

Occidental Petroleum

Weld County, CO (UTM-NAD83)

Camenisch 10-33HZ Pad

Camenisch 33-5HZ

API# 123-51904

OH

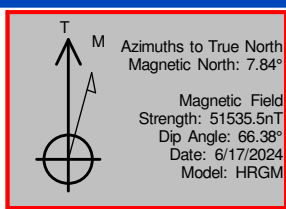
Design: OH

Standard Survey Report

26 July, 2024



Project: Weld County, CO (UTM-NAD83)
 Site: Camenisch 10-33HZ Pad
 Well: Camenisch 33-5HZ
 Wellbore: OH
 Design: OH
 Lat: 40.268798
 Long: -104.893560
 GL: 4870.00
 KB: PD 562 @ 4896.00usft



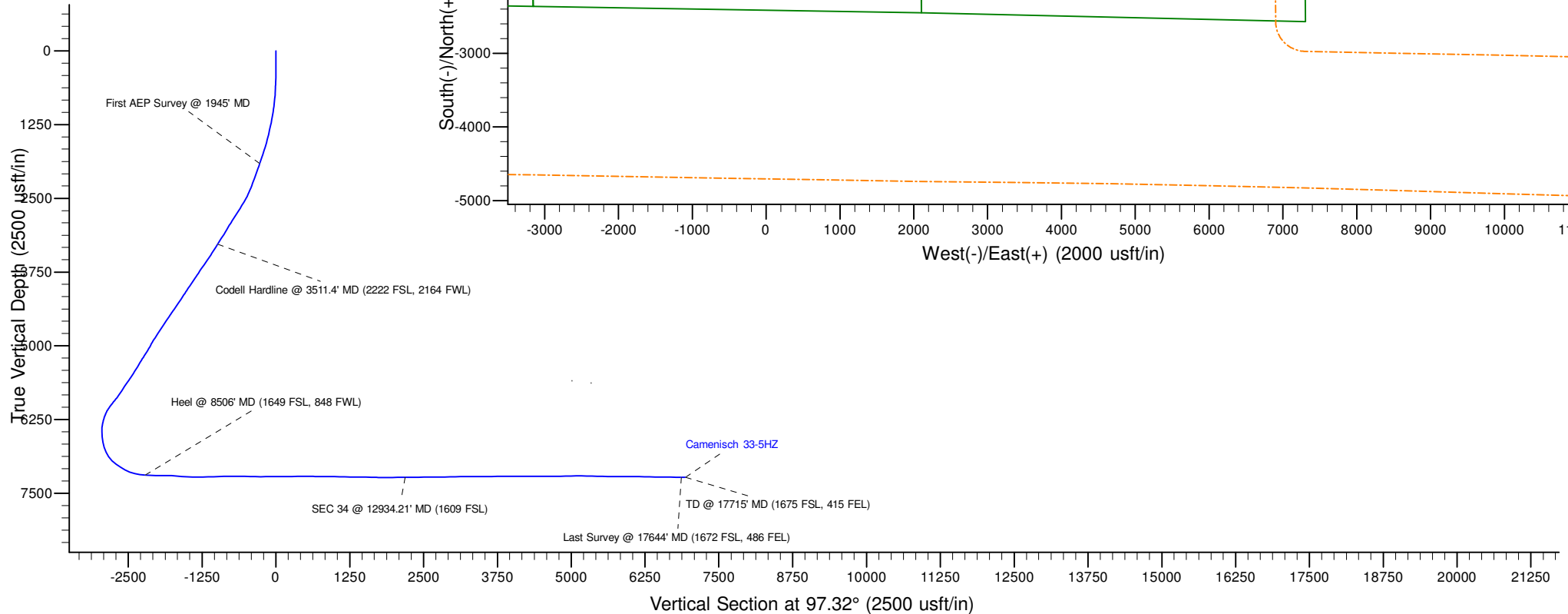
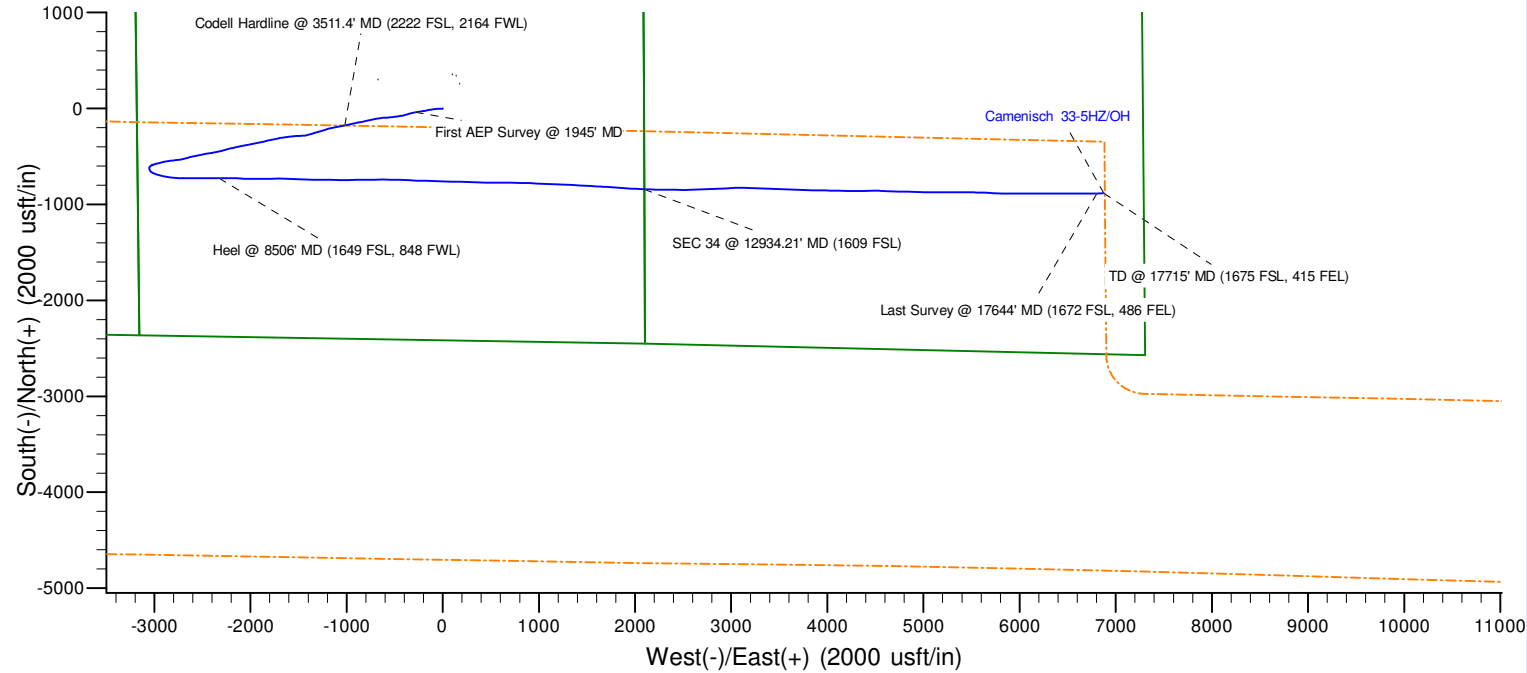
WELL DETAILS: Camenisch 33-5HZ

