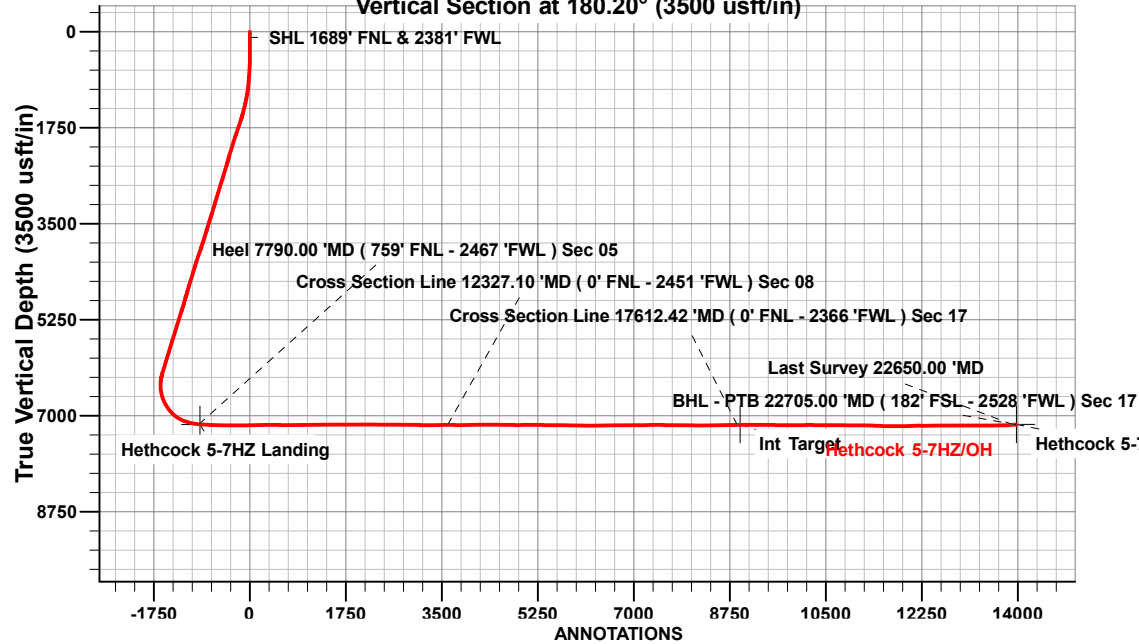


FORMATION TOP DETAILS

Project: Weld County, CO (UTM-NAD83)
Site: 3N-65W-05 Hethcock 6-5HZ Pad
Well: Hethcock 5-7HZ
Wellbore: OH
Design: OH

TVDPath	MDPath	Formation
3902.00	4027.54	PKMN
4354.00	4500.34	SSSX
6968.00	7267.96	SSPG
7003.00	7321.53	NBRR
7080.00	7463.14	N470_B_CK
7151.00	7691.24	N700_C_CK

Vertical Section at 180.20° (3500 usft/in)



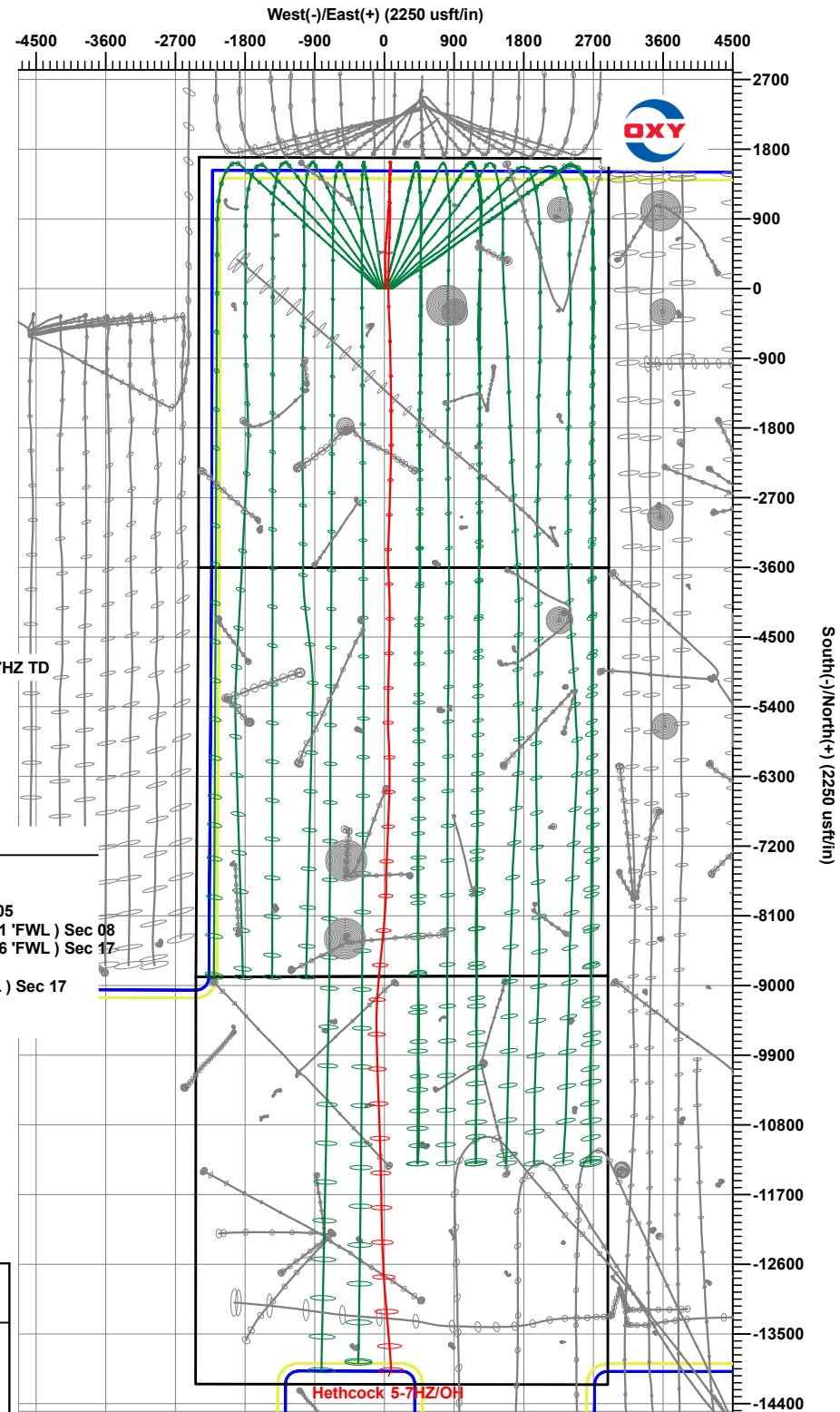
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
100.00	0.21	287.59	100.00	0.06	-0.24	-0.05	0.25	SHL 1689' FNL & 2381' FWL
7790.00	87.48	181.87	7155.88	929.68	73.31	-929.93	2340.34	Heel 7790.00' MD (759' FNL - 2467' FWL) Sec 05
12327.10	90.28	176.67	7169.12	-3604.99	48.73	3604.80	6876.74	Cross Section Line 12327.10' MD (0' FNL - 2451' FWL) Sec 08
17612.42	90.32	186.07	7169.07	-8883.35	-70.19	8883.54	12161.40	Cross Section Line 17612.42' MD (0' FNL - 2366' FWL) Sec 17
22650.00	93.30	175.72	7165.82	-13913.76	85.13	13913.37	17198.14	Last Survey 22650.00' MD
22705.00	93.30	175.72	7162.65	-13968.51	89.23	13968.11	17253.05	BHL - PTB 22705.00' MD (182' FSL - 2528' FWL) Sec 17

