

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) 748-1283 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
AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21323	² Pool Code 52860	³ Pool Name RUSTY GALLUP OIL POOL
⁴ Property Code 322151	⁵ Property Name S ESCAVADA UNIT	⁶ Well Number 352H
⁷ GRID No. 372286	⁸ Operator Name ENDURING RESOURCES, LLC	⁹ Elevation 6776'

¹⁰ Surface Location

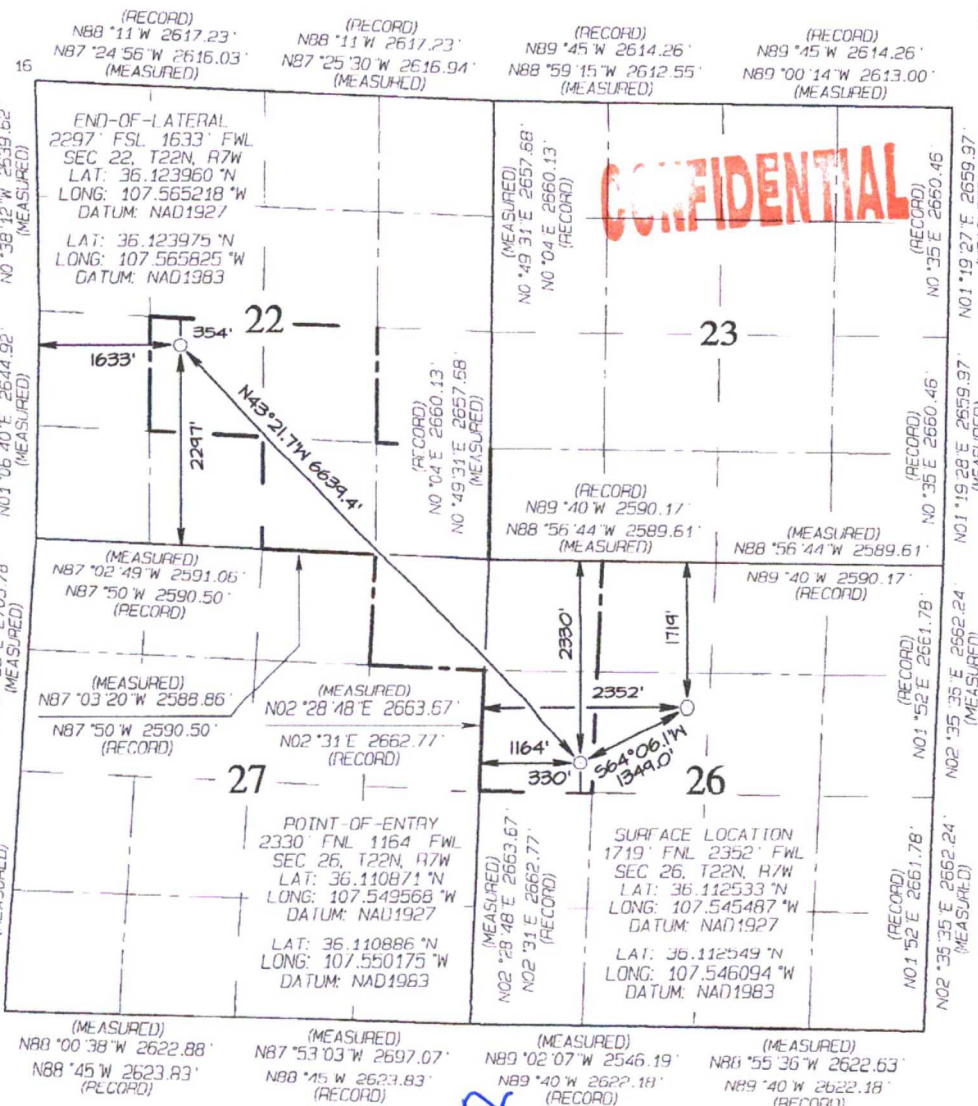
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	26	22N	7W		1719	NORTH	2352	WEST	SANDOVAL

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
K	22	22N	7W		2297	SOUTH	1633	WEST	SANDOVAL

¹² Dedicated Acres 280.00	NE/4 SW/4, W/2 SE/4 SE/4 SE/4 - Section 22 W/2 NW/4 - Section 26 NE/4 NE/4 - Section 27	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.

Signature: *Lacey Granillo*
Date: 2/12/15

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
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
15269

JASON C. EDWARDS
Certificate Number 15269



Well: S Escavada Unit 352 H
Site: S Escavada Unit
Project: Sandoval County, New Mexico NAD83 NM C
Design: rev1
Rig: Aztec 1000

ANNOTATIONS SURVEYS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Annotation
328.00	0.35	96.33	328.00	-0.11	1.00	-0.76	MWD surveys
5163.00	81.10	318.40	4661.10	-590.88	-1213.42	397.43	330 FSL @ 5163 MD 4661 TVD
11809.40	90.59	315.35	4742.80	4237.74	-5772.06	7037.91	Sleeve depth @ 11809.4 MD 4743 TVD
11819.00	90.74	315.28	4742.69	4244.57	-5778.81	7047.50	Survey @ 11819.00 MD 4742.69 TVD
11844.00	90.74	315.28	4742.37	4262.33	-5796.40	7072.49	330 FNL @ 11844 MD 4742 TVD
11962.00	90.74	315.28	4740.84	4346.17	-5879.42	7190.43	Survey projected to 11962.00 MD 4740.84 TVD

Ojo Alamo

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

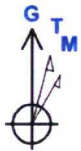
Zone: New Mexico Central Zone

System Datum: Mean Sea Level

Depth Reference: RKB=6776+22 @ 6798.00ft (Aztec 1000)

