

Occidental Petroleum

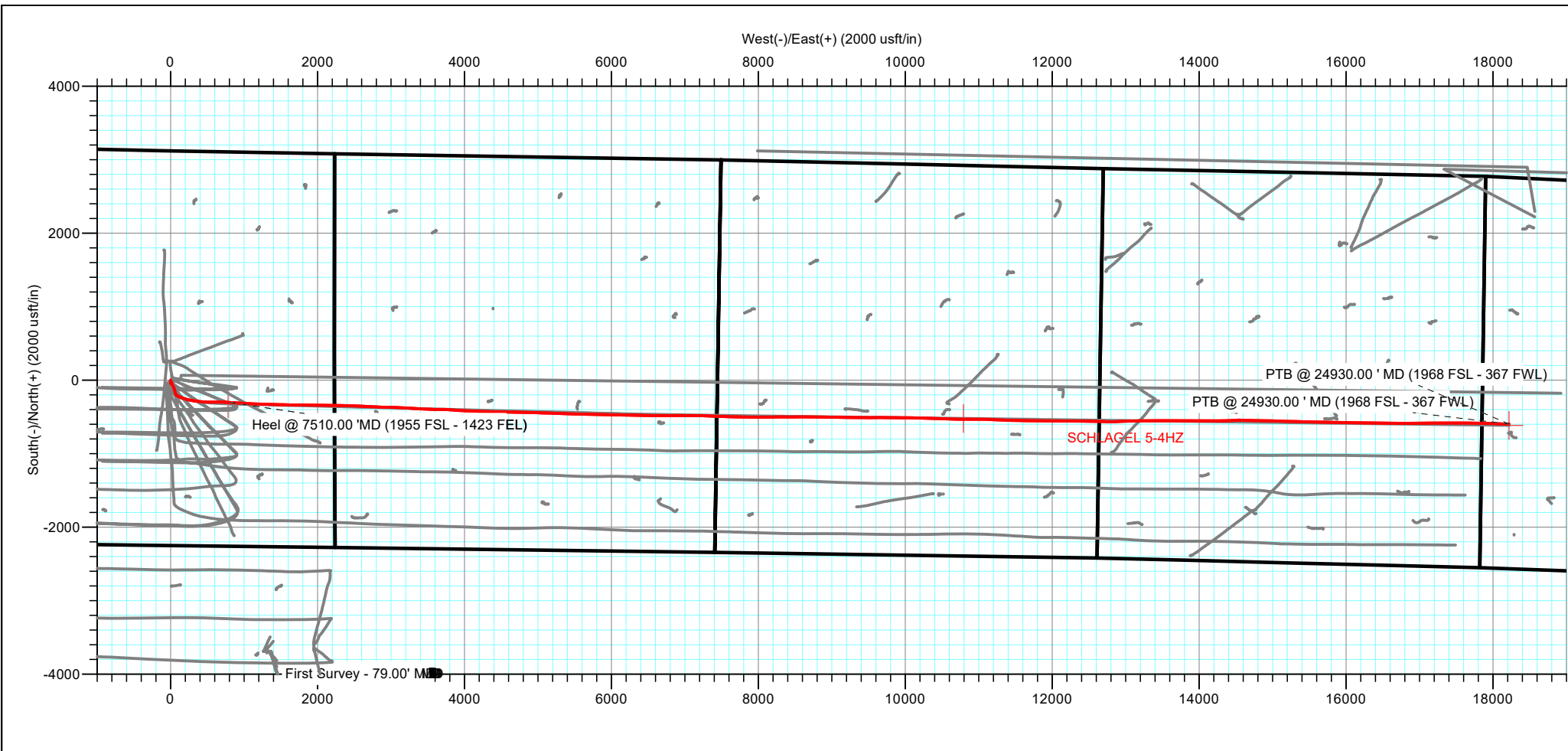
Project: Weld County, CO (UTM-NAD83)
 Site: 3N-67W-05 Schlagel 10-5HZ Pad
 Well: SCHLAGEL 5-4HZ
 Wellbore: Wellbore #1
 Design: Wellbore #1



ACTUAL LINE CALLS
SHL: 2249' FSL, 2231' FEL
LP: 1955' FSL, 1423' FEL
TOE: 1968' FSL, 367' FWL

SHL: Sec 05-T3N-R67W
LP: Sec 05-T3N-R67W
BHL: Sec 01-T3N-R67W

ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
7510.00	89.74	94.95	7067.28	-303.04	808.62	813.59	982.97	Heel @ 7510.00 'MD (1955 FSL - 1423 FEL)
24889.00	90.46	90.42	7229.05	-595.21	18177.82	18185.24	18358.52	Last Survey @ 24889.00 ' MD
24930.00	90.46	90.42	7228.72	-595.51	18218.82	18226.24	18399.52	PTB @ 24930.00 ' MD (1968 FSL - 367 FWL)



TOTAL DIRECTIONAL SERVICES LLC

Survey: Survey #2 (SCHLAGEL 5-4HZ/Wellbore #1)
 3N-67W-05 Schlagel 10-5HZ Pad
 Created By: Bethany Ball Date: 6:02, March 06 2023
 Date: _____
 Approved: _____ Date: _____

Occidental Petroleum

PROJECT DETAILS: Weld County, CO (UTM-NAD83)



Geodetic System: Universal Transverse Mercator (US Survey Feet)