CASING DETAILS

TVD	MD	Name	Size
1861.00	1891.54	9 5/8"	9-5/8
7158.00	22692.18	Prod Csg	5-1/2

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Hethcock 5-7HZ Landing	7160.00	908.94	93.18	14621395.81	1727527.89	40.259534	-104.687760
Hethcock 5-7HZ TD	7158.00	-13970.94	41.01	14606515.83	1727528.07	40.218673	-104.687947
Int Target	7158.68	-8933.64	-36.23	14611552.83	1727433.11	40.232506	-104.688224



Occidental Petroleum

Weld County, CO (UTM-NAD83)
3N-65W-05 Hethcock 6-5HZ Pad
Hethcock 5-7HZ

OH

OH



Standard Survey Report

06 December, 2023

Total Report Version 1.60

COMPASS 5000.16 Build 97

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Weld County, CO (UTM-NAD83)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	3N-65W-05 Hethcock 6-5HZ Pad				
Site Position:		Northing:	14,620,486.95 usft	Latitude:	40.257040
From:	Lat/Long	Easting:	1,727,347.79 usft	Longitude:	-104.688417
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well	Hethcock 5-7HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,620,486.54 usft	Latitude:	40.257038
	+E/-W	0.00 usft	Easting:	1,727,437.91 usft	Longitude:	-104.688094
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,903.00 usft
Grid Convergence:		0.20 °				

Wellbore	OH					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength	
			(°)	(°)	(nT)	
	HDGM2023	6/24/2023	7.77	66.47	51,697.10000000	

Design	OH					
Audit Notes:						
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00	
Vertical Section:		Depth From (TVD)	+N/-S	+E/-W	Direction	
		(usft)	(usft)	(usft)	(°)	
		0.00	0.00	0.00	180.20	

Survey Program	Date	12/6/2023				
From	To	Survey (Wellbore)	Tool Name	Description		
(usft)	(usft)					
90.00	1,896.00	Survey #1 (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination		
1,943.00	22,705.00	Survey #2 (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:Rockies, crustal dec + 3-axis correction		

Survey													
Measured Depth	INC	AZI	Vertical Depth	Local Coordinates		Map Coordinates		Geo Coordinates		Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
				(usft)	(usft)	(usft)	(usft)	(°)	(°)				
0.00	0.00	0.00	0.00	0.00	0.00	14,620,486.55	1,727,437.91	40.257038	-104.688094	0.00	0.00	0.00	0.00
90.00	0.26	282.68	90.00	0.04	-0.20	14,620,486.59	1,727,437.71	40.257038	-104.688095	-0.04	0.29	0.29	0.00
100.00	0.21	287.59	100.00	0.06	-0.24	14,620,486.60	1,727,437.67	40.257038	-104.688095	-0.05	0.57	-0.54	49.13
SHL 1689' FNL & 2381' FWL													
180.00	0.28	68.08	180.00	0.17	-0.19	14,620,486.72	1,727,437.71	40.257039	-104.688095	-0.17	0.57	0.09	175.61
271.00	0.38	83.33	271.00	0.29	0.31	14,620,486.84	1,727,438.22	40.257039	-104.688093	-0.29	0.15	0.11	16.76

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Geo Coordinates		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
				+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude (°)	Longitude (°)				
363.00	0.40	75.86	363.00	0.40	0.93	14,620,486.95	1,727,438.83	40.257039	-104.688091	-0.41	0.06	0.02	-8.12
453.00	0.47	77.94	452.99	0.56	1.59	14,620,487.11	1,727,439.50	40.257040	-104.688089	-0.56	0.08	0.08	2.31
542.00	1.05	57.38	541.99	1.07	2.64	14,620,487.63	1,727,440.54	40.257041	-104.688085	-1.08	0.71	0.65	-23.10
632.00	3.85	8.17	631.90	4.51	3.76	14,620,491.07	1,727,441.65	40.257050	-104.688081	-4.52	3.62	3.11	-54.68
721.00	3.90	0.48	720.70	10.49	4.21	14,620,497.05	1,727,442.08	40.257067	-104.688079	-10.51	0.59	0.06	-8.64
810.00	4.00	356.00	809.49	16.62	4.02	14,620,503.18	1,727,441.87	40.257084	-104.688080	-16.63	0.36	0.11	-5.03
900.00	3.93	354.93	899.27	22.82	3.53	14,620,509.38	1,727,441.36	40.257101	-104.688082	-22.83	0.11	-0.08	-1.19
989.00	6.03	0.75	987.93	30.53	3.32	14,620,517.09	1,727,441.12	40.257122	-104.688082	-30.55	2.42	2.36	6.54
1,079.00	8.39	7.13	1,077.21	41.78	4.20	14,620,528.34	1,727,441.96	40.257153	-104.688079	-41.79	2.77	2.62	7.09
1,168.00	10.27	8.96	1,165.03	56.06	6.24	14,620,542.63	1,727,443.95	40.257192	-104.688072	-56.08	2.14	2.11	2.06
1,258.00	11.85	10.77	1,253.36	73.06	9.21	14,620,559.64	1,727,446.87	40.257239	-104.688061	-73.09	1.80	1.76	2.01
1,348.00	13.46	3.66	1,341.17	92.60	11.61	14,620,579.18	1,727,449.19	40.257292	-104.688053	-92.64	2.49	1.79	-7.90
1,437.00	14.62	3.87	1,427.51	114.14	13.03	14,620,600.73	1,727,450.54	40.257352	-104.688048	-114.19	1.30	1.30	0.24
1,527.00	15.22	359.27	1,514.48	137.29	13.65	14,620,623.88	1,727,451.07	40.257415	-104.688045	-137.33	1.47	0.67	-5.11
1,616.00	17.70	358.42	1,599.83	162.50	13.12	14,620,649.09	1,727,450.46	40.257484	-104.688047	-162.54	2.80	2.79	-0.96
1,706.00	18.29	358.96	1,685.43	190.29	12.49	14,620,676.88	1,727,449.73	40.257561	-104.688049	-190.34	0.68	0.66	0.60
1,795.00	19.14	358.63	1,769.72	218.84	11.89	14,620,705.43	1,727,449.03	40.257639	-104.688052	-218.88	0.96	0.96	-0.37
1,885.00	18.88	0.51	1,854.81	248.15	11.66	14,620,734.74	1,727,448.70	40.257720	-104.688052	-248.19	0.74	-0.29	2.09
1,896.00	18.71	0.23	1,865.23	251.70	11.69	14,620,738.28	1,727,448.71	40.257729	-104.688052	-251.74	1.75	-1.55	-2.55
1,943.00	18.29	1.65	1,909.80	266.61	11.93	14,620,753.19	1,727,448.90	40.257770	-104.688052	-266.65	1.31	-0.89	3.02
2,033.00	17.97	0.53	1,995.33	294.61	12.46	14,620,781.20	1,727,449.34	40.257847	-104.688050	-294.65	0.53	-0.36	-1.24
2,123.00	17.29	358.98	2,081.10	321.86	12.35	14,620,808.45	1,727,449.13	40.257922	-104.688050	-321.90	0.92	-0.76	-1.72
2,212.00	17.01	357.00	2,166.14	348.09	11.44	14,620,834.67	1,727,448.12	40.257994	-104.688053	-348.13	0.73	-0.31	-2.22
2,302.00	16.57	355.24	2,252.31	374.02	9.68	14,620,860.60	1,727,446.28	40.258065	-104.688060	-374.05	0.75	-0.49	-1.96
2,391.00	15.03	0.48	2,337.95	398.21	8.73	14,620,884.79	1,727,445.24	40.258132	-104.688063	-398.24	2.36	-1.73	5.89
2,481.00	17.45	4.07	2,424.35	423.35	9.78	14,620,909.92	1,727,446.20	40.258201	-104.688059	-423.38	2.91	2.69	3.99
2,570.00	16.60	2.61	2,509.45	449.36	11.31	14,620,935.94	1,727,447.64	40.258272	-104.688054	-449.39	1.07	-0.96	-1.64
2,660.00	16.31	1.90	2,595.77	474.83	12.31	14,620,961.42	1,727,448.55	40.258342	-104.688050	-474.87	0.39	-0.32	-0.79
2,749.00	17.94	6.11	2,680.82	500.95	14.19	14,620,987.55	1,727,450.33	40.258414	-104.688043	-501.00	2.30	1.83	4.73
2,839.00	17.43	3.82	2,766.57	528.18	16.56	14,621,014.79	1,727,452.61	40.258489	-104.688035	-528.24	0.96	-0.57	-2.54
2,928.00	17.28	4.23	2,851.52	554.67	18.42	14,621,041.27	1,727,454.38	40.258561	-104.688028	-554.73	0.22	-0.17	0.46
3,041.00	16.87	3.54	2,959.53	587.77	20.67	14,621,074.38	1,727,456.52	40.258652	-104.688020	-587.84	0.40	-0.36	-0.61
3,130.00	16.81	2.86	3,044.72	613.51	22.11	14,621,100.13	1,727,457.86	40.258723	-104.688015	-613.59	0.23	-0.07	-0.76
3,220.00	15.85	3.17	3,131.09	638.78	23.44	14,621,125.41	1,727,459.10	40.258792	-104.688010	-638.86	1.07	-1.07	0.34
3,309.00	17.29	5.95	3,216.39	664.07	25.49	14,621,150.71	1,727,461.06	40.258862	-104.688003	-664.16	1.85	1.62	3.12
3,399.00	16.54	5.15	3,302.50	690.14	28.02	14,621,176.78	1,727,463.50	40.258933	-104.687994	-690.23	0.87	-0.83	-0.89
3,488.00	18.63	5.88	3,387.33	716.90	30.62	14,621,203.55	1,727,466.00	40.259007	-104.687985	-717.00	2.36	2.35	0.82
3,578.00	17.32	4.69	3,472.94	744.55	33.18	14,621,231.21	1,727,468.47	40.259083	-104.687975	-744.66	1.51	-1.46	-1.32