North	East	Lat	Long
1862785.00	1257590.21	36.11254900	-107.54609401

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

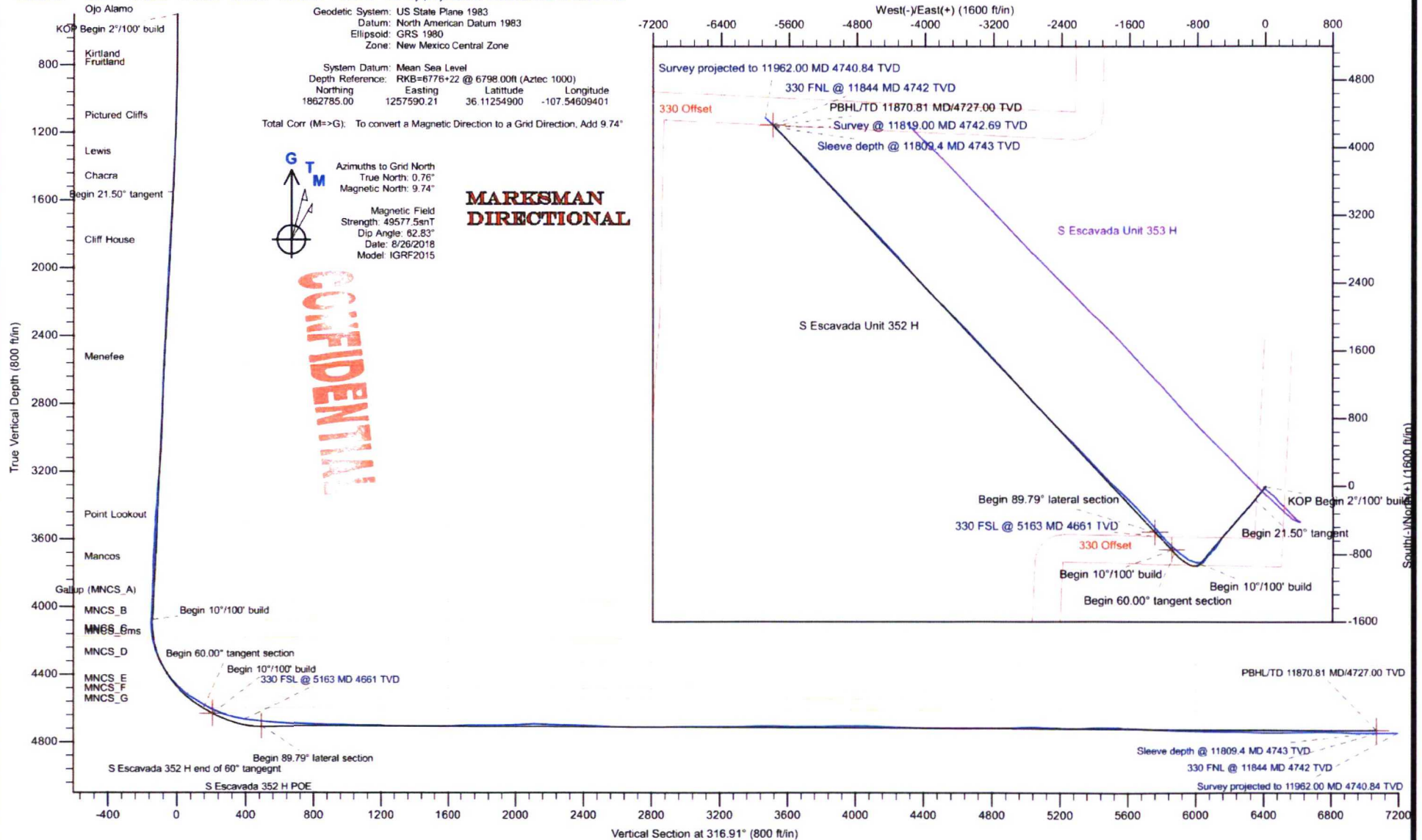


Azimuths to Grid North
True North: 0.76°
Magnetic North: 9.74°

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

**MARKSMAN
DIRECTIONAL**

CONFIDENTIAL



Section Details										Annotation
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100° build
3	1574.96	21.50	220.10	1549.91	-152.46	-128.40	2.00	220.10	-23.62	Begin 21.50° tangent
4	4291.34	21.50	220.10	4077.29	-913.91	-769.69	0.00	0.00	-141.60	Begin 10°/100° build
5	4938.18	60.00	316.91	4596.25	-786.16	-1069.99	10.00	107.96	156.84	Begin 60.00° tangent section
6	4998.18	60.00	316.91	4626.25	-748.21	-1105.48	0.00	0.00	208.80	Begin 10°/100° build
7	5296.09	89.79	316.91	4703.01	-540.53	-1299.77	10.00	0.00	493.19	Begin 89.79° lateral section
8	11870.81	89.79	316.91	4727.00	4260.66	-5791.42	0.00	0.00	7067.87	PBHL/TD 11870.81 MD/4727.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	North	East	Lat	Long
S Escavada 352 H end of 60° tangent	4626.25	-748.21	-1105.48	1862036.79	1256484.73	36.11045351	-107.54980199
S Escavada 352 H POE	4703.00	-540.44	-1299.77	1862244.56	1256290.44	36.11101700	-107.55046900
S Escavada 352 H PBHL	4727.00	4260.66	-5791.42	1867045.65	1251798.80	36.12403700	-107.56599200



Survey Report

MARKSMAN
DIRECTIONAL

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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	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 352 H			
Well Position	+N/-S	0.00 ft	Northing:	1,862,785.00 usft
	+E/-W	0.00 ft	Easting:	1,257,590.21 usft
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	49,577.51487757

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	316.91	

Survey Program	Date 9/26/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
328.00	11,819.00	MWD (Original hole)	MWD	OWSG MWD - Standard
11,962.00	11,962.00	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	
328.00	0.35	96.33	328.00	-0.11	1.00	-0.76	0.11	0.11	0.00	
MWD surveys										
419.00	0.45	100.91	419.00	-0.21	1.62	-1.26	0.12	0.11	5.03	
513.00	2.37	276.17	512.97	-0.07	0.05	-0.09	3.00	2.04	186.45	
604.00	5.46	219.74	603.78	-3.20	-4.59	0.80	5.05	3.40	-62.01	
695.00	6.89	218.92	694.25	-10.77	-10.79	-0.50	1.57	1.57	-0.90	
788.00	7.22	220.80	786.54	-19.54	-18.11	-1.90	0.43	0.35	2.02	
878.00	7.27	222.74	875.82	-28.00	-25.67	-2.91	0.28	0.06	2.16	
970.00	8.82	218.68	966.92	-37.78	-34.03	-4.35	1.79	1.68	-4.41	



