13.39	11.97	-6.81
4,870.00	67.55	312.28	4,649.43	-158.08	99.09	-182.82	13.59	12.68	-5.39
4,902.00	72.23	310.84	4,660.43	-138.15	76.61	-152.88	15.22	14.63	-4.50
4,934.00	76.94	310.76	4,668.94	-118.00	53.26	-122.19	14.72	14.72	-0.25
4,965.00	80.88	311.18	4,674.90	-98.06	30.30	-91.91	12.78	12.71	1.35
5,060.00	81.94	311.24	4,689.09	-36.18	-40.37	1.63	1.12	1.12	0.06
5,145.00	83.20	313.37	4,700.08	20.55	-102.70	85.70	2.89	1.48	2.50
330 FEL @ 5145 MD 4700 TVD									
5,154.00	83.33	313.59	4,701.14	26.70	-109.19	94.62	2.89	1.48	2.49
5,248.00	87.88	316.63	4,708.34	93.08	-175.30	188.29	5.82	4.84	3.23
5,343.00	88.69	316.89	4,711.18	162.25	-240.35	283.24	0.90	0.85	0.27
5,437.00	88.49	316.24	4,713.50	230.49	-304.96	377.21	0.72	-0.21	-0.69
5,532.00	88.76	316.42	4,715.78	299.19	-370.54	472.18	0.34	0.28	0.19
5,626.00	88.86	315.62	4,717.73	366.81	-435.80	566.16	0.86	0.11	-0.85
5,721.00	90.03	316.79	4,718.65	435.38	-501.54	661.15	1.74	1.23	1.23
5,815.00	90.03	316.00	4,718.60	503.45	-566.37	755.15	0.84	0.00	-0.84
5,909.00	89.60	314.89	4,718.90	570.43	-632.32	849.14	1.27	-0.46	-1.18
6,003.00	89.73	314.25	4,719.45	636.39	-699.28	943.09	0.69	0.14	-0.68
6,097.00	92.32	315.74	4,717.77	702.84	-765.74	1,037.03	3.18	2.76	1.59
6,191.00	91.18	315.83	4,714.90	770.18	-831.26	1,130.98	1.22	-1.21	0.10
6,286.00	89.97	318.05	4,713.95	839.58	-896.11	1,225.96	2.66	-1.27	2.34
6,381.00	90.03	318.08	4,713.95	910.25	-959.60	1,320.92	0.07	0.06	0.03
6,475.00	89.80	318.02	4,714.09	980.16	-1,022.44	1,414.89	0.25	-0.24	-0.06
6,570.00	89.87	317.94	4,714.36	1,050.74	-1,086.03	1,509.85	0.11	0.07	-0.08
6,664.00	89.70	317.94	4,714.71	1,120.53	-1,149.00	1,603.82	0.18	-0.18	0.00
6,759.00	90.00	317.77	4,714.96	1,190.96	-1,212.74	1,698.78	0.36	0.32	-0.18
6,853.00	89.39	317.30	4,715.46	1,260.31	-1,276.21	1,792.76	0.82	-0.65	-0.50
6,948.00	89.43	317.34	4,716.44	1,330.14	-1,340.60	1,887.75	0.06	0.04	0.04



