



Marathon Oil Permian LLC

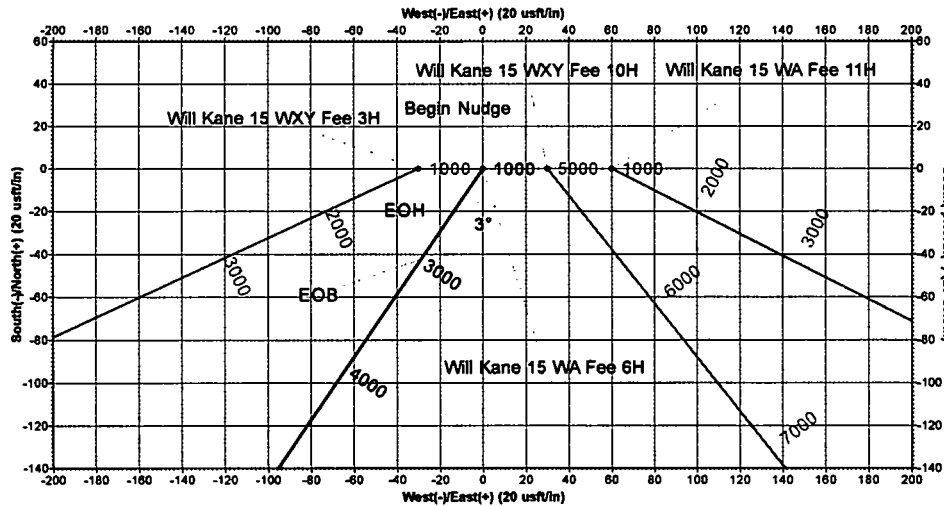
RKB (Precision 601) 25' + GL(3518") @ 3543.00usft

3518.00

Project: Lea County, New Mexico (NAD 27)
Site: Will Kane 15 Pad (Grid) [Permitting]
Well: Will Kane 15 WA Fee 6H
Wellbore: Wellbore #1
Design: Plan 1
Rig:

HOBBS OCD
MAY 20 2019
RECEIVED

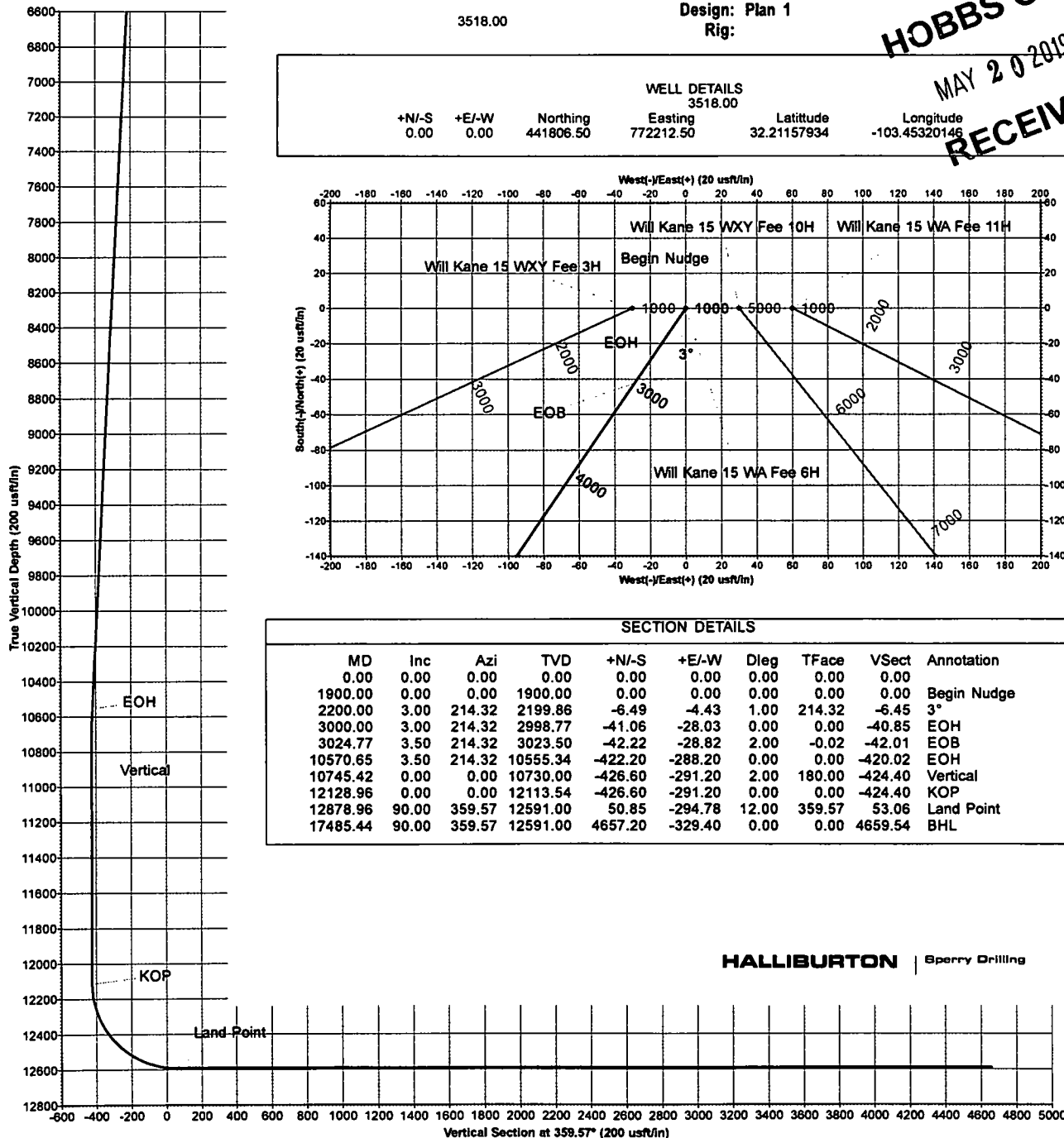
WELL DETAILS
3518.00
+N/-S 0.00 +E/-W 0.00 Northing 441806.50 Easting 772212.50 Latitude 32.21157934 Longitude -103.45320146



