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30-025-39830

APACHE CORP

Wildcat
Lea County, NM
Uno State #2H
VH - Job #32K1010750

Survey: Actual

SDI Standard Survey Report

30 October, 2010

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

Richard Martin

Notorized this date 2nd of November, 2010.

Carrie Reed

Notary Signature
County of Midland
State of Texas

CARRIE REED
My Commission Expires
October 4, 2011

Scientific Drilling International, Inc.

SDI Standard Survey Report

Company:	APACHE CORP	**Local Co-ordinate Reference:**	Well Uno State #2H
Project:	Wildcat	**TVD Reference:**	WELL @ 0.0usft (Original Well Elev)
Site:	Lea County, NM	**MD Reference:**	WELL @ 0.0usft (Original Well Elev)
Well:	Uno State #2H	**North Reference:**	Grid
Wellbore:	VH - Job #32K1010750	**Survey Calculation Method:**	Minimum Curvature
Design:	VH - Job #32K1010750	**Database:**	EDM-Regulatory

Project Wildcat

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

Site Lea County, NM

Site Position:		**Northing:**	763,506.88 usft	**Latitude:**	33° 5' 45.600 N
From:	Lat/Long	**Easting:**	800,219.68 usft	**Longitude:**	103° 29' 16.800 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	0"	**Grid Convergence:**	0.46 °

Well Uno State #2H

Well Position	**+N/-S**	0.0 usft	**Northing:**	0.00 usft	**Latitude:**	30° 59' 18.404 N
	+E/-W	0.0 usft	**Easting:**	0.00 usft	**Longitude:**	106° 3' 38.987 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	0.0 usft

Wellbore VH - Job #32K1010750

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	10/6/2010	8.68	58.56	47,650

Design VH - Job #32K1010750

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	105.87

Survey Program **Date** 10/30/2010

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
84.8	10,694.7	Actual (VH - Job #32K1010750)	Keeper	Keeper Gyro

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
84.8	0.54	176.18	84.8	-0.4	0.0	176.18	0.4
113.8	1.02	187.39	113.8	-0.8	0.0	179.82	0.8
200.6	1.01	189.13	200.6	-2.3	-0.2	185.39	2.3
287.4	0.85	192.37	287.4	-3.7	-0.5	187.36	3.7
374.2	0.78	192.79	374.2	-4.9	-0.7	188.66	5.0
461.0	0.88	201.76	461.0	-6.1	-1.1	190.45	6.2
547.8	0.78	214.80	547.7	-7.2	-1.7	193.35	7.4
634.6	0.62	222.58	634.5	-8.0	-2.4	196.40	8.4
721.4	0.60	239.57	721.3	-8.6	-3.1	199.65	9.1
808.2	0.58	240.89	808.1	-9.1	-3.8	203.03	9.8
899.7	0.48	240.44	899.6	-9.5	-4.6	205.85	10.5

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Wellbore:	VH - Job #32K1010750	**Survey Calculation Method:**	Minimum Curvature
Design:	VH - Job #32K1010750	**Database:**	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
991.3	0.53	244.33	991.2	-9.8	-5.3	208.32	11.2
1,082.4	0.35	245.30	1,082.3	-10.1	-5.9	210.35	11.7
1,174.3	0.37	239.52	1,174.2	-10.4	-6.4	211.78	12.2
1,265.9	0.37	245.21	1,265.8	-10.7	-7.0	213.13	12.8
1,357.4	0.33	255.98	1,357.3	-10.9	-7.5	214.59	13.2
1,449.0	0.25	307.98	1,448.9	-10.8	-7.9	216.19	13.4
1,540.5	0.28	350.92	1,540.4	-10.5	-8.1	217.74	13.2
1,632.0	0.49	294.27	1,631.9	-10.1	-8.5	220.10	13.2
1,723.6	0.42	293.13	1,723.5	-9.8	-9.2	223.08	13.4
1,815.1	0.60	281.02	1,815.0	-9.6	-9.9	226.08	13.8
1,906.6	0.83	281.50	1,906.5	-9.3	-11.1	229.80	14.5
1,998.2	0.84	268.95	1,998.1	-9.2	-12.4	233.31	15.4
2,089.7	0.78	270.09	2,089.6	-9.2	-13.7	235.96	16.5
2,181.3	0.69	270.83	2,181.2	-9.2	-14.8	238.14	17.5
2,272.8	0.81	270.21	2,272.7	-9.2	-16.0	240.13	18.5
2,364.3	0.85	280.95	2,364.2	-9.1	-17.4	242.37	19.6
2,455.9	1.00	263.66	2,455.7	-9.0	-18.8	244.33	20.9
2,547.4	1.02	257.62	2,547.2	-9.3	-20.4	245.48	22.4
2,639.0	0.87	264.98	2,638.8	-9.5	-21.9	246.45	23.9
2,730.5	0.82	271.54	2,730.3	-9.6	-23.2	247.59	25.1
2,822.1	0.83	277.23	2,821.9	-9.5	-24.6	248.88	26.3
2,913.6	0.93	261.05	2,913.4	-9.5	-25.9	249.86	27.6
3,005.1	1.33	270.85	3,004.9	-9.6	-27.7	250.88	29.4
3,096.7	1.64	294.30	3,096.4	-9.1	-30.0	253.19	31.3
3,188.2	2.16	310.55	3,187.9	-7.4	-32.5	257.17	33.3
3,279.8	2.37	319.19	3,279.4	-4.8	-35.1	262.13	35.4
3,371.3	2.25	325.29	3,370.8	-1.9	-37.3	267.03	37.4
3,462.8	1.91	325.11	3,462.3	0.8	-39.2	271.16	39.2
3,554.4	1.94	327.24	3,553.8	3.3	-40.9	274.68	41.1
3,645.9	1.93	327.96	3,645.3	6.0	-42.6	277.96	43.0
3,737.4	1.69	326.17	3,736.7	8.4	-44.1	280.75	44.9
3,829.0	1.33	330.17	3,828.3	10.4	-45.4	282.93	46.6
3,920.5	1.17	325.07	3,919.8	12.1	-46.5	284.61	48.0
4,012.1	1.21	322.46	4,011.4	13.6	-47.6	285.99	49.5
4,103.6	1.04	323.84	4,102.8	15.1	-48.7	287.21	51.0
4,195.1	0.74	326.53	4,194.3	16.2	-49.5	288.17	52.1
4,286.7	0.65	315.84	4,285.9	17.1	-50.2	288.83	53.0
4,378.2	0.54	334.00	4,377.4	17.9	-50.7	289.40	53.8
4,469.8	0.64	342.29	4,469.0	18.7	-51.1	290.15	54.4
4,561.3	0.56	334.04	4,560.5	19.6	-51.4	290.89	55.1
4,652.9	0.54	339.17	4,652.1	20.4	-51.8	291.54	55.7
4,744.4	0.43	342.46	4,743.6	21.2	-52.0	292.14	56.2
4,835.9	0.39	331.26	4,835.1	21.8	-52.3	292.60	56.7
4,927.5	0.42	325.11	4,926.7	22.3	-52.6	292.98	57.2