Survey Report

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 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)
7,042.00	89.36	317.30	4,717.43	1,399.24	-1,404.32	1,981.73	0.09	-0.07	-0.04
7,136.00	89.16	317.60	4,718.65	1,468.48	-1,467.88	2,075.71	0.38	-0.21	0.32
7,231.00	88.86	317.45	4,720.29	1,538.54	-1,532.02	2,170.67	0.35	-0.32	-0.16
7,325.00	88.82	316.57	4,722.19	1,607.29	-1,596.11	2,264.65	0.94	-0.04	-0.94
7,443.00	89.03	316.48	4,724.41	1,692.90	-1,677.28	2,382.63	0.19	0.18	-0.08
7,538.00	91.75	314.96	4,723.76	1,760.90	-1,743.60	2,477.61	3.28	2.86	-1.60
7,632.00	91.85	314.90	4,720.81	1,827.26	-1,810.11	2,571.53	0.12	0.11	-0.06
7,727.00	91.99	314.53	4,717.62	1,894.06	-1,877.58	2,666.43	0.42	0.15	-0.39
7,821.00	91.75	314.15	4,714.56	1,959.72	-1,944.78	2,760.32	0.48	-0.26	-0.40
7,916.00	91.85	314.72	4,711.57	2,026.20	-2,012.58	2,855.22	0.61	0.11	0.60
8,009.00	90.00	315.91	4,710.07	2,092.31	-2,077.96	2,948.18	2.37	-1.99	1.28
8,104.00	90.10	316.27	4,709.99	2,160.75	-2,143.85	3,043.18	0.39	0.11	0.38
8,198.00	90.34	316.31	4,709.63	2,228.70	-2,208.80	3,137.18	0.26	0.26	0.04
8,293.00	89.97	315.65	4,709.37	2,297.01	-2,274.82	3,232.18	0.80	-0.39	-0.69
8,387.00	89.56	314.76	4,709.76	2,363.71	-2,341.05	3,326.16	1.04	-0.44	-0.95
8,481.00	88.99	314.32	4,710.95	2,429.64	-2,408.04	3,420.10	0.77	-0.61	-0.47
8,576.00	89.60	316.02	4,712.11	2,497.01	-2,475.01	3,515.06	1.90	0.64	1.79
8,670.00	90.00	315.95	4,712.44	2,564.61	-2,540.32	3,609.06	0.43	0.43	-0.07
8,765.00	89.83	315.51	4,712.58	2,632.63	-2,606.64	3,704.05	0.50	-0.18	-0.46
8,859.00	89.76	314.80	4,712.92	2,699.28	-2,672.92	3,798.03	0.76	-0.07	-0.76
8,953.00	90.13	317.28	4,713.01	2,766.94	-2,738.17	3,892.02	2.67	0.39	2.64
9,048.00	90.07	317.01	4,712.84	2,836.58	-2,802.78	3,987.01	0.29	-0.06	-0.28
9,143.00	88.86	316.70	4,713.73	2,905.89	-2,867.74	4,082.00	1.31	-1.27	-0.33
9,237.00	88.76	316.74	4,715.68	2,974.31	-2,932.17	4,175.98	0.11	-0.11	0.04
9,331.00	88.66	316.38	4,717.80	3,042.54	-2,996.79	4,269.96	0.40	-0.11	-0.38
9,425.00	88.72	315.76	4,719.95	3,110.22	-3,061.99	4,363.93	0.66	0.06	-0.66
9,520.00	89.13	315.56	4,721.73	3,178.16	-3,128.37	4,458.91	0.48	0.43	-0.21
9,615.00	88.89	317.01	4,723.37	3,246.81	-3,194.01	4,553.89	1.55	-0.25	1.53
9,709.00	89.66	316.96	4,724.56	3,315.53	-3,258.13	4,647.88	0.82	0.82	-0.05
9,803.00	90.64	315.58	4,724.32	3,383.46	-3,323.11	4,741.87	1.80	1.04	-1.47
9,897.00	91.08	314.84	4,722.90	3,450.16	-3,389.32	4,835.84	0.92	0.47	-0.79
9,991.00	90.81	318.22	4,721.35	3,518.36	-3,453.98	4,929.81	3.61	-0.29	3.60
10,086.00	89.97	317.40	4,720.71	3,588.74	-3,517.77	5,024.78	1.24	-0.88	-0.86
10,180.00	90.00	316.65	4,720.73	3,657.52	-3,581.85	5,118.77	0.80	0.03	-0.80
10,274.00	89.70	316.25	4,720.98	3,725.65	-3,646.62	5,212.77	0.53	-0.32	-0.43
10,369.00	89.39	315.92	4,721.73	3,794.08	-3,712.51	5,307.77	0.48	-0.33	-0.35
10,463.00	89.73	316.08	4,722.45	3,861.69	-3,777.80	5,401.76	0.40	0.36	0.17
10,558.00	89.06	314.73	4,723.46	3,929.34	-3,844.49	5,496.74	1.59	-0.71	-1.42
10,653.00	88.05	316.37	4,725.85	3,997.13	-3,911.00	5,591.70	2.03	-1.06	1.73
10,748.00	87.95	316.38	4,729.17	4,065.86	-3,976.50	5,686.64	0.11	-0.11	0.01
10,842.00	88.08	315.43	4,732.42	4,133.32	-4,041.87	5,780.58	1.02	0.14	-1.01
10,876.00	88.62	315.58	4,733.40	4,157.57	-4,065.69	5,814.56	1.66	1.60	0.43

