

30-015-37960

OCCIDENTAL PERMIAN LTD.

Lost Tank Delaware, West
Eddy County, NM
Lost Tank 10 Federal #2
DH - Job #32D10111015

Survey: MWD

SDI Standard Survey Report

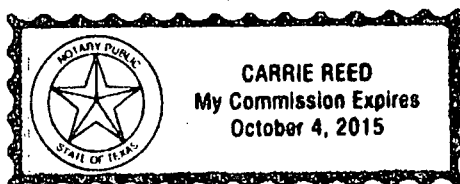
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notarized this date 18th of November, 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 10 Federal #2
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 10 Federal #2	North Reference:	Grid
Wellbore:	VH - Job #32K10111009	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K10111009	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
From:	Lat/Long	Easting:	676,005 63 usft
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 24' 54 705 N
		Longitude:	103° 45' 46 737 W
		Grid Convergence:	0 31 °

Well:	Lost Tank 10 Federal #2, Directional		
Well Position	+N/-S	0 0 usft	Northing: 515,338 08 usft
	+E/-W	0 0 usft	Easting: 676,111 69 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 24' 55 749 N
		Longitude:	103° 45' 45 493 W
		Ground Level:	0 0 usft

Wellbore:	VH - Job #32K10111009		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	10/18/2011	7 65
			60 32
			48,702

Design:	VH - Job #32K10111009		
Audit Notes:			
Version:	1 0	Phase:	ACTUAL
		Tie On Depth:	0 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0 0	0 0	0.0
			194 51

Survey Program	Date	12/14/2011	
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100 0	656 0	Gyro (VH - Job #32K10111009)	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	0 0
100 0	0 09	234 14	100 0	0 0	-0 1	234.14	0 1	
198 0	0 16	250 29	198 0	-0 1	-0 3	241 70	0 3	
288 0	0 20	268 06	288 0	-0 2	-0 5	250 77	0 6	
378 0	0 29	283 12	378 0	-0 1	-0 9	261.33	0 9	
468 0	0 31	290 42	468 0	0 0	-1 4	269 92	1 4	
559 0	0 27	290 88	559 0	0 2	-1 8	275 12	1 8	
656 0	0 27	289 90	656 0	0 3	-2 2	278 20	2 2	

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SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Lost Tank 10 Federal #2
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 10 Federal #2	North Reference:	Grid
Wellbore:	DH - Job #32D10111015	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D10111015	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
From:	Lat/Long	Easting:	676,005.63 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 24' 54.705 N
		Longitude:	103° 45' 46.737 W
		Grid Convergence:	0.31 °

Well	Lost Tank 10 Federal #2, Directional					
Well Position	+N/-S	0 0 usft	Northing:	515,338 08 usft	Latitude:	32° 24' 55 749 N
	+E/-W	0 0 usft	Easting:	676,111 69 usft	Longitude:	103° 45' 45 493 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore		DH - Job #32D10111015			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/20/2011	7.65	60.32	48,702

Design:	DH - Job #32D10111015				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	656 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0 0	0 0	0.0	154 51	

Survey Program	Date	12/14/2011		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	656.0	Gyro (VH - Job #32K10111009)	Keeper	Keeper Surface Readout
745.0	8,674.0	MWD (DH - Job #32D10111015)	MWD	MWD

Survey:								
Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance	
(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)	
656.0	0.27	289.90	656.0	0.3	-2.2	278.20	2.2	
745.0	0.17	353.55	745.0	0.5	-2.4	282.13	2.5	
865.0	0.43	303.73	865.0	0.9	-2.8	288.57	3.0	
955.0	0.26	303.40	955.0	1.2	-3.3	290.87	3.5	
1,090.0	0.29	211.10	1,090.0	1.1	-3.7	286.88	3.9	
1,225.0	0.41	251.29	1,225.0	0.7	-4.3	278.87	4.4	
1,360.0	0.41	242.49	1,360.0	0.3	-5.2	273.28	5.2	
1,495.0	0.20	192.20	1,495.0	-0.2	-5.7	268.46	5.7	
1,630.0	0.36	224.44	1,630.0	-0.7	-6.1	263.53	6.1	
1,765.0	0.26	185.07	1,765.0	-1.3	-6.4	258.52	6.5	
1,901.0	0.31	110.91	1,901.0	-1.7	-6.1	254.04	6.3	