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Well:	Uno State #2H	**North Reference:**	Grid
Wellbore:	VH - Job #32K1010750	**Survey Calculation Method:**	Minimum Curvature
Design:	VH - Job #32K1010750	**Database:**	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,019.0	0.38	332.40	5,018.2	22.9	-53.0	293.35	57.7
5,110.6	0.38	336.11	5,109.8	23.4	-53.2	293.74	58.2
5,202.1	0.31	334.16	5,201.3	23.9	-53.5	294.10	58.6
5,293.6	0.16	336.51	5,292.8	24.3	-53.6	294.34	58.9
5,385.2	0.17	288.16	5,384.4	24.4	-53.8	294.40	59.1
5,476.7	0.33	199.01	5,475.9	24.2	-54.0	294.14	59.2
5,568.3	0.21	242.59	5,567.5	23.9	-54.3	293.76	59.3
5,659.8	0.12	139.80	5,659.0	23.7	-54.3	293.59	59.3
5,751.3	0.18	113.89	5,750.5	23.6	-54.2	293.55	59.1
5,842.9	0.26	123.67	5,842.1	23.4	-53.8	293.51	58.7
5,934.4	0.26	120.81	5,933.6	23.2	-53.5	293.45	58.3
6,025.9	0.24	119.73	6,025.1	23.0	-53.2	293.40	57.9
6,117.5	0.21	86.47	6,116.7	22.9	-52.8	293.46	57.6
6,209.0	0.36	75.02	6,208.2	23.0	-52.4	293.71	57.2
6,300.6	0.67	70.56	6,299.8	23.3	-51.6	294.26	56.6
6,392.1	0.86	79.99	6,391.3	23.6	-50.4	295.04	55.6
6,483.6	0.94	87.64	6,482.8	23.7	-49.0	295.82	54.4
6,575.2	0.89	85.07	6,574.3	23.8	-47.5	296.60	53.1
6,666.7	0.64	81.14	6,665.8	23.9	-46.3	297.33	52.1
6,758.3	0.52	80.50	6,757.4	24.1	-45.4	297.95	51.4
6,849.8	0.53	56.48	6,848.9	24.4	-44.6	298.65	50.9
6,941.3	0.63	44.95	6,940.4	25.0	-43.9	299.62	50.5
7,032.9	0.55	40.19	7,032.0	25.7	-43.3	300.67	50.3
7,124.4	0.41	41.42	7,123.5	26.2	-42.8	301.53	50.2
7,216.0	0.45	41.59	7,215.1	26.8	-42.3	302.30	50.1
7,307.5	0.45	29.95	7,306.6	27.3	-41.9	303.12	50.0
7,399.1	0.44	34.39	7,398.2	27.9	-41.5	303.93	50.1
7,490.6	0.53	17.04	7,489.7	28.6	-41.2	304.80	50.2
7,582.1	0.57	19.07	7,581.2	29.5	-40.9	305.75	50.4
7,673.7	0.51	21.43	7,672.8	30.3	-40.6	306.69	50.7
7,765.2	0.51	12.76	7,764.3	31.1	-40.4	307.55	51.0
7,856.7	0.45	12.18	7,855.8	31.8	-40.2	308.33	51.3
7,948.3	0.39	6.12	7,947.4	32.5	-40.1	308.98	51.6
8,039.8	0.27	345.97	8,038.9	33.0	-40.1	309.41	52.0
8,131.4	0.24	310.11	8,130.5	33.3	-40.3	309.55	52.3
8,222.9	0.20	270.18	8,222.0	33.4	-40.6	309.45	52.6
8,314.4	0.07	162.90	8,313.5	33.4	-40.8	309.30	52.7
8,406.0	0.18	113.73	8,405.1	33.3	-40.6	309.31	52.5
8,497.5	0.20	91.54	8,496.6	33.2	-40.4	309.46	52.3
8,589.1	0.19	68.75	8,588.2	33.3	-40.1	309.71	52.1
8,680.6	0.21	22.07	8,679.7	33.5	-39.8	310.04	52.0
8,772.1	0.18	358.87	8,771.2	33.8	-39.8	310.33	52.2
8,863.7	0.08	28.55	8,862.8	34.0	-39.8	310.52	52.3
8,955.5	0.16	63.72	8,954.6	34.1	-39.6	310.71	52.3

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Well:	Uno State #2H	**North Reference:**	Grid
Wellbore:	VH - Job #32K1010750	**Survey Calculation Method:**	Minimum Curvature
Design:	VH - Job #32K1010750	**Database:**	EDM-Regulatory

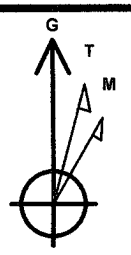
Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
9,047.0	0.46	93.41	9,046.1	34.1	-39.1	311.09	51.9
9,138.5	1.08	101.95	9,137.6	33.9	-37.9	311.82	50.9
9,230.1	1.62	108.62	9,229.1	33.3	-35.9	312.92	49.0
9,321.6	1.68	105.04	9,320.6	32.6	-33.3	314.34	46.6
9,413.2	1.48	104.25	9,412.2	31.9	-30.9	315.95	44.4
9,504.7	1.25	102.93	9,503.6	31.4	-28.8	317.52	42.6
9,596.2	1.26	101.52	9,595.1	31.0	-26.8	319.14	41.0
9,687.8	1.27	96.23	9,686.7	30.7	-24.8	321.04	39.5
9,779.3	1.21	91.94	9,778.2	30.5	-22.8	323.21	38.1
9,870.9	0.98	86.09	9,869.8	30.6	-21.1	325.39	37.1
9,962.4	0.97	82.23	9,961.3	30.7	-19.5	327.53	36.4
10,053.9	0.76	81.24	10,052.7	30.9	-18.2	329.55	35.9
10,145.5	0.63	76.68	10,144.3	31.1	-17.1	331.23	35.5
10,237.0	0.39	69.94	10,235.8	31.3	-16.3	332.52	35.3
10,328.6	0.58	51.43	10,327.4	31.7	-15.7	333.76	35.4
10,420.1	0.51	37.50	10,418.9	32.4	-15.0	335.07	35.7
10,511.6	0.36	32.33	10,510.4	32.9	-14.6	336.03	36.0
10,603.2	0.45	3.74	10,602.0	33.5	-14.5	336.67	36.5
10,694.7	0.45	33.24	10,693.5	34.2	-14.2	337.38	37.0

Checked By: _____ Approved By: _____ Date: _____

Scientific Drilling
Directional Drilling Operations

Project: Wildcat
Lea County, NM
Well: Uno State #2H
Wellbore: VH - Job #32K1010750
Design: VH - Job #32K1010750

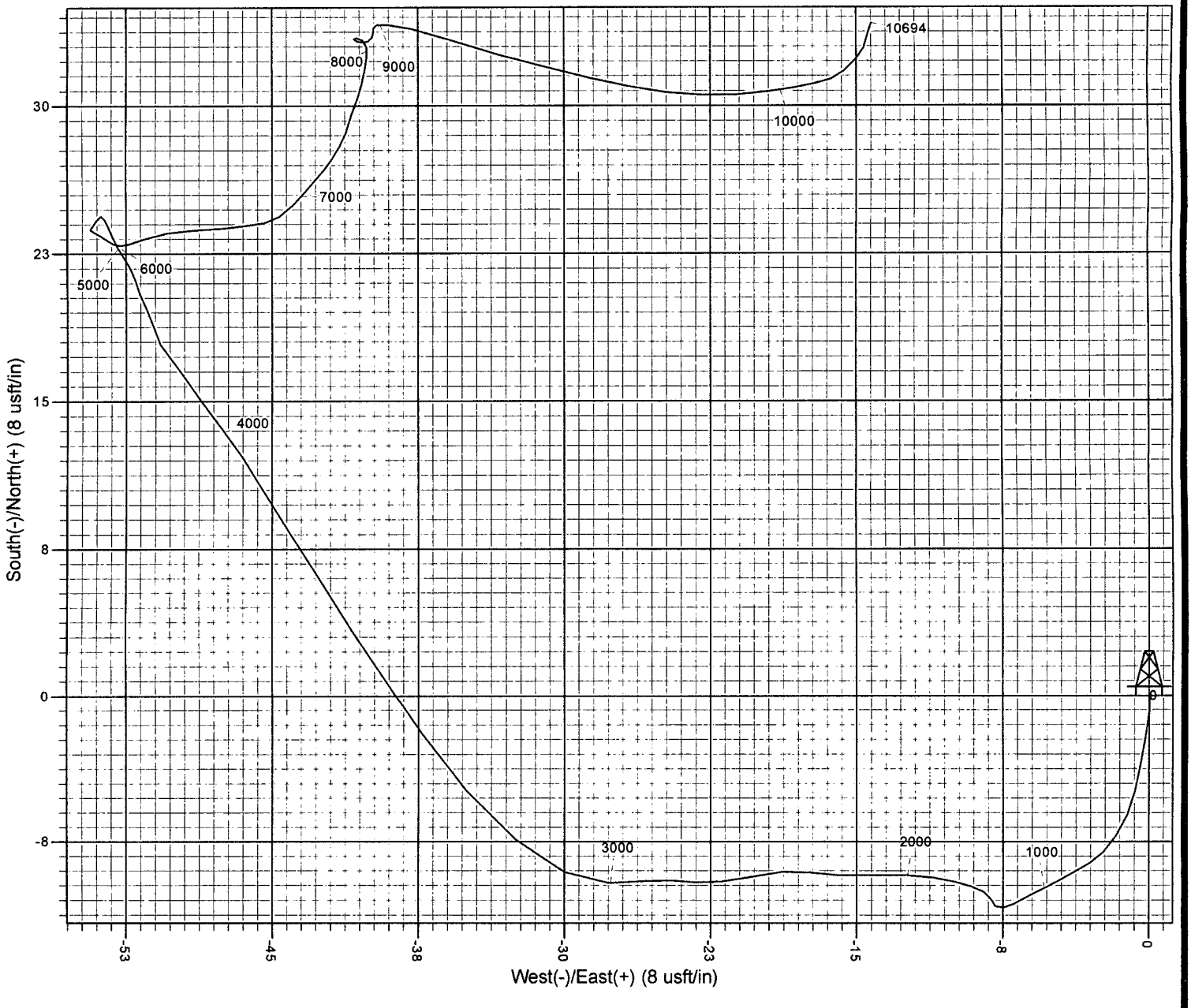


Azimuths to Grid North
True North: 0.89°
Magnetic North: 9.57°

Magnetic Field
Strength: 47649.7snT
Dip Angle: 58.56°
Date: 10/6/2010
Model: BGGM2010

WELL DETAILS: Uno State #2H
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	0.00	0.00	30° 59' 18.404 N	106° 3' 38.987 W	



PROJECT DETAILS: Wildcat
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

SITE DETAILS: Lea County, NM
Site Centre Latitude: 33° 5' 45.600 N
Longitude: 103° 29' 16.800 W
Positional Uncertainity: 0.0
Convergence: 0.46
Local North: Grid