Sleeve depth @ 10876 MD 4733 TVD



Survey Report

MARKSMAN DIRECTIONAL

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 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)
10,905.00	89.09	315.70	4,733.98	4,178.29	-4,085.96	5,843.55	1.66	1.60	0.43
330 FNL @ 10905 MD 4734 TVD									
10,937.00	89.60	315.84	4,734.35	4,201.22	-4,108.28	5,875.55	1.66	1.60	0.43
10,986.00	89.90	315.41	4,734.56	4,236.25	-4,142.55	5,924.54	1.07	0.61	-0.88
Survey @ 10986.00 MD 4734.56 TVD									
11,051.00	89.90	315.41	4,734.68	4,282.54	-4,188.18	5,989.53	0.00	0.00	0.00
Survey projected to 11051.00 MD 4734.67 TVD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
334.00	334.00	-0.29	0.40	MWD surveys
5,145.00	4,700.08	20.55	-102.70	330 FEL @ 5145 MD 4700 TVD
10,876.00	4,733.40	4,157.57	-4,065.69	Sleeve depth @ 10876 MD 4733 TVD
10,905.00	4,733.98	4,178.29	-4,085.96	330 FNL @ 10905 MD 4734 TVD
10,986.00	4,734.56	4,236.25	-4,142.55	Survey @ 10986.00 MD 4734.56 TVD
11,051.00	4,734.68	4,282.54	-4,188.18	Survey projected to 11051.00 MD 4734.67 TVD



Survey Report - Geographic

MARKSMAN
DIRECTIONAL

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

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

Site	S Escavada Unit			
Site Position:		Northing:	1,862,785.00 usft	Latitude: 36.11254900
From:	Lat/Long	Easting:	1,257,590.21 usft	Longitude: -107.54609400
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: -0.76 °

Well	S Escavada Unit 353 H, Surf loc: 1719 FNL 2352 FWL Section 26-T22N-R07W					
Well Position	+N/-S	0.00 ft	Northing:	1,862,785.00 usft	Latitude:	36.11254900
	+E/-W	0.00 ft	Easting:	1,257,590.21 usft	Longitude:	-107.54609400
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,776.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/26/2018	8.98	62.83	49,577.51487974

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	316.41	

Survey Program	Date	9/15/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
334.00	2,663.00	MWD Surf (Original Hole)	MWD	OWSG MWD - Standard	
2,790.00	10,986.00	MWD (Original Hole)	MWD	OWSG MWD - Standard	
11,051.00	11,051.00	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	0.00	0.00	0.00	0.00	1,862,785.00	1,257,590.21	36.11254900	-107.54609400
	334.00	0.17	126.32	334.00	-0.29	0.40	1,862,784.71	1,257,590.61	36.11254821	-107.54609264
MWD surveys										
	426.00	0.43	235.85	426.00	-0.57	0.22	1,862,784.43	1,257,590.44	36.11254745	-107.54609322
	520.00	0.46	230.77	520.00	-1.00	-0.36	1,862,784.00	1,257,589.85	36.11254623	-107.54609518
	611.00	0.55	221.70	610.99	-1.56	-0.93	1,862,783.44	1,257,589.28	36.11254468	-107.54609710
	702.00	0.54	227.48	701.99	-2.18	-1.54	1,862,782.82	1,257,588.67	36.11254296	-107.54609912
	794.00	0.77	224.50	793.98	-2.91	-2.29	1,862,782.09	1,257,587.92	36.11254092	-107.54610164
	885.00	1.35	171.16	884.97	-4.41	-2.56	1,862,780.59	1,257,587.65	36.11253680	-107.54610246
	977.00	3.04	141.94	976.90	-7.40	-0.89	1,862,777.60	1,257,589.32	36.11252865	-107.54609667



