

Scientific Drilling

CONFIDENTIAL

SUR: M-8-15s-31e, 660/S & 330/W
BHL: P-8-15s-31e, 687/S & 4949/W
API # 30-005-29079

MARSHALL & WINSTON

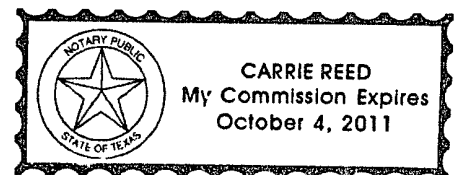
Field: Wildcat
Site: Chaves County, NM
Well: Medlin Federal Com 8 #2H
Wellpath: VH - Job #32K0309105
Survey: 03/19/09

This survey is correct to the best of my knowledge
and is supported by actual field data.

Richard Company Representative

Notorized this date 2nd of April, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

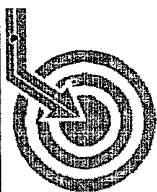
Company: MARSHALL & WINSTON
Field: Wildcat
Site: Chaves County, NM
Well: Medlin Federal Com 8 #2H
Wellpath: VH - Job #32K0309105

Date: 03/26/2009 Time: 17:43:31 Page: 1
Co-ordinate(NE) Reference: Site: Chaves County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,66.75Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 03/19/09 Start Date: 03/19/2009
KSRG 0'-3953'
Company: Scientific Drilling Internatio Engineer: Melendez/Paredes/Williams
Tool: KSRG;Keeper Gyro Tied-to: From Surface

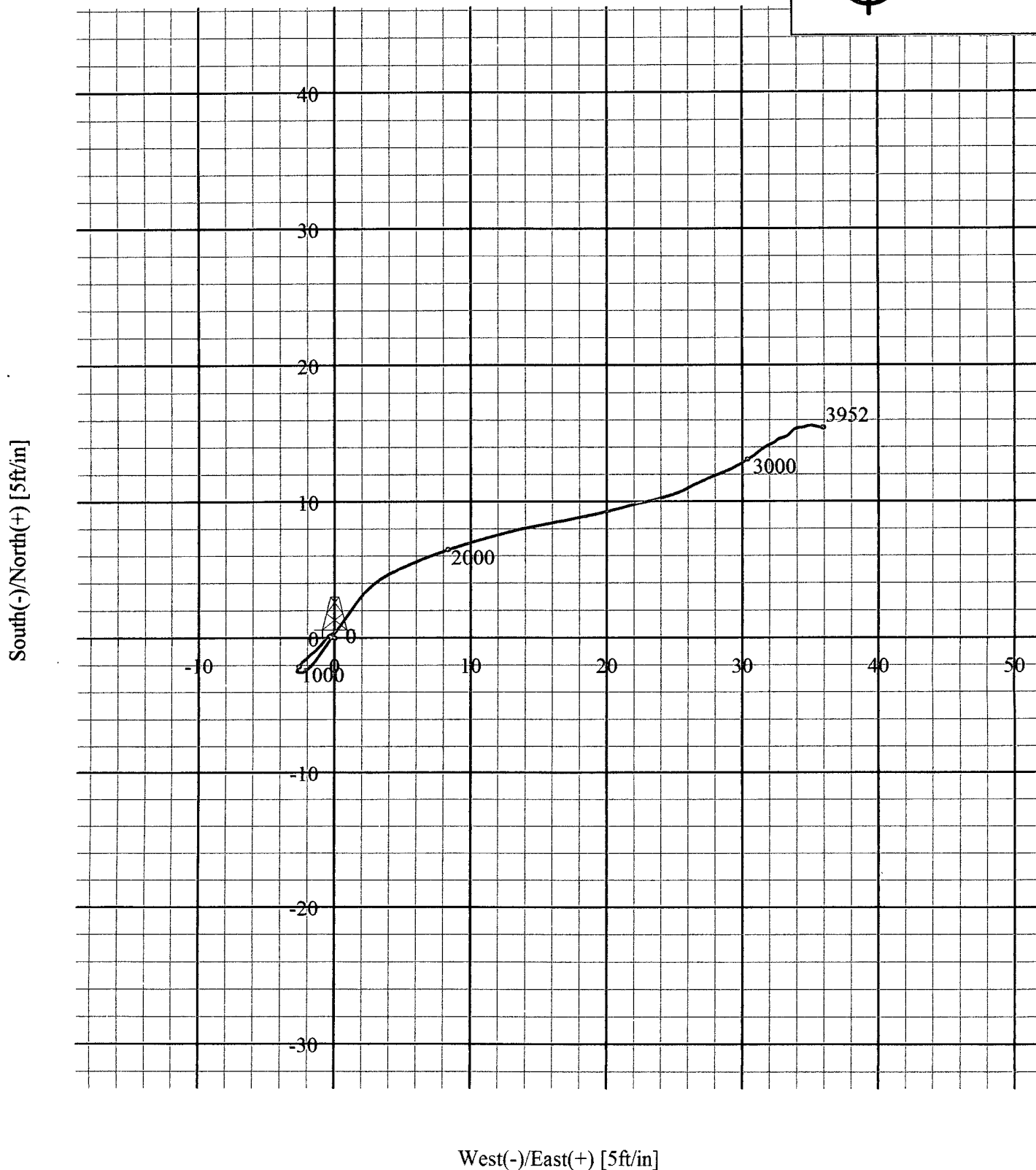
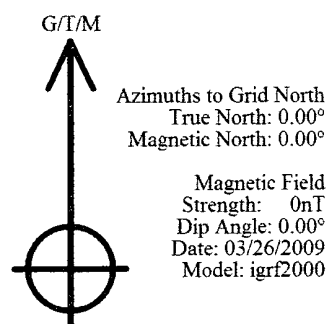
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.12	351.12	100.00	0.03	0.10	-0.02	0.12	0.10	351.12
200.00	0.19	326.79	200.00	0.02	0.35	-0.12	0.09	0.37	340.39
300.00	0.44	221.82	300.00	-0.35	0.20	-0.47	0.52	0.51	292.87
400.00	0.47	214.92	400.00	-1.05	-0.42	-0.96	0.06	1.05	246.18
500.00	0.34	234.42	499.99	-1.69	-0.93	-1.44	0.19	1.71	237.00
600.00	0.47	226.29	599.99	-2.36	-1.39	-1.97	0.14	2.41	234.87
700.00	0.20	234.31	699.99	-2.92	-1.77	-2.41	0.27	3.00	233.67
800.00	0.15	205.09	799.99	-3.19	-1.99	-2.61	0.10	3.29	232.61
900.00	0.04	87.43	899.99	-3.25	-2.11	-2.63	0.17	3.37	231.25
1000.00	0.04	256.41	999.99	-3.25	-2.12	-2.63	0.08	3.38	231.15
1100.00	0.10	196.62	1099.99	-3.34	-2.21	-2.69	0.09	3.48	230.58
1200.00	0.23	205.29	1199.99	-3.55	-2.48	-2.80	0.13	3.74	228.52
1300.00	0.49	74.87	1299.99	-3.28	-2.55	-2.47	0.66	3.55	224.17
1400.00	0.99	38.93	1399.98	-2.09	-1.76	-1.52	0.66	2.32	220.73
1500.00	0.92	32.46	1499.96	-0.66	-0.41	-0.54	0.13	0.68	232.80
1600.00	1.06	37.68	1599.95	0.81	1.00	0.45	0.17	1.10	24.44
1700.00	1.01	33.92	1699.93	2.36	2.46	1.51	0.08	2.89	31.54
1800.00	1.18	48.87	1799.92	4.08	3.87	2.78	0.33	4.76	35.67
1900.00	1.88	66.40	1899.88	6.70	5.20	5.06	0.83	7.26	44.18
2000.00	2.13	71.26	1999.82	10.19	6.46	8.32	0.30	10.53	52.18
2100.00	2.22	74.79	2099.75	13.96	7.56	11.95	0.16	14.14	57.67
2200.00	1.94	79.63	2199.68	17.53	8.38	15.48	0.33	17.60	61.59
2300.00	1.61	78.54	2299.63	20.56	8.96	18.52	0.33	20.58	64.19
2400.00	1.38	74.47	2399.60	23.12	9.56	21.06	0.25	23.13	65.58
2500.00	1.08	78.09	2499.57	25.24	10.08	23.14	0.31	25.24	66.47
2600.00	0.92	71.89	2599.56	26.97	10.52	24.83	0.19	26.97	67.03
2700.00	0.88	60.54	2699.55	28.53	11.15	26.26	0.18	28.53	67.00
2800.00	0.95	69.16	2799.53	30.12	11.82	27.70	0.15	30.12	66.89
2900.00	0.86	64.53	2899.52	31.70	12.44	29.16	0.12	31.70	66.90
3000.00	0.69	57.95	2999.51	33.04	13.08	30.34	0.19	33.04	66.68
3100.00	0.57	49.99	3099.51	34.11	13.72	31.24	0.15	34.12	66.29
3200.00	0.45	65.72	3199.50	34.98	14.20	31.97	0.18	34.99	66.05
3300.00	0.25	50.24	3299.50	35.59	14.50	32.50	0.22	35.59	65.95
3400.00	0.43	75.67	3399.50	36.17	14.74	33.03	0.23	36.17	65.96
3500.00	0.40	33.97	3499.50	36.83	15.12	33.59	0.30	36.83	65.77
3600.00	0.35	85.59	3599.50	37.41	15.43	34.09	0.33	37.42	65.65
3700.00	0.42	74.58	3699.49	38.06	15.55	34.75	0.10	38.07	65.89
3800.00	0.23	113.81	3799.49	38.56	15.57	35.28	0.28	38.57	66.19
3900.00	0.27	94.85	3899.49	38.91	15.47	35.70	0.09	38.91	66.58
3953.00	0.22	103.10	3952.49	39.10	15.43	35.93	0.12	39.10	66.75