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,667.00	16.17	3.83	3,558.16	770.12	35.10	14,621,256.78	1,727,470.30	40.259153	-104.687968	-770.24	1.32	-1.29	-0.97
3,757.00	17.95	5.70	3,644.20	796.43	37.31	14,621,283.10	1,727,472.42	40.259225	-104.687961	-796.55	2.07	1.98	2.08
3,846.00	16.70	4.48	3,729.16	822.82	39.67	14,621,309.50	1,727,474.69	40.259298	-104.687952	-822.96	1.46	-1.40	-1.37
3,936.00	18.34	3.88	3,814.98	849.84	41.64	14,621,336.53	1,727,476.56	40.259372	-104.687945	-849.98	1.83	1.82	-0.67
4,026.00	17.35	1.54	3,900.65	877.38	42.96	14,621,364.08	1,727,477.78	40.259447	-104.687940	-877.53	1.36	-1.10	-2.60
4,115.00	19.50	4.64	3,985.09	905.46	44.52	14,621,392.16	1,727,479.24	40.259525	-104.687935	-905.61	2.65	2.42	3.48
4,205.00	19.26	4.00	4,069.99	935.24	46.77	14,621,421.94	1,727,481.39	40.259606	-104.687927	-935.40	0.36	-0.27	-0.71
4,295.00	18.44	3.39	4,155.16	964.26	48.64	14,621,450.97	1,727,483.16	40.259686	-104.687920	-964.42	0.94	-0.91	-0.68
4,384.00	17.24	1.40	4,239.88	991.49	49.80	14,621,478.21	1,727,484.22	40.259761	-104.687916	-991.66	1.51	-1.35	-2.24
4,474.00	17.39	5.91	4,325.81	1,018.21	51.51	14,621,504.93	1,727,485.84	40.259834	-104.687910	-1,018.38	1.50	0.17	5.01
4,563.00	16.23	5.54	4,411.00	1,043.82	54.08	14,621,530.55	1,727,488.32	40.259904	-104.687900	-1,044.00	1.31	-1.30	-0.42
4,653.00	16.86	6.54	4,497.27	1,069.30	56.78	14,621,556.04	1,727,490.93	40.259974	-104.687891	-1,069.49	0.77	0.70	1.11
4,743.00	17.30	3.91	4,583.31	1,095.62	59.18	14,621,582.37	1,727,493.23	40.260047	-104.687882	-1,095.82	0.99	0.49	-2.92
4,832.00	16.53	3.14	4,668.46	1,121.46	60.78	14,621,608.22	1,727,494.74	40.260118	-104.687876	-1,121.67	0.90	-0.87	-0.87
4,922.00	15.11	2.17	4,755.04	1,145.97	61.92	14,621,632.73	1,727,495.80	40.260185	-104.687872	-1,146.18	1.60	-1.58	-1.08
5,011.00	17.57	3.12	4,840.44	1,170.98	63.09	14,621,657.74	1,727,496.88	40.260254	-104.687868	-1,171.19	2.78	2.76	1.07
5,101.00	15.42	359.40	4,926.74	1,196.51	63.71	14,621,683.27	1,727,497.41	40.260324	-104.687866	-1,196.73	2.66	-2.39	-4.13
5,191.00	17.23	359.46	5,013.10	1,221.81	63.46	14,621,708.57	1,727,497.07	40.260393	-104.687867	-1,222.02	2.01	2.01	0.07
5,281.00	18.37	2.47	5,098.80	1,249.31	63.94	14,621,736.07	1,727,497.45	40.260469	-104.687865	-1,249.52	1.63	1.27	3.34
5,370.00	17.29	1.96	5,183.52	1,276.54	65.00	14,621,763.30	1,727,498.42	40.260544	-104.687861	-1,276.76	1.23	-1.21	-0.57
5,460.00	17.10	2.38	5,269.50	1,303.12	66.00	14,621,789.89	1,727,499.33	40.260617	-104.687858	-1,303.35	0.25	-0.21	0.47
5,550.00	17.19	3.72	5,355.50	1,329.61	67.42	14,621,816.39	1,727,500.65	40.260689	-104.687853	-1,329.84	0.45	0.10	1.49
5,639.00	17.21	4.90	5,440.52	1,355.86	69.39	14,621,842.64	1,727,502.53	40.260761	-104.687846	-1,356.09	0.39	0.02	1.33
5,729.00	17.44	3.04	5,526.44	1,382.59	71.25	14,621,869.38	1,727,504.29	40.260835	-104.687839	-1,382.83	0.67	0.26	-2.07
5,818.00	17.26	3.69	5,611.39	1,409.09	72.80	14,621,895.88	1,727,505.76	40.260908	-104.687833	-1,409.33	0.30	-0.20	0.73
5,908.00	17.19	5.48	5,697.35	1,435.65	74.93	14,621,922.45	1,727,507.79	40.260980	-104.687826	-1,435.90	0.59	-0.08	1.99
5,997.00	16.77	3.38	5,782.47	1,461.56	76.95	14,621,948.37	1,727,509.71	40.261052	-104.687818	-1,461.82	0.84	-0.47	-2.36
6,087.00	17.42	2.06	5,868.50	1,487.98	78.20	14,621,974.79	1,727,510.87	40.261124	-104.687814	-1,488.25	0.84	0.72	-1.47
6,266.00	16.02	359.51	6,039.93	1,539.46	78.95	14,622,026.27	1,727,511.44	40.261266	-104.687811	-1,539.73	0.88	-0.78	-1.42
6,356.00	17.52	1.13	6,126.10	1,565.42	79.11	14,622,052.24	1,727,511.51	40.261337	-104.687811	-1,565.69	1.75	1.67	1.80
6,445.00	17.05	0.00	6,211.08	1,591.87	79.37	14,622,078.68	1,727,511.68	40.261409	-104.687810	-1,592.13	0.65	-0.53	-1.27
6,535.00	11.81	354.91	6,298.21	1,614.25	78.56	14,622,101.06	1,727,510.79	40.261471	-104.687813	-1,614.52	5.98	-5.82	-5.66
6,624.00	4.93	346.83	6,386.21	1,627.06	76.87	14,622,113.87	1,727,509.06	40.261506	-104.687819	-1,627.32	7.82	-7.73	-9.08
6,714.00	2.29	153.73	6,476.13	1,629.22	76.79	14,622,116.02	1,727,508.97	40.261512	-104.687819	-1,629.48	7.98	-2.93	185.44
6,804.00	10.35	174.48	6,565.51	1,619.54	78.37	14,622,106.35	1,727,510.58	40.261485	-104.687813	-1,619.81	9.16	8.96	23.06
6,893.00	16.17	182.68	6,652.11	1,599.19	78.56	14,622,086.00	1,727,510.84	40.261430	-104.687813	-1,599.45	6.86	6.54	9.21
6,983.00	23.09	182.42	6,736.83	1,569.00	77.22	14,622,055.81	1,727,509.61	40.261347	-104.687817	-1,569.26	7.69	7.69	-0.29

