

ANADARKO PETROLEUM CORP

WELD COUNTY (NAD 83)

SE SW SEC 35 T2N R66W 6th P.M.

BAJA BERG 35-9HZ

JOB # 2019-026-461

18 February, 2019

Survey: FINAL SURVEYS



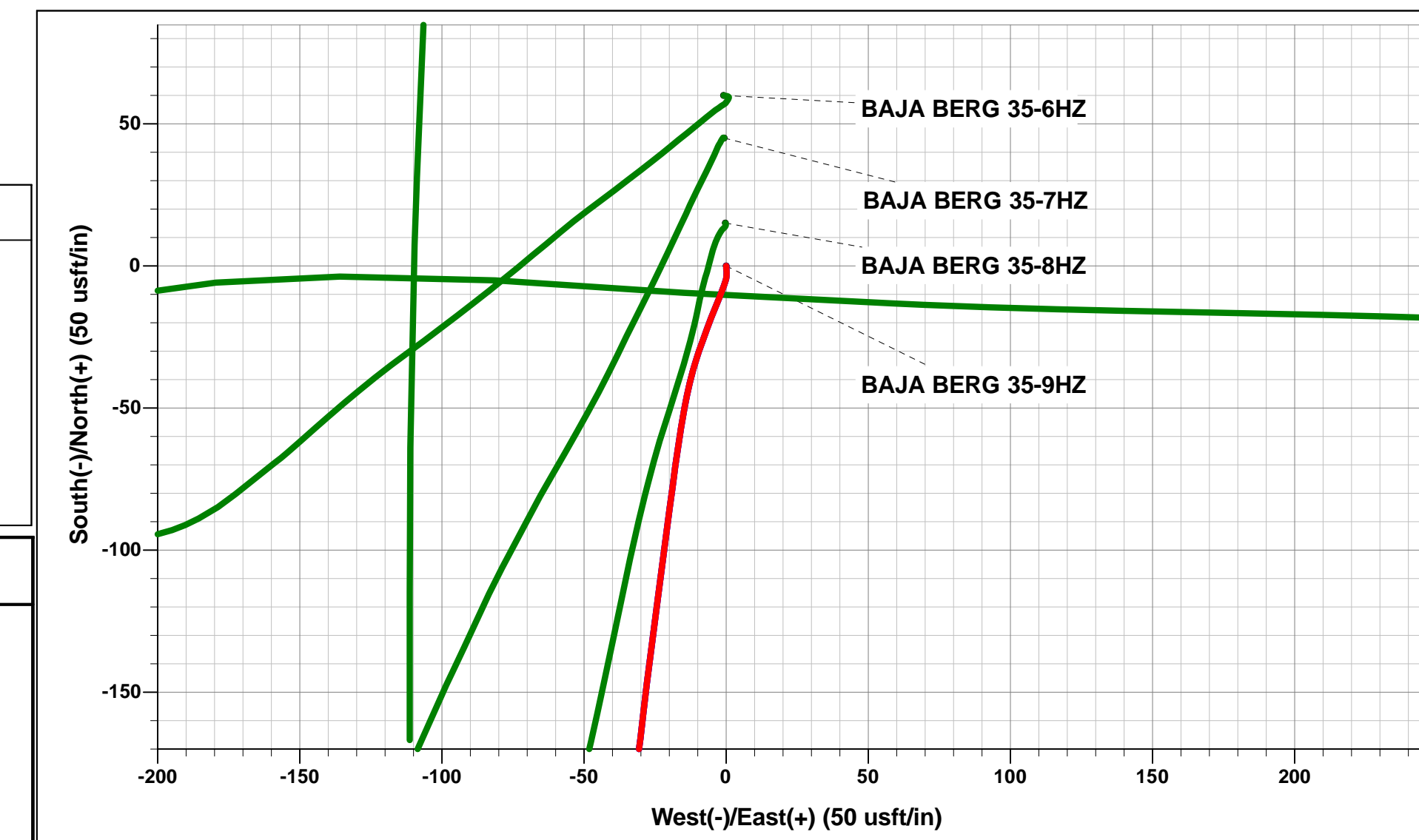


Project: WELD COUNTY (NAD 83)
Site: SE SW SEC 35 T2N R66W 6th P.M.
Well: BAJA BERG 35-9HZ
Wellbore: JOB # 2019-026-461
Design: FINAL SURVEYS



ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation		
2783.05	2878.00	16.97	207.07	-630.40	-167.33	-155.64	656.79	ENTER TGT BOX (2878'MD)		
6617.43	6760.00	1.61	80.75	-926.08	-338.90	-321.71	1039.35	KOP		
7021.35	7194.45	34.67	90.26	-905.09	-198.00	-181.23	1182.16	ENTER RADIUS HEEL (7194' MD)		
7420.70	8167.00	89.44	90.67	-929.81	656.71	673.79	2037.40	EXIT RADIUS HEEL (8167' MD)		
7420.62	8181.00	91.23	90.25	-929.93	670.71	687.79	2051.33	HEEL:40.087942,-104.856520		
7400.55	16599.00	89.71	89.29	-1049.35	9083.34	9101.19	10467.90	ENTER RADIUS TOE (16599' MD)		
7386.80	17505.00	90.62	91.44	-1071.07	9988.65	10006.75	11373.64	EXIT RADIUS TOE (17505' MD)		
7380.67	17665.00	93.88	91.82	-1076.56	10148.41	10166.59	11533.50	LAST SURVEY FEB 18, 2019		
7376.54	17726.00	93.88	91.82	-1078.49	10209.24	10227.44	11594.36	PROJ TO TD:40.087528,-104.822430		

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
BHL - BAJA BERG 35-9HZ (P3)	7395.00	-1079.73	10209.56	40.087525	-104.822428	
HEEL - BAJA BERG 35-9HZ (P3)	7411.00	-944.20	442.85	40.087902	-104.857334	
KOP - BAJA BERG 35-9HZ (P4)	6774.38	-936.97	-194.73	40.087922	-104.859612	



AS DRILLED LOCAL COORDINATES:

