

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

September 20, 2019

OXY USA WTP LP
PO Box 4294
Houston, TX 77210

Re:

S14, T20S, R28 E Eddy, NM
N 32.579754 W -104.14084975

CLIENT: OXY USA WTP LP
WELL: Charlie Chocolate 14-15 Federal Com 31H
FIELD: Burton Flat Wolfcamp

RIG: H&P 617
COUNTY: Eddy
API NO: 30-015-43123
JOB NO: 19MLH0226

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Jeremy James FS	Charlie Chocolate 14- 15 Federal Com 31H Original Hole	526.00 Ft to 10252.00 Ft	August 3, 2019 to August 17, 2019	TelePacer SlimPulse

Schlumberger-Private

Schlumberger Drilling and Measurements
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Schlumberger

Well Reference:

S14, T20S, R28 E Eddy, NM
N 32.579754 W -104.14084975

I, Jeremy James certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 03, 2019 through August 17, 2019, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 526.00 feet to a depth of 10252.00 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 WTP LP for the Charlie Chocolate 14-15 Federal Com 31H Well (Original Hole) API No. 30-015-43123 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
Jeremy James
FS

Jeremy James

Subscribed and Sworn to before me this 20 day of September (month) 2019 (yr)

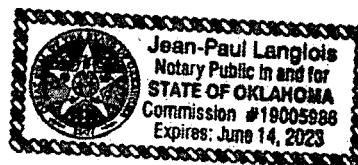
My Commission expires:

6/14/2023

Notary Public

(County State)

(signature)



Schlumberger-Private



Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-10181'MD Survey Geodetic Report (Def Survey)

