



NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 30 2016

RECEIVED

OXY

Eddy County, NM (NAD 27 NME)
Patton MDP1 18 Federal #6H
Patton MDP1 18 Federal #6H
OH

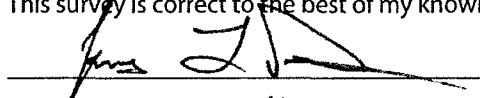
30-015-43854

Design: OH

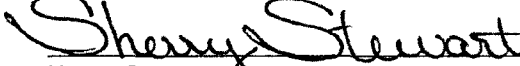
Regulatory Report (Grid North)

07 November, 2016

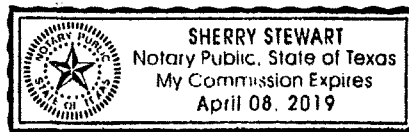
This survey is correct to the best of my knowledge and is supported by actual field data.



Notarized this date 7th of November, 2016.



Notary Signature
County of Midland
State of Texas





Regulatory Report (Grid North)



Company:	OXY	Local Co-ordinate Reference:	Well Patton MDP1 18 Federal #6H
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	H&P 636 KB Height = 26.5' @ 3552.2usft
Site:	Patton MDP1 18 Federal #6H	MD Reference:	H&P 636 KB Height = 26.5' @ 3552.2usft
Well:	Patton MDP1 18 Federal #6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Project Eddy County, NM (NAD 27 NME), New Mexico,

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 Patton MDP1 18 Federal #6H

Site Position:		Northing:	445,625.84 usft	Latitude:	32° 13' 26.606 N
From:	Map	Easting:	661,978.18 usft	Longitude:	103° 48' 34.342 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.28 °

Well Patton MDP1 18 Federal #6H

Well Position	+N/-S	0.0 usft	Northing:	445,625.84 usft	Latitude:	32° 13' 26.606 N
	+E/-W	0.0 usft	Easting:	661,978.18 usft	Longitude:	103° 48' 34.342 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,525.7 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/7/2016	7.03	60.03	48,193

Design OH

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	59.19	

Survey Program Date 11/7/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
79.0	4,174.0	Survey #1 (OH)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
79.0	0.28	237.92	79.0	-0.1	-0.2	237.92	0.2
167.0	0.52	235.29	167.0	-0.4	-0.7	236.62	0.8
254.0	0.71	236.21	254.0	-1.0	-1.4	236.19	1.7
344.0	0.86	229.85	344.0	-1.7	-2.4	234.76	3.0
438.0	1.12	224.53	438.0	-2.8	-3.6	231.96	4.6
531.0	1.23	211.93	531.0	-4.3	-4.8	227.87	6.4
622.0	1.23	212.00	621.9	-6.0	-5.8	224.19	8.3
713.0	1.19	210.22	712.9	-7.6	-6.8	221.75	10.2
804.0	1.19	213.93	803.9	-9.2	-7.8	220.24	12.1
895.0	1.29	215.94	894.9	-10.8	-8.9	219.51	14.0
987.0	1.36	216.60	986.8	-12.6	-10.2	219.08	16.2



Regulatory Report (Grid North)



Company: OXY
Project: Eddy County, NM (NAD 27 NME)
Site: Patton MDP1 18 Federal #6H
Well: Patton MDP1 18 Federal #6H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Patton MDP1 18 Federal #6H
H&P 636 KB Height = 26.5' @ 3552.2usft
H&P 636 KB Height = 26.5' @ 3552.2usft
Grid
Minimum Curvature
Midland District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,050.0	1.44	219.06	1,049.8	-13.8	-11.1	218.98	17.7
1,144.0	1.18	215.07	1,143.8	-15.5	-12.4	218.79	19.9
1,239.0	0.25	33.29	1,238.8	-16.1	-12.9	218.67	20.6
1,334.0	0.60	32.26	1,333.8	-15.5	-12.5	218.89	19.9
1,429.0	0.69	30.10	1,428.8	-14.6	-12.0	219.33	18.9
1,524.0	0.77	29.46	1,523.8	-13.5	-11.4	219.98	17.7
1,618.0	0.78	23.06	1,617.8	-12.4	-10.8	221.03	16.4
1,713.0	0.88	23.38	1,712.8	-11.1	-10.2	222.62	15.1
1,903.0	0.96	24.17	1,902.7	-8.3	-9.0	227.22	12.3
1,998.0	0.96	24.15	1,997.7	-6.9	-8.4	230.51	10.8
2,092.0	0.95	16.49	2,091.7	-5.4	-7.8	235.24	9.5
2,187.0	0.97	24.88	2,186.7	-3.9	-7.3	241.49	8.3
2,282.0	0.98	17.81	2,281.7	-2.4	-6.7	249.91	7.1
2,377.0	0.97	9.52	2,376.7	-0.9	-6.3	262.09	6.4
2,471.0	0.97	9.64	2,470.7	0.7	-6.0	276.57	6.1
2,566.0	0.95	2.63	2,565.6	2.3	-5.9	291.21	6.3
2,661.0	0.96	1.51	2,660.6	3.9	-5.8	303.61	7.0
2,756.0	0.97	2.31	2,755.6	5.5	-5.7	313.50	7.9
2,851.0	0.85	8.86	2,850.6	7.0	-5.6	321.12	8.9
2,945.0	0.84	23.43	2,944.6	8.3	-5.2	327.73	9.8
3,040.0	1.02	34.52	3,039.6	9.6	-4.5	335.06	10.6
3,135.0	1.18	36.46	3,134.6	11.1	-3.4	342.92	11.6
3,230.0	1.23	38.92	3,229.5	12.7	-2.2	350.21	12.9
3,325.0	1.16	38.24	3,324.5	14.2	-1.0	356.17	14.3
3,419.0	1.08	36.60	3,418.5	15.7	0.2	0.61	15.7
3,514.0	1.15	45.29	3,513.5	17.1	1.4	4.61	17.1
3,609.0	1.21	66.69	3,608.5	18.1	3.0	9.32	18.4
3,703.0	1.30	85.49	3,702.4	18.6	5.0	14.89	19.3
3,798.0	1.52	100.88	3,797.4	18.5	7.3	21.47	19.8
3,893.0	1.85	108.62	3,892.4	17.7	10.0	29.30	20.3
3,988.0	2.19	125.68	3,987.3	16.2	12.9	38.51	20.7
4,083.0	2.46	131.66	4,082.2	13.8	15.9	49.06	21.0
4,174.0	2.39	134.29	4,173.2	11.1	18.7	59.19	21.8