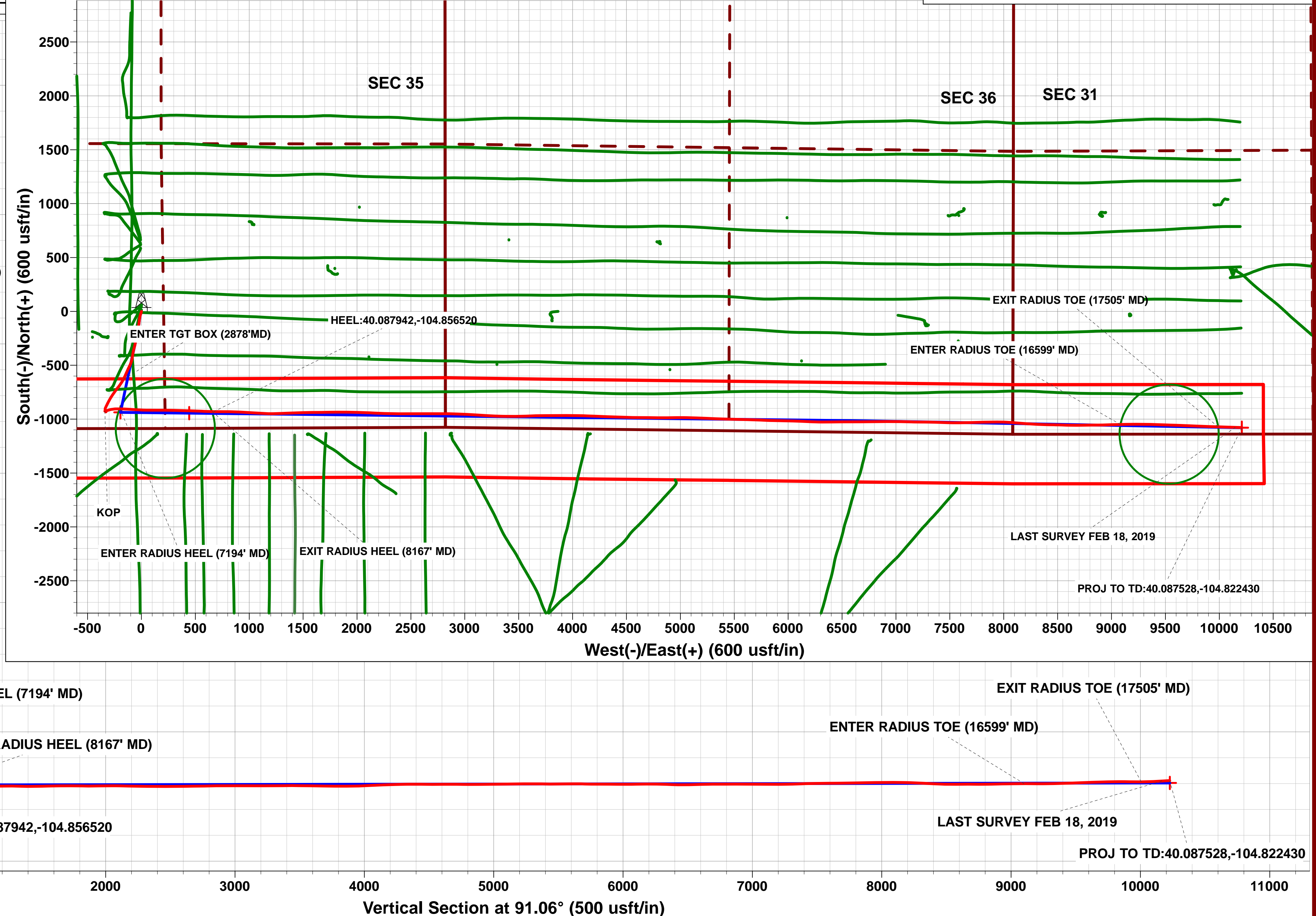
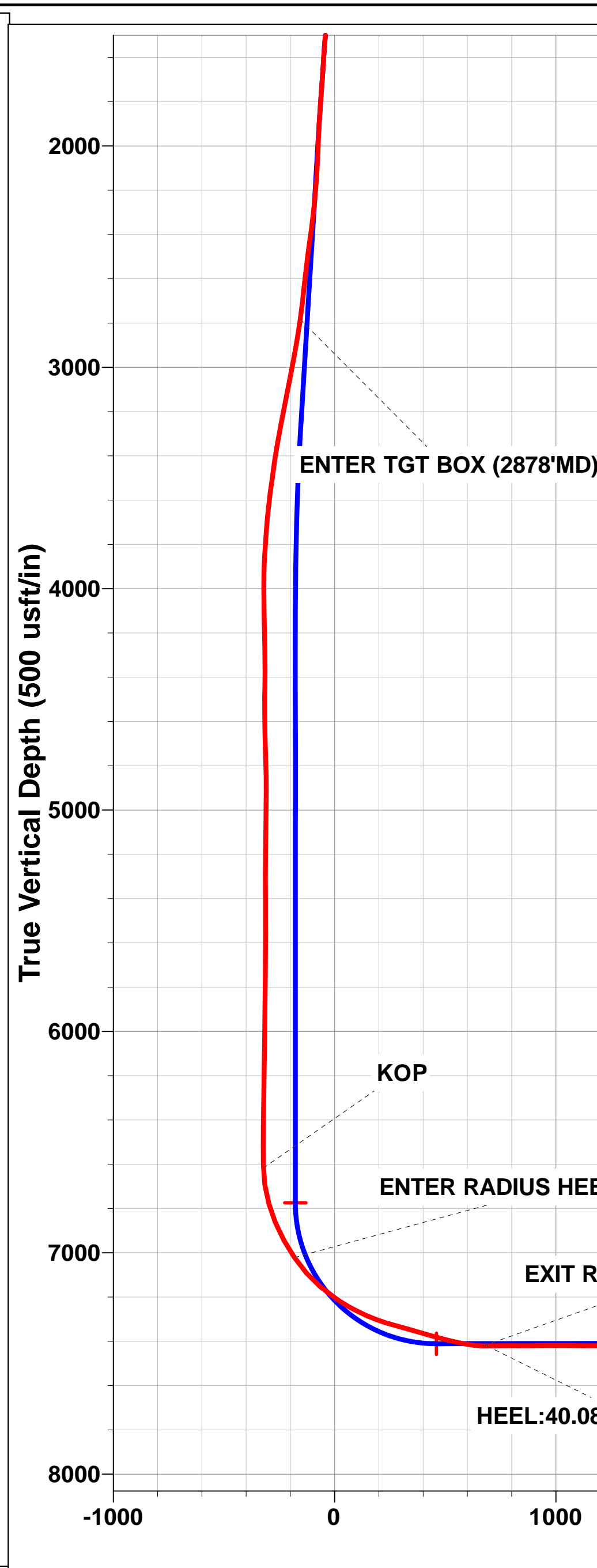
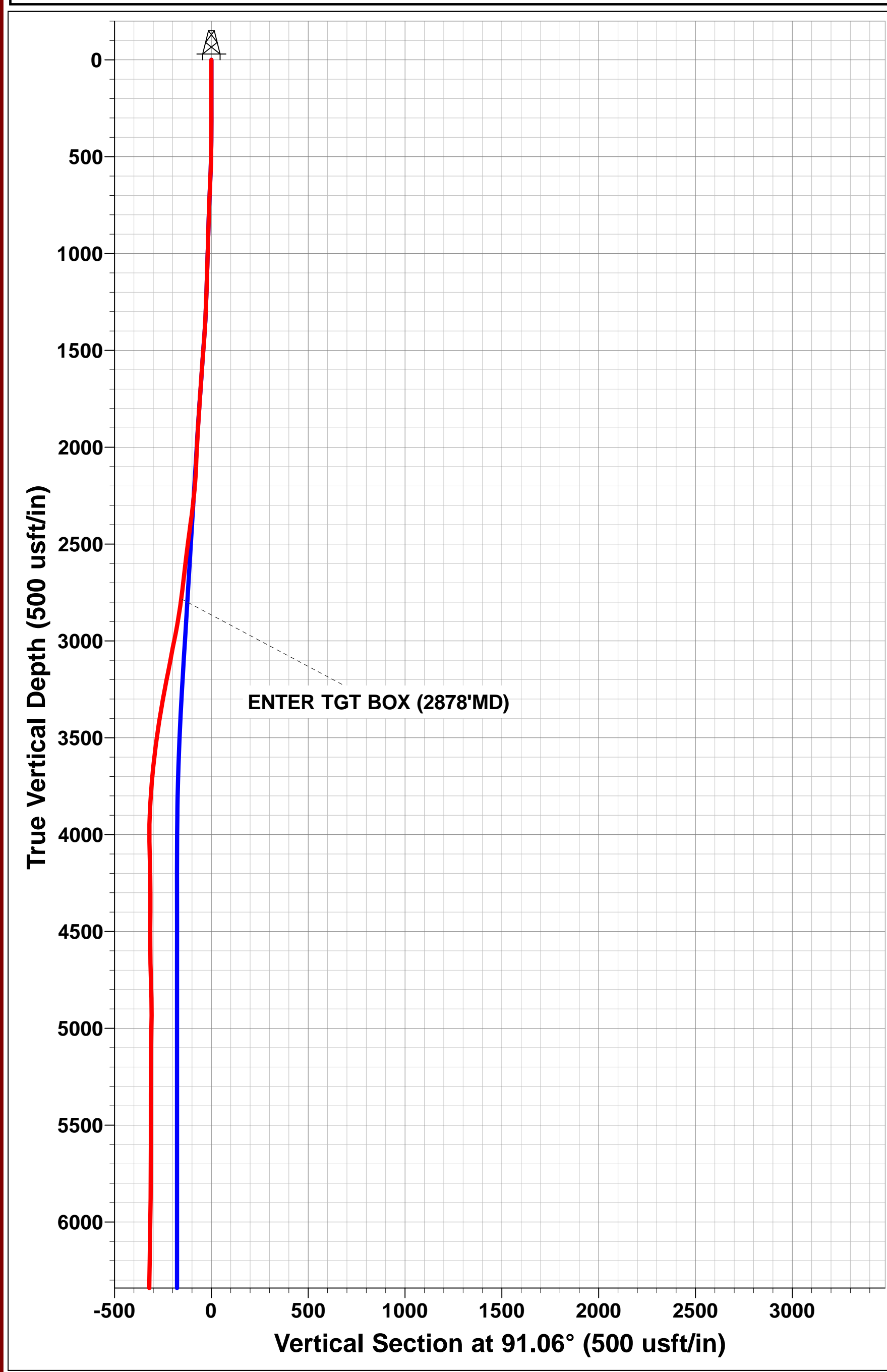
SHL: 1087ft FSL & 2451ft FWL of Sec 35