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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Lost Tank 10 Federal #2	North Reference:	Grid
Wellbore:	DH - Job #32D10111015	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D10111015	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
2,036.0	0.46	52.70	2,036.0	-1.5	-5.3	253.81	5.5	
2,171.0	0.22	54.98	2,171.0	-1.1	-4.6	257.17	4.8	
2,306.0	0.38	41.05	2,306.0	-0.6	-4.1	262.13	4.2	
2,441.0	0.36	79.81	2,441.0	-0.2	-3.4	267.34	3.4	
2,576.0	0.58	83.56	2,576.0	0.0	-2.3	269.81	2.3	
2,711.0	0.83	52.60	2,711.0	0.7	-0.9	307.13	1.1	
2,846.0	0.98	53.28	2,845.9	1.9	0.8	23.01	2.1	
2,981.0	0.98	81.37	2,980.9	2.8	2.9	45.83	4.0	
3,116.0	1.19	77.68	3,115.9	3.3	5.4	58.72	6.3	
3,251.0	1.75	86.94	3,250.8	3.7	8.8	67.31	9.6	
3,386.0	1.42	121.39	3,385.8	2.9	12.3	76.62	12.7	
3,521.0	0.84	117.29	3,520.8	1.6	14.6	83.73	14.7	
3,656.0	0.85	73.17	3,655.8	1.4	16.5	84.99	16.5	
3,791.0	0.39	37.87	3,790.8	2.1	17.7	83.25	17.8	
3,926.0	0.60	29.50	3,925.7	3.1	18.3	80.49	18.6	
4,060.0	0.62	8.85	4,059.7	4.4	18.8	76.82	19.3	
4,108.0	0.47	35.66	4,107.7	4.8	18.9	75.74	19.5	
4,229.0	0.44	354.42	4,228.7	5.7	19.2	73.51	20.0	
4,274.0	0.35	2.33	4,273.7	6.0	19.2	72.65	20.1	
4,319.0	0.35	208.25	4,318.7	6.0	19.1	72.56	20.0	
4,364.0	1.67	193.93	4,363.7	5.2	18.9	74.47	19.6	
4,409.0	2.90	189.88	4,408.7	3.5	18.5	79.34	18.9	
4,454.0	3.43	188.74	4,453.6	1.0	18.1	86.72	18.2	
4,499.0	4.40	183.29	4,498.5	-2.0	17.8	96.44	18.0	
4,544.0	5.54	181.53	4,543.3	-5.9	17.7	108.48	18.6	
4,589.0	6.07	181.06	4,588.1	-10.5	17.6	120.75	20.5	
4,634.0	7.03	182.15	4,632.8	-15.6	17.4	131.80	23.4	
4,679.0	7.65	178.19	4,677.5	-21.3	17.4	140.76	27.5	
4,724.0	8.53	177.32	4,722.0	-27.7	17.7	147.42	32.8	
4,769.0	8.79	179.16	4,766.5	-34.4	17.9	152.56	38.8	
4,815.0	8.79	183.38	4,811.9	-41.5	17.7	156.85	45.1	
4,860.0	8.79	180.22	4,856.4	-48.3	17.5	160.08	51.4	
4,905.0	10.11	178.72	4,900.8	-55.7	17.6	162.48	58.4	
4,950.0	11.61	179.60	4,945.0	-64.2	17.7	164.58	66.6	
4,995.0	12.05	183.12	4,989.0	-73.4	17.5	166.61	75.5	
5,040.0	12.75	184.35	5,033.0	-83.1	16.8	168.53	84.7	
5,085.0	13.28	185.14	5,076.8	-93.2	16.0	170.25	94.5	
5,130.0	14.16	183.64	5,120.6	-103.8	15.2	171.67	104.9	
5,175.0	14.86	186.63	5,164.1	-115.0	14.2	172.97	115.9	
5,220.0	14.77	187.16	5,207.6	-126.4	12.8	174.22	127.1	
5,265.0	16.09	188.21	5,251.0	-138.3	11.2	175.37	138.8	
5,310.0	17.15	190.24	5,294.1	-151.0	9.1	176.54	151.3	
5,355.0	17.15	191.73	5,337.1	-164.0	6.6	177.70	164.2	
5,400.0	17.85	189.71	5,380.0	-177.3	4.1	178.68	177.4	

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Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Lost Tank 10 Federal #2	North Reference:	Grid
Wellbore:	DH - Job #32D10111015	Survey/Calculation Method:	Minimum Curvature
Design:	DH - Job #32D10111015	Database:	EDM-Regulatory