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,073.00	31.51	185.18	6,816.74	1,527.87	74.35	14,622,014.67	1,727,506.88	40.261234	-104.687828	-1,528.12	9.46	9.36	3.07
7,162.00	39.87	183.92	6,888.96	1,476.15	70.29	14,621,962.94	1,727,503.01	40.261092	-104.687842	-1,476.39	9.43	9.39	-1.42
7,252.00	46.35	184.42	6,954.63	1,414.84	65.80	14,621,901.61	1,727,498.74	40.260923	-104.687858	-1,415.06	7.21	7.20	0.56
7,342.00	51.00	182.61	7,014.04	1,347.40	61.70	14,621,834.16	1,727,494.87	40.260738	-104.687873	-1,347.61	5.38	5.17	-2.01
7,431.00	61.79	178.14	7,063.25	1,273.42	61.40	14,621,760.17	1,727,494.83	40.260535	-104.687874	-1,273.62	12.82	12.12	-5.02
7,521.00	70.15	175.33	7,099.87	1,191.44	66.14	14,621,678.21	1,727,499.86	40.260310	-104.687857	-1,191.66	9.72	9.29	-3.12
7,611.00	74.38	176.99	7,127.28	1,105.93	71.86	14,621,592.72	1,727,505.88	40.260075	-104.687837	-1,106.18	5.02	4.70	1.84
7,700.00	80.61	179.57	7,146.54	1,019.13	74.45	14,621,505.93	1,727,508.77	40.259837	-104.687827	-1,019.39	7.55	7.00	2.90
7,790.00	87.48	181.87	7,155.88	929.68	73.31	14,621,416.48	1,727,507.95	40.259591	-104.687831	-929.93	8.04	7.63	2.56
Heel 7790.00 'MD (759' FNL - 2467 'FWL) Sec 05													
7,880.00	87.55	181.58	7,159.78	839.81	70.61	14,621,326.60	1,727,505.56	40.259344	-104.687841	-840.05	0.33	0.08	-0.32
7,970.00	87.87	181.79	7,163.37	749.92	67.96	14,621,236.70	1,727,503.23	40.259097	-104.687851	-750.15	0.43	0.36	0.23
8,059.00	88.13	181.69	7,166.48	661.02	65.26	14,621,147.79	1,727,500.84	40.258853	-104.687860	-661.24	0.31	0.29	-0.11
8,149.00	87.99	181.60	7,169.53	571.10	62.68	14,621,057.87	1,727,498.58	40.258606	-104.687870	-571.32	0.18	-0.16	-0.10
8,239.00	87.54	181.62	7,173.04	481.21	60.15	14,620,967.96	1,727,496.37	40.258360	-104.687879	-481.42	0.50	-0.50	0.02
8,328.00	89.51	181.60	7,175.33	392.28	57.65	14,620,879.02	1,727,494.18	40.258115	-104.687888	-392.48	2.21	2.21	-0.02
8,418.00	89.93	181.92	7,175.77	302.32	54.89	14,620,789.06	1,727,491.73	40.257868	-104.687898	-302.51	0.59	0.47	0.36
8,507.00	90.41	181.43	7,175.50	213.36	52.29	14,620,700.09	1,727,489.45	40.257624	-104.687907	-213.54	0.77	0.54	-0.55
8,597.00	90.48	180.35	7,174.80	123.38	50.89	14,620,610.10	1,727,488.36	40.257377	-104.687912	-123.55	1.20	0.08	-1.20
8,686.00	91.05	178.60	7,173.62	34.39	51.70	14,620,521.12	1,727,489.49	40.257133	-104.687909	-34.57	2.07	0.64	-1.97
8,776.00	91.19	179.10	7,171.86	-55.57	53.51	14,620,431.16	1,727,491.61	40.256885	-104.687902	55.39	0.58	0.16	0.56
8,866.00	91.76	178.96	7,169.54	-145.53	55.03	14,620,341.21	1,727,493.45	40.256638	-104.687897	145.34	0.65	0.63	-0.16
8,955.00	90.51	178.53	7,167.78	-234.49	56.98	14,620,252.26	1,727,495.72	40.256394	-104.687890	234.29	1.49	-1.40	-0.48
9,045.00	90.29	177.67	7,167.15	-324.44	59.97	14,620,162.32	1,727,499.02	40.256147	-104.687879	324.23	0.99	-0.24	-0.96
9,134.00	89.14	177.07	7,167.59	-413.34	64.05	14,620,073.43	1,727,503.41	40.255903	-104.687865	413.11	1.46	-1.29	-0.67
9,224.00	89.12	176.78	7,168.96	-503.20	68.88	14,619,983.59	1,727,508.56	40.255656	-104.687847	502.96	0.32	-0.02	-0.32
9,313.00	89.62	179.24	7,169.94	-592.13	71.97	14,619,894.67	1,727,511.96	40.255412	-104.687836	591.88	2.82	0.56	2.76
9,403.00	89.77	179.08	7,170.42	-682.12	73.29	14,619,804.69	1,727,513.60	40.255165	-104.687832	681.86	0.24	0.17	-0.18
9,492.00	89.92	179.11	7,170.66	-771.11	74.69	14,619,715.70	1,727,515.31	40.254921	-104.687827	770.85	0.17	0.17	0.03
9,582.00	90.43	178.76	7,170.38	-861.10	76.36	14,619,625.72	1,727,517.30	40.254673	-104.687821	860.82	0.69	0.57	-0.39
9,671.00	90.74	178.13	7,169.47	-950.06	78.78	14,619,536.77	1,727,520.03	40.254429	-104.687812	949.78	0.79	0.35	-0.71
9,761.00	91.53	178.08	7,167.69	-1,039.99	81.76	14,619,446.85	1,727,523.32	40.254182	-104.687801	1,039.70	0.88	0.88	-0.06
9,850.00	89.50	179.84	7,166.89	-1,128.96	83.37	14,619,357.88	1,727,525.25	40.253938	-104.687795	1,128.67	3.02	-2.28	1.98
9,940.00	91.16	180.68	7,166.37	-1,218.96	82.96	14,619,267.89	1,727,525.16	40.253691	-104.687797	1,218.66	2.07	1.84	0.93
10,029.00	90.08	178.71	7,165.41	-1,307.94	83.44	14,619,178.90	1,727,525.95	40.253446	-104.687795	1,307.65	2.52	-1.21	-2.21
10,119.00	89.71	177.29	7,165.57	-1,397.89	86.58	14,619,088.97	1,727,529.40	40.253199	-104.687784	1,397.58	1.63	-0.41	-1.58
10,208.00	89.93	180.72	7,165.85	-1,486.86	88.12	14,619,000.01	1,727,531.26	40.252955	-104.687778	1,486.54	3.86	0.25	3.85
10,298.00	90.10	180.89	7,165.83	-1,576.85	86.86	14,618,910.01	1,727,530.31	40.252708	-104.687783	1,576.54	0.27	0.19	0.19