Survey Report - Geographic

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,071.00	4.46	137.50	1,070.70	-12.06	3.12	1,862,772.95	1,257,593.33	36.11251600	-107.54608290
1,166.00	5.94	135.36	1,165.30	-18.28	9.07	1,862,766.72	1,257,599.28	36.11249913	-107.54606248
1,260.00	7.57	132.06	1,258.65	-25.89	17.08	1,862,759.11	1,257,607.30	36.11247853	-107.54603501
1,355.00	8.92	133.25	1,352.66	-35.13	27.09	1,862,749.88	1,257,617.31	36.11245352	-107.54600071
1,450.00	9.71	131.00	1,446.41	-45.43	38.51	1,862,739.57	1,257,628.72	36.11242564	-107.54596162
1,545.00	10.80	130.19	1,539.89	-56.43	51.35	1,862,728.57	1,257,641.56	36.11239590	-107.54591764
1,639.00	12.22	131.72	1,632.00	-68.73	65.51	1,862,716.27	1,257,655.72	36.11236262	-107.54586918
1,734.00	12.80	131.30	1,724.74	-82.37	80.92	1,862,702.63	1,257,671.13	36.11232574	-107.54581640
1,828.00	11.64	130.87	1,816.61	-95.45	95.91	1,862,689.55	1,257,686.12	36.11229037	-107.54576506
1,923.00	12.70	132.18	1,909.48	-108.73	110.90	1,862,676.27	1,257,701.11	36.11225443	-107.54571373
2,018.00	13.37	133.77	2,002.03	-123.34	126.57	1,862,661.66	1,257,716.78	36.11221488	-107.54566003
2,113.00	13.62	134.01	2,094.40	-138.71	142.54	1,862,646.29	1,257,732.75	36.11217325	-107.54560526
2,207.00	13.70	134.25	2,185.75	-154.17	158.48	1,862,630.83	1,257,748.69	36.11213138	-107.54555063
2,302.00	13.63	135.12	2,278.06	-169.95	174.43	1,862,615.05	1,257,764.64	36.11208862	-107.54549591
2,396.00	13.62	134.42	2,369.41	-185.54	190.15	1,862,599.46	1,257,780.36	36.11204637	-107.54544200
2,491.00	13.50	135.27	2,461.76	-201.25	205.95	1,862,583.75	1,257,796.16	36.11200381	-107.54538784
2,586.00	12.48	137.07	2,554.33	-216.64	220.74	1,862,568.36	1,257,810.95	36.11196207	-107.54533706
2,663.00	11.15	138.36	2,629.70	-228.30	231.36	1,862,556.70	1,257,821.57	36.11193045	-107.54530061
2,790.00	9.86	136.60	2,754.57	-245.38	246.99	1,862,539.62	1,257,837.20	36.11188411	-107.54524693
2,885.00	10.96	135.49	2,848.00	-257.73	258.91	1,862,527.27	1,257,849.12	36.11185063	-107.54520603
2,979.00	13.48	131.88	2,939.87	-271.42	273.33	1,862,513.58	1,257,863.54	36.11181356	-107.54515659
3,074.00	13.50	133.10	3,032.25	-286.39	289.67	1,862,498.62	1,257,879.88	36.11177305	-107.54510061
3,168.00	12.77	133.97	3,123.79	-301.10	305.16	1,862,483.91	1,257,895.37	36.11173322	-107.54504752
3,262.00	11.96	134.54	3,215.60	-315.14	319.58	1,862,469.86	1,257,909.79	36.11169517	-107.54499808
3,357.00	11.24	136.64	3,308.66	-328.78	332.95	1,862,456.23	1,257,923.16	36.11165821	-107.54495220
3,452.00	10.08	131.01	3,402.03	-340.96	345.58	1,862,444.04	1,257,935.79	36.11162520	-107.54490890
3,546.00	11.64	131.25	3,494.34	-352.62	358.92	1,862,432.39	1,257,949.13	36.11159369	-107.54486323