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,445 0	18 29	186 72	5,422 8	-191 1	2 1	179 37	191 1
5,490 0	18 64	186 37	5,465 5	-205 3	0 5	179 87	205 3
5,535 0	20 05	186 90	5,508 0	-220 1	-1 3	180 33	220 1
5,580 0	21 72	187 42	5,550 0	-236 0	-3 3	180 79	236 0
5,625 0	22 95	189 18	5,591 6	-252 9	-5 7	181 30	253 0
5,670 0	24 27	190 32	5,632 9	-270 7	-8 8	181 86	270 8
5,715 0	25 32	191 91	5,673 7	-289 2	-12 4	182 46	289 5
5,760 0	26 20	192 78	5,714 2	-308 3	-16 6	183 08	308 8
5,805 0	27 08	194 63	5,754 5	-327 9	-21 4	183 73	328 6
5,850 0	27 96	196 65	5,794 4	-347 9	-27 0	184 44	349 0
5,895 0	28 84	197 71	5,834 0	-368 4	-33 3	185 17	369 9
5,940 0	28 40	197 79	5,873 5	-388 9	-39 9	185 86	391 0
5,985 0	29 46	197 62	5,912 8	-409 6	-46 5	186 48	412 3
6,030 0	30 16	198 15	5,951 9	-430 9	-53 4	187 06	434 2
6,075 0	31 04	199 11	5,990 6	-452 6	-60 7	187 64	456 7
6,120 0	32 01	199 73	6,029 0	-474 8	-68 5	188 21	479 8
6,165 0	32 01	200 78	6,067 1	-497 2	-76 8	188 78	503 1
6,210 0	32 98	199 99	6,105 1	-519 9	-85 2	189 31	526 8
6,255 0	34 38	199 20	6,142 5	-543 4	-93 6	189 77	551 4
6,300 0	35 09	199 38	6,179 5	-567 6	-102 1	190 19	576 7
6,345 0	35 96	199 11	6,216 1	-592 3	-110 7	190 58	602 5
6,390 0	36 05	199 73	6,252 5	-617 2	-119 5	190 95	628 7
6,435 0	36 32	199 55	6,288 9	-642 2	-128 4	191 31	654 9
6,525 0	35 61	200 08	6,361 7	-692 0	-146 3	191 94	707 3
6,615 0	35 26	200 52	6,435 0	-740 9	-164 4	192 51	758 9
6,705 0	35 70	201 13	6,508 3	-789 7	-183 0	193 05	810 6
6,795 0	34 29	199 90	6,582 1	-838 1	-201 1	193 49	861 8
6,885 0	33 24	201 22	6,656 9	-884 9	-218 6	193 88	911 5
6,974 0	33 41	198 94	6,731 2	-930 8	-235 4	194 19	960 1
7,064 0	32 45	198 06	6,806 8	-977 2	-251 0	194 40	1,008 9
7,154 0	32 36	196 30	6,882 8	-1,023 3	-265 2	194 53	1,057 1
7,244 0	32 10	195 42	6,958 9	-1,069 4	-278 3	194 59	1,105 1
7,335 0	34 21	195 42	7,035 1	-1,117 4	-291 5	194 62	1,154 8
7,425 0	35 00	195 33	7,109 2	-1,166 7	-305 1	194 65	1,205 9
7,515 0	34 30	195 07	7,183 2	-1,216 1	-318 5	194 68	1,257 1
7,605 0	33 24	195 86	7,258 0	-1,264 3	-331 9	194 71	1,307 1
7,695 0	32 54	196 30	7,333 6	-1,311 3	-345 4	194 76	1,356 0
7,785 0	32 39	196 69	7,409 5	-1,357 6	-359 1	194 82	1,404 3
7,875 0	31 57	196 92	7,485 9	-1,403 2	-372 9	194 88	1,451 9
7,965 0	32 54	196 04	7,562 1	-1,449 0	-386 4	194 93	1,499 7
8,055 0	31 57	196 30	7,638 4	-1,494 9	-399 7	194 97	1,547 4
8,145 0	30 78	196 48	7,715 4	-1,539 6	-412 9	195 01	1,594 0
8,235 0	32 01	195 95	7,792 2	-1,584 6	-426 0	195 05	1,640 9
8,325 0	30 60	196 30	7,869 1	-1,629 5	-438 9	195 08	1,687 6
8,415 0	29 55	196 92	7,947 0	-1,672 8	-451 8	195 12	1,732 7

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Lost Tank 10 Federal #2
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 10 Federal #2	North Reference:	Grid
Wellbore:	DH - Job #32D10111015	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #32D10111015	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
8,505 0	28 98	196 74	8,025 5	-1,714 9	-464 6	195 16	1,776 7	
8,533 0	27 96	196 65	8,050 1	-1,727 6	-468 4	195 17	1,790 0	
8,613 0	26 82	197 27	8,121 2	-1,762 9	-479 1	195 21	1,826 8	
8,674 0	26 82	197 27	8,175 6	-1,789 1	-487 3	195 24	1,854 3	
Projection to Bit								

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		N/S (usft)	E/W (usft)	Comment	
8,674 0	8,175 6	-1,789 1	-487 3	Projection to Bit	