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14624633.79	1670108.08	40.268798	-104.893560

SHL: 2415' FSL, 2096' FEL - Sec 33-T4N-R67W
 Heel: 1649' FSL, 848' FWL - Sec 33-T4N-R67W
 BHL: 1675' FSL, 415' FEL - Sec 34-T4N-R67W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1945.00	18.91	258.89	1909.73	-39.83	-280.82	-273.46	286.50	First AEP Survey @ 1945' MD
3511.40	33.36	259.03	3277.22	-176.33	-1016.64	-985.87	1036.13	Codell Hardline @ 3511.4' MD (2222 FSL, 2164 FWL)
8506.00	87.66	90.65	7192.80	-727.89	-2325.84	-2214.09	3895.26	Heel @ 8506' MD (1649 FSL, 848 FWL)
12934.21	90.24	92.14	7230.50	-840.80	2097.92	2187.98	8321.78	SEC 34 @ 12934.21' MD (1609 FSL)
17644.00	88.99	89.59	7230.00	-884.18	6805.58	6862.77	13031.07	Last Survey @ 17644' MD (1672 FSL, 486 FEL)
17715.00	88.99	89.59	7231.25	-883.67	6876.57	6933.12	13102.05	TD @ 17715' MD (1675 FSL, 415 FEL)



Survey Report

Company: Occidental Petroleum	Local Co-ordinate Reference: Well Camenisch 33-5HZ
Project: Weld County, CO (UTM-NAD83)	TVD Reference: PD 562 @ 4896.00usft
Site: Camenisch 10-33HZ Pad	MD Reference: PD 562 @ 4896.00usft
Well: Camenisch 33-5HZ	North Reference: True
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: OH	Database: Fhartmann

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 Camenisch 10-33HZ Pad		
Site Position:	Northing: 14,624,606.43 usft	Latitude: 40.268723
From: Lat/Long	Easting: 1,670,071.57 usft	Longitude: -104.893691
Position Uncertainty: 0.00 usft	Slot Radius: 13-3/16 "	