Report Date: September 06, 2019 - 10:01 AM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Charlie Chocolate 14-15 Federal Com 31H / Oxy Charlie Chocolate 14-15 Federal Com 31H
Well: Oxy Charlie Chocolate 14-15 Federal Com 31H
Borehole: Pilot
UWA / API#: Unknown / 30-015-43123
Survey Name: Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-10181'MD
Survey Date: July 26, 2019
Tol / AHD / DDI / ERD Ratio: 50.948' / 274.792 ft / 4.147' / 0.027
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 34' 47.13038" W 104° 8' 26.83353"
Location Grid N/E Y/X: N 574700.480 RUS, E 600645.960 RUS
CRS Grid Convergence Angle: 0.1037°
Grid Scale Factor: 0.99991312
Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 119.590° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5
TVD Reference Elevation: 3290.200 ft above MSL
Seabed / Ground Elevation: 3263.700 ft above MSL
Magnetic Declination: 7.207°
Total Gravity Field Strength: 986.5047mgn (9.80665 Baseg)
Gravity Model: GARM
Total Magnetic Field Strength: 47944.889 nT
Magnetic Dip Angle: 60.335°
Declination Date: July 26, 2019
Magnetic Declination Model: HDGM 2018
North Reference: Grid North
Grid Convergence Used: 0.1037°
Total Cor Mag North->Grid North: 7.1038°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (RUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	574700.48	600645.96	N 32 34 47.13 W 104	8 26 83
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	574700.48	600645.96	N 32 34 47.13 W 104	8 26 83
	46.80	0.15	19.71	46.80	0.00	0.03	0.01	0.74	574700.51	600645.97	N 32 34 47.13 W 104	8 26 83
	145.50	0.17	98.01	145.50	0.11	0.13	0.20	0.21	574700.61	600646.16	N 32 34 47.13 W 104	8 26 83
	238.90	0.26	172.35	238.90	0.37	-0.10	0.36	0.29	574700.38	600646.32	N 32 34 47.13 W 104	8 26 83
	332.00	0.79	228.85	332.00	0.28	-0.73	-0.09	0.73	574699.75	600645.87	N 32 34 47.12 W 104	8 26 83
	363.10	0.88	228.80	363.09	0.13	-1.03	-0.43	0.29	574699.45	600645.53	N 32 34 47.12 W 104	8 26 84
	456.30	0.42	220.66	456.29	-0.17	-1.76	-1.19	0.50	574698.72	600644.77	N 32 34 47.11 W 104	8 26 85
	549.70	0.26	249.81	549.68	-0.37	-2.10	-1.62	0.25	574698.38	600644.34	N 32 34 47.11 W 104	8 26 85
	674.40	0.21	302.83	674.38	-0.78	-2.07	-2.07	0.17	574698.41	600643.89	N 32 34 47.11 W 104	8 26 86
	772.20	0.14	324.95	772.18	-1.07	-1.88	-2.29	0.10	574698.60	600643.67	N 32 34 47.11 W 104	8 26 86
	865.10	0.17	320.22	865.08	-1.30	-1.68	-2.45	0.04	574698.80	600643.51	N 32 34 47.11 W 104	8 26 86
	958.00	0.16	318.00	957.98	-1.55	-1.47	-2.62	0.01	574699.01	600643.34	N 32 34 47.12 W 104	8 26 86
	1051.10	0.15	323.64	1051.08	-1.79	-1.28	-2.78	0.02	574699.20	600643.18	N 32 34 47.12 W 104	8 26 87
	1144.00	0.12	332.64	1143.98	-1.98	-1.10	-2.90	0.04	574699.38	600643.06	N 32 34 47.12 W 104	8 26 87
	1237.30	0.06	359.29	1237.28	-2.09	-0.96	-2.94	0.08	574699.52	600643.02	N 32 34 47.12 W 104	8 26 87
	1330.60	0.20	324.89	1330.58	-2.26	-0.78	-3.04	0.17	574699.70	600642.92	N 32 34 47.12 W 104	8 26 87
	1423.80	0.25	338.23	1423.88	-2.56	-0.46	-3.21	0.08	574700.02	600642.75	N 32 34 47.13 W 104	8 26 87
	1516.80	0.19	8.17	1516.88	-2.78	-0.11	-3.26	0.14	574700.37	600642.70	N 32 34 47.13 W 104	8 26 87
	1610.20	0.28	228.61	1610.18	-2.91	-0.11	-3.41	0.47	574700.37	600642.55	N 32 34 47.13 W 104	8 26 87
	1702.90	0.28	152.51	1702.88	-2.92	-0.48	-3.63	0.19	574700.00	600642.33	N 32 34 47.13 W 104	8 26 88
	1797.30	0.09	220.40	1797.28	-2.86	-0.76	-3.73	0.22	574699.72	600642.23	N 32 34 47.12 W 104	8 26 88
	1891.80	0.05	151.40	1891.78	-2.84	-0.86	-3.75	0.22	574699.69	600642.21	N 32 34 47.12 W 104	8 26 88
	1986.50	0.09	130.50	1986.48	-2.73	-0.94	-3.68	0.05	574699.54	600642.21	N 32 34 47.12 W 104	8 26 88
	2081.40	0.14	132.15	2081.38	-2.55	-1.07	-3.54	0.05	574699.41	600642.43	N 32 34 47.12 W 104	8 26 88
	2175.80	0.17	175.32	2175.78	-2.36	-1.28	-3.44	0.12	574699.20	600642.52	N 32 34 47.12 W 104	8 26 87
	2270.50	0.14	219.09	2270.48	-2.30	-1.51	-3.50	0.13	574698.97	600642.46	N 32 34 47.12 W 104	8 26 87
	2364.90	0.11	141.90	2364.88	-2.23	-1.68	-3.52	0.17	574698.80	600642.44	N 32 34 47.11 W 104	8 26 87
	2459.60	0.04	279.79	2459.58	-2.18	-1.74	-3.49	0.15	574698.74	600642.47	N 32 34 47.11 W 104	8 26 87
	2554.30	0.04	152.54	2554.28	-2.18	-1.77	-3.51	0.08	574698.72	600642.45	N 32 34 47.11 W 104	8 26 87
	2648.70	0.05	64.45	2648.68	-2.13	-1.78	-3.46	0.07	574698.70	600642.50	N 32 34 47.11 W 104	8 26 87
	2743.20	0.19	71.54	2743.18	-2.00	-1.71	-3.27	0.15	574698.77	600642.69	N 32 34 47.11 W 104	8 26 87