Scientific Drilling
Directional Drilling Operations

Project: Lost Tank Delaware, West
Eddy County, NM
Well: Lost Tank 10 Federal #2
Wellbore: DH - Job #32D10111015
Design: DH - Job #32D10111015

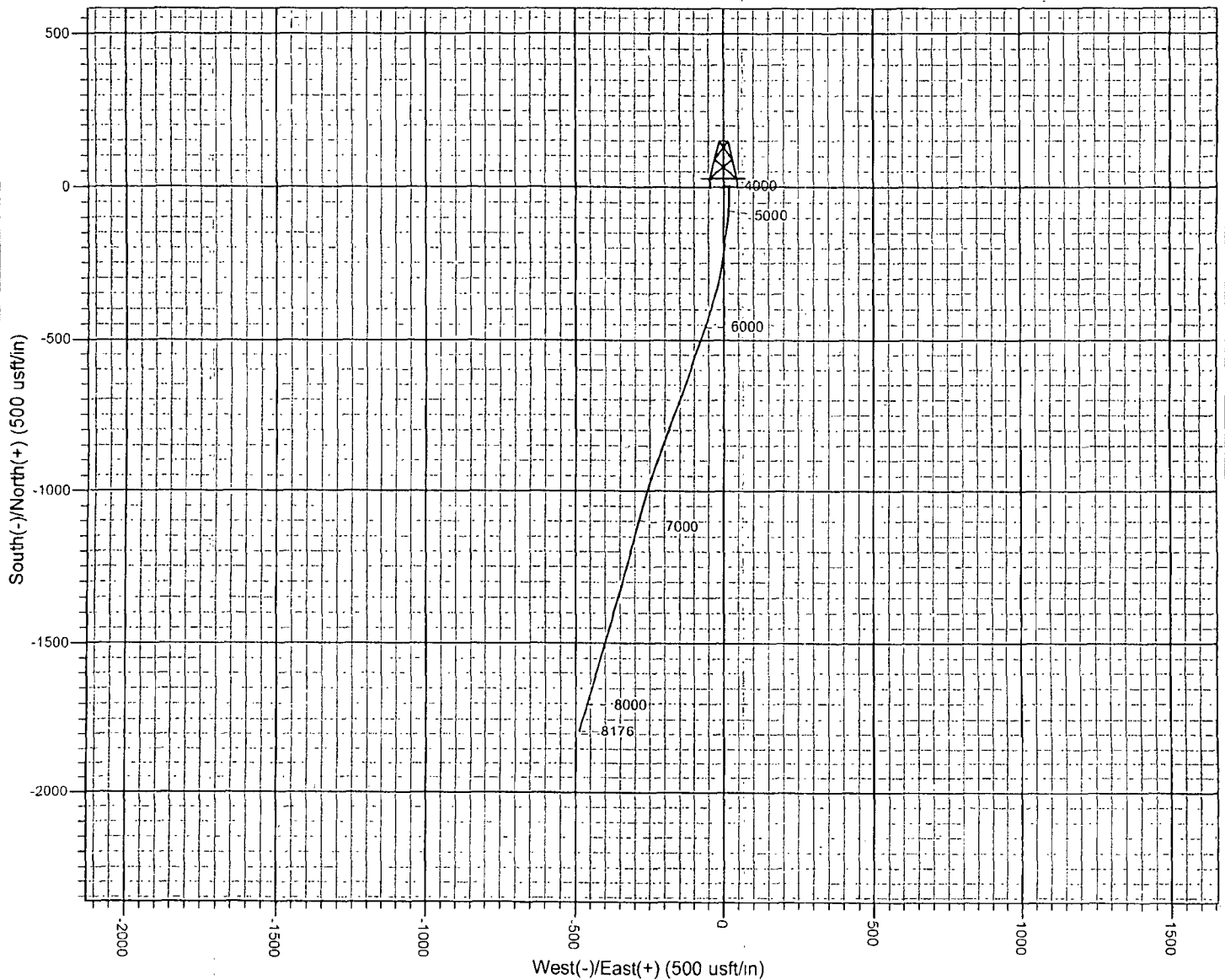


Azimuths to Grid North
True North: -0.31°
Magnetic North: 7.34°

Magnetic Field
Strength: 48701.9 nT
Dip Angle: 60.32°
Date: 10/20/2011
Model: IGRF2010

WELL DETAILS: Lost Tank 10 Federal #2
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	515338.08	676111.69	$32^\circ 24' 55.749''$ N	$103^\circ 45' 45.493''$ 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: $32^\circ 24' 54.705''$ N
Longitude: $103^\circ 45' 46.737''$ W
Positional Uncertainty: 0.0
Convergence: 0.31°
Local North: Grid