Well Camenisch 33-5HZ			
Well Position	+N/-S 0.00 usft	Northing: 14,624,633.79 usft	Latitude: 40.268798
	+E/-W 0.00 usft	Easting: 1,670,108.08 usft	Longitude: -104.893560
Position Uncertainty	2.00 usft	Wellhead Elevation: usft	Ground Level: 4,870.00 usft
Grid Convergence:	0.07 °		

Wellbore OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HRGM	6/17/2024	7.84	66.38	51,535.52139199

Design OH					
Audit Notes:					
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.00			
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	97.32	

Survey Program		Date 7/26/2024		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
11.00	1,819.00	Surface (OH)	A005Mc_MWD+IFR1_R5	MWD+IFR1
1,945.00	17,715.00	MWD (OH)	A008Mc_MWD+IFR1+MS_R	MWD+IFR1+MSA

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11.00	0.00	0.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.00	0.44	81.26	90.00	0.05	0.30	0.29	0.56	0.56	0.00	
181.00	0.67	250.49	181.00	-0.08	0.14	0.15	1.21	0.25	185.97	
273.00	0.26	160.85	273.00	-0.46	-0.29	-0.23	0.78	-0.45	-97.43	
364.00	0.31	170.32	363.99	-0.89	-0.19	-0.07	0.08	0.05	10.41	
453.00	1.06	259.78	452.99	-1.28	-0.96	-0.78	1.24	0.84	100.52	
543.00	1.59	268.51	542.96	-1.46	-3.02	-2.81	0.63	0.59	9.70	
632.00	3.69	268.11	631.86	-1.58	-7.12	-6.86	2.36	2.36	-0.45	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Camenisch 33-5HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	PD 562 @ 4896.00usft
Site:	Camenisch 10-33HZ Pad	MD Reference:	PD 562 @ 4896.00usft
Well:	Camenisch 33-5HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Fhartmann

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
721.00	3.91	268.66	720.67	-1.75	-13.02	-12.69	0.25	0.25	0.62	
811.00	5.95	270.97	810.33	-1.74	-20.75	-20.36	2.28	2.27	2.57	
900.00	6.35	268.88	898.82	-1.76	-30.28	-29.81	0.51	0.45	-2.35	
990.00	7.77	265.88	988.13	-2.29	-41.33	-40.70	1.63	1.58	-3.33	
1,079.00	8.85	266.53	1,076.20	-3.14	-54.16	-53.32	1.22	1.21	0.73	
1,169.00	10.76	264.75	1,164.88	-4.33	-69.44	-68.32	2.15	2.12	-1.98	
1,258.00	12.76	262.18	1,252.01	-6.43	-87.45	-85.92	2.32	2.25	-2.89	
1,348.00	13.02	263.47	1,339.74	-8.93	-107.37	-105.36	0.43	0.29	1.43	
1,437.00	14.58	258.65	1,426.17	-12.28	-128.32	-125.70	2.18	1.75	-5.42	
1,527.00	15.75	258.16	1,513.04	-17.01	-151.38	-147.98	1.31	1.30	-0.54	
1,616.00	16.95	259.04	1,598.44	-21.96	-175.94	-171.70	1.38	1.35	0.99	
1,705.00	18.78	260.39	1,683.14	-26.82	-202.80	-197.73	2.11	2.06	1.52	
1,795.00	19.39	260.59	1,768.19	-31.68	-231.83	-225.90	0.68	0.68	0.22	
1,819.00	19.70	261.90	1,790.81	-32.90	-239.76	-233.61	2.24	1.29	5.46	
1,945.00	18.91	258.89	1,909.73	-39.83	-280.82	-273.46	1.01	-0.63	-2.39	
First AEP Survey @ 1945' MD										
2,034.00	21.44	258.23	1,993.26	-45.92	-310.90	-302.51	2.85	2.84	-0.74	
2,124.00	21.07	255.80	2,077.14	-53.25	-342.69	-333.11	1.06	-0.41	-2.70	
2,214.00	21.11	253.10	2,161.11	-61.93	-373.88	-362.94	1.08	0.04	-3.00	
2,303.00	21.61	256.63	2,244.00	-70.38	-405.16	-392.89	1.55	0.56	3.97	
2,393.00	23.36	258.72	2,327.16	-77.70	-438.79	-425.30	2.14	1.94	2.32	
2,482.00	25.16	261.47	2,408.30	-83.96	-474.80	-460.23	2.39	2.02	3.09	
2,572.00	28.83	264.24	2,488.48	-88.98	-515.33	-499.79	4.31	4.08	3.08	
2,661.00	30.20	264.05	2,565.93	-93.45	-558.95	-542.48	1.54	1.54	-0.21	
2,751.00	32.35	267.38	2,642.85	-96.90	-605.52	-588.23	3.06	2.39	3.70	
2,841.00	33.96	263.38	2,718.21	-100.90	-654.56	-636.36	3.02	1.79	-4.44	
2,930.00	34.28	257.57	2,791.91	-109.16	-703.74	-684.09	3.68	0.36	-6.53	
3,041.00	34.13	257.84	2,883.71	-122.45	-764.71	-742.86	0.19	-0.14	0.24	
3,131.00	31.55	257.03	2,959.32	-133.05	-812.34	-788.76	2.91	-2.87	-0.90	
3,220.00	32.48	258.82	3,034.78	-142.91	-858.48	-833.26	1.49	1.04	2.01	
3,310.00	33.74	257.46	3,110.17	-153.03	-906.58	-879.69	1.63	1.40	-1.51	
3,399.00	34.42	257.64	3,183.88	-163.78	-955.28	-926.62	0.77	0.76	0.20	
3,489.00	33.52	258.97	3,258.52	-173.98	-1,004.52	-974.16	1.30	-1.00	1.48	
3,511.40	33.36	259.03	3,277.22	-176.33	-1,016.64	-985.87	0.73	-0.71	0.29	
Codell Hardline @ 3511.4' MD (2222 FSL, 2164 FWL)										
3,579.00	32.88	259.23	3,333.83	-183.30	-1,052.91	-1,020.96	0.73	-0.71	0.29	
3,668.00	33.73	260.15	3,408.22	-192.04	-1,100.99	-1,067.54	1.11	0.96	1.03	
3,757.00	36.33	258.34	3,481.09	-201.59	-1,151.17	-1,116.08	3.15	2.92	-2.03	
3,847.00	35.83	253.59	3,553.84	-214.43	-1,202.56	-1,165.42	3.16	-0.56	-5.28	
3,937.00	37.58	252.62	3,625.99	-230.07	-1,254.02	-1,214.47	2.05	1.94	-1.08	
4,026.00	37.46	252.68	3,696.58	-246.23	-1,305.76	-1,263.73	0.14	-0.13	0.07	
4,115.00	36.11	252.08	3,767.86	-262.36	-1,356.55	-1,312.05	1.57	-1.52	-0.67	
4,205.00	34.87	258.33	3,841.16	-275.73	-1,407.00	-1,360.38	4.26	-1.38	6.94	

