

30-015-39219

OCCIDENTAL PERMIAN LTD.

Nash Draw Delaware
Eddy County, NM
Cypress 34 Federal #7H
VH - Job #32K0911850

Survey: Actual

SDI Standard Survey Report

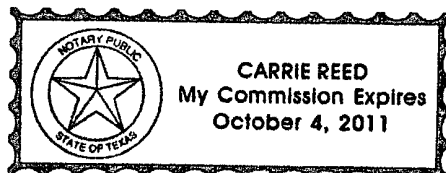
This survey is correct to the best of my knowledge and is supported by actual field data.

Slack

Notarized this date 4th of October, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0911850	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0911850	Database:	EDM-Regulatory

Project	Nash Draw Delaware		
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		Eddy County, NM			
Site Position:		Northing:	461,073.91 usft	Latitude:	32° 16' 1 542 N
From:	Lat/Long	Easting:	611,392.06 usft	Longitude:	103° 58' 22 621 W
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0 19 °

Well	Cypress 34 Federal #7H, Directional (Unknown)					
Well Position	+N/-S	0 0 usft	Northing:	461,073.91 usft	Latitude:	32° 16' 1 542 N
	+E/-W	0 0 usft	Easting:	611,392.06 usft	Longitude:	103° 58' 22 621 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K0911850				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/7/2011	7 75	60 15	48,600

Design	VH - Job #32K0911850				
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	319 36	

Survey Program	Date	10/23/2011			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
104 8	257 1	Actual (VH - Job #32K0911850)	Keeper	Keeper Surface Readout	

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	
104.8	0 40	332 55	104 8	0.3	-0.2	332 55	0.4	
166 1	0 41	313 54	166.1	0 7	-0.4	327.36	0 8	
257 1	0 69	311 27	257 1	1 3	-1.1	319.36	1 6	



Project: Nash Draw Delaware
Eddy County, NM
Well: Cypress 34 Federal #7H
Wellbore: VH - Job #32K0911850
Design: VH - Job #32K0911850

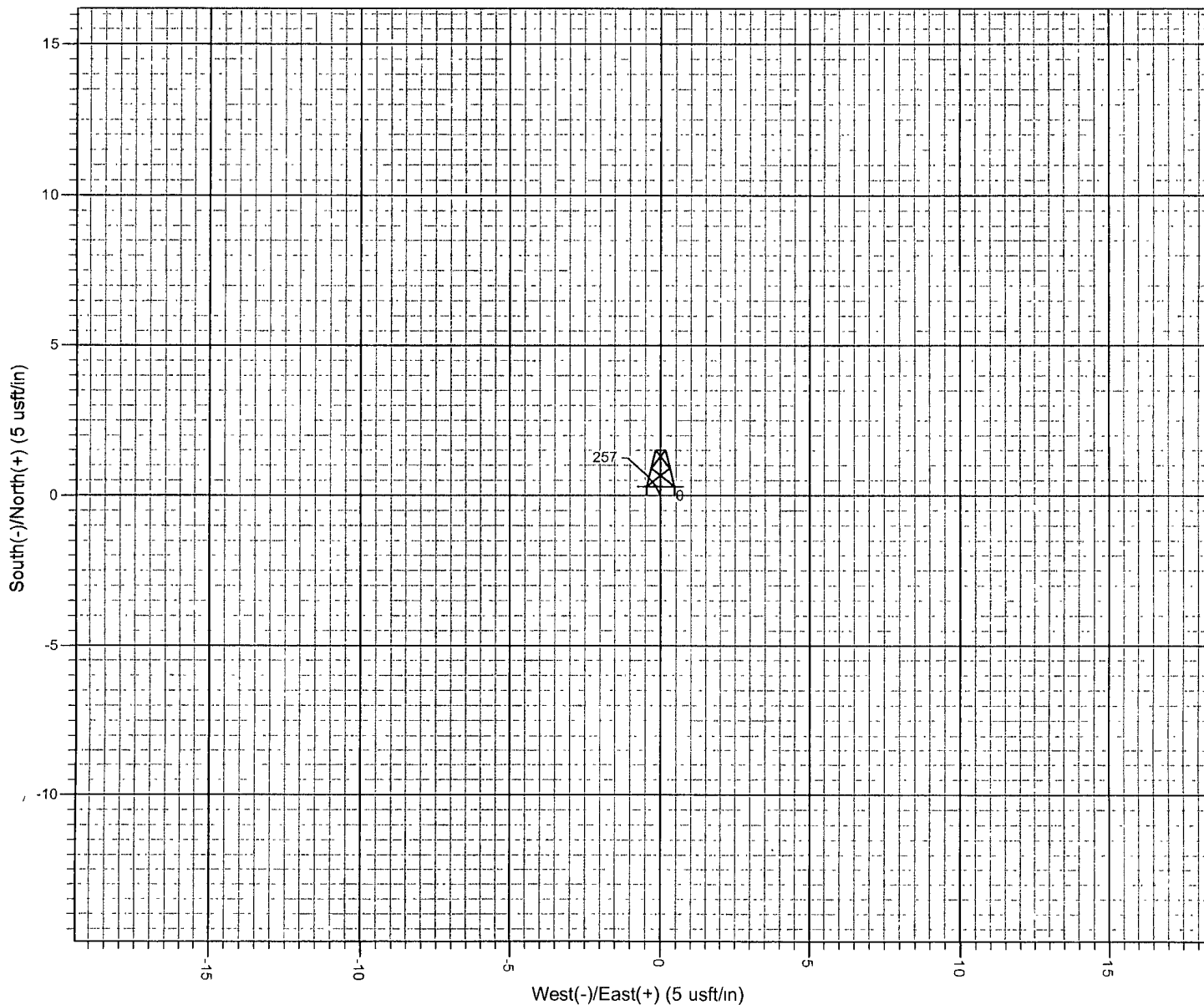


Azimuths to Grid North
True North -0 19°
Magnetic North: 7.55°
Magnetic Field
Strength 48600 2snT
Dip Angle 60.15°
Date 9/7/2011
Model IGRF2010

WELL DETAILS: Cypress 34 Federal #7H
WELL @ 0.0usft (Original Well Elev)

Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	461073.91	611392.06	32° 16' 1.542 N	103° 58' 22.621 W	



PROJECT DETAILS: Nash Draw Delaware
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: Eddy County, NM
Site Centre Latitude: 32° 16' 1.542 N
Longitude: 103° 58' 22.621 W
Positional Uncertainty: 0.0
Convergence: 0.19
Local North: Grid