Survey Report

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Site: S Escavada Unit
Well: S Escavada Unit 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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)
1,065.00	11.95	219.15	1,060.35	-51.10	-44.79	-6.72	3.30	3.29	0.49
1,160.00	15.55	220.39	1,152.61	-68.43	-59.26	-9.49	3.80	3.79	1.31
1,255.00	16.50	219.81	1,243.92	-88.49	-76.15	-12.61	1.01	1.00	-0.61
1,349.00	16.90	219.42	1,333.95	-109.30	-93.37	-16.04	0.44	0.43	-0.41
1,444.00	17.78	218.05	1,424.64	-131.39	-111.08	-20.07	1.02	0.93	-1.44
1,538.00	19.15	217.00	1,513.79	-155.01	-129.20	-24.94	1.50	1.46	-1.12
1,633.00	21.00	219.18	1,603.02	-180.65	-149.34	-29.91	2.10	1.95	2.29
1,728.00	20.95	219.58	1,691.72	-206.94	-170.91	-34.36	0.16	-0.05	0.42
1,823.00	20.25	219.97	1,780.65	-232.63	-192.30	-38.52	0.75	-0.74	0.41
1,917.00	21.23	219.35	1,868.56	-258.26	-213.54	-42.72	1.07	1.04	-0.66
2,012.00	21.68	219.44	1,956.97	-285.11	-235.59	-47.27	0.47	0.47	0.09
2,106.00	21.26	219.33	2,044.45	-311.70	-257.42	-51.77	0.45	-0.45	-0.12
2,201.00	21.48	219.92	2,132.92	-338.36	-279.50	-56.16	0.32	0.23	0.62
2,295.00	21.31	219.24	2,220.44	-364.79	-301.35	-60.53	0.32	-0.18	-0.72
2,390.00	21.56	219.90	2,308.87	-391.55	-323.46	-64.97	0.37	0.26	0.69
2,484.00	21.34	219.87	2,396.36	-417.93	-345.51	-69.17	0.23	-0.23	-0.03
2,579.00	20.82	219.96	2,485.00	-444.14	-367.43	-73.33	0.55	-0.55	0.09
2,674.00	19.18	220.33	2,574.27	-468.97	-388.38	-77.17	1.73	-1.73	0.39
2,721.00	18.16	220.03	2,618.80	-480.47	-398.08	-78.93	2.18	-2.17	-0.64
2,789.00	17.07	220.63	2,683.61	-496.16	-411.40	-81.29	1.63	-1.60	0.88
2,883.00	18.34	224.25	2,773.16	-517.22	-430.70	-83.48	1.79	1.35	3.85
2,977.00	20.76	223.15	2,861.73	-539.97	-452.42	-85.26	2.60	2.57	-1.17
3,072.00	20.51	223.98	2,950.64	-564.23	-475.49	-87.22	0.41	-0.26	0.87
3,166.00	22.04	220.84	3,038.23	-589.43	-498.46	-89.93	2.03	1.63	-3.34
3,261.00	22.68	215.46	3,126.10	-617.83	-520.75	-95.45	2.26	0.67	-5.66
3,355.00	21.98	214.68	3,213.05	-647.06	-541.27	-102.77	0.81	-0.74	-0.83
3,449.00	21.26	213.81	3,300.43	-675.69	-560.76	-110.36	0.84	-0.77	-0.93
3,544.00	20.70	217.92	3,389.14	-703.25	-580.67	-116.89	1.66	-0.59	4.33
3,638.00	19.43	217.30	3,477.43	-728.79	-600.35	-122.09	1.37	-1.35	-0.66
3,733.00	20.63	221.16	3,566.69	-753.96	-620.94	-126.41	1.88	1.26	4.06
3,827.00	19.45	219.60	3,655.00	-778.49	-641.82	-130.06	1.38	-1.26	-1.66
3,921.00	19.99	221.17	3,743.48	-802.64	-662.37	-133.66	0.80	0.57	1.67
4,016.00	20.80	220.63	3,832.53	-827.67	-684.05	-137.13	0.88	0.85	-0.57
4,110.00	18.00	219.08	3,921.18	-851.61	-704.07	-140.93	3.03	-2.98	-1.65
4,204.00	16.33	218.01	4,010.99	-873.30	-721.37	-144.96	1.81	-1.78	-1.14
4,267.00	15.60	218.47	4,071.56	-886.91	-732.09	-147.57	1.18	-1.16	0.73
4,299.00	14.91	228.04	4,102.44	-893.03	-737.83	-148.12	8.15	-2.16	29.91
4,330.00	14.59	244.59	4,132.43	-897.38	-744.33	-146.85	13.59	-1.03	53.39
4,361.00	15.13	260.11	4,162.41	-899.75	-751.84	-143.45	12.92	1.74	50.06
4,393.00	17.51	267.48	4,193.12	-900.68	-760.77	-138.03	9.85	7.44	23.03
4,424.00	20.98	269.83	4,222.38	-900.90	-770.98	-131.22	11.47	11.19	7.58
4,456.00	24.12	272.37	4,251.93	-900.65	-783.24	-122.66	10.27	9.81	7.94
4,488.00	27.05	275.23	4,280.79	-899.71	-797.03	-112.56	9.93	9.16	8.94



Survey Report

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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)
4,519.00	30.14	279.90	4,308.01	-897.73	-811.72	-101.07	12.30	9.97	15.06
4,550.00	33.07	282.65	4,334.41	-894.54	-827.64	-87.87	10.53	9.45	8.87
4,582.00	35.42	286.00	4,360.87	-890.07	-845.08	-72.69	9.41	7.34	10.47
4,613.00	37.80	290.83	4,385.75	-884.21	-862.60	-56.44	12.05	7.68	15.58
4,645.00	40.02	294.46	4,410.65	-876.47	-881.13	-38.12	9.94	6.94	11.34
4,676.00	41.99	296.20	4,434.05	-867.76	-899.51	-19.21	7.34	6.35	5.61
4,707.00	44.77	299.83	4,456.58	-857.75	-918.29	0.93	12.04	8.97	11.71
4,739.00	47.55	302.09	4,478.75	-845.87	-938.08	23.12	10.07	8.69	7.06
4,771.00	49.90	304.30	4,499.85	-832.70	-958.19	46.48	8.99	7.34	6.91
4,802.00	53.32	307.32	4,519.11	-818.47	-977.88	70.32	13.41	11.03	9.74
4,833.00	55.79	310.06	4,537.08	-802.68	-997.58	95.31	10.74	7.97	8.84
4,865.00	58.11	312.16	4,554.54	-785.04	-1,017.79	121.99	9.10	7.25	6.56
4,897.00	60.90	313.39	4,570.77	-766.32	-1,038.02	149.49	9.33	8.72	3.84
4,928.00	61.32	313.36	4,585.75	-747.68	-1,057.75	176.58	1.36	1.35	-0.10
4,960.00	62.08	313.13	4,600.92	-728.37	-1,078.27	204.70	2.46	2.38	-0.72
4,991.00	65.66	312.93	4,614.57	-709.39	-1,098.62	232.46	11.56	11.55	-0.65
5,023.00	69.58	313.91	4,626.75	-689.05	-1,120.10	261.99	12.57	12.25	3.06
5,055.00	72.90	314.92	4,637.04	-667.84	-1,141.74	292.26	10.80	10.38	3.16
5,086.00	75.43	316.34	4,645.50	-646.53	-1,162.59	322.07	9.27	8.16	4.58
5,118.00	77.65	317.43	4,652.95	-623.81	-1,183.86	353.19	7.69	6.94	3.41
5,149.00	80.40	318.43	4,658.85	-601.22	-1,204.25	383.62	9.42	8.87	3.23
5,163.00	81.10	318.40	4,661.10	-590.88	-1,213.42	397.43	5.04	5.03	-0.22
330 FSL @ 5163 MD 4661 TVD									
5,181.00	82.01	318.36	4,663.75	-577.57	-1,225.24	415.23	5.04	5.03	-0.22
5,212.00	83.40	318.45	4,667.68	-554.58	-1,245.65	445.97	4.49	4.48	0.29
5,244.00	84.12	318.66	4,671.16	-530.73	-1,266.71	477.76	2.34	2.25	0.66
5,339.00	85.74	318.58	4,679.55	-459.73	-1,329.26	572.35	1.71	1.71	-0.08
5,433.00	86.69	317.61	4,685.76	-389.93	-1,391.91	666.12	1.44	1.01	-1.03
5,528.00	87.81	317.14	4,690.32	-320.11	-1,456.17	761.00	1.28	1.18	-0.49
5,623.00	89.12	316.17	4,692.86	-251.05	-1,521.35	855.97	1.72	1.38	-1.02
5,718.00	87.94	315.58	4,695.30	-182.88	-1,587.46	950.92	1.39	-1.24	-0.62
5,812.00	88.61	314.83	4,698.13	-116.21	-1,653.66	1,044.83	1.07	0.71	-0.80
5,907.00	89.76	313.77	4,699.48	-49.86	-1,721.65	1,139.72	1.65	1.21	-1.12
6,001.00	88.04	313.11	4,701.29	14.75	-1,789.88	1,233.53	1.96	-1.83	-0.70
6,096.00	88.42	314.81	4,704.22	80.67	-1,858.23	1,328.35	1.83	0.40	1.79
6,191.00	90.03	317.42	4,705.51	149.12	-1,924.07	1,423.32	3.23	1.69	2.75
6,285.00	91.86	317.41	4,703.95	218.32	-1,987.67	1,517.30	1.95	1.95	-0.01
6,379.00	90.44	317.36	4,702.07	287.48	-2,051.30	1,611.28	1.51	-1.51	-0.05
6,498.00	91.65	316.25	4,699.90	374.22	-2,132.74	1,730.25	1.38	1.02	-0.93
6,592.00	90.00	316.34	4,698.54	442.16	-2,197.68	1,824.24	1.76	-1.76	0.10
6,687.00	91.01	315.73	4,697.71	510.53	-2,263.62	1,919.22	1.24	1.06	-0.64
6,781.00	92.46	314.18	4,694.86	576.92	-2,330.11	2,013.12	2.26	1.54	-1.65
6,876.00	89.26	315.03	4,693.44	643.61	-2,397.73	2,108.02	3.49	-3.37	0.89
6,970.00	87.53	317.57	4,696.07	711.53	-2,462.64	2,201.96	3.27	-1.84	2.70