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,388.00	90.45	180.40	7,165.40	-1,666.84	85.84	14,618,820.01	1,727,529.62	40.252461	-104.687787	1,666.53	0.67	0.39	-0.54
10,477.00	90.56	178.57	7,164.61	-1,755.83	86.64	14,618,731.03	1,727,530.73	40.252216	-104.687784	1,755.52	2.06	0.12	-2.06
10,567.00	92.10	178.86	7,162.52	-1,845.78	88.66	14,618,641.09	1,727,533.06	40.251969	-104.687777	1,845.46	1.74	1.71	0.32
10,657.00	90.89	180.02	7,160.18	-1,935.75	89.54	14,618,551.13	1,727,534.26	40.251722	-104.687773	1,935.42	1.86	-1.34	1.29
10,746.00	89.62	181.06	7,159.78	-2,024.74	88.70	14,618,462.13	1,727,533.73	40.251478	-104.687776	2,024.42	1.84	-1.43	1.17
10,836.00	90.85	181.35	7,159.41	-2,114.71	86.81	14,618,372.15	1,727,532.16	40.251231	-104.687783	2,114.40	1.40	1.37	0.32
10,926.00	88.55	181.56	7,159.88	-2,204.68	84.52	14,618,282.18	1,727,530.19	40.250984	-104.687791	2,204.37	2.57	-2.56	0.23
11,015.00	88.68	181.27	7,162.03	-2,293.63	82.33	14,618,193.22	1,727,528.31	40.250740	-104.687799	2,293.32	0.36	0.15	-0.33
11,105.00	88.85	181.65	7,163.97	-2,383.57	80.03	14,618,103.27	1,727,526.33	40.250493	-104.687807	2,383.28	0.46	0.19	0.42
11,194.00	89.21	181.41	7,165.48	-2,472.53	77.66	14,618,014.30	1,727,524.27	40.250248	-104.687816	2,472.24	0.49	0.40	-0.27
11,284.00	90.53	181.80	7,165.68	-2,562.49	75.14	14,617,924.33	1,727,522.06	40.250001	-104.687825	2,562.21	1.53	1.47	0.43
11,374.00	90.63	181.33	7,164.77	-2,652.45	72.68	14,617,834.36	1,727,519.92	40.249754	-104.687834	2,652.18	0.53	0.11	-0.52
11,464.00	88.87	182.03	7,165.17	-2,742.41	70.04	14,617,744.40	1,727,517.60	40.249507	-104.687843	2,742.15	2.10	-1.96	0.78
11,553.00	89.34	181.80	7,166.56	-2,831.35	67.07	14,617,655.45	1,727,514.94	40.249263	-104.687854	2,831.10	0.59	0.53	-0.26
11,643.00	89.68	181.95	7,167.33	-2,921.30	64.12	14,617,565.49	1,727,512.31	40.249016	-104.687864	2,921.06	0.41	0.38	0.17
11,732.00	89.24	181.77	7,168.16	-3,010.25	61.23	14,617,476.53	1,727,509.73	40.248772	-104.687875	3,010.01	0.53	-0.49	-0.20
11,822.00	89.09	181.33	7,169.48	-3,100.20	58.80	14,617,386.57	1,727,507.62	40.248525	-104.687884	3,099.98	0.52	-0.17	-0.49
11,911.00	89.88	182.38	7,170.28	-3,189.15	55.92	14,617,297.61	1,727,505.05	40.248281	-104.687894	3,188.94	1.48	0.89	1.18
12,001.00	90.17	182.41	7,170.24	-3,279.07	52.16	14,617,207.68	1,727,501.60	40.248034	-104.687907	3,278.87	0.32	0.32	0.03
12,091.00	90.41	182.43	7,169.78	-3,368.99	48.36	14,617,117.75	1,727,498.12	40.247787	-104.687921	3,368.80	0.27	0.27	0.02
12,180.00	90.05	180.88	7,169.42	-3,457.95	45.79	14,617,028.78	1,727,495.86	40.247542	-104.687930	3,457.77	1.79	-0.40	-1.74
12,270.00	90.10	178.46	7,169.31	-3,547.94	46.31	14,616,938.79	1,727,496.70	40.247295	-104.687928	3,547.76	2.69	0.06	-2.69
12,327.10	90.28	176.67	7,169.12	-3,604.99	48.73	14,616,881.75	1,727,499.32	40.247139	-104.687920	3,604.80	3.15	0.32	-3.13
Cross Section Line 12327.10 'MD (0' FNL - 2451 'FWL) Sec 08													
12,360.00	90.39	175.64	7,168.92	-3,637.81	50.94	14,616,848.93	1,727,501.65	40.247048	-104.687912	3,637.61	3.15	0.32	-3.13
12,449.00	89.15	177.65	7,169.28	-3,726.65	56.15	14,616,760.11	1,727,507.17	40.246805	-104.687893	3,726.44	2.65	-1.39	2.26
12,539.00	89.96	177.13	7,169.98	-3,816.56	60.24	14,616,670.22	1,727,511.58	40.246558	-104.687878	3,816.32	1.07	0.90	-0.58
12,629.00	90.70	177.61	7,169.46	-3,906.46	64.37	14,616,580.34	1,727,516.03	40.246311	-104.687864	3,906.21	0.98	0.82	0.53
12,718.00	89.95	179.69	7,168.95	-3,995.43	66.47	14,616,491.38	1,727,518.44	40.246066	-104.687856	3,995.17	2.48	-0.84	2.34
12,808.00	90.78	178.95	7,168.38	-4,085.42	67.54	14,616,401.39	1,727,519.82	40.245819	-104.687852	4,085.16	1.24	0.92	-0.82
12,898.00	91.27	178.51	7,166.77	-4,175.38	69.53	14,616,311.43	1,727,522.13	40.245572	-104.687845	4,175.11	0.73	0.54	-0.49
12,987.00	90.52	180.44	7,165.38	-4,264.36	70.35	14,616,222.46	1,727,523.26	40.245328	-104.687842	4,264.09	2.33	-0.84	2.17
13,077.00	89.75	181.70	7,165.17	-4,354.34	68.67	14,616,132.47	1,727,521.90	40.245081	-104.687848	4,354.08	1.64	-0.86	1.40
13,166.00	90.05	181.50	7,165.32	-4,443.31	66.18	14,616,043.50	1,727,519.72	40.244837	-104.687857	4,443.05	0.41	0.34	-0.22
13,256.00	89.13	181.58	7,165.97	-4,533.27	63.76	14,615,953.53	1,727,517.62	40.244590	-104.687866	4,533.02	1.03	-1.02	0.09
13,345.00	89.13	181.02	7,167.32	-4,622.24	61.75	14,615,864.55	1,727,515.92	40.244345	-104.687873	4,622.00	0.63	0.00	-0.63
13,435.00	89.48	181.00	7,168.41	-4,712.22	60.16	14,615,774.57	1,727,514.65	40.244098	-104.687879	4,711.98	0.39	0.39	-0.02
13,524.00	89.44	180.70	7,169.25	-4,801.20	58.84	14,615,685.58	1,727,513.64	40.243854	-104.687883	4,800.97	0.34	-0.04	-0.34