Datum: North American Datum 1983

Ellipsoid: GRS 1980

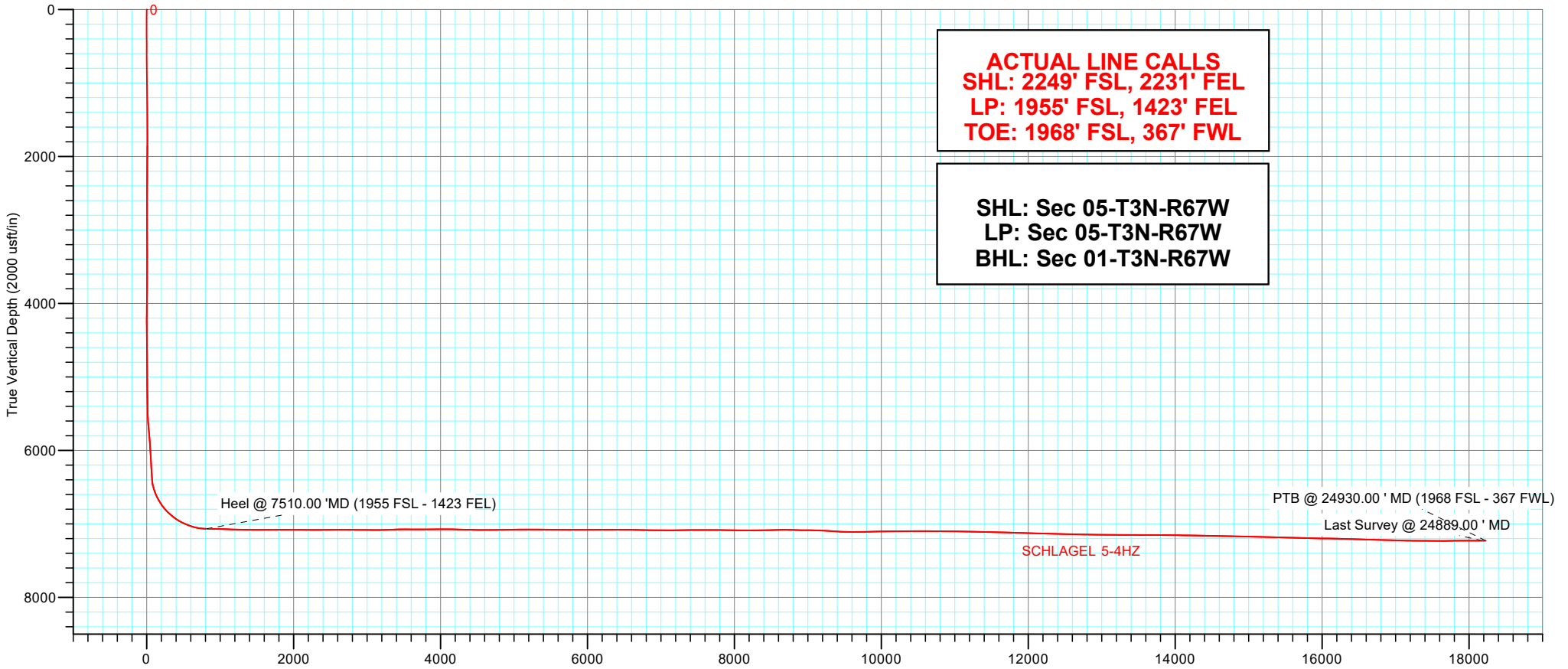
Zone: Zone 13N (108 W to 102 W)

Ground Level

Project: Weld County, CO (UTM-NAD83)
 Site: 3N-67W-05 Schlagel 10-5HZ Pad
 Well: SCHLAGEL 5-4HZ
 Wellbore: Wellbore #1
 Design: Wellbore #1

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7510.00	89.74	94.95	7067.28	-303.04	808.62	813.59	982.97	Heel @ 7510.00 'MD (1955 FSL - 1423 FEL)
24889.00	90.46	90.42	7229.05	-595.21	18177.82	18185.24	18358.52	Last Survey @ 24889.00 ' MD
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TOTAL DIRECTIONAL SERVICES LLC

Survey: Survey #2 (SCHLAGEL 5-4HZ/Wellbore #1)
 3N-67W-05 Schlagel 10-5HZ Pad
 Created By: Bethany Ball Date: 6:09, March 06 2023
 Date: _____
 Approved: _____ Date: _____

Occidental Petroleum

**Weld County, CO (UTM-NAD83)
3N-67W-05 Schlagel 10-5HZ Pad
SCHLAGEL 5-4HZ**

Wellbore #1

Design: Wellbore #1

Standard Survey Report

06 March, 2023

Survey Report

Company: Occidental Petroleum	Local Co-ordinate Reference: Well SCHLAGEL 5-4HZ
Project: Weld County, CO (UTM-NAD83)	TVD Reference: GE 4870' + KB 29' @ 4899.00usft
Site: 3N-67W-05 Schlager 10-5HZ Pad	MD Reference: GE 4870' + KB 29' @ 4899.00usft
Well: SCHLAGEL 5-4HZ	North Reference: True
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	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-67W-05 Schlager 10-5HZ Pad			
Site Position:	Northing: 14,619,213.65 usft	Latitude:	40.2539300
From: Lat/Long	Easting: 1,664,758.13 usft	Longitude:	-104.9127580
Position Uncertainty: 0.00 usft	Slot Radius: 13-3/16 "		

Well SCHLAGEL 5-4HZ			
Well Position	+N/-S 0.00 usft	Northing: 14,619,182.22 usft	Latitude: 40.2538438
	+E/-W 0.00 usft	Easting: 1,664,725.82 usft	Longitude: -104.9128739
Position Uncertainty	3.28 usft	Wellhead Elevation: usft	Ground Level: 4,870.00 usft
Grid Convergence:	0.06 °		

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2023	2/22/2023	7.98	66.42	51,700.00000000

Design Wellbore #1				
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	90.96

Survey Program		Date 3/6/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
103.00	1,856.00	Survey #1 (Wellbore #1)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination
1,958.00	24,930.00	Survey #2 (Wellbore #1)	APC_ISCWSA REV 2 MWD+	Fixed:v2:Rockies, crustal dec + 3-axis correction