Weatherford

SURVEY REPORT

Report Date: 9/27/2011

Customer: Oxy Permian

Job Name: 4023827

Well Name: Cypress 34 Fed #7H

Field: Nash Draw Delaware

Rig: H&P 370

Rig Loc: Eddy County, NM

Survey Calculation Method. Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
Grid North	180.13 deg	48590 nT	60.15 deg	7.74 deg	0.19 deg	7.55 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	0.00 ft	0.00 deg	0.00 deg	0.00 ft	0.00 ft	0.00 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
104.80	0.40	332.55	104.80	0.32	-0.17	-0.32	0.38
166.10	0.41	313.54	166.10	0.67	-0.43	-0.66	0.22
257.10	0.69	311.27	257.09	1.25	-1.07	-1.25	0.31
415.00	0.64	304.70	414.98	2.38	-2.51	-2.37	0.06
507.00	0.53	302.53	506.98	2.90	-3.29	-2.89	0.12
599.00	0.61	305.74	598.97	3.42	-4.05	-3.41	0.09
691.00	0.55	298.81	690.97	3.92	-4.84	-3.90	0.10
783.00	0.65	309.38	782.96	4.46	-5.63	-4.45	0.16
875.00	0.60	309.54	874.96	5.10	-6.40	-5.08	0.05
967.00	0.62	300.76	966.95	5.66	-7.20	-5.64	0.10
1059.00	0.55	294.68	1058.95	6.10	-8.03	-6.08	0.10
1154.00	0.64	284.80	1153.94	6.42	-8.96	-6.40	0.14
1248.00	0.84	284.66	1247.93	6.73	-10.13	-6.71	0.21
1343.00	0.73	280.40	1342.93	7.02	-11.40	-6.99	0.13
1437.00	0.27	239.41	1436.92	7.01	-12.18	-6.98	0.59
1532.00	0.25	149.83	1531.92	6.72	-12.27	-6.69	0.39
1626.00	0.11	212.77	1625.92	6.47	-12.21	-6.44	0.24
1721.00	0.11	224.10	1720.92	6.32	-12.33	-6.30	0.02
1815.00	0.15	257.85	1814.92	6.23	-12.51	-6.21	0.09
1910.00	0.11	332.31	1909.92	6.29	-12.67	-6.26	0.17
2005.00	0.05	316.24	2004.92	6.40	-12.74	-6.37	0.07
2099.00	0.05	21.99	2098.92	6.47	-12.76	-6.44	0.06
2194.00	0.05	250.07	2193.92	6.49	-12.78	-6.46	0.10
2289.00	0.30	107.77	2288.92	6.40	-12.58	-6.37	0.36
2383.00	0.52	97.27	2382.92	6.27	-11.93	-6.24	0.25
2477.00	1.10	122.15	2476.91	5.74	-10.74	-5.71	0.71
2572.00	0.89	120.42	2571.89	4.88	-9.33	-4.86	0.22
2666.00	1.24	119.32	2665.88	4.01	-7.81	-3.99	0.37
2761.00	1.64	131.45	2760.85	2.61	-5.90	-2.59	0.53
2855.00	1.64	150.81	2854.81	0.54	-4.23	-0.53	0.59
2950.00	0.98	173.39	2949.78	-1.45	-3.48	1.46	0.87
3044.00	0.55	165.81	3043.78	-2.69	-3.27	2.69	0.47
3074.00	0.62	166.37	3073.77	-2.98	-3.20	2.99	0.23
3202.00	0.53	187.20	3201.77	-4.24	-3.11	4.25	0.18
3296.00	0.33	176.88	3295.76	-4.95	-3.15	4.95	0.23

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
3391.00	0.44	154.05	3390.76	-5.55	-2.98	5.55	0.20
3486.00	0.45	129.97	3485.76	-6.11	-2.53	6.12	0.20
3580.00	0.31	160.99	3579.76	-6.59	-2.17	6.60	0.26
3674.00	0.51	148.35	3673.76	-7.19	-1.86	7.19	0.23
3768.00	0.33	141.38	3767.75	-7.76	-1.47	7.76	0.20
3862.00	0.44	144.25	3861.75	-8.26	-1.10	8.26	0.12
3957.00	0.44	146.12	3956.75	-8.86	-0.68	8.86	0.02
4051.00	0.44	134.48	4050.74	-9.41	-0.22	9.41	0.09
4146.00	0.31	124.75	4145.74	-9.81	0.25	9.81	0.15
4240.00	0.36	130.19	4239.74	-10.15	0.69	10.15	0.06
4334.00	0.50	119.65	4333.74	-10.54	1.27	10.54	0.17
4428.00	0.53	123.91	4427.73	-10.99	1.99	10.98	0.05
4523.00	0.53	143.12	4522.73	-11.59	2.61	11.58	0.19
4617.00	0.53	137.10	4616.73	-12.25	3.17	12.24	0.06
4712.00	0.44	144.89	4711.72	-12.87	3.68	12.86	0.12
4806.00	0.49	135.98	4805.72	-13.46	4.17	13.45	0.09
4900.00	0.49	153.99	4899.72	-14.11	4.62	14.10	0.16
4994.00	0.44	151.06	4993.71	-14.78	4.97	14.77	0.06
5087.00	0.44	164.87	5086.71	-15.44	5.24	15.43	0.11
5181.00	0.36	177.37	5180.71	-16.08	5.35	16.07	0.13
5275.00	0.38	195.10	5274.71	-16.68	5.28	16.67	0.12
5370.00	0.58	187.33	5369.70	-17.46	5.14	17.45	0.22
5464.00	0.41	185.40	5463.70	-18.27	5.04	18.26	0.18
5558.00	0.31	175.39	5557.70	-18.86	5.03	18.84	0.13
5653.00	0.26	187.73	5652.70	-19.33	5.02	19.31	0.08
5747.00	0.19	170.24	5746.70	-19.69	5.02	19.68	0.10
5841.00	0.14	169.43	5840.70	-19.96	5.07	19.95	0.05
5936.00	0.20	159.09	5935.69	-20.23	5.15	20.21	0.07
6026.00	0.28	142.38	6025.69	-20.55	5.34	20.54	0.12
6090.00	0.80	156.31	6089.69	-21.08	5.61	21.07	0.83
6122.00	4.33	177.96	6121.65	-22.49	5.75	22.48	11.25
6153.00	10.15	183.60	6152.39	-26.39	5.62	26.38	18.89
6185.00	15.02	184.91	6183.62	-33.34	5.09	33.33	15.24
6216.00	18.66	186.43	6213.28	-42.27	4.19	42.27	11.83
6247.00	22.26	186.16	6242.32	-53.04	3.00	53.04	11.62
6278.00	24.72	185.51	6270.75	-65.34	1.75	65.33	7.98
6310.00	27.00	183.94	6299.54	-79.24	0.61	79.24	7.44
6342.00	29.28	180.63	6327.76	-94.32	0.02	94.32	8.63
6373.00	30.98	178.35	6354.57	-109.88	0.17	109.87	6.61
6405.00	32.55	178.01	6381.78	-126.71	0.70	126.71	4.94
6436.00	34.88	177.11	6407.56	-143.90	1.44	143.90	7.69
6467.00	38.01	178.19	6432.50	-162.30	2.19	162.29	10.31
6499.00	40.20	178.56	6457.33	-182.47	2.76	182.47	6.88
6530.00	42.36	179.95	6480.62	-202.92	3.02	202.91	7.57
6562.00	44.58	181.00	6503.85	-224.93	2.83	224.93	7.30
6593.00	45.75	181.91	6525.70	-246.91	2.27	246.90	4.31
6625.00	47.38	181.12	6547.70	-270.14	1.66	270.13	5.40
6656.00	49.98	180.68	6568.17	-293.41	1.30	293.41	8.45
6687.00	52.17	180.39	6587.65	-317.53	1.07	317.53	7.10
6719.00	53.99	179.21	6606.87	-343.11	1.16	343.11	6.41