3,641.00	13.07	132.66	3,587.14	-366.21	374.03	1,862,418.79	1,257,964.24	36.11155689	-107.54481148
3,735.00	12.02	132.04	3,678.89	-379.97	389.11	1,862,405.03	1,257,979.32	36.11151966	-107.54475980
3,830.00	10.63	131.69	3,772.04	-392.42	403.00	1,862,392.58	1,257,993.21	36.11148597	-107.54471222
3,924.00	8.82	131.46	3,864.68	-402.96	414.88	1,862,382.04	1,258,005.09	36.11145746	-107.54467155
3,988.00	7.38	134.28	3,928.04	-409.08	421.50	1,862,375.92	1,258,011.71	36.11144089	-107.54464887
4,020.00	4.76	154.01	3,959.87	-411.71	423.55	1,862,373.29	1,258,013.76	36.11143375	-107.54464180
4,051.00	3.36	209.41	3,990.80	-413.66	423.67	1,862,371.34	1,258,013.88	36.11142840	-107.54464131
4,083.00	5.38	255.95	4,022.71	-414.84	421.75	1,862,370.16	1,258,011.96	36.11142509	-107.54464775
4,114.00	8.56	272.69	4,053.48	-415.08	418.04	1,862,369.92	1,258,008.25	36.11142428	-107.54466031
4,146.00	12.23	282.23	4,084.95	-414.25	412.34	1,862,370.75	1,258,002.56	36.11142635	-107.54467962
4,177.00	14.91	288.92	4,115.09	-412.27	405.36	1,862,372.74	1,257,995.57	36.11143156	-107.54470335
4,208.00	15.75	290.79	4,144.98	-409.48	397.65	1,862,375.52	1,257,987.87	36.11143893	-107.54472956
4,240.00	15.83	293.30	4,175.78	-406.21	389.59	1,862,378.79	1,257,979.80	36.11144761	-107.54475702
4,271.00	17.10	296.16	4,205.51	-402.53	381.61	1,862,382.47	1,257,971.82	36.11145743	-107.54478417
4,303.00	18.84	299.81	4,235.95	-397.89	372.90	1,862,387.12	1,257,963.12	36.11146986	-107.54481385
4,334.00	21.14	303.53	4,265.08	-392.31	363.90	1,862,392.69	1,257,954.11	36.11148485	-107.54484458
4,365.00	23.44	305.36	4,293.76	-385.65	354.21	1,862,399.35	1,257,944.42	36.11150278	-107.54487768
4,397.00	26.25	305.45	4,322.79	-377.86	343.25	1,862,407.14	1,257,933.46	36.11152377	-107.54491512
4,428.00	28.95	304.81	4,350.26	-369.60	331.51	1,862,415.40	1,257,921.72	36.11154603	-107.54495525
4,460.00	31.29	305.51	4,377.94	-360.35	318.38	1,862,424.65	1,257,908.59	36.11157095	-107.54500010
4,492.00	33.52	306.63	4,404.96	-350.25	304.52	1,862,434.75	1,257,894.73	36.11159819	-107.54504745
4,523.00	36.06	308.57	4,430.41	-339.46	290.52	1,862,445.55	1,257,880.73	36.11162733	-107.54509534
4,555.00	38.39	311.20	4,455.89	-327.04	275.68	1,862,457.97	1,257,865.89	36.11166089	-107.54514614
4,586.00	40.83	312.55	4,479.78	-313.84	260.97	1,862,471.16	1,257,851.18	36.11169660	-107.54519653
4,618.00	43.37	311.67	4,503.52	-299.46	245.05	1,862,485.54	1,257,835.26	36.11173551	-107.54525105
4,650.00	46.28	311.51	4,526.21	-284.49	228.18	1,862,500.52	1,257,818.39	36.11177602	-107.54530883
4,681.00	48.54	312.00	4,547.19	-269.29	211.16	1,862,515.71	1,257,801.37	36.11181714	-107.54536714
4,712.00	51.02	313.75	4,567.21	-253.18	193.82	1,862,531.82	1,257,784.03	36.11186074	-107.54542655