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	
103.00	0.54	252.55	103.00	-0.15	-0.46	-0.46	0.52	0.52	0.00	
192.00	0.53	235.00	191.99	-0.51	-1.20	-1.19	0.18	-0.01	-19.72	
281.00	0.65	153.20	280.99	-1.19	-1.31	-1.29	0.87	0.13	-91.91	
371.00	0.91	131.93	370.98	-2.13	-0.55	-0.51	0.43	0.29	-23.63	
461.00	0.87	125.58	460.97	-3.00	0.54	0.59	0.12	-0.04	-7.06	
551.00	0.42	159.55	550.97	-3.71	1.21	1.27	0.64	-0.50	37.74	
641.00	0.78	159.40	640.96	-4.59	1.54	1.62	0.40	0.40	-0.17	
731.00	2.18	181.74	730.93	-6.88	1.70	1.82	1.65	1.56	24.82	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well SCHLAGEL 5-4HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	GE 4870' + KB 29' @ 4899.00usft
Site:	3N-67W-05 Schlager 10-5HZ Pad	MD Reference:	GE 4870' + KB 29' @ 4899.00usft
Well:	SCHLAGEL 5-4HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
821.00	2.85	179.95	820.84	-10.82	1.65	1.84	0.75	0.74	-1.99	
911.00	3.67	171.66	910.70	-15.91	2.07	2.34	1.05	0.91	-9.21	
1,001.00	4.38	165.47	1,000.47	-22.09	3.35	3.72	0.92	0.79	-6.88	
1,091.00	4.06	163.93	1,090.23	-28.48	5.10	5.58	0.38	-0.36	-1.71	
1,180.00	3.09	160.14	1,179.06	-33.76	6.79	7.35	1.12	-1.09	-4.26	
1,270.00	1.69	131.52	1,268.98	-36.92	8.60	9.22	2.00	-1.56	-31.80	
1,360.00	0.67	107.91	1,358.96	-37.96	10.10	10.73	1.23	-1.13	-26.23	
1,450.00	0.38	85.80	1,448.96	-38.10	10.90	11.53	0.39	-0.32	-24.57	
1,540.00	0.07	66.72	1,538.95	-38.06	11.24	11.88	0.35	-0.34	-21.20	
1,630.00	0.17	144.44	1,628.95	-38.15	11.37	12.01	0.19	0.11	86.36	
1,720.00	0.44	120.04	1,718.95	-38.43	11.75	12.39	0.33	0.30	-27.11	
1,810.00	1.17	335.04	1,808.95	-37.77	11.66	12.29	1.72	0.81	-161.11	
1,856.00	0.92	320.87	1,854.94	-37.06	11.23	11.85	0.78	-0.54	-30.80	
1,958.00	1.27	300.34	1,956.92	-35.85	9.74	10.34	0.51	0.34	-20.13	
2,049.00	0.33	168.17	2,047.91	-35.60	8.92	9.52	1.66	-1.03	-145.24	
2,139.00	0.44	200.31	2,137.91	-36.18	8.85	9.46	0.26	0.12	35.71	
2,228.00	0.56	218.77	2,226.91	-36.83	8.46	9.08	0.22	0.13	20.74	
2,318.00	0.61	225.06	2,316.90	-37.52	7.85	8.48	0.09	0.06	6.99	
2,408.00	0.80	216.49	2,406.90	-38.36	7.14	7.78	0.24	0.21	-9.52	
2,498.00	0.79	216.02	2,496.89	-39.37	6.40	7.06	0.01	-0.01	-0.52	
2,590.00	0.68	240.06	2,588.88	-40.15	5.55	6.22	0.35	-0.12	26.13	
2,680.00	0.68	239.20	2,678.88	-40.69	4.63	5.31	0.01	0.00	-0.96	
2,772.00	0.87	238.32	2,770.87	-41.34	3.57	4.26	0.21	0.21	-0.96	
2,863.00	1.08	101.92	2,861.86	-41.88	3.82	4.52	1.99	0.23	-149.89	
2,954.00	1.07	122.08	2,952.85	-42.51	5.38	6.09	0.41	-0.01	22.15	
3,045.00	0.77	132.26	3,043.83	-43.37	6.55	7.27	0.37	-0.33	11.19	
3,137.00	0.45	157.44	3,135.83	-44.12	7.15	7.88	0.45	-0.35	27.37	
3,227.00	0.40	206.72	3,225.83	-44.73	7.14	7.89	0.40	-0.06	54.76	
3,318.00	0.69	219.44	3,316.82	-45.43	6.65	7.41	0.34	0.32	13.98	
3,409.00	0.64	45.55	3,407.82	-45.50	6.66	7.42	1.46	-0.05	-191.09	
3,500.00	0.55	9.60	3,498.82	-44.71	7.10	7.85	0.41	-0.10	-39.51	
3,591.00	0.48	350.90	3,589.81	-43.91	7.11	7.85	0.20	-0.08	-20.55	
3,683.00	0.32	309.94	3,681.81	-43.36	6.85	7.58	0.35	-0.17	-44.52	
3,775.00	0.76	291.59	3,773.81	-42.97	6.09	6.81	0.51	0.48	-19.95	
3,866.00	0.63	270.32	3,864.80	-42.75	5.03	5.74	0.31	-0.14	-23.37	
3,958.00	0.48	299.31	3,956.80	-42.56	4.19	4.90	0.34	-0.16	31.51	
4,049.00	0.96	291.83	4,047.79	-42.08	3.15	3.85	0.54	0.53	-8.22	
4,139.00	1.19	273.79	4,137.77	-41.74	1.51	2.21	0.45	0.26	-20.04	
4,230.00	1.04	24.88	4,228.76	-40.93	0.92	1.60	2.02	-0.16	122.08	
4,319.00	1.50	34.90	4,317.74	-39.24	1.92	2.58	0.57	0.52	11.26	
4,410.00	1.36	31.33	4,408.71	-37.34	3.17	3.79	0.18	-0.15	-3.92	
4,501.00	1.04	12.18	4,499.69	-35.61	3.90	4.50	0.56	-0.35	-21.04	
4,591.00	0.85	343.94	4,589.68	-34.17	3.89	4.46	0.55	-0.21	-31.38	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well SCHLAGEL 5-4HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	GE 4870' + KB 29' @ 4899.00usft
Site:	3N-67W-05 Schlagel 10-5HZ Pad	MD Reference:	GE 4870' + KB 29' @ 4899.00usft
Well:	SCHLAGEL 5-4HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
4,682.00	0.98	352.33	4,680.67	-32.75	3.60	4.15	0.20	0.14	9.22	
4,773.00	1.59	65.99	4,771.65	-31.47	4.65	5.18	1.78	0.67	80.95	
4,893.00	1.21	69.01	4,891.62	-30.34	7.35	7.86	0.32	-0.32	2.52	
4,983.00	0.93	46.32	4,981.60	-29.49	8.77	9.26	0.56	-0.31	-25.21	
5,073.00	0.61	59.20	5,071.59	-28.74	9.71	10.19	0.40	-0.36	14.31	
5,162.00	0.55	33.10	5,160.59	-28.14	10.35	10.82	0.30	-0.07	-29.33	