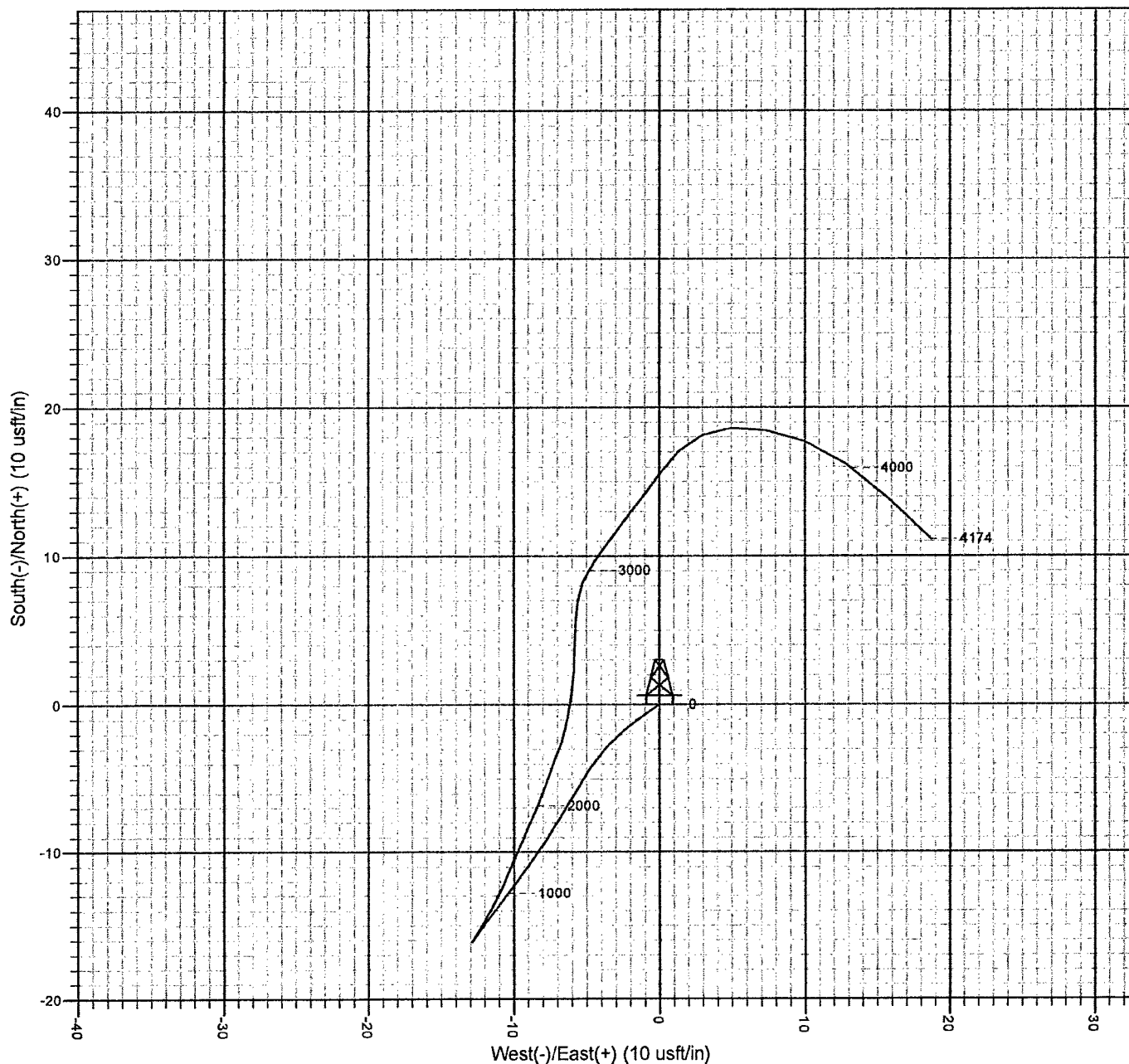
Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County, NM (NAD 27 NME)
Patton MDP1 18 Federal #6H
Well: Patton MDP1 18 Federal #6H
Wellbore: OH
Design: OH

WELL DETAILS: Patton MDP1 18 Federal #6H
H&P 636 KB Height = 26.5' @ 3552.2usft
Ground Level: 3525.7

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	445625.84	661978.18	32° 13' 26.606 N	103° 48' 34.342 W	



PROJECT DETAILS: Eddy County, NM (NAD 27 NME)
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: Patton MDP1 18 Federal #6H
Site Centre Latitude: 32° 13' 26.606 N
Longitude: 103° 48' 34.342 W
Positional Uncertainty: 0.0
Convergence: 0.28
Local North: Grid

Schlumberger

Reservoir Development

Schlumberger Drilling and Measurements

9200 West Reno Avenue

Oklahoma City, Oklahoma 73127 USA

Phone: (405) 789-1515

Fax: (405) 789-1519

Well Reference:

18, 24S, 31E, Eddy NM

-32.22406 -103.80954

I, Leslie Bullard certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 23, 2016 through September 23, 2016, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 4300.00 feet to a depth of 13654.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY USA INC for the Patton MDP1 18 Federal 6H Well (Original Hole) API No. 30-015-43854 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By

Leslie Bullard

FS

Leslie Bullard

Subscribed and Sworn to before me this 24th day of October (month) 2016 (yr)

My Commission expires:

05/15/2019

Jennifer Rath

Notary Public

(signature)

Eddy, NM
(County State)



OFFICIAL SEAL
Jennifer Rath
NOTARY PUBLIC
STATE OF NEW MEXICO
05/15/2019

Oxy Patton MDP1 18 Fed 6H Pilot Gyro+ MWD 0 to 13730ft Survey Geodetic Report

(Def Survey)



Report Date: October 18, 2016 - 01:21 PM
Client: OXY
Field: NM Eddy County (NAD 27)
Structure / Slot: Oxy Patton MDP1 18 Fed 6H / Oxy Patton MDP1 18 Fed 6H
Well: Oxy Patton MDP1 18 Fed 6H
Borehole: Pilot - Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Oxy Patton MDP1 18 Fed 6H Pilot Gyro+ MWD 0 to 13730ft
Survey Date: August 15, 2016
Tort / AHD / DDI / ERD Ratio: 49.846° / 199.920 ft / 3.999 / 0.015
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 26.60589", W 103° 48' 34.34248"
Location Grid N/E Y/X: N 445625 840 ftUS, E 661978 180 ftUS
CRS Grid Convergence Angle: 0.2793°
Grid Scale Factor: 0.99993914
Version / Patch: 2 10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 0.000° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3552 200 ft above MSL
Seabed / Ground Elevation: 3525 700 ft above MSL
Magnetic Declination: 7.058°
Total Gravity Field Strength: 998 4287mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48218.363 nT
Magnetic Dip Angle: 60.042°
Declination Date: August 15, 2016
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.2793°
Total Corr Mag North->Grid North: 6.7783°

Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In RKB	0.00	0.00	0.00	0.00	-3552.20	0.00	0.00	0.00	N/A	445625.84	661978.18	N 32 13 26.61	W 103 48 34.34
	26.50	0.00	0.00	26.50	-3525.70	0.00	0.00	0.00	0.00	445625.84	661978.18	N 32 13 26.61	W 103 48 34.34
	79.00	0.28	237.92	79.00	-3473.20	-0.07	-0.07	-0.11	0.53	445625.77	661978.07	N 32 13 26.61	W 103 48 34.34
	167.00	0.52	235.29	167.00	-3385.20	-0.41	-0.41	-0.62	0.27	445625.43	661977.56	N 32 13 26.60	W 103 48 34.35
	254.00	0.71	236.21	253.99	-3298.21	-0.93	-0.93	-1.39	0.22	445624.91	661976.79	N 32 13 26.60	W 103 48 34.36
	344.00	0.86	229.85	343.98	-3208.22	-1.68	-1.68	-2.37	0.19	445624.16	661975.81	N 32 13 26.59	W 103 48 34.37
	438.00	1.12	224.53	437.97	-3114.23	-2.79	-2.79	-3.55	0.29	445623.05	661974.63	N 32 13 26.58	W 103 48 34.38
	531.00	1.23	211.93	530.95	-3021.25	-4.28	-4.28	-4.72	0.30	445621.56	661973.46	N 32 13 26.56	W 103 48 34.40
	622.00	1.23	212.00	621.93	-2930.27	-5.94	-5.94	-5.75	0.00	445619.90	661972.43	N 32 13 26.55	W 103 48 34.41
	713.00	1.19	210.22	712.91	-2839.29	-7.59	-7.59	-6.75	0.06	445618.25	661971.43	N 32 13 26.53	W 103 48 34.42
Last Gyro	804.00	1.19	213.93	803.89	-2748.31	-9.19	-9.19	-7.75	0.08	445616.65	661970.43	N 32 13 26.52	W 103 48 34.43
	895.00	1.29	215.94	894.87	-2657.33	-10.80	-10.80	-8.88	0.12	445615.04	661969.30	N 32 13 26.50	W 103 48 34.45
	987.00	1.36	216.60	986.84	-2565.36	-12.52	-12.52	-10.14	0.08	445613.33	661968.04	N 32 13 26.48	W 103 48 34.46
	1050.00	1.44	219.06	1049.82	-2502.38	-13.73	-13.73	-11.08	0.16	445612.11	661967.10	N 32 13 26.47	W 103 48 34.47
	1144.00	1.18	215.07	1143.80	-2408.40	-15.44	-15.44	-12.38	0.29	445610.40	661965.80	N 32 13 26.45	W 103 48 34.49
	1239.00	0.25	33.29	1238.79	-2313.41	-16.07	-16.07	-12.83	1.51	445609.77	661965.35	N 32 13 26.45	W 103 48 34.49
	1334.00	0.60	32.26	1333.79	-2218.41	-15.47	-15.47	-12.45	0.37	445610.37	661965.73	N 32 13 26.45	W 103 48 34.49
	1429.00	0.69	30.10	1428.79	-2123.41	-14.56	-14.56	-11.90	0.10	445611.28	661966.28	N 32 13 26.46	W 103 48 34.48
	1524.00	0.77	29.46	1523.78	-2028.42	-13.51	-13.51	-11.30	0.08	445612.33	661966.88	N 32 13 26.47	W 103 48 34.47
	1618.00	0.78	23.06	1617.77	-1934.43	-12.37	-12.37	-10.74	0.09	445613.47	661967.44	N 32 13 26.48	W 103 48 34.47
	1713.00	0.88	23.38	1712.76	-1839.44	-11.10	-11.10	-10.19	0.11	445614.74	661967.99	N 32 13 26.50	W 103 48 34.46
	1903.00	0.96	24.17	1902.74	-1649.46	-8.31	-8.31	-8.96	0.04	445617.53	661969.22	N 32 13 26.52	W 103 48 34.45
	1998.00	0.96	24.15	1997.72	-1554.48	-6.86	-6.86	-8.31	0.00	445618.88	661969.87	N 32 13 26.54	W 103 48 34.44
	2092.00	0.95	16.49	2091.71	-1460.49	-5.39	-5.39	-7.77	0.14	445620.45	661970.41	N 32 13 26.55	W 103 48 34.43
	2187.00	0.97	24.88	2186.70	-1365.50	-3.91	-3.91	-7.21	0.15	445621.93	661970.97	N 32 13 26.57	W 103 48 34.43
	2282.00	0.98	17.81	2281.68	-1270.52	-2.41	-2.41	-6.62	0.13	445623.43	661971.56	N 32 13 26.58	W 103 48 34.42
	2377.00	0.97	9.52	2376.67	-1175.53	-0.84	-0.84	-6.24	0.15	445625.00	661971.94	N 32 13 26.60	W 103 48 34.42
	2471.00	0.97	9.64	2470.65	-1081.55	0.73	0.73	-5.97	0.00	445626.57	661972.21	N 32 13 26.61	W 103 48 34.41
	2566.00	0.95	2.63	2565.64	-986.56	2.31	2.31	-5.80	0.13	445628.15	661972.38	N 32 13 26.63	W 103 48 34.41
	2661.00	0.96	1.51	2660.63	-891.57	3.89	3.89	-5.75	0.02	445629.73	661972.43	N 32 13 26.64	W 103 48 34.41
	2756.00	0.97	2.31	2755.61	-796.59	5.49	5.49	-5.69	0.02	445631.33	661972.49	N 32 13 26.66	W 103 48 34.41
	2851.00	0.85	8.86	2850.60	-701.60	6.99	6.99	-5.55	0.17	445632.83	661972.63	N 32 13 26.68	W 103 48 34.41
	2945.00	0.84	23.43	2944.59	-607.61	8.31	8.31	-5.17	0.23	445634.15	661973.01	N 32 13 26.69	W 103 48 34.40
	3040.00	1.02	34.52	3039.58	-512.62	9.65	9.65	-4.41	0.27	445635.49	661973.77	N 32 13 26.70	W 103 48 34.39
	3135.00	1.18	36.46	3134.56	-417.64	11.13	11.13	-3.35	0.17	445636.97	661974.83	N 32 13 26.72	W 103 48 34.38
	3230.00	1.23	38.92	3229.54	-322.66	12.71	12.71	-2.13	0.08	445638.55	661976.05	N 32 13 26.73	W 103 48 34.37
	3325.00	1.16	38.24	3324.52	-227.68	14.26	14.26	-0.90	0.08	445640.10	661977.28	N 32 13 26.75	W 103 48 34.35
	3419.00	1.08	36.60	3418.50	-133.70	15.72	15.72	0.22	0.09	445641.56	661978.40	N 32 13 26.76	W 103 48 34.34
	3514.00	1.15	45.29	3513.49	-38.71	17.11	17.11	1.43	0.19	445642.94	661979.61	N 32 13 26.78	W 103 48 34.32
	3609.00	1.21	66.69	3608.47	56.27	18.17	18.17	3.03	0.47	445644.01	661981.21	N 32 13 26.79	W 103 48 34.31
	3703.00	1.30	85.49	3702.44	150.24	18.65	18.65	5.01	0.45	445644.49	661983.18	N 32 13 26.79	W 103 48 34.28
	3798.00	1.52	100.88	3797.41	245.21	18.50	18.50	7.32	0.46	445644.34	661985.50	N 32 13 26.79	W 103 48 34.26
	3893.00	1.85	108.62	3892.37	340.17	17.77	17.77	10.01	0.42	445643.61	661988.19	N 32 13 26.78	W 103 48 34.22
	3988.00	2.19	125.68	3987.32	435.12	16.22	16.22	12.93	0.72	445642.06	661991.11	N 32 13 26.77	W 103 48 34.19
	4083.00	2.46	131.66	4082.24	530.04	13.81	13.81	15.93	0.38	445639.65	661994.11	N 32 13 26.74	W 103 48 34.16
	4174.00	2.39	134.29	4173.16	620.96	11.18	11.18	18.75	0.14	445637.02	661996.93	N 32 13 26.72	W 103 48 34.12
	4300.00	2.04	137.88	4299.06	746.86	7.69	7.69	22.13	0.30	445633.53	662000.31	N 32 13 26.68	W 103 48 34.08
	4395.00	0.13	151.33	4394.04	841.84	6.34	6.34	23.32	2.01	445632.18	662001.50	N 32 13 26.67	W 103 48 34.07
	4490.00	0.07	28.81	4489.04	936.84	6.29	6.29	23.40	0.19	445632.13	662001.58	N 32 13 26.67	W 103 48 34.07
	4585.00	0.04	182.21	4584.04	1031.84	6.31	6.31	23.43	0.11	445632.15	662001.61	N 32 13 26.67	W 103 48 34.07
	4775.00	0.07	220.36	4774.04	1221.84	6.16	6.16	23.35	0.02	445632.00	662001.53	N 32 13 26.67	W 103 48 34.07
	4964.00	0.07	297.69	4963.04	1410.84	6.12	6.12	23.17	0.05	445631.96	662001.35	N 32 13 26.67	W 103 48 34.07
	5154.00	0.07	211.93	5153.04	1600.84	6.08	6.08	23.01	0.05	445631.92	662001.19	N 32 13 26.66	W 103 48 34.07
	5248.00	0.11	39.32	5247.04	1694.84	6.10	6.10	23.03	0.19	445631.94	662001.21	N 32 13 26.67	W 103 48 34.07
	5438.00	3.14	227.10	5436.95	1884.75	2.70	2.70	19.34	1.71	445628.54	661997.52	N 32 13 26.63	W 103 48 34.12
	5532.00	4.88	261.47	5530.73	1978.53	0.35	0.35	13.50	3.08	445628.19	661991.68	N 32 13 26.61	W 103 48 34.19
	5627.00	6.75	288.51	5625.25	2073.05	1.52	1.52	4.20	3.44	445627.36	661982.38	N 32 13 26.62	W 103 48 34.29
	5721.00	7.74	300.18	5718.50	2166.30	6.46	6.46	-6.51	1.88	445632.30	661971.67	N 32 13 26.67	W 103 48 34.42
	5816.00	7.16	300.04	5812.70	2260.50	12.64	12.64	-17.16	0.61	445638.48	661961.02	N 32 13 26.73	W 103 48 34.54
	5911.00	6.39	300.44	5907.04	2354.84	18.28	18.28	-26.85	0.81	445644.12	661951.34	N 32 13 26.79	W 103 48 34.65
6005.00	4.94	299.76	6000.58	2448.38	22.94	22.94	-34.87	1.54	445648.78	661943.31	N 32 13 26.83	W 103 48 34.75	
6100.00	3.23	299.27	6095.33	2543.13	28.28	28.28	-40.76	1.80	445652.12	661937.43	N 32 13 26.87	W 103 48 34.82	
6195.00	2.22	293.34	6190.22	2638.02	28.32	28.32	-44.78	1.10	445654.16	661933.40	N 32 13 26.89	W 103 48 34.86	
6290.00	0.97	276.53	6285.18	2732.98	29.14	29.14	-47.27	1.39	445654.98	661930.91	N 32 13 26.90	W 103 48 34.89	
6385.00	0.00	0.00	6380.18	2827.98	29.23	29.23	-48.07	1.02	445655.07	661930.12	N 32 13 26.90	W 103 48 34.90	
6480.00	0.07	202.80	6475.18	2922.98	29.18	29.18	-48.09	0.07	445655.02	661930.09	N 32 13 26.90	W 103 48 34.90	
6669.00	0.09	263.86	6664.18	3111.98	29.05	29.05	-48.28	0.04	445654.89	661929.90	N 32 13 26.90	W 103 48 34.90	
6764.00	0.04	39.63	6759.18	3206.98	29.07	29.07	-48.34	0.13	445654.91	661929.85	N 32 13 26.90	W 103 48 34.90	
6858.00	0.02	0.00	6853.18	3300.98	29.11	29.11	-48.31	0.03	445654.95	661929.87	N 32 13 26.90	W 103 48 34.90	
6953.00	0.0												