Survey Report

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Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	PD 562 @ 4896.00usft
Site:	Camenisch 10-33HZ Pad	MD Reference:	PD 562 @ 4896.00usft
Well:	Camenisch 33-5HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Fhartmann

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,294.00	35.05	264.70	3,914.13	-283.24	-1,457.38	-1,409.39	4.10	0.20	7.16	
4,384.00	35.11	267.45	3,987.78	-286.78	-1,508.97	-1,460.11	1.76	0.07	3.06	
4,474.00	32.64	265.50	4,062.50	-289.83	-1,559.03	-1,509.38	3.00	-2.74	-2.17	
4,563.00	34.87	263.06	4,136.50	-294.79	-1,608.23	-1,557.54	2.93	2.51	-2.74	
4,653.00	34.97	261.63	4,210.30	-301.65	-1,659.28	-1,607.30	0.92	0.11	-1.59	
4,743.00	35.00	257.27	4,284.05	-311.10	-1,709.98	-1,656.39	2.78	0.03	-4.84	
4,832.00	35.53	258.31	4,356.71	-321.96	-1,760.20	-1,704.81	0.90	0.60	1.17	
4,921.00	37.97	257.55	4,428.02	-333.11	-1,812.27	-1,755.03	2.79	2.74	-0.85	
5,011.00	34.95	256.98	4,500.40	-344.89	-1,864.43	-1,805.27	3.38	-3.36	-0.63	
5,101.00	35.05	258.07	4,574.12	-356.04	-1,914.84	-1,853.84	0.70	0.11	1.21	
5,190.00	35.05	259.44	4,646.98	-366.00	-1,964.96	-1,902.29	0.88	0.00	1.54	
5,279.00	34.99	259.84	4,719.87	-375.19	-2,015.20	-1,950.95	0.27	-0.07	0.45	
5,369.00	35.06	258.86	4,793.57	-384.73	-2,065.97	-2,000.08	0.63	0.08	-1.09	
5,459.00	34.39	258.12	4,867.54	-394.96	-2,116.20	-2,048.60	0.88	-0.74	-0.82	
5,548.00	32.20	255.25	4,941.93	-406.17	-2,163.74	-2,094.32	3.03	-2.46	-3.22	
5,638.00	29.75	256.71	5,019.09	-417.41	-2,208.67	-2,137.45	2.85	-2.72	1.62	
5,727.00	33.58	255.98	5,094.83	-428.46	-2,254.06	-2,181.06	4.32	4.30	-0.82	
5,817.00	35.65	256.11	5,168.89	-440.78	-2,303.67	-2,228.70	2.30	2.30	0.14	
5,907.00	33.07	258.65	5,243.19	-451.91	-2,353.22	-2,276.42	3.28	-2.87	2.82	
5,996.00	31.77	258.97	5,318.31	-461.18	-2,400.02	-2,321.67	1.47	-1.46	0.36	
6,086.00	32.90	260.72	5,394.36	-469.65	-2,447.40	-2,367.58	1.63	1.26	1.94	
6,176.00	33.98	258.32	5,469.46	-478.69	-2,496.16	-2,414.79	1.90	1.20	-2.67	
6,265.00	33.31	259.01	5,543.55	-488.38	-2,544.51	-2,461.51	0.87	-0.75	0.78	
6,355.00	36.94	258.02	5,617.15	-498.71	-2,595.24	-2,510.51	4.08	4.03	-1.10	
6,445.00	36.72	254.57	5,689.20	-511.48	-2,647.63	-2,560.85	2.31	-0.24	-3.83	
6,534.00	36.01	255.90	5,760.87	-524.93	-2,698.66	-2,609.74	1.19	-0.80	1.49	
6,624.00	36.24	261.46	5,833.58	-535.33	-2,750.64	-2,659.97	3.65	0.26	6.18	
6,713.00	38.55	264.46	5,904.29	-541.92	-2,804.27	-2,712.33	3.31	2.60	3.37	
6,803.00	39.94	262.11	5,973.99	-548.59	-2,860.80	-2,767.55	2.26	1.54	-2.61	
6,893.00	36.88	255.69	6,044.54	-559.24	-2,915.62	-2,820.57	5.58	-3.40	-7.13	
6,982.00	28.99	255.67	6,119.17	-571.20	-2,962.47	-2,865.51	8.87	-8.87	-0.02	
7,072.00	22.09	252.14	6,200.34	-581.80	-2,999.76	-2,901.14	7.85	-7.67	-3.92	
7,162.00	16.18	242.88	6,285.34	-592.72	-3,027.06	-2,926.82	7.36	-6.57	-10.29	
7,251.00	12.53	220.15	6,371.62	-605.76	-3,044.34	-2,942.30	7.47	-4.10	-25.54	
7,341.00	10.74	185.71	6,459.87	-621.59	-3,051.48	-2,947.36	7.84	-1.99	-38.27	
7,430.00	11.88	156.58	6,547.21	-638.26	-3,048.66	-2,942.44	6.47	1.28	-32.73	
7,520.00	14.15	134.19	6,634.95	-654.44	-3,037.08	-2,928.89	6.09	2.52	-24.88	
7,609.00	18.69	117.80	6,720.34	-668.69	-3,016.64	-2,906.81	7.24	5.10	-18.42	
7,699.00	24.67	111.83	6,803.95	-682.42	-2,986.42	-2,875.08	7.07	6.64	-6.63	
7,789.00	34.84	106.80	6,881.99	-696.87	-2,944.26	-2,831.42	11.63	11.30	-5.59	
7,878.00	45.30	98.82	6,950.05	-709.11	-2,888.47	-2,774.53	13.07	11.75	-8.97	
7,968.00	53.84	96.72	7,008.37	-718.28	-2,820.65	-2,706.10	9.65	9.49	-2.33	
8,058.00	57.46	92.93	7,059.15	-724.48	-2,746.64	-2,631.90	5.32	4.02	-4.21	
8,147.00	58.39	89.82	7,106.42	-726.28	-2,671.26	-2,556.91	3.14	1.04	-3.49	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Camenisch 33-5HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	PD 562 @ 4896.00usft
Site:	Camenisch 10-33HZ Pad	MD Reference:	PD 562 @ 4896.00usft
Well:	Camenisch 33-5HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Fhartmann