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
6750.00	56.26	178.87	6624.59	-368.54	1.59	368.53	7.38
6782.00	58.74	179.33	6641.78	-395.52	2.01	395.51	7.84
6813.00	60.92	180.30	6657.36	-422.32	2.10	422.31	7.53
6845.00	62.32	181.13	6672.57	-450.47	1.75	450.46	4.93
6876.00	64.67	182.17	6686.41	-478.20	0.94	478.19	8.15
6907.00	66.90	182.18	6699.12	-506.45	-0.13	506.45	7.19
6939.00	69.44	181.74	6711.02	-536.13	-1.14	536.13	8.04
6971.00	72.16	181.23	6721.54	-566.34	-1.93	566.34	8.63
7002.00	75.33	181.66	6730.22	-596.09	-2.68	596.09	10.31
7034.00	77.23	181.97	6737.81	-627.16	-3.66	627.16	6.01
7065.00	79.57	182.17	6744.04	-657.50	-4.76	657.51	7.57
7096.00	82.56	182.21	6748.86	-688.10	-5.93	688.11	9.65
7128.00	85.00	182.39	6752.32	-719.88	-7.21	719.90	7.65
7159.00	87.53	182.37	6754.34	-750.79	-8.49	750.81	8.16
7190.00	89.81	181.73	6755.06	-781.76	-9.60	781.78	7.64
7253.00	91.59	180.32	6754.29	-844.74	-10.73	844.76	3.60
7347.00	92.47	180.12	6750.96	-938.68	-11.09	938.70	0.96
7442.00	91.36	179.59	6747.79	-1033.62	-10.85	1033.65	1.29
7536.00	91.23	179.87	6745.66	-1127.60	-10.40	1127.62	0.33
7630.00	89.81	178.02	6744.81	-1221.57	-8.67	1221.59	2.48
7724.00	90.09	178.74	6744.89	-1315.53	-6.01	1315.54	0.82
7819.00	91.11	179.26	6743.90	-1410.51	-4.36	1410.52	1.21
7913.00	90.12	178.78	6742.89	-1504.49	-2.75	1504.49	1.17
8007.00	90.37	178.90	6742.49	-1598.47	-0.85	1598.47	0.30
8101.00	90.56	178.94	6741.72	-1692.45	0.93	1692.45	0.21
8195.00	90.00	177.85	6741.26	-1786.41	3.56	1786.40	1.30
8290.00	89.81	177.08	6741.42	-1881.32	7.76	1881.30	0.83
8384.00	90.00	175.90	6741.58	-1975.14	13.51	1975.10	1.27
8478.00	88.89	176.98	6742.49	-2068.95	19.35	2068.90	1.65
8572.00	87.29	178.84	6745.62	-2162.83	22.78	2162.77	2.61
8666.00	87.53	182.13	6749.87	-2256.72	21.98	2256.66	3.51
8761.00	88.39	183.48	6753.25	-2351.54	17.34	2351.49	1.68
8855.00	90.00	184.57	6754.57	-2445.29	10.74	2445.26	2.07
8949.00	90.74	184.71	6753.97	-2538.98	3.14	2538.97	0.80
9043.00	90.93	184.33	6752.60	-2632.68	-4.27	2632.68	0.45
9137.00	90.06	184.05	6751.78	-2726.43	-11.14	2726.44	0.97
9231.00	90.68	183.36	6751.18	-2820.23	-17.21	2820.26	0.99
9325.00	89.01	180.89	6751.43	-2914.15	-20.70	2914.19	3.17
9420.00	90.12	181.46	6752.15	-3009.13	-22.65	3009.17	1.31
9514.00	91.11	180.58	6751.14	-3103.10	-24.32	3103.15	1.41
9608.00	91.85	179.46	6748.71	-3197.07	-24.35	3197.12	1.43
9702.00	90.56	177.25	6746.74	-3291.00	-21.65	3291.04	2.72
9797.00	91.61	178.01	6744.94	-3385.90	-17.73	3385.93	1.36
9891.00	89.69	178.21	6743.87	-3479.84	-14.63	3479.86	2.05
9985.00	89.65	178.91	6744.41	-3573.81	-12.26	3573.83	0.75
10079.00	90.92	179.99	6743.95	-3667.80	-11.36	3667.82	1.77
10173.00	90.56	179.38	6742.73	-3761.79	-10.85	3761.80	0.75
10268.00	89.32	178.78	6742.83	-3856.78	-9.32	3856.79	1.45
10362.00	88.76	178.18	6744.41	-3950.73	-6.83	3950.73	0.87
10456.00	89.07	177.86	6746.19	-4044.65	-3.58	4044.65	0.47

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
10550.00	89 26	180 28	6747 56	-4138.63	-2.05	4138 62	2.58
10644.00	88 83	178 31	6749.12	-4232.60	-0 90	4232.59	2.14
10739.00	88.83	180.30	6751.06	-4327.57	0.25	4327.56	2.09
10768.00	89 20	180.97	6751.56	-4356 56	-0.07	4356 55	2.64

Weatherford surveys from 415 ft MD to 10768 ft MD.

TD at 10833 ft MD.

The total correction is 7 55 deg relative to Grid North.

OCCIDENTAL PERMIAN LTD.

Nash Draw Delaware
Eddy County, NM
Cypress 34 Federal #7H
VH - Job #32K0212204

Survey: Gyro

SDI Standard Survey Report

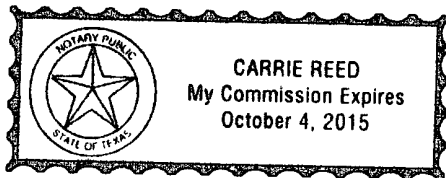
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 14th of March, 2012.

[Signature]

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Project:	Nash Draw Delaware		
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:	Eddy County, NM				
Site Position:		Northing:	461,073 91 usft	Latitude:	32° 16' 1 542 N
From:	Lat/Long	Easting:	611,392 06 usft	Longitude:	103° 58' 22 621 W
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0 19 °

Well:	Cypress 34 Federal #7H, Directional (Unknown)					
Well Position	+N/-S	0 0 usft	Northing:	461,073 91 usft	Latitude:	32° 16' 1 542 N
	+E/-W	0 0 usft	Easting:	611,392 06 usft	Longitude:	103° 58' 22 621 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K0212204				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/21/2012	7 69	60 14	48,555

Design		VH - Job #32K0212204			
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	166 79

Survey Program		Date: 3/13/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100 0	6,098 0	Gyro (VH - Job #32K0212204)	Keeper	Keeper Surface Readout

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
100 0	0 34	338 95	100 0	0 3	-0 1	338 95	0 3
115 0	0 50	328 12	115 0	0 4	-0 2	337 21	0 4
130 0	0 59	322 42	130 0	0 5	-0 2	334 06	0 5
145 0	0 47	314 67	145 0	0 6	-0 3	331 02	0 7
160 0	0 47	308 32	160 0	0 7	-0 4	328 07	0 8
175 0	0 49	298 32	175 0	0 7	-0 5	324 76	0 9
190 0	0 53	299 32	190 0	0 8	-0 6	321 53	1 0
205 0	0 53	299 76	205 0	0 9	-0 8	318 97	1 2
220 0	0 53	300 46	220 0	0 9	-0 9	316 99	1 3
235 0	0 54	300 07	235 0	1 0	-1 0	315 37	1 4
250 0	0 51	297 75	250 0	1 1	-1 1	313 95	1 6