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7995.00	0.09	137.67	7990.18	4437.98	28.75	28.75	-47.86	0.03	445654.59	661930.32	N 32 13 26.89	W 103 48 34.90
	8090.00	0.29	246.52	8085.18	4532.98	28.60	28.60	-48.03	0.35	445654.44	661930.15	N 32 13 26.89	W 103 48 34.90
	8279.00	0.13	325.71	8274.18	4721.98	28.59	28.59	-48.59	0.16	445654.43	661929.59	N 32 13 26.89	W 103 48 34.91
	8374.00	0.48	339.16	8369.18	4816.98	29.05	29.05	-48.80	0.37	445654.89	661929.39	N 32 13 26.90	W 103 48 34.91
	8545.00	0.73	100.24	8540.17	4987.97	29.53	29.53	-47.98	0.62	445655.36	661930.20	N 32 13 26.90	W 103 48 34.90
	8563.00	0.88	110.00	8558.17	5005.97	29.46	29.46	-47.74	1.13	445655.30	661930.45	N 32 13 26.90	W 103 48 34.90
	8658.00	0.73	109.73	8653.16	5100.96	29.00	29.00	-46.48	0.16	445654.84	661931.70	N 32 13 26.90	W 103 48 34.88
	8708.00	0.62	120.22	8703.16	5150.96	28.76	28.76	-45.95	0.33	445654.60	661932.24	N 32 13 26.89	W 103 48 34.88
	8762.00	0.51	129.97	8757.15	5204.95	28.46	28.46	-45.51	0.27	445654.30	661932.67	N 32 13 26.89	W 103 48 34.87
	8952.00	0.13	237.60	8947.15	5394.95	27.80	27.80	-45.04	0.30	445653.64	661933.14	N 32 13 26.88	W 103 48 34.87
	9046.00	0.24	224.86	9041.15	5489.95	27.60	27.60	-45.27	0.12	445653.44	661932.91	N 32 13 26.88	W 103 48 34.87
	9141.00	0.15	140.87	9136.15	5583.95	27.37	27.37	-45.33	0.28	445653.21	661932.85	N 32 13 26.88	W 103 48 34.87
	9236.00	0.07	220.36	9231.15	5678.95	27.23	27.23	-45.29	0.16	445653.06	661932.89	N 32 13 26.88	W 103 48 34.87
	9331.00	0.20	194.19	9326.15	5773.95	27.02	27.02	-45.37	0.15	445652.86	661932.81	N 32 13 26.88	W 103 48 34.87
	9425.00	0.31	212.58	9420.15	5867.95	26.65	26.65	-45.55	0.14	445652.49	661932.63	N 32 13 26.87	W 103 48 34.87
	9614.00	0.46	330.00	9609.15	6056.95	26.87	26.87	-46.20	0.35	445652.71	661931.98	N 32 13 26.87	W 103 48 34.88
	9804.00	0.24	68.04	9799.14	6246.94	27.68	27.68	-46.22	0.29	445653.52	661931.97	N 32 13 26.88	W 103 48 34.88
	9993.00	0.02	0.00	9988.14	6435.94	27.86	27.86	-45.85	0.12	445653.70	661932.33	N 32 13 26.88	W 103 48 34.87
	10088.00	0.15	252.08	10083.14	6530.94	27.84	27.84	-45.97	0.17	445653.68	661932.22	N 32 13 26.88	W 103 48 34.88
	10278.00	0.13	316.87	10273.14	6720.94	27.92	27.92	-46.35	0.08	445653.76	661931.83	N 32 13 26.88	W 103 48 34.88
	10373.00	0.33	246.74	10368.14	6815.94	27.89	27.89	-46.68	0.33	445653.73	661931.51	N 32 13 26.88	W 103 48 34.88
	10467.00	0.22	155.70	10462.14	6909.94	27.62	27.62	-46.85	0.43	445653.46	661931.33	N 32 13 26.88	W 103 48 34.89
	10562.00	0.22	185.20	10557.14	7004.94	27.27	27.27	-46.79	0.12	445653.11	661931.39	N 32 13 26.88	W 103 48 34.89
	10657.00	0.20	226.27	10652.14	7099.94	26.98	26.98	-46.93	0.16	445652.82	661931.25	N 32 13 26.88	W 103 48 34.89
	10846.00	0.73	19.52	10841.14	7288.94	27.89	27.89	-46.76	0.48	445653.72	661931.42	N 32 13 26.88	W 103 48 34.89
	10940.00	0.90	27.96	10935.13	7382.93	29.10	29.10	-46.22	0.22	445654.94	661931.96	N 32 13 26.90	W 103 48 34.88
	11035.00	0.79	20.53	11030.12	7477.92	30.37	30.37	-45.64	0.16	445656.21	661932.54	N 32 13 26.91	W 103 48 34.87
	11130.00	0.07	224.19	11125.11	7572.91	30.95	30.95	-45.45	0.90	445656.78	661932.73	N 32 13 26.91	W 103 48 34.87
	11224.00	0.13	221.15	11219.11	7666.91	30.82	30.82	-45.56	0.06	445656.68	661932.62	N 32 13 26.91	W 103 48 34.87
	11319.00	0.04	327.30	11314.11	7761.91	30.77	30.77	-45.65	0.15	445656.61	661932.53	N 32 13 26.91	W 103 48 34.87
	11413.00	0.07	273.13	11408.11	7855.91	30.80	30.80	-45.72	0.06	445656.64	661932.46	N 32 13 26.91	W 103 48 34.87
	11517.00	0.04	80.38	11512.11	7959.91	30.81	30.81	-45.75	0.11	445656.65	661932.43	N 32 13 26.91	W 103 48 34.87
	11580.00	0.09	251.40	11575.11	8022.91	30.80	30.80	-45.78	0.21	445656.64	661932.41	N 32 13 26.91	W 103 48 34.87
	11611.00	0.11	296.57	11606.11	8053.91	30.80	30.80	-45.83	0.25	445656.64	661932.36	N 32 13 26.91	W 103 48 34.87
	11706.00	0.59	297.32	11701.11	8148.91	31.07	31.07	-46.34	0.51	445656.91	661931.84	N 32 13 26.92	W 103 48 34.88
	11801.00	0.44	318.37	11796.11	8243.91	31.57	31.57	-47.02	0.25	445657.41	661931.16	N 32 13 26.92	W 103 48 34.89
	11896.00	0.40	305.23	11891.11	8338.91	32.03	32.03	-47.53	0.11	445657.87	661930.65	N 32 13 26.93	W 103 48 34.89
Last Intermediate	11922.00	0.48	297.60	11917.10	8364.90	32.13	32.13	-47.70	0.38	445657.97	661930.48	N 32 13 26.93	W 103 48 34.90
	11972.00	0.57	281.68	11967.10	8414.90	32.28	32.28	-48.13	0.34	445658.12	661930.05	N 32 13 26.93	W 103 48 34.90
	12065.00	0.61	255.89	12060.10	8507.90	32.26	32.26	-49.07	0.29	445658.09	661929.11	N 32 13 26.93	W 103 48 34.91
	12159.00	0.28	249.58	12154.09	8601.89	32.05	32.05	-49.77	0.36	445657.89	661928.42	N 32 13 26.93	W 103 48 34.92
	12253.00	0.38	312.54	12248.09	8695.89	32.18	32.18	-50.21	0.38	445658.02	661927.97	N 32 13 26.93	W 103 48 34.93
	12346.00	0.93	359.92	12341.09	8788.89	33.14	33.14	-50.44	0.78	445658.98	661927.75	N 32 13 26.94	W 103 48 34.93
	12439.00	1.20	5.30	12434.07	8881.87	34.86	34.86	-50.35	0.31	445660.70	661927.84	N 32 13 26.95	W 103 48 34.93
	12533.00	1.46	7.82	12528.05	8975.85	37.03	37.03	-50.09	0.29	445662.86	661928.09	N 32 13 26.97	W 103 48 34.92
	12626.00	0.69	48.60	12621.03	9068.83	38.57	38.57	-49.51	1.12	445664.41	661928.67	N 32 13 26.99	W 103 48 34.92
	12719.00	0.26	78.23	12714.03	9161.83	38.99	38.99	-48.88	0.52	445664.82	661929.30	N 32 13 26.99	W 103 48 34.91
	12812.00	0.12	17.08	12807.03	9254.83	39.13	39.13	-48.64	0.25	445664.96	661929.54	N 32 13 27.00	W 103 48 34.91
	12999.00	0.53	307.74	12994.02	9441.82	39.85	39.85	-49.27	0.27	445665.69	661928.91	N 32 13 27.00	W 103 48 34.91
	13091.00	0.11	199.11	13086.02	9533.82	40.03	40.03	-49.64	0.63	445665.87	661928.54	N 32 13 27.00	W 103 48 34.92
	13184.00	0.12	348.47	13179.02	9626.82	40.05	40.05	-49.69	0.24	445665.89	661928.49	N 32 13 27.00	W 103 48 34.92
	13277.00	0.17	321.34	13272.02	9719.82	40.26	40.26	-49.80	0.09	445666.09	661928.38	N 32 13 27.01	W 103 48 34.92
	13371.00	0.15	308.87	13366.02	9813.82	40.44	40.44	-49.98	0.04	445666.28	661928.20	N 32 13 27.01	W 103 48 34.92
	13463.00	0.22	310.72	13458.02	9905.82	40.63	40.63	-50.21	0.08	445666.47	661927.97	N 32 13 27.01	W 103 48 34.92
	13556.00	0.26	125.83	13551.02	9998.82	40.63	40.63	-50.17	0.52	445666.46	661928.01	N 32 13 27.01	W 103 48 34.92
Last Survey	13654.00	0.55	345.99	13649.02	10096.82	40.95	40.95	-50.11	0.78	445666.79	661928.07	N 32 13 27.01	W 103 48 34.92
PTB	13730.00	0.55	345.99	13725.02	10172.82	41.66	41.66	-50.29	0.00	445667.50	661927.90	N 32 13 27.02	W 103 48 34.93