Scientific
Drilling

Field: Wildcat
Site: Chaves County, NM
Well: Medlin Federal Com 8 #2H
Wellpath: VH - Job #32K0309105
Survey: 03/19/09



Marshall & Winston, INC

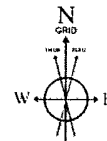
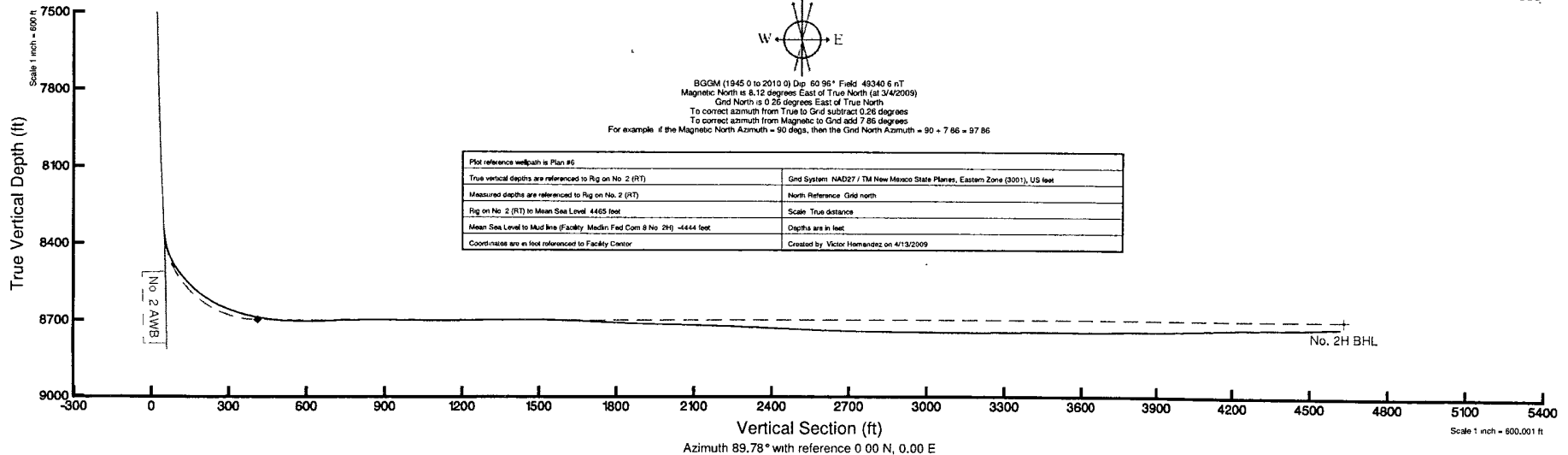
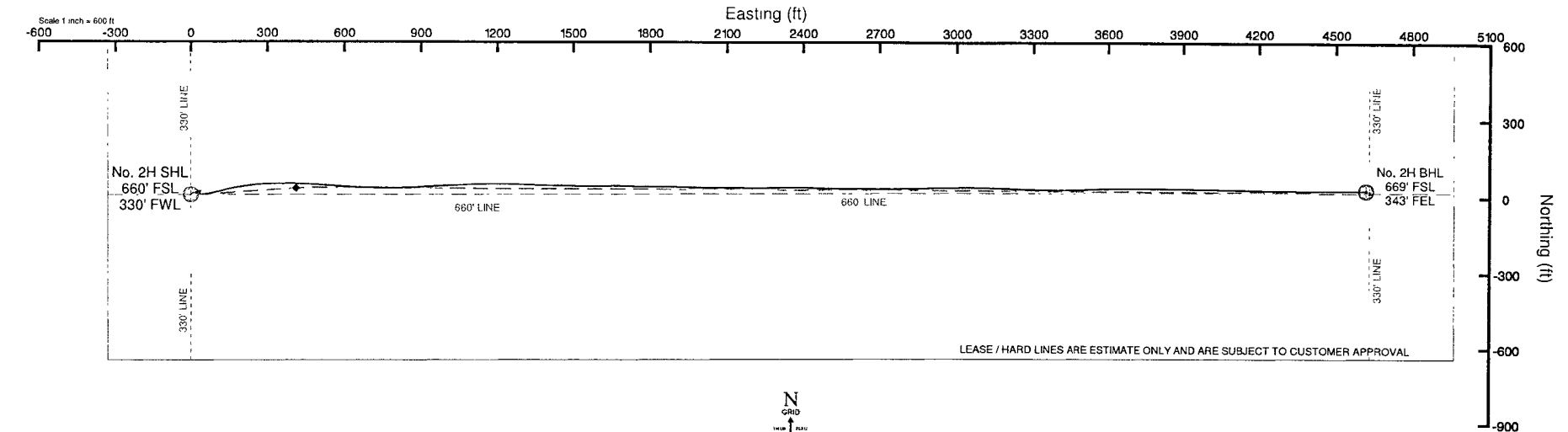
Location: Chaves County, NM
Field: (Medlin) Sec 8, T15S, R31E
Facility: Medlin Fed Com 8 No. 2H

Slot: No. 2H SHL
Well: No. 2H
Wellbore: No. 2H PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	8340.00	2.450	98.940	8338.74	0.83	47.23	0.00	47.23
EST. KOP	8361.00	4.000	86.000	8359.71	0.81	48.40	8.11	48.40
END OF CURVE	8910.07	90.000	86.000	8700.00	26.27	412.43	15.66	412.53
END OF TURN	8993.19	90.000	90.156	8700.00	29.06	495.48	5.00	495.59
No. 2H BHL	13129.44	90.000	90.156	8700.00	17.80	4631.71	0.00	4631.75

CONFIDENTIAL



BGGM (1945 0 to 2010 0) Dip 60.96° Field 49340.6 nT
Magnetic North is 8.12 degrees East of True North (at 3/4/2009)
Grid North is 0.26 degrees East of True North
To correct azimuth from True to Grid subtract 0.26 degrees
To correct azimuth from Magnetic to Grid add 7.86 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.86 = 97.86

Plot reference wellpath is Plan #6	Grid System: NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet
True vertical depths are referenced to Rig on No. 2 (RT)	North Reference: Grid north
Measured depths are referenced to Rig on No. 2 (RT)	Scale: True distance
Rig on No. 2 (RT) in Mean Sea Level: 4465 feet	Depths are in feet
Mean Sea Level to Mud line (Facility: Medlin Fed Com 8 No. 2H) -4444 feet	Created by: Victor Hernandez on 4/13/2009
Coordinates are in feet referenced to Facility Center	

Actual Wellpath Report

No. 2H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999934	Report Generated	4/13/2009 at 12:01:06 PM
Convergence at slot	0.26° East	Database/Source file	WA_Midland/No. 2H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	647804.30	736889.60	33°01'29.430"N	103°51'03.956"W
Facility Reference Pt			647804.30	736889.60	33°01'29.430"N	103°51'03.956"W
Field Reference Pt			647804.30	736889.60	33°01'29.430"N	103°51'03.956"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 2 (RT) to Facility Vertical Datum	21.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 2 (RT) to Mean Sea Level	4465.00ft
Vertical Reference Pt	Rig on No. 2 (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.78°