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	Begin Nudge
2200.00	3.00	214.32	2199.86	-6.49	-4.43	1.00	214.32	-6.45	3°
3000.00	3.00	214.32	2998.77	-41.06	-28.03	0.00	0.00	-40.85	EOH
3024.77	3.50	214.32	3023.50	-42.22	-28.82	2.00	-0.02	-42.01	EOB
10570.65	3.50	214.32	10555.34	-422.20	-288.20	0.00	0.00	-420.02	EOH
10745.42	0.00	0.00	10730.00	-426.60	-291.20	2.00	180.00	-424.40	Vertical
12128.96	0.00	0.00	12113.54	-426.60	-291.20	0.00	0.00	-424.40	KOP
12878.96	90.00	359.57	12591.00	50.85	-294.78	12.00	359.57	53.06	Land Point
17485.44	90.00	359.57	12591.00	4657.20	-329.40	0.00	0.00	4659.54	BHL

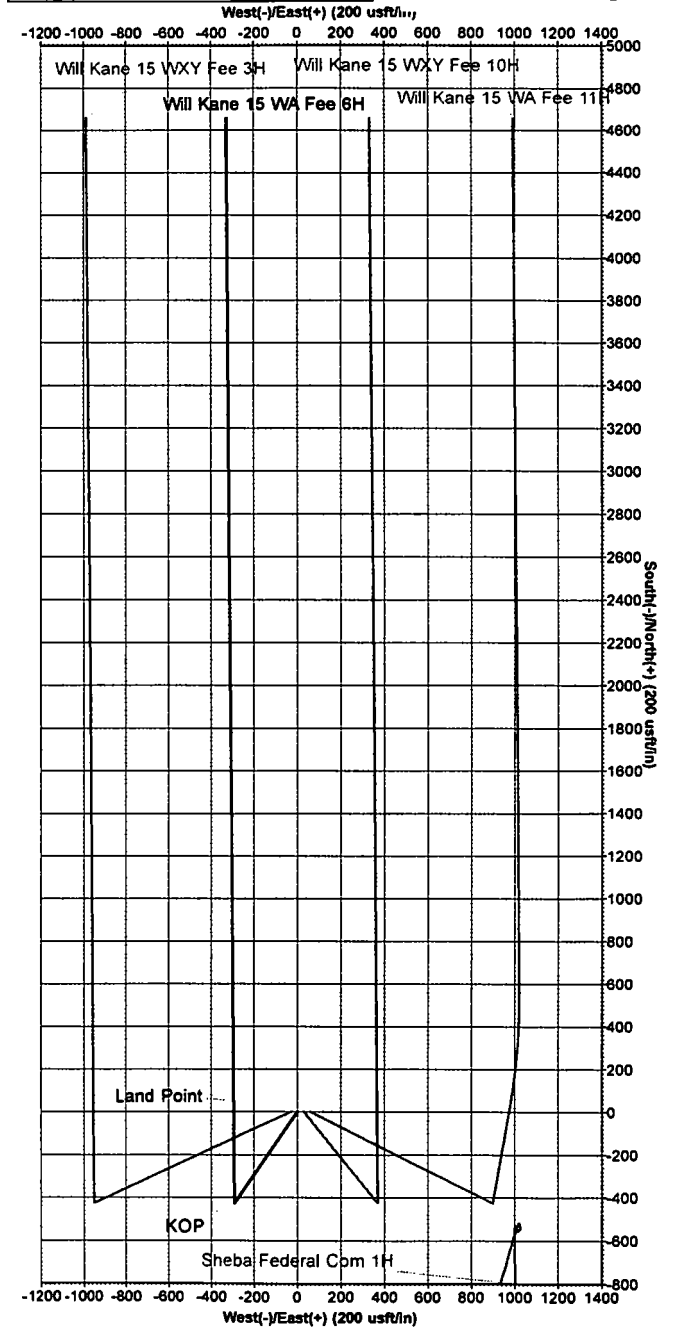
HALLIBURTON | Sperry Drilling



45997

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1886
Zone Name: New Mexico East 3001

Azimuths to Grid North
True North: -0.47°
Magnetic North: 8.16°
Magnetic Field
Strength: 47907.1nT
Dip Angle: 89.87°
Date: 5/1/2019
Model: HDGM_2019



Marathon Oil Permian LLC

Lea County, New Mexico (NAD 27) Will Kane 15 Pad (Grid) [Permitting]

API#

Will Kane 15 WA Fee 6H

SHL: (520' FSL - 1359' FEL)

Wellbore #1

Plan: Plan 1

Sperry Drilling Services Combo Report

16 May, 2019

Well Coordinates: 32.21157933
-103.45320146

NAD 1927 (NADCON CONUS)
New Mexico East 3001
441,806.50 N
772,212.50 E

Ground Level: 3,518.00 usft

Local Coordinate Origin:

Centered on Well Will Kane 15 WA Fee 6H

Viewing Datum:

RKB (Precision 601) 25' + GL(3518') @ 3543.00usft

TVDs to System:

N

North Reference:

Grid

Unit System:

Midcon (2 decimal)

Version: 5000.15 Build: 91

Report Version: Midcon Combo v1.13

HALLIBURTON