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Pilot - Original Hole / Oxy Patton MDP1 18 Fed 6H Pilot Gyro+ MWD 0 to 13730ft
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Pilot - Original Hole / Oxy Patton MDP1 18 Fed 6H Pilot Gyro+ MWD 0 to 13730ft
	1	26.500	4174.000	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Pilot - Original Hole / Oxy Patton MDP1 18 Fed 6H Pilot Gyro+
	1	4174.000	13730.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Pilot - Original Hole / Oxy Patton MDP1 18 Fed 6H Pilot Gyro+

Schlumberger

Reservoir Development

Schlumberger Drilling and Measurements

9200 West Reno Avenue

Oklahoma City, Oklahoma 73127 USA

Phone: (405) 789-1515

Fax: (405) 789-1519

Well Reference:

18, 24S, 31E, Eddy NM

-32.22406 -103.80954

I, Leslie Bullard certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of October 03, 2016 through October 12, 2016, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 11152.00 feet to a depth of 16399.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY USA INC for the Patton MDP1 18 Federal 6H ST01 Well (Side Track) API No. 30-015-43854 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By

Leslie Bullard

FS

Leslie Bullard

Subscribed and Sworn to before me this 24th day of October (month) 2016 (yr)

My Commission expires:

05/15/2019

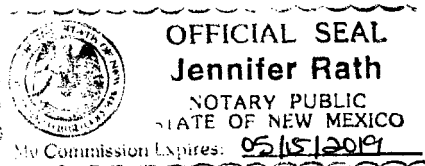
Jennifer Rath

Notary Public

(signature)

Eddy, NM

(County State)





Survey Oxy Patton MDP1 18 Fed 6H ST01 Gyro + MWD Tie-In to 16441 **ftMD Survey Geodetic Report** **(Def Survey)**