Actual Wellpath Report

No. 2H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
0.00	0.000	350.857	0.00	0.00	0.00	0.00	647804.30	736889.60	33°01'29.430"N	103°51'03.956"W	0.00
100.00	0.120	350.857	100.00	-0.02	0.10	-0.02	647804.28	736889.70	33°01'29.431"N	103°51'03.956"W	0.12
200.00	0.190	326.527	200.00	-0.12	0.35	-0.12	647804.18	736889.95	33°01'29.434"N	103°51'03.957"W	0.09
300.00	0.440	221.557	300.00	-0.47	0.20	-0.47	647803.83	736889.80	33°01'29.432"N	103°51'03.961"W	0.52
400.00	0.470	214.657	400.00	-0.96	-0.43	-0.96	647803.34	736889.17	33°01'29.426"N	103°51'03.967"W	0.06
500.00	0.340	234.157	499.99	-1.44	-0.94	-1.43	647802.87	736888.66	33°01'29.421"N	103°51'03.973"W	0.19
600.00	0.470	226.027	599.99	-1.97	-1.40	-1.97	647802.33	736888.20	33°01'29.417"N	103°51'03.979"W	0.14
700.00	0.200	234.047	699.99	-2.41	-1.79	-2.40	647801.90	736887.81	33°01'29.413"N	103°51'03.984"W	0.27
800.00	0.150	204.827	799.99	-2.61	-2.01	-2.60	647801.70	736887.59	33°01'29.411"N	103°51'03.986"W	0.10
900.00	0.040	87.167	899.99	-2.63	-2.12	-2.62	647801.68	736887.48	33°01'29.409"N	103°51'03.987"W	0.17
1000.00	0.040	256.147	999.99	-2.63	-2.13	-2.62	647801.68	736887.47	33°01'29.409"N	103°51'03.987"W	0.08
1100.00	0.100	196.357	1099.99	-2.69	-2.22	-2.68	647801.62	736887.38	33°01'29.408"N	103°51'03.987"W	0.09
1200.00	0.230	205.027	1199.99	-2.80	-2.49	-2.79	647801.51	736887.11	33°01'29.406"N	103°51'03.989"W	0.13
1300.00	0.490	74.607	1299.99	-2.47	-2.56	-2.46	647801.84	736887.04	33°01'29.405"N	103°51'03.985"W	0.66
1400.00	0.990	38.667	1399.98	-1.52	-1.77	-1.51	647802.79	736887.83	33°01'29.413"N	103°51'03.974"W	0.66
1500.00	0.920	32.197	1499.96	-0.54	-0.41	-0.54	647803.76	736889.19	33°01'29.426"N	103°51'03.962"W	0.13
1600.00	1.060	37.417	1599.95	0.45	1.00	0.45	647804.75	736890.60	33°01'29.440"N	103°51'03.950"W	0.17
1700.00	1.010	33.657	1699.93	1.51	2.47	1.50	647805.80	736892.07	33°01'29.455"N	103°51'03.938"W	0.08
1800.00	1.180	48.607	1799.92	2.77	3.88	2.76	647807.06	736893.48	33°01'29.469"N	103°51'03.923"W	0.33
1900.00	1.880	66.137	1899.88	5.05	5.23	5.03	647809.33	736894.83	33°01'29.482"N	103°51'03.896"W	0.83
2000.00	2.130	70.997	1999.82	8.31	6.50	8.29	647812.59	736896.09	33°01'29.494"N	103°51'03.858"W	0.30
2100.00	2.220	74.527	2099.75	11.94	7.62	11.91	647816.21	736897.22	33°01'29.505"N	103°51'03.815"W	0.16
2200.00	1.940	79.367	2199.68	15.48	8.45	15.44	647819.74	736898.05	33°01'29.513"N	103°51'03.774"W	0.33
2300.00	1.610	78.277	2299.63	18.52	9.04	18.48	647822.78	736898.64	33°01'29.519"N	103°51'03.738"W	0.33
2400.00	1.380	74.207	2399.60	21.05	9.66	21.02	647825.32	736899.26	33°01'29.525"N	103°51'03.708"W	0.25
2500.00	1.080	77.827	2499.57	23.14	10.18	23.10	647827.40	736899.78	33°01'29.530"N	103°51'03.684"W	0.31
2600.00	0.920	71.627	2599.56	24.82	10.64	24.78	647829.08	736900.23	33°01'29.534"N	103°51'03.664"W	0.19
2700.00	0.880	60.277	2699.55	26.25	11.27	26.21	647830.51	736900.87	33°01'29.541"N	103°51'03.647"W	0.18
2800.00	0.950	68.897	2799.53	27.69	11.95	27.65	647831.95	736901.55	33°01'29.547"N	103°51'03.630"W	0.15
2900.00	0.860	64.267	2899.52	29.15	12.57	29.10	647833.40	736902.17	33°01'29.553"N	103°51'03.613"W	0.12

Actual Wellpath Report

No. 2H AWP

Page 3 of 13

REFERENCE WELLPATH IDENTIFICATION			
Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
3000.00	0.690	57.687	2999.51	30.33	13.22	30.28	647834.58	736902.82	33°01'29.560"N	103°51'03.599"W	0.19
3100.00	0.570	49.727	3099.51	31.22	13.86	31.17	647835.47	736903.46	33°01'29.566"N	103°51'03.589"W	0.15
3200.00	0.450	65.457	3199.50	31.96	14.35	31.91	647836.21	736903.95	33°01'29.571"N	103°51'03.580"W	0.18
3300.00	0.250	49.977	3299.50	32.49	14.65	32.43	647836.73	736904.25	33°01'29.574"N	103°51'03.574"W	0.22
3400.00	0.430	75.407	3399.50	33.02	14.89	32.96	647837.26	736904.49	33°01'29.576"N	103°51'03.568"W	0.23
3500.00	0.400	33.707	3499.50	33.58	15.27	33.52	647837.82	736904.87	33°01'29.580"N	103°51'03.561"W	0.30
3600.00	0.350	85.327	3599.50	34.08	15.59	34.02	647838.32	736905.19	33°01'29.583"N	103°51'03.555"W	0.33
3700.00	0.420	74.317	3699.49	34.74	15.71	34.68	647838.97	736905.31	33°01'29.584"N	103°51'03.548"W	0.10
3800.00	0.230	113.547	3799.49	35.27	15.73	35.21	647839.51	736905.33	33°01'29.584"N	103°51'03.541"W	0.28
3900.00	0.270	94.587	3899.49	35.69	15.63	35.63	647839.93	736905.23	33°01'29.583"N	103°51'03.536"W	0.09
3953.00	0.220	102.837	3952.49	35.91	15.60	35.85	647840.15	736905.20	33°01'29.583"N	103°51'03.534"W	0.12
3960.00	0.190	91.190	3959.49	35.94	15.59	35.88	647840.18	736905.19	33°01'29.583"N	103°51'03.534"W	0.73
3990.00	0.280	88.160	3989.49	36.06	15.60	36.00	647840.30	736905.20	33°01'29.583"N	103°51'03.532"W	0.30
4020.00	0.150	81.730	4019.49	36.17	15.60	36.11	647840.41	736905.20	33°01'29.583"N	103°51'03.531"W	0.44
4050.00	0.170	89.650	4049.49	36.26	15.61	36.20	647840.50	736905.21	33°01'29.583"N	103°51'03.530"W	0.10
4080.00	0.090	103.040	4079.49	36.33	15.60	36.27	647840.56	736905.20	33°01'29.583"N	103°51'03.529"W	0.28
4110.00	0.180	97.400	4109.49	36.39	15.59	36.34	647840.63	736905.19	33°01'29.583"N	103°51'03.528"W	0.30
4140.00	0.260	98.110	4139.49	36.51	15.58	36.45	647840.75	736905.18	33°01'29.583"N	103°51'03.527"W	0.27
4170.00	0.250	93.870	4169.49	36.64	15.56	36.58	647840.88	736905.16	33°01'29.583"N	103°51'03.525"W	0.07
4200.00	0.250	99.460	4199.49	36.77	15.55	36.71	647841.01	736905.15	33°01'29.582"N	103°51'03.524"W	0.08
4230.00	0.300	102.960	4229.49	36.91	15.52	36.85	647841.15	736905.12	33°01'29.582"N	103°51'03.522"W	0.18
4260.00	0.310	105.410	4259.49	37.07	15.48	37.01	647841.31	736905.08	33°01'29.582"N	103°51'03.520"W	0.05
4290.00	0.380	103.180	4289.49	37.24	15.44	37.18	647841.48	736905.04	33°01'29.581"N	103°51'03.518"W	0.24
4320.00	0.310	101.060	4319.49	37.42	15.40	37.36	647841.66	736905.00	33°01'29.581"N	103°51'03.516"W	0.24
4350.00	0.330	103.980	4349.49	37.58	15.36	37.52	647841.82	736904.96	33°01'29.581"N	103°51'03.514"W	0.09
4380.00	0.380	102.880	4379.49	37.76	15.32	37.70	647842.00	736904.92	33°01'29.580"N	103°51'03.512"W	0.17
4410.00	0.430	99.230	4409.48	37.97	15.28	37.91	647842.21	736904.88	33°01'29.580"N	103°51'03.510"W	0.19
4440.00	0.410	95.590	4439.48	38.19	15.25	38.13	647842.43	736904.85	33°01'29.579"N	103°51'03.507"W	0.11
4470.00	0.310	98.200	4469.48	38.38	15.23	38.32	647842.61	736904.83	33°01'29.579"N	103°51'03.505"W	0.34
4500.00	0.430	101.580	4499.48	38.57	15.19	38.51	647842.80	736904.79	33°01'29.579"N	103°51'03.503"W	0.41