	2837.90	0.16	67.57	2837.88	-1.82	-1.61	-3.00	0.03	574698.87	600642.96	N 32 34 47.11 W 104	8 26 87
	2931.90	0.13	116.05	2931.88	-1.63	-1.61	-2.78	0.13	574698.87	600643.18	N 32 34 47.11 W 104	8 26 87
	3026.80	0.16	100.57	3026.78	-1.40	-1.68	-2.56	0.05	574698.80	600643.40	N 32 34 47.11 W 104	8 26 86
	3121.30	0.14	92.88	3121.28	-1.17	-1.71	-2.31	0.03	574698.77	600643.65	N 32 34 47.11 W 104	8 26 86
	3216.40	0.18	34.30	3216.37	-1.05	-1.59	-2.11	0.17	574698.89	600643.85	N 32 34 47.11 W 104	8 26 86
	3310.50	0.16	113.17	3310.47	-0.91	-1.52	-1.91	0.23	574698.96	600644.05	N 32 34 47.12 W 104	8 26 86
	3404.70	0.12	70.66	3404.67	-0.71	-1.54	-1.69	0.11	574698.94	600644.27	N 32 34 47.12 W 104	8 26 85
	3498.10	0.13	18.48	3498.07	-0.57	-1.40	-1.57	0.12	574699.08	600644.39	N 32 34 47.12 W 104	8 26 85
	3593.80	0.13	105.92	3593.77	-0.58	-1.33	-1.43	0.19	574699.15	600644.53	N 32 34 47.12 W 104	8 26 85
	3688.10	0.12	358.65	3688.07	-0.63	-1.26	-1.33	0.21	574699.22	600644.63	N 32 34 47.12 W 104	8 26 85
	3782.60	0.11	335.98	3782.57	-0.66	-1.08	-1.37	0.05	574699.40	600644.51	N 32 34 47.12 W 104	8 26 85
	3876.90	0.11	328.41	3876.87	-0.81	-0.92	-1.45	0.02	574699.56	600644.43	N 32 34 47.12 W 104	8 26 85
	3971.60	0.11	342.41	3971.57	-0.95	-0.76	-1.53	0.03	574699.72	600644.39	N 32 34 47.12 W 104	8 26 85
	4066.20	0.11	315.61	4066.17	-1.11	-0.61	-1.62	0.05	574699.87	600644.34	N 32 34 47.12 W 104	8 26 85
	4160.60	0.11	321.99	4160.57	-1.28	-0.47	-1.74	0.01	574700.01	600644.22	N 32 34 47.13 W 104	8 26 85
	4350.10	0.11	317.91	4350.07	-1.62	-0.19	-1.97	0.00	574700.29	600643.99	N 32 34 47.13 W 104	8 26 86
	4444.50	0.11	358.78	4444.47	-1.75	-0.03	-2.03	0.08	574700.45	600643.83	N 32 34 47.13 W 104	8 26 86
	4538.30	0.13	289.57	4539.27	-1.90	0.09	-2.14	0.14	574700.57	600643.61	N 32 34 47.13 W 104	8 26 86
	4633.60	0.18	231.99	4633.57	-2.07	0.04	-2.35	0.16	574700.52	600643.40	N 32 34 47.13 W 104	8 26 86
	4728.30	0.20	212.67	4728.27	-2.13	-0.19	-2.56	0.07	574700.29	600643.15	N 32 34 47.13 W 104	8 26 86
	4822.80	0.20	263.62	4822.77	-2.27	-0.35	-2.81	0.18	574700.13	600642.92	N 32 34 47.13 W 104	8 26 87
	4917.30	0.54	304.94	4917.27	-2.85	-0.11	-3.34	0.44	574700.37	600642.62	N 32 34 47.13 W 104	8 26 87
	5106.50	0.14	236.66	5106.47	-3.84	0.27	-4.27	0.27	574700.75	600641.69	N 32 34 47.13 W 104	8 26 88
	5201.20	0.15	256.66	5201.17	-3.99	0.18	-4.48	0.05	574700.66	600641.48	N 32 34 47.13 W 104	8 26 89
	5295.90	0.20	239.36	5295.86	-4.16	0.07	-4.75	0.08	574700.55	600641.21	N 32 34 47.13 W 104	8 26 89
	5390.90	0.19	242.58	5390.86	-4.33	-0.09	-5.03	0.02	574700.39	600640.93	N 32 34 47.13 W 104	8 26 89
	5485.90	0.22	235.58	5485.86	-4.49	-0.27	-5.32	0.04	574700.21	600640.64	N 32 34 47.13 W 104	8 26 90
	5580.30	0.07	240.17	5580.26	-4.60	-0.40	-5.62	0.16	574700.08	600640.44	N 32 34 47.13 W 104	8 26 90
	5675.20	0.24	344.00	5675.16	-4.77	-0.24	-5.62	0.28	574700.24	600640.34	N 32 34 47.13 W 104	8 26 90
	5769.70	0.37	339.29	5769.66	-5.15	0.24	-5.79	0.14	574700.72	600640.17	N 32 34 47.14 W 104	8 26 90
	5864.40	0.42	29.38	5864.36	-5.39	0.83	-5.72	0.36	574701.31	600640.24	N 32 34 47.14 W 104	8 26 90
	5959.10	1.00	88.68	5959.05	-4.62	1.01	-4.74	0.99	574701.49	600641.22	N 32 34 47.14 W 104	8 26 89
	6053.70	1.86	111.58	6053.62	-2.33	0.32	-2.49	0.97	574700.80	600643.47	N 32 34 47.13 W 104	8 26 86
	6148.50	3.15	117.05	6148.33	1.80	-1.43	1.26	1.38	574699.05	600647.22	N 32 34 47.12 W 104	8 26 82
	6243.30	4.67	121.85	6242.91	8.26	-4.65	6.85	1.64	574695.83	600652.81	N 32 34 47.08 W 104	8 26 75
	6337.70	6.18	123.74	6336.88	17.17	-9.51	14.34	1.61	574690.98	600660.30	N 32 34 47.04 W 104	8 26 67
	6432.30	6.55	121.81	6430.90	27.64	-15.18	23.16	0.45	574685.30	600669.12	N 32 34 46.98 W 104	8 26 56
	6526.50	7.27	119.83	6524.41	38.97	-20.97	32.90	0.80	574679.51	600676.86	N 32 34 46.92 W 104	8 26 45
	6621.10	8.79	118.13	6618.08	52.18	-27.36	44.47	1.63	574673.12	600690.42	N 32 34 46.85 W 104	8 26 31
	6715.40	9.81	114.82	6711.14	67.39	-34.13	58.11	1.22	574666.35	600704.07	N 32 34 46.79 W 104	8 26 16
	6810.00	8.99	112.70	6804.47	82.76	-40.36	72.25	0.94	574650.12	600718.20	N 32 34 46.73 W 104	8 25 59
	6904.70	7.48	111.07	6898.19	96.20	-45.44	84.83	1.61	574655.05	600730.78	N 32 34 46.68 W 104	8 25 54
	6999.50	6.88	111.00	6992.25	107.92	-49.69	95.89	0.93	574650.79	600741.84	N 32 34 46.64 W 104	8 25 51
	7093.80	7.58	115.27	7085.80	119.70	-54.37	106.78	0.94	57			

