

MEWBOURNE OIL

Tonto Bone Springs
Lea County, NM
Spyglass 17 Federal Com #1H
VH - Job #32K0111069

RECEIVED

APR 11 2011
HOBBSOCD

Survey: Actual

SDI Standard Survey Report

27 January, 2011

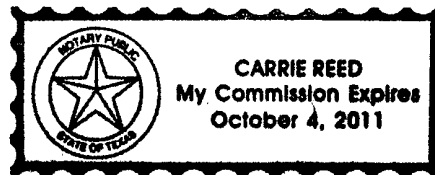
This survey is correct to the best of my knowledge and is supported by actual field data.

Shasta

Notarized this date 27th of January, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



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FEB 25 2011

BY:

Scientific Drilling International, Inc.

SDI Standard Survey Report

Company:	MEWBOURNE OIL	Local Co-ordinate Reference:	Well Spyglass 17 Federal Com #1H
Project:	Tonto Bone Springs	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Spyglass 17 Federal Com #1H	North Reference:	Grid
Wellbore:	VH - Job #32K0111069	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0111069	Database:	EDM-Regulatory

Project	Tonto Bone Springs		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Lea County, NM		
Site Position:		Northing:	424,703.02 usft
From:	Lat/Long	Easting:	698,452.73 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 9' 57.600 N
		Longitude:	103° 41' 31.200 W
		Grid Convergence:	0.34 °

Well	Spyglass 17 Federal Com #1H; Directional (Baker Integ)		
Well Position	+N/-S	0.0 usft	Northing: 424,703.02 usft
	+E/-W	0.0 usft	Easting: 698,452.73 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 9' 57.600 N
		Longitude:	103° 41' 31.200 W
		Ground Level:	0.0 usft

Wellbore	VH - Job #32K0111069				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	BGGM2010	1/24/2011	(°)	(°)	(nT)
			7.74	60.13	48,668

Design	VH - Job #32K0111069				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	89.62	

Survey Program	Date 1/27/2011				
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.0	9,100.0	Actual (VH - Job #32K0111069)	Keeper	Keeper Gyro	

Survey								
Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance	
(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
100.0	0.13	101.48	100.0	0.0	0.1	101.48	0.1	
200.0	0.17	56.56	200.0	0.0	0.3	83.97	0.3	
300.0	0.05	115.49	300.0	0.1	0.5	78.94	0.5	
400.0	0.07	198.87	400.0	0.0	0.5	87.51	0.5	
500.0	0.25	217.76	500.0	-0.2	0.4	118.89	0.4	
600.0	0.41	207.44	600.0	-0.7	0.1	173.69	0.7	
700.0	0.50	190.86	700.0	-1.4	-0.2	186.72	1.5	
800.0	0.82	151.67	800.0	-2.5	0.1	178.00	2.5	
900.0	0.80	146.01	900.0	-3.7	0.8	167.58	3.8	
1,000.0	0.64	150.57	1,000.0	-4.8	1.5	162.76	5.0	
1,100.0	0.34	184.32	1,100.0	-5.6	1.7	162.67	5.8	

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Site:	Lea County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Spyglass 17 Federal Com #1H	North Reference:	Grid
Wellbore:	VH - Job #32K0111069	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0111069	Database:	EDM-Regulatory

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)		
1,200.0	0.57	218.96	1,200.0	-6.2	1.4	167.37	6.4		
1,300.0	0.68	226.80	1,300.0	-7.0	0.7	174.69	7.1		
1,400.0	0.64	216.74	1,400.0	-7.9	-0.1	180.82	7.9		
1,500.0	0.29	208.80	1,499.9	-8.6	-0.6	183.80	8.6		
1,600.0	0.24	219.26	1,599.9	-8.9	-0.8	185.26	9.0		
1,700.0	0.38	203.59	1,699.9	-9.4	-1.1	186.60	9.5		
1,800.0	0.24	160.94	1,799.9	-9.9	-1.2	186.64	10.0		
1,900.0	0.18	182.89	1,899.9	-10.3	-1.1	186.08	10.3		
2,000.0	0.25	197.70	1,999.9	-10.6	-1.2	186.27	10.7		
2,100.0	0.20	183.24	2,099.9	-11.0	-1.2	186.44	11.1		
2,200.0	0.03	311.79	2,199.9	-11.2	-1.3	186.50	11.2		
2,300.0	0.06	330.41	2,299.9	-11.1	-1.3	186.77	11.2		
2,400.0	0.53	19.04	2,399.9	-10.6	-1.2	186.41	10.7		
2,500.0	1.42	36.94	2,499.9	-9.2	-0.3	181.85	9.2		
2,600.0	1.76	37.77	2,599.9	-7.0	1.4	168.77	7.1		
2,700.0	1.85	41.44	2,699.8	-4.6	3.4	143.35	5.7		
2,800.0	1.99	41.73	2,799.8	-2.1	5.6	110.13	6.0		
2,900.0	1.56	43.82	2,899.7	0.2	7.7	88.38	7.7		
3,000.0	0.22	59.95	2,999.7	1.3	8.8	81.65	8.9		
3,100.0	0.72	207.01	3,099.7	0.8	8.7	84.54	8.7		
3,200.0	1.71	216.41	3,199.7	-0.9	7.5	97.02	7.6		
3,300.0	2.35	216.44	3,299.6	-3.8	5.4	124.81	6.6		
3,400.0	2.68	219.76	3,399.5	-7.2	2.7	159.36	7.7		
3,500.0	2.73	219.76	3,499.4	-10.9	-0.3	181.57	10.9		
3,600.0	2.84	218.56	3,599.3	-14.6	-3.4	192.96	15.0		
3,700.0	2.84	215.99	3,699.2	-18.6	-6.4	198.93	19.6		
3,800.0	2.72	215.51	3,799.1	-22.5	-9.2	202.24	24.3		
3,900.0	2.74	215.84	3,898.9	-26.4	-12.0	204.43	29.0		
4,000.0	2.73	216.95	3,998.8	-30.2	-14.8	206.11	33.6		
4,100.0	2.48	218.64	4,098.7	-33.8	-17.6	207.49	38.1		
4,200.0	1.95	225.08	4,198.7	-36.7	-20.1	208.77	41.9		
4,300.0	1.64	220.10	4,298.6	-39.0	-22.3	209.74	44.9		
4,400.0	1.56	219.21	4,398.6	-41.1	-24.1	210.32	47.7		
4,500.0	1.45	221.11	4,498.5	-43.1	-25.7	210.83	50.2		
4,600.0	1.15	216.83	4,598.5	-44.9	-27.2	211.19	52.5		
4,700.0	1.10	200.33	4,698.5	-46.6	-28.1	211.10	54.4		
4,800.0	1.02	195.27	4,798.5	-48.4	-28.7	210.67	56.2		
4,900.0	0.82	187.58	4,898.5	-49.9	-29.0	210.16	57.7		
5,000.0	0.87	186.44	4,998.4	-51.4	-29.2	209.60	59.1		
5,100.0	0.74	177.25	5,098.4	-52.8	-29.2	208.98	60.4		
5,200.0	0.58	176.10	5,198.4	-53.9	-29.2	208.41	61.3		
5,300.0	0.26	210.82	5,298.4	-54.6	-29.3	208.17	62.0		
5,400.0	0.20	243.84	5,398.4	-54.9	-29.5	208.27	62.4		
5,500.0	0.37	298.23	5,498.4	-54.8	-30.0	208.66	62.5		

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Site:	Lea County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Spyglass 17 Federal Com #1H	North Reference:	Grid
Wellbore:	VH - Job #32K0111069	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0111069	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	0.60	315.21	5,598.4	-54.3	-30.6	209.42	62.4
5,700.0	0.60	319.13	5,698.4	-53.5	-31.3	210.34	62.0
5,800.0	0.58	327.96	5,798.4	-52.7	-32.0	211.22	61.7
5,900.0	0.58	339.16	5,898.4	-51.8	-32.4	212.01	61.1
6,000.0	0.63	333.07	5,998.4	-50.9	-32.8	212.84	60.5
6,100.0	0.60	310.85	6,098.4	-50.0	-33.5	213.79	60.2
6,200.0	0.58	298.18	6,198.4	-49.4	-34.3	214.76	60.2
6,300.0	0.54	285.74	6,298.4	-49.1	-35.2	215.66	60.4
6,400.0	0.50	290.36	6,398.4	-48.8	-36.1	216.48	60.7
6,500.0	0.53	280.43	6,498.4	-48.6	-36.9	217.26	61.0
6,600.0	0.49	275.78	6,598.4	-48.4	-37.8	217.99	61.5
6,700.0	0.44	275.47	6,698.4	-48.4	-38.6	218.62	61.9
6,800.0	0.34	286.69	6,798.4	-48.2	-39.3	219.17	62.2
6,900.0	0.46	291.77	6,898.4	-48.0	-40.0	219.77	62.5
7,000.0	0.52	268.95	6,998.4	-47.9	-40.8	220.43	62.9
7,100.0	0.49	263.70	7,098.4	-47.9	-41.7	221.01	63.5
7,200.0	0.42	260.32	7,198.4	-48.0	-42.4	221.47	64.1
7,300.0	0.59	263.06	7,298.4	-48.1	-43.3	221.98	64.8
7,400.0	0.46	252.25	7,398.3	-48.3	-44.2	222.45	65.5
7,500.0	0.57	254.68	7,498.3	-48.6	-45.1	222.85	66.3
7,600.0	0.43	261.99	7,598.3	-48.8	-45.9	223.28	67.0
7,700.0	0.41	256.71	7,698.3	-48.9	-46.6	223.65	67.6
7,800.0	0.13	274.62	7,798.3	-49.0	-47.1	223.88	68.0
7,900.0	1.28	128.02	7,898.3	-49.7	-46.3	223.02	67.9
8,000.0	1.44	125.30	7,998.3	-51.1	-44.4	221.03	67.7
8,100.0	2.13	111.42	8,098.3	-52.5	-41.7	218.46	67.0
8,200.0	2.29	114.60	8,198.2	-54.0	-38.1	215.24	66.1
8,300.0	1.72	118.94	8,298.1	-55.5	-35.0	212.22	65.7
8,400.0	1.64	116.70	8,398.1	-56.9	-32.4	209.66	65.5
8,500.0	1.67	115.33	8,498.0	-58.2	-29.8	207.13	65.4
8,600.0	1.43	100.64	8,598.0	-59.0	-27.3	204.80	65.0
8,700.0	0.90	129.24	8,698.0	-59.8	-25.4	203.06	64.9
8,800.0	0.51	165.11	8,798.0	-60.7	-24.7	202.16	65.5
8,900.0	0.60	208.71	8,898.0	-61.6	-24.9	201.98	66.4
9,000.0	0.57	202.60	8,998.0	-62.5	-25.3	202.04	67.4
9,100.0	0.43	212.49	9,098.0	-63.3	-25.7	202.10	68.3