Plan Report for Will Kane 15 WA Fee 6H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)								
0.00	0.00	0.00	0.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
950.00	0.00	0.00	950.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	9 5/8"
1,000.00	0.00	0.00	1,000.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00 N	0.00 E	441,806.50	772,212.50	0.00	0.00	0.00	Begin Nudge
2,000.00	1.00	214.32	1,999.99	0.72 S	0.49 W	441,805.78	772,212.01	1.00	-0.72	214.32	
2,100.00	2.00	214.32	2,099.96	2.88 S	1.97 W	441,803.62	772,210.53	1.00	-2.87	0.00	
2,200.00	3.00	214.32	2,199.86	6.49 S	4.43 W	441,800.01	772,208.07	1.00	-6.45	0.00	3"
2,300.00	3.00	214.32	2,299.73	10.81 S	7.38 W	441,795.69	772,205.12	0.00	-10.75	0.00	
2,400.00	3.00	214.32	2,399.59	15.13 S	10.33 W	441,791.37	772,202.17	0.00	-15.05	0.00	
2,500.00	3.00	214.32	2,499.45	19.45 S	13.28 W	441,787.05	772,199.22	0.00	-19.35	0.00	
2,600.00	3.00	214.32	2,599.31	23.77 S	16.23 W	441,782.73	772,196.27	0.00	-23.65	0.00	
2,700.00	3.00	214.32	2,699.18	28.10 S	19.18 W	441,778.40	772,193.32	0.00	-27.95	0.00	
2,800.00	3.00	214.32	2,799.04	32.42 S	22.13 W	441,774.08	772,190.37	0.00	-32.25	0.00	
2,900.00	3.00	214.32	2,898.90	36.74 S	25.08 W	441,769.76	772,187.42	0.00	-36.55	0.00	
3,000.00	3.00	214.32	2,998.77	41.06 S	28.03 W	441,765.44	772,184.47	0.00	-40.85	0.00	EOH
3,024.77	3.50	214.32	3,023.50	42.22 S	28.82 W	441,764.28	772,183.68	2.00	-42.01	-0.02	EOB
3,100.00	3.50	214.32	3,098.59	46.01 S	31.41 W	441,760.49	772,181.09	0.00	-45.77	0.00	
3,200.00	3.50	214.32	3,198.40	51.05 S	34.85 W	441,755.45	772,177.65	0.00	-50.78	0.00	
3,300.00	3.50	214.32	3,298.21	56.08 S	38.28 W	441,750.42	772,174.22	0.00	-55.79	0.00	