Survey Report - Geographic

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,744.00	53.54	315.63	4,586.78	-235.38	175.83	1,862,549.63	1,257,766.04	36.11190898	-107.54548824
4,776.00	56.57	316.99	4,605.11	-216.41	157.72	1,862,568.59	1,257,747.93	36.11196041	-107.54555040
4,807.00	59.79	316.13	4,621.45	-197.29	139.60	1,862,587.71	1,257,729.82	36.11201227	-107.54561257
4,839.00	63.62	313.95	4,636.62	-177.36	119.69	1,862,607.64	1,257,709.90	36.11206626	-107.54568086
4,870.00	67.55	312.28	4,649.43	-158.08	99.09	1,862,626.92	1,257,689.30	36.11211847	-107.54575148
4,902.00	72.23	310.84	4,660.43	-138.15	76.61	1,862,646.85	1,257,666.82	36.11217237	-107.54582847
4,934.00	76.94	310.76	4,668.94	-118.00	53.26	1,862,667.00	1,257,643.47	36.11222686	-107.54590840
4,965.00	80.88	311.18	4,674.90	-98.06	30.30	1,862,686.94	1,257,620.51	36.11228079	-107.54598703
5,060.00	81.94	311.24	4,689.09	-36.18	-40.37	1,862,748.83	1,257,549.84	36.11244817	-107.54622901
5,145.00	83.20	313.37	4,700.08	20.55	-102.70	1,862,805.55	1,257,487.51	36.11260168	-107.54644255
330 FEL @ 5145 MD 4700 TVD									
5,154.00	83.33	313.59	4,701.14	26.70	-109.19	1,862,811.70	1,257,481.03	36.11261833	-107.54646478
5,248.00	87.88	316.63	4,708.34	93.08	-175.30	1,862,878.08	1,257,414.91	36.11279822	-107.54669157
5,343.00	88.69	316.89	4,711.18	162.25	-240.35	1,862,947.26	1,257,349.86	36.11298582	-107.54691488
5,437.00	88.49	316.24	4,713.50	230.49	-304.96	1,863,015.49	1,257,285.25	36.11317087	-107.54713664
5,532.00	88.76	316.42	4,715.78	299.19	-370.54	1,863,084.19	1,257,219.67	36.11335714	-107.54736172
5,626.00	88.86	315.62	4,717.73	366.81	-435.80	1,863,151.82	1,257,154.41	36.11354048	-107.54758567
5,721.00	90.03	316.79	4,718.65	435.38	-501.54	1,863,220.38	1,257,088.67	36.11372639	-107.54781130
5,815.00	90.03	316.00	4,718.60	503.45	-566.37	1,863,288.45	1,257,023.84	36.11391095	-107.54803381
5,909.00	89.60	314.89	4,718.90	570.43	-632.32	1,863,355.43	1,256,957.89	36.11409249	-107.54826007
6,003.00	89.73	314.25	4,719.45	636.39	-699.28	1,863,421.40	1,256,890.93	36.11427121	-107.54848971
6,097.00	92.32	315.74	4,717.77	702.84	-765.74	1,863,487.84	1,256,824.48	36.11445126	-107.54871766
6,191.00	91.18	315.83	4,714.90	770.18	-831.26	1,863,555.18	1,256,758.96	36.11463380	-107.54894248
6,286.00	89.97	318.05	4,713.95	839.58	-896.11	1,863,624.58	1,256,694.10	36.11482203	-107.54916515
6,381.00	90.03	318.08	4,713.95	910.25	-959.60	1,863,695.25	1,256,630.62	36.11501379	-107.54938324
6,475.00	89.80	318.02	4,714.09	980.16	-1,022.44	1,863,765.16	1,256,567.78	36.11520349	-107.54959911
6,570.00	89.87	317.94	4,714.36	1,050.74	-1,086.03	1,863,835.74	1,256,504.19	36.11539499	-107.54981755
6,664.00	89.70	317.94	4,714.71	1,120.53	-1,149.00	1,863,905.53	1,256,441.22	36.11558435	-107.55003387