Apache Corporation

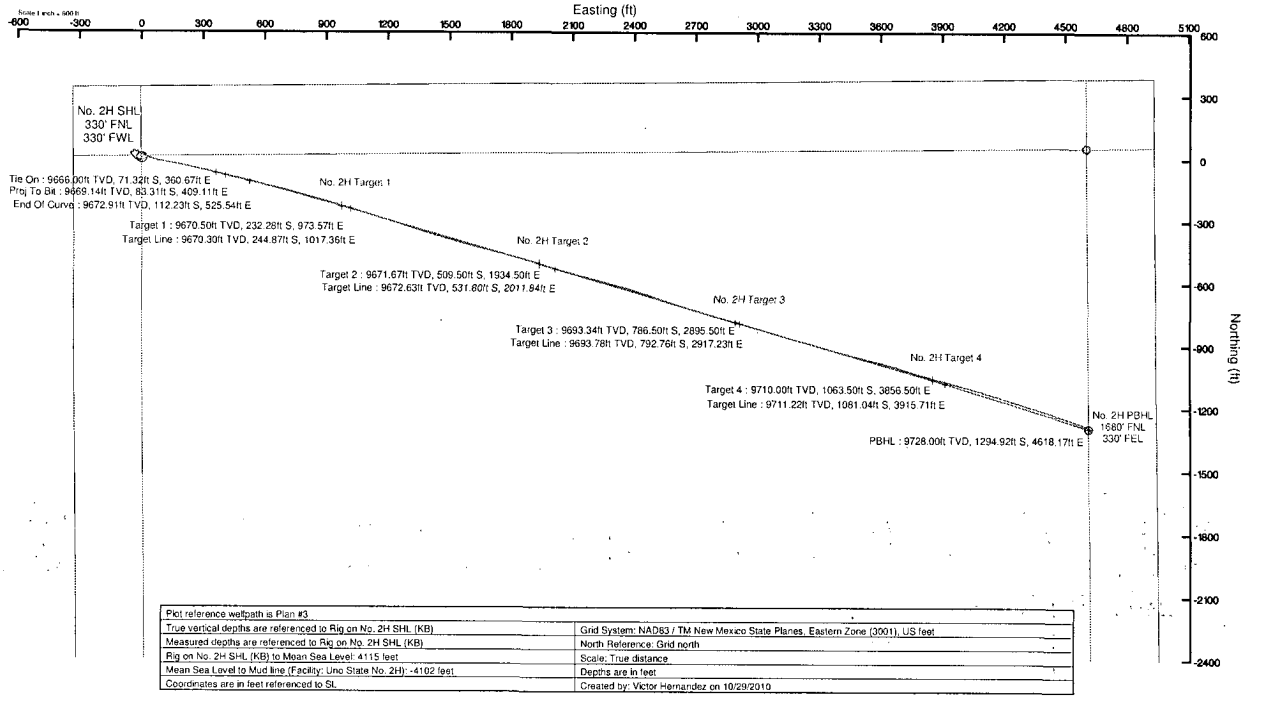
Location: Lea County, NM
Field: (UNO) Sec 23, T14S, R34E
Facility: Uno State No. 2H

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

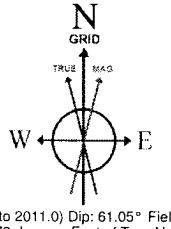
BAKER HUGHES

Well Profile Data

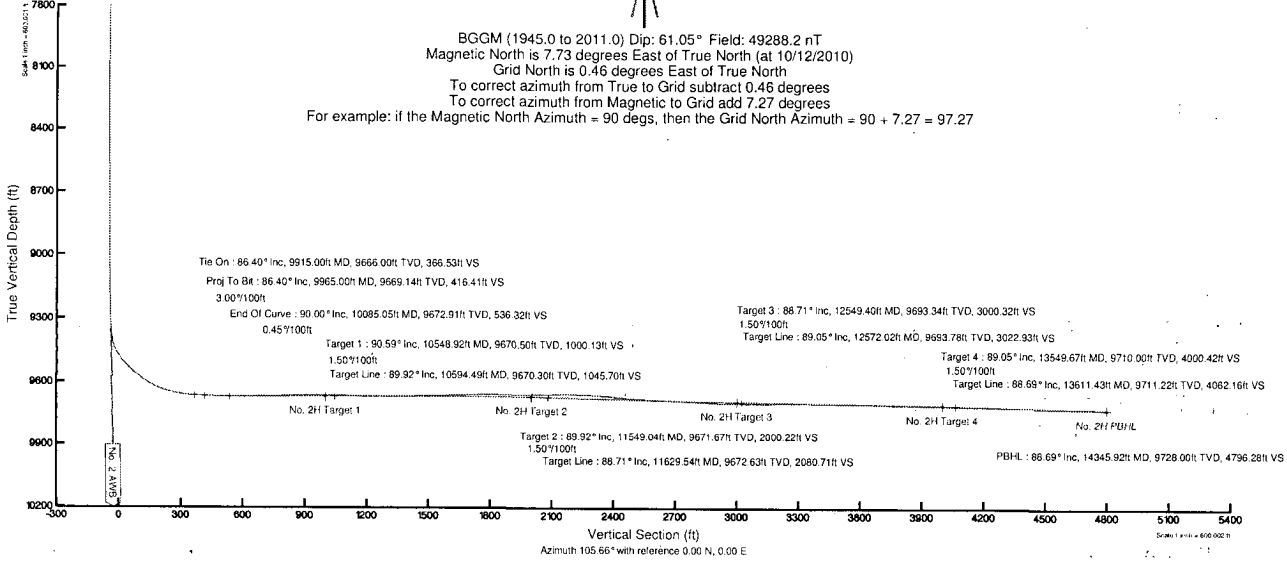
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	9915.00	86.400	103.900	9666.00	-71.32	360.67	3.22	366.53
Proj To Bit	9965.00	86.400	103.900	9669.14	-83.31	409.11	0.00	416.41
End Of Curve	10085.05	90.000	104.000	9672.91	-112.23	525.54	3.00	536.32
Target 1	10548.92	90.595	106.000	9670.50	-232.28	973.57	0.45	1000.13
Target Line	10594.49	89.918	106.095	9670.30	-244.87	1017.36	1.50	1045.70
Target 2	11549.04	89.918	106.095	9671.67	-509.50	1934.50	0.00	2000.22
Target Line	11629.54	88.710	106.079	9672.63	-531.80	2011.84	1.50	2080.71
Target 3	12549.40	88.710	106.079	9693.34	-786.50	2895.50	0.00	3000.32
Target Line	12572.02	89.049	106.079	9693.78	-792.76	2917.23	1.50	3022.93
Target 4	13549.67	89.049	106.079	9710.00	-1063.50	3856.50	0.00	4000.42
Target Line	13611.43	88.691	106.934	9711.22	-1081.04	3915.71	1.50	4062.16
PBHL	14345.92	88.691	106.934	9728.00	-1294.92	4618.17	0.00	4796.28



Plot reference wellpath is Plan #3	
True vertical depths are referenced to Rig on No. 2H SHL (KB)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 2H SHL (KB)	North Reference: Grid north
Rig on No. 2H SHL (KB) to Mean Sea Level: 4115 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: Uno State No. 2H): -4102 feet	Depths are in feet
Coordinates are in feet referenced to SL	Created by: Victor Hernandez on 10/29/2010



BGGM (1945.0 to 2011.0) Dip: 61.05° Field: 49288.2 nT
Magnetic North is 7.73 degrees East of True North (at 10/12/2010)
Grid North is 0.46 degrees East of True North
To correct azimuth from True to Grid subtract 0.46 degrees
To correct azimuth from Magnetic to Grid add 7.27 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.27 = 97.27



Actual Wellpath Report

No. 2H AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**Apache Corporation**	Slot	**No. 2H SHL**
Area	**Lea County, NM**	Well	**No. 2H**
Field	**(UNO) Sec 23, T14S, R34E**	Wellbore	**No. 2H AWB**
Facility	**Uno State No. 2H**	Sidetrack from	**No. 2 AWB** at **9321.60 MD**

REPORT SETUP INFORMATION

Projection System	**NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 2.0**
North Reference	**Grid**	User	**Gomeoscr**
Scale	**0.999986**	Report Generated	**11/1/2010** at **2:52:23 PM**
Convergence at slot	**0.46° 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**	799910.02	763660.84	33°05'47.148"N	103°29'20.425"W
Facility Reference Pt			**799910.02**	**763660.84**	33°05'47.148"N	103°29'20.425"W
Field Reference Pt			**799910.02**	**763660.84**	33°05'47.148"N	103°29'20.425"W

WELLPATH DATUM

Calculation method	**Minimum curvature**	Rig on No. 2H SHL (KB) to GL	**13.00ft**
Horizontal Reference Pt	**SL**	Rig on No. 2H SHL (KB) to Mean Sea Level	**4115.00ft**
Vertical Reference Pt	**Rig on No. 2H SHL (KB)**	GL to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No. 2H SHL (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**105.66°**

Actual Wellpath Report

No. 2H AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Slot	**No. 2H SHL**
Area	**Lea County, NM**	Well	**No. 2H**
Field	**(UNO) Sec 23, T14S, R34E**	Wellbore	**No. 2H AWB**
Facility	**Uno State No. 2H**	Sidetrack from	**No. 2 AWB** at **9321.60 MD**