Plan Report for Will Kane 15 WA Fee 6H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
3,400.00	3.50	214.32	3,398.03	61.12 S	41.72 W	441,745.38	772,170.78	0.00	-60.80	0.00	
3,500.00	3.50	214.32	3,497.84	66.15 S	45.16 W	441,740.35	772,167.34	0.00	-65.81	0.00	
3,600.00	3.50	214.32	3,597.66	71.19 S	48.60 W	441,735.31	772,163.90	0.00	-70.82	0.00	
3,700.00	3.50	214.32	3,697.47	76.22 S	52.03 W	441,730.28	772,160.47	0.00	-75.83	0.00	
3,800.00	3.50	214.32	3,797.28	81.26 S	55.47 W	441,725.24	772,157.03	0.00	-80.84	0.00	
3,900.00	3.50	214.32	3,897.10	86.30 S	58.91 W	441,720.20	772,153.59	0.00	-85.85	0.00	
4,000.00	3.50	214.32	3,996.91	91.33 S	62.35 W	441,715.17	772,150.15	0.00	-90.86	0.00	
4,100.00	3.50	214.32	4,096.73	96.37 S	65.78 W	441,710.13	772,146.72	0.00	-95.87	0.00	
4,200.00	3.50	214.32	4,196.54	101.40 S	69.22 W	441,705.10	772,143.28	0.00	-100.88	0.00	
4,300.00	3.50	214.32	4,296.35	106.44 S	72.66 W	441,700.06	772,139.84	0.00	-105.89	0.00	
4,400.00	3.50	214.32	4,396.17	111.47 S	76.09 W	441,695.03	772,136.41	0.00	-110.90	0.00	
4,500.00	3.50	214.32	4,495.98	116.51 S	79.53 W	441,689.99	772,132.97	0.00	-115.91	0.00	
4,600.00	3.50	214.32	4,595.80	121.54 S	82.97 W	441,684.96	772,129.53	0.00	-120.92	0.00	
4,700.00	3.50	214.32	4,695.61	126.58 S	86.41 W	441,679.92	772,126.09	0.00	-125.93	0.00	
4,800.00	3.50	214.32	4,795.42	131.62 S	89.84 W	441,674.88	772,122.66	0.00	-130.94	0.00	
4,900.00	3.50	214.32	4,895.24	136.65 S	93.28 W	441,669.85	772,119.22	0.00	-135.95	0.00	
5,000.00	3.50	214.32	4,995.05	141.69 S	96.72 W	441,664.81	772,115.78	0.00	-140.96	0.00	
5,100.00	3.50	214.32	5,094.87	146.72 S	100.16 W	441,659.78	772,112.34	0.00	-145.97	0.00	
5,200.00	3.50	214.32	5,194.68	151.76 S	103.59 W	441,654.74	772,108.91	0.00	-150.98	0.00	
5,300.00	3.50	214.32	5,294.49	156.79 S	107.03 W	441,649.71	772,105.47	0.00	-155.99	0.00	
5,400.00	3.50	214.32	5,394.31	161.83 S	110.47 W	441,644.67	772,102.03	0.00	-161.00	0.00	
5,500.00	3.50	214.32	5,494.12	166.86 S	113.90 W	441,639.64	772,098.60	0.00	-166.00	0.00	
5,600.00	3.50	214.32	5,593.94	171.90 S	117.34 W	441,634.60	772,095.16	0.00	-171.01	0.00	
5,700.00	3.50	214.32	5,693.75	176.94 S	120.78 W	441,629.56	772,091.72	0.00	-176.02	0.00	
5,800.00	3.50	214.32	5,793.56	181.97 S	124.22 W	441,624.53	772,088.28	0.00	-181.03	0.00	
5,900.00	3.50	214.32	5,893.38	187.01 S	127.65 W	441,619.49	772,084.85	0.00	-186.04	0.00	
6,000.00	3.50	214.32	5,993.19	192.04 S	131.09 W	441,614.46	772,081.41	0.00	-191.05	0.00	
6,100.00	3.50	214.32	6,093.01	197.08 S	134.53 W	441,609.42	772,077.97	0.00	-196.06	0.00	
6,200.00	3.50	214.32	6,192.82	202.11 S	137.97 W	441,604.39	772,074.53	0.00	-201.07	0.00	
6,300.00	3.50	214.32	6,292.63	207.15 S	141.40 W	441,599.35	772,071.10	0.00	-206.08	0.00	
6,400.00	3.50	214.32	6,392.45	212.18 S	144.84 W	441,594.32	772,067.66	0.00	-211.09	0.00	
6,500.00	3.50	214.32	6,492.26	217.22 S	148.28 W	441,589.28	772,064.22	0.00	-216.10	0.00	
6,600.00	3.50	214.32	6,592.08	222.26 S	151.71 W	441,584.24	772,060.79	0.00	-221.11	0.00	
6,700.00	3.50	214.32	6,691.89	227.29 S	155.15 W	441,579.21	772,057.35	0.00	-226.12	0.00	
6,800.00	3.50	214.32	6,791.70	232.33 S	158.59 W	441,574.17	772,053.91	0.00	-231.13	0.00	
6,900.00	3.50	214.32	6,891.52	237.36 S	162.03 W	441,569.14	772,050.47	0.00	-236.14	0.00	
7,000.00	3.50	214.32	6,991.33	242.40 S	165.46 W	441,564.10	772,047.04	0.00	-241.15	0.00	