5,254.00	0.26	17.31	5,252.58	-27.57	10.65	11.11	0.33	-0.32	-17.16	
5,343.00	2.03	173.75	5,341.57	-28.95	10.88	11.37	2.55	1.99	175.78	
5,433.00	4.48	164.06	5,431.42	-33.91	12.02	12.59	2.78	2.72	-10.77	
5,522.00	6.57	161.63	5,520.00	-42.09	14.58	15.29	2.36	2.35	-2.73	
5,612.00	8.41	157.07	5,609.23	-53.04	18.77	19.66	2.15	2.04	-5.07	
5,702.00	9.56	148.22	5,698.13	-65.45	25.27	26.36	1.99	1.28	-9.83	
5,792.00	10.74	150.92	5,786.72	-79.14	33.28	34.60	1.41	1.31	3.00	
5,882.00	10.93	157.19	5,875.11	-94.33	40.67	42.24	1.33	0.21	6.97	
5,971.00	10.88	164.10	5,962.51	-110.19	46.24	48.08	1.47	-0.06	7.76	
6,062.00	11.40	160.81	6,051.80	-126.94	51.55	53.67	0.90	0.57	-3.62	
6,152.00	10.68	162.98	6,140.13	-143.32	56.91	59.31	0.92	-0.80	2.41	
6,241.00	10.96	167.56	6,227.55	-159.46	61.15	63.81	1.02	0.31	5.15	
6,331.00	10.89	164.34	6,315.92	-176.00	65.29	68.23	0.68	-0.08	-3.58	
6,421.00	10.15	155.19	6,404.41	-191.39	70.91	74.11	2.03	-0.82	-10.17	
6,511.00	18.20	126.82	6,491.70	-207.05	85.53	88.99	11.57	8.94	-31.52	
6,601.00	22.24	115.68	6,576.17	-222.87	112.15	115.87	6.18	4.49	-12.38	
6,691.00	29.83	109.39	6,656.99	-237.71	148.68	152.64	8.96	8.43	-6.99	
6,781.00	34.26	106.96	6,733.26	-252.54	194.05	198.25	5.13	4.92	-2.70	
6,872.00	42.58	102.87	6,804.51	-266.89	248.66	253.10	9.56	9.14	-4.49	
6,963.00	48.82	98.27	6,868.05	-278.69	312.65	317.27	7.75	6.86	-5.05	
7,055.00	53.85	97.69	6,925.51	-288.65	383.76	388.55	5.49	5.47	-0.63	
7,146.00	62.32	91.49	6,973.61	-294.63	460.65	465.52	10.95	9.31	-6.81	
7,238.00	68.75	90.99	7,011.69	-296.43	544.32	549.21	7.01	6.99	-0.54	
7,329.00	73.00	90.02	7,041.49	-297.18	630.28	635.17	4.78	4.67	-1.07	
7,420.00	82.24	91.25	7,060.98	-298.18	719.06	723.95	10.24	10.15	1.35	
7,510.00	89.74	94.95	7,067.28	-303.04	808.62	813.59	9.29	8.33	4.11	
Heel @ 7510.00 'MD (1955 FSL - 1423 FEL)										
7,601.00	88.61	93.73	7,068.59	-309.93	899.35	904.42	1.83	-1.24	-1.34	
7,691.00	89.22	93.04	7,070.29	-315.24	989.18	994.32	1.02	0.68	-0.77	
7,780.00	87.68	92.18	7,072.70	-319.29	1,078.05	1,083.25	1.98	-1.73	-0.97	
7,870.00	87.97	91.53	7,076.11	-322.20	1,167.94	1,173.17	0.79	0.32	-0.72	
7,960.00	88.61	91.73	7,078.80	-324.76	1,257.86	1,263.12	0.74	0.71	0.22	
8,050.00	87.77	91.44	7,081.64	-327.25	1,347.78	1,353.07	0.99	-0.93	-0.32	
8,142.00	90.69	92.43	7,082.88	-330.36	1,439.71	1,445.04	3.35	3.17	1.08	
8,233.00	90.40	91.33	7,082.01	-333.34	1,530.65	1,536.02	1.25	-0.32	-1.21	
8,324.00	90.58	90.72	7,081.23	-334.97	1,621.63	1,627.02	0.70	0.20	-0.67	
8,414.00	90.68	89.68	7,080.24	-335.28	1,711.63	1,717.00	1.16	0.11	-1.16	
8,504.00	90.81	92.39	7,079.07	-336.91	1,801.60	1,806.99	3.01	0.14	3.01	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well SCHLAGEL 5-4HZ
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Well:	SCHLAGEL 5-4HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
8,595.00	89.51	90.99	7,078.82	-339.59	1,892.55	1,897.98	2.10	-1.43	-1.54	
8,686.00	88.75	89.23	7,080.20	-339.77	1,983.54	1,988.95	2.11	-0.84	-1.93	
8,777.00	89.35	91.04	7,081.71	-339.98	2,074.52	2,079.92	2.10	0.66	1.99	
8,867.00	89.08	90.79	7,082.94	-341.42	2,164.50	2,169.92	0.41	-0.30	-0.28	
8,957.00	88.96	91.33	7,084.48	-343.08	2,254.47	2,259.90	0.61	-0.13	0.60	
9,048.00	90.51	92.14	7,084.90	-345.84	2,345.42	2,350.89	1.92	1.70	0.89	
9,139.00	91.21	91.25	7,083.54	-348.53	2,436.37	2,441.87	1.24	0.77	-0.98	
9,230.00	91.59	90.98	7,081.31	-350.30	2,527.33	2,532.84	0.51	0.42	-0.30	
9,320.00	89.88	93.61	7,080.16	-353.90	2,617.24	2,622.80	3.49	-1.90	2.92	
9,411.00	89.62	92.65	7,080.56	-358.87	2,708.10	2,713.73	1.09	-0.29	-1.05	
9,500.00	89.52	92.66	7,081.23	-363.00	2,797.00	2,802.69	0.11	-0.11	0.01	
9,591.00	89.09	92.13	7,082.33	-366.80	2,887.91	2,893.65	0.75	-0.47	-0.58	
9,680.00	88.88	91.41	7,083.91	-369.55	2,976.86	2,982.63	0.84	-0.24	-0.81	
9,772.00	89.07	91.10	7,085.55	-371.56	3,068.82	3,074.62	0.40	0.21	-0.34	
9,861.00	91.32	93.15	7,085.25	-374.86	3,157.75	3,163.59	3.42	2.53	2.30	
9,951.00	92.30	93.17	7,082.41	-379.82	3,247.57	3,253.47	1.09	1.09	0.02	
10,042.00	92.22	94.31	7,078.82	-385.75	3,338.30	3,344.29	1.25	-0.09	1.25	
10,132.00	91.42	93.01	7,075.96	-391.49	3,428.07	3,434.15	1.70	-0.89	-1.44	
10,223.00	89.39	91.88	7,075.32	-395.37	3,518.98	3,525.11	2.55	-2.23	-1.24	
10,313.00	89.49	90.65	7,076.19	-397.36	3,608.95	3,615.10	1.37	0.11	-1.37	
10,404.00	90.11	89.63	7,076.51	-397.58	3,699.95	3,706.09	1.31	0.68	-1.12	