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure/Azimuth (°)	Closure Distance (usft)
265.0	0.51	297.94	265.0	1.1	-1.2	312.69	1.7
280.0	0.52	300.71	280.0	1.2	-1.4	311.72	1.8
295.0	0.54	300.66	295.0	1.3	-1.5	310.94	2.0
310.0	0.54	301.25	310.0	1.4	-1.6	310.27	2.1
325.0	0.54	302.02	325.0	1.4	-1.7	309.73	2.2
340.0	0.56	304.24	340.0	1.5	-1.8	309.33	2.4
355.0	0.58	304.61	355.0	1.6	-2.0	309.04	2.5
370.0	0.60	304.71	370.0	1.7	-2.1	308.79	2.7
385.0	0.56	303.60	385.0	1.8	-2.2	308.54	2.8
400.0	0.56	301.62	400.0	1.8	-2.3	308.25	3.0
415.0	0.59	304.15	415.0	1.9	-2.5	308.00	3.1
430.0	0.61	305.46	430.0	2.0	-2.6	307.84	3.3
445.0	0.60	302.36	445.0	2.1	-2.7	307.66	3.4
460.0	0.61	302.41	460.0	2.2	-2.9	307.43	3.6
475.0	0.61	301.73	475.0	2.3	-3.0	307.20	3.8
490.0	0.58	299.94	490.0	2.4	-3.1	306.95	3.9
505.0	0.58	298.30	505.0	2.4	-3.3	306.66	4.1
520.0	0.62	303.52	520.0	2.5	-3.4	306.45	4.2
535.0	0.60	302.41	535.0	2.6	-3.5	306.33	4.4
550.0	0.61	302.36	550.0	2.7	-3.7	306.19	4.5
565.0	0.59	299.75	565.0	2.8	-3.8	306.02	4.7
580.0	0.58	299.12	580.0	2.8	-3.9	305.81	4.9
595.0	0.58	300.56	595.0	2.9	-4.1	305.63	5.0
610.0	0.56	299.52	610.0	3.0	-4.2	305.47	5.2
625.0	0.59	301.36	625.0	3.1	-4.3	305.33	5.3
640.0	0.58	299.51	640.0	3.1	-4.5	305.19	5.5
655.0	0.56	299.57	655.0	3.2	-4.6	305.04	5.6
670.0	0.57	298.61	670.0	3.3	-4.7	304.89	5.7
685.0	0.59	298.67	685.0	3.4	-4.8	304.73	5.9
700.0	0.56	300.23	700.0	3.4	-5.0	304.59	6.0
715.0	0.56	302.47	715.0	3.5	-5.1	304.52	6.2
730.0	0.52	298.34	730.0	3.6	-5.2	304.43	6.3
745.0	0.50	298.87	745.0	3.6	-5.3	304.31	6.5
760.0	0.54	301.67	760.0	3.7	-5.5	304.22	6.6
775.0	0.57	302.79	775.0	3.8	-5.6	304.18	6.8
790.0	0.56	305.05	790.0	3.9	-5.7	304.18	6.9
805.0	0.53	300.58	805.0	4.0	-5.8	304.15	7.0
820.0	0.55	303.38	820.0	4.0	-5.9	304.11	7.2
835.0	0.57	302.94	835.0	4.1	-6.1	304.09	7.3
850.0	0.54	300.55	850.0	4.2	-6.2	304.04	7.5
865.0	0.58	304.68	865.0	4.3	-6.3	304.02	7.6
880.0	0.59	302.24	880.0	4.3	-6.4	304.01	7.8
895.0	0.61	300.19	895.0	4.4	-6.6	303.95	7.9
910.0	0.58	299.49	910.0	4.5	-6.7	303.87	8.1

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
925 0	0 59	300 45	925 0	4 6	-6 8	303 80	8 2	
940 0	0 61	299 15	940 0	4 7	-7 0	303 72	8 4	
955 0	0 62	297 16	955 0	4 7	-7 1	303 62	8 6	
970 0	0 61	293 60	970 0	4 8	-7 3	303 47	8 7	
985 0	0 60	292 66	985 0	4 9	-7 4	303 29	8 9	
1,000 0	0 64	296 01	1,000 0	4 9	-7 6	303 13	9 0	
1,015 0	0 62	293 53	1,015 0	5 0	-7 7	302 98	9 2	
1,030 0	0 62	292 93	1,030 0	5 1	-7 9	302 81	9 4	
1,045 0	0 65	295 62	1,045 0	5 1	-8 0	302 66	9 5	
1,060 0	0 64	296 00	1,060 0	5 2	-8 2	302 54	9 7	
1,075 0	0 64	295 98	1,075 0	5 3	-8 3	302 43	9 9	
1,090 0	0 63	294 61	1,090 0	5 4	-8 5	302 31	10 0	
1,105 0	0 64	295 31	1,104 9	5 4	-8 6	302 19	10 2	
1,120 0	0 66	292 23	1,119 9	5 5	-8 8	302 05	10 4	
1,135 0	0 68	288 69	1,134 9	5 6	-8 9	301 86	10 5	
1,150 0	0 72	289 30	1,149 9	5 6	-9 1	301 64	10 7	
1,165 0	0 74	289 80	1,164 9	5 7	-9 3	301 43	10 9	
1,180 0	0 71	286 03	1,179 9	5 7	-9 5	301 20	11 1	
1,195 0	0 71	285 05	1,194 9	5 8	-9 6	300 95	11 3	
1,210 0	0 72	286 01	1,209 9	5 8	-9 8	300 70	11 4	
1,225 0	0 75	285 03	1,224 9	5 9	-10 0	300 45	11 6	
1,240 0	0 73	281 51	1,239 9	5 9	-10 2	300 17	11 8	
1,255 0	0 70	281 20	1,254 9	6 0	-10 4	299 88	12 0	
1,270 0	0 70	282 01	1,269 9	6 0	-10 6	299 61	12 2	
1,285 0	0 69	279 88	1,284 9	6 0	-10 7	299 34	12 3	
1,300 0	0 67	280 88	1,299 9	6 1	-10 9	299 08	12 5	
1,315 0	0 66	282 41	1,314 9	6 1	-11 1	298 84	12 7	
1,330 0	0 66	283 30	1,329 9	6 1	-11 3	298 63	12 8	
1,345 0	0 64	283 75	1,344 9	6 2	-11 4	298 43	13 0	
1,360 0	0 65	282 28	1,359 9	6 2	-11 6	298 24	13 2	
1,375 0	0 56	280 39	1,374 9	6 3	-11 7	298 04	13 3	
1,390 0	0 50	279 88	1,389 9	6 3	-11 9	297 86	13 4	
1,405 0	0 37	278 05	1,404 9	6 3	-12 0	297 70	13 5	
1,420 0	0 29	278 55	1,419 9	6 3	-12 1	297 58	13 6	
1,435 0	0 22	281 47	1,434 9	6 3	-12 1	297 50	13 7	
1,450 0	0 16	275 47	1,449 9	6 3	-12 2	297 43	13 7	
1,465 0	0 15	279 59	1,464 9	6 3	-12 2	297 37	13 8	
1,480 0	0 10	267 68	1,479 9	6 3	-12 3	297 32	13 8	
1,495 0	0 07	262 76	1,494 9	6 3	-12 3	297 27	13 8	
1,510 0	0 12	268 15	1,509 9	6 3	-12 3	297 22	13 8	
1,525 0	0 11	270 42	1,524 9	6 3	-12 3	297 16	13 9	
1,540 0	0 10	254 94	1,539 9	6 3	-12 4	297 10	13 9	
1,555 0	0 12	256 12	1,554 9	6 3	-12 4	297 02	13 9	
1,570 0	0 10	246 52	1,569 9	6 3	-12 4	296 94	13 9	