Plan Report for Will Kane 15 WA Fee 6H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
7,100.00	3.50	214.32	7,091.15	247.43 S	168.90 W	441,559.07	772,043.60	0.00	-246.16	0.00	
7,200.00	3.50	214.32	7,190.96	252.47 S	172.34 W	441,554.03	772,040.16	0.00	-251.17	0.00	
7,300.00	3.50	214.32	7,290.77	257.50 S	175.77 W	441,549.00	772,036.73	0.00	-256.18	0.00	
7,400.00	3.50	214.32	7,390.59	262.54 S	179.21 W	441,543.96	772,033.29	0.00	-261.19	0.00	
7,500.00	3.50	214.32	7,490.40	267.57 S	182.65 W	441,538.93	772,029.85	0.00	-266.20	0.00	
7,600.00	3.50	214.32	7,590.22	272.61 S	186.09 W	441,533.89	772,026.41	0.00	-271.21	0.00	
7,700.00	3.50	214.32	7,690.03	277.65 S	189.52 W	441,528.85	772,022.98	0.00	-276.22	0.00	
7,800.00	3.50	214.32	7,789.84	282.68 S	192.96 W	441,523.82	772,019.54	0.00	-281.23	0.00	
7,900.00	3.50	214.32	7,889.66	287.72 S	196.40 W	441,518.78	772,016.10	0.00	-286.24	0.00	
8,000.00	3.50	214.32	7,989.47	292.75 S	199.84 W	441,513.75	772,012.66	0.00	-291.24	0.00	
8,100.00	3.50	214.32	8,089.29	297.79 S	203.27 W	441,508.71	772,009.23	0.00	-296.25	0.00	
8,200.00	3.50	214.32	8,189.10	302.82 S	206.71 W	441,503.68	772,005.79	0.00	-301.26	0.00	
8,300.00	3.50	214.32	8,288.91	307.86 S	210.15 W	441,498.64	772,002.35	0.00	-306.27	0.00	
8,400.00	3.50	214.32	8,388.73	312.89 S	213.58 W	441,493.61	771,998.92	0.00	-311.28	0.00	
8,500.00	3.50	214.32	8,488.54	317.93 S	217.02 W	441,488.57	771,995.48	0.00	-316.29	0.00	
8,600.00	3.50	214.32	8,588.36	322.97 S	220.46 W	441,483.53	771,992.04	0.00	-321.30	0.00	
8,700.00	3.50	214.32	8,688.17	328.00 S	223.90 W	441,478.50	771,988.60	0.00	-326.31	0.00	
8,800.00	3.50	214.32	8,787.98	333.04 S	227.33 W	441,473.46	771,985.17	0.00	-331.32	0.00	
8,900.00	3.50	214.32	8,887.80	338.07 S	230.77 W	441,468.43	771,981.73	0.00	-336.33	0.00	
9,000.00	3.50	214.32	8,987.61	343.11 S	234.21 W	441,463.39	771,978.29	0.00	-341.34	0.00	
9,100.00	3.50	214.32	9,087.43	348.14 S	237.65 W	441,458.36	771,974.85	0.00	-346.35	0.00	
9,200.00	3.50	214.32	9,187.24	353.18 S	241.08 W	441,453.32	771,971.42	0.00	-351.36	0.00	
9,300.00	3.50	214.32	9,287.05	358.21 S	244.52 W	441,448.29	771,967.98	0.00	-356.37	0.00	
9,400.00	3.50	214.32	9,386.87	363.25 S	247.96 W	441,443.25	771,964.54	0.00	-361.38	0.00	
9,500.00	3.50	214.32	9,486.68	368.29 S	251.39 W	441,438.21	771,961.11	0.00	-366.39	0.00	
9,600.00	3.50	214.32	9,586.49	373.32 S	254.83 W	441,433.18	771,957.67	0.00	-371.40	0.00	
9,700.00	3.50	214.32	9,686.31	378.36 S	258.27 W	441,428.14	771,954.23	0.00	-376.41	0.00	
9,800.00	3.50	214.32	9,786.12	383.39 S	261.71 W	441,423.11	771,950.79	0.00	-381.42	0.00	
9,900.00	3.50	214.32	9,885.94	388.43 S	265.14 W	441,418.07	771,947.36	0.00	-386.43	0.00	
10,000.00	3.50	214.32	9,985.75	393.46 S	268.58 W	441,413.04	771,943.92	0.00	-391.44	0.00	
10,100.00	3.50	214.32	10,085.56	398.50 S	272.02 W	441,408.00	771,940.48	0.00	-396.45	0.00	
10,200.00	3.50	214.32	10,185.38	403.53 S	275.46 W	441,402.97	771,937.04	0.00	-401.46	0.00	
10,300.00	3.50	214.32	10,285.19	408.57 S	278.89 W	441,397.93	771,933.61	0.00	-406.47	0.00	
10,400.00	3.50	214.32	10,385.01	413.61 S	282.33 W	441,392.89	771,930.17	0.00	-411.47	0.00	
10,500.00	3.50	214.32	10,484.82	418.64 S	285.77 W	441,387.86	771,926.73	0.00	-416.48	0.00	
10,570.65	3.50	214.32	10,555.34	422.20 S	288.20 W	441,384.30	771,924.30	0.00	-420.02	0.00	EOH
10,600.00	2.91	214.32	10,584.64	423.55 S	289.12 W	441,382.95	771,923.38	2.00	-421.37	180.00	