10,495.00	91.13	94.65	7,075.53	-400.98	3,790.85	3,797.03	5.63	1.12	5.52	
10,586.00	90.05	93.60	7,074.59	-407.52	3,881.60	3,887.89	1.66	-1.19	-1.15	
10,677.00	89.98	93.78	7,074.57	-413.38	3,972.42	3,978.78	0.21	-0.08	0.20	
10,768.00	89.58	92.95	7,074.92	-418.72	4,063.26	4,069.70	1.01	-0.44	-0.91	
10,859.00	89.35	92.47	7,075.77	-423.02	4,154.15	4,160.66	0.58	-0.25	-0.53	
10,948.00	88.85	91.63	7,077.16	-426.21	4,243.08	4,249.63	1.10	-0.56	-0.94	
11,038.00	88.41	91.78	7,079.32	-428.88	4,333.02	4,339.59	0.52	-0.49	0.17	
11,129.00	88.64	90.97	7,081.66	-431.07	4,423.96	4,430.56	0.93	0.25	-0.89	
11,220.00	88.92	90.56	7,083.60	-432.28	4,514.93	4,521.54	0.55	0.31	-0.45	
11,310.00	89.38	91.21	7,084.93	-433.67	4,604.91	4,611.53	0.88	0.51	0.72	
11,402.00	90.36	90.82	7,085.14	-435.30	4,696.89	4,703.53	1.15	1.07	-0.42	
11,492.00	91.12	91.57	7,083.98	-437.18	4,786.86	4,793.52	1.19	0.84	0.83	
11,583.00	91.56	90.97	7,081.85	-439.20	4,877.82	4,884.49	0.82	0.48	-0.66	
11,675.00	91.06	91.90	7,079.75	-441.50	4,969.76	4,976.46	1.15	-0.54	1.01	
11,766.00	91.20	91.91	7,077.95	-444.52	5,060.69	5,067.43	0.15	0.15	0.01	
11,855.00	89.65	91.49	7,077.29	-447.16	5,149.65	5,156.42	1.80	-1.74	-0.47	
11,946.00	91.02	91.49	7,076.76	-449.53	5,240.62	5,247.41	1.51	1.51	0.00	
12,037.00	88.85	92.33	7,076.86	-452.56	5,331.56	5,338.39	2.56	-2.38	0.92	
12,129.00	89.25	92.29	7,078.39	-456.27	5,423.47	5,430.35	0.44	0.43	-0.04	
12,220.00	89.97	91.94	7,079.01	-459.63	5,514.41	5,521.33	0.88	0.79	-0.38	
12,309.00	89.15	91.15	7,079.69	-462.03	5,603.37	5,610.32	1.28	-0.92	-0.89	
12,400.00	89.48	91.64	7,080.78	-464.24	5,694.34	5,701.31	0.65	0.36	0.54	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well SCHLAGEL 5-4HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	GE 4870' + KB 29' @ 4899.00usft
Site:	3N-67W-05 Schlagel 10-5HZ Pad	MD Reference:	GE 4870' + KB 29' @ 4899.00usft
Well:	SCHLAGEL 5-4HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
12,490.00	89.64	91.09	7,081.47	-466.39	5,784.31	5,791.31	0.64	0.18	-0.61	
12,582.00	89.52	91.04	7,082.14	-468.10	5,876.29	5,883.31	0.14	-0.13	-0.05	
12,671.00	90.37	91.18	7,082.23	-469.82	5,965.27	5,972.31	0.97	0.96	0.16	
12,761.00	91.31	90.67	7,080.91	-471.27	6,055.25	6,062.29	1.19	1.04	-0.57	
12,851.00	89.45	91.56	7,080.31	-473.02	6,145.22	6,152.29	2.29	-2.07	0.99	
12,940.00	90.18	90.73	7,080.60	-474.80	6,234.20	6,241.28	1.24	0.82	-0.93	
13,030.00	90.32	92.17	7,080.21	-477.08	6,324.17	6,331.28	1.61	0.16	1.60	
13,120.00	91.29	91.43	7,078.94	-479.91	6,414.12	6,421.26	1.36	1.08	-0.82	
13,210.00	89.35	91.11	7,078.44	-481.90	6,504.09	6,511.25	2.18	-2.16	-0.36	
13,300.00	88.20	90.79	7,080.36	-483.39	6,594.06	6,601.23	1.33	-1.28	-0.36	
13,392.00	89.07	89.54	7,082.56	-483.66	6,686.03	6,693.19	1.66	0.95	-1.36	
13,483.00	88.44	88.96	7,084.53	-482.47	6,777.00	6,784.13	0.94	-0.69	-0.64	
13,573.00	89.45	90.06	7,086.19	-481.70	6,866.97	6,874.08	1.66	1.12	1.22	
13,663.00	89.18	90.06	7,087.27	-481.79	6,956.97	6,964.06	0.30	-0.30	0.00	
13,753.00	89.93	91.09	7,087.97	-482.70	7,046.96	7,054.06	1.42	0.83	1.14	
13,844.00	89.98	90.12	7,088.04	-483.66	7,137.95	7,145.05	1.07	0.05	-1.07	
13,935.00	90.18	89.47	7,087.91	-483.33	7,228.95	7,236.04	0.75	0.22	-0.71	
14,027.00	90.57	92.33	7,087.31	-484.78	7,320.93	7,328.02	3.14	0.42	3.11	
14,117.00	91.87	92.79	7,085.39	-488.79	7,410.82	7,417.97	1.53	1.44	0.51	
14,207.00	89.76	92.18	7,084.11	-492.70	7,500.72	7,507.92	2.44	-2.34	-0.68	
14,297.00	90.55	92.72	7,083.87	-496.54	7,590.63	7,597.89	1.06	0.88	0.60	
14,386.00	88.71	91.30	7,084.44	-499.66	7,679.57	7,686.86	2.61	-2.07	-1.60	
14,476.00	89.71	91.16	7,085.68	-501.60	7,769.54	7,776.85	1.12	1.11	-0.16	
14,567.00	89.75	91.06	7,086.11	-503.36	7,860.52	7,867.85	0.12	0.04	-0.11	
14,656.00	89.11	89.43	7,087.00	-503.74	7,949.51	7,956.84	1.97	-0.72	-1.83	
14,746.00	89.52	88.93	7,088.07	-502.45	8,039.50	8,046.79	0.72	0.46	-0.56	
14,837.00	89.96	88.85	7,088.49	-500.69	8,130.48	8,137.73	0.49	0.48	-0.09	
14,928.00	90.42	88.93	7,088.18	-498.93	8,221.46	8,228.67	0.51	0.51	0.09	
15,017.00	90.20	90.65	7,087.70	-498.60	8,310.46	8,317.64	1.95	-0.25	1.93	
15,107.00	91.14	91.31	7,086.65	-500.14	8,400.44	8,407.64	1.28	1.04	0.73	
15,199.00	90.85	89.67	7,085.05	-500.93	8,492.41	8,499.62	1.81	-0.32	-1.78	
15,289.00	91.72	89.03	7,083.03	-499.90	8,582.39	8,589.56	1.20	0.97	-0.71	
15,382.00	89.88	90.39	7,081.74	-499.43	8,675.37	8,682.52	2.46	-1.98	1.46	