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,585 0	0 09	247 24	1,584.9	6 3	-12 4	296 86	14 0	
1,600 0	0 09	243 04	1,599 9	6 3	-12.5	296 78	14 0	
1,615 0	0 10	247 94	1,614 9	6 3	-12 5	296 70	14 0	
1,630 0	0 10	253 76	1,629 9	6 3	-12 5	296 63	14 0	
1,645 0	0 09	228 31	1,644 9	6 3	-12 5	296 55	14 0	
1,660 0	0 11	260 45	1,659 9	6 3	-12 6	296 47	14 0	
1,675 0	0 10	255.72	1,674 9	6 2	-12 6	296 40	14 1	
1,690 0	0 12	273 13	1,689 9	6 2	-12 6	296 34	14 1	
1,705 0	0 20	292 74	1,704 9	6 3	-12 7	296 31	14 1	
1,720 0	0 28	295 23	1,719 9	6 3	-12 7	296 30	14 2	
1,735 0	0 13	272 11	1,734 9	6 3	-12 8	296 27	14 2	
1,750 0	0 09	245 85	1,749 9	6 3	-12 8	296 20	14 3	
1,765 0	0 08	248 50	1,764 9	6 3	-12 8	296 13	14 3	
1,780 0	0 07	260 63	1,779 9	6 3	-12 8	296 08	14 3	
1,795 0	0 07	204 78	1,794 9	6 3	-12 8	296 02	14 3	
1,810 0	0 05	206 59	1,809 9	6.3	-12 9	295 96	14 3	
1,825 0	0 03	243 96	1,824.9	6 2	-12 9	295 92	14 3	
1,840 0	0 03	262 00	1,839 9	6 2	-12 9	295.90	14 3	
1,855.0	0 03	219 15	1,854 9	6 2	-12.9	295 88	14 3	
1,870 0	0 04	267 74	1,869 9	6 2	-12 9	295 85	14 3	
1,885 0	0 06	289 91	1,884 9	6.2	-12 9	295 84	14 3	
1,900 0	0 04	281 49	1,899 9	6 2	-12 9	295 83	14.3	
1,915 0	0 07	283 48	1,914.9	6 2	-12 9	295 82	14 4	
1,930 0	0 09	287 98	1,929 9	6 3	-12.9	295 80	14 4	
1,945 0	0 07	280 17	1,944 9	6 3	-13 0	295 79	14 4	
1,960 0	0 09	284 99	1,959 9	6 3	-13 0	295 77	14 4	
1,975 0	0 04	277 79	1,974.9	6 3	-13 0	295 75	14 4	
1,990 0	0 02	243 36	1,989 9	6 3	-13 0	295 74	14 4	
2,005 0	0 03	268 44	2,004 9	6 3	-13 0	295 72	14 4	
2,020 0	0 03	264 46	2,019 9	6 3	-13 0	295 71	14 4	
2,035 0	0 03	249 88	2,034.9	6 3	-13 0	295 69	14 5	
2,050 0	0 04	276 48	2,049 9	6 3	-13 0	295 67	14 5	
2,065 0	0 04	292 60	2,064.9	6 3	-13 0	295 66	14 5	
2,080 0	0 04	311 57	2,079 9	6 3	-13 1	295 67	14 5	
2,095 0	0 06	345 41	2,094 9	6 3	-13 1	295 70	14 5	
2,110 0	0 05	332 47	2,109 9	6 3	-13 1	295 74	14 5	
2,125 0	0 03	300 49	2,124.9	6 3	-13 1	295 75	14 5	
2,140 0	0 04	287 26	2,139 9	6 3	-13 1	295 75	14 5	
2,155 0	0 06	60 86	2,154 9	6 3	-13 1	295 77	14.5	
2,170 0	0 08	80 85	2,169 9	6 3	-13 1	295 82	14 5	
2,185 0	0 08	98 78	2,184 9	6 3	-13 0	295 86	14 5	
2,200 0	0 08	113 62	2,199 9	6 3	-13 0	295 87	14 5	
2,215 0	0 10	125 22	2,214 9	6 3	-13 0	295 86	14 4	
2,230 0	0 09	121.36	2,229 9	6 3	-13 0	295 85	14 4	
2,245 0	0 08	148.35	2,244 9	6 3	-13 0	295 82	14 4	

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
2,260.0	0.15	130.86	2,259.9	6.3	-12.9	295.78	14.4
2,275.0	0.24	119.30	2,274.9	6.2	-12.9	295.75	14.3
2,290.0	0.32	113.76	2,289.9	6.2	-12.8	295.75	14.2
2,305.0	0.38	110.53	2,304.9	6.2	-12.7	295.78	14.2
2,320.0	0.42	108.40	2,319.9	6.1	-12.6	295.82	14.1
2,335.0	0.47	104.59	2,334.9	6.1	-12.5	295.90	13.9
2,350.0	0.48	105.25	2,349.9	6.1	-12.4	296.00	13.8
2,365.0	0.56	109.83	2,364.9	6.0	-12.3	296.08	13.7
2,380.0	0.66	114.18	2,379.9	6.0	-12.1	296.13	13.5
2,395.0	0.72	113.93	2,394.9	5.9	-12.0	296.16	13.3
2,410.0	0.81	115.61	2,409.9	5.8	-11.8	296.18	13.1
2,425.0	0.83	118.65	2,424.9	5.7	-11.6	296.16	12.9
2,440.0	0.82	119.16	2,439.9	5.6	-11.4	296.11	12.7
2,455.0	0.84	119.57	2,454.9	5.5	-11.2	296.06	12.5
2,470.0	0.84	120.84	2,469.9	5.4	-11.0	295.98	12.3
2,485.0	0.86	122.86	2,484.9	5.3	-10.8	295.87	12.1
2,500.0	0.89	121.53	2,499.9	5.1	-10.7	295.75	11.8
2,515.0	0.92	123.15	2,514.9	5.0	-10.5	295.62	11.6
2,530.0	0.97	121.90	2,529.9	4.9	-10.2	295.47	11.3
2,545.0	1.01	123.77	2,544.9	4.7	-10.0	295.30	11.1
2,560.0	1.06	122.70	2,559.9	4.6	-9.8	295.10	10.8
2,575.0	1.03	121.46	2,574.9	4.4	-9.6	294.92	10.5
2,590.0	1.04	121.75	2,589.9	4.3	-9.3	294.74	10.3
2,605.0	1.06	122.49	2,604.9	4.2	-9.1	294.54	10.0
2,620.0	1.10	123.47	2,619.9	4.0	-8.9	294.29	9.7
2,635.0	1.14	124.42	2,634.9	3.8	-8.6	294.00	9.4
2,650.0	1.22	126.66	2,649.9	3.7	-8.4	293.61	9.1
2,665.0	1.26	126.68	2,664.9	3.5	-8.1	293.13	8.8
2,680.0	1.28	127.41	2,679.9	3.3	-7.8	292.59	8.5
2,695.0	1.30	128.56	2,694.9	3.1	-7.6	291.96	8.2
2,710.0	1.32	130.10	2,709.9	2.8	-7.3	291.22	7.8
2,725.0	1.38	131.90	2,724.9	2.6	-7.0	290.30	7.5
2,740.0	1.44	132.19	2,739.9	2.4	-6.8	289.21	7.2
2,755.0	1.49	133.37	2,754.9	2.1	-6.5	287.92	6.8
2,770.0	1.54	134.37	2,769.9	1.8	-6.2	286.38	6.5
2,785.0	1.53	134.51	2,784.8	1.5	-5.9	284.61	6.1
2,800.0	1.52	135.21	2,799.8	1.3	-5.6	282.62	5.8
2,815.0	1.49	139.59	2,814.8	1.0	-5.4	280.26	5.5
2,830.0	1.45	142.01	2,829.8	0.7	-5.1	277.49	5.2
2,845.0	1.35	146.54	2,844.8	0.4	-4.9	274.39	4.9
2,860.0	1.29	149.27	2,859.8	0.1	-4.7	271.03	4.7
2,875.0	1.23	150.00	2,874.8	-0.2	-4.6	267.49	4.6
2,890.0	1.17	151.99	2,889.8	-0.5	-4.4	263.86	4.4
2,905.0	1.08	154.38	2,904.8	-0.7	-4.3	260.22	4.3