HEEL: 155.47ft FSL & 2149.14ft FEL of Sec 35

BHL: 60.24ft FSL & 2125.68ft FWL of Sec 31

Azimuths to True North
Magnetic North: 8.07°

Magnetic Field
Strength: 52041.3snT
Dip Angle: 66.55°
Date: 12/01/2019
Model: IGRF2015



Survey Report



Company:	ANADARKO PETROLEUM CORP	Local Co-ordinate Reference:	Well BAJA BERG 35-9HZ
Project:	WELD COUNTY (NAD 83)	TVD Reference:	KB 20' @ 4955.00usft (PD461)
Site:	SE SW SEC 35 T2N R66W 6th P.M.	MD Reference:	KB 20' @ 4955.00usft (PD461)
Well:	BAJA BERG 35-9HZ	North Reference:	True
Wellbore:	JOB # 2019-026-461	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	Database 1

Project	WELD COUNTY (NAD 83)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)	Using geodetic scale factor	

Site	SE SW SEC 35 T2N R66W 6th P.M.				
Site Position:		Northing:	14,559,777.58 usft	Latitude:	40.090659
From:	Lat/Long	Easting:	1,679,874.12 usft	Longitude:	-104.858919
Position Uncertainty:	0.00 usft	Slot Radius:	1.10 ft	Grid Convergence:	0.09 °

Well	BAJA BERG 35-9HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,559,717.60 usft	Latitude:	40.090494
	+E/-W	0.00 usft	Easting:	1,679,875.07 usft	Longitude:	-104.858916
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,935.00 usft

Wellbore	JOB # 2019-026-461				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/01/2019	8.07	66.55	52,041

Design	FINAL SURVEYS				
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	91.06	

Survey Program	Date	18/02/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
131.00	17,726.00	FINAL SURVEYS (JOB # 2019-026-461)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea 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	4,955.00	0.00	0.00	0.00	0.00	0.00	0.00
131.00	0.31	171.67	131.00	4,824.00	-0.35	0.05	0.06	0.24	0.24	0.00
163.00	0.40	184.33	163.00	4,792.00	-0.55	0.06	0.07	0.37	0.28	39.56
194.00	0.75	185.12	194.00	4,761.00	-0.86	0.03	0.05	1.13	1.13	2.55
226.00	0.79	164.99	225.99	4,729.01	-1.28	0.07	0.09	0.85	0.12	-62.91
258.00	1.01	175.63	257.99	4,697.01	-1.77	0.15	0.18	0.86	0.69	33.25
290.00	1.01	174.49	289.99	4,665.01	-2.34	0.19	0.24	0.06	0.00	-3.56
321.00	1.45	191.19	320.98	4,634.02	-2.99	0.14	0.20	1.82	1.42	53.87
353.00	1.36	182.40	352.97	4,602.03	-3.77	0.05	0.12	0.73	-0.28	-27.47
385.00	1.67	190.04	384.96	4,570.04	-4.61	-0.05	0.04	1.15	0.97	23.87
417.00	2.29	201.12	416.94	4,538.06	-5.66	-0.36	-0.25	2.27	1.94	34.62
449.00	2.55	196.81	448.91	4,506.09	-6.94	-0.79	-0.67	0.99	0.81	-13.47
481.00	3.38	201.56	480.87	4,474.13	-8.50	-1.35	-1.19	2.70	2.59	14.84

Survey Report



Company:	ANADARKO PETROLEUM CORP	Local Co-ordinate Reference:	Well BAJA BERG 35-9HZ
Project:	WELD COUNTY (NAD 83)	TVD Reference:	KB 20' @ 4955.00usft (PD461)
Site:	SE SW SEC 35 T2N R66W 6th P.M.	MD Reference:	KB 20' @ 4955.00usft (PD461)
Well:	BAJA BERG 35-9HZ	North Reference:	True
Wellbore:	JOB # 2019-026-461	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	Database 1

