

OCCIDENTAL PERMIAN LTD.

Lost Tank Delaware, West

Eddy County, NM

Lost Tank 4 Federal #15

DH - Job #32D1010754

30-015-37894

Survey: Actual

SDI Standard Survey Report

19 November, 2010

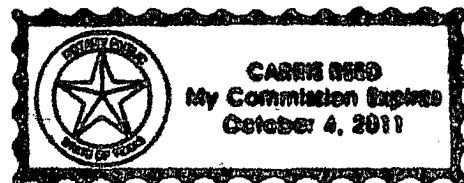
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notorized this date 17th of November, 2010.

Carrin Reed

Notary Signature
County of Midland
State of Texas



WR

Scientific Drilling International, Inc.

SDI Standard Survey Report

Company:	OCCIDENTAL PERMIAN LTD.	Local Co-ordinate Reference:	Well Lost Tank 4 Federal #15
Project:	Lost Tank Delaware, West	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Lost Tank 4 Federal #15	North Reference:	Grid
Wellbore:	VH - Job #32K1010764	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1010764	Database:	EDM-Regulatory

Project	Lost Tank Delaware, West		
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:	515,232.05 usft	Latitude: 32° 24' 54.705 N
From:	Lat/Long	Easting:	676,005.63 usft	Longitude: 103° 45' 46.737 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence: 0.31 °

Well	Lost Tank 4 Federal #15, Directional			
Well Position	+N/-S	0.0 usft	Northing:	516,669.66 usft
	+E/-W	0.0 usft	Easting:	669,637.29 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level: 0.0 usft

Wellbore	VH - Job #32K1010764				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	10/7/2010	7.84	60.36	48,843

Design	VH - Job #32K1010764			
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	130.12

Survey Program	Date 11/19/2010			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
78.6	618.0	Actual (VH - Job #32K1010764)	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	
78.6	0.28	95.17	78.6	0.0	0.2	95.17	0.2	
168.9	0.30	79.60	168.9	0.0	0.6	89.51	0.6	
259.3	0.33	74.53	259.3	0.1	1.1	84.04	1.1	
349.6	0.30	76.14	349.6	0.2	1.6	81.38	1.6	
439.9	0.22	70.84	439.9	0.4	2.0	79.88	2.0	
530.2	0.09	100.61	530.2	0.4	2.2	79.82	2.3	
618.0	0.04	86.22	618.0	0.4	2.3	80.50	2.4	

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Project:	Lost Tank Delaware, West	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Lost Tank 4 Federal #15	North Reference:	Grid
Wellbore:	DH - Job #32D1010754	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D1010754	Database:	EDM-Regulatory

Project	Lost Tank Delaware, West		
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:	515,232.05 usft	Latitude:	32° 24' 54.705 N
From:	Lat/Long	Easting:	676,005.63 usft	Longitude:	103° 45' 46.737 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.31 °

Well	Lost Tank 4 Federal #15, Directional					
Well Position	+N/-S	0.0 usft	Northing:	516,669.66 usft	Latitude:	32° 25' 9.261 N
	+E/-W	0.0 usft	Easting:	669,637.29 usft	Longitude:	103° 47' 0.940 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore	DH - Job #32D1010754				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	BGGM2010	10/9/2010	(°)	(°)	(nT)
			7.84	60.36	48,843

Design	DH - Job #32D1010754				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	618.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	130.10	

Survey Program	Date 11/19/2010				
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
78.6	618.0	Actual (VH - Job #32K1010764)	Keeper	Keeper Surface Readout	
690.0	8,093.0	Actual (DH - Job #32D1010754)	MWD	MWD	

Survey										
Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance			
(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)			
618.0	0.04	86.22	618.0	0.4	2.3	80.50	2.4			
690.0	0.24	39.73	690.0	0.5	2.5	78.30	2.5			
720.0	0.10	68.22	720.0	0.6	2.5	77.33	2.6			
810.0	0.19	37.17	810.0	0.7	2.7	75.09	2.8			
900.0	0.12	116.14	900.0	0.8	2.9	74.51	3.0			
991.0	0.05	274.65	991.0	0.8	2.9	75.46	3.0			
1,081.0	0.00	7.48	1,081.0	0.8	2.9	75.21	3.0			
1,171.0	0.17	134.18	1,171.0	0.7	3.0	77.37	3.0			
1,261.0	0.34	189.98	1,261.0	0.3	3.0	84.18	3.0			
1,351.0	0.34	153.75	1,351.0	-0.2	3.1	93.64	3.1			
1,441.0	0.36	132.15	1,441.0	-0.6	3.4	100.39	3.5			