Survey Report

**MARKSMAN
DIRECTIONAL**

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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)
7,064.00	88.08	316.31	4,699.67	780.16	-2,526.77	2,295.89	1.46	0.59	-1.34
7,159.00	89.66	315.20	4,701.54	848.20	-2,593.04	2,390.85	2.03	1.66	-1.17
7,253.00	87.53	315.97	4,703.85	915.32	-2,658.80	2,484.79	2.41	-2.27	0.82
7,348.00	88.35	314.92	4,707.26	982.97	-2,725.41	2,579.69	1.40	0.86	-1.11
7,442.00	88.41	318.51	4,709.92	1,051.36	-2,789.82	2,673.64	3.82	0.06	3.82
7,537.00	89.46	318.91	4,711.69	1,122.72	-2,852.50	2,768.58	1.18	1.11	0.42
7,631.00	91.01	318.37	4,711.30	1,193.27	-2,914.61	2,862.53	1.75	1.65	-0.57
7,726.00	92.90	317.65	4,708.06	1,263.84	-2,978.12	2,957.45	2.13	1.99	-0.76
7,820.00	89.49	317.81	4,706.10	1,333.37	-3,041.32	3,051.41	3.63	-3.63	0.17
7,915.00	89.06	317.51	4,707.30	1,403.59	-3,105.30	3,146.39	0.55	-0.45	-0.32
8,008.00	90.78	317.03	4,707.43	1,471.90	-3,168.41	3,239.39	1.92	1.85	-0.52
8,102.00	92.09	316.10	4,705.08	1,540.13	-3,233.01	3,333.35	1.71	1.39	-0.99
8,197.00	90.24	318.17	4,703.15	1,609.74	-3,297.62	3,428.32	2.92	-1.95	2.18
8,291.00	88.25	318.34	4,704.38	1,679.87	-3,360.20	3,522.28	2.12	-2.12	0.18
8,386.00	89.06	317.81	4,706.61	1,750.53	-3,423.65	3,617.24	1.02	0.85	-0.56
8,480.00	89.73	317.00	4,707.61	1,819.72	-3,487.27	3,711.23	1.12	0.71	-0.86
8,574.00	91.18	315.73	4,706.86	1,887.75	-3,552.13	3,805.21	2.05	1.54	-1.35
8,669.00	92.84	315.07	4,703.53	1,955.35	-3,618.79	3,900.12	1.88	1.75	-0.69
8,764.00	90.13	314.81	4,701.07	2,022.43	-3,686.01	3,995.02	2.87	-2.85	-0.27
8,858.00	86.52	315.64	4,703.81	2,089.11	-3,752.17	4,088.92	3.94	-3.84	0.88
8,952.00	87.13	314.63	4,709.02	2,155.63	-3,818.38	4,182.73	1.25	0.65	-1.07
9,047.00	88.89	314.05	4,712.32	2,221.99	-3,886.28	4,277.58	1.95	1.85	-0.61
9,141.00	87.50	316.17	4,715.28	2,288.54	-3,952.59	4,371.48	2.70	-1.48	2.26
9,236.00	88.45	316.78	4,718.64	2,357.38	-4,017.97	4,466.41	1.19	1.00	0.64
9,330.00	88.68	319.78	4,720.99	2,427.51	-4,080.50	4,560.35	3.20	0.24	3.19
9,424.00	90.88	320.59	4,721.35	2,499.71	-4,140.68	4,654.18	2.49	2.34	0.86
9,519.00	90.14	319.55	4,720.51	2,572.56	-4,201.65	4,749.03	1.34	-0.78	-1.09
9,613.00	91.35	319.19	4,719.28	2,643.89	-4,262.86	4,842.94	1.34	1.29	-0.38
9,708.00	92.84	318.26	4,715.81	2,715.24	-4,325.48	4,937.82	1.85	1.57	-0.98
9,802.00	90.34	317.39	4,713.20	2,784.87	-4,388.56	5,031.77	2.82	-2.66	-0.93
9,896.00	87.94	317.16	4,714.61	2,853.91	-4,452.33	5,125.75	2.56	-2.55	-0.24
9,990.00	88.24	315.61	4,717.75	2,921.92	-4,517.13	5,219.69	1.68	0.32	-1.65
10,085.00	90.30	315.48	4,718.96	2,989.72	-4,583.66	5,314.65	2.17	2.17	-0.14
10,179.00	91.99	314.74	4,717.08	3,056.30	-4,649.98	5,408.58	1.96	1.80	-0.79
10,273.00	89.60	315.63	4,715.78	3,122.97	-4,716.22	5,502.52	2.71	-2.54	0.95
10,368.00	86.56	317.63	4,718.96	3,191.98	-4,781.41	5,597.45	3.83	-3.20	2.11
10,462.00	87.87	317.09	4,723.53	3,261.05	-4,845.01	5,691.33	1.51	1.39	-0.57
10,557.00	89.46	316.44	4,725.74	3,330.24	-4,910.06	5,786.30	1.81	1.67	-0.68
10,651.00	87.53	316.55	4,728.21	3,398.39	-4,974.75	5,880.26	2.06	-2.05	0.12
10,746.00	88.89	316.40	4,731.18	3,467.24	-5,040.14	5,975.21	1.44	1.43	-0.16
10,841.00	90.78	316.15	4,731.45	3,535.89	-5,105.80	6,070.20	2.01	1.99	-0.26
10,936.00	88.62	317.83	4,731.95	3,605.35	-5,170.60	6,165.19	2.88	-2.27	1.77
11,030.00	86.89	319.33	4,735.63	3,675.78	-5,232.73	6,259.07	2.44	-1.84	1.60