15,474.00	88.48	88.48	7,083.05	-498.53	8,767.35	8,774.47	2.57	-1.52	-2.08	
15,563.00	88.39	91.08	7,085.48	-498.19	8,856.31	8,863.41	2.92	-0.10	2.92	
15,654.00	89.63	92.17	7,087.06	-500.77	8,947.25	8,954.39	1.81	1.36	1.20	
15,744.00	90.02	92.20	7,087.33	-504.20	9,037.19	9,044.37	0.43	0.43	0.03	
15,834.00	87.51	90.45	7,089.27	-506.28	9,127.13	9,134.33	3.40	-2.79	-1.94	
16,021.00	86.36	90.05	7,099.27	-507.09	9,313.86	9,321.05	0.65	-0.61	-0.21	
16,113.00	85.82	89.93	7,105.54	-507.08	9,405.64	9,412.82	0.60	-0.59	-0.13	
16,202.00	88.65	89.18	7,109.84	-506.39	9,494.53	9,501.68	3.29	3.18	-0.84	
16,292.00	90.73	90.78	7,110.32	-506.36	9,584.52	9,591.66	2.92	2.31	1.78	
16,382.00	90.64	90.63	7,109.25	-507.46	9,674.51	9,681.65	0.19	-0.10	-0.17	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well SCHLAGEL 5-4HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	GE 4870' + KB 29' @ 4899.00usft
Site:	3N-67W-05 Schlagel 10-5HZ Pad	MD Reference:	GE 4870' + KB 29' @ 4899.00usft
Well:	SCHLAGEL 5-4HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
16,472.00	90.68	90.42	7,108.21	-508.29	9,764.50	9,771.64	0.24	0.04	-0.23	
16,561.00	90.86	90.51	7,107.01	-509.01	9,853.49	9,860.63	0.23	0.20	0.10	
16,652.00	90.63	90.98	7,105.83	-510.19	9,944.47	9,951.62	0.57	-0.25	0.52	
16,742.00	90.89	90.85	7,104.64	-511.63	10,034.45	10,041.61	0.32	0.29	-0.14	
16,832.00	90.48	91.38	7,103.56	-513.38	10,124.43	10,131.61	0.74	-0.46	0.59	
16,922.00	90.58	91.14	7,102.73	-515.36	10,214.40	10,221.60	0.29	0.11	-0.27	
17,012.00	90.61	91.89	7,101.79	-517.74	10,304.36	10,311.59	0.83	0.03	0.83	
17,102.00	90.58	91.54	7,100.86	-520.43	10,394.32	10,401.58	0.39	-0.03	-0.39	
17,190.00	90.55	91.71	7,099.99	-522.93	10,482.28	10,489.57	0.20	-0.03	0.19	
17,280.00	90.71	92.44	7,099.00	-526.19	10,572.21	10,579.55	0.83	0.18	0.81	
17,369.00	89.72	91.60	7,098.67	-529.32	10,661.16	10,668.53	1.46	-1.11	-0.94	
17,461.00	89.26	89.84	7,099.49	-530.48	10,753.14	10,760.52	1.98	-0.50	-1.91	
17,551.00	89.18	89.80	7,100.71	-530.20	10,843.13	10,850.49	0.10	-0.09	-0.04	
17,642.00	89.19	90.74	7,102.01	-530.63	10,934.12	10,941.48	1.03	0.01	1.03	
17,733.00	89.41	90.84	7,103.12	-531.88	11,025.11	11,032.47	0.27	0.24	0.11	
17,824.00	89.44	91.34	7,104.03	-533.61	11,116.08	11,123.46	0.55	0.03	0.55	
17,915.00	89.19	92.87	7,105.12	-536.95	11,207.01	11,214.44	1.70	-0.27	1.68	
18,004.00	88.48	92.94	7,106.93	-541.46	11,295.88	11,303.37	0.80	-0.80	0.08	
18,094.00	88.41	91.40	7,109.37	-544.87	11,385.78	11,393.31	1.71	-0.08	-1.71	
18,185.00	88.47	90.47	7,111.85	-546.35	11,476.73	11,484.28	1.02	0.07	-1.02	
18,276.00	88.59	91.18	7,114.18	-547.66	11,567.69	11,575.24	0.79	0.13	0.78	
18,366.00	88.18	90.86	7,116.72	-549.27	11,657.64	11,665.21	0.58	-0.46	-0.36	
18,457.00	88.51	90.98	7,119.35	-550.73	11,748.59	11,756.17	0.39	0.36	0.13	
18,547.00	88.16	91.01	7,121.96	-552.29	11,838.54	11,846.13	0.39	-0.39	0.03	
18,638.00	88.13	90.61	7,124.91	-553.57	11,929.48	11,937.08	0.44	-0.03	-0.44	
18,730.00	88.41	90.93	7,127.69	-554.81	12,021.43	12,029.04	0.46	0.30	0.35	
18,820.00	88.19	89.75	7,130.36	-555.34	12,111.39	12,118.99	1.33	-0.24	-1.31	
18,909.00	88.46	89.65	7,132.96	-554.88	12,200.35	12,207.94	0.32	0.30	-0.11	
18,998.00	88.52	90.22	7,135.30	-554.78	12,289.32	12,296.89	0.64	0.07	0.64	
19,088.00	88.39	91.00	7,137.73	-555.73	12,379.28	12,386.85	0.88	-0.14	0.87	
19,178.00	88.25	90.05	7,140.37	-556.56	12,469.24	12,476.81	1.07	-0.16	-1.06	
19,269.00	89.15	91.45	7,142.43	-557.75	12,560.20	12,567.79	1.83	0.99	1.54	
19,360.00	89.11	93.07	7,143.81	-561.34	12,651.12	12,658.75	1.78	-0.04	1.78	
19,449.00	89.11	90.89	7,145.20	-564.41	12,740.05	12,747.72	2.45	0.00	-2.45	
19,540.00	89.11	89.01	7,146.61	-564.33	12,831.03	12,838.69	2.07	0.00	-2.07	
19,631.00	89.07	87.84	7,148.06	-561.83	12,921.99	12,929.59	1.29	-0.04	-1.29	
19,720.00	89.11	87.20	7,149.47	-557.98	13,010.89	13,018.41	0.72	0.04	-0.72	
19,812.00	89.19	88.59	7,150.83	-554.60	13,102.82	13,110.27	1.51	0.09	1.51	
19,902.00	90.23	89.05	7,151.29	-552.75	13,192.80	13,200.21	1.26	1.16	0.51	
19,993.00	89.95	89.32	7,151.15	-551.45	13,283.79	13,291.16	0.43	-0.31	0.30	
20,082.00	90.03	90.12	7,151.16	-551.02	13,372.78	13,380.14	0.90	0.09	0.90	
20,174.00	90.17	90.48	7,151.00	-551.50	13,464.78	13,472.13	0.42	0.15	0.39	
20,264.00	90.01	89.29	7,150.86	-551.32	13,554.78	13,562.12	1.33	-0.18	-1.32	
20,354.00	89.38	89.68	7,151.34	-550.51	13,644.78	13,652.08	0.82	-0.70	0.43	