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,614.00	90.09	180.64	7,169.62	-4,891.20	57.79	14,615,595.58	1,727,512.90	40.243607	-104.687887	4,890.97	0.73	0.72	-0.07
13,703.00	90.71	181.18	7,169.00	-4,980.18	56.37	14,615,506.59	1,727,511.80	40.243362	-104.687892	4,979.96	0.92	0.70	0.61
13,793.00	89.87	182.25	7,168.54	-5,070.14	53.68	14,615,416.63	1,727,509.43	40.243115	-104.687902	5,069.92	1.51	-0.93	1.19
13,882.00	89.88	181.24	7,168.74	-5,159.10	50.97	14,615,327.66	1,727,507.03	40.242871	-104.687912	5,158.89	1.13	0.01	-1.13
13,971.00	90.44	180.44	7,168.49	-5,248.09	49.66	14,615,238.67	1,727,506.04	40.242627	-104.687916	5,247.88	1.10	0.63	-0.90
14,061.00	88.53	180.99	7,169.30	-5,338.07	48.54	14,615,148.68	1,727,505.23	40.242379	-104.687920	5,337.87	2.21	-2.12	0.61
14,151.00	89.48	180.37	7,170.86	-5,428.05	47.47	14,615,058.70	1,727,504.48	40.242132	-104.687924	5,427.85	1.26	1.06	-0.69
14,240.00	90.47	179.84	7,170.90	-5,517.05	47.31	14,614,969.70	1,727,504.63	40.241888	-104.687925	5,516.85	1.26	1.11	-0.60
14,330.00	90.98	180.06	7,169.76	-5,607.04	47.39	14,614,879.71	1,727,505.02	40.241641	-104.687924	5,606.84	0.62	0.57	0.24
14,420.00	88.02	177.57	7,170.55	-5,697.00	49.25	14,614,789.75	1,727,507.20	40.241394	-104.687918	5,696.79	4.30	-3.29	-2.77
14,509.00	88.32	177.23	7,173.39	-5,785.86	53.28	14,614,700.91	1,727,511.55	40.241150	-104.687903	5,785.64	0.51	0.34	-0.38
14,599.00	88.46	177.46	7,175.92	-5,875.73	57.45	14,614,611.05	1,727,516.03	40.240903	-104.687888	5,875.49	0.30	0.16	0.26
14,689.00	88.85	177.43	7,178.03	-5,965.62	61.46	14,614,521.18	1,727,520.36	40.240656	-104.687874	5,965.37	0.43	0.43	-0.03
14,778.00	89.35	177.43	7,179.43	-6,054.52	65.45	14,614,432.30	1,727,524.66	40.240412	-104.687860	6,054.25	0.56	0.56	0.00
14,868.00	88.71	179.76	7,180.95	-6,144.47	67.66	14,614,342.35	1,727,527.19	40.240165	-104.687852	6,144.20	2.68	-0.71	2.59
14,957.00	89.00	179.79	7,182.73	-6,233.45	68.01	14,614,253.37	1,727,527.85	40.239921	-104.687851	6,233.18	0.33	0.33	0.03
15,047.00	90.79	181.89	7,182.89	-6,323.43	66.69	14,614,163.39	1,727,526.85	40.239674	-104.687855	6,323.16	3.07	1.99	2.33
15,136.00	91.22	181.56	7,181.33	-6,412.38	64.01	14,614,074.43	1,727,524.48	40.239429	-104.687865	6,412.12	0.61	0.48	-0.37
15,226.00	91.74	180.73	7,179.01	-6,502.33	62.21	14,613,984.48	1,727,523.00	40.239182	-104.687871	6,502.07	1.09	0.58	-0.92
15,315.00	93.40	180.78	7,175.02	-6,591.23	61.04	14,613,895.57	1,727,522.14	40.238938	-104.687876	6,590.98	1.87	1.87	0.06
15,405.00	90.83	180.96	7,171.70	-6,681.15	59.68	14,613,805.65	1,727,521.09	40.238691	-104.687880	6,680.90	2.86	-2.86	0.20
15,494.00	91.04	180.94	7,170.24	-6,770.13	58.20	14,613,716.67	1,727,519.93	40.238447	-104.687886	6,769.88	0.24	0.24	-0.02
15,584.00	89.52	182.79	7,169.80	-6,860.07	55.27	14,613,626.71	1,727,517.32	40.238200	-104.687896	6,859.84	2.66	-1.69	2.06
15,674.00	89.03	182.43	7,170.94	-6,949.97	51.17	14,613,536.80	1,727,513.53	40.237953	-104.687911	6,949.75	0.68	-0.54	-0.40
15,763.00	89.85	182.26	7,171.81	-7,038.89	47.53	14,613,447.87	1,727,510.21	40.237709	-104.687924	7,038.68	0.94	0.92	-0.19
15,853.00	90.65	183.64	7,171.42	-7,128.77	42.90	14,613,357.97	1,727,505.89	40.237462	-104.687941	7,128.57	1.77	0.89	1.53
15,942.00	91.01	183.18	7,170.13	-7,217.60	37.61	14,613,269.12	1,727,500.91	40.237218	-104.687959	7,217.42	0.66	0.40	-0.52
16,032.00	91.29	182.82	7,168.32	-7,307.46	32.90	14,613,179.25	1,727,496.52	40.236971	-104.687976	7,307.30	0.51	0.31	-0.40
16,122.00	89.28	183.07	7,167.88	-7,397.33	28.27	14,613,089.36	1,727,492.21	40.236725	-104.687993	7,397.19	2.25	-2.23	0.28
16,211.00	89.38	182.23	7,168.92	-7,486.23	24.16	14,613,000.45	1,727,488.41	40.236481	-104.688008	7,486.10	0.95	0.11	-0.94
16,301.00	89.56	180.21	7,169.75	-7,576.20	22.24	14,612,910.47	1,727,486.81	40.236233	-104.688015	7,576.08	2.25	0.20	-2.24
16,390.00	89.75	178.40	7,170.29	-7,665.19	23.32	14,612,821.49	1,727,488.20	40.235989	-104.688011	7,665.06	2.04	0.21	-2.03
16,480.00	89.10	181.23	7,171.19	-7,755.18	23.61	14,612,731.50	1,727,488.81	40.235742	-104.688010	7,755.05	3.23	-0.72	3.14
16,569.00	89.45	183.82	7,172.32	-7,844.07	19.69	14,612,642.59	1,727,485.20	40.235498	-104.688024	7,843.96	2.94	0.39	2.91
16,659.00	89.25	182.99	7,173.34	-7,933.91	14.35	14,612,552.74	1,727,480.17	40.235251	-104.688043	7,933.81	0.95	-0.22	-0.92
16,748.00	88.74	184.28	7,174.90	-8,022.71	8.71	14,612,463.91	1,727,474.84	40.235007	-104.688063	8,022.63	1.56	-0.57	1.45
16,838.00	89.04	183.37	7,176.64	-8,112.50	2.70	14,612,374.11	1,727,469.15	40.234761	-104.688085	8,112.44	1.06	0.33	-1.01