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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Lost Tank 4 Federal #15	North Reference:	Grid
Wellbore:	DH - Job #32D1010754	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D1010754	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,531.0	0.32	166.35	1,531.0	-1.1	3.7	106.07	3.8
1,621.0	0.30	145.32	1,621.0	-1.5	3.9	111.15	4.1
1,711.0	0.38	148.87	1,711.0	-1.9	4.2	115.08	4.6
1,801.0	0.40	140.48	1,801.0	-2.4	4.5	118.44	5.1
1,890.0	0.74	150.01	1,890.0	-3.2	5.0	122.48	5.9
1,981.0	0.78	179.35	1,981.0	-4.3	5.3	129.12	6.8
2,071.0	0.69	239.26	2,071.0	-5.2	4.8	137.05	7.1
2,161.0	1.69	308.55	2,160.9	-4.6	3.3	144.34	5.7
2,251.0	1.75	318.29	2,250.9	-2.8	1.4	153.67	3.1
2,341.0	0.88	296.08	2,340.9	-1.5	-0.2	185.90	1.5
2,431.0	0.64	291.88	2,430.9	-1.0	-1.2	231.79	1.6
2,521.0	0.61	321.29	2,520.9	-0.4	-2.0	258.33	2.0
2,611.0	0.77	307.13	2,610.9	0.3	-2.8	276.65	2.8
2,701.0	0.63	324.47	2,700.9	1.1	-3.6	287.08	3.7
2,791.0	0.82	322.12	2,790.8	2.0	-4.2	295.30	4.7
2,881.0	0.80	328.16	2,880.8	3.0	-5.0	301.52	5.8
2,927.0	0.71	349.19	2,926.8	3.6	-5.2	304.74	6.3
2,972.0	0.65	357.42	2,971.8	4.1	-5.3	308.16	6.7
3,017.0	0.53	2.03	3,016.8	4.6	-5.3	311.13	7.0
3,062.0	0.48	8.32	3,061.8	5.0	-5.2	313.67	7.2
3,107.0	0.46	1.77	3,106.8	5.4	-5.2	315.88	7.5
3,152.0	0.38	19.97	3,151.8	5.7	-5.1	317.86	7.6
3,197.0	0.34	39.32	3,196.8	5.9	-5.0	319.81	7.7
3,242.0	0.55	63.79	3,241.8	6.1	-4.7	322.34	7.7
3,287.0	0.51	98.89	3,286.8	6.2	-4.3	325.00	7.5
3,332.0	0.48	126.47	3,331.8	6.0	-4.0	326.62	7.2
3,377.0	0.64	150.40	3,376.8	5.7	-3.7	327.02	6.8
3,422.0	0.81	152.22	3,421.8	5.2	-3.4	326.62	6.2
3,467.0	0.84	151.26	3,466.8	4.6	-3.1	326.03	5.6
3,512.0	0.84	148.54	3,511.8	4.1	-2.8	325.51	4.9
3,557.0	0.85	149.35	3,556.8	3.5	-2.4	324.98	4.3
3,602.0	0.95	156.90	3,601.8	2.9	-2.1	323.34	3.6
3,647.0	0.94	151.37	3,646.8	2.2	-1.8	320.54	2.8
3,692.0	1.19	151.79	3,691.8	1.5	-1.4	316.01	2.0
3,737.0	1.37	153.30	3,736.8	0.6	-0.9	300.99	1.1
3,782.0	1.36	154.10	3,781.8	-0.4	-0.5	230.55	0.6
3,815.0	1.48	154.90	3,814.7	-1.1	-0.1	186.21	1.1
3,965.0	1.07	168.99	3,964.7	-4.3	1.0	167.21	4.4
4,055.0	1.22	166.33	4,054.7	-6.0	1.4	167.32	6.2
4,145.0	1.83	138.11	4,144.7	-8.0	2.5	162.42	8.4
4,235.0	1.52	140.64	4,234.6	-10.0	4.3	156.96	10.9
4,325.0	1.88	141.64	4,324.6	-12.1	5.9	153.87	13.5
4,415.0	1.82	140.78	4,414.5	-14.4	7.7	151.64	16.3
4,505.0	2.16	124.78	4,504.5	-16.4	10.0	148.55	19.3