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
512.00	4.13	203.14	511.80	4,443.20	-10.38	-2.12	-1.93	2.44	2.42	5.10
544.00	5.14	201.29	543.69	4,411.31	-12.77	-3.09	-2.86	3.19	3.16	-5.78
576.00	5.32	201.82	575.56	4,379.44	-15.48	-4.17	-3.88	0.58	0.56	1.66
607.00	6.24	202.35	606.40	4,348.60	-18.38	-5.34	-5.00	2.97	2.97	1.71
639.00	7.16	199.71	638.18	4,316.82	-21.86	-6.68	-6.27	3.03	2.87	-8.25
671.00	7.87	199.80	669.91	4,285.09	-25.80	-8.09	-7.61	2.22	2.22	0.28
702.00	8.53	199.27	700.59	4,254.41	-29.97	-9.57	-9.01	2.14	2.13	-1.71
734.00	9.49	195.76	732.20	4,222.80	-34.75	-11.07	-10.42	3.46	3.00	-10.97
766.00	9.98	195.32	763.74	4,191.26	-39.96	-12.52	-11.78	1.55	1.53	-1.37
798.00	10.24	191.01	795.24	4,159.76	-45.43	-13.79	-12.95	2.50	0.81	-13.47
829.00	11.07	190.22	825.71	4,129.29	-51.06	-14.85	-13.90	2.72	2.68	-2.55
861.00	11.56	189.43	857.08	4,097.92	-57.25	-15.92	-14.86	1.61	1.53	-2.47
893.00	11.87	188.73	888.42	4,066.58	-63.66	-16.94	-15.76	1.07	0.97	-2.19
925.00	12.97	187.41	919.67	4,035.33	-70.48	-17.91	-16.60	3.55	3.44	-4.12
956.00	13.89	187.23	949.82	4,005.18	-77.62	-18.82	-17.38	2.97	2.97	-0.58
988.00	14.59	188.81	980.84	3,974.16	-85.41	-19.92	-18.34	2.50	2.19	4.94
1,020.00	15.21	186.79	1,011.76	3,943.24	-93.56	-21.04	-19.30	2.53	1.94	-6.31
1,052.00	15.69	187.41	1,042.60	3,912.40	-102.02	-22.09	-20.20	1.59	1.50	1.94
1,083.00	16.17	187.14	1,072.41	3,882.59	-110.46	-23.17	-21.12	1.57	1.55	-0.87
1,115.00	16.66	187.41	1,103.11	3,851.89	-119.43	-24.31	-22.10	1.55	1.53	0.84
1,147.00	16.74	187.76	1,133.76	3,821.24	-128.55	-25.53	-23.14	0.40	0.25	1.09
1,179.00	17.09	187.41	1,164.38	3,790.62	-137.78	-26.76	-24.20	1.14	1.09	-1.09
1,210.00	17.49	187.06	1,193.97	3,761.03	-146.92	-27.92	-25.19	1.33	1.29	-1.13
1,242.00	17.58	186.09	1,224.49	3,730.51	-156.49	-29.02	-26.12	0.96	0.28	-3.03
1,274.00	18.19	187.14	1,254.94	3,700.06	-166.26	-30.15	-27.07	2.16	1.91	3.28
1,305.00	18.33	187.49	1,284.38	3,670.62	-175.89	-31.39	-28.13	0.57	0.45	1.13
1,337.00	18.68	188.73	1,314.73	3,640.27	-185.94	-32.82	-29.38	1.65	1.09	3.87
1,368.00	19.51	191.19	1,344.02	3,610.98	-195.93	-34.58	-30.95	3.73	2.68	7.94
1,432.00	18.85	192.50	1,404.47	3,550.53	-216.51	-38.89	-34.88	1.23	-1.03	2.05
1,463.00	18.41	193.30	1,433.84	3,521.16	-226.16	-41.10	-36.91	1.64	-1.42	2.58
1,495.00	19.16	192.59	1,464.14	3,490.86	-236.20	-43.41	-39.03	2.45	2.34	-2.22
1,527.00	19.69	193.21	1,494.32	3,460.68	-246.58	-45.79	-41.22	1.78	1.66	1.94
1,558.00	19.20	193.47	1,523.55	3,431.45	-256.62	-48.17	-43.41	1.61	-1.58	0.84
1,589.00	18.54	192.86	1,552.88	3,402.12	-266.38	-50.45	-45.52	2.22	-2.13	-1.97
1,621.00	18.98	192.77	1,583.18	3,371.82	-276.42	-52.73	-47.61	1.38	1.37	-0.28
1,653.00	18.24	192.77	1,613.51	3,341.49	-286.37	-54.99	-49.68	2.31	-2.31	0.00
1,685.00	17.93	192.33	1,643.93	3,311.07	-296.07	-57.15	-51.66	1.06	-0.97	-1.37
1,748.00	18.11	193.21	1,703.84	3,251.16	-315.08	-61.46	-55.62	0.52	0.29	1.40
1,780.00	18.68	194.26	1,734.20	3,220.80	-324.89	-63.86	-57.84	2.06	1.78	3.28
1,811.00	19.16	194.44	1,763.53	3,191.47	-334.62	-66.35	-60.15	1.56	1.55	0.58
1,849.00	17.84	193.65	1,799.56	3,155.44	-346.32	-69.28	-62.86	3.54	-3.47	-2.08
1,930.00	17.38	192.08	1,876.77	3,078.23	-370.21	-74.74	-67.88	0.82	-0.57	-1.94
2,020.00	17.26	190.44	1,962.69	2,992.31	-396.48	-79.97	-72.62	0.56	-0.13	-1.82
2,110.00	16.40	188.02	2,048.83	2,906.17	-422.19	-84.16	-76.34	1.23	-0.96	-2.69
2,199.00	16.38	192.50	2,134.22	2,820.78	-446.89	-88.63	-80.35	1.42	-0.02	5.03
2,289.00	16.97	199.07	2,220.44	2,734.56	-471.69	-95.67	-86.93	2.19	0.66	7.30
2,379.00	17.32	203.23	2,306.45	2,648.55	-496.42	-105.25	-96.05	1.42	0.39	4.62
2,469.00	18.61	205.80	2,392.06	2,562.94	-521.66	-116.78	-107.11	1.68	1.43	2.86
2,559.00	17.45	205.14	2,477.64	2,477.36	-546.81	-128.76	-118.63	1.31	-1.29	-0.73
2,738.00	16.42	203.51	2,648.87	2,306.13	-594.30	-150.26	-139.24	0.63	-0.58	-0.91
2,828.00	16.54	205.82	2,735.18	2,219.82	-617.50	-160.91	-149.46	0.74	0.13	2.57
ENTER TGT BOX (2878'MD)										
2,878.00	16.97	207.07	2,783.05	2,171.95	-630.40	-167.33	-155.64	1.12	0.86	2.49

Survey Report



Company:	ANADARKO PETROLEUM CORP	Local Co-ordinate Reference:	Well BAJA BERG 35-9HZ
Project:	WELD COUNTY (NAD 83)	TVD Reference:	KB 20' @ 4955.00usft (PD461)
Site:	SE SW SEC 35 T2N R66W 6th P.M.	MD Reference:	KB 20' @ 4955.00usft (PD461)
Well:	BAJA BERG 35-9HZ	North Reference:	True
Wellbore:	JOB # 2019-026-461	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	Database 1