Report Date: October 18, 2016 - 01:20 PM
Client: OXY
Field: NM Eddy County (NAD 27)
Structure / Slot: Oxy Patton MDP1 18 Federal 6H / Oxy Patton MDP1 18 Fed 6H
Well: Oxy Patton MDP1 18 Federal 6H
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: Survey Oxy Patton MDP1 18 Fed 6H ST01 Gyro + MWD Tie-In to 16441 ftMD
Survey Date: August 15, 2016
Tort / AHD / DDI / ERD Ratio: 179.361' / 5301.478 ft / 6.129 / 0.456
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 26.60589", W 103° 48' 34.34245"
Location Grid N/E Y/X: N 445625 840 ftUS, E 661978 180 ftUS
CRS Grid Convergence Angle: 0.2793°
Grid Scale Factor: 0.99993914
Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.747° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3552.200 ft above MSL
Seabed / Ground Elevation: 3525.700 ft above MSL
Magnetic Declination: 7.046°
Total Gravity Field Strength: 998.4287mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48204.968 nT
Magnetic Dip Angle: 60.040°
Declination Date: September 29, 2016
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.2793°
Total Corr Mag North-Grid North: 6.7662°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In	0.00	0.00	0.00	0.00	-3552.20	0.00	0.00	0.00	N/A	445625.84	661978.18	N 32 13 26.61	W 103 48 34.34
RKB	26.50	0.00	0.00	26.50	-3525.70	0.00	0.00	0.00	0.00	445625.84	661978.18	N 32 13 26.61	W 103 48 34.34
	79.00	0.28	237.92	79.00	-3473.20	0.07	-0.07	-0.11	0.53	445625.77	661978.07	N 32 13 26.61	W 103 48 34.34
	167.00	0.52	235.29	167.00	-3385.20	0.41	-0.41	-0.62	0.27	445625.43	661977.56	N 32 13 26.60	W 103 48 34.35
	254.00	0.71	236.21	253.99	-3298.21	0.93	-0.93	-1.39	0.22	445624.91	661976.79	N 32 13 26.60	W 103 48 34.36
	344.00	0.86	229.85	343.98	-3208.22	1.67	-1.68	-2.37	0.19	445624.16	661975.81	N 32 13 26.59	W 103 48 34.37
	438.00	1.12	224.53	437.97	-3114.23	2.77	-2.79	-3.55	0.29	445623.05	661974.63	N 32 13 26.58	W 103 48 34.38
	531.00	1.23	211.93	530.95	-3021.25	4.26	-4.28	-4.72	0.30	445621.56	661973.46	N 32 13 26.56	W 103 48 34.40
	622.00	1.23	212.00	621.93	-2930.27	5.92	-5.94	-5.75	0.00	445619.90	661972.43	N 32 13 26.55	W 103 48 34.41
	713.00	1.19	210.22	712.91	-2839.29	7.56	-7.59	-6.75	0.06	445618.25	661971.43	N 32 13 26.53	W 103 48 34.42
	804.00	1.19	213.93	803.89	-2748.31	9.15	-9.19	-7.75	0.08	445616.65	661970.43	N 32 13 26.52	W 103 48 34.43
	895.00	1.29	215.94	894.87	-2657.33	10.76	-10.80	-8.88	0.12	445615.04	661969.30	N 32 13 26.50	W 103 48 34.45
	987.00	1.36	216.60	986.84	-2565.36	12.47	-12.52	-10.14	0.08	445613.33	661968.04	N 32 13 26.48	W 103 48 34.46
	1050.00	1.44	219.06	1049.82	-2502.38	13.68	-13.73	-11.08	0.16	445612.11	661967.10	N 32 13 26.47	W 103 48 34.47
	1144.00	1.18	215.07	1143.80	-2408.40	15.39	-15.44	-12.38	0.29	445610.40	661965.80	N 32 13 26.45	W 103 48 34.49
	1239.00	0.25	33.29	1238.79	-2313.41	16.01	-16.07	-12.83	1.51	445609.77	661965.35	N 32 13 26.45	W 103 48 34.49
	1334.00	0.60	32.26	1333.79	-2218.41	15.42	-15.47	-12.45	0.37	445610.37	661965.73	N 32 13 26.45	W 103 48 34.49
	1429.00	0.69	30.10	1428.79	-2123.41	14.51	-14.56	-11.90	0.10	445611.28	661966.28	N 32 13 26.46	W 103 48 34.48
	1524.00	0.77	29.46	1523.78	-2028.42	13.48	-13.51	-11.30	0.08	445612.33	661966.88	N 32 13 26.47	W 103 48 34.47
	1618.00	0.78	23.06	1617.77	-1934.43	12.32	-12.37	-10.74	0.09	445613.47	661967.44	N 32 13 26.48	W 103 48 34.47
	1713.00	0.88	23.38	1712.76	-1839.44	11.06	-11.10	-10.19	0.11	445614.74	661967.99	N 32 13 26.50	W 103 48 34.46
	1903.00	0.96	24.17	1902.74	-1649.46	8.27	-8.31	-8.96	0.04	445617.53	661969.22	N 32 13 26.52	W 103 48 34.45
	1998.00	0.96	24.15	1997.72	-1554.48	6.82	-6.86	-8.31	0.00	445618.98	661969.87	N 32 13 26.54	W 103 48 34.44
	2092.00	0.95	16.49	2091.71	-1460.49	5.36	-5.39	-7.77	0.14	445620.45	661970.41	N 32 13 26.55	W 103 48 34.43
	2187.00	0.97	24.88	2186.70	-1365.50	3.88	-3.91	-7.21	0.15	445621.93	661970.57	N 32 13 26.57	W 103 48 34.43
	2282.00	0.98	17.81	2281.68	-1270.52	2.38	-2.41	-6.62	0.13	445623.43	661971.56	N 32 13 26.58	W 103 48 34.42
	2377.00	0.97	9.52	2376.67	-1175.53	0.81	-0.84	-6.24	0.15	445625.00	661971.94	N 32 13 26.60	W 103 48 34.42
	2471.00	0.97	9.64	2470.65	-1081.55	-0.76	0.73	-5.97	0.00	445626.57	661972.21	N 32 13 26.61	W 103 48 34.41