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well SCHLAGEL 5-4HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	GE 4870' + KB 29' @ 4899.00usft
Site:	3N-67W-05 Schlagel 10-5HZ Pad	MD Reference:	GE 4870' + KB 29' @ 4899.00usft
Well:	SCHLAGEL 5-4HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
20,446.00	89.36	89.64	7,152.35	-549.97	13,736.77	13,744.05	0.05	-0.02	-0.04
20,537.00	89.20	91.53	7,153.50	-550.90	13,827.75	13,835.04	2.08	-0.18	2.08
20,627.00	89.16	90.28	7,154.78	-552.32	13,917.73	13,925.03	1.39	-0.04	-1.39
20,717.00	89.33	89.78	7,155.97	-552.36	14,007.72	14,015.01	0.59	0.19	-0.56
20,807.00	89.59	90.13	7,156.82	-552.29	14,097.72	14,104.99	0.48	0.29	0.39
20,897.00	89.25	90.38	7,157.73	-552.69	14,187.71	14,194.98	0.47	-0.38	0.28
20,986.00	89.18	89.32	7,158.95	-552.46	14,276.70	14,283.95	1.19	-0.08	-1.19
21,076.00	89.28	87.85	7,160.16	-550.24	14,366.66	14,373.87	1.64	0.11	-1.63
21,166.00	88.57	87.33	7,161.85	-546.45	14,456.57	14,463.69	0.98	-0.79	-0.58
21,256.00	89.15	89.42	7,163.64	-543.90	14,546.51	14,553.58	2.41	0.64	2.32
21,345.00	88.44	92.00	7,165.51	-545.01	14,635.47	14,642.55	3.01	-0.80	2.90
21,435.00	88.35	90.85	7,168.03	-547.24	14,725.41	14,732.51	1.28	-0.10	-1.28
21,525.00	88.27	92.58	7,170.68	-549.93	14,815.33	14,822.46	1.92	-0.09	1.92
21,615.00	88.71	90.46	7,173.06	-552.32	14,905.26	14,912.42	2.40	0.49	-2.36
21,705.00	88.97	90.31	7,174.88	-552.93	14,995.24	15,002.40	0.33	0.29	-0.17
21,795.00	88.61	92.81	7,176.78	-555.37	15,085.18	15,092.36	2.81	-0.40	2.78
21,885.00	88.80	91.12	7,178.81	-558.46	15,175.10	15,182.32	1.89	0.21	-1.88
21,974.00	88.76	91.75	7,180.71	-560.69	15,264.05	15,271.30	0.71	-0.04	0.71
22,064.00	88.34	91.46	7,182.99	-563.21	15,353.98	15,361.27	0.57	-0.47	-0.32
22,154.00	88.66	91.23	7,185.34	-565.32	15,443.93	15,451.23	0.44	0.36	-0.26
22,244.00	88.61	90.82	7,187.48	-566.93	15,533.89	15,541.21	0.46	-0.06	-0.46
22,334.00	88.49	90.77	7,189.76	-568.18	15,623.85	15,631.18	0.14	-0.13	-0.06
22,425.00	88.84	91.18	7,191.88	-569.73	15,714.81	15,722.15	0.59	0.38	0.45
22,514.00	88.42	92.12	7,194.01	-572.29	15,803.75	15,811.12	1.16	-0.47	1.06
22,604.00	88.74	91.09	7,196.24	-574.81	15,893.69	15,901.08	1.20	0.36	-1.14
22,694.00	88.84	91.40	7,198.14	-576.76	15,983.64	15,991.06	0.36	0.11	0.34
22,784.00	88.81	90.49	7,199.99	-578.25	16,073.61	16,081.04	1.01	-0.03	-1.01
22,874.00	88.75	90.35	7,201.90	-578.91	16,163.59	16,171.02	0.17	-0.07	-0.16
22,964.00	88.57	90.46	7,204.01	-579.54	16,253.56	16,260.99	0.23	-0.20	0.12
23,053.00	88.32	91.06	7,206.42	-580.72	16,342.52	16,349.96	0.73	-0.28	0.67
23,142.00	88.15	91.61	7,209.16	-582.79	16,431.45	16,438.91	0.65	-0.19	0.62
23,231.00	88.52	89.47	7,211.75	-583.63	16,520.41	16,527.87	2.44	0.42	-2.40
23,321.00	88.11	90.84	7,214.40	-583.88	16,610.37	16,617.82	1.59	-0.46	1.52
23,411.00	88.54	90.06	7,217.03	-584.58	16,700.32	16,707.77	0.99	0.48	-0.87
23,501.00	88.46	90.15	7,219.38	-584.75	16,790.29	16,797.73	0.13	-0.09	0.10
23,591.00	88.31	90.18	7,221.92	-585.01	16,880.26	16,887.69	0.17	-0.17	0.03
23,680.00	88.56	90.24	7,224.35	-585.33	16,969.22	16,976.65	0.29	0.28	0.07
23,770.00	88.22	90.53	7,226.88	-585.94	17,059.18	17,066.61	0.50	-0.38	0.32
23,860.00	88.21	88.56	7,229.68	-585.22	17,149.13	17,156.53	2.19	-0.01	-2.19
23,950.00	89.54	87.75	7,231.45	-582.33	17,239.07	17,246.40	1.73	1.48	-0.90
24,040.00	89.22	90.10	7,232.42	-580.64	17,329.04	17,336.34	2.64	-0.36	2.61
24,129.00	90.36	89.33	7,232.75	-580.19	17,418.04	17,425.31	1.55	1.28	-0.87
24,219.00	90.46	90.27	7,232.11	-579.88	17,508.03	17,515.29	1.05	0.11	1.04