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
	7252.70	5.53	113.73	7273.49	140.89	-63.64	125.89	0.95	574636.85	600771.84	N 32 34 46.50 W 104	8 25.36
	7376.80	5.11	111.27	7367.19	149.55	-66.98	133.94	0.51	574633.51	600779.89	N 32 34 46.47 W 104	8 25.27
	7471.90	4.46	119.81	7461.96	157.44	-70.35	141.10	1.01	574630.13	600787.05	N 32 34 46.43 W 104	8 25.19
	7567.10	4.38	128.11	7556.87	164.73	-74.44	147.17	0.98	574626.05	600793.12	N 32 34 46.39 W 104	8 25.12
	7661.60	3.94	133.73	7651.13	171.49	-78.78	152.47	0.51	574621.70	600798.42	N 32 34 46.35 W 104	8 25.05
	7756.10	3.51	148.61	7745.43	177.20	-83.37	156.44	1.30	574617.12	600802.38	N 32 34 46.30 W 104	8 25.01
	7850.50	2.81	137.65	7839.69	181.93	-87.55	159.50	0.98	574612.94	600805.45	N 32 34 46.26 W 104	8 24.97
	7944.60	6.19	147.75	7933.48	188.60	-93.55	163.76	3.68	574608.94	600809.71	N 32 34 46.20 W 104	8 24.92
	8038.90	4.53	151.59	8027.37	196.24	-101.12	168.25	1.80	574599.37	600814.19	N 32 34 46.13 W 104	8 24.87
	8133.50	4.46	156.45	8121.68	202.35	-107.78	171.50	0.41	574592.71	600817.44	N 32 34 46.06 W 104	8 24.83
	8227.80	3.44	166.94	8215.75	207.20	-113.90	173.60	1.32	574586.59	600818.54	N 32 34 46.00 W 104	8 24.81
	8322.40	2.44	189.86	8310.23	209.80	-118.85	173.90	1.61	574581.84	600819.03	N 32 34 45.95 W 104	8 24.80
	8417.00	2.07	195.76	8404.76	210.89	-122.27	173.09	0.46	574578.22	600819.03	N 32 34 45.92 W 104	8 24.81
	8511.70	2.85	194.38	8499.37	211.92	-126.20	172.04	0.83	574574.29	600817.98	N 32 34 45.88 W 104	8 24.83
	8606.30	1.19	216.39	8593.91	212.42	-129.27	170.67	1.91	574571.22	600816.82	N 32 34 45.85 W 104	8 24.84
	8700.90	0.13	225.51	8688.50	212.27	-130.14	170.21	1.12	574570.36	600816.16	N 32 34 45.84 W 104	8 24.85
	8795.40	0.21	61.60	8783.00	212.34	-130.13	170.29	0.36	574570.36	600816.23	N 32 34 45.84 W 104	8 24.85
	8889.90	0.25	70.98	8877.50	212.56	-129.88	170.64	0.06	574570.51	600816.58	N 32 34 45.84 W 104	8 24.84
	8984.60	0.23	190.35	8972.20	212.76	-130.10	170.80	0.44	574570.39	600816.74	N 32 34 45.84 W 104	8 24.84
	9079.20	0.88	192.73	9066.79	212.88	-130.99	170.80	0.69	574569.50	600816.55	N 32 34 45.83 W 104	8 24.84
	9173.90	0.73	278.76	9161.49	212.88	-131.61	169.85	1.17	574568.88	600815.79	N 32 34 45.83 W 104	8 24.85
	9268.40	0.41	348.41	9255.98	211.80	-131.19	169.18	0.74	574569.30	600815.13	N 32 34 45.83 W 104	8 24.86
	9362.90	0.49	188.86	9350.48	211.87	-131.26	169.11	0.95	574569.23	600815.05	N 32 34 45.83 W 104	8 24.86
	9457.70	0.65	238.43	9445.28	211.80	-131.95	169.64	0.60	574568.54	600814.59	N 32 34 45.82 W 104	8 24.87
	9551.80	0.30	276.53	9539.38	211.32	-132.20	167.94	0.48	574568.29	600813.89	N 32 34 45.82 W 104	8 24.87
	9646.10	0.18	272.67	9633.68	210.96	-132.16	167.55	0.13	574568.33	600813.50	N 32 34 45.82 W 104	8 24.88
	9740.70	0.49	203.02	9728.27	210.88	-132.53	167.24	0.49	574567.96	600813.19	N 32 34 45.82 W 104	8 24.88
	9834.80	1.78	219.92	9822.35	210.66	-134.02	165.15	1.40	574566.47	600812.09	N 32 34 45.80 W 104	8 24.89
	9929.00	2.42	220.31	9916.49	210.03	-136.66	163.92	0.68	574563.83	600809.87	N 32 34 45.78 W 104	8 24.92
	10023.80	2.00	229.87	10011.22	209.08	-139.25	161.36	0.59	574561.24	600807.31	N 32 34 45.75 W 104	8 24.95
	10118.00	1.89	240.32	10105.37	207.72	-141.08	158.76	0.39	574559.41	600804.70	N 32 34 45.73 W 104	8 24.98
	10180.70	1.87	250.56	10168.03	206.52	-141.93	158.90	0.54	574558.56	600802.84	N 32 34 45.72 W 104	8 25.00