Survey Report

MARKSMAN DIRECTIONAL

Company: Enduring Resources LLC
Project: Sandoval County, New Mexico NAD83 NM C
Site: S Escavada Unit
Well: S Escavada Unit 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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)
11,125.00	87.97	317.76	4,739.89	3,746.90	-5,295.56	6,353.93	2.00	1.14	-1.65
11,220.00	89.63	316.22	4,741.88	3,816.35	-5,360.34	6,448.91	2.38	1.75	-1.62
11,315.00	91.08	315.04	4,741.29	3,884.25	-5,426.77	6,543.88	1.97	1.53	-1.24
11,409.00	92.63	314.08	4,738.25	3,950.17	-5,493.71	6,637.75	1.94	1.65	-1.02
11,504.00	89.97	315.63	4,736.09	4,017.15	-5,561.03	6,732.65	3.24	-2.80	1.63
11,598.00	87.43	317.08	4,738.22	4,085.15	-5,625.88	6,826.61	3.11	-2.70	1.54
11,693.00	88.31	316.36	4,741.75	4,154.26	-5,690.97	6,921.54	1.20	0.93	-0.76
11,788.00	90.24	315.49	4,742.96	4,222.50	-5,757.04	7,016.52	2.23	2.03	-0.92
11,809.40	90.59	315.35	4,742.80	4,237.74	-5,772.06	7,037.91	1.75	1.61	-0.68
Sleeve depth @ 11809.4 MD 4743 TVD									
11,819.00	90.74	315.28	4,742.69	4,244.57	-5,778.81	7,047.50	1.75	1.61	-0.68
Survey @ 11819.00 MD 4742.69 TVD									
11,844.00	90.74	315.28	4,742.37	4,262.33	-5,796.40	7,072.49	0.00	0.00	0.00
330 FNL @ 11844 MD 4742 TVD									
11,962.00	90.74	315.28	4,740.84	4,346.17	-5,879.42	7,190.43	0.00	0.00	0.00
Survey projected to 11962.00 MD 4740.84 TVD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
328.00	328.00	-0.11	1.00	MWD surveys
5,163.00	4,661.10	-590.88	-1,213.42	330 FSL @ 5163 MD 4661 TVD
11,809.40	4,742.80	4,237.74	-5,772.06	Sleeve depth @ 11809.4 MD 4743 TVD
11,819.00	4,742.69	4,244.57	-5,778.81	Survey @ 11819.00 MD 4742.69 TVD
11,844.00	4,742.37	4,262.33	-5,796.40	330 FNL @ 11844 MD 4742 TVD
11,962.00	4,740.84	4,346.17	-5,879.42	Survey projected to 11962.00 MD 4740.84 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 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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	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
From:	Lat/Long	Easting:	1,257,590.21 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.11254900
		Longitude:	-107.54609400
		Grid Convergence:	-0.76 °

Well	S Escavada Unit 352 H		
Well Position	+N/-S	0.00 ft	Northing: 1,862,785.00 usft
	+E/-W	0.00 ft	Easting: 1,257,590.21 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	36.11254900
		Longitude:	-107.54609402
		Ground Level:	6,776.00 ft

Wellbore	Original hole		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	8/26/2018	8.98
			Dip Angle (°)
			62.83
			Field Strength (nT)
			49,577.51487757

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)
	0.00	0.00	0.00
			Direction (°)
			316.91

Survey Program	Date 9/26/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
328.00	11,819.00	MWD (Original hole)	MWD
11,962.00	11,962.00	Projection (Original hole)	MWD
			Description
			OWSG MWD - Standard
			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	-107.54609402
328.00	0.35	96.33	328.00	-0.11	1.00	1,862,784.89	1,257,591.20	36.11254873	-107.54609064
MWD surveys									
419.00	0.45	100.91	419.00	-0.21	1.62	1,862,784.79	1,257,591.83	36.11254848	-107.54608851
513.00	2.37	276.17	512.97	-0.07	0.05	1,862,784.93	1,257,590.26	36.11254881	-107.54609383
604.00	5.46	219.74	603.78	-3.20	-4.59	1,862,781.80	1,257,585.62	36.11254005	-107.54610940
695.00	6.89	218.92	694.25	-10.77	-10.79	1,862,774.23	1,257,579.42	36.11251901	-107.54613004
788.00	7.22	220.80	786.54	-19.54	-18.11	1,862,765.46	1,257,572.10	36.11249467	-107.54615443
878.00	7.27	222.74	875.82	-28.00	-25.67	1,862,757.00	1,257,564.54	36.11247115	-107.54617964
970.00	8.82	218.68	966.92	-37.78	-34.03	1,862,747.22	1,257,556.18	36.11244398	-107.54620749
1,065.00	11.95	219.15	1,060.35	-51.10	-44.79	1,862,733.90	1,257,545.42	36.11240701	-107.54624332