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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Lost Tank 4 Federal #15	North Reference:	Grid
Wellbore:	DH - Job #32D1010754	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D1010754	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
4,595.0	3.72	135.56	4,594.4	-19.5	13.5	145.31	23.7
4,685.0	4.72	141.40	4,684.1	-24.5	17.8	143.90	30.3
4,775.0	5.60	135.19	4,773.8	-30.5	23.2	142.66	38.3
4,865.0	7.52	136.15	4,863.2	-37.8	30.4	141.20	48.5
4,955.0	8.28	130.21	4,952.3	-46.3	39.4	139.55	60.8
5,045.0	9.48	128.65	5,041.2	-55.1	50.2	137.66	74.5
5,090.0	9.89	127.25	5,085.6	-59.7	56.2	136.77	82.0
5,136.0	10.55	127.82	5,130.9	-64.7	62.6	135.93	90.0
5,181.0	11.13	126.63	5,175.1	-69.8	69.4	135.19	98.4
5,226.0	12.02	127.36	5,219.1	-75.3	76.6	134.50	107.4
5,271.0	12.53	130.03	5,263.1	-81.2	84.0	134.03	116.9
5,316.0	13.38	129.38	5,307.0	-87.7	91.8	133.68	126.9
5,361.0	14.04	127.25	5,350.7	-94.3	100.2	133.27	137.6
5,406.0	14.77	127.75	5,394.3	-101.1	109.1	132.83	148.7
5,496.0	16.28	129.83	5,481.0	-116.2	127.8	132.28	172.7
5,586.0	16.53	129.64	5,567.3	-132.5	147.4	131.95	198.1
5,721.0	16.81	129.58	5,696.6	-157.1	177.2	131.57	236.8
5,856.0	16.51	130.34	5,826.0	-182.0	206.9	131.34	275.5
5,991.0	16.71	131.04	5,955.3	-207.2	236.1	131.26	314.1
6,126.0	17.04	132.30	6,084.5	-233.2	265.4	131.31	353.3
6,261.0	17.11	132.28	6,213.6	-259.9	294.7	131.41	392.9
6,351.0	16.13	130.83	6,299.8	-277.0	314.0	131.42	418.7
6,442.0	16.26	128.75	6,387.2	-293.2	333.5	131.32	444.0
6,577.0	15.35	129.93	6,517.1	-316.5	361.9	131.17	480.8
6,712.0	14.86	131.08	6,647.4	-339.4	388.7	131.13	516.0
6,847.0	14.13	127.31	6,778.1	-360.7	414.8	131.01	549.7
6,937.0	13.64	128.22	6,865.5	-373.9	431.9	130.89	571.3
7,027.0	14.36	126.16	6,952.8	-387.1	449.2	130.75	593.0
7,162.0	14.78	126.16	7,083.5	-407.1	476.7	130.50	626.9
7,297.0	14.83	126.26	7,214.0	-427.5	504.5	130.28	661.3
7,432.0	14.69	126.40	7,344.6	-447.9	532.2	130.08	695.6
7,567.0	15.20	127.78	7,475.0	-468.9	560.0	129.94	730.4
7,702.0	14.93	129.26	7,605.4	-490.7	587.4	129.88	765.4
7,837.0	15.35	128.85	7,735.7	-512.9	614.8	129.84	800.7
7,972.0	16.00	129.81	7,865.6	-536.1	643.0	129.82	837.2
8,062.0	15.63	129.45	7,952.2	-551.7	661.9	129.81	861.7
8,093.0	15.27	129.43	7,982.1	-557.0	668.3	129.81	869.9



Scientific Drilling
Directional Drilling Operations

Project: Lost Tank Delaware, West
Eddy County, NM
Well: Lost Tank 4 Federal #15
Wellbore: DH - Job #32D1010754
Design: DH - Job #32D1010754