WELLPATH DATA (259 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	175.260	0.00	0.00	0.00	0.00	799910.02	763660.84	33°05'47.148"N	103°29'20.425"W	0.00	
84.80	0.540	175.260	84.80	0.14	-0.40	0.03	799910.05	763660.44	33°05'47.144"N	103°29'20.425"W	0.64	
113.80	1.020	186.470	113.80	0.23	-0.79	0.02	799910.04	763660.05	33°05'47.140"N	103°29'20.425"W	1.73	
200.60	1.010	188.210	200.58	0.45	-2.32	-0.18	799909.84	763658.52	33°05'47.125"N	103°29'20.427"W	0.04	
287.40	0.850	191.450	287.37	0.60	-3.70	-0.42	799909.60	763657.14	33°05'47.111"N	103°29'20.430"W	0.19	
374.20	0.780	191.870	374.16	0.68	-4.91	-0.67	799909.35	763655.93	33°05'47.099"N	103°29'20.433"W	0.08	
461.00	0.880	200.840	460.95	0.66	-6.11	-1.03	799908.99	763654.73	33°05'47.087"N	103°29'20.438"W	0.19	
547.80	0.780	213.880	547.74	0.42	-7.23	-1.59	799908.43	763653.61	33°05'47.076"N	103°29'20.445"W	0.25	
634.60	0.620	221.660	634.54	0.03	-8.07	-2.23	799907.79	763652.77	33°05'47.068"N	103°29'20.452"W	0.21	
721.40	0.600	238.650	721.33	-0.49	-8.66	-2.93	799907.09	763652.18	33°05'47.062"N	103°29'20.460"W	0.21	
808.20	0.580	239.970	808.13	-1.11	-9.11	-3.70	799906.32	763651.73	33°05'47.058"N	103°29'20.470"W	0.03	
899.70	0.480	239.520	899.62	-1.69	-9.54	-4.43	799905.59	763651.30	33°05'47.054"N	103°29'20.478"W	0.11	
991.30	0.530	243.410	991.22	-2.27	-9.92	-5.14	799904.88	763650.92	33°05'47.050"N	103°29'20.487"W	0.07	
1082.40	0.350	244.380	1082.32	-2.79	-10.23	-5.77	799904.25	763650.61	33°05'47.047"N	103°29'20.494"W	0.20	
1174.30	0.370	238.600	1174.22	-3.21	-10.51	-6.28	799903.74	763650.33	33°05'47.044"N	103°29'20.500"W	0.05	
1265.90	0.370	244.290	1265.81	-3.63	-10.79	-6.80	799903.22	763650.05	33°05'47.042"N	103°29'20.506"W	0.04	
1357.40	0.330	255.060	1357.31	-4.08	-10.99	-7.32	799902.70	763649.85	33°05'47.040"N	103°29'20.512"W	0.08	
1449.00	0.250	307.060	1448.91	-4.49	-10.93	-7.73	799902.29	763649.91	33°05'47.040"N	103°29'20.517"W	0.29	
1540.50	0.280	350.000	1540.41	-4.78	-10.59	-7.93	799902.09	763650.25	33°05'47.044"N	103°29'20.519"W	0.21	
1632.00	0.490	293.350	1631.91	-5.26	-10.22	-8.33	799901.69	763650.62	33°05'47.047"N	103°29'20.524"W	0.45	
1723.60	0.420	292.210	1723.51	-5.98	-9.94	-9.00	799901.02	763650.90	33°05'47.050"N	103°29'20.532"W	0.08	
1815.10	0.600	280.100	1815.00	-6.79	-9.73	-9.78	799900.24	763651.11	33°05'47.052"N	103°29'20.541"W	0.23	
1906.60	0.830	280.580	1906.49	-7.93	-9.52	-10.90	799899.12	763651.32	33°05'47.055"N	103°29'20.554"W	0.25	
1998.20	0.840	268.030	1998.09	-9.23	-9.42	-12.23	799897.79	763651.42	33°05'47.056"N	103°29'20.570"W	0.20	
2089.70	0.780	269.170	2089.58	-10.47	-9.45	-13.52	799896.50	763651.39	33°05'47.055"N	103°29'20.585"W	0.07	
2181.30	0.690	269.910	2181.17	-11.59	-9.46	-14.69	799895.33	763651.38	33°05'47.055"N	103°29'20.599"W	0.10	
2272.80	0.810	269.290	2272.66	-12.75	-9.47	-15.89	799894.13	763651.37	33°05'47.055"N	103°29'20.613"W	0.13	
2364.30	0.850	280.030	2364.15	-14.04	-9.36	-17.21	799892.81	763651.48	33°05'47.057"N	103°29'20.628"W	0.18	
2455.90	1.000	262.740	2455.74	-15.45	-9.34	-18.67	799891.35	763651.50	33°05'47.057"N	103°29'20.645"W	0.34	
2547.40	1.020	256.700	2547.23	-16.90	-9.63	-20.25	799889.77	763651.21	33°05'47.054"N	103°29'20.664"W	0.12	
2639.00	0.870	264.060	2638.81	-18.26	-9.89	-21.74	799888.28	763650.95	33°05'47.052"N	103°29'20.682"W	0.21	
2730.50	0.820	270.620	2730.30	-19.54	-9.96	-23.08	799886.94	763650.88	33°05'47.051"N	103°29'20.697"W	0.12	
2822.10	0.830	276.310	2821.89	-20.83	-9.88	-24.40	799885.62	763650.96	33°05'47.052"N	103°29'20.713"W	0.09	
2913.60	0.930	260.130	2913.38	-22.15	-9.93	-25.79	799884.23	763650.91	33°05'47.052"N	103°29'20.729"W	0.29	
3005.10	1.330	269.930	3004.86	-23.84	-10.06	-27.58	799882.44	763650.78	33°05'47.051"N	103°29'20.750"W	0.48	
3096.70	1.640	293.380	3096.43	-26.17	-9.54	-29.85	799880.17	763651.30	33°05'47.056"N	103°29'20.777"W	0.74	
3188.20	2.160	309.630	3187.88	-29.04	-7.92	-32.38	799877.64	763652.92	33°05'47.072"N	103°29'20.806"W	0.81	
3279.80	2.370	318.270	3279.41	-32.21	-5.41	-34.97	799875.05	763655.43	33°05'47.097"N	103°29'20.837"W	0.44	
3371.30	2.250	324.370	3370.84	-35.21	-2.54	-37.28	799872.75	763658.30	33°05'47.126"N	103°29'20.864"W	0.30	
3462.80	1.910	324.190	3462.28	-37.80	0.16	-39.21	799870.81	763661.00	33°05'47.153"N	103°29'20.886"W	0.37	
3554.40	1.940	326.320	3553.83	-40.17	2.69	-40.97	799869.05	763663.53	33°05'47.178"N	103°29'20.906"W	0.08	
3645.90	1.930	327.040	3645.27	-42.50	5.27	-42.66	799867.36	763666.11	33°05'47.203"N	103°29'20.926"W	0.03	
3737.40	1.690	325.250	3736.73	-44.70	7.67	-44.27	799865.75	763668.51	33°05'47.227"N	103°29'20.945"W	0.27	
3829.00	1.330	329.250	3828.30	-46.51	9.70	-45.58	799864.44	763670.54	33°05'47.247"N	103°29'20.960"W	0.41	
3920.50	1.170	324.150	3919.78	-48.01	11.37	-46.67	799863.35	763672.21	33°05'47.264"N	103°29'20.973"W	0.21	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(UNO) Sec 23, T14S, R34E	Wellbore	No. 2H AWB
Facility	Uno State No. 2H	Sidetrack from	No. 2 AWB at 9321.60 MD