Actual Wellpath Report

No. 2H AWP

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IDENTIFICATION			
Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
4530.00	0.400	97.610	4529.48	38.78	15.16	38.72	647843.02	736904.76	33°01'29.579"N	103°51'03.500"W	0.14
4560.00	0.220	96.280	4559.48	38.94	15.14	38.88	647843.18	736904.74	33°01'29.578"N	103°51'03.498"W	0.60
4590.00	0.100	115.370	4589.48	39.02	15.12	38.96	647843.26	736904.72	33°01'29.578"N	103°51'03.497"W	0.43
4620.00	0.110	113.470	4619.48	39.07	15.10	39.01	647843.31	736904.70	33°01'29.578"N	103°51'03.497"W	0.04
4650.00	0.100	121.010	4649.48	39.12	15.07	39.06	647843.36	736904.67	33°01'29.578"N	103°51'03.496"W	0.06
4680.00	0.050	183.640	4679.48	39.14	15.05	39.08	647843.38	736904.64	33°01'29.577"N	103°51'03.496"W	0.30
4710.00	0.280	195.650	4709.48	39.12	14.96	39.06	647843.36	736904.56	33°01'29.577"N	103°51'03.496"W	0.77
4740.00	0.380	208.750	4739.48	39.05	14.80	39.00	647843.29	736904.40	33°01'29.575"N	103°51'03.497"W	0.42
4770.00	0.530	213.050	4769.48	38.93	14.60	38.87	647843.17	736904.20	33°01'29.573"N	103°51'03.498"W	0.51
4800.00	0.680	215.560	4799.48	38.75	14.34	38.69	647842.99	736903.94	33°01'29.570"N	103°51'03.501"W	0.51
4830.00	0.760	218.440	4829.48	38.52	14.04	38.47	647842.76	736903.64	33°01'29.567"N	103°51'03.503"W	0.29
4860.00	0.890	217.010	4859.47	38.25	13.70	38.20	647842.50	736903.30	33°01'29.564"N	103°51'03.506"W	0.44
4890.00	1.070	215.590	4889.47	37.95	13.28	37.90	647842.20	736902.88	33°01'29.560"N	103°51'03.510"W	0.61
4920.00	0.980	207.680	4919.46	37.67	12.83	37.62	647841.91	736902.43	33°01'29.556"N	103°51'03.513"W	0.56
4950.00	0.940	209.270	4949.46	37.42	12.39	37.38	647841.67	736901.99	33°01'29.551"N	103°51'03.516"W	0.16
4980.00	0.760	206.530	4979.46	37.21	11.99	37.17	647841.47	736901.59	33°01'29.547"N	103°51'03.519"W	0.61
5010.00	0.710	198.260	5009.45	37.07	11.64	37.02	647841.32	736901.24	33°01'29.544"N	103°51'03.520"W	0.39
5040.00	0.680	197.960	5039.45	36.95	11.29	36.91	647841.20	736900.89	33°01'29.540"N	103°51'03.522"W	0.10
5070.00	0.680	204.810	5069.45	36.82	10.96	36.78	647841.08	736900.56	33°01'29.537"N	103°51'03.523"W	0.27
5100.00	0.790	203.770	5099.45	36.66	10.61	36.62	647840.92	736900.21	33°01'29.534"N	103°51'03.525"W	0.37
5130.00	0.860	202.920	5129.44	36.49	10.22	36.45	647840.75	736899.81	33°01'29.530"N	103°51'03.527"W	0.24
5160.00	0.820	202.270	5159.44	36.32	9.81	36.28	647840.58	736899.41	33°01'29.526"N	103°51'03.529"W	0.14
5190.00	0.770	205.960	5189.44	36.15	9.43	36.11	647840.41	736899.03	33°01'29.522"N	103°51'03.531"W	0.24
5220.00	0.810	201.930	5219.43	35.98	9.05	35.94	647840.24	736898.65	33°01'29.518"N	103°51'03.533"W	0.23
5250.00	1.090	205.620	5249.43	35.77	8.60	35.74	647840.04	736898.20	33°01'29.514"N	103°51'03.536"W	0.95
5280.00	1.110	206.770	5279.42	35.52	8.08	35.49	647839.78	736897.68	33°01'29.509"N	103°51'03.539"W	0.10
5310.00	1.040	212.840	5309.42	35.24	7.59	35.21	647839.50	736897.19	33°01'29.504"N	103°51'03.542"W	0.45
5340.00	0.930	216.460	5339.41	34.94	7.17	34.92	647839.21	736896.77	33°01'29.500"N	103°51'03.545"W	0.42
5370.00	1.080	210.720	5369.41	34.65	6.73	34.63	647838.92	736896.33	33°01'29.495"N	103°51'03.549"W	0.60
5400.00	0.900	214.330	5399.41	34.37	6.29	34.35	647838.65	736895.89	33°01'29.491"N	103°51'03.552"W	0.63

Actual Wellpath Report

No. 2H AWP

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Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
5430.00	0.890	214.950	5429.40	34.10	5.91	34.08	647838.38	736895.51	33°01'29.487"N	103°51'03.555"W	0.05
5460.00	0.820	214.870	5459.40	33.85	5.54	33.83	647838.12	736895.14	33°01'29.484"N	103°51'03.558"W	0.23
5490.00	0.720	215.770	5489.40	33.61	5.21	33.59	647837.89	736894.81	33°01'29.480"N	103°51'03.561"W	0.34
5520.00	0.980	217.610	5519.39	33.34	4.85	33.33	647837.62	736894.45	33°01'29.477"N	103°51'03.564"W	0.87
5550.00	0.870	217.850	5549.39	33.05	4.47	33.03	647837.33	736894.07	33°01'29.473"N	103°51'03.568"W	0.37
5580.00	1.000	216.610	5579.38	32.75	4.08	32.73	647837.03	736893.68	33°01'29.469"N	103°51'03.571"W	0.44
5610.00	0.930	223.130	5609.38	32.43	3.69	32.41	647836.71	736893.29	33°01'29.465"N	103°51'03.575"W	0.43
5640.00	0.910	222.740	5639.38	32.10	3.34	32.08	647836.38	736892.94	33°01'29.462"N	103°51'03.579"W	0.07
5670.00	0.810	219.220	5669.37	31.80	3.00	31.79	647836.09	736892.60	33°01'29.459"N	103°51'03.582"W	0.38
5700.00	0.810	232.010	5699.37	31.50	2.71	31.49	647835.78	736892.31	33°01'29.456"N	103°51'03.586"W	0.60
5730.00	0.750	233.160	5729.37	31.17	2.46	31.16	647835.46	736892.06	33°01'29.453"N	103°51'03.590"W	0.21
5760.00	0.780	231.580	5759.36	30.85	2.21	30.85	647835.14	736891.81	33°01'29.451"N	103°51'03.593"W	0.12
5790.00	0.770	240.810	5789.36	30.52	1.99	30.51	647834.81	736891.59	33°01'29.449"N	103°51'03.597"W	0.42
5820.00	0.720	247.930	5819.36	30.17	1.82	30.16	647834.46	736891.42	33°01'29.447"N	103°51'03.602"W	0.35
5850.00	0.570	246.030	5849.36	29.85	1.69	29.85	647834.15	736891.29	33°01'29.446"N	103°51'03.605"W	0.50
5880.00	0.650	254.700	5879.36	29.55	1.58	29.55	647833.85	736891.18	33°01'29.445"N	103°51'03.609"W	0.41
5910.00	0.520	257.500	5909.35	29.26	1.51	29.25	647833.55	736891.11	33°01'29.444"N	103°51'03.612"W	0.44
5940.00	0.530	259.490	5939.35	28.99	1.45	28.98	647833.28	736891.05	33°01'29.443"N	103°51'03.615"W	0.07
5970.00	0.450	272.050	5969.35	28.73	1.43	28.73	647833.02	736891.03	33°01'29.443"N	103°51'03.618"W	0.44
6000.00	0.380	283.460	5999.35	28.52	1.46	28.51	647832.81	736891.06	33°01'29.443"N	103°51'03.621"W	0.36
6030.00	0.400	288.530	6029.35	28.32	1.52	28.32	647832.61	736891.12	33°01'29.444"N	103°51'03.623"W	0.13
6060.00	0.380	300.220	6059.35	28.14	1.60	28.13	647832.43	736891.20	33°01'29.445"N	103°51'03.625"W	0.27
6090.00	0.370	300.960	6089.35	27.97	1.70	27.96	647832.26	736891.30	33°01'29.446"N	103°51'03.627"W	0.04
6120.00	0.410	297.670	6119.35	27.79	1.80	27.78	647832.08	736891.40	33°01'29.447"N	103°51'03.629"W	0.15
6150.00	0.440	304.710	6149.35	27.60	1.91	27.59	647831.89	736891.51	33°01'29.448"N	103°51'03.632"W	0.20
6180.00	0.460	306.950	6179.35	27.41	2.05	27.40	647831.70	736891.65	33°01'29.449"N	103°51'03.634"W	0.09
6210.00	0.540	307.050	6209.35	27.20	2.21	27.19	647831.49	736891.81	33°01'29.451"N	103°51'03.636"W	0.27
6240.00	0.650	306.430	6239.34	26.95	2.40	26.94	647831.24	736892.00	33°01'29.453"N	103°51'03.639"W	0.37
6270.00	0.630	315.880	6269.34	26.70	2.61	26.69	647830.99	736892.21	33°01'29.455"N	103°51'03.642"W	0.36
6300.00	0.700	310.030	6299.34	26.45	2.85	26.44	647830.74	736892.45	33°01'29.457"N	103°51'03.645"W	0.32