Scientific Drilling
Directional Drilling Operations

Project: Tonto Bone Springs
Lea County, NM
Well: Spyglass 17 Federal Com #1H
Wellbore: VH - Job #32K0111069
Design: VH - Job #32K0111069

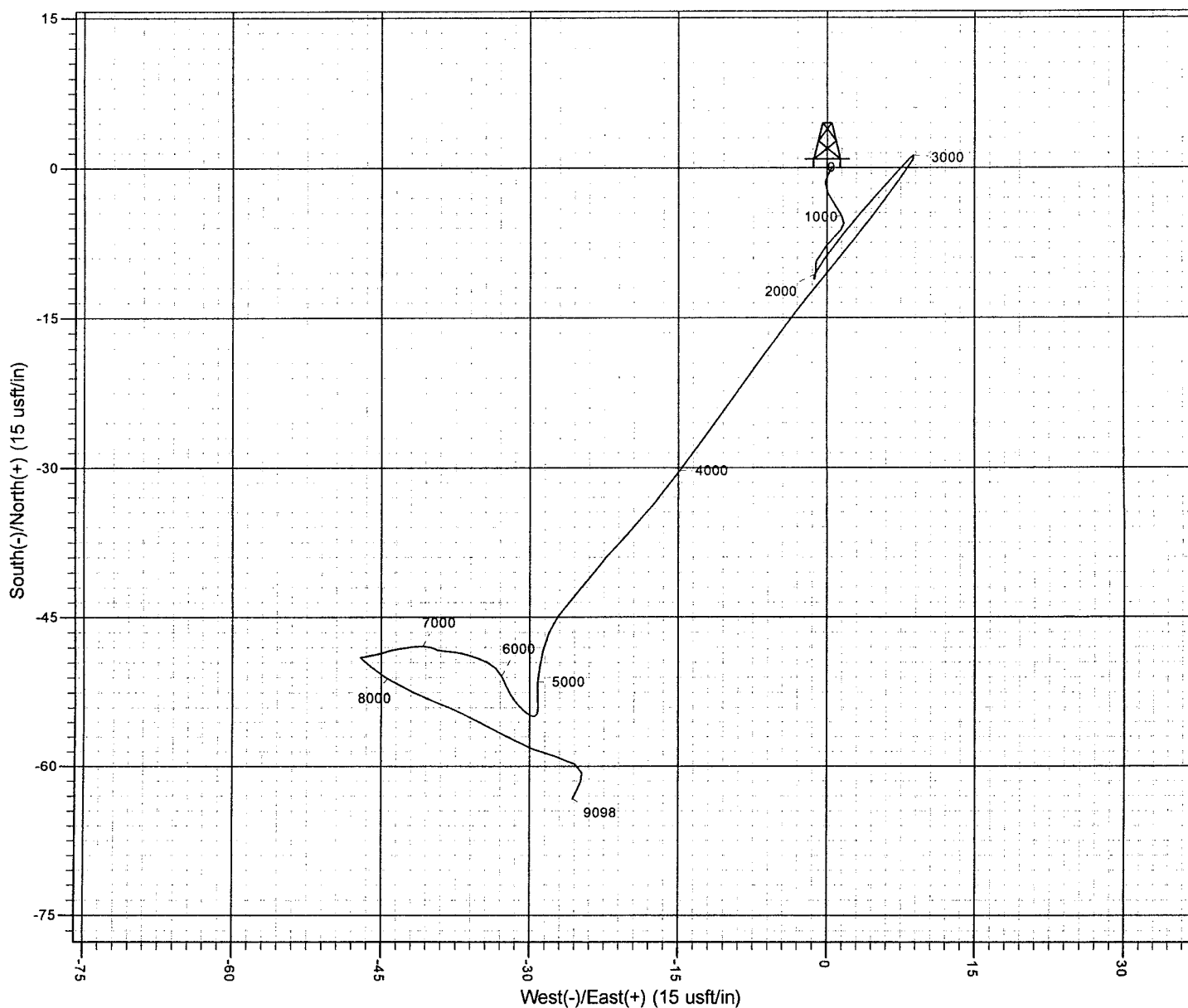


Azimuths to Grid North
True North: -0.34°
Magnetic North: 7.39°

Magnetic Field
Strength: 48667.5nT
Dip Angle: 60.13°
Date: 1/24/2011
Model: BGGM2010

WELL DETAILS: Spyglass 17 Federal Com #1H
WELL @ 0.0usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	424703.02	698452.73	32° 9' 57.600 N	103° 41' 31.200 W	



PROJECT DETAILS: Tonto Bone Springs
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

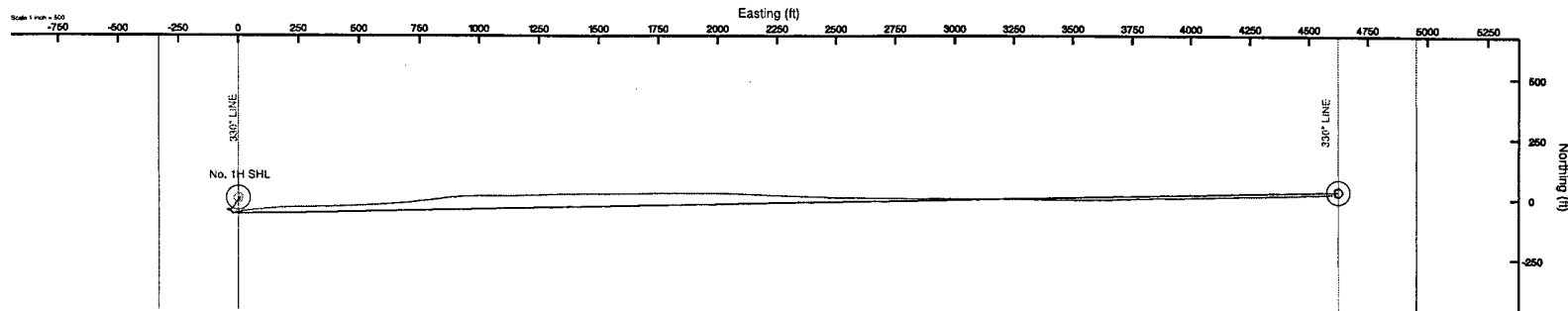
SITE DETAILS: Lea County, NM
Site Centre Latitude: 32° 9' 57.600 N
Longitude: 103° 41' 31.200 W
Positional Uncertainty: 0.0
Convergence: 0.34
Local North: Grid

Location: Lea County, NM
Field: (Spyglass) Sec 17, T19S, R33E
Facility: Spyglass Fed Com 17 No. 1H

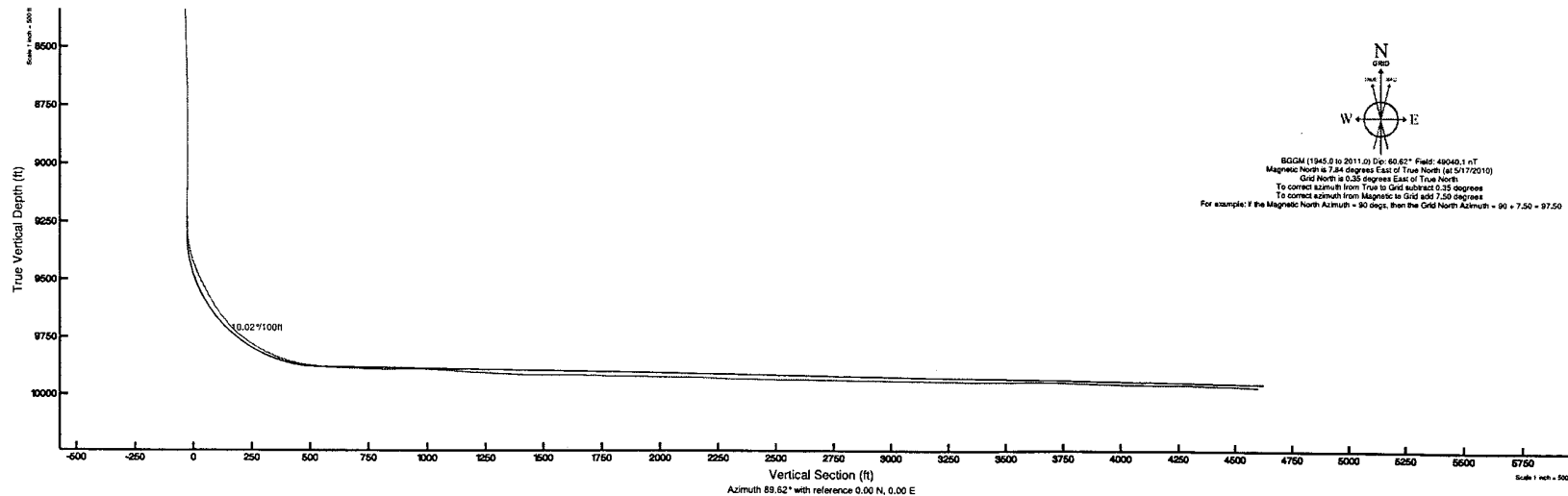
Slot: No. 1H SHL
Well: No. 1H
Wellbore: No. 1H PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*100ft)	VS (ft)
Tie On	9100.00	0.430	212.490	9097.95	-63.27	-25.69	0.00	-26.11
EST. KOP	9306.00	0.430	212.490	9303.95	-64.57	-26.52	0.00	-26.95
END OF CURVE	10196.11	88.951	88.781	9878.04	-56.15	534.77	10.02	534.38
No. 1H PBHL	14289.31	88.951	88.781	9953.00	30.93	4626.35	0.00	4626.45