WELLPATH DATA (259 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
4012.10	1.210	321.540	4011.36	-49.53	12.88	-47.82	799862.20	763673.72	33°05'47.279"N	103°29'20.986"W	0.07	
4103.60	1.040	322.920	4102.84	-50.97	14.30	-48.93	799861.10	763675.14	33°05'47.293"N	103°29'20.999"W	0.19	
4195.10	0.740	325.610	4194.33	-52.08	15.45	-49.76	799860.26	763676.29	33°05'47.305"N	103°29'21.009"W	0.33	
4286.70	0.650	314.920	4285.92	-52.99	16.30	-50.46	799859.56	763677.14	33°05'47.313"N	103°29'21.017"W	0.17	
4378.20	0.540	333.080	4377.42	-53.73	17.06	-51.02	799859.00	763677.90	33°05'47.321"N	103°29'21.023"W	0.24	
4469.80	0.640	341.370	4469.01	-54.31	17.93	-51.38	799858.64	763678.77	33°05'47.329"N	103°29'21.027"W	0.14	
4561.30	0.560	333.120	4560.51	-54.91	18.81	-51.75	799858.27	763679.65	33°05'47.338"N	103°29'21.032"W	0.13	
4652.90	0.540	338.250	4652.10	-55.47	19.61	-52.11	799857.91	763680.45	33°05'47.346"N	103°29'21.036"W	0.06	
4744.40	0.430	341.540	4743.60	-55.92	20.33	-52.38	799857.64	763681.17	33°05'47.353"N	103°29'21.039"W	0.12	
4835.90	0.390	330.340	4835.10	-56.34	20.93	-52.64	799857.38	763681.77	33°05'47.359"N	103°29'21.042"W	0.10	
4927.50	0.420	324.190	4926.69	-56.82	21.47	-52.99	799857.03	763682.31	33°05'47.365"N	103°29'21.046"W	0.06	
5019.00	0.380	331.480	5018.19	-57.30	22.01	-53.33	799856.69	763682.85	33°05'47.370"N	103°29'21.050"W	0.07	
5110.60	0.380	335.190	5109.79	-57.71	22.56	-53.61	799856.41	763683.40	33°05'47.375"N	103°29'21.053"W	0.03	
5202.10	0.310	333.240	5201.29	-58.07	23.05	-53.85	799856.18	763683.89	33°05'47.380"N	103°29'21.056"W	0.08	
5293.60	0.160	335.590	5292.79	-58.32	23.39	-54.01	799856.01	763684.23	33°05'47.384"N	103°29'21.058"W	0.16	
5385.20	0.170	287.240	5384.39	-58.54	23.55	-54.19	799855.83	763684.39	33°05'47.385"N	103°29'21.060"W	0.15	
5476.70	0.330	198.090	5475.89	-58.68	23.34	-54.40	799855.62	763684.18	33°05'47.383"N	103°29'21.062"W	0.40	
5568.30	0.210	241.670	5567.48	-58.82	23.01	-54.63	799855.39	763683.85	33°05'47.380"N	103°29'21.065"W	0.25	
5659.80	0.120	138.880	5658.98	-58.86	22.85	-54.72	799855.30	763683.69	33°05'47.378"N	103°29'21.066"W	0.29	
5751.30	0.180	112.970	5750.48	-58.63	22.73	-54.52	799855.50	763683.57	33°05'47.377"N	103°29'21.064"W	0.10	
5842.90	0.260	122.750	5842.08	-58.29	22.56	-54.22	799855.81	763683.40	33°05'47.375"N	103°29'21.060"W	0.10	
5934.40	0.260	119.890	5933.58	-57.89	22.34	-53.86	799856.16	763683.18	33°05'47.373"N	103°29'21.056"W	0.01	
6025.90	0.240	118.810	6025.08	-57.50	22.15	-53.51	799856.51	763682.98	33°05'47.371"N	103°29'21.052"W	0.02	
6117.50	0.210	85.550	6116.68	-57.16	22.07	-53.18	799856.84	763682.91	33°05'47.370"N	103°29'21.048"W	0.14	
6209.00	0.360	74.100	6208.18	-56.76	22.16	-52.73	799857.29	763683.00	33°05'47.371"N	103°29'21.043"W	0.17	
6300.60	0.670	69.640	6299.78	-56.08	22.42	-51.96	799858.07	763683.26	33°05'47.374"N	103°29'21.034"W	0.34	
6392.10	0.860	79.070	6391.27	-55.03	22.74	-50.78	799859.24	763683.58	33°05'47.377"N	103°29'21.020"W	0.25	
6483.60	0.940	86.720	6482.76	-53.71	22.91	-49.36	799860.66	763683.75	33°05'47.378"N	103°29'21.003"W	0.16	
6575.20	0.890	84.150	6574.35	-52.34	23.03	-47.90	799862.12	763683.87	33°05'47.380"N	103°29'20.986"W	0.07	
6666.70	0.640	80.220	6665.84	-51.21	23.19	-46.69	799863.33	763684.03	33°05'47.381"N	103°29'20.972"W	0.28	
6758.30	0.520	79.580	6757.43	-50.38	23.35	-45.77	799864.25	763684.19	33°05'47.383"N	103°29'20.961"W	0.13	
6849.80	0.530	55.560	6848.93	-49.73	23.66	-45.02	799865.00	763684.50	33°05'47.386"N	103°29'20.952"W	0.24	
6941.30	0.630	44.030	6940.42	-49.22	24.26	-44.32	799865.70	763685.10	33°05'47.391"N	103°29'20.944"W	0.17	
7032.90	0.550	39.270	7032.02	-48.81	24.97	-43.69	799866.33	763685.81	33°05'47.398"N	103°29'20.936"W	0.10	
7124.40	0.410	40.500	7123.52	-48.50	25.56	-43.20	799866.82	763686.40	33°05'47.404"N	103°29'20.930"W	0.15	
7216.00	0.450	40.670	7215.11	-48.21	26.08	-42.75	799867.27	763686.92	33°05'47.409"N	103°29'20.925"W	0.04	
7307.50	0.450	29.030	7306.61	-47.97	26.66	-42.34	799867.68	763687.50	33°05'47.415"N	103°29'20.920"W	0.10	
7399.10	0.440	33.470	7398.21	-47.78	27.27	-41.98	799868.05	763688.11	33°05'47.421"N	103°29'20.916"W	0.04	
7490.60	0.530	16.120	7489.70	-47.67	27.97	-41.66	799868.36	763688.81	33°05'47.428"N	103°29'20.912"W	0.19	
7582.10	0.570	18.150	7581.20	-47.65	28.81	-41.40	799868.62	763689.65	33°05'47.436"N	103°29'20.909"W	0.05	
7673.70	0.510	20.510	7672.80	-47.59	29.63	-41.12	799868.90	763690.47	33°05'47.444"N	103°29'20.906"W	0.07	
7765.20	0.510	11.840	7764.29	-47.58	30.41	-40.89	799869.13	763691.25	33°05'47.452"N	103°29'20.903"W	0.08	
7856.70	0.450	11.260	7855.79	-47.64	31.16	-40.74	799869.28	763692.00	33°05'47.459"N	103°29'20.901"W	0.07	
7948.30	0.390	5.200	7947.39	-47.72	31.82	-40.64	799869.38	763692.66	33°05'47.466"N	103°29'20.900"W	0.08	
8039.80	0.270	345.050	8038.89	-47.89	32.34	-40.67	799869.35	763693.18	33°05'47.471"N	103°29'20.900"W	0.18	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(UNO) Sec 23, T14S, R34E	Wellbore	No. 2H AWB
Facility	Uno State No. 2H	Sidetrack from	No. 2 AWB at 9321.60 MD