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,918.00	17.32	208.02	2,821.28	2,133.72	-640.86	-172.79	-160.90	1.12	0.87	2.38
3,008.00	17.57	213.99	2,907.14	2,047.86	-663.95	-186.68	-174.36	2.01	0.28	6.63
3,098.00	19.37	217.05	2,992.51	1,962.49	-687.13	-203.26	-190.52	2.27	2.00	3.40
3,188.00	17.62	217.00	3,077.85	1,877.15	-709.92	-220.46	-207.29	1.94	-1.94	-0.06
3,278.00	19.28	216.96	3,163.23	1,791.77	-732.67	-237.59	-223.99	1.84	1.84	-0.04
3,368.00	17.40	215.84	3,248.65	1,706.35	-755.46	-254.40	-240.38	2.13	-2.09	-1.24
3,458.00	18.96	213.25	3,334.16	1,620.84	-778.60	-270.30	-255.85	1.95	1.73	-2.88
3,548.00	16.36	211.34	3,419.91	1,535.09	-801.65	-284.91	-270.03	2.96	-2.89	-2.12
3,638.00	16.83	208.55	3,506.16	1,448.84	-823.92	-297.73	-282.44	1.03	0.52	-3.10
3,728.00	14.63	208.13	3,592.79	1,362.21	-845.39	-309.32	-293.63	2.45	-2.44	-0.47
3,818.00	12.74	206.32	3,680.23	1,274.77	-864.31	-319.08	-303.03	2.15	-2.10	-2.01
3,908.00	10.24	204.38	3,768.42	1,186.58	-880.50	-326.78	-310.44	2.81	-2.78	-2.16
3,998.00	7.35	206.66	3,857.35	1,097.65	-892.93	-332.67	-316.09	3.23	-3.21	2.53
4,088.00	6.27	192.84	3,946.72	1,008.28	-902.87	-336.34	-319.58	2.17	-1.20	-15.36
4,178.00	5.95	173.01	4,036.22	918.78	-912.29	-336.87	-319.93	2.36	-0.36	-22.03
4,268.00	4.06	154.08	4,125.88	829.12	-919.79	-334.91	-317.84	2.76	-2.10	-21.03
4,358.00	1.08	126.74	4,215.78	739.22	-923.16	-332.84	-315.70	3.49	-3.31	-30.38
4,448.00	0.42	138.93	4,305.77	649.23	-923.92	-331.94	-314.79	0.75	-0.73	13.54
4,538.00	0.60	232.38	4,395.77	559.23	-924.46	-332.10	-314.94	0.84	0.20	103.83
4,628.00	0.33	296.62	4,485.76	469.24	-924.63	-332.70	-315.54	0.61	-0.30	71.38
4,717.00	0.61	50.94	4,574.76	380.24	-924.21	-332.56	-315.41	0.90	0.31	128.45
4,807.00	1.20	43.14	4,664.75	290.25	-923.22	-331.55	-314.41	0.67	0.66	-8.67
4,897.00	2.34	85.49	4,754.71	200.29	-922.39	-329.07	-311.95	1.85	1.27	47.06
4,987.00	1.18	58.54	4,844.67	110.33	-921.76	-326.45	-309.34	1.55	-1.29	-29.94
5,077.00	1.23	194.53	4,934.66	20.34	-922.22	-325.90	-308.78	2.48	0.06	151.10
5,167.00	1.09	221.46	5,024.64	-69.64	-923.79	-326.71	-309.56	0.62	-0.16	29.92
5,257.00	1.65	260.63	5,114.62	-159.62	-924.64	-328.55	-311.39	1.18	0.62	43.52
5,347.00	1.30	161.39	5,204.60	-249.60	-925.82	-329.51	-312.32	2.51	-0.39	-110.27
5,437.00	1.60	182.27	5,294.57	-339.57	-928.05	-329.23	-312.01	0.67	0.33	23.20
5,527.00	1.45	199.07	5,384.54	-429.54	-930.38	-329.65	-312.38	0.52	-0.17	18.67
5,617.00	0.46	98.42	5,474.53	-519.53	-931.51	-329.67	-312.38	1.78	-1.10	-111.83
5,707.00	0.13	107.10	5,564.53	-609.53	-931.59	-329.21	-311.92	0.37	-0.37	9.64
5,797.00	0.40	287.69	5,654.53	-699.53	-931.52	-329.41	-312.12	0.59	0.30	-199.34
5,886.00	0.85	309.22	5,743.52	-788.52	-931.01	-330.22	-312.94	0.56	0.51	24.19
5,977.00	0.69	300.31	5,834.51	-879.51	-930.31	-331.22	-313.95	0.22	-0.18	-9.79
6,066.00	0.79	322.67	5,923.51	-968.51	-929.55	-332.05	-314.80	0.34	0.11	25.12
6,156.00	0.65	291.60	6,013.50	-1,058.50	-928.87	-332.90	-315.66	0.45	-0.16	-34.52
6,246.00	0.81	289.00	6,103.49	-1,148.49	-928.47	-333.98	-316.74	0.18	0.18	-2.89
6,336.00	1.19	309.32	6,193.48	-1,238.48	-927.68	-335.30	-318.08	0.57	0.42	22.58
6,426.00	1.39	309.69	6,283.46	-1,328.46	-926.39	-336.87	-319.67	0.22	0.22	0.41
6,564.00	0.50	262.63	6,421.44	-1,466.44	-925.39	-338.75	-321.57	0.81	-0.64	-34.10
6,654.00	0.38	190.88	6,511.43	-1,556.43	-925.74	-339.20	-322.01	0.58	-0.13	-79.72
6,744.00	0.17	124.83	6,601.43	-1,646.43	-926.11	-339.14	-321.95	0.39	-0.23	-73.39
KOP										
6,760.00	1.61	80.75	6,617.43	-1,662.43	-926.08	-338.90	-321.71	9.33	9.00	-275.50
6,834.00	8.51	77.06	6,691.10	-1,736.10	-924.69	-332.53	-315.37	9.33	9.32	-4.99
6,924.00	16.80	69.81	6,778.84	-1,823.84	-918.70	-313.80	-296.75	9.36	9.21	-8.06
7,013.00	23.10	77.29	6,862.47	-1,907.47	-910.41	-284.66	-267.77	7.62	7.08	8.40
7,103.00	28.55	87.97	6,943.50	-1,988.50	-905.76	-245.90	-229.10	7.94	6.06	11.87
7,193.00	34.57	90.21	7,020.15	-2,065.15	-905.09	-198.83	-182.05	6.81	6.69	2.49
ENTER RADIUS HEEL (7194' MD)										
7,194.45	34.67	90.26	7,021.35	-2,066.35	-905.09	-198.00	-181.23	7.31	7.00	3.72
7,283.00	40.91	93.11	7,091.29	-2,136.29	-906.78	-143.81	-127.01	7.31	7.05	3.21

Survey Report



Company:	ANADARKO PETROLEUM CORP	Local Co-ordinate Reference:	Well BAJA BERG 35-9HZ
Project:	WELD COUNTY (NAD 83)	TVD Reference:	KB 20' @ 4955.00usft (PD461)
Site:	SE SW SEC 35 T2N R66W 6th P.M.	MD Reference:	KB 20' @ 4955.00usft (PD461)
Well:	BAJA BERG 35-9HZ	North Reference:	True
Wellbore:	JOB # 2019-026-461	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	Database 1