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,237.00	71.80	90.55	7,144.24	-726.57	-2,589.82	-2,476.09	14.92	14.90	0.81	
8,327.00	79.38	90.62	7,166.62	-727.46	-2,502.72	-2,389.59	8.42	8.42	0.08	
8,416.00	79.62	89.64	7,182.84	-727.66	-2,415.21	-2,302.77	1.12	0.27	-1.10	
8,506.00	87.66	90.65	7,192.80	-727.89	-2,325.84	-2,214.09	9.00	8.93	1.12	
Heel @ 8506' MD (1649 FSL, 848 FWL)										
8,596.00	88.26	88.30	7,196.00	-727.06	-2,235.91	-2,125.00	2.69	0.67	-2.61	
8,685.00	88.95	92.18	7,198.17	-727.44	-2,146.95	-2,036.72	4.43	0.78	4.36	
8,775.00	89.61	91.33	7,199.30	-730.19	-2,057.00	-1,947.16	1.20	0.73	-0.94	
8,864.00	90.26	91.51	7,199.40	-732.40	-1,968.03	-1,858.63	0.76	0.73	0.20	
8,954.00	85.88	89.31	7,202.43	-733.05	-1,878.11	-1,769.36	5.45	-4.87	-2.44	
9,043.00	84.83	88.71	7,209.64	-731.51	-1,789.42	-1,681.59	1.36	-1.18	-0.67	
9,133.00	85.27	89.21	7,217.41	-729.89	-1,699.77	-1,592.88	0.74	0.49	0.56	
9,222.00	89.43	92.42	7,221.52	-731.15	-1,610.90	-1,504.57	5.90	4.67	3.61	
9,312.00	88.57	92.17	7,223.09	-734.76	-1,520.99	-1,414.94	1.00	-0.96	-0.28	
9,402.00	90.77	92.50	7,223.61	-738.42	-1,431.07	-1,325.28	2.47	2.44	0.37	
9,491.00	90.23	91.51	7,222.83	-741.54	-1,342.13	-1,236.67	1.27	-0.61	-1.11	
9,581.00	90.28	90.49	7,222.43	-743.11	-1,252.15	-1,147.22	1.13	0.06	-1.13	
9,670.00	92.58	90.65	7,220.21	-743.99	-1,163.19	-1,058.87	2.59	2.58	0.18	
9,760.00	92.37	90.16	7,216.33	-744.63	-1,073.27	-969.61	0.59	-0.23	-0.54	
9,849.00	90.99	89.54	7,213.72	-744.40	-984.31	-881.41	1.70	-1.55	-0.70	
9,939.00	89.98	88.71	7,212.96	-743.02	-894.33	-792.33	1.45	-1.12	-0.92	
10,028.00	90.55	90.31	7,212.54	-742.26	-805.34	-704.16	1.91	0.64	1.80	
10,118.00	89.35	88.14	7,212.62	-741.04	-715.35	-615.07	2.76	-1.33	-2.41	
10,208.00	88.78	89.30	7,214.09	-739.03	-625.39	-526.09	1.44	-0.63	1.29	
10,298.00	88.48	92.06	7,216.24	-740.10	-535.43	-436.73	3.08	-0.33	3.07	
10,387.00	87.74	91.99	7,219.18	-743.24	-446.53	-348.16	0.84	-0.83	-0.08	
10,477.00	90.76	92.43	7,220.36	-746.71	-356.62	-258.54	3.39	3.36	0.49	
10,566.00	90.94	92.22	7,219.04	-750.32	-267.70	-169.88	0.31	0.20	-0.24	
10,656.00	90.20	91.91	7,218.14	-753.57	-177.77	-80.27	0.89	-0.82	-0.34	
10,745.00	89.87	92.05	7,218.09	-756.64	-88.82	8.34	0.40	-0.37	0.16	
10,835.00	89.92	91.40	7,218.25	-759.35	1.14	97.92	0.72	0.06	-0.72	
10,924.00	89.48	90.92	7,218.72	-761.15	90.12	186.40	0.73	-0.49	-0.54	
11,014.00	92.16	91.69	7,217.43	-763.20	180.08	275.89	3.10	2.98	0.86	
11,104.00	91.89	91.86	7,214.25	-765.99	269.98	365.41	0.35	-0.30	0.19	
11,193.00	91.75	91.37	7,211.42	-768.49	358.90	453.92	0.57	-0.16	-0.55	
11,283.00	88.52	91.31	7,211.21	-770.60	448.86	543.42	3.59	-3.59	-0.07	
11,373.00	86.81	90.35	7,214.88	-771.90	538.77	632.76	2.18	-1.90	-1.07	
11,462.00	89.34	90.59	7,217.87	-772.63	627.71	721.07	2.86	2.84	0.27	
11,552.00	89.55	90.96	7,218.74	-773.85	717.70	810.48	0.47	0.23	0.41	
11,641.00	89.58	91.33	7,219.41	-775.63	806.68	898.96	0.42	0.03	0.42	
11,731.00	89.75	91.57	7,219.94	-777.90	896.65	988.49	0.33	0.19	0.27	
11,820.00	89.32	91.96	7,220.66	-780.65	985.60	1,077.06	0.65	-0.48	0.44	
11,910.00	88.99	92.48	7,221.99	-784.13	1,075.53	1,166.70	0.68	-0.37	0.58	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Camenisch 33-5HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	PD 562 @ 4896.00usft
Site:	Camenisch 10-33HZ Pad	MD Reference:	PD 562 @ 4896.00usft
Well:	Camenisch 33-5HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Fhartmann