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
2,920 0	1 04	154 73	2,919 8	-1 0	-4 2	256 64	4 3
2,935 0	0 94	155 35	2,934 8	-1 2	-4 0	253 20	4 2
2,950 0	0 83	159 23	2,949 8	-1 4	-4 0	250 06	4 2
2,965 0	0 76	161 81	2,964 8	-1 6	-3 9	247 23	4 2
2,980 0	0 74	163 03	2,979 8	-1 8	-3 8	244 59	4 2
2,995 0	0 60	167 17	2,994 8	-2 0	-3 8	242 28	4 3
3,010 0	0 52	171 42	3,009 8	-2 1	-3 8	240 42	4 3
3,025 0	0 52	172 10	3,024 8	-2 3	-3 7	238 76	4 4
3,040 0	0 53	172 49	3,039 8	-2 4	-3 7	237 13	4 4
3,055 0	0 53	172 57	3,054 8	-2 5	-3 7	235 53	4 5
3,070 0	0 51	174 64	3,069 8	-2 7	-3 7	234 01	4 6
3,085 0	0 53	174 11	3,084 8	-2 8	-3 7	232 56	4 6
3,100 0	0 53	175 65	3,099 8	-2 9	-3 7	231 13	4 7
3,115 0	0 52	178 79	3,114 8	-3 1	-3 7	229 80	4 8
3,130 0	0 53	179 93	3,129 8	-3 2	-3 7	228 55	4 9
3,145 0	0 54	180 13	3,144 8	-3 4	-3 7	227 34	5 0
3,160 0	0 51	180 02	3,159 8	-3 5	-3 7	226 20	5 1
3,175 0	0 50	180 96	3,174 8	-3 6	-3 7	225 15	5 2
3,190 0	0 46	178 04	3,189 8	-3 8	-3 7	224 16	5 2
3,205 0	0 42	175 06	3,204 8	-3 9	-3 6	223 25	5 3
3,220 0	0 36	167 41	3,219 8	-4 0	-3 6	222 40	5 4
3,235 0	0 32	157 85	3,234 8	-4 1	-3 6	221 59	5 4
3,250 0	0 29	158 80	3,249 8	-4 1	-3 6	220 84	5 5
3,265 0	0 31	160 69	3,264 8	-4 2	-3 5	220 13	5 5
3,280 0	0 39	167 13	3,279 8	-4 3	-3 5	219 35	5 6
3,295 0	0 44	168 55	3,294 8	-4 4	-3 5	218 48	5 6
3,310 0	0 44	167 20	3,309 8	-4 5	-3 5	217 59	5 7
3,325 0	0 45	166 28	3,324 8	-4 6	-3 4	216 69	5 8
3,340 0	0 41	166 65	3,339 8	-4 7	-3 4	215 84	5 8
3,355 0	0 37	162 63	3,354 8	-4 8	-3 4	215 07	5 9
3,370 0	0 34	147 47	3,369 8	-4 9	-3 4	214 31	6 0
3,385 0	0 31	128 09	3,384 8	-5 0	-3 3	213 53	6 0
3,400 0	0 34	121 39	3,399 8	-5 0	-3 2	212 71	6 0
3,415 0	0 44	119 74	3,414 8	-5 1	-3 1	211 73	6 0
3,430 0	0 51	127 58	3,429 8	-5 2	-3 0	210 55	6 0
3,445 0	0 62	138 20	3,444 8	-5 3	-2 9	209 18	6 0
3,460 0	0 58	142 67	3,459 8	-5 4	-2 8	207 80	6 1
3,475 0	0 45	155 47	3,474 8	-5 5	-2 8	206 72	6 1
3,490 0	0 39	163 16	3,489 8	-5 6	-2 7	205 97	6 2
3,505 0	0 38	160 12	3,504 8	-5 7	-2 7	205 33	6 3
3,520 0	0 39	160 60	3,519 8	-5 8	-2 7	204 69	6 4
3,535 0	0 43	153 44	3,534 8	-5 9	-2 6	203 98	6 4
3,550 0	0 43	152 22	3,549 8	-6 0	-2 6	203 21	6 5
3,565 0	0 48	157 02	3,564 8	-6 1	-2 5	202 44	6 6

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
3,580.0	0.47	155.44	3,579.8	-6.2	-2.5	201.67	6.7
3,595.0	0.47	158.24	3,594.8	-6.3	-2.4	200.93	6.8
3,610.0	0.46	159.76	3,609.8	-6.4	-2.4	200.25	6.9
3,625.0	0.40	156.69	3,624.8	-6.5	-2.3	199.63	6.9
3,640.0	0.36	156.21	3,639.8	-6.6	-2.3	199.07	7.0
3,655.0	0.34	137.40	3,654.8	-6.7	-2.2	198.50	7.1
3,670.0	0.38	117.19	3,669.8	-6.8	-2.2	197.78	7.1
3,685.0	0.40	114.25	3,684.8	-6.8	-2.1	196.97	7.1
3,700.0	0.41	115.93	3,699.8	-6.8	-2.0	196.13	7.1
3,715.0	0.41	125.10	3,714.8	-6.9	-1.9	195.29	7.2
3,730.0	0.44	134.10	3,729.8	-7.0	-1.8	194.49	7.2
3,745.0	0.43	138.66	3,744.8	-7.1	-1.7	193.73	7.3
3,760.0	0.39	141.08	3,759.8	-7.1	-1.7	193.05	7.3
3,775.0	0.39	148.55	3,774.8	-7.2	-1.6	192.46	7.4
3,790.0	0.36	162.76	3,789.8	-7.3	-1.6	192.01	7.5
3,805.0	0.38	167.02	3,804.8	-7.4	-1.5	191.68	7.6
3,820.0	0.41	169.66	3,819.8	-7.5	-1.5	191.37	7.7
3,835.0	0.42	163.91	3,834.8	-7.6	-1.5	191.04	7.7
3,850.0	0.43	141.16	3,849.8	-7.7	-1.4	190.54	7.8
3,865.0	0.43	130.71	3,864.8	-7.8	-1.4	189.87	7.9
3,880.0	0.46	126.92	3,879.8	-7.9	-1.3	189.14	8.0
3,895.0	0.44	126.81	3,894.8	-7.9	-1.2	188.39	8.0
3,910.0	0.41	129.16	3,909.8	-8.0	-1.1	187.71	8.1
3,925.0	0.40	126.78	3,924.8	-8.1	-1.0	187.06	8.1
3,940.0	0.44	134.93	3,939.8	-8.1	-0.9	186.42	8.2
3,955.0	0.49	141.98	3,954.8	-8.2	-0.8	185.80	8.3
3,970.0	0.44	153.30	3,969.8	-8.3	-0.8	185.28	8.4
3,985.0	0.43	164.02	3,984.8	-8.4	-0.7	184.94	8.5
4,000.0	0.35	165.54	3,999.8	-8.5	-0.7	184.70	8.6
4,015.0	0.25	166.06	4,014.8	-8.6	-0.7	184.53	8.6
4,030.0	0.26	135.59	4,029.8	-8.7	-0.7	184.30	8.7
4,045.0	0.41	105.60	4,044.8	-8.7	-0.6	183.78	8.7
4,060.0	0.50	102.75	4,059.8	-8.7	-0.5	183.01	8.7
4,075.0	0.53	107.27	4,074.8	-8.8	-0.3	182.15	8.8
4,090.0	0.47	116.16	4,089.8	-8.8	-0.2	181.35	8.8
4,105.0	0.36	140.26	4,104.8	-8.9	-0.1	180.79	8.9
4,120.0	0.33	153.52	4,119.8	-9.0	-0.1	180.47	9.0
4,135.0	0.26	152.89	4,134.8	-9.0	0.0	180.25	9.0
4,150.0	0.26	141.82	4,149.8	-9.1	0.0	180.01	9.1
4,165.0	0.38	120.82	4,164.8	-9.1	0.1	179.61	9.1
4,180.0	0.48	112.04	4,179.8	-9.2	0.2	178.99	9.2
4,195.0	0.61	109.42	4,194.8	-9.2	0.3	178.16	9.2
4,210.0	0.67	115.14	4,209.8	-9.3	0.5	177.22	9.3
4,225.0	0.63	131.79	4,224.8	-9.4	0.6	176.39	9.4