Plan Report for Will Kane 15 WA Fee 6H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
10,700.00	0.91	214.32	10,684.58	426.30 S	291.00 W	441,380.20	771,921.50	2.00	-424.11	-180.00	
10,745.42	0.00	0.00	10,730.00	426.60 S	291.20 W	441,379.90	771,921.30	2.00	-424.40	180.00	Vertical
10,800.00	0.00	0.00	10,784.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
10,900.00	0.00	0.00	10,884.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,000.00	0.00	0.00	10,984.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,100.00	0.00	0.00	11,084.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,200.00	0.00	0.00	11,184.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,300.00	0.00	0.00	11,284.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,400.00	0.00	0.00	11,384.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,500.00	0.00	0.00	11,484.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,600.00	0.00	0.00	11,584.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,700.00	0.00	0.00	11,684.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,800.00	0.00	0.00	11,784.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
11,900.00	0.00	0.00	11,884.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
12,000.00	0.00	0.00	11,984.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
12,100.00	0.00	0.00	12,084.58	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	
12,128.96	0.00	0.00	12,113.54	426.60 S	291.20 W	441,379.90	771,921.30	0.00	-424.40	0.00	KOP
12,200.00	8.52	359.57	12,184.32	421.32 S	291.24 W	441,385.18	771,921.26	12.00	-419.13	359.57	
12,300.00	20.52	359.57	12,280.95	396.29 S	291.43 W	441,410.21	771,921.07	12.00	-394.09	0.00	
12,400.00	32.52	359.57	12,370.26	351.72 S	291.76 W	441,454.78	771,920.74	12.00	-349.52	0.00	
12,500.00	44.52	359.57	12,448.35	289.55 S	292.23 W	441,516.95	771,920.27	12.00	-287.34	0.00	
12,600.00	56.52	359.57	12,511.81	212.50 S	292.81 W	441,594.00	771,919.69	12.00	-210.30	0.00	
12,700.00	68.52	359.57	12,557.86	123.94 S	293.47 W	441,682.56	771,919.03	12.00	-121.74	0.00	
12,800.00	80.52	359.57	12,584.49	27.75 S	294.19 W	441,778.75	771,918.31	12.00	-25.54	0.00	
12,878.96	90.00	359.57	12,591.00	50.85 N	294.78 W	441,857.35	771,917.72	12.00	53.06	0.00	Land Point
12,900.00	90.00	359.57	12,591.00	71.89 N	294.94 W	441,878.39	771,917.56	0.00	74.10	0.00	
13,000.00	90.00	359.57	12,591.00	171.89 N	295.69 W	441,978.39	771,916.81	0.00	174.10	0.00	
13,100.00	90.00	359.57	12,591.00	271.89 N	296.44 W	442,078.39	771,916.06	0.00	274.10	0.00	
13,200.00	90.00	359.57	12,591.00	371.88 N	297.19 W	442,178.38	771,915.31	0.00	374.10	0.00	
13,300.00	90.00	359.57	12,591.00	471.88 N	297.94 W	442,278.38	771,914.56	0.00	474.10	0.00	
13,400.00	90.00	359.57	12,591.00	571.88 N	298.69 W	442,378.38	771,913.81	0.00	574.10	0.00	
13,500.00	90.00	359.57	12,591.00	671.87 N	299.44 W	442,478.37	771,913.06	0.00	674.10	0.00	
13,600.00	90.00	359.57	12,591.00	771.87 N	300.19 W	442,578.37	771,912.31	0.00	774.10	0.00	
13,700.00	90.00	359.57	12,591.00	871.87 N	300.95 W	442,678.37	771,911.55	0.00	874.10	0.00	
13,800.00	90.00	359.57	12,591.00	971.87 N	301.70 W	442,778.37	771,910.80	0.00	974.10	0.00	
13,900.00	90.00	359.57	12,591.00	1,071.86 N	302.45 W	442,878.36	771,910.05	0.00	1,074.10	0.00	