WELLPATH DATA (259 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
8131.40	0.240	309.190	8130.48	-48.18	32.67	-40.87	799869.15	763693.51	33°05'47.474"N	103°29'20.902"W	0.17	
8222.90	0.200	269.260	8221.98	-48.50	32.79	-41.18	799868.84	763693.63	33°05'47.476"N	103°29'20.906"W	0.17	
8314.40	0.070	161.980	8313.48	-48.63	32.73	-41.32	799868.70	763693.57	33°05'47.475"N	103°29'20.908"W	0.25	
8406.00	0.180	112.810	8405.08	-48.45	32.62	-41.17	799868.85	763693.46	33°05'47.474"N	103°29'20.906"W	0.16	
8497.50	0.200	90.620	8496.58	-48.16	32.57	-40.88	799869.14	763693.41	33°05'47.473"N	103°29'20.903"W	0.08	
8589.10	0.190	67.830	8588.18	-47.88	32.62	-40.58	799869.44	763693.46	33°05'47.474"N	103°29'20.899"W	0.08	
8680.60	0.210	21.150	8679.68	-47.75	32.83	-40.38	799869.64	763693.67	33°05'47.476"N	103°29'20.897"W	0.17	
8772.10	0.180	357.950	8771.18	-47.77	33.13	-40.32	799869.70	763693.97	33°05'47.479"N	103°29'20.896"W	0.09	
8863.70	0.080	27.630	8862.78	-47.80	33.34	-40.30	799869.72	763694.17	33°05'47.481"N	103°29'20.896"W	0.13	
8955.50	0.160	62.800	8954.58	-47.70	33.45	-40.16	799869.86	763694.29	33°05'47.482"N	103°29'20.894"W	0.11	
9047.00	0.460	92.490	9046.08	-47.25	33.49	-39.68	799870.34	763694.33	33°05'47.482"N	103°29'20.888"W	0.36	
9138.50	1.080	101.030	9137.57	-46.03	33.31	-38.46	799871.56	763694.15	33°05'47.480"N	103°29'20.874"W	0.69	
9230.10	1.620	107.700	9229.15	-43.87	32.75	-36.38	799873.64	763693.59	33°05'47.475"N	103°29'20.850"W	0.61	
9321.60	1.680	104.120	9320.61	-41.24	32.03	-33.85	799876.17	763692.87	33°05'47.467"N	103°29'20.820"W	0.13	
9410.00	11.300	115.500	9408.34	-31.39	27.98	-24.75	799885.27	763688.82	33°05'47.427"N	103°29'20.713"W	10.93	
9442.00	21.700	115.500	9438.98	-22.45	24.07	-16.56	799893.46	763684.91	33°05'47.387"N	103°29'20.618"W	32.50	
9474.00	32.200	113.100	9467.47	-8.12	18.16	-3.34	799906.68	763679.00	33°05'47.328"N	103°29'20.463"W	32.98	
9503.00	39.600	114.100	9490.94	8.71	11.35	12.22	799922.24	763672.19	33°05'47.259"N	103°29'20.280"W	25.60	
9535.00	43.900	113.000	9514.81	29.81	2.84	31.76	799941.77	763663.68	33°05'47.173"N	103°29'20.052"W	13.63	
9567.00	46.800	108.600	9537.30	52.47	-5.21	53.03	799963.05	763655.63	33°05'47.092"N	103°29'19.802"W	13.33	
9598.00	50.100	103.700	9557.87	75.65	-11.64	75.31	799985.33	763649.20	33°05'47.027"N	103°29'19.541"W	15.91	
9630.00	53.100	99.900	9577.75	100.66	-16.75	99.85	800009.87	763644.09	33°05'46.974"N	103°29'19.253"W	13.21	
9661.00	57.000	98.900	9595.50	125.91	-20.89	124.91	800034.93	763639.95	33°05'46.931"N	103°29'18.959"W	12.86	
9693.00	62.000	100.400	9611.74	153.33	-25.52	152.08	800062.10	763635.32	33°05'46.883"N	103°29'18.640"W	16.14	
9725.00	67.000	101.200	9625.51	182.09	-30.94	180.44	800090.46	763629.90	33°05'46.827"N	103°29'18.307"W	15.79	
9756.00	72.400	101.600	9636.26	211.08	-36.68	208.93	800118.95	763624.16	33°05'46.768"N	103°29'17.973"W	17.46	
9788.00	74.300	102.800	9645.43	241.68	-43.16	238.90	800148.91	763617.68	33°05'46.702"N	103°29'17.621"W	6.94	
9820.00	76.700	102.900	9653.44	272.62	-50.05	269.10	800179.12	763610.79	33°05'46.631"N	103°29'17.267"W	7.51	
9851.00	80.000	102.400	9659.70	302.93	-56.70	298.72	800208.74	763604.14	33°05'46.563"N	103°29'16.919"W	10.76	
9883.00	85.500	103.400	9663.74	334.63	-63.78	329.65	800239.66	763597.06	33°05'46.491"N	103°29'16.557"W	17.46	
9915.00	86.400	103.900	9666.00	366.53	-71.32	360.67	800270.68	763589.52	33°05'46.414"N	103°29'16.193"W	3.22	
9956.00	87.600	102.300	9668.14	407.43	-80.60	400.54	800310.56	763580.24	33°05'46.319"N	103°29'15.725"W	4.87	
9988.00	87.900	102.500	9669.40	439.35	-87.46	431.77	800341.79	763573.38	33°05'46.248"N	103°29'15.358"W	1.13	
10019.00	88.000	102.800	9670.51	470.29	-94.25	462.00	800372.01	763566.59	33°05'46.179"N	103°29'15.004"W	1.02	
10050.00	88.300	103.000	9671.51	501.24	-101.16	492.20	800402.22	763559.68	33°05'46.108"N	103°29'14.649"W	1.16	
10081.00	90.000	103.700	9671.97	532.21	-108.32	522.36	800432.37	763552.52	33°05'46.035"N	103°29'14.296"W	5.93	
10113.00	90.600	103.900	9671.80	564.19	-115.95	553.44	800463.45	763544.89	33°05'45.957"N	103°29'13.931"W	1.98	
10144.00	91.100	103.800	9671.34	595.17	-123.37	583.53	800493.54	763537.47	33°05'45.881"N	103°29'13.578"W	1.64	
10175.00	91.100	103.800	9670.75	626.15	-130.77	613.63	800523.64	763530.07	33°05'45.805"N	103°29'13.225"W	0.00	
10206.00	91.000	104.100	9670.18	657.13	-138.24	643.71	800553.72	763522.60	33°05'45.729"N	103°29'12.872"W	1.02	
10238.00	91.000	104.500	9669.62	689.12	-146.14	674.72	800584.73	763514.70	33°05'45.648"N	103°29'12.508"W	1.25	
10269.00	91.100	104.900	9669.05	720.11	-154.01	704.70	800614.71	763506.83	33°05'45.568"N	103°29'12.157"W	1.33	
10301.00	90.800	105.200	9668.52	752.10	-162.32	735.59	800645.60	763498.53	33°05'45.483"N	103°29'11.794"W	1.33	
10332.00	90.800	105.000	9668.09	783.10	-170.39	765.52	800675.53	763490.45	33°05'45.401"N	103°29'11.443"W	0.65	
10363.00	91.300	105.400	9667.52	814.09	-178.52	795.43	800705.44	763482.33	33°05'45.318"N	103°29'11.093"W	2.07	

Actual Wellpath Report

No. 2H AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(UNO) Sec 23, T14S, R34E	Wellbore	No. 2H AWB
Facility	Uno State No. 2H	Sidetrack from	No. 2 AWB at 9321.60 MD

WELLPATH DATA (259 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
10395.00	91.900	105.700	9666.63	846.08	-187.09	826.25	800736.25	763473.75	33°05'45.231"N	103°29'10.731"W	2.10	
10427.00	91.700	105.900	9665.62	878.06	-195.80	857.02	800767.03	763465.04	33°05'45.142"N	103°29'10.370"W	0.88	
10458.00	91.000	106.200	9664.89	909.05	-204.37	886.81	800796.81	763456.47	33°05'45.055"N	103°29'10.021"W	2.46	
10490.00	90.000	106.000	9664.61	941.05	-213.24	917.55	800827.56	763447.60	33°05'44.965"N	103°29'09.661"W	3.19	
10521.00	89.600	106.200	9664.72	972.05	-221.84	947.33	800857.34	763439.00	33°05'44.878"N	103°29'09.311"W	1.44	
10553.00	89.400	105.700	9665.00	1004.05	-230.63	978.10	800888.11	763430.21	33°05'44.788"N	103°29'08.951"W	1.68	
10583.00	89.200	106.800	9665.37	1034.04	-239.03	1006.90	800916.90	763421.82	33°05'44.703"N	103°29'08.613"W	3.73	
10615.00	89.200	107.100	9665.81	1066.03	-248.35	1037.51	800947.51	763412.49	33°05'44.608"N	103°29'08.254"W	0.94	
10646.00	88.000	107.200	9666.57	1097.01	-257.49	1067.12	800977.12	763403.35	33°05'44.515"N	103°29'07.907"W	3.88	
10678.00	87.800	107.400	9667.74	1128.98	-267.00	1097.65	801007.65	763393.84	33°05'44.419"N	103°29'07.549"W	0.88	
10709.00	88.200	107.400	9668.82	1159.94	-276.27	1127.21	801037.22	763384.58	33°05'44.325"N	103°29'07.202"W	1.29	
10741.00	89.400	107.800	9669.49	1191.92	-285.94	1157.71	801067.71	763374.90	33°05'44.227"N	103°29'06.845"W	3.95	
10772.00	89.900	107.600	9669.68	1222.90	-295.37	1187.24	801097.24	763365.48	33°05'44.131"N	103°29'06.498"W	1.74	
10803.00	90.400	107.100	9669.60	1253.88	-304.61	1216.83	801126.83	763356.23	33°05'44.037"N	103°29'06.152"W	2.28	
10835.00	90.400	107.400	9669.38	1285.87	-314.10	1247.39	801157.39	763346.75	33°05'43.941"N	103°29'05.793"W	0.94	
10898.00	90.700	107.600	9668.77	1348.83	-333.04	1307.47	801217.47	763327.80	33°05'43.749"N	103°29'05.089"W	0.57	
10929.00	90.500	107.500	9668.45	1379.82	-342.39	1337.03	801247.03	763318.46	33°05'43.654"N	103°29'04.742"W	0.72	
10961.00	90.500	107.400	9668.17	1411.80	-351.99	1367.55	801277.55	763308.86	33°05'43.556"N	103°29'04.385"W	0.31	
10992.00	90.600	107.000	9667.87	1442.79	-361.15	1397.17	801307.16	763299.69	33°05'43.463"N	103°29'04.037"W	1.33	
11024.00	91.300	107.000	9667.34	1474.77	-370.51	1427.76	801337.76	763290.34	33°05'43.368"N	103°29'03.679"W	2.19	
11055.00	91.600	106.800	9666.56	1505.76	-379.52	1457.41	801367.41	763281.33	33°05'43.277"N	103°29'03.331"W	1.16	
11086.00	91.200	105.900	9665.80	1536.74	-388.24	1487.15	801397.15	763272.61	33°05'43.188"N	103°29'02.982"W	3.18	
11118.00	91.500	105.900	9665.05	1568.74	-397.00	1517.92	801427.91	763263.84	33°05'43.099"N	103°29'02.621"W	0.94	
11150.00	91.500	105.300	9664.21	1600.72	-405.61	1548.73	801458.72	763255.24	33°05'43.011"N	103°29'02.260"W	1.87	
11181.00	91.400	105.200	9663.42	1631.71	-413.76	1578.63	801488.62	763247.09	33°05'42.928"N	103°29'01.909"W	0.46	
11213.00	91.500	105.000	9662.62	1663.70	-422.09	1609.51	801519.51	763238.76	33°05'42.843"N	103°29'01.547"W	0.70	
11244.00	91.500	104.600	9661.80	1694.69	-430.01	1639.47	801549.47	763230.84	33°05'42.763"N	103°29'01.196"W	1.29	
11276.00	90.900	104.200	9661.13	1726.67	-437.96	1670.46	801580.45	763222.88	33°05'42.681"N	103°29'00.832"W	2.25	
11307.00	90.200	104.400	9660.84	1757.66	-445.62	1700.50	801610.49	763215.23	33°05'42.603"N	103°29'00.480"W	2.35	
11338.00	89.900	104.300	9660.81	1788.65	-453.30	1730.53	801640.52	763207.54	33°05'42.525"N	103°29'00.128"W	1.02	
11370.00	89.800	104.500	9660.89	1820.65	-461.26	1761.53	801671.52	763199.59	33°05'42.444"N	103°28'59.764"W	0.70	
11401.00	89.800	104.800	9661.00	1851.64	-469.10	1791.52	801701.51	763191.75	33°05'42.364"N	103°28'59.412"W	0.97	
11433.00	89.800	105.200	9661.11	1883.64	-477.38	1822.43	801732.42	763183.46	33°05'42.279"N	103°28'59.050"W	1.25	
11465.00	89.800	105.300	9661.22	1915.64	-485.80	1853.30	801763.29	763175.05	33°05'42.194"N	103°28'58.688"W	0.31	
11496.00	89.800	105.200	9661.33	1946.64	-493.95	1883.21	801793.20	763166.89	33°05'42.110"N	103°28'58.337"W	0.32	
11528.00	90.300	105.300	9661.30	1978.64	-502.37	1914.08	801824.07	763158.48	33°05'42.025"N	103°28'57.975"W	1.59	
11559.00	91.100	105.700	9660.93	2009.63	-510.65	1943.95	801853.94	763150.19	33°05'41.940"N	103°28'57.625"W	2.89	
11591.00	91.300	105.600	9660.26	2041.63	-519.29	1974.76	801884.75	763141.56	33°05'41.853"N	103°28'57.264"W	0.70	
11623.00	91.500	105.900	9659.47	2073.62	-527.97	2005.55	801915.54	763132.88	33°05'41.764"N	103°28'56.902"W	1.13	
11654.00	91.500	106.000	9658.66	2104.60	-536.48	2035.35	801945.33	763124.36	33°05'41.678"N	103°28'56.553"W	0.32	
11686.00	90.900	105.700	9657.99	2136.60	-545.22	2066.12	801976.11	763115.63	33°05'41.589"N	103°28'56.192"W	2.10	
11717.00	89.900	105.400	9657.78	2167.60	-553.53	2095.99	802005.97	763107.32	33°05'41.504"N	103°28'55.842"W	3.37	
11749.00	88.800	105.100	9658.14	2199.59	-561.95	2126.86	802036.84	763098.90	33°05'41.418"N	103°28'55.480"W	3.56	
11781.00	88.100	104.600	9659.00	2231.58	-570.15	2157.78	802067.76	763090.70	33°05'41.335"N	103°28'55.117"W	2.69	
11812.00	87.200	104.400	9660.28	2262.54	-577.90	2187.76	802097.75	763082.95	33°05'41.256"N	103°28'54.766"W	2.97	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(UNO) Sec 23, T14S, R34E	Wellbore	No. 2H AWB
Facility	Uno State No. 2H	Sidetrack from	No. 2 AWB at 9321.60 MD