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 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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
1,160.00	15.55	220.39	1,152.61	-68.43	-59.26	1,862,716.57	1,257,530.95	36.11235888	-107.54629150
1,255.00	16.50	219.81	1,243.92	-88.49	-76.15	1,862,696.51	1,257,514.06	36.11230316	-107.54634776
1,349.00	16.90	219.42	1,333.95	-109.30	-93.37	1,862,675.70	1,257,496.84	36.11224538	-107.54640512
1,444.00	17.78	218.05	1,424.64	-131.39	-111.08	1,862,653.61	1,257,479.13	36.11218406	-107.54646406
1,538.00	19.15	217.00	1,513.79	-155.01	-129.20	1,862,629.99	1,257,461.00	36.11211854	-107.54652435
1,633.00	21.00	219.18	1,603.02	-180.65	-149.34	1,862,604.35	1,257,440.87	36.11204737	-107.54659134
1,728.00	20.95	219.58	1,691.72	-206.94	-170.91	1,862,578.07	1,257,419.30	36.11197439	-107.54666318
1,823.00	20.25	219.97	1,780.65	-232.63	-192.30	1,862,552.38	1,257,397.91	36.11190305	-107.54673439
1,917.00	21.23	219.35	1,868.56	-258.26	-213.54	1,862,526.75	1,257,376.67	36.11183188	-107.54680513
2,012.00	21.68	219.44	1,956.97	-285.11	-235.59	1,862,499.89	1,257,354.62	36.11175732	-107.54687857
2,106.00	21.26	219.33	2,044.45	-311.70	-257.42	1,862,473.30	1,257,332.79	36.11168349	-107.54695126
2,201.00	21.48	219.92	2,132.92	-338.36	-279.50	1,862,446.64	1,257,310.71	36.11160945	-107.54702478
2,295.00	21.31	219.24	2,220.44	-364.79	-301.35	1,862,420.21	1,257,288.86	36.11153607	-107.54709754
2,390.00	21.56	219.90	2,308.87	-391.55	-323.46	1,862,393.45	1,257,266.74	36.11146176	-107.54717119
2,484.00	21.34	219.87	2,396.36	-417.93	-345.51	1,862,367.07	1,257,244.70	36.11138851	-107.54724461
2,579.00	20.82	219.96	2,485.00	-444.14	-367.43	1,862,340.87	1,257,222.78	36.11131573	-107.54731763
2,674.00	19.18	220.33	2,574.27	-468.97	-388.38	1,862,316.03	1,257,201.83	36.11124674	-107.54738740
2,721.00	18.16	220.03	2,618.80	-480.47	-398.08	1,862,304.53	1,257,192.13	36.11121482	-107.54741974
2,789.00	17.07	220.63	2,683.61	-496.16	-411.40	1,862,288.85	1,257,178.81	36.11117124	-107.54746410
2,883.00	18.34	224.25	2,773.16	-517.22	-430.70	1,862,267.78	1,257,159.51	36.11111268	-107.54752849
2,977.00	20.76	223.15	2,861.73	-539.97	-452.42	1,862,245.03	1,257,137.79	36.11104939	-107.54760097
3,072.00	20.51	223.98	2,950.64	-564.23	-475.49	1,862,220.77	1,257,114.72	36.11098192	-107.54767796
3,166.00	22.04	220.84	3,038.23	-589.43	-498.46	1,862,195.58	1,257,091.75	36.11091188	-107.54775457
3,261.00	22.68	215.46	3,126.10	-617.83	-520.75	1,862,167.17	1,257,069.46	36.11083305	-107.54782872
3,355.00	21.98	214.68	3,213.05	-647.06	-541.27	1,862,137.94	1,257,048.94	36.11075202	-107.54789686
3,449.00	21.26	213.81	3,300.43	-675.69	-560.76	1,862,109.31	1,257,029.45	36.11067268	-107.54796154
3,544.00	20.70	217.92	3,389.14	-703.25	-580.67	1,862,081.76	1,257,009.54	36.11059627	-107.54802767
3,638.00	19.43	217.30	3,477.43	-728.79	-600.35	1,862,056.21	1,256,989.86	36.11052539	-107.54809314
3,733.00	20.63	221.16	3,566.69	-753.96	-620.94	1,862,031.04	1,256,969.27	36.11045550	-107.54816170
3,827.00	19.45	219.60	3,655.00	-778.49	-641.82	1,862,006.51	1,256,948.39	36.11038737	-107.54823125
3,921.00	19.99	221.17	3,743.48	-802.64	-662.37	1,861,982.36	1,256,927.84	36.11032028	-107.54829972
4,016.00	20.80	220.63	3,832.53	-827.67	-684.05	1,861,957.34	1,256,906.16	36.11025075	-107.54837195
4,110.00	18.00	219.08	3,921.18	-851.61	-704.07	1,861,933.39	1,256,886.14	36.11018425	-107.54843866
4,204.00	16.33	218.01	4,010.99	-873.30	-721.37	1,861,911.70	1,256,868.84	36.11012405	-107.54849622
4,267.00	15.60	218.47	4,071.56	-886.91	-732.09	1,861,898.09	1,256,858.12	36.11008628	-107.54853190
4,299.00	14.91	228.04	4,102.44	-893.03	-737.83	1,861,891.97	1,256,852.38	36.11006925	-107.54855105
4,330.00	14.59	244.59	4,132.43	-897.38	-744.33	1,861,887.63	1,256,845.88	36.11005708	-107.54857283
4,361.00	15.13	260.11	4,162.41	-899.75	-751.84	1,861,885.25	1,256,838.37	36.11005030	-107.54859816
4,393.00	17.51	267.48	4,193.12	-900.68	-760.77	1,861,884.32	1,256,829.44	36.11004742	-107.54862833
4,424.00	20.98	269.83	4,222.38	-900.90	-770.98	1,861,884.10	1,256,819.23	36.11004643	-107.54866289
4,456.00	24.12	272.37	4,251.93	-900.65	-783.24	1,861,884.36	1,256,806.97	36.11004668	-107.54870441
4,488.00	27.05	275.23	4,280.79	-899.71	-797.03	1,861,885.29	1,256,793.18	36.11004874	-107.54875110
4,519.00	30.14	279.90	4,308.01	-897.73	-811.72	1,861,887.27	1,256,778.49	36.11005364	-107.54880092
4,550.00	33.07	282.65	4,334.41	-894.54	-827.64	1,861,890.46	1,256,762.57	36.11006182	-107.54885496
4,582.00	35.42	286.00	4,360.87	-890.07	-845.08	1,861,894.93	1,256,745.13	36.11007346	-107.54891418
4,613.00	37.80	290.83	4,385.75	-884.21	-862.60	1,861,900.79	1,256,727.61	36.11008890	-107.54897375
4,645.00	40.02	294.46	4,410.65	-876.47	-881.13	1,861,908.54	1,256,709.07	36.11010950	-107.54903684
4,676.00	41.99	296.20	4,434.05	-867.76	-899.51	1,861,917.24	1,256,690.70	36.11013274	-107.54909944
4,707.00	44.77	299.83	4,456.58	-857.75	-918.29	1,861,927.26	1,256,671.92	36.11015954	-107.54916346
4,739.00	47.55	302.09	4,478.75	-845.87	-938.08	1,861,939.14	1,256,652.13	36.11019145	-107.54923095
4,771.00	49.90	304.30	4,499.85	-832.70	-958.19	1,861,952.31	1,256,632.02	36.11022688	-107.54929964
4,802.00	53.32	307.32	4,519.11	-818.47	-977.88	1,861,966.53	1,256,612.33	36.11026523	-107.54936692
4,833.00	55.79	310.06	4,537.08	-802.68	-997.58	1,861,982.32	1,256,592.63	36.11030787	-107.54943432
4,865.00	58.11	312.16	4,554.54	-785.04	-1,017.79	1,861,999.96	1,256,572.42	36.11035557	-107.54950350
4,897.00	60.90	313.39	4,570.77	-766.32	-1,038.02	1,862,018.69	1,256,552.19	36.11040626	-107.54957283