Plan Report for Will Kane 15 WA Fee 6H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
				Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)				
14,000.00	90.00	359.57	12,591.00	1,171.86 N	303.20 W	442,978.36	771,909.30	0.00	1,174.10	0.00	
14,100.00	90.00	359.57	12,591.00	1,271.86 N	303.95 W	443,078.36	771,908.55	0.00	1,274.10	0.00	
14,200.00	90.00	359.57	12,591.00	1,371.85 N	304.70 W	443,178.35	771,907.80	0.00	1,374.10	0.00	
14,300.00	90.00	359.57	12,591.00	1,471.85 N	305.45 W	443,278.35	771,907.05	0.00	1,474.10	0.00	
14,400.00	90.00	359.57	12,591.00	1,571.85 N	306.20 W	443,378.35	771,906.30	0.00	1,574.10	0.00	
14,500.00	90.00	359.57	12,591.00	1,671.85 N	306.95 W	443,478.35	771,905.55	0.00	1,674.10	0.00	
14,600.00	90.00	359.57	12,591.00	1,771.84 N	307.70 W	443,578.34	771,904.80	0.00	1,774.10	0.00	
14,700.00	90.00	359.57	12,591.00	1,871.84 N	308.45 W	443,678.34	771,904.05	0.00	1,874.10	0.00	
14,800.00	90.00	359.57	12,591.00	1,971.84 N	309.20 W	443,778.34	771,903.30	0.00	1,974.10	0.00	
14,900.00	90.00	359.57	12,591.00	2,071.84 N	309.95 W	443,878.34	771,902.55	0.00	2,074.10	0.00	
15,000.00	90.00	359.57	12,591.00	2,171.83 N	310.70 W	443,978.33	771,901.80	0.00	2,174.10	0.00	
15,100.00	90.00	359.57	12,591.00	2,271.83 N	311.45 W	444,078.33	771,901.05	0.00	2,274.10	0.00	
15,200.00	90.00	359.57	12,591.00	2,371.83 N	312.20 W	444,178.33	771,900.30	0.00	2,374.10	0.00	
15,300.00	90.00	359.57	12,591.00	2,471.82 N	312.95 W	444,278.32	771,899.55	0.00	2,474.10	0.00	
15,400.00	90.00	359.57	12,591.00	2,571.82 N	313.70 W	444,378.32	771,898.80	0.00	2,574.10	0.00	
15,500.00	90.00	359.57	12,591.00	2,671.82 N	314.45 W	444,478.32	771,898.05	0.00	2,674.10	0.00	
15,600.00	90.00	359.57	12,591.00	2,771.82 N	315.20 W	444,578.32	771,897.30	0.00	2,774.10	0.00	
15,700.00	90.00	359.57	12,591.00	2,871.81 N	315.95 W	444,678.31	771,896.55	0.00	2,874.10	0.00	
15,800.00	90.00	359.57	12,591.00	2,971.81 N	316.71 W	444,778.31	771,895.79	0.00	2,974.10	0.00	
15,900.00	90.00	359.57	12,591.00	3,071.81 N	317.46 W	444,878.31	771,895.04	0.00	3,074.10	0.00	
16,000.00	90.00	359.57	12,591.00	3,171.80 N	318.21 W	444,978.30	771,894.29	0.00	3,174.10	0.00	
16,100.00	90.00	359.57	12,591.00	3,271.80 N	318.96 W	445,078.30	771,893.54	0.00	3,274.10	0.00	
16,200.00	90.00	359.57	12,591.00	3,371.80 N	319.71 W	445,178.30	771,892.79	0.00	3,374.10	0.00	
16,300.00	90.00	359.57	12,591.00	3,471.80 N	320.46 W	445,278.30	771,892.04	0.00	3,474.10	0.00	
16,400.00	90.00	359.57	12,591.00	3,571.79 N	321.21 W	445,378.29	771,891.29	0.00	3,574.10	0.00	
16,500.00	90.00	359.57	12,591.00	3,671.79 N	321.96 W	445,478.29	771,890.54	0.00	3,674.10	0.00	
16,600.00	90.00	359.57	12,591.00	3,771.79 N	322.71 W	445,578.29	771,889.79	0.00	3,774.10	0.00	
16,700.00	90.00	359.57	12,591.00	3,871.78 N	323.46 W	445,678.28	771,889.04	0.00	3,874.10	0.00	
16,800.00	90.00	359.57	12,591.00	3,971.78 N	324.21 W	445,778.28	771,888.29	0.00	3,974.10	0.00	
16,900.00	90.00	359.57	12,591.00	4,071.78 N	324.96 W	445,878.28	771,887.54	0.00	4,074.10	0.00	
17,000.00	90.00	359.57	12,591.00	4,171.78 N	325.71 W	445,978.28	771,886.79	0.00	4,174.10	0.00	
17,100.00	90.00	359.57	12,591.00	4,271.77 N	326.46 W	446,078.27	771,886.04	0.00	4,274.10	0.00	
17,200.00	90.00	359.57	12,591.00	4,371.77 N	327.21 W	446,178.27	771,885.29	0.00	4,374.10	0.00	
17,300.00	90.00	359.57	12,591.00	4,471.77 N	327.96 W	446,278.27	771,884.54	0.00	4,474.10	0.00	
17,400.00	90.00	359.57	12,591.00	4,571.76 N	328.71 W	446,378.26	771,883.79	0.00	4,574.10	0.00	
17,485.44	90.00	359.57	12,591.00	4,657.20 N	329.40 W	446,463.70	771,883.10	0.00	4,659.54	0.00	BHL