WELLPATH DATA (259 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
11845.00	86.800	104.500	9662.00	2295.49	-586.13	2219.68	802129.66	763074.72	33°05'41.172"N	103°28'54.391"W	1.25	
11876.00	86.400	104.600	9663.84	2326.43	-593.90	2249.63	802159.61	763066.95	33°05'41.092"N	103°28'54.040"W	1.33	
11908.00	85.900	104.900	9665.99	2358.36	-602.03	2280.50	802190.49	763058.82	33°05'41.009"N	103°28'53.678"W	1.82	
11940.00	85.100	105.000	9668.50	2390.25	-610.26	2311.33	802221.31	763050.59	33°05'40.925"N	103°28'53.316"W	2.52	
11971.00	85.000	105.600	9671.18	2421.14	-618.41	2341.11	802251.10	763042.44	33°05'40.842"N	103°28'52.967"W	1.96	
12003.00	85.300	106.400	9673.88	2453.02	-627.20	2371.76	802281.75	763033.65	33°05'40.753"N	103°28'52.608"W	2.66	
12035.00	85.700	106.900	9676.39	2484.92	-636.34	2402.33	802312.31	763024.51	33°05'40.660"N	103°28'52.249"W	2.00	
12067.00	85.900	107.400	9678.74	2516.82	-645.75	2432.82	802342.80	763015.10	33°05'40.565"N	103°28'51.892"W	1.68	
12098.00	86.300	107.600	9680.84	2547.73	-655.05	2462.32	802372.30	763005.80	33°05'40.470"N	103°28'51.546"W	1.44	
12130.00	87.400	107.800	9682.60	2579.66	-664.76	2492.76	802402.74	762996.09	33°05'40.372"N	103°28'51.189"W	3.49	
12162.00	88.000	108.000	9683.89	2611.61	-674.59	2523.18	802433.16	762986.26	33°05'40.272"N	103°28'50.832"W	1.98	
12193.00	88.000	108.000	9684.97	2642.57	-684.16	2552.65	802462.63	762976.69	33°05'40.175"N	103°28'50.487"W	0.00	
12225.00	87.200	107.700	9686.31	2674.52	-693.96	2583.08	802493.06	762966.89	33°05'40.076"N	103°28'50.130"W	2.67	
12256.00	87.100	107.900	9687.85	2705.46	-703.43	2612.56	802522.54	762957.42	33°05'39.979"N	103°28'49.785"W	0.72	
12288.00	87.100	108.100	9689.47	2737.39	-713.30	2642.96	802552.93	762947.55	33°05'39.879"N	103°28'49.428"W	0.62	
12319.00	87.000	107.900	9691.06	2768.32	-722.87	2672.40	802582.38	762937.98	33°05'39.782"N	103°28'49.083"W	0.72	
12351.00	86.500	106.900	9692.88	2800.26	-732.43	2702.89	802612.86	762928.43	33°05'39.685"N	103°28'48.726"W	3.49	
12383.00	86.400	106.300	9694.86	2832.19	-741.55	2733.49	802643.47	762919.30	33°05'39.593"N	103°28'48.367"W	1.90	
12414.00	86.200	105.800	9696.86	2863.13	-750.10	2763.22	802673.20	762910.75	33°05'39.506"N	103°28'48.018"W	1.73	
12446.00	87.000	105.600	9698.76	2895.07	-758.75	2793.97	802703.95	762902.11	33°05'39.418"N	103°28'47.658"W	2.58	
12477.00	88.500	106.000	9699.97	2926.04	-767.18	2823.78	802733.75	762893.67	33°05'39.332"N	103°28'47.308"W	5.01	
12509.00	89.500	106.000	9700.53	2958.04	-776.00	2854.53	802764.51	762884.85	33°05'39.242"N	103°28'46.947"W	3.12	
12540.00	89.500	106.100	9700.80	2989.04	-784.57	2884.33	802794.30	762876.28	33°05'39.155"N	103°28'46.598"W	0.32	
12572.00	89.500	106.100	9701.08	3021.03	-793.44	2915.07	802825.04	762867.41	33°05'39.065"N	103°28'46.238"W	0.00	
12604.00	89.600	106.100	9701.33	3053.03	-802.32	2945.81	802855.79	762858.54	33°05'38.974"N	103°28'45.877"W	0.31	
12636.00	90.200	106.200	9701.39	3085.03	-811.22	2976.55	802886.52	762849.64	33°05'38.884"N	103°28'45.517"W	1.90	
12667.00	90.300	106.200	9701.26	3116.03	-819.87	3006.32	802916.29	762840.99	33°05'38.796"N	103°28'45.168"W	0.32	
12699.00	90.200	106.300	9701.12	3148.03	-828.82	3037.04	802947.01	762832.03	33°05'38.705"N	103°28'44.807"W	0.44	
12730.00	90.100	106.000	9701.03	3179.03	-837.44	3066.82	802976.79	762823.41	33°05'38.617"N	103°28'44.458"W	1.02	
12762.00	90.700	105.800	9700.81	3211.03	-846.21	3097.59	803007.56	762814.64	33°05'38.528"N	103°28'44.097"W	1.98	
12794.00	91.200	105.800	9700.28	3243.02	-854.92	3128.38	803038.35	762805.93	33°05'38.439"N	103°28'43.736"W	1.56	
12825.00	90.100	105.500	9699.93	3274.02	-863.28	3158.23	803068.19	762797.57	33°05'38.354"N	103°28'43.386"W	3.68	
12857.00	89.100	105.200	9700.15	3306.02	-871.75	3189.08	803099.05	762789.10	33°05'38.268"N	103°28'43.024"W	3.26	
12888.00	89.000	105.100	9700.67	3337.01	-879.85	3219.00	803128.97	762781.00	33°05'38.185"N	103°28'42.674"W	0.46	
12920.00	89.000	105.500	9701.22	3369.01	-888.30	3249.86	803159.83	762772.56	33°05'38.099"N	103°28'42.312"W	1.25	
12951.00	89.100	105.700	9701.74	3400.00	-896.63	3279.72	803189.68	762764.22	33°05'38.014"N	103°28'41.962"W	0.72	
12983.00	89.000	105.800	9702.27	3432.00	-905.32	3310.51	803220.48	762755.54	33°05'37.926"N	103°28'41.600"W	0.44	
13015.00	89.000	105.800	9702.83	3463.99	-914.03	3341.30	803251.26	762746.83	33°05'37.837"N	103°28'41.239"W	0.00	
13046.00	89.100	105.500	9703.34	3494.99	-922.39	3371.14	803281.11	762738.46	33°05'37.752"N	103°28'40.889"W	1.02	
13078.00	89.300	105.200	9703.79	3526.98	-930.86	3402.00	803311.96	762729.99	33°05'37.666"N	103°28'40.528"W	1.13	
13110.00	89.000	104.800	9704.26	3558.98	-939.14	3432.91	803342.87	762721.71	33°05'37.581"N	103°28'40.165"W	1.56	
13141.00	89.100	104.600	9704.78	3589.97	-947.01	3462.89	803372.85	762713.85	33°05'37.501"N	103°28'39.814"W	0.72	
13173.00	89.000	104.600	9705.31	3621.96	-955.07	3493.85	803403.81	762705.78	33°05'37.419"N	103°28'39.450"W	0.31	
13204.00	89.100	104.000	9705.82	3652.95	-962.73	3523.88	803433.85	762698.13	33°05'37.341"N	103°28'39.098"W	1.96	
13236.00	89.000	103.900	9706.35	3684.93	-970.44	3554.94	803464.90	762690.41	33°05'37.262"N	103°28'38.734"W	0.44	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(UNO) Sec 23, T14S, R34E	Wellbore	No. 2H AWB
Facility	Uno State No. 2H	Sidetrack from	No. 2 AWB at 9321.60 MD