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD.	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
4,240.0	0.54	152.70	4,239.8	-9.5	0.7	175.87	9.5
4,255.0	0.38	165.73	4,254.8	-9.6	0.7	175.66	9.6
4,270.0	0.24	183.53	4,269.8	-9.7	0.7	175.63	9.7
4,285.0	0.21	151.45	4,284.8	-9.7	0.8	175.59	9.8
4,300.0	0.35	109.02	4,299.8	-9.8	0.8	175.28	9.8
4,315.0	0.46	103.72	4,314.8	-9.8	0.9	174.70	9.9
4,330.0	0.51	107.22	4,329.8	-9.8	1.0	174.02	9.9
4,345.0	0.50	117.78	4,344.8	-9.9	1.2	173.35	10.0
4,360.0	0.49	131.68	4,359.8	-10.0	1.3	172.80	10.1
4,375.0	0.49	132.33	4,374.8	-10.1	1.4	172.33	10.2
4,390.0	0.47	132.56	4,389.8	-10.1	1.4	171.88	10.2
4,405.0	0.45	130.26	4,404.8	-10.2	1.5	171.44	10.3
4,420.0	0.43	123.28	4,419.8	-10.3	1.6	171.00	10.4
4,435.0	0.46	122.81	4,434.8	-10.4	1.7	170.53	10.5
4,450.0	0.45	124.28	4,449.8	-10.4	1.8	170.06	10.6
4,465.0	0.45	131.04	4,464.8	-10.5	1.9	169.63	10.7
4,480.0	0.50	140.92	4,479.8	-10.6	2.0	169.27	10.8
4,495.0	0.57	147.47	4,494.8	-10.7	2.1	168.96	10.9
4,510.0	0.60	151.71	4,509.8	-10.8	2.2	168.70	11.0
4,525.0	0.59	151.53	4,524.8	-11.0	2.2	168.46	11.2
4,540.0	0.50	137.06	4,539.8	-11.1	2.3	168.18	11.3
4,555.0	0.43	122.80	4,554.8	-11.2	2.4	167.80	11.4
4,570.0	0.40	121.92	4,569.8	-11.2	2.5	167.42	11.5
4,585.0	0.38	121.88	4,584.8	-11.3	2.6	167.06	11.6
4,600.0	0.38	140.21	4,599.8	-11.3	2.7	166.77	11.6
4,615.0	0.41	161.38	4,614.8	-11.4	2.7	166.64	11.7
4,630.0	0.42	166.75	4,629.8	-11.5	2.7	166.62	11.9
4,645.0	0.44	161.45	4,644.8	-11.6	2.8	166.59	12.0
4,660.0	0.48	151.38	4,659.8	-11.7	2.8	166.49	12.1
4,675.0	0.50	140.73	4,674.8	-11.9	2.9	166.28	12.2
4,690.0	0.51	134.45	4,689.8	-12.0	3.0	165.99	12.3
4,705.0	0.51	134.34	4,704.8	-12.0	3.1	165.66	12.4
4,720.0	0.49	136.32	4,719.8	-12.1	3.2	165.36	12.5
4,735.0	0.44	146.91	4,734.8	-12.2	3.2	165.14	12.7
4,750.0	0.37	148.50	4,749.8	-12.3	3.3	164.99	12.8
4,765.0	0.33	121.41	4,764.8	-12.4	3.4	164.80	12.8
4,780.0	0.36	109.63	4,779.8	-12.4	3.4	164.50	12.9
4,795.0	0.42	114.46	4,794.7	-12.5	3.5	164.14	13.0
4,810.0	0.47	134.51	4,809.7	-12.5	3.6	163.82	13.0
4,825.0	0.54	164.14	4,824.7	-12.6	3.7	163.69	13.2
4,840.0	0.54	179.19	4,839.7	-12.8	3.7	163.78	13.3
4,855.0	0.23	184.61	4,854.7	-12.9	3.7	163.90	13.4
4,870.0	0.04	104.68	4,869.7	-12.9	3.7	163.93	13.4
4,885.0	0.34	133.51	4,884.7	-12.9	3.8	163.81	13.5

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
4,900 0	0 63	143 54	4,899 7	-13 0	3 8	163 60	13 6	
4,915 0	0 68	153 22	4,914 7	-13 2	3 9	163 41	13 8	
4,930 0	0 49	173 10	4,929 7	-13 3	4 0	163 39	13 9	
4,945 0	0 28	198 10	4,944 7	-13 4	4 0	163 52	14 0	
4,960 0	0 12	231 08	4,959 7	-13 5	3 9	163 67	14 0	
4,975 0	0 22	145 01	4,974 7	-13 5	4 0	163 69	14 1	
4,990 0	0 52	135 19	4,989 7	-13 6	4 0	163 52	14 2	
5,005 0	0 57	150 58	5,004 7	-13 7	4 1	163 32	14 3	
5,020 0	0 56	188 34	5,019 7	-13 8	4 1	163 38	14 4	
5,035 0	0 57	197 22	5,034 7	-14 0	4 1	163 67	14 6	
5,050 0	0 36	184 88	5,049 7	-14 1	4 1	163 89	14 7	
5,065 0	0 26	138 74	5,064 7	-14 2	4 1	163 90	14 7	
5,080 0	0 33	124 54	5,079 7	-14 2	4 1	163 74	14 8	
5,095 0	0 38	146 13	5,094 7	-14 3	4 2	163 58	14 9	
5,110 0	0 55	180 02	5,109 7	-14 4	4 2	163 60	15 0	
5,125 0	0 60	196 00	5,124 7	-14 5	4 2	163 84	15 1	
5,140 0	0 43	219 08	5,139 7	-14 7	4 2	164 17	15 2	
5,155 0	0 27	241 44	5,154 7	-14 7	4 1	164 47	15 3	
5,170 0	0 19	197 40	5,169 7	-14 8	4 1	164 65	15 3	
5,185 0	0 26	156 52	5,184 7	-14 8	4 1	164 68	15 4	
5,200 0	0 25	155 59	5,199 7	-14 9	4 1	164 64	15 4	
5,215 0	0 24	184 17	5,214 7	-14 9	4 1	164 66	15 5	
5,230 0	0 41	216 55	5,229 7	-15 0	4 1	164 86	15 6	
5,245 0	0 59	222 90	5,244 7	-15 1	4 0	165 25	15 6	
5,260 0	0 58	200 23	5,259 7	-15 2	3 9	165 65	15 7	
5,275 0	0 59	166 90	5,274 7	-15 4	3 9	165 81	15 9	
5,290 0	0 45	171 48	5,289 7	-15 5	3 9	165 84	16 0	
5,305 0	0 32	196 84	5,304 7	-15 6	3 9	165 93	16 1	
5,320 0	0 33	216 29	5,319 7	-15 7	3 9	166 13	16 2	
5,335 0	0 36	220 92	5,334 7	-15 8	3 8	166 38	16 2	
5,350 0	0 35	198 25	5,349 7	-15 8	3 8	166 60	16 3	
5,365 0	0 44	164 97	5,364 7	-15 9	3 8	166 68	16 4	
5,380 0	0 49	166 39	5,379 7	-16 1	3 8	166 67	16 5	
5,395 0	0 51	180 43	5,394 7	-16 2	3 8	166 73	16 6	
5,410 0	0 52	185 23	5,409 7	-16 3	3 8	166 85	16 8	
5,425 0	0 52	186 67	5,424 7	-16 5	3 8	167 00	16 9	
5,440 0	0 52	181 34	5,439 7	-16 6	3 8	167 14	17 0	
5,455 0	0 56	173 84	5,454 7	-16 7	3 8	167 22	17 2	
5,470 0	0 55	176 86	5,469 7	-16 9	3 8	167 29	17 3	
5,485 0	0 45	202 29	5,484 7	-17 0	3 8	167 44	17 4	
5,500 0	0 36	223 49	5,499 7	-17 1	3 7	167 68	17 5	
5,515 0	0 26	173 72	5,514 7	-17 2	3 7	167 82	17 6	
5,530 0	0 37	133 73	5,529 7	-17 2	3 7	167 74	17 6	
5,545 0	0 32	155 57	5,544 7	-17 3	3 8	167 63	17 7	