Plot reference wellpath is Plan #2	Grid System: NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet
True vertical depths are referenced to Rig 45 on No. 1H SHL (KB)	North Reference: Grid north
Measured depths are referenced to Rig 45 on No. 1H SHL (KB)	Scale: True distance
Rig 45 on No. 1H SHL (KB) to Mean Sea Level: 3658 feet	Depths are in feet
Mean Sea Level to Mud line (Facility: Spyglass Fed Com 17 No. 1H): -3640 feet	Created by: gomasior on 1/24/2011
Coordinates are in feet referenced to Slot	

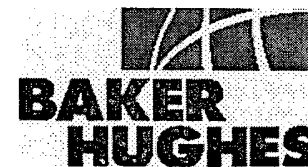


SDGM (1945.0 to 2011.0) Dip: 60.62° Field: 49040.1 nT
Magnetic North is 7.46 degrees East of True North (at 21702010)
Grid North is 0.35 degrees East of True North
To correct azimuth from True to Grid subtract 0.35 degrees
To correct azimuth from Magnetic to Grid add 7.50 degrees
For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.50 = 97.50

Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWB
Facility	Spyglass Fed Com 17 No. 1H		

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	Calhphik
Scale	0.999954	Report Generated	2/18/2011 at 7:31:52 AM
Convergence at slot	0.35° East	Database/Source file	WA_Midland/No.1H_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	697292.68	604981.53	32°39'41.608"N	103°41'32.116"W
Facility Reference Pt			697292.68	604981.53	32°39'41.608"N	103°41'32.116"W
Field Reference Pt			697292.68	604981.53	32°39'41.608"N	103°41'32.116"W

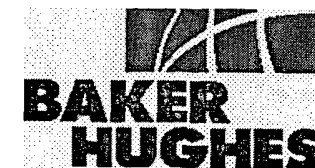
WELLPATH DATUM

Calculation method	Minimum curvature	Rig 45 on No. 1H SHL (KB) to GL	18.00ft
Horizontal Reference Pt	Slot	Rig 45 on No. 1H SHL (KB) to Mean Sea Level	3658.00ft
Vertical Reference Pt	Rig 45 on No. 1H SHL (KB)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig 45 on No. 1H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.62°

Actual Wellpath Report

No.1H AWP

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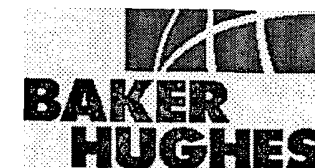
REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWP
Facility	Spyglass Fed Com 17 No. 1H		

WELLPATH DATA (250 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]	Comments
0.00	0.000	101.480	0.00	0.00	0.00	0.00	697292.68	604981.53	32°39'41.608"N	103°41'32.116"W	0.00	
100.00	0.130	101.480	100.00	0.11	-0.02	0.11	697292.79	604981.51	32°39'41.607"N	103°41'32.115"W	0.13	
200.00	0.170	56.560	200.00	0.35	0.04	0.35	697293.03	604981.57	32°39'41.608"N	103°41'32.112"W	0.12	
300.00	0.050	115.490	300.00	0.51	0.10	0.51	697293.19	604981.63	32°39'41.609"N	103°41'32.110"W	0.15	
400.00	0.070	198.870	400.00	0.53	0.02	0.53	697293.21	604981.55	32°39'41.608"N	103°41'32.110"W	0.08	
500.00	0.250	217.760	500.00	0.37	-0.21	0.38	697293.06	604981.32	32°39'41.606"N	103°41'32.112"W	0.19	
600.00	0.410	207.440	600.00	0.07	-0.70	0.08	697292.76	604980.83	32°39'41.601"N	103°41'32.115"W	0.17	
700.00	0.500	190.860	699.99	-0.18	-1.44	-0.17	697292.51	604980.09	32°39'41.593"N	103°41'32.118"W	0.16	
800.00	0.820	151.670	799.99	0.07	-2.50	0.09	697292.77	604979.03	32°39'41.583"N	103°41'32.115"W	0.54	
900.00	0.800	146.010	899.98	0.79	-3.71	0.82	697293.50	604977.82	32°39'41.571"N	103°41'32.107"W	0.08	
1000.00	0.640	150.570	999.97	1.45	-4.78	1.48	697294.16	604976.75	32°39'41.560"N	103°41'32.099"W	0.17	
1100.00	0.340	184.320	1099.97	1.70	-5.56	1.73	697294.41	604975.97	32°39'41.553"N	103°41'32.096"W	0.40	
1200.00	0.570	218.960	1199.96	1.36	-6.24	1.40	697294.08	604975.29	32°39'41.546"N	103°41'32.100"W	0.35	
1300.00	0.680	226.800	1299.96	0.61	-7.03	0.65	697293.33	604974.50	32°39'41.538"N	103°41'32.109"W	0.14	
1400.00	0.640	216.740	1399.95	-0.17	-7.89	-0.11	697292.57	604973.64	32°39'41.530"N	103°41'32.118"W	0.12	
1500.00	0.290	208.800	1499.95	-0.63	-8.56	-0.57	697292.11	604972.97	32°39'41.523"N	103°41'32.124"W	0.36	
1600.00	0.240	219.260	1599.95	-0.88	-8.94	-0.82	697291.86	604972.59	32°39'41.519"N	103°41'32.127"W	0.07	
1700.00	0.380	203.590	1699.94	-1.15	-9.41	-1.09	697291.59	604972.12	32°39'41.515"N	103°41'32.130"W	0.16	
1800.00	0.240	160.940	1799.94	-1.22	-9.91	-1.15	697291.53	604971.62	32°39'41.510"N	103°41'32.130"W	0.26	
1900.00	0.180	182.890	1899.94	-1.16	-10.26	-1.09	697291.59	604971.27	32°39'41.506"N	103°41'32.130"W	0.10	
2000.00	0.250	197.700	1999.94	-1.24	-10.63	-1.17	697291.51	604970.90	32°39'41.503"N	103°41'32.131"W	0.09	
2100.00	0.200	183.240	2099.94	-1.32	-11.01	-1.24	697291.44	604970.52	32°39'41.499"N	103°41'32.132"W	0.08	
2200.00	0.030	311.790	2199.94	-1.35	-11.17	-1.27	697291.41	604970.36	32°39'41.497"N	103°41'32.132"W	0.22	
2300.00	0.060	330.410	2299.94	-1.39	-11.10	-1.32	697291.36	604970.43	32°39'41.498"N	103°41'32.132"W	0.03	
2400.00	0.530	19.040	2399.94	-1.26	-10.62	-1.19	697291.49	604970.91	32°39'41.503"N	103°41'32.131"W	0.49	
2500.00	1.420	36.940	2499.92	-0.36	-9.19	-0.30	697292.38	604972.34	32°39'41.517"N	103°41'32.120"W	0.93	
2600.00	1.760	37.770	2599.89	1.34	-6.99	1.39	697294.07	604974.54	32°39'41.538"N	103°41'32.101"W	0.34	
2700.00	1.850	41.440	2699.84	3.37	-4.57	3.40	697296.08	604976.96	32°39'41.562"N	103°41'32.077"W	0.15	
2800.00	1.990	41.730	2799.78	5.61	-2.06	5.62	697298.30	604979.47	32°39'41.587"N	103°41'32.051"W	0.14	
2900.00	1.560	43.820	2899.73	7.72	0.22	7.72	697300.40	604981.75	32°39'41.609"N	103°41'32.026"W	0.43	

Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWP
Facility	Spyglass Fed Com 17 No. 1H		

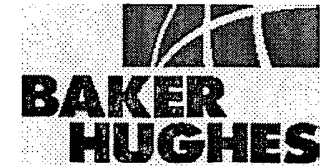
WELLPATH DATA (250 stations)