Survey Report

Company:	Occidental Petroleum	Local Co-ordinate Reference:	Well SCHLAGEL 5-4HZ
Project:	Weld County, CO (UTM-NAD83)	TVD Reference:	GE 4870' + KB 29' @ 4899.00usft
Site:	3N-67W-05 Schlagel 10-5HZ Pad	MD Reference:	GE 4870' + KB 29' @ 4899.00usft
Well:	SCHLAGEL 5-4HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
24,309.00	90.35	91.43	7,231.47	-581.22	17,598.02	17,605.29	1.29	-0.12	1.29	
24,399.00	90.41	90.79	7,230.87	-582.96	17,688.00	17,695.28	0.71	0.07	-0.71	
24,489.00	90.39	91.16	7,230.24	-584.49	17,777.98	17,785.28	0.41	-0.02	0.41	
24,579.00	90.18	91.02	7,229.80	-586.20	17,867.97	17,875.28	0.28	-0.23	-0.16	
24,668.00	89.98	92.25	7,229.67	-588.74	17,956.93	17,964.27	1.40	-0.22	1.38	
24,758.00	90.26	90.94	7,229.48	-591.25	18,046.89	18,054.26	1.49	0.31	-1.46	
24,847.00	90.06	92.69	7,229.24	-594.07	18,135.84	18,143.25	1.98	-0.22	1.97	
24,889.00	90.46	90.42	7,229.05	-595.21	18,177.82	18,185.24	5.49	0.95	-5.40	
Last Survey @ 24889.00 ' MD										
24,930.00	90.46	90.42	7,228.72	-595.51	18,218.82	18,226.24	0.00	0.00	0.00	
PTB @ 24930.00 ' MD (1968 FSL - 367 FWL)										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
7,510.00	7,067.28	-303.04	808.62	Heel @ 7510.00 'MD (1955 FSL - 1423 FEL)	
24,889.00	7,229.05	-595.21	18,177.82	Last Survey @ 24889.00 ' MD	
24,930.00	7,228.72	-595.51	18,218.82	PTB @ 24930.00 ' MD (1968 FSL - 367 FWL)	

Checked By: _____ Approved By: _____ Date: _____