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,372.00	49.88	93.60	7,153.73	-2,198.73	-910.51	-80.62	-63.76	10.09	10.08	0.55
7,462.00	55.69	93.31	7,208.14	-2,253.14	-914.82	-9.10	7.82	6.46	6.46	-0.32
7,552.00	62.02	89.85	7,254.67	-2,299.67	-916.86	67.84	84.79	7.76	7.03	-3.84
7,642.00	67.66	90.73	7,292.92	-2,337.92	-917.29	149.27	166.21	6.33	6.27	0.98
7,732.00	74.21	89.96	7,322.30	-2,367.30	-917.79	234.28	251.22	7.32	7.28	-0.86
7,822.00	74.72	91.18	7,346.41	-2,391.41	-918.65	320.99	337.93	1.42	0.57	1.36
7,912.00	73.37	92.13	7,371.15	-2,416.15	-921.15	407.48	424.45	1.81	-1.50	1.06
8,001.00	76.05	91.55	7,394.61	-2,439.61	-923.90	493.28	510.28	3.08	3.01	-0.65
8,091.00	79.70	93.00	7,413.52	-2,458.52	-927.40	581.18	598.24	4.35	4.06	1.61
EXIT RADIUS HEEL (8167' MD)										
8,167.00	89.44	90.67	7,420.70	-2,465.70	-929.81	656.71	673.79	13.17	12.81	-3.06
HEEL:40.087942,-104.856520										
8,181.00	91.23	90.25	7,420.62	-2,465.62	-929.93	670.71	687.79	13.17	12.81	-3.03
8,271.00	89.66	90.78	7,419.92	-2,464.92	-930.73	760.70	777.78	1.84	-1.74	0.59
8,361.00	90.19	91.38	7,420.04	-2,465.04	-932.43	850.68	867.78	0.89	0.59	0.67
8,450.00	90.70	92.84	7,419.35	-2,464.35	-935.71	939.61	956.76	1.74	0.57	1.64
8,540.00	89.20	93.97	7,419.43	-2,464.43	-941.05	1,029.45	1,046.68	2.09	-1.67	1.26
8,643.00	90.00	93.13	7,420.15	-2,465.15	-947.43	1,132.25	1,149.58	1.13	0.78	-0.82
8,733.00	90.97	89.35	7,419.38	-2,464.38	-949.38	1,222.21	1,239.56	4.34	1.08	-4.20
8,823.00	87.81	86.77	7,420.34	-2,465.34	-946.33	1,312.13	1,329.41	4.53	-3.51	-2.87
8,913.00	90.08	88.28	7,422.00	-2,467.00	-942.45	1,402.02	1,419.22	3.03	2.52	1.68
9,003.00	91.29	88.06	7,420.92	-2,465.92	-939.57	1,491.97	1,509.10	1.37	1.34	-0.24
9,092.00	91.59	90.00	7,418.69	-2,463.69	-938.07	1,580.92	1,598.01	2.21	0.34	2.18
9,182.00	90.42	89.27	7,417.11	-2,462.11	-937.49	1,670.91	1,687.96	1.53	-1.30	-0.81
9,272.00	88.44	88.89	7,418.00	-2,463.00	-936.05	1,760.89	1,777.90	2.24	-2.20	-0.42
9,362.00	90.11	89.55	7,419.14	-2,464.14	-934.82	1,850.87	1,867.84	2.00	1.86	0.73
9,452.00	90.90	92.15	7,418.35	-2,463.35	-936.16	1,940.84	1,957.83	3.02	0.88	2.89
9,541.00	90.42	90.94	7,417.32	-2,462.32	-938.56	2,029.80	2,046.82	1.46	-0.54	-1.36
9,631.00	88.50	93.04	7,418.17	-2,463.17	-941.68	2,119.74	2,136.79	3.16	-2.13	2.33
9,721.00	88.76	92.21	7,420.32	-2,465.32	-945.80	2,209.62	2,226.73	0.97	0.29	-0.92
9,811.00	89.20	91.49	7,421.93	-2,466.93	-948.71	2,299.55	2,316.71	0.94	0.49	-0.80
9,900.00	90.34	90.54	7,422.28	-2,467.28	-950.28	2,388.54	2,405.71	1.67	1.28	-1.07
9,990.00	89.89	90.02	7,422.10	-2,467.10	-950.72	2,478.53	2,495.70	0.76	-0.50	-0.58
10,080.00	91.25	89.26	7,421.21	-2,466.21	-950.16	2,568.53	2,585.66	1.73	1.51	-0.84
10,170.00	89.83	90.14	7,420.36	-2,465.36	-949.69	2,658.52	2,675.63	1.86	-1.58	0.98
10,260.00	91.58	89.91	7,419.25	-2,464.25	-949.73	2,748.51	2,765.61	1.96	1.94	-0.26
10,349.00	90.94	90.50	7,417.29	-2,462.29	-950.05	2,837.48	2,854.57	0.98	-0.72	0.66
10,439.00	89.40	92.47	7,417.03	-2,462.03	-952.38	2,927.45	2,944.56	2.78	-1.71	2.19
10,529.00	90.45	92.11	7,417.15	-2,462.15	-955.97	3,017.37	3,034.54	1.23	1.17	-0.40
10,619.00	90.23	94.44	7,416.61	-2,461.61	-961.12	3,107.22	3,124.47	2.60	-0.24	2.59
10,708.00	89.24	92.59	7,417.02	-2,462.02	-966.57	3,196.04	3,213.38	2.36	-1.11	-2.08
10,798.00	90.72	92.92	7,417.05	-2,462.05	-970.90	3,285.94	3,303.34	1.68	1.64	0.37
10,888.00	90.47	90.82	7,416.12	-2,461.12	-973.83	3,375.88	3,393.32	2.35	-0.28	-2.33
10,983.00	89.32	89.95	7,416.29	-2,461.29	-974.47	3,470.88	3,488.31	1.52	-1.21	-0.92
11,077.00	89.24	87.28	7,417.48	-2,462.48	-972.20	3,564.83	3,582.21	2.84	-0.09	-2.84
11,171.00	88.92	88.36	7,418.98	-2,463.98	-968.63	3,658.75	3,676.04	1.20	-0.34	1.15
11,266.00	89.72	90.21	7,420.11	-2,465.11	-967.44	3,753.73	3,770.99	2.12	0.84	1.95
11,360.00	90.38	88.60	7,420.03	-2,465.03	-966.46	3,847.72	3,864.94	1.85	0.70	-1.71
11,454.00	91.48	91.08	7,418.50	-2,463.50	-966.20	3,941.70	3,958.90	2.89	1.17	2.64
11,549.00	93.42	90.59	7,414.44	-2,459.44	-967.58	4,036.60	4,053.81	2.11	2.04	-0.52
11,643.00	91.88	92.07	7,410.10	-2,455.10	-969.76	4,130.47	4,147.70	2.27	-1.64	1.57
11,737.00	91.67	92.57	7,407.19	-2,452.19	-973.57	4,224.35	4,241.63	0.58	-0.22	0.53
11,832.00	90.78	91.97	7,405.15	-2,450.15	-977.33	4,319.25	4,336.59	1.13	-0.94	-0.63

Survey Report



Company:	ANADARKO PETROLEUM CORP	Local Co-ordinate Reference:	Well BAJA BERG 35-9HZ
Project:	WELD COUNTY (NAD 83)	TVD Reference:	KB 20' @ 4955.00usft (PD461)
Site:	SE SW SEC 35 T2N R66W 6th P.M.	MD Reference:	KB 20' @ 4955.00usft (PD461)
Well:	BAJA BERG 35-9HZ	North Reference:	True
Wellbore:	JOB # 2019-026-461	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	Database 1