Actual Wellpath Report

No. 2H AWP

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INTEQ

Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
6330.00	0.540	308.050	6329.34	26.20	3.06	26.19	647830.48	736892.66	33°01'29.459"N	103°51'03.648"W	0.54
6360.00	0.560	310.920	6359.34	25.98	3.24	25.96	647830.26	736892.84	33°01'29.461"N	103°51'03.651"W	0.11
6390.00	0.500	298.740	6389.34	25.75	3.40	25.74	647830.04	736893.00	33°01'29.463"N	103°51'03.653"W	0.42
6420.00	0.360	308.110	6419.33	25.56	3.52	25.55	647829.85	736893.12	33°01'29.464"N	103°51'03.656"W	0.52
6450.00	0.490	303.560	6449.33	25.38	3.65	25.37	647829.67	736893.25	33°01'29.465"N	103°51'03.658"W	0.45
6480.00	0.580	297.330	6479.33	25.14	3.79	25.13	647829.42	736893.39	33°01'29.467"N	103°51'03.661"W	0.36
6510.00	0.560	303.120	6509.33	24.88	3.94	24.87	647829.17	736893.54	33°01'29.468"N	103°51'03.664"W	0.20
6540.00	0.620	304.130	6539.33	24.63	4.11	24.61	647828.91	736893.71	33°01'29.470"N	103°51'03.667"W	0.20
6570.00	0.710	298.710	6569.33	24.33	4.29	24.31	647828.61	736893.89	33°01'29.472"N	103°51'03.670"W	0.37
6600.00	0.750	298.770	6599.33	24.00	4.47	23.98	647828.28	736894.07	33°01'29.473"N	103°51'03.674"W	0.13
6630.00	0.670	300.970	6629.32	23.67	4.66	23.66	647827.95	736894.26	33°01'29.475"N	103°51'03.678"W	0.28
6660.00	0.490	292.420	6659.32	23.41	4.80	23.39	647827.69	736894.40	33°01'29.477"N	103°51'03.681"W	0.66
6690.00	0.650	297.100	6689.32	23.14	4.92	23.12	647827.42	736894.52	33°01'29.478"N	103°51'03.684"W	0.56
6720.00	0.750	301.900	6719.32	22.82	5.11	22.80	647827.10	736894.71	33°01'29.480"N	103°51'03.688"W	0.39
6750.00	0.760	297.180	6749.32	22.48	5.30	22.46	647826.75	736894.90	33°01'29.482"N	103°51'03.692"W	0.21
6780.00	0.590	296.920	6779.31	22.16	5.46	22.14	647826.44	736895.06	33°01'29.483"N	103°51'03.695"W	0.57
6810.00	0.630	291.170	6809.31	21.87	5.59	21.85	647826.15	736895.19	33°01'29.485"N	103°51'03.699"W	0.24
6840.00	0.460	292.490	6839.31	21.61	5.70	21.58	647825.88	736895.30	33°01'29.486"N	103°51'03.702"W	0.57
6870.00	0.500	294.900	6869.31	21.38	5.80	21.35	647825.65	736895.40	33°01'29.487"N	103°51'03.705"W	0.15
6900.00	0.560	293.590	6899.31	21.12	5.91	21.10	647825.40	736895.51	33°01'29.488"N	103°51'03.708"W	0.20
6930.00	0.550	287.400	6929.31	20.85	6.01	20.83	647825.13	736895.61	33°01'29.489"N	103°51'03.711"W	0.20
6960.00	0.560	292.120	6959.30	20.58	6.11	20.56	647824.85	736895.71	33°01'29.490"N	103°51'03.714"W	0.16
6990.00	0.580	292.330	6989.30	20.30	6.22	20.28	647824.58	736895.82	33°01'29.491"N	103°51'03.717"W	0.07
7020.00	0.620	283.440	7019.30	20.01	6.32	19.98	647824.28	736895.92	33°01'29.492"N	103°51'03.721"W	0.34
7050.00	0.550	285.630	7049.30	19.71	6.40	19.68	647823.98	736896.00	33°01'29.493"N	103°51'03.724"W	0.24
7080.00	0.690	289.390	7079.30	19.40	6.49	19.38	647823.67	736896.09	33°01'29.494"N	103°51'03.728"W	0.49
7110.00	0.630	283.550	7109.30	19.07	6.59	19.05	647823.34	736896.19	33°01'29.495"N	103°51'03.732"W	0.30
7140.00	0.580	286.290	7139.29	18.76	6.67	18.74	647823.04	736896.27	33°01'29.496"N	103°51'03.735"W	0.19
7170.00	0.530	286.460	7169.29	18.49	6.76	18.46	647822.76	736896.36	33°01'29.496"N	103°51'03.739"W	0.17
7200.00	0.550	290.110	7199.29	18.22	6.85	18.19	647822.49	736896.45	33°01'29.497"N	103°51'03.742"W	0.13

Actual Wellpath Report

No. 2H AWP

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INTEQ

Operator				Slot	
Marshall & Winston, INC				No. 2H SHL	
Area				Well	
Chaves County, NM				No. 2H	
Field				Wellbore	
(Medlin) Sec 8, T15S, R31E				No. 2H AWP	
Facility				Sidetrack from	
Medlin Fed Com 8 No. 2H				No. 2 AWP at 8340.00 MD	

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
7230.00	0.340	293.870	7229.29	18.00	6.93	17.98	647822.27	736896.53	33°01'29.498"N	103°51'03.744"W	0.71
7260.00	0.190	295.020	7259.29	17.88	6.99	17.85	647822.15	736896.59	33°01'29.499"N	103°51'03.746"W	0.50
7290.00	0.090	329.400	7289.29	17.82	7.03	17.79	647822.09	736896.63	33°01'29.499"N	103°51'03.746"W	0.42
7320.00	0.030	336.190	7319.29	17.80	7.06	17.78	647822.08	736896.66	33°01'29.499"N	103°51'03.747"W	0.20
7350.00	0.180	24.470	7349.29	17.82	7.11	17.79	647822.09	736896.71	33°01'29.500"N	103°51'03.746"W	0.54
7380.00	0.310	85.240	7379.29	17.92	7.16	17.89	647822.19	736896.76	33°01'29.500"N	103°51'03.745"W	0.91
7410.00	0.540	93.040	7409.29	18.14	7.16	18.12	647822.41	736896.76	33°01'29.500"N	103°51'03.743"W	0.79
7440.00	0.590	98.400	7439.29	18.44	7.13	18.41	647822.71	736896.73	33°01'29.500"N	103°51'03.739"W	0.24
7470.00	0.860	99.970	7469.29	18.81	7.06	18.78	647823.08	736896.66	33°01'29.499"N	103°51'03.735"W	0.90
7500.00	1.110	105.260	7499.28	19.31	6.95	19.29	647823.58	736896.55	33°01'29.498"N	103°51'03.729"W	0.89
7530.00	1.380	105.190	7529.27	19.94	6.78	19.92	647824.21	736896.38	33°01'29.496"N	103°51'03.722"W	0.90
7560.00	1.490	107.290	7559.26	20.66	6.57	20.64	647824.93	736896.17	33°01'29.494"N	103°51'03.713"W	0.41
7590.00	1.510	107.760	7589.25	21.41	6.33	21.38	647825.68	736895.93	33°01'29.492"N	103°51'03.704"W	0.08
7620.00	1.460	104.960	7619.24	22.15	6.11	22.13	647826.43	736895.71	33°01'29.490"N	103°51'03.696"W	0.29
7650.00	1.150	109.200	7649.24	22.81	5.91	22.78	647827.08	736895.51	33°01'29.488"N	103°51'03.688"W	1.08
7680.00	0.930	97.350	7679.23	23.33	5.78	23.31	647827.61	736895.38	33°01'29.486"N	103°51'03.682"W	1.02
7710.00	1.080	99.950	7709.23	23.85	5.70	23.83	647828.13	736895.30	33°01'29.486"N	103°51'03.676"W	0.52
7740.00	1.000	99.470	7739.22	24.39	5.61	24.37	647828.66	736895.21	33°01'29.485"N	103°51'03.669"W	0.27
7770.00	1.170	94.070	7769.22	24.95	5.55	24.93	647829.23	736895.15	33°01'29.484"N	103°51'03.663"W	0.66
7800.00	1.460	102.540	7799.21	25.63	5.44	25.61	647829.91	736895.04	33°01'29.483"N	103°51'03.655"W	1.16
7830.00	1.660	99.430	7829.20	26.43	5.29	26.41	647830.71	736894.89	33°01'29.481"N	103°51'03.645"W	0.72
7860.00	1.830	101.780	7859.18	27.33	5.12	27.31	647831.61	736894.72	33°01'29.480"N	103°51'03.635"W	0.61
7890.00	2.020	101.290	7889.17	28.31	4.92	28.30	647832.59	736894.52	33°01'29.478"N	103°51'03.623"W	0.64
7920.00	1.930	104.730	7919.15	29.32	4.69	29.30	647833.60	736894.29	33°01'29.475"N	103°51'03.611"W	0.50
7950.00	2.300	103.790	7949.13	30.39	4.41	30.38	647834.67	736894.01	33°01'29.473"N	103°51'03.599"W	1.24
7980.00	2.210	104.960	7979.11	31.53	4.12	31.52	647835.82	736893.72	33°01'29.470"N	103°51'03.585"W	0.34
8010.00	2.220	104.360	8009.08	32.66	3.83	32.64	647836.94	736893.43	33°01'29.467"N	103°51'03.572"W	0.08
8040.00	2.290	103.150	8039.06	33.80	3.55	33.79	647838.09	736893.15	33°01'29.464"N	103°51'03.559"W	0.28
8070.00	2.140	106.140	8069.04	34.92	3.25	34.91	647839.21	736892.85	33°01'29.461"N	103°51'03.546"W	0.63
8100.00	2.620	103.330	8099.01	36.13	2.94	36.11	647840.41	736892.54	33°01'29.458"N	103°51'03.532"W	1.65