Survey Type: Def Survey

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	30.000 GYD_GC+DROP+OH-Depth Only	Pilot / Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-10181MD
	1	26.500	26.500	Act Stns	30.000	30.000 GYD_GC+DROP+OH-Depth Only	Pilot / Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-10181MD
	1	26.500	10180.700	Act Stns	30.000	30.000 GYD_GC+DROP+OH	Pilot / Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-

...Pilot/Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-10181MD

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

September 20, 2019

OXY USA WTP LP
PO Box 4294
Houston, TX 77210

Re:

S14, T20S, R28 E Eddy, NM
N 32.579754 W -104.14084975

CLIENT: OXY USA WTP LP
WELL: Charlie Chocolate 14-15 Fed Com 31H ST01
FIELD: ~~Burton Flat Wolfcamp~~

RIG: H&P 617
COUNTY: Eddy
API NO: 30-015-43123-01
JOB NO: 19MLH0226

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Jeremy James FS	Charlie Chocolate 14- 15 Fed Com 31H ST01 Side Track	7279.00 Ft to 18850.00 Ft	August 23, 2019 to September 4, 2019	SlimPulse, Extreme Third Party Corrected

Schlumberger-Private

Oil Field Services Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

Well Reference:
S14, T20S, R28 E Eddy, NM
N 32.579754 W -104.14084975

I, Jeremy James certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 23, 2019 through September 04, 2019, conduct or supervise the taking of the SlimPulse, Extreme & Third Party Corrected surveys from a depth of 7279.00 feet to a depth of 18850.00 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 WTP LP for the Charlie Chocolate 14-15 Fed Com 31H ST01 Well (Side Track) API No. 30-015-43123-01 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
Jeremy James
FS

Jeremy James

Subscribed and Sworn to before me this 20 day of September (month) 2019 (yr)

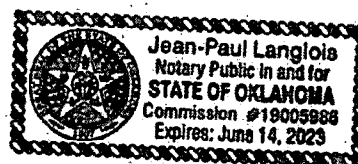
My Commission expires:

6/14/2023

Notary Public

(County State)

(signature)



Schlumberger-Private



Oxy Charlie Chocolate 14-15 Federal Com 31H ST01 Gyro + MWD 0-19065' MD Survey Geodetic Report
(Def Survey)