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,927.00	90.42	184.96	7,177.06	-8,201.25	-3.76	14,612,285.33	1,727,463.00	40.234517	-104.688108	8,201.22	2.37	1.55	1.79
17,017.00	91.27	184.26	7,175.73	-8,290.95	-10.99	14,612,195.61	1,727,456.09	40.234271	-104.688134	8,290.94	1.22	0.94	-0.78
17,106.00	90.07	186.24	7,174.69	-8,379.57	-19.13	14,612,106.96	1,727,448.26	40.234027	-104.688163	8,379.58	2.60	-1.35	2.22
17,196.00	90.67	185.41	7,174.11	-8,469.10	-28.27	14,612,017.40	1,727,439.44	40.233782	-104.688196	8,469.15	1.14	0.67	-0.92
17,285.00	90.83	184.82	7,172.95	-8,557.74	-36.20	14,611,928.74	1,727,431.81	40.233538	-104.688224	8,557.81	0.69	0.18	-0.66
17,375.00	90.71	186.25	7,171.74	-8,647.31	-44.88	14,611,839.14	1,727,423.45	40.233292	-104.688255	8,647.41	1.59	-0.13	1.59
17,465.00	91.56	186.12	7,169.95	-8,736.76	-54.58	14,611,749.64	1,727,414.07	40.233046	-104.688290	8,736.90	0.96	0.94	-0.14
17,554.00	89.62	186.06	7,169.04	-8,825.25	-64.02	14,611,661.12	1,727,404.94	40.232803	-104.688324	8,825.42	2.18	-2.18	-0.07
17,612.42	90.32	186.07	7,169.07	-8,883.35	-70.19	14,611,603.01	1,727,398.97	40.232644	-104.688346	8,883.54	1.20	1.20	0.01
Cross Section Line 17612.42 'MD (0' FNL - 2366 'FWL) Sec 17													
17,644.00	90.70	186.07	7,168.79	-8,914.75	-73.53	14,611,571.60	1,727,395.75	40.232558	-104.688358	8,914.95	1.20	1.20	0.01
17,733.00	90.42	184.01	7,167.92	-9,003.39	-81.34	14,611,482.92	1,727,388.24	40.232314	-104.688386	9,003.62	2.34	-0.31	-2.31
17,823.00	90.35	183.34	7,167.31	-9,093.21	-87.11	14,611,393.09	1,727,382.79	40.232068	-104.688406	9,093.46	0.75	-0.08	-0.74
17,913.00	90.92	182.97	7,166.31	-9,183.06	-92.07	14,611,303.22	1,727,378.15	40.231821	-104.688424	9,183.33	0.76	0.63	-0.41
18,002.00	89.17	182.36	7,166.24	-9,271.96	-96.20	14,611,214.30	1,727,374.33	40.231577	-104.688439	9,272.24	2.08	-1.97	-0.69
18,092.00	90.66	182.64	7,166.38	-9,361.88	-100.13	14,611,124.38	1,727,370.72	40.231330	-104.688453	9,362.17	1.68	1.66	0.31
18,182.00	88.34	180.11	7,167.16	-9,451.83	-102.29	14,611,034.41	1,727,368.87	40.231083	-104.688461	9,452.13	3.81	-2.58	-2.81
18,271.00	89.17	178.59	7,169.10	-9,540.80	-101.28	14,610,945.45	1,727,370.20	40.230839	-104.688457	9,541.10	1.95	0.93	-1.71
18,361.00	89.30	179.25	7,170.30	-9,630.78	-99.58	14,610,855.48	1,727,372.21	40.230591	-104.688451	9,631.07	0.75	0.14	0.73
18,450.00	89.78	178.61	7,171.01	-9,719.76	-97.92	14,610,766.50	1,727,374.18	40.230347	-104.688445	9,720.04	0.90	0.54	-0.72
18,540.00	91.23	179.00	7,170.22	-9,809.73	-96.04	14,610,676.54	1,727,376.38	40.230100	-104.688438	9,810.01	1.67	1.61	0.43
18,630.00	88.78	178.84	7,170.21	-9,899.71	-94.35	14,610,586.57	1,727,378.39	40.229853	-104.688432	9,899.98	2.73	-2.72	-0.18
18,719.00	90.04	178.56	7,171.13	-9,988.68	-92.33	14,610,497.60	1,727,380.72	40.229609	-104.688425	9,988.94	1.45	1.42	-0.31
18,809.00	90.47	177.81	7,170.73	-10,078.63	-89.48	14,610,407.66	1,727,383.89	40.229362	-104.688415	10,078.88	0.96	0.48	-0.83
18,899.00	91.12	178.18	7,169.48	-10,168.57	-86.33	14,610,317.74	1,727,387.35	40.229115	-104.688404	10,168.81	0.83	0.72	0.41
18,988.00	89.09	178.31	7,169.32	-10,257.52	-83.61	14,610,228.79	1,727,390.39	40.228870	-104.688394	10,257.75	2.29	-2.28	0.15
19,078.00	90.07	178.06	7,169.98	-10,347.47	-80.75	14,610,138.85	1,727,393.56	40.228623	-104.688384	10,347.69	1.12	1.09	-0.28
19,168.00	89.96	177.28	7,169.95	-10,437.40	-77.10	14,610,048.94	1,727,397.53	40.228376	-104.688370	10,437.60	0.88	-0.12	-0.87
19,257.00	90.45	177.27	7,169.63	-10,526.30	-72.86	14,609,960.06	1,727,402.08	40.228132	-104.688355	10,526.49	0.55	0.55	-0.01
19,347.00	88.35	177.60	7,170.58	-10,616.20	-68.84	14,609,870.17	1,727,406.42	40.227885	-104.688341	10,616.37	2.36	-2.33	0.37
19,436.00	89.12	177.70	7,172.54	-10,705.10	-65.19	14,609,781.28	1,727,410.38	40.227641	-104.688328	10,705.26	0.87	0.87	0.11
19,526.00	90.30	178.15	7,173.00	-10,795.04	-61.93	14,609,691.36	1,727,413.96	40.227394	-104.688316	10,795.19	1.40	1.31	0.50
19,615.00	89.16	178.76	7,173.42	-10,884.00	-59.53	14,609,602.40	1,727,416.67	40.227150	-104.688307	10,884.14	1.45	-1.28	0.69
19,705.00	90.78	178.88	7,173.46	-10,973.98	-57.68	14,609,512.43	1,727,418.84	40.226903	-104.688301	10,974.12	1.80	1.80	0.13
19,794.00	89.01	178.54	7,173.63	-11,062.95	-55.67	14,609,423.46	1,727,421.16	40.226659	-104.688294	11,063.08	2.03	-1.99	-0.38
19,884.00	90.25	178.35	7,174.21	-11,152.92	-53.23	14,609,333.51	1,727,423.92	40.226412	-104.688285	11,153.04	1.39	1.38	-0.21
19,973.00	88.04	178.49	7,175.54	-11,241.87	-50.78	14,609,244.57	1,727,426.68	40.226167	-104.688276	11,241.98	2.49	-2.48	0.16
20,063.00	87.55	178.52	7,179.00	-11,331.77	-48.43	14,609,154.68	1,727,429.34	40.225920	-104.688268	11,331.87	0.55	-0.54	0.03