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,999.00	88.56	92.62	7,223.89	-788.09	1,164.42	1,255.37	0.51	-0.48	0.16	
12,089.00	90.25	93.09	7,224.83	-792.57	1,254.30	1,345.09	1.95	1.88	0.52	
12,179.00	89.63	92.99	7,224.92	-797.35	1,344.17	1,434.83	0.70	-0.69	-0.11	
12,268.00	88.61	93.03	7,226.29	-802.02	1,433.04	1,523.57	1.15	-1.15	0.04	
12,358.00	88.19	93.09	7,228.80	-806.82	1,522.87	1,613.29	0.47	-0.47	0.07	
12,448.00	87.94	92.52	7,231.84	-811.22	1,612.71	1,702.96	0.69	-0.28	-0.63	
12,537.00	89.38	94.14	7,233.92	-816.39	1,701.53	1,791.71	2.43	1.62	1.82	
12,627.00	90.59	93.99	7,233.94	-822.77	1,791.30	1,881.56	1.35	1.34	-0.17	
12,716.00	90.25	94.66	7,233.29	-829.48	1,880.05	1,970.44	0.84	-0.38	0.75	
12,806.00	91.18	93.04	7,232.17	-835.53	1,969.83	2,060.26	2.08	1.03	-1.80	
12,895.00	90.60	91.95	7,230.79	-839.40	2,058.74	2,148.93	1.39	-0.65	-1.22	
12,934.21	90.24	92.14	7,230.50	-840.80	2,097.92	2,187.98	1.03	-0.91	0.48	
SEC 34 @ 12934.21' MD (1609 FSL)										
12,985.00	89.78	92.38	7,230.49	-842.80	2,148.67	2,238.57	1.03	-0.91	0.48	
13,075.00	90.88	90.69	7,229.97	-845.21	2,238.63	2,328.10	2.24	1.22	-1.88	
13,164.00	91.15	90.69	7,228.39	-846.28	2,327.61	2,416.49	0.30	0.30	0.00	
13,254.00	91.56	90.77	7,226.27	-847.43	2,417.58	2,505.87	0.46	0.46	0.09	
13,343.00	90.79	91.11	7,224.44	-848.89	2,506.55	2,594.30	0.95	-0.87	0.38	
13,433.00	90.22	87.63	7,223.65	-847.90	2,596.53	2,683.42	3.92	-0.63	-3.87	
13,523.00	89.82	87.10	7,223.62	-843.76	2,686.43	2,772.06	0.74	-0.44	-0.59	
13,612.00	90.87	87.16	7,223.08	-839.30	2,775.32	2,859.66	1.18	1.18	0.07	
13,702.00	90.18	87.09	7,222.25	-834.79	2,865.20	2,948.23	0.77	-0.77	-0.08	
13,792.00	90.82	86.87	7,221.47	-830.05	2,955.07	3,036.76	0.75	0.71	-0.24	
13,881.00	92.04	89.19	7,219.25	-826.99	3,043.98	3,124.56	2.94	1.37	2.61	
13,971.00	89.62	91.15	7,217.94	-827.26	3,133.96	3,213.84	3.46	-2.69	2.18	
14,060.00	89.44	91.27	7,218.67	-829.14	3,222.94	3,302.33	0.24	-0.20	0.13	
14,150.00	90.35	91.66	7,218.84	-831.44	3,312.91	3,391.86	1.10	1.01	0.43	
14,239.00	90.59	92.25	7,218.11	-834.47	3,401.85	3,480.47	0.72	0.27	0.66	
14,329.00	90.45	92.57	7,217.29	-838.26	3,491.77	3,570.13	0.39	-0.16	0.36	
14,418.00	90.95	92.47	7,216.21	-842.17	3,580.67	3,658.81	0.57	0.56	-0.11	
14,508.00	91.25	91.90	7,214.48	-845.60	3,670.59	3,748.43	0.72	0.33	-0.63	
14,598.00	91.05	91.59	7,212.67	-848.34	3,760.53	3,837.99	0.41	-0.22	-0.34	
14,687.00	90.48	90.84	7,211.48	-850.23	3,849.50	3,926.47	1.06	-0.64	-0.84	
14,777.00	90.64	91.15	7,210.60	-851.79	3,939.49	4,015.92	0.39	0.18	0.34	
14,866.00	89.27	92.23	7,210.67	-854.42	4,028.44	4,104.49	1.96	-1.54	1.21	
14,956.00	89.08	91.62	7,211.97	-857.44	4,118.38	4,194.08	0.71	-0.21	-0.68	
15,046.00	88.67	91.08	7,213.74	-859.56	4,208.34	4,283.57	0.75	-0.46	-0.60	
15,135.00	90.88	89.46	7,214.09	-859.98	4,297.33	4,371.89	3.08	2.48	-1.82	
15,225.00	90.30	88.93	7,213.16	-858.71	4,387.31	4,460.98	0.87	-0.64	-0.59	
15,314.00	89.46	89.74	7,213.35	-857.68	4,476.31	4,549.12	1.31	-0.94	0.91	
15,404.00	90.94	91.29	7,213.03	-858.49	4,566.30	4,638.48	2.38	1.64	1.72	
15,493.00	90.94	92.11	7,211.57	-861.13	4,655.25	4,727.04	0.92	0.00	0.92	
15,583.00	90.86	91.88	7,210.16	-864.26	4,745.18	4,816.64	0.27	-0.09	-0.26	
15,672.00	90.97	91.39	7,208.74	-866.80	4,834.13	4,905.19	0.56	0.12	-0.55	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well Camenisch 33-5HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	PD 562 @ 4896.00usft
Site:	Camenisch 10-33HZ Pad	MD Reference:	PD 562 @ 4896.00usft
Well:	Camenisch 33-5HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Fhartmann