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,926.00	89.04	92.25	7,405.30	-2,450.30	-980.79	4,413.18	4,430.57	1.87	-1.85	0.30
12,020.00	89.65	91.37	7,406.38	-2,451.38	-983.76	4,507.13	4,524.55	1.14	0.65	-0.94
12,115.00	91.06	90.35	7,405.79	-2,450.79	-985.19	4,602.11	4,619.55	1.83	1.48	-1.07
12,209.00	88.95	90.82	7,405.78	-2,450.78	-986.14	4,696.10	4,713.54	2.30	-2.24	0.50
12,304.00	90.02	90.00	7,406.63	-2,451.63	-986.82	4,791.09	4,808.53	1.42	1.13	-0.86
12,393.00	90.17	89.99	7,406.49	-2,451.49	-986.82	4,880.09	4,897.51	0.17	0.17	-0.01
12,483.00	91.16	89.22	7,405.44	-2,450.44	-986.20	4,970.08	4,987.47	1.39	1.10	-0.86
12,573.00	90.18	91.41	7,404.39	-2,449.39	-986.69	5,060.07	5,077.45	2.67	-1.09	2.43
12,663.00	91.43	91.77	7,403.12	-2,448.12	-989.19	5,150.02	5,167.44	1.45	1.39	0.40
12,753.00	90.15	92.39	7,401.88	-2,446.88	-992.45	5,239.95	5,257.41	1.58	-1.42	0.69
12,842.00	88.93	92.24	7,402.60	-2,447.60	-996.05	5,328.87	5,346.39	1.38	-1.37	-0.17
12,932.00	89.74	91.45	7,403.64	-2,448.64	-998.95	5,418.82	5,436.37	1.26	0.90	-0.88
13,022.00	90.72	92.04	7,403.28	-2,448.28	-1,001.69	5,508.78	5,526.36	1.27	1.09	0.66
13,112.00	90.61	91.70	7,402.24	-2,447.24	-1,004.62	5,598.72	5,616.35	0.40	-0.12	-0.38
13,201.00	88.03	91.30	7,403.29	-2,448.29	-1,006.95	5,687.68	5,705.33	2.93	-2.90	-0.45
13,291.00	90.38	93.05	7,404.54	-2,449.54	-1,010.37	5,777.59	5,795.30	3.26	2.61	1.94
13,381.00	89.04	91.12	7,405.00	-2,450.00	-1,013.64	5,867.53	5,885.27	2.61	-1.49	-2.14
13,471.00	89.95	91.12	7,405.79	-2,450.79	-1,015.40	5,957.51	5,975.27	1.01	1.01	0.00
13,560.00	89.90	91.32	7,405.91	-2,450.91	-1,017.30	6,046.48	6,064.27	0.23	-0.06	0.22
13,650.00	91.90	92.86	7,404.49	-2,449.49	-1,020.58	6,136.41	6,154.24	2.80	2.22	1.71
13,740.00	89.04	92.44	7,403.76	-2,448.76	-1,024.74	6,226.30	6,244.19	3.21	-3.18	-0.47
13,830.00	87.47	89.74	7,406.50	-2,451.50	-1,026.45	6,316.23	6,334.14	3.47	-1.74	-3.00
13,920.00	88.81	89.93	7,409.42	-2,454.42	-1,026.19	6,406.18	6,424.07	1.50	1.49	0.21
14,009.00	91.79	89.27	7,408.95	-2,453.95	-1,025.57	6,495.16	6,513.03	3.43	3.35	-0.74
14,099.00	91.79	89.64	7,406.14	-2,451.14	-1,024.71	6,585.12	6,602.95	0.41	0.00	0.41
14,189.00	89.93	90.19	7,404.79	-2,449.79	-1,024.58	6,675.10	6,692.91	2.16	-2.07	0.61
14,279.00	90.24	89.56	7,404.66	-2,449.66	-1,024.38	6,765.10	6,782.89	0.78	0.34	-0.70
14,368.00	90.27	88.78	7,404.26	-2,449.26	-1,023.10	6,854.09	6,871.84	0.88	0.03	-0.88
14,458.00	89.16	90.05	7,404.71	-2,449.71	-1,022.18	6,944.08	6,961.80	1.87	-1.23	1.41
14,548.00	89.75	90.92	7,405.56	-2,450.56	-1,022.94	7,034.07	7,051.79	1.17	0.66	0.97
14,638.00	89.89	91.57	7,405.85	-2,450.85	-1,024.89	7,124.05	7,141.79	0.74	0.16	0.72
14,727.00	90.11	90.47	7,405.85	-2,450.85	-1,026.48	7,213.03	7,230.79	1.26	0.25	-1.24
14,817.00	92.22	90.77	7,404.02	-2,449.02	-1,027.45	7,303.01	7,320.76	2.37	2.34	0.33
14,907.00	91.98	91.86	7,400.72	-2,445.72	-1,029.52	7,392.92	7,410.70	1.24	-0.27	1.21
14,997.00	90.62	91.96	7,398.68	-2,443.68	-1,032.51	7,482.85	7,500.67	1.52	-1.51	0.11
15,086.00	90.34	90.24	7,397.93	-2,442.93	-1,034.22	7,571.82	7,589.66	1.96	-0.31	-1.93
15,176.00	90.01	87.31	7,397.66	-2,442.66	-1,032.30	7,661.79	7,679.58	3.28	-0.37	-3.26
15,266.00	92.16	89.12	7,395.95	-2,440.95	-1,029.50	7,751.72	7,769.44	3.12	2.39	2.01
15,356.00	91.40	89.11	7,393.16	-2,438.16	-1,028.11	7,841.67	7,859.34	0.84	-0.84	-0.01
15,445.00	89.98	89.16	7,392.08	-2,437.08	-1,026.76	7,930.65	7,948.29	1.60	-1.60	0.06
15,535.00	90.16	92.86	7,391.97	-2,436.97	-1,028.35	8,020.62	8,038.27	4.12	0.20	4.11
15,625.00	90.33	94.76	7,391.59	-2,436.59	-1,034.33	8,110.42	8,128.16	2.12	0.19	2.11
15,715.00	87.80	94.54	7,393.06	-2,438.06	-1,041.62	8,200.10	8,217.97	2.82	-2.81	-0.24
15,804.00	87.43	92.35	7,396.76	-2,441.76	-1,046.97	8,288.86	8,306.81	2.49	-0.42	-2.46
15,894.00	86.98	92.04	7,401.15	-2,446.15	-1,050.41	8,378.68	8,396.68	0.61	-0.50	-0.34
15,984.00	87.88	90.82	7,405.19	-2,450.19	-1,052.65	8,468.56	8,486.59	1.68	1.00	-1.36
16,074.00	91.71	92.30	7,405.51	-2,450.51	-1,055.10	8,558.51	8,576.56	4.56	4.26	1.64
16,163.00	89.31	89.77	7,404.72	-2,449.72	-1,056.71	8,647.48	8,665.55	3.92	-2.70	-2.84
16,253.00	89.54	89.48	7,405.62	-2,450.62	-1,056.12	8,737.47	8,755.51	0.41	0.26	-0.32
16,343.00	91.54	89.39	7,404.77	-2,449.77	-1,055.23	8,827.46	8,845.47	2.22	2.22	-0.10
16,433.00	90.77	89.11	7,402.96	-2,447.96	-1,054.06	8,917.43	8,935.40	0.91	-0.86	-0.31
16,522.00	91.38	87.56	7,401.29	-2,446.29	-1,051.47	9,006.37	9,024.28	1.87	0.69	-1.74

