

OCCIDENTAL PERMIAN LTD.

Lost Tank Delaware, West

Eddy County, NM

Lost Tank 4 Federal #14

DH - Job #32D0111042

3D-015-37893

Survey: Actual

SDI Standard Survey Report

20 February, 2011

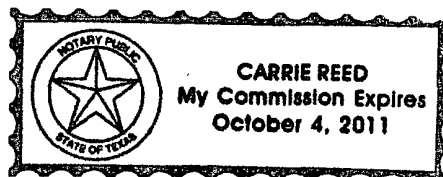
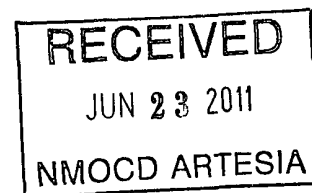
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notarized this date 21st of February, 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 Lost Tank 4 Federal #14
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 #14	North Reference:	Grid
Wellbore:	VH - Job #32K0111037	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0111037	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 #14, Directional					
Well Position	+N/-S	0.0 usft	Northing:	516,707.54 usft	Latitude:	32° 25' 9.546 N
	+E/-W	0.0 usft	Easting:	671,405.56 usft	Longitude:	103° 46' 40.309 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore	VH - Job #32K0111037				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	BGGM2010	1/13/2011	7.80	60.35	48,815

Design	VH - Job #32K0111037				
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	224.64	

Survey Program	Date	2/20/2011			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
107.3	648.8	Actual (VH - Job #32K0111037)	Keeper	Keeper Surface Readout	

Survey							
Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance
(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
107.3	0.82	61.17	107.3	0.4	0.7	61.17	0.8
200.6	0.97	90.38	200.6	0.7	2.0	71.45	2.2
288.5	0.87	67.09	288.5	0.9	3.4	74.54	3.5
378.4	0.81	69.36	378.4	1.4	4.6	72.82	4.8
468.3	0.68	87.19	468.3	1.7	5.8	73.72	6.0
558.2	0.63	64.10	558.2	1.9	6.7	74.06	7.0
648.8	0.54	57.66	648.7	2.4	7.5	72.56	7.9

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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Lost Tank 4 Federal #14	North Reference:	Grid
Wellbore:	DH - Job #32D0111042	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D0111042	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)		
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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
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Well	Lost Tank 4 Federal #14, Directional		
Well Position	+N/-S	0.0 usft	Northing: 516,707.54 usft
	+E/-W	0.0 usft	Easting: 671,405.56 usft
			Latitude: 32° 25' 9.546 N
			Longitude: 103° 46' 40.309 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
			Ground Level: 0.0 usft

Wellbore	DH - Job #32D0111042				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	1/15/2011	7.80	60.35	48,814

Design	DH - Job #32D0111042			
Audit Notes:				
Version: 1.0	Phase:	ACTUAL	Tie On Depth:	648.8
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	224.64

Survey Program	Date	2/20/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
107.3	648.8	Actual (VH - Job #32K0111037)	Keeper	Keeper Surface Readout
713.0	8,088.0	Actual (DH - Job #32D0111042)	MWD	MWD

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
648.8	0.54	57.66	648.7	2.4	7.5	72.56	7.9	
713.0	0.61	18.67	712.9	2.9	7.9	70.15	8.4	
835.0	0.37	344.70	834.9	3.9	8.0	64.33	8.9	
970.0	0.36	41.76	969.9	4.6	8.2	60.71	9.4	
1,105.0	0.27	11.43	1,104.9	5.2	8.5	58.54	10.0	
1,240.0	0.29	71.29	1,239.9	5.6	8.9	57.69	10.5	
1,375.0	0.13	49.06	1,374.9	5.8	9.4	57.98	11.0	
1,510.0	0.07	3.07	1,509.9	6.0	9.5	57.52	11.2	
1,645.0	0.27	60.52	1,644.9	6.3	9.8	57.27	11.6	
1,780.0	0.56	85.93	1,779.9	6.5	10.7	58.80	12.5	
1,915.0	0.72	88.04	1,914.9	6.5	12.2	61.76	13.8	

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Well:	Lost Tank 4 Federal #14	North Reference:	Grid
Wellbore:	DH Job #32D0111042	Survey Calculation Method:	Minimum Curvature
Design:	DH Job #32D0111042	Database:	EDM-Regulatory