Plan Report for Will Kane 15 WA Fee 6H - Plan 1

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,900.00	1,900.00	0.00	0.00	Begin Nudge
2,200.00	2,199.86	-6.49	-4.43	3°
3,000.00	2,998.77	-41.06	-28.03	EOH
3,024.77	3,023.50	-42.22	-28.82	EOB
10,570.65	10,555.34	-422.20	-288.20	EOH
10,745.42	10,730.00	-426.60	-291.20	Vertical
12,128.96	12,113.54	-426.60	-291.20	KOP
12,878.96	12,591.00	50.85	-294.78	Land Point
17,485.44	12,591.00	4,657.20	-329.40	BHL

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	359.57	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	17,485.31	Plan 1	2_MWD+HRGM+AX

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
950.00	950.00	9 5/8"	9-5/8	12-1/4

Plan Report for Will Kane 15 WA Fee 6H - Plan 1

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Will Kane 6H FTP (100' FSL - 1655' FEL) ()	0.00	0.00	12,591.00	-426.60	-291.20	441,379.90	771,921.30	32.21041330	-103.45415417
- plan misses target center by 197.82usft at 12500.00usft MD (12448.35 TVD, -289.55 N, -292.23 E)									
- Point									
Will Kane 6H BHL (100' FNL - 1646' FEL) ()	0.00	0.00	12,591.00	4,657.20	-329.40	446,463.70	771,883.10	32.22438787	-103.45414320
- plan hits target center									
- Point									

Directional Difficulty Index

Average Dogleg over Survey:	0.55 °/100usft	Maximum Dogleg over Survey:	12.00 °/100usft at 12,878.96 usft
Net Tortousity applicable to Plans:	0.55 °/100usft	Directional Difficulty Index:	6.142

Audit Info

North Reference Sheet for Will Kane 15 Pad (Grid) [Permitting] - Will Kane 15 WA Fee 6H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to RKB (Precision 601) 25' + GL(3518') @ 3543.00usft. Northing and Easting are relative to Will Kane 15 WA Fee 6H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104.33333333°, Longitude Origin:0.00000000°, Latitude Origin:0.00000000°

False Easting: 500,000.00usft, False Northing: 0.00usft, Scale Reduction: 0.99999396

Grid Coordinates of Well: 441,806.50 usft N, 772,212.50 usft E

Geographical Coordinates of Well: 32° 12' 41.69" N, 103° 27' 11.53" W

Grid Convergence at Surface is: 0.47°

Based upon Minimum Curvature type calculations, at a Measured Depth of 17,485.44usft
the Bottom Hole Displacement is 4,668.83usft in the Direction of 355.95° (Grid).

Magnetic Convergence at surface is: -6.16° (1 May 2019, , HDGM_2019)