Actual Wellpath Report

No. 2H AWP

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WELL IDENTIFICATION			
Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
8130.00	2.810	102.320	8128.98	37.51	2.63	37.50	647841.80	736892.23	33°01'29.455"N	103°51'03.515"W	0.65
8160.00	3.030	103.550	8158.94	39.00	2.28	38.99	647843.29	736891.88	33°01'29.451"N	103°51'03.498"W	0.76
8190.00	2.860	100.110	8188.90	40.50	1.97	40.50	647844.79	736891.57	33°01'29.448"N	103°51'03.480"W	0.82
8220.00	2.710	102.880	8218.86	41.93	1.68	41.93	647846.22	736891.28	33°01'29.445"N	103°51'03.463"W	0.67
8250.00	2.630	98.950	8248.83	43.30	1.41	43.30	647847.59	736891.01	33°01'29.442"N	103°51'03.447"W	0.67
8280.00	2.500	98.910	8278.80	44.63	1.20	44.62	647848.92	736890.80	33°01'29.440"N	103°51'03.432"W	0.43
8310.00	2.550	97.280	8308.77	45.93	1.02	45.93	647850.23	736890.62	33°01'29.438"N	103°51'03.416"W	0.29
8340.00	2.450	98.940	8338.74	47.23	0.83	47.23	647851.52	736890.43	33°01'29.436"N	103°51'03.401"W	0.41
8360.00	5.300	81.800	8358.70	48.57	0.90	48.56	647852.86	736890.50	33°01'29.437"N	103°51'03.385"W	15.23
8392.00	10.600	81.800	8390.38	52.95	1.53	52.94	647857.24	736891.13	33°01'29.443"N	103°51'03.334"W	16.56
8424.00	16.700	82.500	8421.46	60.43	2.55	60.42	647864.72	736892.15	33°01'29.453"N	103°51'03.246"W	19.07
8455.00	23.100	79.700	8450.59	70.85	4.22	70.83	647875.13	736893.82	33°01'29.469"N	103°51'03.124"W	20.87
8485.00	29.200	77.800	8477.51	83.81	6.82	83.79	647888.08	736896.42	33°01'29.494"N	103°51'02.971"W	20.52
8516.00	35.100	76.100	8503.75	99.88	10.56	99.84	647904.14	736900.16	33°01'29.530"N	103°51'02.783"W	19.25
8548.00	39.900	75.800	8529.13	118.79	15.30	118.74	647923.03	736904.89	33°01'29.576"N	103°51'02.561"W	15.01
8580.00	44.300	76.500	8552.86	139.64	20.42	139.56	647943.85	736910.02	33°01'29.626"N	103°51'02.316"W	13.83
8611.00	47.100	78.200	8574.51	161.30	25.27	161.21	647965.50	736914.87	33°01'29.673"N	103°51'02.061"W	9.85
8643.00	51.000	80.600	8595.48	185.07	29.70	184.96	647989.25	736919.30	33°01'29.716"N	103°51'01.782"W	13.44
8675.00	55.900	81.700	8614.53	210.48	33.65	210.35	648014.64	736923.25	33°01'29.754"N	103°51'01.484"W	15.56
8706.00	60.900	82.400	8630.77	236.64	37.30	236.49	648040.78	736926.89	33°01'29.789"N	103°51'01.176"W	16.24
8737.00	65.200	84.400	8644.82	264.09	40.46	263.94	648068.22	736930.06	33°01'29.819"N	103°51'00.854"W	15.01
8769.00	67.800	87.100	8657.58	293.36	42.63	293.20	648097.48	736932.23	33°01'29.839"N	103°51'00.510"W	11.22
8800.00	71.300	89.400	8668.41	322.39	43.51	322.22	648126.50	736933.11	33°01'29.846"N	103°51'00.169"W	13.26
8832.00	74.600	88.900	8677.79	352.97	43.96	352.81	648157.08	736933.56	33°01'29.849"N	103°50'59.810"W	10.42
8864.00	77.900	89.000	8685.40	384.05	44.53	383.88	648188.16	736934.13	33°01'29.853"N	103°50'59.445"W	10.32
8895.00	79.800	91.100	8691.39	414.46	44.51	414.29	648218.57	736934.10	33°01'29.852"N	103°50'59.088"W	9.04
8927.00	81.600	93.100	8696.56	446.01	43.35	445.85	648250.12	736932.94	33°01'29.839"N	103°50'58.717"W	8.35
8943.00	81.900	93.200	8698.86	461.82	42.48	461.66	648265.93	736932.07	33°01'29.830"N	103°50'58.532"W	1.97
8965.00	84.400	93.200	8701.48	483.62	41.26	483.47	648287.73	736930.86	33°01'29.817"N	103°50'58.276"W	11.36
8997.00	88.100	93.200	8703.58	515.49	39.48	515.34	648319.61	736929.07	33°01'29.797"N	103°50'57.901"W	11.56

Actual Wellpath Report

No. 2H AWP

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Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWP
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWP at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
9028.00	87.900	94.100	8704.66	546.40	37.50	546.26	648350.52	736927.10	33°01'29.777"N	103°50'57.538"W	2.97
9060.00	88.800	94.200	8705.58	578.29	35.19	578.16	648382.42	736924.79	33°01'29.752"N	103°50'57.164"W	2.83
9092.00	90.400	93.900	8705.80	610.20	32.93	610.08	648414.34	736922.53	33°01'29.728"N	103°50'56.789"W	5.09
9124.00	91.400	92.400	8705.30	642.14	31.17	642.03	648446.28	736920.77	33°01'29.710"N	103°50'56.414"W	5.63
9156.00	92.500	91.300	8704.21	674.10	30.14	673.99	648478.25	736919.74	33°01'29.698"N	103°50'56.039"W	4.86
9188.00	93.100	91.000	8702.65	706.05	29.50	705.95	648510.20	736919.09	33°01'29.690"N	103°50'55.663"W	2.10
9220.00	92.100	90.700	8701.20	738.02	29.02	737.91	648542.16	736918.62	33°01'29.684"N	103°50'55.288"W	3.26
9251.00	90.100	89.900	8700.60	769.01	28.86	768.90	648573.15	736918.46	33°01'29.681"N	103°50'54.924"W	6.95
9283.00	90.100	89.400	8700.55	801.01	29.06	800.90	648605.15	736918.65	33°01'29.681"N	103°50'54.548"W	1.56
9315.00	90.100	88.900	8700.49	833.00	29.53	832.90	648637.14	736919.13	33°01'29.685"N	103°50'54.172"W	1.56
9346.00	90.100	87.600	8700.44	863.99	30.48	863.88	648668.12	736920.08	33°01'29.693"N	103°50'53.808"W	4.19
9378.00	90.200	86.600	8700.35	895.96	32.10	895.84	648700.08	736921.69	33°01'29.707"N	103°50'53.433"W	3.14
9410.00	89.500	86.500	8700.44	927.91	34.02	927.78	648732.02	736923.62	33°01'29.725"N	103°50'53.058"W	2.21
9442.00	89.400	86.500	8700.74	959.85	35.98	959.72	648763.96	736925.57	33°01'29.743"N	103°50'52.683"W	0.31
9473.00	89.500	87.000	8701.04	990.81	37.73	990.67	648794.90	736927.33	33°01'29.759"N	103°50'52.319"W	1.64
9505.00	89.500	86.800	8701.32	1022.77	39.46	1022.62	648826.85	736929.06	33°01'29.774"N	103°50'51.944"W	0.62
9537.00	89.400	87.300	8701.63	1054.73	41.11	1054.58	648858.81	736930.71	33°01'29.789"N	103°50'51.568"W	1.59
9569.00	89.500	87.300	8701.93	1086.70	42.62	1086.54	648890.77	736932.21	33°01'29.802"N	103°50'51.193"W	0.31
9601.00	90.600	88.700	8701.91	1118.68	43.73	1118.52	648922.74	736933.33	33°01'29.812"N	103°50'50.817"W	5.56
9633.00	90.100	88.900	8701.71	1150.67	44.40	1150.51	648954.73	736934.00	33°01'29.817"N	103°50'50.441"W	1.68
9665.00	90.300	89.100	8701.60	1182.67	44.96	1182.51	648986.73	736934.56	33°01'29.821"N	103°50'50.066"W	0.88
9696.00	90.400	90.200	8701.41	1213.67	45.15	1213.51	649017.72	736934.75	33°01'29.822"N	103°50'49.701"W	3.56
9728.00	90.700	92.000	8701.10	1245.66	44.54	1245.50	649049.71	736934.13	33°01'29.814"N	103°50'49.326"W	5.70
9760.00	91.300	91.800	8700.54	1277.63	43.48	1277.47	649081.69	736933.07	33°01'29.802"N	103°50'48.950"W	1.98
9792.00	90.800	91.700	8699.96	1309.61	42.50	1309.45	649113.66	736932.10	33°01'29.791"N	103°50'48.575"W	1.59
9824.00	90.300	91.200	8699.65	1341.59	41.69	1341.44	649145.65	736931.29	33°01'29.782"N	103°50'48.199"W	2.21
9855.00	90.300	91.800	8699.49	1372.58	40.88	1372.43	649176.64	736930.48	33°01'29.772"N	103°50'47.835"W	1.94
9887.00	90.200	91.500	8699.35	1404.56	39.96	1404.42	649208.62	736929.55	33°01'29.762"N	103°50'47.460"W	0.99
9919.00	90.200	91.700	8699.24	1436.54	39.06	1436.40	649240.61	736928.66	33°01'29.751"N	103°50'47.084"W	0.62
9950.00	90.000	91.400	8699.18	1467.53	38.23	1467.39	649271.59	736927.82	33°01'29.742"N	103°50'46.720"W	1.16