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]	Comments
3000.00	0.220	59.950	2999.72	8.84	1.30	8.83	697301.51	604982.83	32°39'41.620"N	103°41'32.013"W	1.35	
3100.00	0.720	207.010	3099.72	8.71	0.83	8.71	697301.39	604982.36	32°39'41.615"N	103°41'32.014"W	0.91	
3200.00	1.710	216.410	3199.69	7.53	-0.93	7.54	697300.22	604980.60	32°39'41.598"N	103°41'32.028"W	1.01	
3300.00	2.350	216.440	3299.63	5.41	-3.78	5.43	697298.11	604977.75	32°39'41.570"N	103°41'32.053"W	0.64	
3400.00	2.680	219.760	3399.53	2.67	-7.22	2.72	697295.40	604974.31	32°39'41.536"N	103°41'32.085"W	0.36	
3500.00	2.730	219.760	3499.42	-0.37	-10.85	-0.30	697292.38	604970.68	32°39'41.500"N	103°41'32.121"W	0.05	
3600.00	2.840	218.560	3599.30	-3.46	-14.62	-3.36	697289.32	604966.91	32°39'41.463"N	103°41'32.157"W	0.12	
3700.00	2.840	215.990	3699.18	-6.49	-18.56	-6.36	697286.32	604962.97	32°39'41.424"N	103°41'32.192"W	0.13	
3800.00	2.720	215.510	3799.06	-9.35	-22.50	-9.20	697283.48	604959.03	32°39'41.386"N	103°41'32.225"W	0.12	
3900.00	2.740	215.840	3898.95	-12.15	-26.37	-11.98	697280.70	604955.16	32°39'41.347"N	103°41'32.258"W	0.03	
4000.00	2.730	216.950	3998.83	-15.01	-30.21	-14.81	697277.87	604951.32	32°39'41.310"N	103°41'32.292"W	0.05	
4100.00	2.480	218.640	4098.73	-17.82	-33.80	-17.59	697275.09	604947.73	32°39'41.274"N	103°41'32.324"W	0.26	
4200.00	1.950	225.080	4198.66	-20.39	-36.69	-20.15	697272.54	604944.84	32°39'41.246"N	103°41'32.355"W	0.58	
4300.00	1.640	220.100	4298.61	-22.53	-38.99	-22.27	697270.41	604942.54	32°39'41.223"N	103°41'32.380"W	0.35	
4400.00	1.560	219.210	4398.57	-24.33	-41.14	-24.05	697268.63	604940.39	32°39'41.202"N	103°41'32.401"W	0.08	
4500.00	1.450	221.110	4498.53	-26.03	-43.15	-25.75	697266.93	604938.39	32°39'41.182"N	103°41'32.420"W	0.12	
4600.00	1.150	216.830	4598.51	-27.48	-44.90	-27.18	697265.50	604936.63	32°39'41.165"N	103°41'32.437"W	0.32	
4700.00	1.100	200.330	4698.49	-28.43	-46.61	-28.12	697264.57	604934.93	32°39'41.148"N	103°41'32.448"W	0.33	
4800.00	1.020	195.270	4798.47	-29.01	-48.36	-28.68	697264.00	604933.17	32°39'41.131"N	103°41'32.455"W	0.12	
4900.00	0.820	187.580	4898.46	-29.35	-49.93	-29.01	697263.67	604931.60	32°39'41.115"N	103°41'32.459"W	0.23	
5000.00	0.870	186.440	4998.45	-29.53	-51.40	-29.19	697263.49	604930.14	32°39'41.101"N	103°41'32.461"W	0.05	
5100.00	0.740	177.250	5098.44	-29.60	-52.79	-29.25	697263.44	604928.74	32°39'41.087"N	103°41'32.462"W	0.18	
5200.00	0.580	176.100	5198.43	-29.54	-53.94	-29.18	697263.50	604927.59	32°39'41.076"N	103°41'32.461"W	0.16	
5300.00	0.260	210.820	5298.43	-29.63	-54.64	-29.26	697263.42	604926.89	32°39'41.069"N	103°41'32.462"W	0.40	
5400.00	0.200	243.840	5398.43	-29.90	-54.92	-29.53	697263.15	604926.62	32°39'41.066"N	103°41'32.466"W	0.14	
5500.00	0.370	298.230	5498.43	-30.34	-54.84	-29.98	697262.71	604926.69	32°39'41.067"N	103°41'32.471"W	0.30	
5600.00	0.600	315.210	5598.42	-30.99	-54.32	-30.63	697262.05	604927.22	32°39'41.072"N	103°41'32.478"W	0.27	
5700.00	0.600	319.130	5698.42	-31.70	-53.55	-31.34	697261.34	604927.98	32°39'41.080"N	103°41'32.487"W	0.04	
5800.00	0.580	327.960	5798.41	-32.30	-52.72	-31.95	697260.73	604928.81	32°39'41.088"N	103°41'32.494"W	0.09	
5900.00	0.580	339.160	5898.41	-32.75	-51.82	-32.40	697260.28	604929.71	32°39'41.097"N	103°41'32.499"W	0.11	

Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWB
Facility	Spyglass Fed Com 17 No. 1H		

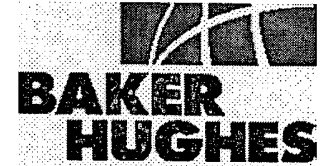
WELLPATH DATA (250 stations)

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]	Comments
6000.00	0.630	333.070	5998.40	-33.17	-50.86	-32.83	697259.85	604930.67	32°39'41.106"N	103°41'32.504"W	0.08	
6100.00	0.600	310.850	6098.40	-33.81	-50.03	-33.47	697259.21	604931.51	32°39'41.115"N	103°41'32.511"W	0.24	
6200.00	0.580	298.180	6198.39	-34.65	-49.44	-34.32	697258.36	604932.09	32°39'41.120"N	103°41'32.521"W	0.13	
6300.00	0.540	285.740	6298.39	-35.54	-49.08	-35.22	697257.47	604932.45	32°39'41.124"N	103°41'32.532"W	0.13	
6400.00	0.500	290.360	6398.38	-36.40	-48.80	-36.08	697256.60	604932.73	32°39'41.127"N	103°41'32.542"W	0.06	
6500.00	0.530	280.430	6498.38	-37.27	-48.56	-36.94	697255.74	604932.97	32°39'41.129"N	103°41'32.552"W	0.09	
6600.00	0.490	275.780	6598.37	-38.15	-48.44	-37.82	697254.86	604933.10	32°39'41.131"N	103°41'32.562"W	0.06	
6700.00	0.440	275.470	6698.37	-38.95	-48.36	-38.63	697254.05	604933.18	32°39'41.132"N	103°41'32.572"W	0.05	
6800.00	0.340	286.690	6798.37	-39.62	-48.23	-39.30	697253.38	604933.30	32°39'41.133"N	103°41'32.579"W	0.13	
6900.00	0.460	291.770	6898.37	-40.27	-48.00	-39.95	697252.73	604933.53	32°39'41.135"N	103°41'32.587"W	0.13	
7000.00	0.520	268.950	6998.36	-41.10	-47.86	-40.78	697251.90	604933.67	32°39'41.137"N	103°41'32.597"W	0.20	
7100.00	0.490	263.700	7098.36	-41.98	-47.91	-41.66	697251.02	604933.62	32°39'41.136"N	103°41'32.607"W	0.06	
7200.00	0.420	260.320	7198.36	-42.77	-48.02	-42.45	697250.24	604933.51	32°39'41.135"N	103°41'32.616"W	0.07	
7300.00	0.590	263.060	7298.35	-43.64	-48.15	-43.32	697249.36	604933.39	32°39'41.134"N	103°41'32.626"W	0.17	
7400.00	0.460	252.250	7398.35	-44.53	-48.33	-44.21	697248.47	604933.20	32°39'41.132"N	103°41'32.637"W	0.16	
7500.00	0.570	254.680	7498.34	-45.40	-48.59	-45.07	697247.61	604932.95	32°39'41.130"N	103°41'32.647"W	0.11	
7600.00	0.430	261.990	7598.34	-46.25	-48.77	-45.93	697246.76	604932.76	32°39'41.128"N	103°41'32.657"W	0.15	
7700.00	0.410	256.710	7698.34	-46.97	-48.90	-46.64	697246.04	604932.63	32°39'41.127"N	103°41'32.665"W	0.04	
7800.00	0.130	274.620	7798.34	-47.43	-48.98	-47.11	697245.58	604932.56	32°39'41.126"N	103°41'32.671"W	0.29	
7900.00	1.280	128.020	7898.33	-46.67	-49.66	-46.34	697246.34	604931.88	32°39'41.119"N	103°41'32.662"W	1.39	
8000.00	1.440	125.300	7998.30	-44.77	-51.07	-44.43	697248.25	604930.46	32°39'41.105"N	103°41'32.640"W	0.17	
8100.00	2.130	111.420	8098.25	-42.03	-52.47	-41.68	697251.00	604929.06	32°39'41.091"N	103°41'32.607"W	0.81	
8200.00	2.290	114.600	8198.18	-38.49	-53.99	-38.13	697254.55	604927.55	32°39'41.076"N	103°41'32.566"W	0.20	
8300.00	1.720	118.940	8298.11	-35.37	-55.54	-35.00	697257.68	604925.99	32°39'41.060"N	103°41'32.530"W	0.59	
8400.00	1.640	116.700	8398.07	-32.79	-56.91	-32.41	697260.27	604924.62	32°39'41.046"N	103°41'32.499"W	0.10	
8500.00	1.670	115.330	8498.03	-30.20	-58.18	-29.81	697262.87	604923.35	32°39'41.034"N	103°41'32.469"W	0.05	
8600.00	1.430	100.640	8597.99	-27.67	-59.03	-27.27	697265.41	604922.50	32°39'41.025"N	103°41'32.439"W	0.46	
8700.00	0.900	129.240	8697.97	-25.84	-59.76	-25.44	697267.24	604921.77	32°39'41.018"N	103°41'32.418"W	0.77	
8800.00	0.510	165.110	8797.97	-25.12	-60.69	-24.71	697267.97	604920.85	32°39'41.009"N	103°41'32.410"W	0.57	
8900.00	0.600	208.710	8897.96	-25.26	-61.58	-24.85	697267.83	604919.96	32°39'41.000"N	103°41'32.411"W	0.42	

Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWB
Facility	Spyglass Fed Com 17 No. 1H		

WELLPATH DATA (250 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]	Comments
9000.00	0.570	202.600	8997.96	-25.71	-62.49	-25.29	697267.39	604919.04	32°39'40.991"N	103°41'32.417"W	0.07	
9100.00	0.430	212.490	9097.95	-26.11	-63.27	-25.69	697266.99	604918.26	32°39'40.983"N	103°41'32.421"W	0.16	
9109.00	1.000	197.000	9106.95	-26.15	-63.37	-25.73	697266.95	604918.16	32°39'40.982"N	103°41'32.422"W	6.63	
9141.00	0.800	221.400	9138.95	-26.38	-63.81	-25.96	697266.72	604917.73	32°39'40.978"N	103°41'32.424"W	1.34	
9172.00	0.900	247.500	9169.95	-26.75	-64.06	-26.33	697266.36	604917.47	32°39'40.975"N	103°41'32.429"W	1.28	
9204.00	0.800	222.700	9201.94	-27.14	-64.32	-26.71	697265.97	604917.21	32°39'40.973"N	103°41'32.433"W	1.18	
9236.00	0.700	267.900	9233.94	-27.49	-64.50	-27.06	697265.63	604917.04	32°39'40.971"N	103°41'32.437"W	1.82	
9267.00	0.800	82.800	9264.94	-27.46	-64.48	-27.03	697265.65	604917.06	32°39'40.971"N	103°41'32.437"W	4.83	
9297.00	4.600	76.400	9294.90	-26.08	-64.17	-25.65	697267.03	604917.37	32°39'40.974"N	103°41'32.421"W	12.69	
9329.00	7.800	80.400	9326.71	-22.69	-63.50	-22.26	697270.42	604918.03	32°39'40.981"N	103°41'32.381"W	10.08	
9361.00	10.500	76.200	9358.30	-17.71	-62.44	-17.29	697275.39	604919.09	32°39'40.991"N	103°41'32.323"W	8.69	
9392.00	14.400	79.200	9388.56	-11.17	-61.05	-10.76	697281.92	604920.49	32°39'41.004"N	103°41'32.246"W	12.75	
9422.00	17.300	80.700	9417.42	-3.09	-59.63	-2.69	697289.99	604921.91	32°39'41.018"N	103°41'32.152"W	9.76	
9454.00	21.000	81.400	9447.64	7.29	-58.00	7.68	697300.36	604923.53	32°39'41.033"N	103°41'32.031"W	11.58	
9486.00	23.900	81.200	9477.22	19.38	-56.15	19.76	697312.44	604925.38	32°39'41.051"N	103°41'31.889"W	9.07	
9518.00	25.900	82.700	9506.24	32.73	-54.27	33.10	697325.77	604927.26	32°39'41.069"N	103°41'31.733"W	6.55	
9549.00	26.800	83.500	9534.02	46.40	-52.62	46.76	697339.43	604928.91	32°39'41.084"N	103°41'31.573"W	3.12	
9581.00	28.100	84.500	9562.42	61.08	-51.08	61.43	697354.10	604930.45	32°39'41.099"N	103°41'31.401"W	4.31	
9613.00	29.900	84.700	9590.40	76.54	-49.62	76.87	697369.55	604931.91	32°39'41.112"N	103°41'31.221"W	5.63	
9645.00	32.500	84.000	9617.77	93.04	-47.99	93.36	697386.04	604933.55	32°39'41.127"N	103°41'31.028"W	8.20	
9676.00	35.000	84.000	9643.55	110.18	-46.19	110.49	697403.17	604935.35	32°39'41.144"N	103°41'30.827"W	8.06	
9708.00	37.600	84.500	9669.33	129.04	-44.29	129.34	697422.01	604937.24	32°39'41.162"N	103°41'30.607"W	8.18	
9739.00	40.500	85.700	9693.41	148.51	-42.63	148.80	697441.47	604938.90	32°39'41.177"N	103°41'30.379"W	9.67	
9771.00	45.000	86.400	9716.90	170.18	-41.14	170.46	697463.13	604940.39	32°39'41.190"N	103°41'30.125"W	14.14	
9802.00	49.500	87.400	9737.94	192.91	-39.91	193.18	697485.86	604941.62	32°39'41.201"N	103°41'29.860"W	14.71	
9833.00	53.600	88.100	9757.21	217.17	-38.97	217.44	697510.11	604942.57	32°39'41.209"N	103°41'29.576"W	13.34	
9864.00	56.300	88.700	9775.01	242.54	-38.26	242.80	697535.47	604943.27	32°39'41.215"N	103°41'29.279"W	8.85	
9896.00	59.000	89.400	9792.13	269.57	-37.81	269.83	697562.50	604943.72	32°39'41.217"N	103°41'28.963"W	8.64	
9928.00	61.800	88.800	9807.94	297.39	-37.38	297.65	697590.31	604944.16	32°39'41.220"N	103°41'28.637"W	8.90	
9958.00	64.800	89.100	9821.41	324.19	-36.88	324.44	697617.11	604944.65	32°39'41.223"N	103°41'28.324"W	10.04	

Actual Wellpath Report

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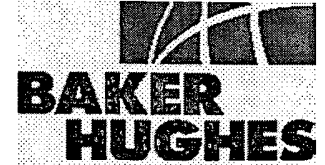
REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWB
Facility	Spyglass Fed Com 17 No. 1H		

WELLPATH DATA (250 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]	Comments
9990.00	67.600	89.100	9834.33	353.46	-36.43	353.71	697646.38	604945.11	32°39'41.226"N	103°41'27.982"W	8.75	
10022.00	71.100	88.600	9845.61	383.40	-35.82	383.65	697676.31	604945.71	32°39'41.230"N	103°41'27.631"W	11.03	
10053.00	73.400	88.200	9855.06	412.91	-35.00	413.16	697705.82	604946.53	32°39'41.237"N	103°41'27.286"W	7.52	
10084.00	76.800	87.800	9863.03	442.86	-33.95	443.09	697735.75	604947.58	32°39'41.245"N	103°41'26.936"W	11.04	
10115.00	80.000	88.000	9869.26	473.21	-32.84	473.44	697766.09	604948.69	32°39'41.254"N	103°41'26.581"W	10.34	
10146.00	83.100	87.600	9873.82	503.85	-31.66	504.07	697796.73	604949.87	32°39'41.264"N	103°41'26.223"W	10.08	
10247.00	86.900	86.300	9882.62	604.34	-26.31	604.52	697897.18	604955.23	32°39'41.311"N	103°41'25.047"W	3.97	
10343.00	87.500	84.900	9887.31	699.98	-18.95	700.12	697992.77	604962.58	32°39'41.378"N	103°41'23.929"W	1.59	
10375.00	87.900	83.600	9888.59	731.82	-15.75	731.94	698024.58	604965.78	32°39'41.408"N	103°41'23.556"W	4.25	
10407.00	88.300	82.900	9889.65	763.60	-11.99	763.70	698056.34	604969.54	32°39'41.443"N	103°41'23.184"W	2.52	
10439.00	88.500	82.900	9890.55	795.37	-8.03	795.44	698088.08	604973.50	32°39'41.481"N	103°41'22.813"W	0.62	
10470.00	89.200	82.900	9891.17	826.15	-4.20	826.20	698118.84	604977.33	32°39'41.517"N	103°41'22.453"W	2.26	
10502.00	91.400	83.200	9891.00	857.94	-0.33	857.96	698150.60	604981.20	32°39'41.553"N	103°41'22.081"W	6.94	
10534.00	91.400	84.500	9890.22	889.76	3.10	889.76	698182.40	604984.63	32°39'41.585"N	103°41'21.709"W	4.06	
10566.00	91.600	86.200	9889.38	921.66	5.69	921.65	698214.28	604987.22	32°39'41.609"N	103°41'21.336"W	5.35	
10598.00	89.800	87.900	9888.99	953.63	7.34	953.60	698246.23	604988.87	32°39'41.623"N	103°41'20.962"W	7.74	
10629.00	87.800	89.300	9889.64	984.61	8.09	984.58	698277.21	604989.62	32°39'41.629"N	103°41'20.599"W	7.87	
10661.00	86.600	89.700	9891.20	1016.57	8.37	1016.54	698309.17	604989.90	32°39'41.630"N	103°41'20.226"W	3.95	
10693.00	86.500	89.600	9893.13	1048.52	8.57	1048.48	698341.11	604990.10	32°39'41.630"N	103°41'19.852"W	0.44	
10725.00	86.100	89.500	9895.19	1080.45	8.82	1080.41	698373.04	604990.35	32°39'41.630"N	103°41'19.479"W	1.29	
10756.00	85.900	89.400	9897.36	1111.37	9.12	1111.34	698403.96	604990.64	32°39'41.631"N	103°41'19.117"W	0.72	
10788.00	85.700	89.200	9899.70	1143.29	9.50	1143.25	698435.87	604991.03	32°39'41.633"N	103°41'18.744"W	0.88	
10820.00	87.000	88.600	9901.74	1175.22	10.12	1175.18	698467.80	604991.65	32°39'41.637"N	103°41'18.370"W	4.47	
10852.00	87.500	88.500	9903.27	1207.18	10.93	1207.13	698499.75	604992.46	32°39'41.643"N	103°41'17.996"W	1.59	
10884.00	87.000	88.500	9904.81	1239.13	11.76	1239.08	698531.70	604993.29	32°39'41.650"N	103°41'17.622"W	1.56	
10915.00	86.800	88.100	9906.48	1270.08	12.68	1270.02	698562.64	604994.21	32°39'41.657"N	103°41'17.260"W	1.44	
10947.00	86.500	88.000	9908.35	1302.01	13.77	1301.95	698594.57	604995.30	32°39'41.666"N	103°41'16.887"W	0.99	
10979.00	86.600	88.200	9910.28	1333.94	14.83	1333.87	698626.49	604996.36	32°39'41.674"N	103°41'16.513"W	0.70	
11011.00	87.000	88.700	9912.07	1365.89	15.69	1365.81	698658.43	604997.22	32°39'41.681"N	103°41'16.140"W	2.00	
11042.00	87.500	89.000	9913.55	1396.85	16.31	1396.77	698689.38	604997.84	32°39'41.685"N	103°41'15.778"W	1.88	

Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWP
Facility	Spyglass Fed Com 17 No. 1H		

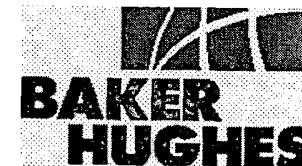
WELLPATH DATA (250 stations)

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]	Comments
11074.00	89.100	89.900	9914.50	1428.83	16.62	1428.75	698721.36	604998.15	32°39'41.686"N	103°41'15.404"W	5.74	
11105.00	89.800	89.700	9914.80	1459.83	16.73	1459.75	698752.36	604998.26	32°39'41.686"N	103°41'15.041"W	2.35	
11137.00	90.000	89.900	9914.86	1491.83	16.84	1491.75	698784.36	604998.37	32°39'41.685"N	103°41'14.667"W	0.88	
11169.00	89.900	89.500	9914.88	1523.83	17.01	1523.75	698816.36	604998.54	32°39'41.685"N	103°41'14.292"W	1.29	
11200.00	90.000	89.300	9914.91	1554.83	17.33	1554.75	698847.35	604998.86	32°39'41.686"N	103°41'13.930"W	0.72	
11232.00	90.000	89.300	9914.91	1586.83	17.72	1586.75	698879.35	604999.25	32°39'41.688"N	103°41'13.556"W	0.00	
11264.00	89.700	89.200	9915.00	1618.83	18.14	1618.74	698911.35	604999.67	32°39'41.690"N	103°41'13.181"W	0.99	
11296.00	88.200	89.200	9915.58	1650.82	18.59	1650.73	698943.34	605000.12	32°39'41.693"N	103°41'12.807"W	4.69	
11329.00	88.100	89.000	9916.65	1683.80	19.11	1683.71	698976.31	605000.64	32°39'41.696"N	103°41'12.421"W	0.68	
11359.00	88.100	89.100	9917.64	1713.79	19.60	1713.69	699006.29	605001.13	32°39'41.699"N	103°41'12.071"W	0.33	
11391.00	88.600	89.400	9918.56	1745.77	20.02	1745.68	699038.27	605001.55	32°39'41.701"N	103°41'11.696"W	1.82	
11423.00	89.000	89.400	9919.23	1777.76	20.36	1777.67	699070.26	605001.89	32°39'41.702"N	103°41'11.322"W	1.25	
11454.00	89.000	89.500	9919.77	1808.76	20.66	1808.66	699101.25	605002.18	32°39'41.703"N	103°41'10.960"W	0.32	
11486.00	88.900	89.800	9920.36	1840.75	20.85	1840.66	699133.25	605002.38	32°39'41.703"N	103°41'10.585"W	0.99	
11518.00	89.000	90.000	9920.95	1872.75	20.91	1872.65	699165.24	605002.44	32°39'41.702"N	103°41'10.211"W	0.70	
11550.00	88.900	90.000	9921.53	1904.74	20.91	1904.65	699197.23	605002.44	32°39'41.700"N	103°41'09.837"W	0.31	
11582.00	88.800	90.000	9922.18	1936.74	20.91	1936.64	699229.22	605002.44	32°39'41.698"N	103°41'09.463"W	0.31	
11614.00	88.900	90.200	9922.82	1968.73	20.85	1968.63	699261.22	605002.38	32°39'41.696"N	103°41'09.089"W	0.70	
11645.00	89.100	90.600	9923.36	1999.72	20.63	1999.63	699292.21	605002.16	32°39'41.692"N	103°41'08.726"W	1.44	
11677.00	89.500	91.100	9923.75	2031.71	20.16	2031.62	699324.20	605001.69	32°39'41.685"N	103°41'08.352"W	2.00	
11709.00	89.500	91.700	9924.03	2063.69	19.38	2063.61	699356.19	605000.91	32°39'41.675"N	103°41'07.978"W	1.87	
11741.00	89.500	92.200	9924.31	2095.67	18.29	2095.59	699388.17	604999.82	32°39'41.663"N	103°41'07.604"W	1.56	
11772.00	89.300	92.600	9924.63	2126.63	16.99	2126.56	699419.14	604998.52	32°39'41.648"N	103°41'07.242"W	1.44	
11804.00	88.800	92.800	9925.16	2158.58	15.48	2158.52	699451.10	604997.01	32°39'41.631"N	103°41'06.868"W	1.68	
11836.00	87.600	92.500	9926.17	2190.51	14.01	2190.47	699483.04	604995.53	32°39'41.615"N	103°41'06.494"W	3.87	
11867.00	87.400	92.700	9927.52	2221.44	12.60	2221.41	699513.98	604994.13	32°39'41.599"N	103°41'06.133"W	0.91	
11899.00	87.400	92.800	9928.97	2253.36	11.07	2253.34	699545.91	604992.60	32°39'41.582"N	103°41'05.759"W	0.31	
11931.00	87.900	92.200	9930.28	2285.29	9.67	2285.28	699577.85	604991.20	32°39'41.566"N	103°41'05.386"W	2.44	
11963.00	88.800	91.600	9931.21	2317.26	8.61	2317.25	699609.82	604990.14	32°39'41.554"N	103°41'05.012"W	3.38	
11995.00	89.300	91.400	9931.74	2349.23	7.77	2349.23	699641.80	604989.30	32°39'41.543"N	103°41'04.638"W	1.68	

Actual Wellpath Report

No.1H AWP

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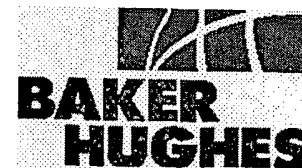
REFERENCE WELLPATH IDENTIFICATION			
Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWB
Facility	Spyglass Fed Com 17 No. 1H		

WELLPATH DATA (250 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]	Comments
12026.00	89.400	91.200	9932.09	2380.22	7.07	2380.22	699672.79	604988.60	32°39'41.535"N	103°41'04.275"W	0.72	
12058.00	89.500	91.400	9932.40	2412.20	6.34	2412.21	699704.78	604987.87	32°39'41.525"N	103°41'03.901"W	0.70	
12090.00	89.500	91.600	9932.67	2444.18	5.51	2444.20	699736.76	604987.04	32°39'41.515"N	103°41'03.527"W	0.62	
12121.00	89.400	91.800	9932.97	2475.16	4.59	2475.19	699767.75	604986.12	32°39'41.504"N	103°41'03.165"W	0.72	
12153.00	89.400	91.100	9933.31	2507.14	3.78	2507.18	699799.73	604985.31	32°39'41.494"N	103°41'02.791"W	2.19	
12184.00	89.400	90.100	9933.63	2538.14	3.45	2538.17	699830.73	604984.98	32°39'41.489"N	103°41'02.428"W	3.23	
12216.00	89.300	90.300	9934.00	2570.13	3.34	2570.17	699862.72	604984.87	32°39'41.486"N	103°41'02.054"W	0.70	
12248.00	89.200	90.400	9934.41	2602.13	3.15	2602.17	699894.72	604984.68	32°39'41.482"N	103°41'01.680"W	0.44	
12280.00	89.000	90.300	9934.92	2634.12	2.95	2634.16	699926.71	604984.48	32°39'41.478"N	103°41'01.305"W	0.70	
12312.00	89.200	90.600	9935.42	2666.11	2.70	2666.16	699958.71	604984.23	32°39'41.474"N	103°41'00.931"W	1.13	
12344.00	89.500	90.600	9935.78	2698.11	2.36	2698.15	699990.70	604983.89	32°39'41.469"N	103°41'00.557"W	0.94	
12375.00	89.300	90.700	9936.11	2729.10	2.01	2729.15	700021.70	604983.54	32°39'41.463"N	103°41'00.195"W	0.72	
12407.00	89.100	90.700	9936.55	2761.09	1.62	2761.14	700053.69	604983.15	32°39'41.458"N	103°40'59.820"W	0.62	
12439.00	88.900	90.800	9937.11	2793.08	1.20	2793.14	700085.68	604982.73	32°39'41.451"N	103°40'59.446"W	0.70	
12471.00	89.000	90.100	9937.70	2825.07	0.95	2825.13	700117.67	604982.48	32°39'41.447"N	103°40'59.072"W	2.21	
12502.00	89.700	89.500	9938.05	2856.07	1.06	2856.13	700148.67	604982.59	32°39'41.446"N	103°40'58.709"W	2.97	
12534.00	89.600	89.600	9938.25	2888.07	1.31	2888.12	700180.67	604982.84	32°39'41.447"N	103°40'58.335"W	0.44	
12566.00	89.200	89.600	9938.58	2920.07	1.53	2920.12	700212.66	604983.06	32°39'41.447"N	103°40'57.961"W	1.25	
12598.00	89.000	89.300	9939.08	2952.06	1.84	2952.12	700244.65	604983.37	32°39'41.448"N	103°40'57.587"W	1.13	
12630.00	88.900	89.600	9939.67	2984.06	2.15	2984.11	700276.65	604983.68	32°39'41.449"N	103°40'57.212"W	0.99	
12661.00	89.200	90.200	9940.18	3015.05	2.20	3015.11	700307.64	604983.73	32°39'41.448"N	103°40'56.850"W	2.16	
12693.00	89.500	90.200	9940.55	3047.05	2.09	3047.10	700339.64	604983.62	32°39'41.445"N	103°40'56.476"W	0.94	
12725.00	89.500	90.400	9940.83	3079.05	1.92	3079.10	700371.63	604983.45	32°39'41.441"N	103°40'56.101"W	0.62	
12757.00	89.300	90.400	9941.16	3111.04	1.70	3111.10	700403.63	604983.23	32°39'41.437"N	103°40'55.727"W	0.62	
12789.00	89.000	90.400	9941.64	3143.03	1.48	3143.09	700435.62	604983.01	32°39'41.433"N	103°40'55.353"W	0.94	
12820.00	89.000	90.800	9942.18	3174.02	1.15	3174.09	700466.61	604982.68	32°39'41.428"N	103°40'54.990"W	1.29	
12852.00	89.300	91.400	9942.65	3206.01	0.54	3206.08	700498.60	604982.07	32°39'41.420"N	103°40'54.616"W	2.10	
12884.00	89.100	91.000	9943.10	3238.00	-0.13	3238.07	700530.59	604981.40	32°39'41.411"N	103°40'54.242"W	1.40	
12915.00	88.700	91.100	9943.69	3268.98	-0.70	3269.06	700561.58	604980.83	32°39'41.404"N	103°40'53.880"W	1.33	
12947.00	88.800	90.700	9944.39	3300.96	-1.20	3301.05	700593.57	604980.33	32°39'41.397"N	103°40'53.506"W	1.29	

Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWB
Facility	Spyglass Fed Com 17 No. 1H		

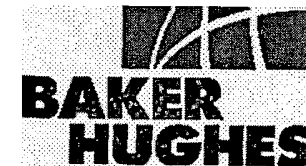
WELLPATH DATA (250 stations)

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]	Comments
12979.00	88.700	90.800	9945.09	3332.95	-1.62	3333.04	700625.55	604979.91	32°39'41.391"N	103°40'53.131"W	0.44	
13011.00	89.000	90.600	9945.73	3364.94	-2.01	3365.03	700657.54	604979.52	32°39'41.385"N	103°40'52.757"W	1.13	
13043.00	90.000	90.600	9946.01	3396.93	-2.35	3397.02	700689.54	604979.18	32°39'41.380"N	103°40'52.383"W	3.12	
13074.00	90.100	90.600	9945.98	3427.93	-2.67	3428.02	700720.54	604978.86	32°39'41.375"N	103°40'52.020"W	0.32	
13106.00	90.000	90.900	9945.96	3459.92	-3.09	3460.02	700752.53	604978.44	32°39'41.369"N	103°40'51.646"W	0.99	
13138.00	90.100	91.000	9945.93	3491.91	-3.62	3492.01	700784.53	604977.91	32°39'41.361"N	103°40'51.272"W	0.44	
13170.00	90.600	90.400	9945.73	3523.91	-4.01	3524.01	700816.52	604977.52	32°39'41.356"N	103°40'50.898"W	2.44	
13202.00	90.900	89.400	9945.31	3555.90	-3.96	3556.01	700848.52	604977.57	32°39'41.354"N	103°40'50.524"W	3.26	
13233.00	90.900	89.300	9944.83	3586.90	-3.60	3587.00	700879.51	604977.93	32°39'41.356"N	103°40'50.161"W	0.32	
13265.00	90.300	88.900	9944.49	3618.89	-3.10	3619.00	700911.50	604978.43	32°39'41.359"N	103°40'49.787"W	2.25	
13296.00	88.600	88.200	9944.79	3649.89	-2.32	3649.98	700942.49	604979.21	32°39'41.365"N	103°40'49.424"W	5.93	
13328.00	88.500	88.100	9945.60	3681.87	-1.29	3681.96	700974.46	604980.24	32°39'41.373"N	103°40'49.050"W	0.44	
13360.00	88.600	88.200	9946.41	3713.84	-0.25	3713.93	701006.43	604981.28	32°39'41.381"N	103°40'48.676"W	0.44	
13392.00	88.500	88.200	9947.22	3745.82	0.75	3745.90	701038.40	604982.28	32°39'41.389"N	103°40'48.302"W	0.31	
13423.00	88.400	88.400	9948.06	3776.81	1.67	3776.88	701069.38	604983.20	32°39'41.396"N	103°40'47.940"W	0.72	
13455.00	87.800	88.700	9949.12	3808.78	2.48	3808.85	701101.35	604984.01	32°39'41.402"N	103°40'47.566"W	2.10	
13487.00	88.000	88.900	9950.29	3840.76	3.15	3840.82	701133.32	604984.68	32°39'41.407"N	103°40'47.192"W	0.88	
13518.00	88.900	89.600	9951.13	3871.74	3.56	3871.81	701164.30	604985.09	32°39'41.409"N	103°40'46.829"W	3.68	
13550.00	88.700	89.700	9951.80	3903.74	3.75	3903.80	701196.29	604985.28	32°39'41.409"N	103°40'46.455"W	0.70	
13582.00	88.400	89.200	9952.61	3935.73	4.06	3935.79	701228.28	604985.59	32°39'41.410"N	103°40'46.081"W	1.82	
13614.00	88.900	88.900	9953.36	3967.72	4.59	3967.77	701260.26	604986.12	32°39'41.414"N	103°40'45.707"W	1.82	
13645.00	88.800	88.300	9953.99	3998.71	5.35	3998.76	701291.25	604986.88	32°39'41.419"N	103°40'45.344"W	1.96	
13677.00	89.000	88.400	9954.60	4030.69	6.27	4030.74	701323.22	604987.80	32°39'41.426"N	103°40'44.970"W	0.70	
13709.00	89.200	88.800	9955.10	4062.68	7.05	4062.73	701355.21	604988.58	32°39'41.432"N	103°40'44.596"W	1.40	
13741.00	89.000	88.600	9955.61	4094.67	7.78	4094.71	701387.20	604989.31	32°39'41.437"N	103°40'44.222"W	0.88	
13773.00	88.800	88.700	9956.22	4126.66	8.53	4126.70	701419.18	604990.06	32°39'41.443"N	103°40'43.848"W	0.70	
13805.00	89.200	88.600	9956.78	4158.65	9.28	4158.69	701451.16	604990.81	32°39'41.448"N	103°40'43.473"W	1.29	
13837.00	89.700	88.800	9957.08	4190.65	10.01	4190.68	701483.15	604991.54	32°39'41.454"N	103°40'43.099"W	1.68	
13868.00	89.700	88.800	9957.25	4221.64	10.66	4221.67	701514.14	604992.19	32°39'41.458"N	103°40'42.737"W	0.00	
13900.00	89.400	88.900	9957.50	4253.64	11.30	4253.66	701546.14	604992.83	32°39'41.463"N	103°40'42.362"W	0.99	

Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Mewbourne Oil Company	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Spyglass) Sec 17, T19S, R33E	Wellbore	No.1H AWB
Facility	Spyglass Fed Com 17 No. 1H		

WELLPATH DATA (250 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]	Comments
13931.00	89.200	88.700	9957.88	4284.64	11.95	4284.65	701577.12	604993.48	32°39'41.467"N	103°40'42.000"W	0.91	
13963.00	89.100	88.800	9958.35	4316.63	12.65	4316.64	701609.11	604994.18	32°39'41.472"N	103°40'41.626"W	0.44	
13995.00	88.900	88.800	9958.91	4348.62	13.32	4348.63	701641.10	604994.85	32°39'41.477"N	103°40'41.251"W	0.62	
14027.00	88.500	88.700	9959.64	4380.61	14.02	4380.61	701673.08	604995.54	32°39'41.482"N	103°40'40.877"W	1.29	
14058.00	88.700	88.600	9960.39	4411.59	14.75	4411.59	701704.06	604996.27	32°39'41.487"N	103°40'40.515"W	0.72	
14090.00	88.900	88.100	9961.06	4443.58	15.67	4443.57	701736.04	604997.20	32°39'41.494"N	103°40'40.141"W	1.68	
14122.00	88.800	88.200	9961.71	4475.56	16.70	4475.55	701768.01	604998.23	32°39'41.502"N	103°40'39.767"W	0.44	
14153.00	88.100	88.300	9962.54	4506.54	17.65	4506.53	701798.99	604999.18	32°39'41.510"N	103°40'39.404"W	2.28	
14185.00	87.600	88.300	9963.75	4538.51	18.59	4538.49	701830.95	605000.12	32°39'41.517"N	103°40'39.030"W	1.56	
14248.00	87.600	88.300	9966.38	4601.44	20.46	4601.41	701893.86	605001.99	32°39'41.532"N	103°40'38.294"W	0.00	Proj to Bit