Survey Report



Company:	ANADARKO PETROLEUM CORP	Local Co-ordinate Reference:	Well BAJA BERG 35-9HZ
Project:	WELD COUNTY (NAD 83)	TVD Reference:	KB 20' @ 4955.00usft (PD461)
Site:	SE SW SEC 35 T2N R66W 6th P.M.	MD Reference:	KB 20' @ 4955.00usft (PD461)
Well:	BAJA BERG 35-9HZ	North Reference:	True
Wellbore:	JOB # 2019-026-461	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	Database 1

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
ENTER RADIUS TOE (16599' MD)										
16,599.00	89.71	89.29	7,400.55	-2,445.55	-1,049.35	9,083.34	9,101.19	3.12	-2.17	2.24
16,612.00	89.43	89.58	7,400.65	-2,445.65	-1,049.23	9,096.33	9,114.19	3.12	-2.17	2.24
16,702.00	90.03	88.60	7,401.08	-2,446.08	-1,047.80	9,186.32	9,204.13	1.28	0.67	-1.09
16,792.00	90.53	90.99	7,400.64	-2,445.64	-1,047.47	9,276.31	9,294.10	2.71	0.56	2.66
16,881.00	91.87	91.05	7,398.77	-2,443.77	-1,049.06	9,365.28	9,383.08	1.51	1.51	0.07
16,971.00	91.21	91.91	7,396.35	-2,441.35	-1,051.38	9,455.21	9,473.04	1.20	-0.73	0.96
17,061.00	93.35	92.38	7,392.77	-2,437.77	-1,054.75	9,545.07	9,562.95	2.43	2.38	0.52
17,150.00	91.45	92.20	7,389.05	-2,434.05	-1,058.30	9,633.92	9,651.85	2.14	-2.13	-0.20
17,240.00	91.26	92.25	7,386.92	-2,431.92	-1,061.79	9,723.83	9,741.81	0.22	-0.21	0.06
17,330.00	90.24	92.04	7,385.74	-2,430.74	-1,065.16	9,813.75	9,831.78	1.16	-1.13	-0.23
17,420.00	88.88	92.12	7,386.43	-2,431.43	-1,068.43	9,903.69	9,921.76	1.51	-1.51	0.09
EXIT RADIUS TOE (17505' MD)										
17,505.00	90.62	91.44	7,386.80	-2,431.80	-1,071.07	9,988.65	10,006.75	2.20	2.04	-0.80
17,509.00	90.70	91.41	7,386.76	-2,431.76	-1,071.17	9,992.64	10,010.75	2.20	2.04	-0.80
17,599.00	92.43	92.38	7,384.30	-2,429.30	-1,074.14	10,082.56	10,100.70	2.20	1.92	1.08
LAST SURVEY FEB 18, 2019										
17,665.00	93.88	91.82	7,380.67	-2,425.67	-1,076.56	10,148.41	10,166.59	2.35	2.20	-0.85
PROJ TO TD:40.087528,-104.822430										
17,726.00	93.88	91.82	7,376.54	-2,421.54	-1,078.49	10,209.24	10,227.44	0.00	0.00	0.00

Survey Report



Company:	ANADARKO PETROLEUM CORP	Local Co-ordinate Reference:	Well BAJA BERG 35-9HZ
Project:	WELD COUNTY (NAD 83)	TVD Reference:	KB 20' @ 4955.00usft (PD461)
Site:	SE SW SEC 35 T2N R66W 6th P.M.	MD Reference:	KB 20' @ 4955.00usft (PD461)
Well:	BAJA BERG 35-9HZ	North Reference:	True
Wellbore:	JOB # 2019-026-461	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	Database 1

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP - BAJA BERG 35-9 - survey misses target center by 58.11usft at 6848.97usft MD (6705.88 TVD, -924.11 N, -330.21 E) - Point	0.00	0.00	6,694.80	-936.06	-274.43	14,558,781.48	1,679,602.23	40.087925	-104.859897
HEEL - BAJA BERG 35- - survey misses target center by 47.24usft at 7961.02usft MD (7384.57 TVD, -922.77 N, 454.60 E) - Point	0.00	0.00	7,425.00	-944.20	442.85	14,558,774.48	1,680,319.24	40.087902	-104.857334
BHL - BAJA BERG 35-9 - survey misses target center by 18.48usft at 17725.11usft MD (7376.60 TVD, -1078.46 N, 10208.35 E) - Point	0.00	0.00	7,395.00	-1,079.73	10,209.56	14,558,654.49	1,690,082.26	40.087525	-104.822428
HEEL - BAJA BERG 35- - survey misses target center by 35.80usft at 7957.33usft MD (7383.60 TVD, -922.66 N, 451.04 E) - Point	0.00	0.00	7,411.00	-944.20	442.85	14,558,774.48	1,680,319.24	40.087902	-104.857334
KOP - BAJA BERG 35-9 - survey misses target center by 117.14usft at 6957.13usft MD (6810.35 TVD, -915.47 N, -304.12 E) - Point	0.00	0.00	6,774.38	-936.97	-194.73	14,558,780.70	1,679,681.90	40.087922	-104.859612
KOP - BAJA BERG 35-9 - survey misses target center by 112.01usft at 6969.97usft MD (6822.46 TVD, -914.27 N, -299.99 E) - Point	0.00	0.00	6,788.38	-936.96	-195.73	14,558,780.71	1,679,680.90	40.087922	-104.859616
BHL - BAJA BERG 35-9 - survey misses target center by 18.48usft at 17725.11usft MD (7376.60 TVD, -1078.46 N, 10208.35 E) - Point	0.00	0.00	7,395.00	-1,079.73	10,209.56	14,558,654.49	1,690,082.26	40.087525	-104.822428

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
2,878.00	2,783.05	-630.40	-167.33	ENTER TGT BOX (2878'MD)
6,760.00	6,617.43	-926.08	-338.90	KOP
7,194.45	7,021.35	-905.09	-198.00	ENTER RADIUS HEEL (7194' MD)
8,167.00	7,420.70	-929.81	656.71	EXIT RADIUS HEEL (8167' MD)
8,181.00	7,420.62	-929.93	670.71	HEEL:40.087942,-104.856520
16,599.00	7,400.55	-1,049.35	9,083.34	ENTER RADIUS TOE (16599' MD)
17,505.00	7,386.80	-1,071.07	9,988.65	EXIT RADIUS TOE (17505' MD)
17,665.00	7,380.67	-1,076.56	10,148.41	LAST SURVEY FEB 18, 2019
17,726.00	7,376.54	-1,078.49	10,209.24	PROJ TO TD:40.087528,-104.822430

Checked By: _____	Approved By: _____	Date: _____
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