Report Date:	September 06, 2019 - 09:44 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	OXY	Vertical Section Azimuth:	266.520 ° (Grid North)
Field:	NM Eddy County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Charlie Chocolate 14-15 Federal Com 31H / Oxy Charlie Chocolate 14-15 Federal Com 31H	TVD Reference Datum:	RKB=26.5'
Well:	Oxy Charlie Chocolate 14-15 Federal Com 31H	TVD Reference Elevation:	3290.200 ft above MSL
Borehole:	ST01	Seabed / Ground Elevation:	3263.700 ft above MSL
UWA / API#:	Unknown / 30-015-43123	Magnetic Declination:	7.262 °
Survey Name:	Oxy Charlie Chocolate 14-15 Federal Com 31H ST01 Gyro + MWD 0-19065' MD	Total Gravity Field Strength:	998.5047mgn (9.80665 Based)
Survey Date:	August 11, 2019	Gravity Model:	GARM
Tor / AHD / DDI / ERD Ratio:	209.649 ° / 10823.997 ft / 6.691 / 1.230	Total Magnetic Field Strength:	48006.700 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.359 °
Location Lat / Long:	N 32° 34' 47.13038", W 104° 8' 26.83353"	Declination Date:	August 19, 2019
Location Grid N/E Y/X:	N 574700.480 RUS, E 800645.960 RUS	Magnetic Declination Model:	IFR1
CRS Grid Convergence Angle:	0.1037 °	North Reference:	Grid North
Grid Scale Factor:	0.99991312	Grid Convergence Used:	0.1037 °
Version / Patch:	2.10.782.0	Total Corr Mag North->Grid North:	7.1583 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	574700.48	800645.96	N 32 34 47.13 W 104	8 26.83
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	574700.48	800645.96	N 32 34 47.13 W 104	8 26.83
	46.80	0.15	19.71	46.80	-0.01	0.03	0.01	0.74	574700.51	800645.97	N 32 34 47.13 W 104	8 26.83
	145.50	0.17	98.01	145.50	-0.20	0.13	0.20	0.21	574700.61	800646.16	N 32 34 47.13 W 104	8 26.83
	238.90	0.26	172.35	238.90	-0.36	-0.10	0.36	0.29	574700.38	800646.32	N 32 34 47.13 W 104	8 26.83
	332.00	0.79	228.85	332.00	0.11	-0.73	-0.09	0.73	574699.75	800645.87	N 32 34 47.12 W 104	8 26.83
	363.10	0.88	228.80	363.09	0.46	-1.03	-0.43	0.29	574699.45	800645.53	N 32 34 47.12 W 104	8 26.84
	456.30	0.42	220.66	456.29	1.24	-1.76	-1.19	0.50	574698.72	800644.77	N 32 34 47.11 W 104	8 26.85
	549.70	0.26	249.81	549.68	1.67	-2.10	-1.62	0.25	574698.38	800644.34	N 32 34 47.11 W 104	8 26.85
	674.40	0.21	302.83	674.38	2.13	-2.07	-2.07	0.17	574698.41	800643.89	N 32 34 47.11 W 104	8 26.86
	772.20	0.14	324.95	772.18	2.34	-1.88	-2.29	0.10	574698.60	800643.67	N 32 34 47.11 W 104	8 26.86
	865.10	0.17	320.22	865.08	2.49	-1.68	-2.45	0.04	574698.80	800643.51	N 32 34 47.11 W 104	8 26.86
	958.00	0.16	318.00	957.98	2.66	-1.47	-2.62	0.01	574699.01	800643.34	N 32 34 47.12 W 104	8 26.86
	1051.10	0.15	323.64	1051.08	2.81	-1.28	-2.78	0.02	574699.20	800643.18	N 32 34 47.12 W 104	8 26.87
	1144.00	0.12	332.64	1143.98	2.92	-1.10	-2.90	0.04	574699.38	800643.06	N 32 34 47.12 W 104	8 26.87
	1237.30	0.06	359.29	1237.28	2.97	-0.96	-2.94	0.08	574699.52	800643.02	N 32 34 47.12 W 104	8 26.87
	1330.60	0.20	324.89	1330.58	3.06	-0.78	-3.04	0.17	574699.70	800642.92	N 32 34 47.12 W 104	8 26.87
	1423.90	0.25	338.23	1423.88	3.22	-0.46	-3.21	0.08	574700.02	800642.75	N 32 34 47.13 W 104	8 26.87
	1516.90	0.19	8.17	1516.88	3.26	-0.11	-3.26	0.14	574700.37	800642.70	N 32 34 47.13 W 104	8 26.87
	1610.20	0.28	228.61	1610.18	3.41	-0.11	-3.41	0.47	574700.37	800642.55	N 32 34 47.13 W 104	8 26.87
	1702.90	0.28	182.51	1702.88	3.64	-0.48	-3.63	0.19	574700.00	800642.33	N 32 34 47.13 W 104	8 26.88
	1797.30	0.09	220.40	1797.28	3.74	-0.76	-3.73	0.22	574699.72	800642.23	N 32 34 47.12 W 104	8 26.88
	1891.80	0.05	151.40	1891.78	3.78	-0.86	-3.75	0.09	574699.62	800642.21	N 32 34 47.12 W 104	8 26.88
	1986.50	0.09	130.50	1986.48	3.70	-0.94	-3.68	0.05	574699.54	800642.18	N 32 34 47.12 W 104	8 26.88
	2081.40	0.14	132.15	2081.38	3.56	-1.07	-3.54	0.05	574699.41	800642.15	N 32 34 47.12 W 104	8 26.87
	2175.80	0.17	175.32	2175.78	3.47	-1.28	-3.44	0.12	574699.20	800642.52	N 32 34 47.12 W 104	8 26.87
	2270.60	0.14	219.09	2270.48	3.54	-1.51	-3.50	0.13	574698.97	800642.46	N 32 34 47.12 W 104	8 26.87
	2364.90	0.11	141.90	2364.88	3.56	-1.68	-3.52	0.17	574698.80	800642.44	N 32 34 47.11 W 104	8 26.87
	2459.60	0.04	279.79	2459.58	3.54	-1.74	-3.49	0.15	574698.74	800642.47	N 32 34 47.11 W 104	8 26.87
	2554.30	0.04	152.54	2554.28	3.55	-1.77	-3.51	0.08	574698.72	800642.45	N 32 34 47.11 W 104	8 26.87
	2648.70	0.05	64.45	2648.68	3.50	-1.78	-3.46	0.07	574698.70	800642.50	N 32 34 47.11 W 104	8 26.87
	2743.20	0.19	71.54	2743.18	3.32	-1.71	-3.27	0.15	574698.77	800642.69	N 32 34 47.11 W 104	8 26.87