6,759.00	90.00	317.77	4,714.96	1,190.96	-1,212.74	1,863,975.96	1,256,377.47	36.11577546	-107.55025283
6,853.00	89.39	317.30	4,715.46	1,260.31	-1,276.21	1,864,045.30	1,256,314.01	36.11596358	-107.55047078
6,948.00	89.43	317.34	4,716.44	1,330.14	-1,340.60	1,864,115.14	1,256,249.61	36.11615301	-107.55069193
7,042.00	89.36	317.30	4,717.43	1,399.24	-1,404.32	1,864,184.24	1,256,185.89	36.11634045	-107.55091075
7,136.00	89.16	317.60	4,718.65	1,468.48	-1,467.88	1,864,253.48	1,256,122.33	36.11652829	-107.55112904
7,231.00	88.86	317.45	4,720.29	1,538.54	-1,532.02	1,864,323.54	1,256,058.19	36.11671834	-107.55134933
7,325.00	88.82	316.57	4,722.19	1,607.29	-1,596.11	1,864,392.29	1,255,994.11	36.11690479	-107.55156936
7,443.00	89.03	316.48	4,724.41	1,692.90	-1,677.28	1,864,477.90	1,255,912.93	36.11713694	-107.55184801
7,538.00	91.75	314.96	4,723.76	1,760.90	-1,743.60	1,864,545.90	1,255,846.62	36.11732127	-107.55207558
7,632.00	91.85	314.90	4,720.81	1,827.26	-1,810.11	1,864,612.26	1,255,780.10	36.11750106	-107.55230374
7,727.00	91.99	314.53	4,717.62	1,894.06	-1,877.58	1,864,679.06	1,255,712.63	36.11768205	-107.55253516
7,821.00	91.75	314.15	4,714.56	1,959.72	-1,944.78	1,864,744.72	1,255,645.44	36.11785992	-107.55276559
7,916.00	91.85	314.72	4,711.57	2,026.20	-2,012.58	1,864,811.20	1,255,577.64	36.11804000	-107.55299812
8,009.00	90.00	315.91	4,710.07	2,092.31	-2,077.96	1,864,877.31	1,255,512.25	36.11821916	-107.55322245
8,104.00	90.10	316.27	4,709.99	2,160.75	-2,143.85	1,864,945.75	1,255,446.37	36.11840470	-107.55344858
8,198.00	90.34	316.31	4,709.63	2,228.70	-2,208.80	1,865,013.69	1,255,381.41	36.11858892	-107.55367154
8,293.00	89.97	315.65	4,709.37	2,297.01	-2,274.82	1,865,082.01	1,255,315.40	36.11877411	-107.55389811
8,387.00	89.56	314.76	4,709.76	2,363.71	-2,341.05	1,865,148.71	1,255,249.17	36.11895487	-107.55412532
8,481.00	88.99	314.32	4,710.95	2,429.64	-2,408.04	1,865,214.64	1,255,182.18	36.11913347	-107.55435510
8,576.00	89.60	316.02	4,712.11	2,497.01	-2,475.01	1,865,282.00	1,255,115.21	36.11931602	-107.55458485
8,670.00	90.00	315.95	4,712.44	2,564.61	-2,540.32	1,865,349.60	1,255,049.89	36.11949927	-107.55480902
8,765.00	89.83	315.51	4,712.58	2,632.63	-2,606.64	1,865,417.63	1,254,983.58	36.11968365	-107.55503659
8,859.00	89.76	314.80	4,712.92	2,699.28	-2,672.92	1,865,484.28	1,254,917.29	36.11986425	-107.55526401
8,953.00	90.13	317.28	4,713.01	2,766.94	-2,738.17	1,865,551.93	1,254,852.05	36.12004766	-107.55548795
9,048.00	90.07	317.01	4,712.84	2,836.58	-2,802.78	1,865,621.58	1,254,787.44	36.12023655	-107.55570984
9,143.00	88.86	316.70	4,713.73	2,905.89	-2,867.74	1,865,690.89	1,254,722.47	36.12042451	-107.55593289
9,237.00	88.76	316.74	4,715.68	2,974.31	-2,932.17	1,865,759.30	1,254,658.05	36.12061004	-107.55615411