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,762.00	90.52	91.27	7,207.57	-868.89	4,924.10	4,994.69	0.52	-0.50	-0.13	
15,852.00	90.16	90.75	7,207.03	-870.48	5,014.08	5,084.14	0.70	-0.40	-0.58	
15,941.00	89.47	90.74	7,207.32	-871.63	5,103.08	5,172.55	0.78	-0.78	-0.01	
16,031.00	89.14	90.15	7,208.41	-872.33	5,193.07	5,261.90	0.75	-0.37	-0.66	
16,120.00	89.06	90.11	7,209.81	-872.53	5,282.05	5,350.19	0.10	-0.09	-0.04	
16,210.00	88.69	90.08	7,211.58	-872.68	5,372.04	5,439.45	0.41	-0.41	-0.03	
16,300.00	88.44	89.90	7,213.83	-872.67	5,462.01	5,528.69	0.34	-0.28	-0.20	
16,389.00	88.83	91.95	7,215.95	-874.10	5,550.97	5,617.10	2.34	0.44	2.30	
16,479.00	90.12	92.45	7,216.77	-877.56	5,640.89	5,706.74	1.54	1.43	0.56	
16,568.00	90.35	92.51	7,216.41	-881.41	5,729.81	5,795.42	0.27	0.26	0.07	
16,658.00	89.99	91.72	7,216.14	-884.73	5,819.75	5,885.05	0.96	-0.40	-0.88	
16,747.00	89.67	90.76	7,216.41	-886.66	5,908.73	5,973.55	1.14	-0.36	-1.08	
16,837.00	89.05	89.77	7,217.41	-887.07	5,998.72	6,062.86	1.30	-0.69	-1.10	
16,927.00	89.16	89.95	7,218.82	-886.85	6,088.71	6,152.08	0.23	0.12	0.20	
17,016.00	89.02	89.95	7,220.23	-886.78	6,177.69	6,240.34	0.16	-0.16	0.00	
17,106.00	88.58	89.74	7,222.12	-886.53	6,267.67	6,329.55	0.54	-0.49	-0.23	
17,196.00	88.05	89.04	7,224.76	-885.58	6,357.63	6,418.65	0.98	-0.59	-0.78	
17,285.00	89.92	90.12	7,226.34	-884.92	6,446.61	6,506.82	2.43	2.10	1.21	
17,375.00	89.60	89.82	7,226.72	-884.88	6,536.61	6,596.08	0.49	-0.36	-0.33	
17,464.00	89.55	90.02	7,227.38	-884.75	6,625.60	6,684.33	0.23	-0.06	0.22	
17,554.00	89.06	89.83	7,228.47	-884.63	6,715.60	6,773.58	0.58	-0.54	-0.21	
17,644.00	88.99	89.59	7,230.00	-884.18	6,805.58	6,862.77	0.28	-0.08	-0.27	
Last Survey @ 17644' MD (1672 FSL, 486 FEL)										
17,715.00	88.99	89.59	7,231.25	-883.67	6,876.57	6,933.12	0.00	0.00	0.00	
TD @ 17715' MD (1675 FSL, 415 FEL)										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,945.00	1,909.73	-39.83	-280.82	First AEP Survey @ 1945' MD	
3,511.40	3,277.22	-176.33	-1,016.64	Codell Hardline @ 3511.4' MD (2222 FSL, 2164 FWL)	
8,506.00	7,192.80	-727.89	-2,325.84	Heel @ 8506' MD (1649 FSL, 848 FWL)	
12,934.21	7,230.50	-840.80	2,097.92	SEC 34 @ 12934.21' MD (1609 FSL)	
17,644.00	7,230.00	-884.18	6,805.58	Last Survey @ 17644' MD (1672 FSL, 486 FEL)	
17,715.00	7,231.25	-883.67	6,876.57	TD @ 17715' MD (1675 FSL, 415 FEL)	

Checked By: _____ Approved By: _____ Date: _____