Actual Wellpath Report

No. 2H AWP

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Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
9981.00	89.600	91.000	8699.29	1498.52	37.58	1498.39	649302.58	736927.17	33°01'29.734"N	103°50'46.356"W	1.82
10019.00	88.900	89.900	8699.79	1536.51	37.28	1536.38	649340.58	736926.88	33°01'29.729"N	103°50'45.910"W	3.43
10051.00	88.400	89.900	8700.54	1568.50	37.33	1568.37	649372.56	736926.93	33°01'29.728"N	103°50'45.534"W	1.56
10083.00	89.100	90.000	8701.24	1600.50	37.36	1600.36	649404.55	736926.96	33°01'29.727"N	103°50'45.158"W	2.21
10115.00	88.300	89.900	8701.97	1632.49	37.39	1632.35	649436.54	736926.99	33°01'29.726"N	103°50'44.783"W	2.52
10147.00	87.100	89.900	8703.25	1664.46	37.45	1664.33	649468.52	736927.04	33°01'29.725"N	103°50'44.407"W	3.75
10178.00	87.000	90.900	8704.85	1695.42	37.23	1695.29	649499.47	736926.83	33°01'29.721"N	103°50'44.044"W	3.24
10210.00	87.100	91.300	8706.49	1727.37	36.62	1727.24	649531.42	736926.21	33°01'29.714"N	103°50'43.668"W	1.29
10241.00	86.700	91.200	8708.17	1758.31	35.94	1758.19	649562.37	736925.54	33°01'29.706"N	103°50'43.305"W	1.33
10273.00	86.900	90.400	8709.96	1790.26	35.49	1790.13	649594.31	736925.09	33°01'29.700"N	103°50'42.930"W	2.57
10305.00	87.700	90.600	8711.46	1822.22	35.22	1822.09	649626.27	736924.81	33°01'29.696"N	103°50'42.554"W	2.58
10337.00	88.100	90.600	8712.64	1854.19	34.88	1854.07	649658.25	736924.48	33°01'29.691"N	103°50'42.179"W	1.25
10369.00	88.000	90.600	8713.72	1886.17	34.55	1886.05	649690.22	736924.14	33°01'29.686"N	103°50'41.803"W	0.31
10400.00	88.300	90.900	8714.73	1917.15	34.14	1917.03	649721.20	736923.74	33°01'29.681"N	103°50'41.440"W	1.37
10432.00	88.300	91.200	8715.68	1949.13	33.55	1949.01	649753.18	736923.15	33°01'29.673"N	103°50'41.064"W	0.94
10464.00	88.400	90.900	8716.60	1981.11	32.97	1980.99	649785.16	736922.57	33°01'29.666"N	103°50'40.688"W	0.99
10496.00	88.400	91.100	8717.49	2013.09	32.41	2012.98	649817.14	736922.01	33°01'29.659"N	103°50'40.313"W	0.62
10528.00	88.500	90.400	8718.36	2045.07	31.99	2044.96	649849.12	736921.59	33°01'29.653"N	103°50'39.937"W	2.21
10560.00	88.000	90.300	8719.33	2077.05	31.80	2076.95	649881.11	736921.39	33°01'29.650"N	103°50'39.562"W	1.59
10591.00	87.900	90.200	8720.44	2108.03	31.66	2107.93	649912.08	736921.26	33°01'29.647"N	103°50'39.198"W	0.46
10623.00	88.000	90.300	8721.59	2140.01	31.52	2139.91	649944.06	736921.12	33°01'29.644"N	103°50'38.822"W	0.44
10655.00	87.900	90.500	8722.73	2171.99	31.30	2171.88	649976.04	736920.90	33°01'29.641"N	103°50'38.447"W	0.70
10687.00	87.800	90.200	8723.93	2203.96	31.10	2203.86	650008.01	736920.70	33°01'29.637"N	103°50'38.071"W	0.99
10718.00	87.800	89.800	8725.12	2234.94	31.10	2234.84	650038.99	736920.70	33°01'29.636"N	103°50'37.707"W	1.29
10750.00	87.200	88.800	8726.52	2266.91	31.49	2266.80	650070.95	736921.09	33°01'29.638"N	103°50'37.332"W	3.64
10782.00	87.700	88.500	8727.94	2298.87	32.25	2298.76	650102.91	736921.84	33°01'29.644"N	103°50'36.956"W	1.82
10814.00	87.400	89.400	8729.31	2330.84	32.83	2330.73	650134.87	736922.43	33°01'29.649"N	103°50'36.581"W	2.96
10846.00	87.400	90.000	8730.76	2362.81	33.00	2362.70	650166.84	736922.60	33°01'29.649"N	103°50'36.206"W	1.87
10877.00	87.300	90.500	8732.19	2393.77	32.86	2393.66	650197.80	736922.46	33°01'29.646"N	103°50'35.842"W	1.64
10909.00	87.400	91.800	8733.67	2425.73	32.22	2425.62	650229.76	736921.82	33°01'29.638"N	103°50'35.467"W	4.07

Actual Wellpath Report

No. 2H AWP

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INTEQ

Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWP
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWP at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
10941.00	87.500	92.100	8735.10	2457.67	31.13	2457.57	650261.70	736920.73	33°01'29.626"N	103°50'35.091"W	0.99
10973.00	87.600	91.500	8736.47	2489.62	30.13	2489.53	650293.66	736919.73	33°01'29.614"N	103°50'34.716"W	1.90
11005.00	87.600	90.800	8737.81	2521.59	29.49	2521.49	650325.62	736919.09	33°01'29.607"N	103°50'34.341"W	2.19
11037.00	87.500	90.700	8739.17	2553.55	29.07	2553.46	650357.59	736918.67	33°01'29.601"N	103°50'33.965"W	0.44
11069.00	87.700	90.100	8740.51	2585.52	28.85	2585.43	650389.55	736918.44	33°01'29.597"N	103°50'33.590"W	1.97
11101.00	88.500	90.400	8741.57	2617.50	28.71	2617.41	650421.53	736918.31	33°01'29.595"N	103°50'33.214"W	2.67
11132.00	88.500	90.500	8742.39	2648.49	28.46	2648.40	650452.52	736918.06	33°01'29.591"N	103°50'32.850"W	0.32
11164.00	88.500	89.700	8743.22	2680.48	28.41	2680.39	650484.51	736918.01	33°01'29.589"N	103°50'32.475"W	2.50
11196.00	88.500	90.000	8744.06	2712.47	28.49	2712.38	650516.49	736918.09	33°01'29.588"N	103°50'32.099"W	0.94
11228.00	88.500	88.900	8744.90	2744.45	28.80	2744.36	650548.48	736918.40	33°01'29.590"N	103°50'31.723"W	3.44
11260.00	88.500	89.000	8745.74	2776.44	29.38	2776.35	650580.46	736918.98	33°01'29.594"N	103°50'31.348"W	0.31
11292.00	88.600	89.500	8746.55	2808.43	29.80	2808.34	650612.44	736919.40	33°01'29.597"N	103°50'30.972"W	1.59
11324.00	88.700	88.900	8747.30	2840.42	30.25	2840.32	650644.43	736919.85	33°01'29.599"N	103°50'30.596"W	1.90
11356.00	89.500	88.900	8747.80	2872.41	30.86	2872.31	650676.42	736920.46	33°01'29.604"N	103°50'30.221"W	2.50
11388.00	89.500	88.400	8748.08	2904.40	31.62	2904.30	650708.41	736921.22	33°01'29.610"N	103°50'29.845"W	1.56
11419.00	89.700	89.000	8748.30	2935.40	32.32	2935.29	650739.39	736921.92	33°01'29.616"N	103°50'29.481"W	2.04
11451.00	89.400	89.300	8748.55	2967.39	32.80	2967.29	650771.39	736922.39	33°01'29.619"N	103°50'29.105"W	1.33
11483.00	89.400	89.200	8748.88	2999.39	33.22	2999.28	650803.38	736922.81	33°01'29.621"N	103°50'28.729"W	0.31
11515.00	89.100	89.700	8749.30	3031.39	33.52	3031.28	650835.37	736923.12	33°01'29.623"N	103°50'28.353"W	1.82
11547.00	88.900	90.500	8749.86	3063.38	33.47	3063.28	650867.37	736923.06	33°01'29.621"N	103°50'27.978"W	2.58
11578.00	89.600	90.900	8750.27	3094.37	33.09	3094.27	650898.36	736922.69	33°01'29.616"N	103°50'27.614"W	2.60
11610.00	90.000	91.400	8750.38	3126.36	32.45	3126.26	650930.35	736922.04	33°01'29.608"N	103°50'27.238"W	2.00
11642.00	90.300	91.600	8750.30	3158.35	31.61	3158.25	650962.34	736921.21	33°01'29.598"N	103°50'26.862"W	1.13
11674.00	90.400	91.700	8750.10	3190.33	30.69	3190.24	650994.32	736920.28	33°01'29.588"N	103°50'26.487"W	0.44
11705.00	90.500	92.000	8749.86	3221.31	29.69	3221.22	651025.30	736919.28	33°01'29.576"N	103°50'26.123"W	1.02
11737.00	90.600	91.500	8749.55	3253.29	28.71	3253.20	651057.28	736918.31	33°01'29.565"N	103°50'25.747"W	1.59
11769.00	90.400	91.400	8749.27	3285.28	27.90	3285.19	651089.27	736917.50	33°01'29.556"N	103°50'25.372"W	0.70
11801.00	90.400	91.700	8749.05	3317.26	27.03	3317.18	651121.26	736916.63	33°01'29.546"N	103°50'24.996"W	0.94
11833.00	90.400	91.500	8748.82	3349.24	26.14	3349.17	651153.24	736915.74	33°01'29.535"N	103°50'24.620"W	0.62
11865.00	90.700	90.300	8748.52	3381.23	25.64	3381.16	651185.23	736915.24	33°01'29.529"N	103°50'24.245"W	3.87