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cypress 34 Federal #7H
Project:	Nash Draw Delaware	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Cypress 34 Federal #7H	North Reference:	Grid
Wellbore:	VH - Job #32K0212204	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212204	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,560.0	0.38	197.41	5,559.7	-17.4	3.8	167.68	17.8
5,575.0	0.44	211.92	5,574.7	-17.5	3.8	167.88	17.9
5,590.0	0.47	207.25	5,589.7	-17.6	3.7	168.14	18.0
5,605.0	0.52	179.40	5,604.7	-17.7	3.7	168.30	18.1
5,620.0	0.55	155.34	5,619.7	-17.8	3.7	168.29	18.2
5,635.0	0.35	141.59	5,634.7	-17.9	3.8	168.18	18.3
5,650.0	0.06	69.06	5,649.7	-18.0	3.8	168.09	18.4
5,665.0	0.07	266.16	5,664.7	-18.0	3.8	168.09	18.4
5,680.0	0.39	217.86	5,679.7	-18.0	3.7	168.24	18.4
5,695.0	0.51	196.24	5,694.7	-18.1	3.7	168.46	18.5
5,710.0	0.40	162.95	5,709.7	-18.2	3.7	168.54	18.6
5,725.0	0.24	116.69	5,724.7	-18.3	3.7	168.45	18.7
5,740.0	0.18	69.89	5,739.7	-18.3	3.8	168.30	18.7
5,755.0	0.13	146.97	5,754.7	-18.3	3.8	168.21	18.7
5,770.0	0.39	171.64	5,769.7	-18.4	3.8	168.20	18.8
5,785.0	0.45	183.13	5,784.7	-18.5	3.8	168.26	18.9
5,800.0	0.25	202.13	5,799.7	-18.6	3.8	168.36	19.0
5,815.0	0.14	260.28	5,814.7	-18.6	3.8	168.47	19.0
5,830.0	0.10	83.93	5,829.7	-18.6	3.8	168.48	19.0
5,845.0	0.24	115.07	5,844.7	-18.6	3.8	168.37	19.0
5,860.0	0.42	151.98	5,859.7	-18.7	3.9	168.25	19.1
5,875.0	0.46	171.72	5,874.7	-18.8	3.9	168.21	19.2
5,890.0	0.16	184.86	5,889.7	-18.9	3.9	168.24	19.3
5,905.0	0.03	295.88	5,904.7	-18.9	3.9	168.27	19.3
5,920.0	0.13	91.81	5,919.7	-18.9	3.9	168.23	19.3
5,935.0	0.31	118.73	5,934.7	-18.9	4.0	168.09	19.3
5,950.0	0.32	150.61	5,949.7	-19.0	4.0	167.96	19.4
5,965.0	0.27	177.84	5,964.7	-19.0	4.1	167.94	19.5
5,980.0	0.05	132.83	5,979.7	-19.1	4.1	167.95	19.5
5,995.0	0.16	43.08	5,994.7	-19.1	4.1	167.89	19.5
6,010.0	0.23	117.72	6,009.7	-19.1	4.1	167.77	19.5
6,025.0	0.52	153.21	6,024.7	-19.1	4.2	167.65	19.6
6,040.0	0.46	157.44	6,039.7	-19.3	4.2	167.57	19.7
6,055.0	0.17	80.34	6,054.7	-19.3	4.3	167.47	19.8
6,070.0	0.36	42.26	6,069.7	-19.3	4.3	167.30	19.8
6,085.0	0.43	94.71	6,084.7	-19.2	4.4	167.03	19.7
6,098.0	1.10	149.41	6,097.7	-19.4	4.5	166.79	19.9



Project: Nash Draw Delaware
Eddy County, NM
Well: Cypress 34 Federal #7H
Wellbore: VH - Job #32K0212204
Design: VH - Job #32K0212204

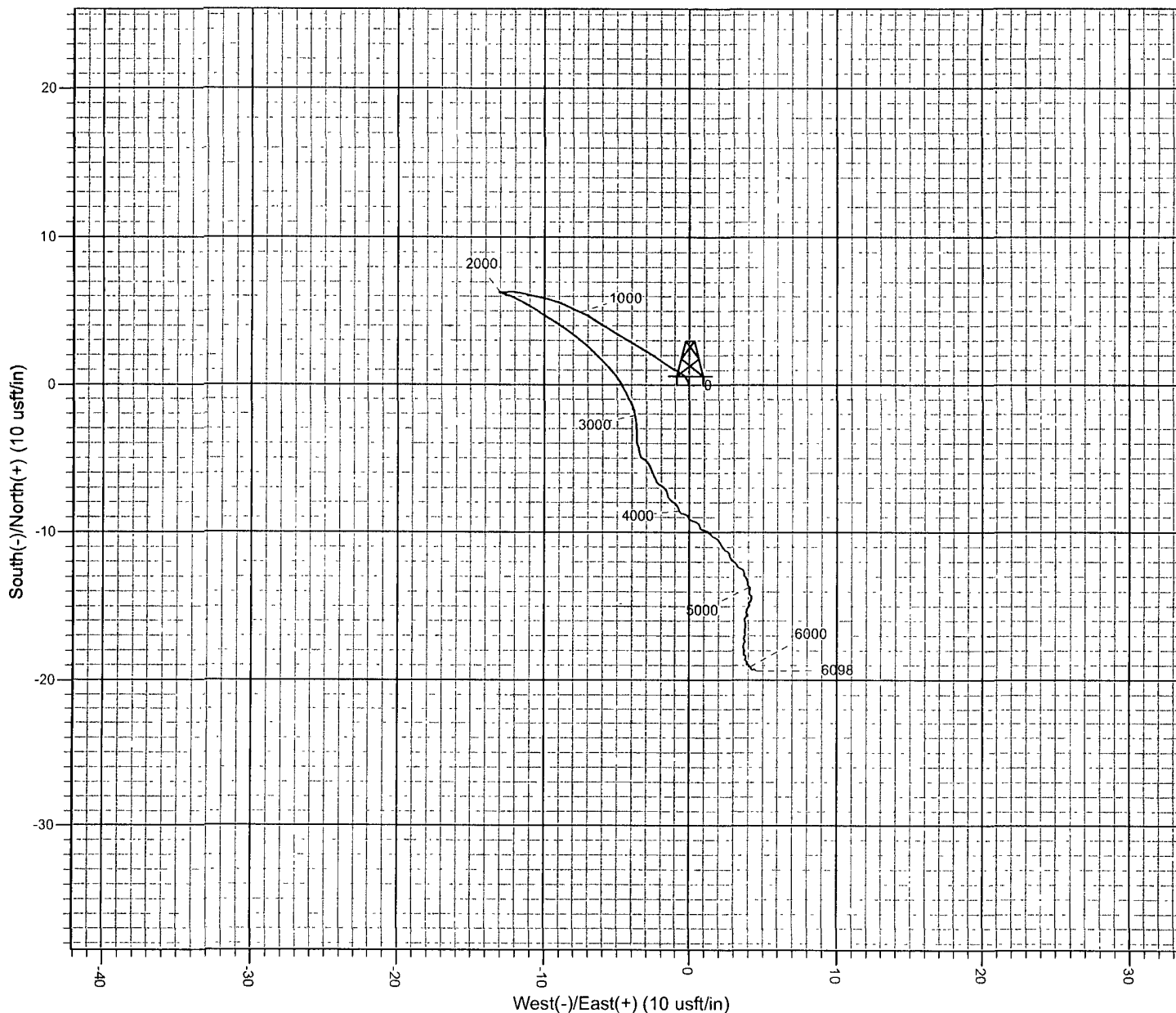


Azimuths to Grid North
True North -0.19°
Magnetic North. 7 50°

Magnetic Field
Strength 48554 6snT
Dip Angle 60 14°
Date 2/21/2012
Model IGRF2010

WELL DETAILS: Cypress 34 Federal #7H
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	461073.91	611392.06	32° 16' 1.542 N	103° 58' 22.621 W	



PROJECT DETAILS: Nash Draw Delaware
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: Eddy County, NM
Site Centre Latitude: 32° 16' 1.542 N
Longitude: 103° 58' 22.621 W
Positional Uncertainty: 0.0
Convergence: 0.19
Local North: Grid