	2837.90	0.16	67.57	2837.88	3.04	-1.61	-3.00	0.03	574698.87	800642.96	N 32 34 47.11 W 104	8 26.87
	2931.90	0.13	116.05	2931.88	2.82	-1.61	-2.78	0.13	574698.87	800643.18	N 32 34 47.11 W 104	8 26.87
	3026.80	0.16	100.57	3026.78	2.60	-1.68	-2.56	0.05	574698.80	800643.40	N 32 34 47.11 W 104	8 26.86
	3121.30	0.14	92.98	3121.28	2.36	-1.71	-2.31	0.03	574698.77	800643.65	N 32 34 47.11 W 104	8 26.86
	3216.40	0.18	34.30	3216.37	2.15	-1.58	-2.11	0.17	574698.89	800643.85	N 32 34 47.11 W 104	8 26.86
	3310.50	0.16	113.17	3310.47	1.95	-1.52	-1.91	0.23	574698.96	800644.05	N 32 34 47.12 W 104	8 26.86
	3404.70	0.12	70.66	3404.67	1.73	-1.54	-1.69	0.11	574699.04	800644.27	N 32 34 47.12 W 104	8 26.85
	3498.10	0.13	18.48	3498.07	1.60	-1.40	-1.57	0.12	574699.08	800644.38	N 32 34 47.12 W 104	8 26.85
	3593.80	0.13	105.82	3593.77	1.46	-1.33	-1.43	0.19	574699.15	800644.53	N 32 34 47.12 W 104	8 26.85
	3688.10	0.12	358.65	3688.07	1.36	-1.26	-1.33	0.21	574699.22	800644.63	N 32 34 47.12 W 104	8 26.85
	3782.80	0.11	335.98	3782.77	1.40	-1.08	-1.27	0.05	574699.40	800644.59	N 32 34 47.12 W 104	8 26.85
	3876.90	0.11	328.41	3876.87	1.48	-0.92	-1.45	0.02	574699.56	800644.51	N 32 34 47.12 W 104	8 26.85
	3971.60	0.11	342.41	3971.57	1.55	-0.76	-1.63	0.03	574699.72	800644.43	N 32 34 47.12 W 104	8 26.85
	4066.20	0.11	315.61	4066.17	1.63	-0.61	-1.62	0.05	574699.87	800644.34	N 32 34 47.12 W 104	8 26.85
	4160.60	0.11	321.99	4160.57	1.75	-0.47	-1.74	0.01	574700.01	800644.22	N 32 34 47.13 W 104	8 26.85
	4350.10	0.11	317.91	4350.07	1.98	-0.19	-1.87	0.00	574700.29	800643.99	N 32 34 47.13 W 104	8 26.86
	4444.50	0.11	358.78	4444.47	2.03	-0.03	-2.03	0.08	574700.45	800643.83	N 32 34 47.13 W 104	8 26.86
	4539.30	0.13	289.57	4539.27	2.13	0.09	-2.14	0.14	574700.57	800643.82	N 32 34 47.13 W 104	8 26.86
	4633.60	0.18	231.99	4633.57	2.35	0.04	-2.35	0.16	574700.52	800643.61	N 32 34 47.13 W 104	8 26.86
	4728.30	0.20	212.67	4728.27	2.57	-0.19	-2.56	0.07	574700.29	800643.40	N 32 34 47.13 W 104	8 26.86
	4822.80	0.20	263.62	4822.77	2.82	-0.35	-2.81	0.18	574700.13	800643.15	N 32 34 47.13 W 104	8 26.87
	4917.30	0.54	304.94	4917.27	3.34	-0.11	-3.34	0.44	574700.37	800642.62	N 32 34 47.13 W 104	8 26.87
	5106.50	0.14	236.66	5106.47	4.26	0.27	-4.27	0.27	574700.75	800641.69	N 32 34 47.13 W 104	8 26.88
	5201.20	0.15	256.66	5201.17	4.48	0.18	-4.48	0.05	574700.66	800641.48	N 32 34 47.13 W 104	8 26.89
	5295.90	0.20	239.36	5295.86	4.74	-0.09	-4.75	0.08	574700.21	800641.21	N 32 34 47.13 W 104	8 26.89
	5390.90	0.19	242.58	5390.86	5.03	-0.27	-5.03	0.02	574700.39	800640.93	N 32 34 47.13 W 104	8 26.89
	5485.90	0.22	235.58	5485.86	5.32	-0.27	-5.32	0.04	574700.21	800640.64	N 32 34 47.13 W 104	8 26.90
	5580.30	0.07	240.17	5580.26	5.53	-0.40	-5.52	0.16	574700.08	800640.44	N 32 34 47.13 W 104	8 26.90
	5675.20	0.24	344.00	5675.16	5.63	-0.24	-5.62	0.28	574700.24	800640.34	N 32 34 47.13 W 104	8 26.90
	5769.70	0.37	339.29	5769.66	5.78	0.24	-5.79	0.14	574700.72	800640.17	N 32 34 47.13 W 104	8 26.90
	5864.40	0.42	29.38	5864.36	5.70	0.83	-5.72	0.36	574701.31	800640.24	N 32 34 47.14 W 104	8 26.90
	5959.10	1.00	98.68	5959.05	4.71	1.01	-4.74	0.98	574701.49	800641.22	N 32 34 47.14 W 104	8 26.89
	6053.70	1.86	111.58	6053.62	2.46	0.32	-2.49	0.97	574700.80	800643.47	N 32 34 47.13 W 104	8 26.86
	6148.50	3.15	117.05	6148.33	-1.22	-1.43	1.26	1.38	574699.05	800647.22	N 32 34 47.12 W 104	8 26.82
	6243.30	4.67	121.85	6242.91	-6.73	-4.65	6.85	1.64	574695.83	800652.81	N 32 34 47.08 W 104	8 26.75
	6337.70	6.18	123.74	6336.88	-14.09	-9.51	14.34	1.61	574690.98	800660.30	N 32 34 47.04 W 104	8 26.67
	6432.30	6.55	121.81	6430.90	-22.76	-15.18	23.16	0.45	574685.30	800669.12	N 32 34 46.98 W 104	8 26.56
	6526.50	7.27	119.83	6524.41	-32.35	-20.97	32.90	0.80	574679.51	800678.86	N 32 34 46.92 W 104	8 26.45
	6621.10	8.79	118.13	6618.08	-43.75	-27.36	44.47	1.63	574673.12	800690.42	N 32 34 46.86 W 104	8 26.31
	6715.40	9.81	114.82	6711.14	-57.21	-34.13	58.11	1.22	574665.35	800704.07	N 32 34 46.79 W 104	8 26.16
	6810.00	8.99	112.70	6804.47	-71.18	-40.36	72.25	0.94	574660.12	800718.20	N 32 34 46.73 W 104	8 25.99
	6904.70	7.48	111.07	6898.19	-83.62	-45.44	84.83	1.61	574655.05	800730.78	N 32 34 46.68 W 104	8 25.84
	6999.50	6.88	111.00	6992.25	-94.57	-49.69	95.89	0.63	574650.79	800741.84	N 32 34 46.64 W 104	8 25.71
	7093.80	7.58	115.27	7085.80	-105.34	-54.37	106.78	0.94	574646.12	800752.73	N 32 34 46.59 W 104	8 25.59
	7188.00	6.36	117.17	7179.30	-115.47	-58.40	117.04	1.32	574641.08	800762.99	N 32 34 46.54 W 104	8 25.47