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 1H PBHL		9953.00	30.93	4626.35	701918.80	605012.46	32°39'41.634"N	103°40'38.002"W	point

WELLPATH COMPOSITION

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	9100.00	Generic gyro - northseeking (Standard)	Gyro	No.1H AWB
9100.00	14248.00	NaviTrak (Standard)	MWD	No.1H AWB

Packers Plus		Do It Once. Do It Right.		Confidential Information - not to be disclosed outside Mewbourne Oil Company		Final Drawing	
Prepared for Mr. Mickey Young		Company Mewbourne Oil Company		Date 19-Feb-11			
Well Name Spyglass -17- Fed Com #1H		Type of Installation 20-Stage 4-1/2" StackFRAC® HD		Location Lea County, NM			
Depth	Drawing	Description		OD(In)	ID(In)	Length	
				Page 1 of 2			
BR = 10' / 100'							
TOL 9,972'							
381.92 bbls							
SNU0002368							
Drillable FracPORT's to be shipped without handling pups							
Latched Seal Assembly							
7" 23-32 ppf x 3.875" Lower Bore x 4.75" Upper Bore SF Liner Hanger Packer				5.875"			
PN: 108425-000004 (Shear Pins: 2 @ 482 plus 1 @ 241 : 1,205 psi setting pressure)				3.875"			
SF Bottom Guide				5.850"			
7" 26# P-110 LT&C Casing							
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
7 Joints				4.000"			
				298.29			
STAGE 20 10,280'				5.630"			
386.69 bbls				3.625"			
EM0024852				3.840"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
1 Joints				43.34			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
2 Joints				5.25			
				4.500"			
				4.000"			
				2.66			
				84.72			
STAGE 19 10,332'				5.630"			
388.92 bbls				3.500"			
EM0031122				3.840"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
2 Joints				82.84			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
2 Joints				5.25			
				4.500"			
				4.000"			
				2.69			
				85.38			
STAGE 18 10,515'				5.630"			
391.79 bbls				3.375"			
EA0045809				3.720"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
1 Joints				38.43			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
2 Joints				5.25			
				4.500"			
				4.000"			
				2.70			
				83.69			
STAGE 17 10,655'				5.630"			
393.93 bbls				3.250"			
EA0036557				3.720"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
3 Joints				118.88			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
2 Joints				5.25			
				4.500"			
				4.000"			
				2.63			
				84.45			
STAGE 16 10,747'				5.630"			
398.00 bbls				3.125"			
EA0041217				3.720"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
2 Joints				84.55			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
3 Joints				5.25			
				4.500"			
				4.000"			
				2.68			
				126.64			
STAGE 15 11,010'				5.630"			
401.52 bbls				3.000"			
EA0042455				3.720"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
2 Joints				82.43			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
2 Joints				5.25			
				4.500"			
				4.000"			
				2.68			
				85.43			
STAGE 14 11,237'				5.630"			
404.37 bbls				2.875"			
EA0040193				3.720"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
3 Joints				125.33			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
3 Joints				5.25			
				4.500"			
				4.000"			
				2.68			
				126.99			
STAGE 13 11,555'				5.630"			
408.54 bbls				2.750"			
EA0019093				3.720"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
2 Joints				83.61			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
Liner: 4-1/2", 11.60#, P-110, LTC				3.750"			
3 Joints				5.25			
				4.500"			
				4.000"			
				2.68			
				126.55			
STAGE 13 11,782'				5.630"			
412.05 bbls				2.625"			
EA0040195				3.720"			
Liner: 4-1/2", 11.60#, P-110, LTC				4.500"			
6' x 4-1/2" 11.6# P-110 LTC Pup Joint				4.000"			
2 Joints				84.67			
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer				4.500"			
PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure)				4.000"			
3' x 4-1/2" 11.6# P-110 LTC Pup Joint				5.750"			
				3.750"			
				5.25			
				4.500"			
				4.000"			
				2.72			
Service Center Midland, TX		Telephone 432-563-8024	Contact Keith Martin	Telephone Chad Williams 405-255-3223			

Packers Plus		Do It Once. Do It Right.		Confidential Information - not to be disclosed outside Mewbourne Oil Company		Final Drawing	
Prepared for Mr. Mickey Young		Company Mewbourne Oil Company		Date 19-Feb-11			
Well Name Spyglass -17- Fed Com #1H		Type of Installation 20-Stage 4-1/2" StackFRAC® HD		Location Lea County, NM			
Depth	Drawing	Description		OD(in)	ID(in)	Length	
				Page 2 of 2			
REV_		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500"	4.000	83.83	
STAGE 11 12,101' 414.92 bbls EA0040191		Packers Plus 4-1/2" Drillable FracPORT™ with 2.500" Seat for 2.625" High Pressure Ball PN: 108482-000053 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	2.500 3.720	2.65	
RSII 12,194' EA0026362 2.65		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 3 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	84.51 5.70 5.25 2.67 126.58	
STAGE 10 12,328' 418.43 bbls EA0036863		Packers Plus 4-1/2" Drillable FracPORT™ with 2.375" Seat for 2.500" High Pressure Ball PN: 108482-000052 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	2.375 3.720	2.65	
RSII 12,422' EA0026358		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	85.26 5.63 5.25 2.73 84.96	
STAGE 9 12,515' 421.33 bbls EA0036797		Packers Plus 4-1/2" Drillable FracPORT™ with 2.250" Seat for 2.375" High Pressure Ball PN: 108482-000051 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	2.250 3.720	2.65	
RSII 12,608' EA0026330		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	84.98 5.63 5.25 2.69 84.00	
STAGE 8 12,700' 424.20 bbls EA0046299		Packers Plus 4-1/2" Drillable FracPORT™ with 2.125" Seat for 2.250" High Pressure Ball PN: 108482-000050 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	2.125 3.720	2.65	
RSII 12,793' EA0026268		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 3 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	84.53 5.65 5.25 2.65 126.94	
STAGE 7 12,927' 427.72 bbls EA0041047		Packers Plus 4-1/2" Drillable FracPORT™ with 2.000" Seat for 2.125" High Pressure Ball PN: 108482-000049 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	2.000 3.720	2.65	
RSII 13,022' EA0026294		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	86.33 5.63 5.25 2.67 85.18	
STAGE 6 13,115' 430.63 bbls EA0030733		Packers Plus 4-1/2" Drillable FracPORT™ with 1.875" Seat for 2.000" High Pressure Ball PN: 108482-000048 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	1.875 3.720	2.65	
RSII 13,207' EA0026308		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	83.30 5.64 5.25 2.67 84.72	
STAGE 5 13,299' 433.48 bbls EA0041059		Packers Plus 4-1/2" Drillable FracPORT™ with 1.750" Seat for 1.875" High Pressure Ball PN: 108482-000047 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	1.750 3.720	2.65	
RSII 13,428' EA0026352		Liner: 4-1/2", 11.60#, P-110, LTC 3 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	120.43 5.63 5.25 2.68 83.65	
STAGE 4 13,520' 436.91 bbls EA0031081		Packers Plus 4-1/2" Drillable FracPORT™ with 1.625" Seat for 1.750" High Pressure Ball PN: 108482-000046 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	1.625 3.720	2.65	
RSII 13,664' EA0026336		Liner: 4-1/2", 11.60#, P-110, LTC 3 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	136.05 5.64 5.25 2.70 87.76	
STAGE 3 13,760' 440.63 bbls EA0036505		Packers Plus 4-1/2" Drillable FracPORT™ with 1.500" Seat for 1.625" High Pressure Ball PN: 108482-000045 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	1.500 3.720	2.65	
RSII 13,853' EA0026280		Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 3 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	85.29 5.63 5.25 2.71 112.32	
STAGE 2 13,974' 443.95 bbls EA0037905		Packers Plus 4-1/2" Drillable FracPORT™ with 1.375" Seat for 1.500" High Pressure Ball PN: 108482-000044 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		5.630"	1.375 3.720	2.65	
RSII 14,109' EA0026360		Liner: 4-1/2", 11.60#, P-110, LTC 3 Joints 6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 102188-000003 (6 shear pins at 324 psi each: 1,944 psi setting pressure) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint Liner: 4-1/2", 11.60#, P-110, LTC 2 Joints		4.500" 4.500" 5.750" 4.500" 4.500"	4.000 4.000 3.750 4.000 4.000	127.40 5.63 5.25 2.70 86.70	
STAGE 1 14,210' 447.60 bbls EA0052023		Packers Plus 4-1/2" Dual Hydraulic FracPORT™ Centralized PN: 105900-000002 (11 pins at 391 psi each: 4,301 psi Upper) / (7 pins at 630 psi each: 4,410 psi Lower) 3' x 4-1/2" 11.6# P-110 LTC Pup Joint		5.630"	3.750	4.34	
Toe Sub 14,224' EM0044379		6' x 4-1/2" 11.6# P-110 LTC Pup Joint Packers Plus 4-1/2" Toe Circulating Sub w/ 1.00" Seat for 1.25" High Pressure Ball PN: 103039-000011 (3 pins at 368 psi each: 1,098 psi closing pressure) 4-1/2" LTC Single Valve Float Collar PN: 104733 6' x 4-1/2" 11.6# P-110 LTC Pup Joint 4-1/2" LTC Single Valve Float Collar PN: 104733 4-1/2" LTC Guide Shoe PN: 121704-000001		4.500" 5.500" 5.000" 4.500" 5.000" 5.500"	4.000 NA NA 4.000 NA 2.250	6.10 2.73 1.35 6.10 1.06 0.75	
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