	2566.00	0.95	2.63	2565.64	-988.56	-2.33	2.31	-5.80	0.13	445628.15	661972.38	N 32 13 26.63	W 103 48 34.41
	2661.00	0.96	1.51	2660.63	-891.57	-3.92	3.89	-5.75	0.02	445629.73	661972.43	N 32 13 26.64	W 103 48 34.41
	2756.00	0.97	2.31	2755.61	-796.59	-5.51	5.49	-5.69	0.02	445631.33	661972.49	N 32 13 26.66	W 103 48 34.41
	2851.00	0.85	8.86	2850.60	-701.60	-7.01	6.99	-5.55	0.17	445632.83	661972.63	N 32 13 26.68	W 103 48 34.41
	2945.00	0.84	23.43	2944.59	-607.61	-8.33	8.31	-5.17	0.23	445634.15	661973.01	N 32 13 26.69	W 103 48 34.40
	3040.00	1.02	34.52	3039.58	-512.62	-9.67	9.65	-4.41	0.27	445635.49	661973.77	N 32 13 26.70	W 103 48 34.39
	3135.00	1.18	36.46	3134.56	-417.64	-11.14	11.13	-3.35	0.17	445636.97	661974.83	N 32 13 26.72	W 103 48 34.38
	3230.00	1.23	38.92	3229.54	-322.66	-12.72	12.71	-2.13	0.08	445638.55	661976.05	N 32 13 26.73	W 103 48 34.37
	3325.00	1.16	38.24	3324.52	-227.68	-14.26	14.26	-0.90	0.08	445640.10	661977.28	N 32 13 26.75	W 103 48 34.35
	3419.00	1.08	36.60	3418.50	-133.70	-15.72	15.72	0.22	0.09	445641.56	661978.40	N 32 13 26.76	W 103 48 34.34
	3514.00	1.15	45.29	3513.49	-38.71	-17.10	17.11	1.43	0.19	445642.94	661979.61	N 32 13 26.78	W 103 48 34.32
	3609.00	1.21	66.69	3608.47	56.27	-18.16	18.17	3.03	0.47	445644.01	661981.21	N 32 13 26.79	W 103 48 34.31
	3703.00	1.30	85.49	3702.44	150.24	-18.63	18.65	5.01	0.45	445644.49	661983.18	N 32 13 26.79	W 103 48 34.28
	3798.00	1.52	100.88	3797.41	245.21	-18.46	18.50	7.32	0.46	445644.34	661985.50	N 32 13 26.79	W 103 48 34.26
	3893.00	1.85	109.62	3892.37	340.17	-17.73	17.77	10.01	0.42	445643.61	661988.19	N 32 13 26.78	W 103 48 34.22
	3988.00	2.19	125.68	3987.32	435.12	-16.16	16.22	12.93	0.72	445642.06	661991.11	N 32 13 26.77	W 103 48 34.19
	4083.00	2.46	131.66	4082.24	530.04	-13.74	13.81	15.93	0.38	445639.65	661994.11	N 32 13 26.74	W 103 48 34.16
	4174.00	2.39	134.29	4173.16	620.96	-11.10	11.18	18.75	0.14	445637.02	661996.93	N 32 13 26.72	W 103 48 34.12
	4300.00	2.04	137.88	4299.06	746.86	-7.59	7.69	22.13	0.30	445633.53	662000.31	N 32 13 26.68	W 103 48 34.08
	4395.00	0.13	151.33	4394.04	841.84	-6.23	6.34	23.32	2.01	445632.18	662001.50	N 32 13 26.67	W 103 48 34.07
	4490.00	0.07	28.81	4489.04	936.84	-6.19	6.29	23.40	0.19	445632.13	662001.58	N 32 13 26.67	W 103 48 34.07
	4585.00	0.04	182.21	4584.04	1031.84	-6.21	6.31	23.43	0.11	445632.15	662001.61	N 32 13 26.67	W 103 48 34.07
	4775.00	0.07	220.36	4774.04	1221.84	-6.05	6.16	23.35	0.02	445632.00	662001.53	N 32 13 26.67	W 103 48 34.07
	4964.00	0.07	297.69	4963.04	1410.84	-6.02	6.12	23.17	0.05	445631.96	662001.35	N 32 13 26.67	W 103 48 34.07
	5154.00	0.07	211.93	5153.04	1600.84	-5.98	6.08	23.01	0.05	445631.92	662001.19	N 32 13 26.66	W 103 48 34.07
	5248.00	0.11	39.32	5247.04	1694.84	-6.00	6.10	23.03	0.19	445631.94	662001.21	N 32 13 26.67	W 103 48 34.07
	5438.00	3.14	227.10	5436.95	1884.75	-2.61	2.70	19.34	1.71	445628.54	661997.52	N 32 13 26.63	W 103 48 34.12
	5532.00	4.88	261.47	5530.73	1978.53	-0.29	0.35	13.50	3.08	445626.19	661991.68	N 32 13 26.61	W 103 48 34.19
	5627.00	6.75	288.51	5625.25	2073.05	-1.51	1.52	4.20	3.44	445627.38	661982.38	N 32 13 26.62	W 103 48 34.29
	5721.00	7.74	300.18	5718.50	2166.30	-6.49	6.46	-6.51	1.88	445632.30	661971.67	N 32 13 26.67	W 103 48 34.42
	5816.00	7.16	300.04	5812.70	2260.50	-12.72	12.64	-17.16	0.61	445638.48	661961.02	N 32 13 26.73	W 103 48 34.54
	5911.00	6.39	300.44	5907.04	2354.84	-18.40	18.28	-26.85	0.81	445644.12	661951.34	N 32 13 26.79	W 103 48 34.65
	6005.00	4.94	299.76	6000.58	2448.38	-23.10	22.94	-34.87	1.54	445648.78	661943.31	N 32 13 26.83	W 103 48 34.75
	6100.00	3.23	299.27	6095.33	2543.13	-26.46	26.28	-40.76	1.80	445652.12	661937.43	N 32 13 26.87	W 103 48 34.82
	6195.00	2.22	293.34	6190.22	2638.02	-28.52	28.32	-44.78	1.10	445654.16	661933.40	N 32 13 26.89	W 103 48 34.86
	6290.00	0.97	276.53	6285.18	2732.98	-29.35	29.14	-47.27	1.39	445654.98	661930.91	N 32 13 26.90	W 103 48 34.89
	6385.00	0.00	0.00	6380.18	2827.98	-29.44	29.23	-48.07	1.02	445655.07	661930.12	N 32 13 26.90	W 103 48 34.90
	6480.00	0.07	202.80	6475.18	2922.98	-29.39	29.18	-48.09	0.07	445655.02	661930.09	N 32 13 26.90	W 103 48 34.90
	6669.00	0.09	263.86	6664.18	3111.98	-29.27	29.05	-48.28	0.04	445654.89	661929.90	N 32 13 26.90	W 103 48 34.90
	6764.00	0.04	39.63	6759.18	3206.98	-29.29	29.07	-48.34	0.13				