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	1		26.500	26.500	Act Stns	30.000	30.000	GYD_GC+DROP+OH-Depth Only			Pilot / Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-10181MD	
	1		26.500	7188.000	Act Stns	30.000	30.000	GYD_GC+DROP+OH			Pilot / Oxy Charlie Chocolate 14-15 Federal Com 31H Pilot Gyro 0-10181MD	
	1		7188.000	7279.000	Act Stns	30.000	30.000	B001Mb_MWD+HRGM			ST01 / Oxy Charlie Chocolate 14-15 Federal Com 31H ST01 Gyro +	
	1		7279.000	15731.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS			ST01 / Oxy Charlie Chocolate 14-15 Federal Com 31H ST01 Gyro +	
	1		15731.000	16203.000	Act Stns	30.000	30.000	A027Ua_INC-ONLY			MWD 0-19065MD	
	1		16203.000	16581.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS			ST01 / Oxy Charlie Chocolate 14-15 Federal Com 31H ST01 Gyro +	
	1		16581.000	18093.000	Act Stns	30.000	30.000	A027Ua_INC-ONLY			ST01 / Oxy Charlie Chocolate 14-15 Federal Com 31H ST01 Gyro +	
	1		18093.000	19065.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS			MWD 0-19065MD	

...ST01\Oxy Charlie Chocolate 14-15 Federal Com 31H ST01 Gyro + MWD 0-19065MD