WELLPATH DATA (259 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
13268.00	89.100	104.000	9706.88	3716.91	-978.16	3585.99	803495.95	762682.70	33°05'37.183"N	103°28'38.370"W	0.44	
13299.00	89.000	105.000	9707.40	3747.90	-985.92	3616.00	803525.96	762674.94	33°05'37.104"N	103°28'38.018"W	3.24	
13331.00	89.000	105.800	9707.96	3779.89	-994.41	3646.84	803556.80	762666.44	33°05'37.017"N	103°28'37.656"W	2.50	
13363.00	89.100	106.600	9708.49	3811.89	-1003.34	3677.57	803587.53	762657.52	33°05'36.927"N	103°28'37.296"W	2.52	
13394.00	89.000	106.700	9709.00	3842.88	-1012.22	3707.26	803617.22	762648.64	33°05'36.836"N	103°28'36.947"W	0.46	
13426.00	89.000	107.000	9709.56	3874.87	-1021.49	3737.89	803647.84	762639.36	33°05'36.742"N	103°28'36.588"W	0.94	
13458.00	89.100	107.400	9710.09	3906.85	-1030.96	3768.45	803678.41	762629.90	33°05'36.646"N	103°28'36.230"W	1.29	
13489.00	89.000	107.000	9710.60	3937.83	-1040.12	3798.06	803708.02	762620.74	33°05'36.553"N	103°28'35.883"W	1.33	
13521.00	89.000	105.600	9711.16	3969.83	-1049.10	3828.77	803738.73	762611.76	33°05'36.462"N	103°28'35.523"W	4.37	
13553.00	89.000	104.900	9711.72	4001.82	-1057.52	3859.64	803769.59	762603.34	33°05'36.376"N	103°28'35.161"W	2.19	
13584.00	89.000	104.800	9712.26	4032.81	-1065.46	3889.60	803799.55	762595.40	33°05'36.295"N	103°28'34.810"W	0.32	
13616.00	89.100	105.100	9712.79	4064.81	-1073.71	3920.51	803830.46	762587.14	33°05'36.211"N	103°28'34.447"W	0.99	
13647.00	89.100	104.700	9713.28	4095.80	-1081.68	3950.46	803860.42	762579.17	33°05'36.129"N	103°28'34.096"W	1.29	
13679.00	89.000	104.700	9713.81	4127.79	-1089.80	3981.41	803891.37	762571.05	33°05'36.047"N	103°28'33.733"W	0.31	
13711.00	89.000	105.400	9714.37	4159.78	-1098.11	4012.31	803922.26	762562.75	33°05'35.962"N	103°28'33.370"W	2.19	
13743.00	89.000	105.900	9714.93	4191.78	-1106.74	4043.12	803953.07	762554.12	33°05'35.874"N	103°28'33.009"W	1.56	
13775.00	89.000	106.100	9715.48	4223.77	-1115.56	4073.87	803983.83	762545.30	33°05'35.784"N	103°28'32.648"W	0.62	
13806.00	89.000	106.800	9716.03	4254.76	-1124.34	4103.60	804013.55	762536.52	33°05'35.695"N	103°28'32.300"W	2.26	
13838.00	89.100	107.100	9716.56	4286.75	-1133.67	4134.21	804044.16	762527.19	33°05'35.600"N	103°28'31.941"W	0.99	
13869.00	89.000	107.100	9717.07	4317.74	-1142.78	4163.83	804073.78	762518.08	33°05'35.508"N	103°28'31.594"W	0.32	
13901.00	89.000	107.100	9717.63	4349.72	-1152.19	4194.41	804104.36	762508.67	33°05'35.412"N	103°28'31.235"W	0.00	
13932.00	89.000	107.200	9718.17	4380.71	-1161.33	4224.03	804133.98	762499.53	33°05'35.319"N	103°28'30.888"W	0.32	
13964.00	89.000	107.100	9718.73	4412.69	-1170.76	4254.60	804164.55	762490.10	33°05'35.224"N	103°28'30.530"W	0.31	
13995.00	89.100	107.300	9719.24	4443.68	-1179.93	4284.21	804194.16	762480.93	33°05'35.130"N	103°28'30.182"W	0.72	
14027.00	89.100	107.000	9719.74	4475.66	-1189.36	4314.78	804224.73	762471.50	33°05'35.035"N	103°28'29.824"W	0.94	
14059.00	89.200	107.200	9720.22	4507.65	-1198.77	4345.37	804255.31	762462.09	33°05'34.939"N	103°28'29.465"W	0.70	
14090.00	89.000	106.800	9720.71	4538.64	-1207.83	4375.01	804284.96	762453.03	33°05'34.847"N	103°28'29.118"W	1.44	
14122.00	89.100	106.800	9721.24	4570.63	-1217.08	4405.64	804315.59	762443.78	33°05'34.753"N	103°28'28.759"W	0.31	
14154.00	89.000	107.100	9721.77	4602.61	-1226.41	4436.24	804346.19	762434.45	33°05'34.658"N	103°28'28.400"W	0.99	
14185.00	89.000	107.500	9722.31	4633.60	-1235.63	4465.84	804375.78	762425.23	33°05'34.565"N	103°28'28.053"W	1.29	
14217.00	89.100	108.000	9722.84	4665.57	-1245.38	4496.31	804406.26	762415.48	33°05'34.466"N	103°28'27.696"W	1.59	
14248.00	89.100	108.400	9723.33	4696.54	-1255.06	4525.75	804435.70	762405.80	33°05'34.368"N	103°28'27.351"W	1.29	
14275.00	89.100	109.100	9723.75	4723.49	-1263.74	4551.32	804461.26	762397.12	33°05'34.280"N	103°28'27.051"W	2.59	
14345.00	89.100	109.100	9724.85	4793.36	-1286.64	4617.46	804527.40	762374.22	33°05'34.048"N	103°28'26.276"W	0.00	Proj. to Bit

Actual Wellpath Report

No. 2H AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Apache Corporation**	Slot	**No. 2H SHL**
Area	**Lea County, NM**	Well	**No. 2H**
Field	**(UNO) Sec 23, T14S, R34E**	Wellbore	**No. 2H AWB**
Facility	**Uno State No. 2H**	Sidetrack from	**No. 2 AWB** at **9321.60 MD**

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 2H Target 1		9670.50	-232.28	973.57	800883.57	763428.56	33°05'44.772"N	103°29'09.004"W	point
No. 2H Target 2		9671.67	-509.50	1934.50	801844.49	763151.35	33°05'41.953"N	103°28'57.736"W	point
No. 2H Target 3		9693.34	-786.50	2895.50	802805.47	762874.35	33°05'39.135"N	103°28'46.467"W	point
No. 2H Target 4		9710.00	-1063.50	3856.50	803766.46	762597.36	33°05'36.317"N	103°28'35.198"W	point
No. 2H PBHL		9728.00	-1294.92	4618.17	**804528.11**	**762365.94**	33°05'33.966"N	103°28'26.268"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	9321.60	Generic gyro - northseeking (Standard)	Gyro (84.8 - 10694.7)	No. 2 AWB
9321.60	14345.00	NaviTrak (Standard)	MWD	No. 2H AWB