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7900.00	0.07	149.96	7895.18	4342.98	-29.07	28.86	-47.94	0.08	445654.70	661930.24	N 32 13 26.89	W 103 48 34.90
	7995.00	0.09	137.67	7990.18	4437.98	-28.96	28.75	-47.86	0.03	445654.59	661930.32	N 32 13 26.89	W 103 48 34.90
	8090.00	0.29	246.52	8085.18	4532.98	-28.81	28.60	-48.03	0.35	445654.44	661930.15	N 32 13 26.89	W 103 48 34.90
	8279.00	0.13	325.71	8274.18	4721.98	-28.80	28.59	-48.59	0.16	445654.43	661929.59	N 32 13 26.89	W 103 48 34.91
	8374.00	0.48	339.16	8369.18	4816.98	-29.27	29.05	-48.80	0.37	445654.89	661929.39	N 32 13 26.90	W 103 48 34.91
	8545.00	0.73	100.24	8540.17	4987.97	-29.74	29.53	-47.98	0.62	445655.36	661930.20	N 32 13 26.90	W 103 48 34.90
	8563.00	0.88	110.00	8558.17	5005.97	-29.67	29.46	-47.74	1.13	445655.30	661930.45	N 32 13 26.90	W 103 48 34.90
	8658.00	0.73	109.73	8653.16	5100.96	-29.21	29.00	-46.48	0.16	445654.84	661931.70	N 32 13 26.90	W 103 48 34.88
	8708.00	0.62	120.22	8703.16	5150.96	-28.96	28.76	-45.95	0.33	445654.60	661932.24	N 32 13 26.89	W 103 48 34.88
	8762.00	0.51	129.97	8757.15	5204.95	-28.66	28.46	-45.51	0.27	445654.30	661932.67	N 32 13 26.89	W 103 48 34.87
	8952.00	0.13	237.60	8947.15	5394.95	-28.00	27.80	-45.04	0.30	445653.64	661933.14	N 32 13 26.88	W 103 48 34.87
	9046.00	0.24	224.86	9041.15	5488.95	-27.80	27.60	-45.27	0.12	445653.44	661932.91	N 32 13 26.88	W 103 48 34.87
	9141.00	0.15	140.87	9136.15	5583.95	-27.57	27.37	-45.33	0.28	445653.21	661932.85	N 32 13 26.88	W 103 48 34.87
	9236.00	0.07	220.36	9231.15	5678.95	-27.43	27.23	-45.29	0.16	445653.06	661932.89	N 32 13 26.88	W 103 48 34.87
	9331.00	0.20	194.19	9326.15	5773.95	-27.22	27.02	-45.37	0.15	445652.86	661932.81	N 32 13 26.88	W 103 48 34.87
	9425.00	0.31	212.58	9420.15	5867.95	-26.85	26.65	-45.55	0.14	445652.49	661932.63	N 32 13 26.87	W 103 48 34.87
	9614.00	0.46	330.00	9609.15	6056.95	-27.08	26.87	-46.20	0.35	445652.71	661931.98	N 32 13 26.87	W 103 48 34.88
	9804.00	0.24	68.04	9799.14	6246.94	-27.89	27.68	-46.22	0.29	445653.52	661931.97	N 32 13 26.88	W 103 48 34.88
	9993.00	0.02	0.00	9988.14	6435.94	-28.07	27.86	-45.85	0.12	445653.70	661932.33	N 32 13 26.88	W 103 48 34.87
	10088.00	0.15	252.08	10083.14	6530.94	-28.05	27.84	-45.97	0.17	445653.68	661932.22	N 32 13 26.88	W 103 48 34.88
	10278.00	0.13	316.87	10273.14	6720.94	-28.13	27.92	-46.35	0.08	445653.76	661931.83	N 32 13 26.88	W 103 48 34.88
	10373.00	0.33	246.74	10368.14	6815.94	-28.10	27.89	-46.66	0.33	445653.73	661931.51	N 32 13 26.88	W 103 48 34.88
	10467.00	0.22	155.70	10462.14	6909.94	-27.83	27.62	-46.85	0.43	445653.46	661931.33	N 32 13 26.88	W 103 48 34.89
	10562.00	0.22	185.20	10557.14	7004.94	-27.48	27.27	-46.79	0.12	445653.11	661931.39	N 32 13 26.88	W 103 48 34.89
	10657.00	0.20	226.27	10652.14	7099.94	-27.19	26.98	-46.93	0.16	445652.82	661931.25	N 32 13 26.88	W 103 48 34.89
	10846.00	0.73	19.52	10841.14	7288.94	-28.09	27.89	-46.76	0.48	445653.72	661931.42	N 32 13 26.88	W 103 48 34.89
	10940.00	0.90	27.96	10935.13	7382.93	-29.31	29.10	-46.22	0.22	445654.94	661931.96	N 32 13 26.90	W 103 48 34.88
	11035.00	0.79	20.53	11030.12	7477.92	-30.58	30.37	-45.64	0.16	445656.21	661932.54	N 32 13 26.91	W 103 48 34.87
	11152.00	19.07	173.95	11145.04	7562.84	-12.13	11.94	-43.32	16.91	445637.78	661934.86	N 32 13 26.73	W 103 48 34.85
	11199.00	25.52	173.14	11188.51	7636.31	5.58	-5.77	-41.30	13.74	445620.07	661936.88	N 32 13 26.55	W 103 48 34.82
	11245.00	29.28	172.98	11229.34	7677.14	26.60	-26.77	-38.74	8.13	445599.07	661939.44	N 32 13 26.34	W 103 48 34.79
	11338.00	37.52	175.18	11306.93	7754.73	77.49	-77.64	-33.57	8.98	445548.21	661944.61	N 32 13 25.84	W 103 48 34.74
	11432.00	41.91	181.85	11379.25	7827.05	137.45	-137.60	-32.18	6.50	445488.25	661946.00	N 32 13 25.25	W 103 48 34.72
	11526.00	52.15	181.87	11443.24	7891.04	206.09	-206.25	-34.41	10.89	445419.60	661943.77	N 32 13 24.57	W 103 48 34.75
	11591.00	57.66	179.15	11480.60	7928.40	259.25	-259.40	-34.84	9.14	445366.45	661943.34	N 32 13 24.04	W 103 48 34.76
	11716.00	66.60	173.80	11539.01	7986.81	369.38	-369.51	-27.84	8.09	445256.35	661950.34	N 32 13 22.95	W 103 48 34.69
	11809.00	76.88	177.45	11588.12	8015.92	457.34	-457.44	-21.20	11.66	445168.43	661956.98	N 32 13 22.08	W 103 48 34.62
	11903.00	83.21	176.03	11584.36	8032.16	549.75	-549.83	-15.93	6.90	445078.05	661962.25	N 32 13 21.17	W 103 48 34.56
	11953.00	88.25	176.59	11588.08	8035.88	599.51	-599.57	-12.72	10.14	445026.31	661965.46	N 32 13 20.67	W 103 48 34.52
	11995.00	88.11	175.63	11589.42	8037.22	641.40	-641.45	-9.87	2.31	444984.43	661968.31	N 32 13 20.26	W 103 48 34.49
	12088.00	89.17	174.46	11591.62	8039.42	734.06	-734.07	-1.84	1.70	444891.81	661976.34	N 32 13 19.34	W 103 48 34.41
	12182.00	88.59	176.57	11593.46	8041.26	827.78	-827.76	5.51	2.33	444798.13	661983.69	N 32 13 18.41	W 103 48 34.33
	12275.00	88.21	179.18	11596.06	8043.86	920.68	-920.65	8.95	2.83	444705.25	661987.13	N 32 13 17.50	W 103 48 34.29
	12368.00	88.35	180.24	11598.85	8046.65	1013.64	-1013.61	9.42	1.15	444612.30	661987.60	N 32 13 16.58	W 103 48 34.29
	12461.00	89.42	179.15	11600.66	8048.46	1106.62	-1106.59	9.98	1.64	444519.32	661988.10	N 32 13 15.66	W 103 48 34.29
	12554.00	89.21	180.06	11601.77	8049.57	1199.61	-1199.58	10.56	1.00	444426.34	661988.74	N 32 13 14.74	W 103 48 34.29
	12647.00	89.97	179.21	11602.44	8050.24	1292.61	-1292.57	11.15	1.23	444333.35	661989.33	N 32 13 13.81	W 103 48 34.29
	12832.00	89.86	178.58	11602.71	8050.51	1477.59	-1477.54	14.72	0.35	444148.40	661992.90	N 32 13 11.98	W 103 48 34.25
	12917.00	88.87	178.77	11603.65	8051.45	1562.56	-1562.51	16.69	1.19	444063.43	661994.86	N 32 13 11.14	W 103 48 34.24
	13018.00	90.00	178.37	11604.65	8052.45	1663.54	-1663.47	19.21	1.19	443962.48	661997.38	N 32 13 10.14	W 103 48 34.21
	13206.00	90.21	179.19	11604.30	8052.10	1851.51	-1851.42	23.21	0.45	443774.53	662001.39	N 32 13 8.28	W 103 48 34.18
	13392.00	90.38	178.82	11603.35	8051.15	2037.50	-2037.41	24.82	0.35	443588.56	662002.99	N 32 13 6.44	W 103 48 34.17
	13486.00	90.93	180.22	11602.27	8050.07	2131.50	-2131.41	24.78	0.72	443494.57	662002.96	N 32 13 5.51	W 103 48 34.17
	13673.00	89.62	179.93	11601.37	8049.17	2318.49	-2318.40	24.54	0.72	443307.59	662002.72	N 32 13 3.66	W 103 48 34.19
	13766.00	91.41	181.00	11600.54	8048.34	2411.47	-2411.39	23.78	2.24	443214.60	662001.96	N 32 13 2.74	W 103 48 34.20
	13953.00	90.89	180.56	11596.79	8044.59	2598.40	-2598.33	21.24	0.36	443027.67	661998.42	N 32 13 0.89	W 103 48 34.24
	14138.00	89.90	180.01	11595.51	8043.31	2783.38	-2783.32	20.32	0.61	442842.69	661998.50	N 32 12 59.06	W 103 48 34.26
	14325.00	91.24	180.51	11593.65	8041.45	2970.36	-2970.31	19.47	0.76	442655.72	661997.65	N 32 12 57.21	W 103 48 34.28
	14419.00	89.90	180.60	11592.71	8040.51	3064.35	-3064.29	18.56	1.43	442561.74	661996.74	N 32 12 56.28	W 103 48 34.30
	14513.00	92.41	184.77	11590.82	8038.62	3158.18	-3158.14	14.16	5.18	442467.89	661992.34	N 32 12 55.35	W 103 48 34.36
	14606.00	87.83	185.79	11590.62	8038.42	3250.72	-3250.72	5.60	5.05	442375.32	661983.78	N 32 12 54.44	W 103 48 34.46
	14699.00	88.31	183.84	11593.76	8041.56	3343.30	-3343.34	-2.20	2.16	442282.71	661975.98	N 32 12 53.52	W 103 48 34.56
	14792.00	88.45	183.12	11596.39	8044.19	3436.06	-3436.13	-7.84	0.79	442189.93	661970.34	N 32 12 52.60	W 103 48 34.63
	14884.00	88.35	181.59	11598.95	8046.75	3527.93	-3528.01	-11.62	1.67	442098.05	661968.56	N 32 12 51.70	W 103 48 34.68
	14977.00	88.52	180.39	11601.49	8049.29	3620.87	-3620.96	-13.23	1.30	442005.11	661964.96	N 32 12 50.78	W 103 48 34.70
	15070.00	88.49	180.56	11603.92	8051.72	3713.83	-3713.93	-14.00	0.19	441912.15	661964.19	N 32 12 49.86	W 103 48 34.72
	15163.00	88.69	179.38	11606.21	8054.01	3806.80	-3806.90	-13.95	1.29	441819.18	661964.23	N 32 12 48.94	W 103 48 34.71
	15256.00	88.21	178.97	11608.73	8058.53	3899.76	-3899.85	-12.61	0.68	441726.23	661965.57	N 32 12 48.02	W 103 48 34.71
	15443.00	89.93	179.23	11611.76	8059.56	4086.72	-4086.80	-9.67	0.93	441539.30	661968.51	N 32 12 46.17	W 103 48 34.69
	15631.00	90.00	179.45	11611.87	8059.67	4274.71	-4274.79	-7.51	0.12	441351.32	661970.67	N 32 12 44.31	W 103 48 34.67
	15818.00	89.90	179.02	11612.04	8059.84	4461.70	-4461.77	-5.01	0.24	441164.35	661973.17	N 32 12 42.46	W 103 48 34.65