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)		
2,050.0	0.63	88.70	2,049.9	6.6	13.8	64.43	15.3		
2,185.0	0.77	79.30	2,184.9	6.8	15.4	66.26	16.8		
2,320.0	0.86	63.44	2,319.9	7.4	17.2	66.74	18.7		
2,455.0	0.42	72.97	2,454.9	8.0	18.6	66.72	20.2		
2,590.0	0.38	333.64	2,589.9	8.5	18.9	65.64	20.7		
2,725.0	0.45	348.29	2,724.9	9.5	18.6	62.98	20.8		
2,861.0	0.65	345.10	2,860.9	10.7	18.3	59.55	21.2		
3,041.0	1.12	245.67	3,040.9	11.0	16.4	56.14	19.7		
3,176.0	0.51	248.77	3,175.8	10.2	14.6	55.02	17.9		
3,311.0	0.84	204.46	3,310.8	9.1	13.7	56.28	16.4		
3,446.0	1.13	196.26	3,445.8	6.9	12.9	61.68	14.6		
3,581.0	0.81	174.09	3,580.8	4.7	12.6	69.51	13.5		
3,716.0	0.67	121.89	3,715.8	3.3	13.4	75.96	13.8		
3,831.0	0.72	110.26	3,830.8	2.7	14.6	79.39	14.9		
3,972.0	0.73	76.76	3,971.8	2.6	16.3	80.82	16.5		
4,107.0	0.63	351.50	4,106.8	3.6	17.0	78.18	17.4		
4,242.0	0.55	336.74	4,241.7	4.9	16.7	73.64	17.4		
4,377.0	0.65	10.74	4,376.7	6.2	16.6	69.35	17.7		
4,512.0	1.03	195.70	4,511.7	5.8	16.4	70.42	17.4		
4,648.0	0.84	204.97	4,647.7	3.7	15.6	76.52	16.1		
4,783.0	0.77	230.30	4,782.7	2.3	14.5	81.11	14.7		
4,918.0	0.86	234.57	4,917.7	1.1	13.0	85.14	13.0		
5,053.0	0.87	224.70	5,052.7	-0.2	11.4	91.05	11.4		
5,143.0	2.34	206.80	5,142.6	-2.3	10.1	102.98	10.4		
5,233.0	3.84	217.75	5,232.5	-6.4	7.5	130.43	9.8		
5,323.0	4.07	221.67	5,322.3	-11.1	3.5	162.56	11.7		
5,413.0	4.53	225.29	5,412.0	-16.0	-1.2	184.12	16.1		
5,503.0	5.94	230.28	5,501.7	-21.5	-7.3	198.67	22.7		
5,593.0	6.71	225.85	5,591.1	-28.1	-14.6	207.46	31.7		
5,683.0	7.27	224.67	5,680.4	-35.8	-22.4	211.99	42.3		
5,773.0	8.95	227.88	5,769.5	-44.6	-31.6	215.32	54.6		
5,863.0	10.05	225.39	5,858.3	-54.8	-42.4	217.71	69.3		
5,953.0	12.41	228.61	5,946.6	-66.7	-55.2	219.62	86.6		
6,043.0	13.98	225.88	6,034.2	-80.7	-70.3	221.06	107.0		
6,132.0	17.35	228.01	6,119.9	-97.0	-87.9	222.16	130.9		
6,222.0	17.80	228.01	6,205.7	-115.2	-108.1	223.16	158.0		
6,312.0	21.20	229.19	6,290.5	-135.1	-130.6	224.04	187.9		
6,402.0	21.87	229.45	6,374.2	-156.6	-155.7	224.83	220.8		
6,536.0	20.60	229.12	6,499.1	-188.3	-192.5	225.63	269.2		
6,671.0	18.64	229.75	6,626.3	-217.7	-226.9	226.18	314.5		
6,806.0	20.05	229.18	6,753.7	-246.8	-260.9	226.59	359.1		
6,940.0	19.51	225.65	6,879.8	-277.5	-294.2	226.68	404.4		
7,075.0	18.97	226.06	7,007.2	-308.4	-326.2	226.60	448.9		
7,165.0	19.06	223.46	7,092.3	-329.3	-346.8	226.49	478.2		

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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Lost Tank 4 Federal #14	North Reference:	Grid
Wellbore:	DH - Job #32D0111042	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D0111042	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
7,255.0	21.72	220.27	7,176.7	-352.6	-367.7	226.20	509.5
7,344.0	22.19	219.48	7,259.2	-378.2	-389.0	225.81	542.5
7,479.0	21.35	219.25	7,384.6	-416.9	-420.8	225.27	592.3
7,614.0	20.08	220.07	7,510.8	-453.7	-451.2	224.85	639.9
7,748.0	19.12	220.93	7,637.1	-487.8	-480.4	224.56	684.7
7,883.0	19.21	219.46	7,764.6	-521.7	-509.0	224.30	728.9
8,017.0	18.82	219.02	7,891.3	-555.5	-536.6	224.01	772.4
8,088.0	17.92	219.80	7,958.7	-572.8	-550.9	223.88	794.7



Scientific Drilling
Directional Drilling Operations

Project: Lost Tank Delaware, West
Site: Eddy County, NM
Well: Lost Tank 4 Federal #14
Wellbore: DH - Job #32D0111042
Design: DH - Job #32D0111042



Azimuths to Grid North
True North: -0.30°
Magnetic North: 7.50°

Magnetic Field
Strength: 48814 3snT
Dip Angle: 60.35°
Date: 1/15/2011
Model: BGGM2010

+N/-S
0.0

+E/-W
0.0

Northing
516707.54

WELL DETAILS: Lost Tank 4 Federal #14
WELL @ 0.0usft (Original Well Elev)

Ground Level: 0.0

Easting

671405.56

Latitude
32° 25' 9.546 N

Longitude
103° 46' 40.309 W

Slot

True Vertical Depth (1500 usft/in)

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Lost Tank 4 Federal #14, Grid North
Vertical (TVD) Reference: WELL @ 0.0usft (Original Well Elev)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: WELL @ 0.0usft (Original Well Elev)
Calculation Method: Minimum Curvature

South(-)/North(+) (150 usft/in)

West(-)/East(+) (150 usft/in)

COMPANY DETAILS: OCCIDENTAL PERMIAN LTD.

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

PROJECT DETAILS: Lost Tank Delaware, West

Geodetic System: NAD 83 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