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longituge (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,153.00	87.04	178.16	7,183.25	-11,421.63	-45.83	14,609,064.82	1,727,432.26	40.225674	-104.688258	11,421.72	0.69	-0.57	-0.40
20,242.00	88.42	179.08	7,186.77	-11,510.53	-43.69	14,608,975.93	1,727,434.72	40.225430	-104.688251	11,510.62	1.86	1.55	1.03
20,332.00	88.79	178.77	7,188.96	-11,600.49	-42.00	14,608,885.98	1,727,436.72	40.225183	-104.688245	11,600.57	0.54	0.41	-0.34
20,421.00	89.40	178.57	7,190.37	-11,689.46	-39.93	14,608,797.02	1,727,439.10	40.224938	-104.688237	11,689.52	0.72	0.69	-0.22
20,511.00	90.57	179.47	7,190.39	-11,779.44	-38.39	14,608,707.04	1,727,440.96	40.224691	-104.688232	11,779.50	1.64	1.30	1.00
20,601.00	91.09	179.18	7,189.09	-11,869.42	-37.33	14,608,617.06	1,727,442.33	40.224444	-104.688228	11,869.48	0.66	0.58	-0.32
20,690.00	91.12	178.76	7,187.37	-11,958.39	-35.73	14,608,528.10	1,727,444.25	40.224200	-104.688222	11,958.44	0.47	0.03	-0.47
20,780.00	91.10	178.84	7,185.63	-12,048.36	-33.85	14,608,438.15	1,727,446.45	40.223953	-104.688215	12,048.40	0.09	-0.02	0.09
20,870.00	91.55	178.51	7,183.55	-12,138.31	-31.77	14,608,348.20	1,727,448.84	40.223706	-104.688208	12,138.34	0.62	0.50	-0.37
20,959.00	88.98	178.35	7,183.14	-12,227.27	-29.33	14,608,259.25	1,727,451.60	40.223461	-104.688199	12,227.29	2.89	-2.89	-0.18
21,049.00	90.08	178.06	7,183.87	-12,317.22	-26.51	14,608,169.31	1,727,454.73	40.223214	-104.688189	12,317.23	1.26	1.22	-0.32
21,139.00	90.79	177.54	7,183.19	-12,407.15	-23.06	14,608,079.39	1,727,458.50	40.222967	-104.688177	12,407.15	0.98	0.79	-0.58
21,228.00	91.01	177.32	7,181.79	-12,496.05	-19.07	14,607,990.51	1,727,462.81	40.222723	-104.688163	12,496.04	0.35	0.25	-0.25
21,318.00	91.54	177.89	7,179.79	-12,585.94	-15.31	14,607,900.63	1,727,466.88	40.222476	-104.688149	12,585.92	0.86	0.59	0.63
21,408.00	90.01	177.31	7,178.57	-12,675.85	-11.54	14,607,810.73	1,727,470.97	40.222229	-104.688136	12,675.82	1.82	-1.70	-0.64
21,497.00	90.49	176.89	7,178.18	-12,764.74	-7.04	14,607,721.86	1,727,475.78	40.221985	-104.688119	12,764.69	0.72	0.54	-0.47
21,587.00	90.37	175.48	7,177.51	-12,854.54	-1.05	14,607,632.09	1,727,482.09	40.221739	-104.688098	12,854.46	1.57	-0.13	-1.57
21,677.00	89.27	175.16	7,177.79	-12,944.23	6.30	14,607,542.42	1,727,489.74	40.221493	-104.688072	12,944.13	1.27	-1.22	-0.36
21,766.00	89.44	175.00	7,178.79	-13,032.90	13.93	14,607,453.78	1,727,497.69	40.221249	-104.688044	13,032.77	0.26	0.19	-0.18
21,856.00	89.92	175.07	7,179.30	-13,122.56	21.72	14,607,364.14	1,727,505.79	40.221003	-104.688016	13,122.40	0.54	0.53	0.08
21,946.00	90.41	175.82	7,179.04	-13,212.27	28.86	14,607,274.45	1,727,513.26	40.220756	-104.687991	13,212.09	1.00	0.54	0.83
22,035.00	89.86	174.60	7,178.83	-13,300.96	36.30	14,607,185.79	1,727,521.00	40.220513	-104.687964	13,300.75	1.50	-0.62	-1.37
22,125.00	90.15	175.01	7,178.82	-13,390.59	44.45	14,607,096.19	1,727,529.46	40.220267	-104.687935	13,390.35	0.56	0.32	0.46
22,214.00	90.13	175.25	7,178.60	-13,479.27	52.00	14,607,007.54	1,727,537.33	40.220023	-104.687908	13,479.01	0.27	-0.02	0.27
22,304.00	90.85	175.50	7,177.83	-13,568.97	59.26	14,606,917.87	1,727,544.90	40.219777	-104.687882	13,568.68	0.85	0.80	0.28
22,393.00	91.08	175.49	7,176.33	-13,657.69	66.25	14,606,829.18	1,727,552.21	40.219533	-104.687857	13,657.37	0.26	0.26	-0.01
22,483.00	91.99	175.81	7,173.92	-13,747.39	73.07	14,606,739.50	1,727,559.35	40.219287	-104.687832	13,747.05	1.07	1.01	0.36
22,572.00	92.96	175.94	7,170.08	-13,836.08	79.47	14,606,650.83	1,727,566.05	40.219043	-104.687810	13,835.72	1.10	1.09	0.15
22,650.00	93.30	175.72	7,165.82	-13,913.76	85.13	14,606,573.18	1,727,571.99	40.218830	-104.687789	13,913.37	0.52	0.44	-0.28
Last Survey 22650.00 'MD													
22,705.00	93.30	175.72	7,162.65	-13,968.51	89.23	14,606,518.44	1,727,576.28	40.218680	-104.687775	13,968.11	0.00	0.00	0.00
BHL - PTB 22705.00 'MD (182' FSL - 2528 'FWL) Sec 17													

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Hethcock 5-7HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	4903' GL + 26' KB @ 4929.00usft
Site:	3N-65W-05 Hethcock 6-5HZ Pad	MD Reference:	4903' GL + 26' KB @ 4929.00usft
Well:	Hethcock 5-7HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	0.06	-0.24	SHL 1689' FNL & 2381' FWL
7,790.00	7,155.88	929.68	73.31	Heel 7790.00 'MD (759' FNL - 2467 'FWL) Sec 05
12,327.10	7,169.12	-3,604.99	48.73	Cross Section Line 12327.10 'MD (0' FNL - 2451 'FWL) Sec 08
17,612.42	7,169.07	-8,883.35	-70.19	Cross Section Line 17612.42 'MD (0' FNL - 2366 'FWL) Sec 17
22,650.00	7,165.82	-13,913.76	85.13	Last Survey 22650.00 'MD
22,705.00	7,162.65	-13,968.51	89.23	BHL - PTB 22705.00 'MD (182' FSL - 2528 'FWL) Sec 17

Checked By: _____	Approved By: _____	Date: _____
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