Actual Wellpath Report

No. 2H AWP

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INTEQ

Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
11897.00	90.500	88.800	8748.18	3413.23	25.89	3413.16	651217.23	736915.49	33°01'29.530"N	103°50'23.869"W	4.73
11929.00	90.000	88.300	8748.04	3445.22	26.70	3445.15	651249.21	736916.30	33°01'29.536"N	103°50'23.493"W	2.21
11960.00	89.600	88.400	8748.15	3476.21	27.59	3476.13	651280.20	736917.19	33°01'29.544"N	103°50'23.129"W	1.33
11992.00	89.200	88.000	8748.49	3508.20	28.60	3508.12	651312.18	736918.19	33°01'29.552"N	103°50'22.754"W	1.77
12024.00	89.000	88.300	8748.99	3540.18	29.63	3540.10	651344.15	736919.23	33°01'29.561"N	103°50'22.378"W	1.13
12056.00	89.000	88.700	8749.55	3572.17	30.47	3572.08	651376.14	736920.06	33°01'29.568"N	103°50'22.002"W	1.25
12088.00	90.300	88.700	8749.74	3604.16	31.19	3604.07	651408.13	736920.79	33°01'29.573"N	103°50'21.626"W	4.06
12119.00	90.400	89.400	8749.55	3635.16	31.71	3635.06	651439.12	736921.30	33°01'29.577"N	103°50'21.262"W	2.28
12151.00	90.400	89.200	8749.33	3667.16	32.10	3667.06	651471.11	736921.70	33°01'29.579"N	103°50'20.887"W	0.62
12185.00	92.000	90.100	8748.62	3701.15	32.31	3701.05	651505.10	736921.90	33°01'29.580"N	103°50'20.487"W	5.40
12217.00	91.600	90.000	8747.61	3733.13	32.28	3733.04	651537.08	736921.88	33°01'29.578"N	103°50'20.112"W	1.29
12249.00	91.300	90.400	8746.80	3765.12	32.17	3765.03	651569.07	736921.76	33°01'29.576"N	103°50'19.736"W	1.56
12280.00	90.400	90.500	8746.34	3796.12	31.92	3796.02	651600.06	736921.52	33°01'29.572"N	103°50'19.372"W	2.92
12311.00	90.400	90.600	8746.13	3827.11	31.62	3827.02	651631.06	736921.22	33°01'29.567"N	103°50'19.008"W	0.32
12343.00	90.900	90.500	8745.76	3859.11	31.32	3859.02	651663.05	736920.92	33°01'29.563"N	103°50'18.632"W	1.59
12375.00	91.100	90.800	8745.20	3891.10	30.95	3891.01	651695.04	736920.55	33°01'29.558"N	103°50'18.257"W	1.13
12406.00	91.200	90.700	8744.58	3922.09	30.55	3922.00	651726.03	736920.15	33°01'29.552"N	103°50'17.893"W	0.46
12438.00	91.200	90.400	8743.91	3954.08	30.24	3953.99	651758.02	736919.84	33°01'29.548"N	103°50'17.517"W	0.94
12470.00	91.700	90.500	8743.10	3986.07	29.99	3985.98	651790.01	736919.59	33°01'29.544"N	103°50'17.141"W	1.59
12502.00	91.900	90.600	8742.10	4018.05	29.68	4017.96	651821.99	736919.28	33°01'29.539"N	103°50'16.766"W	0.70
12533.00	91.900	90.600	8741.07	4049.03	29.36	4048.94	651852.97	736918.96	33°01'29.535"N	103°50'16.402"W	0.00
12565.00	92.000	90.900	8739.98	4081.00	28.94	4080.92	651884.94	736918.54	33°01'29.529"N	103°50'16.026"W	0.99
12597.00	92.000	91.100	8738.86	4112.98	28.38	4112.90	651916.92	736917.98	33°01'29.522"N	103°50'15.651"W	0.62
12629.00	92.000	91.300	8737.75	4144.95	27.71	4144.87	651948.89	736917.31	33°01'29.514"N	103°50'15.275"W	0.62
12661.00	92.100	91.200	8736.60	4176.92	27.01	4176.84	651980.86	736916.61	33°01'29.505"N	103°50'14.900"W	0.44
12692.00	91.100	90.800	8735.74	4207.90	26.47	4207.83	652011.84	736916.07	33°01'29.499"N	103°50'14.536"W	3.47
12724.00	90.600	90.600	8735.26	4239.89	26.08	4239.82	652043.83	736915.68	33°01'29.493"N	103°50'14.160"W	1.68
12755.00	90.600	90.500	8734.94	4270.88	25.79	4270.82	652074.83	736915.38	33°01'29.489"N	103°50'13.796"W	0.32
12787.00	90.500	90.300	8734.63	4302.88	25.56	4302.81	652106.82	736915.16	33°01'29.485"N	103°50'13.420"W	0.70
12819.00	90.600	90.200	8734.32	4334.88	25.42	4334.81	652138.82	736915.02	33°01'29.482"N	103°50'13.045"W	0.44

Actual Wellpath Report

No. 2H AWP

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Operator	Marshall & Winston, INC	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Medlin) Sec 8, T15S, R31E	Wellbore	No. 2H AWB
Facility	Medlin Fed Com 8 No. 2H	Sidetrack from	No. 2 AWB at 8340.00 MD

WELLPATH DATA (339 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
12851.00	90.600	90.100	8733.99	4366.88	25.34	4366.81	652170.81	736914.94	33°01'29.480"N	103°50'12.669"W	0.31
12882.00	90.500	89.900	8733.69	4397.87	25.34	4397.81	652201.81	736914.94	33°01'29.478"N	103°50'12.305"W	0.72
12913.00	90.600	89.800	8733.39	4428.87	25.42	4428.81	652232.81	736915.02	33°01'29.478"N	103°50'11.941"W	0.46
12945.00	90.400	89.600	8733.11	4460.87	25.59	4460.81	652264.80	736915.19	33°01'29.478"N	103°50'11.565"W	0.88
12977.00	92.000	89.700	8732.44	4492.86	25.78	4492.80	652296.79	736915.38	33°01'29.478"N	103°50'11.189"W	5.01
13009.00	92.000	89.700	8731.33	4524.84	25.95	4524.78	652328.77	736915.55	33°01'29.479"N	103°50'10.814"W	0.00
13041.00	92.100	89.700	8730.18	4556.82	26.12	4556.76	652360.75	736915.72	33°01'29.479"N	103°50'10.438"W	0.31
13072.00	92.000	89.600	8729.07	4587.80	26.31	4587.74	652391.72	736915.91	33°01'29.479"N	103°50'10.074"W	0.46
13103.00†	92.000	89.600	8727.99	4618.78	26.52	4618.72	652422.70	736916.12	33°01'29.480"N	103°50'09.710"W	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 2H BHL		8700.00	17.80	4631.71	652435.70	736907.40	33°01'29.393"N	103°50'09.558"W	point

WELLPATH COMPOSITION Ref Wellbore: No. 2H AWB Ref Wellpath: No. 2H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	3953.00	Generic gyro - continuous (Standard)	Gyro	No. 2 AWB
3953.00	8340.00	Dip meter (survey qualified)	Wireline	No. 2 AWB
8340.00	8943.00	NaviTrak (Standard)	MWD	No. 2H AWB
8943.00	13072.00	AutoTrak G3 (Standard)	ATK G3	No. 2H AWB
13072.00	13103.00	Blind Drilling (std)	Projection to bit	No. 2H AWB