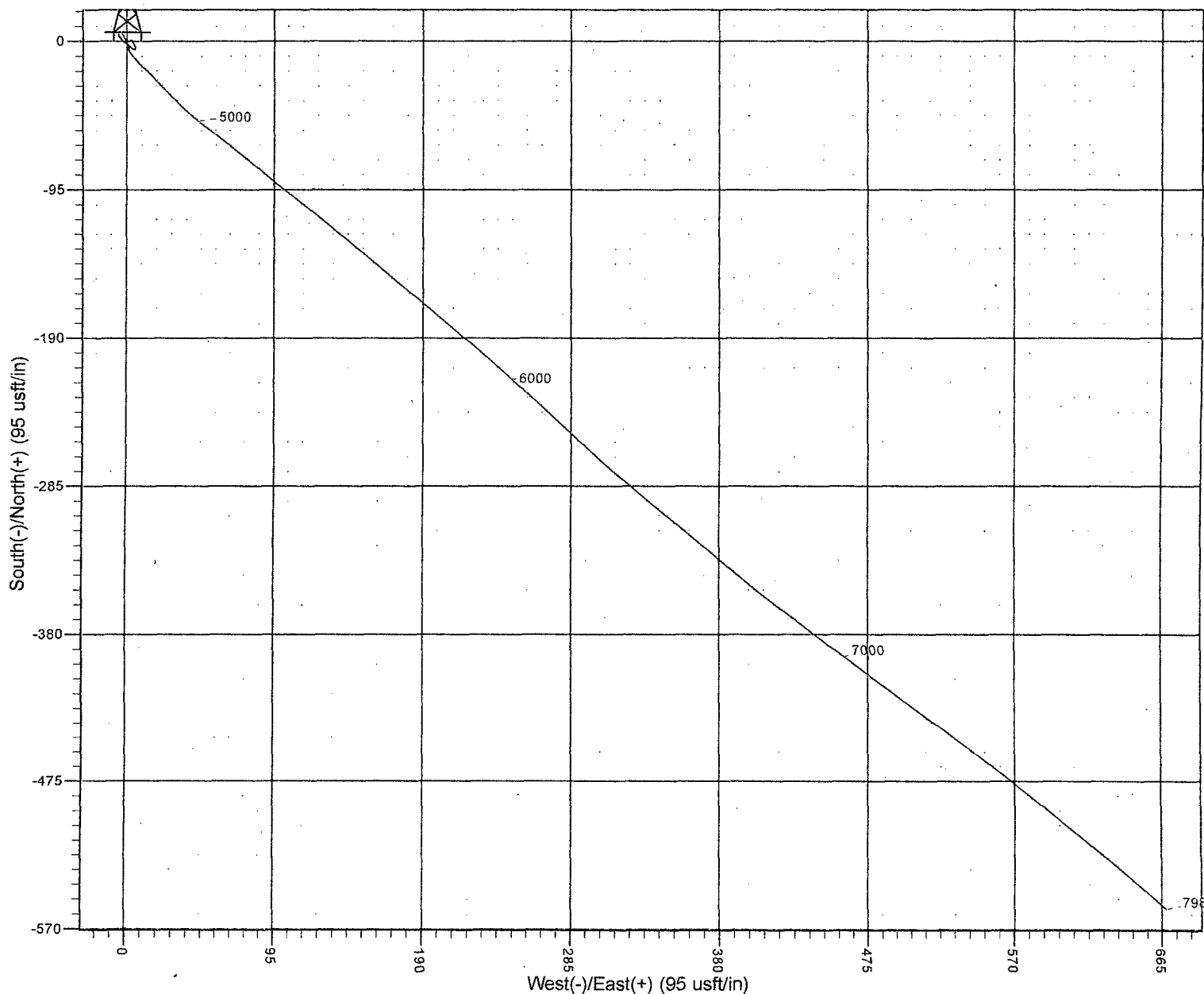


Azimuths to Grid North
True North: -0.29°
Magnetic North: 7.54°

Magnetic Field
Strength: 48842.7nT
Dip Angle: 60.36°
Date: 10/9/2010
Model: BGGM2010

WELL DETAILS: Lost Tank 4 Federal #15
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	516669.66	669637.29	32° 25' 9.261 N	103° 47' 0.940 W	



PROJECT DETAILS: Lost Tank Delaware, West
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° 24' 54.705 N
Longitude: 103° 45' 46.737 W
Positional Uncertainty: 0.0
Convergence: 0.31
Local North: Grid