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 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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
4,928.00	61.32	313.36	4,585.75	-747.68	-1,057.75	1,862,037.33	1,256,532.46	36.11045673	-107.54964045
4,960.00	62.08	313.13	4,600.92	-728.37	-1,078.27	1,862,056.63	1,256,511.94	36.11050899	-107.54971079
4,991.00	65.66	312.93	4,614.57	-709.39	-1,098.62	1,862,075.62	1,256,491.59	36.11056040	-107.54978050
5,023.00	69.58	313.91	4,626.75	-689.05	-1,120.10	1,862,095.95	1,256,470.11	36.11061546	-107.54985414
5,055.00	72.90	314.92	4,637.04	-667.84	-1,141.74	1,862,117.16	1,256,448.47	36.11067290	-107.54992834
5,086.00	75.43	316.34	4,645.50	-646.53	-1,162.59	1,862,138.48	1,256,427.62	36.11073069	-107.54999988
5,118.00	77.65	317.43	4,652.95	-623.81	-1,183.86	1,862,161.19	1,256,406.35	36.11079230	-107.55007290
5,149.00	80.40	318.43	4,658.85	-601.22	-1,204.25	1,862,183.78	1,256,385.97	36.11085359	-107.55014293
5,163.00	81.10	318.40	4,661.10	-590.88	-1,213.42	1,862,194.12	1,256,376.79	36.11088164	-107.55017444
330 FSL @ 5163 MD 4661 TVD									
5,181.00	82.01	318.36	4,663.75	-577.57	-1,225.24	1,862,207.43	1,256,364.97	36.11091776	-107.55021507
5,212.00	83.40	318.45	4,667.68	-554.58	-1,245.65	1,862,230.42	1,256,344.56	36.11098017	-107.55028520
5,244.00	84.12	318.66	4,671.16	-530.73	-1,266.71	1,862,254.27	1,256,323.50	36.11104488	-107.55035754
5,339.00	85.74	318.58	4,679.55	-459.73	-1,329.26	1,862,325.27	1,256,260.95	36.11123759	-107.55057248
5,433.00	86.69	317.61	4,685.76	-389.93	-1,391.91	1,862,395.07	1,256,198.30	36.11142700	-107.55078768
5,528.00	87.81	317.14	4,690.32	-320.11	-1,456.17	1,862,464.89	1,256,134.05	36.11161640	-107.55100834
5,623.00	89.12	316.17	4,692.86	-251.05	-1,521.35	1,862,533.95	1,256,068.86	36.11180367	-107.55123209
5,718.00	87.94	315.58	4,695.30	-182.88	-1,587.46	1,862,602.12	1,256,002.75	36.11198847	-107.55145898
5,812.00	88.61	314.83	4,698.13	-116.21	-1,653.66	1,862,668.80	1,255,936.55	36.11216915	-107.55168607
5,907.00	89.76	313.77	4,699.48	-49.86	-1,721.65	1,862,735.14	1,255,868.57	36.11234885	-107.55191918
6,001.00	88.04	313.11	4,701.29	14.75	-1,789.88	1,862,799.76	1,255,800.33	36.11252382	-107.55215308
6,096.00	88.42	314.81	4,704.22	80.67	-1,858.23	1,862,865.67	1,255,731.98	36.11270232	-107.55238741
6,191.00	90.03	317.42	4,705.51	149.12	-1,924.07	1,862,934.12	1,255,666.14	36.11288791	-107.55261338
6,285.00	91.86	317.41	4,703.95	218.32	-1,987.67	1,863,003.32	1,255,602.54	36.11307562	-107.55283178
6,379.00	90.44	317.36	4,702.07	287.48	-2,051.30	1,863,072.48	1,255,538.91	36.11326323	-107.55305029
6,498.00	91.65	316.25	4,699.90	374.22	-2,132.74	1,863,159.22	1,255,457.48	36.11349845	-107.55332988
6,592.00	90.00	316.34	4,698.54	442.16	-2,197.68	1,863,227.16	1,255,392.54	36.11368266	-107.55355278
6,687.00	91.01	315.73	4,697.71	510.53	-2,263.62	1,863,295.53	1,255,326.59	36.11386802	-107.55377910
6,781.00	92.46	314.18	4,694.86	576.92	-2,330.11	1,863,361.92	1,255,260.10	36.11404788	-107.55400716
6,876.00	89.26	315.03	4,693.44	643.61	-2,397.73	1,863,428.61	1,255,192.49	36.11422857	-107.55423907
6,970.00	87.53	317.57	4,696.07	711.53	-2,462.64	1,863,496.53	1,255,127.57	36.11441272	-107.55446187
7,064.00	88.08	316.31	4,699.67	780.16	-2,526.77	1,863,565.16	1,255,063.44	36.11459884	-107.55468206
7,159.00	89.66	315.20	4,701.54	848.20	-2,593.04	1,863,633.20	1,254,997.18	36.11478326	-107.55490947
7,253.00	87.53	315.97	4,703.85	915.32	-2,658.80	1,863,700.32	1,254,931.41	36.11496518	-107.55513511
7,348.00	88.35	314.92	4,707.26	982.97	-2,725.41	1,863,767.97	1,254,864.81	36.11514852	-107.55536365
7,442.00	88.41	318.51	4,709.92	1,051.36	-2,789.82	1,863,836.36	1,254,800.39	36.11533397	-107.55558479
7,537.00	89.46	318.91	4,711.69	1,122.72	-2,852.50	1,863,907.72	1,254,737.72	36.11552767	-107.55580019
7,631.00	91.01	318.37	4,711.30	1,193.27	-2,914.61	1,863,978.27	1,254,675.61	36.11571914	-107.55601364
7,726.00	92.90	317.65	4,708.06	1,263.84	-2,978.12	1,864,048.84	1,254,612.09	36.11591060	-107.55623184
7,820.00	89.49	317.81	4,706.10	1,333.37	-3,041.32	1,864,118.37	1,254,548.89	36.11609924	-107.55644894
7,915.00	89.06	317.51	4,707.30	1,403.59	-3,105.30	1,864,188.59	1,254,484.91	36.11628972	-107.55666871
8,008.00	90.78	317.03	4,707.43	1,471.90	-3,168.41	1,864,256.90	1,254,421.81	36.11647500	-107.55688541
8,102.00	92.09	316.10	4,705.08	1,540.13	-3,233.01	1,864,325.13	1,254,357.20	36.11666002	-107.55710721
8,197.00	90.24	318.17	4,703.15	1,609.74	-3,297.62	1,864,394.74	1,254,292.60	36.11684881	-107.55732907
8,291.00	88.25	318.34	4,704.38	1,679.87	-3,360.20	1,864,464.87	1,254,230.02	36.11703910	-107.55754408
8,386.00	89.06	317.81	4,706.61	1,750.53	-3,423.65	1,864,535.53	1,254,166.56	36.11723082	-107.55776210
8,480.00	89.73	317.00	4,707.61	1,819.72	-3,487.27	1,864,604.72	1,254,102.95	36.11741851	-107.55798059
8,574.00	91.18	315.73	4,706.86	1,887.75	-3,552.13	1,864,672.75	1,254,038.09	36.11760295	-107.55820325
8,669.00	92.84	315.07	4,703.53	1,955.35	-3,618.79	1,864,740.35	1,253,971.43	36.11778614	-107.55843197
8,764.00	90.13	314.81	4,701.07	2,022.43	-3,686.01	1,864,807.42	1,253,904.21	36.11796787	-107.55866256
8,858.00	86.52	315.64	4,703.81	2,089.11	-3,752.17	1,864,874.11	1,253,838.04	36.11814858	-107.55888958
8,952.00	87.13	314.63	4,709.02	2,155.63	-3,818.38	1,864,940.63	1,253,771.83	36.11832883	-107.55911673
9,047.00	88.89	314.05	4,712.32	2,221.99	-3,886.28	1,865,006.99	1,253,703.93	36.11850856	-107.55934960
9,141.00	87.50	316.17	4,715.28	2,288.54	-3,952.59	1,865,073.54	1,253,637.63	36.11868890	-107.55957707
9,236.00	88.45	316.78	4,718.64	2,357.38	-4,017.97	1,865,142.38	1,253,572.25	36.11887554	-107.55980153