Survey Report - Geographic

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 353 H
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well S Escavada Unit 353 H
TVD Reference: RKB=6776+22 @ 6798.00ft (AZtec 1000)
MD Reference: RKB=6776+22 @ 6798.00ft (AZtec 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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,331.00	88.66	316.38	4,717.80	3,042.54	-2,996.79	1,865,827.54	1,254,593.43	36.12079506	-107.55637595
9,425.00	88.72	315.76	4,719.95	3,110.22	-3,061.99	1,865,895.22	1,254,528.23	36.12097853	-107.55659974
9,520.00	89.13	315.56	4,721.73	3,178.16	-3,128.37	1,865,963.15	1,254,461.85	36.12116266	-107.55682755
9,615.00	88.89	317.01	4,723.37	3,246.81	-3,194.01	1,866,031.80	1,254,396.21	36.12134878	-107.55705288
9,709.00	89.66	316.96	4,724.56	3,315.53	-3,258.13	1,866,100.53	1,254,332.09	36.12153516	-107.55727307
9,803.00	90.64	315.58	4,724.32	3,383.46	-3,323.11	1,866,168.45	1,254,267.11	36.12171931	-107.55749612
9,897.00	91.08	314.84	4,722.90	3,450.16	-3,389.32	1,866,235.15	1,254,200.89	36.12190006	-107.55772331
9,991.00	90.81	318.22	4,721.35	3,518.36	-3,453.98	1,866,303.35	1,254,136.24	36.12208498	-107.55794527
10,086.00	89.97	317.40	4,720.71	3,588.74	-3,517.77	1,866,373.74	1,254,072.44	36.12227593	-107.55816445
10,180.00	90.00	316.65	4,720.73	3,657.52	-3,581.85	1,866,442.51	1,254,008.37	36.12246245	-107.55838450
10,274.00	89.70	316.25	4,720.98	3,725.65	-3,646.62	1,866,510.64	1,253,943.60	36.12264716	-107.55860685
10,369.00	89.39	315.92	4,721.73	3,794.08	-3,712.51	1,866,579.07	1,253,877.71	36.12283267	-107.55883302
10,463.00	89.73	316.08	4,722.45	3,861.69	-3,777.80	1,866,646.69	1,253,812.42	36.12301596	-107.55905714
10,558.00	89.06	314.73	4,723.46	3,929.34	-3,844.49	1,866,714.33	1,253,745.73	36.12319927	-107.55928600
10,653.00	88.05	316.37	4,725.85	3,997.13	-3,911.00	1,866,782.12	1,253,679.22	36.12338300	-107.55951422
10,748.00	87.95	316.38	4,729.17	4,065.86	-3,976.50	1,866,850.85	1,253,613.72	36.12356933	-107.55973910
10,842.00	88.08	315.43	4,732.42	4,133.32	-4,041.87	1,866,918.32	1,253,548.35	36.12375220	-107.55996348
10,876.00	88.62	315.58	4,733.40	4,157.57	-4,065.69	1,866,942.56	1,253,524.53	36.12381790	-107.56004522
Sleeve depth @ 10876 MD 4733 TVD									
10,905.00	89.09	315.70	4,733.98	4,178.29	-4,085.96	1,866,963.29	1,253,504.26	36.12387408	-107.56011479
330 FNL @ 10905 MD 4734 TVD									
10,937.00	89.60	315.84	4,734.35	4,201.22	-4,108.28	1,866,986.22	1,253,481.94	36.12393623	-107.56019139
10,986.00	89.90	315.41	4,734.56	4,236.25	-4,142.55	1,867,021.24	1,253,447.67	36.12403115	-107.56030900
Survey @ 10986.00 MD 4734.56 TVD									
11,051.00	89.90	315.41	4,734.68	4,282.54	-4,188.18	1,867,067.53	1,253,402.04	36.12415659	-107.56046559
Survey projected to 11051.00 MD 4734.67 TVD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
334.00	334.00	-0.29	0.40	MWD surveys
5,145.00	4,700.08	20.55	-102.70	330 FEL @ 5145 MD 4700 TVD
10,876.00	4,733.40	4,157.57	-4,065.69	Sleeve depth @ 10876 MD 4733 TVD
10,905.00	4,733.98	4,178.29	-4,085.96	330 FNL @ 10905 MD 4734 TVD
10,986.00	4,734.56	4,236.25	-4,142.55	Survey @ 10986.00 MD 4734.56 TVD
11,051.00	4,734.68	4,282.54	-4,188.18	Survey projected to 11051.00 MD 4734.67 TVD