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 352 H
Wellbore: Original hole
Design: Surveys Original hole

Local Co-ordinate Reference: Well S Escavada Unit 352 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
9,330.00	88.68	319.78	4,720.99	2,427.51	-4,080.50	1,865,212.51	1,253,509.72	36.11906584	-107.56001640
9,424.00	90.88	320.59	4,721.35	2,499.71	-4,140.68	1,865,284.71	1,253,449.54	36.11926190	-107.56022342
9,519.00	90.14	319.55	4,720.51	2,572.56	-4,201.65	1,865,357.55	1,253,388.56	36.11945970	-107.56043314
9,613.00	91.35	319.19	4,719.28	2,643.89	-4,262.86	1,865,428.88	1,253,327.36	36.11965335	-107.56064358
9,708.00	92.84	318.26	4,715.81	2,715.24	-4,325.48	1,865,500.23	1,253,264.74	36.11984698	-107.56085883
9,802.00	90.34	317.39	4,713.20	2,784.87	-4,388.56	1,865,569.86	1,253,201.65	36.12003588	-107.56107554
9,896.00	87.94	317.16	4,714.61	2,853.91	-4,452.33	1,865,638.90	1,253,137.89	36.12022313	-107.56129455
9,990.00	88.24	315.61	4,717.75	2,921.92	-4,517.13	1,865,706.92	1,253,073.08	36.12040753	-107.56151703
10,085.00	90.30	315.48	4,718.96	2,989.72	-4,583.66	1,865,774.72	1,253,006.56	36.12059128	-107.56174532
10,179.00	91.99	314.74	4,717.08	3,056.30	-4,649.98	1,865,841.30	1,252,940.24	36.12077168	-107.56197288
10,273.00	89.60	315.63	4,715.78	3,122.97	-4,716.22	1,865,907.97	1,252,874.00	36.12095233	-107.56220016
10,368.00	86.56	317.63	4,718.96	3,191.98	-4,781.41	1,865,976.98	1,252,808.81	36.12113944	-107.56242399
10,462.00	87.87	317.09	4,723.53	3,261.05	-4,845.01	1,866,046.04	1,252,745.21	36.12132677	-107.56264244
10,557.00	89.46	316.44	4,725.74	3,330.24	-4,910.06	1,866,115.23	1,252,680.15	36.12151438	-107.56286582
10,651.00	87.53	316.55	4,728.21	3,398.39	-4,974.75	1,866,183.38	1,252,615.47	36.12169916	-107.56308791
10,746.00	88.89	316.40	4,731.18	3,467.24	-5,040.14	1,866,252.23	1,252,550.08	36.12188582	-107.56331242
10,841.00	90.78	316.15	4,731.45	3,535.89	-5,105.80	1,866,320.88	1,252,484.42	36.12207192	-107.56353783
10,936.00	88.62	317.83	4,731.95	3,605.35	-5,170.60	1,866,390.34	1,252,419.62	36.12226029	-107.56376036
11,030.00	86.89	319.33	4,735.63	3,675.78	-5,232.73	1,866,460.77	1,252,357.49	36.12245141	-107.56397393
11,125.00	87.97	317.76	4,739.89	3,746.90	-5,295.56	1,866,531.89	1,252,294.66	36.12264442	-107.56418986
11,220.00	89.63	316.22	4,741.88	3,816.35	-5,360.34	1,866,601.34	1,252,229.87	36.12283275	-107.56441235
11,315.00	91.08	315.04	4,741.29	3,884.25	-5,426.77	1,866,669.25	1,252,163.45	36.12301678	-107.56464034
11,409.00	92.63	314.08	4,738.25	3,950.17	-5,493.71	1,866,735.17	1,252,096.51	36.12319533	-107.56486996
11,504.00	89.97	315.63	4,736.09	4,017.15	-5,561.03	1,866,802.15	1,252,029.19	36.12337679	-107.56510092
11,598.00	87.43	317.08	4,738.22	4,085.15	-5,625.88	1,866,870.14	1,251,964.34	36.12356112	-107.56532358
11,693.00	88.31	316.36	4,741.75	4,154.26	-5,690.97	1,866,939.25	1,251,899.25	36.12374852	-107.56554707
11,788.00	90.24	315.49	4,742.96	4,222.50	-5,757.04	1,867,007.49	1,251,833.18	36.12393348	-107.56577387
11,809.40	90.59	315.35	4,742.80	4,237.74	-5,772.06	1,867,022.74	1,251,818.16	36.12397478	-107.56582542
Sleeve depth @ 11809.4 MD 4743 TVD									
11,819.00	90.74	315.28	4,742.69	4,244.57	-5,778.81	1,867,029.56	1,251,811.41	36.12399328	-107.56584859
Survey @ 11819.00 MD 4742.69 TVD									
11,844.00	90.74	315.28	4,742.37	4,262.33	-5,796.40	1,867,047.32	1,251,793.82	36.12404141	-107.56590895
330 FNL @ 11844 MD 4742 TVD									
11,962.00	90.74	315.28	4,740.84	4,346.17	-5,879.42	1,867,131.16	1,251,710.80	36.12426857	-107.56619384
Survey projected to 11962.00 MD 4740.84 TVD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
328.00	328.00	-0.11	1.00	MWD surveys
5,163.00	4,661.10	-590.88	-1,213.42	330 FSL @ 5163 MD 4661 TVD
11,809.40	4,742.80	4,237.74	-5,772.06	Sleeve depth @ 11809.4 MD 4743 TVD
11,819.00	4,742.69	4,244.57	-5,778.81	Survey @ 11819.00 MD 4742.69 TVD
11,844.00	4,742.37	4,262.33	-5,796.40	330 FNL @ 11844 MD 4742 TVD
11,962.00	4,740.84	4,346.17	-5,879.42	Survey projected to 11962.00 MD 4740.84 TVD