



Survey Report - Geographic

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Guerrero 33-7 (111404) - Slot 33-7
Project:	Guerrero	TVD Reference:	KB @ 5001.00ft (Original Well Elev)
Site:	Guerrero 13-7 Pad	MD Reference:	KB @ 5001.00ft (Original Well Elev)
Well:	Guerrero 33-7 (111404)	North Reference:	True
Wellbore:	33-7	Survey Calculation Method:	Minimum Curvature
Design:	33-7	Database:	EDM5000

Project	Guerrero		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Guerrero 13-7 Pad				
Site Position:		Northing:	14,580,512.71 usft	Latitude:	40.147333000°N
From:	Lat/Long	Easting:	1,720,354.26 usft	Longitude:	104.713945000°W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	0.18 °

Well	Guerrero 33-7 (111404) - Slot 33-7					
Well Position	+N/-S	0.00 ft	Northing:	14,580,512.30 usft	Latitude:	40.147332000°N
	+E/-W	0.00 ft	Easting:	1,720,338.05 usft	Longitude:	104.714002999°W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,986.00 ft

Wellbore	33-7				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/15/11	8.75	66.84	52,950

Design	33-7				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00		330.04

Survey Program	Date	09/23/11			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
137.00	8,108.00	33-7 (33-7)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	14,580,512.30	1,720,338.05	40.147332000°N	104.714002999°W	
137.00	1.19	283.85	136.99	0.34	-1.38	14,580,512.63	1,720,336.67	40.147332936°N	104.714007942°W	
229.00	1.49	287.45	228.96	0.93	-3.45	14,580,513.21	1,720,334.60	40.147334549°N	104.714015345°W	
321.00	4.09	314.17	320.85	3.57	-6.94	14,580,515.85	1,720,331.09	40.147341813°N	104.714027852°W	
414.00	6.11	322.87	413.48	9.83	-12.31	14,580,522.09	1,720,325.71	40.147358997°N	104.714047058°W	
459.00	6.59	325.64	458.20	13.87	-15.22	14,580,526.12	1,720,322.79	40.147370094°N	104.714057446°W	
550.00	7.51	328.45	548.51	23.25	-21.27	14,580,535.48	1,720,316.70	40.147395848°N	104.714079127°W	
641.00	8.00	327.05	638.68	33.63	-27.83	14,580,545.84	1,720,310.11	40.147424357°N	104.714102587°W	
732.00	9.01	330.17	728.68	45.13	-34.82	14,580,557.31	1,720,303.09	40.147455926°N	104.714127597°W	
822.00	9.10	333.55	817.56	57.61	-41.49	14,580,569.78	1,720,296.37	40.147490213°N	104.714151485°W	
913.00	8.39	335.57	907.50	70.10	-47.45	14,580,582.25	1,720,290.38	40.147524505°N	104.714172781°W	
950.00	8.22	335.04	944.11	74.96	-49.68	14,580,587.09	1,720,288.13	40.147537839°N	104.714180770°W	

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Project:	Guerrero	TVD Reference:	KB @ 5001.00ft (Original Well Elev)
Site:	Guerrero 13-7 Pad	MD Reference:	KB @ 5001.00ft (Original Well Elev)
Well:	Guerrero 33-7 (111404)	North Reference:	True
Wellbore:	33-7	Survey Calculation Method:	Minimum Curvature
Design:	33-7	Database:	EDM5000

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,037.00	8.00	332.93	1,030.24	85.99	-55.06	14,580,598.11	1,720,282.72	40.147568127°N	104.714200021°W
1,128.00	9.58	331.35	1,120.17	98.27	-61.57	14,580,610.37	1,720,276.16	40.147601862°N	104.714223327°W
1,218.00	9.32	329.64	1,208.95	111.13	-68.84	14,580,623.21	1,720,268.85	40.147637178°N	104.714249357°W
1,309.00	11.91	326.17	1,298.39	125.29	-77.80	14,580,637.34	1,720,259.85	40.147676065°N	104.714281398°W
1,400.00	14.28	331.97	1,387.02	143.00	-88.30	14,580,655.02	1,720,249.29	40.147724699°N	104.714318986°W
1,491.00	13.80	331.66	1,475.30	162.46	-98.73	14,580,674.44	1,720,238.80	40.147778136°N	104.714356296°W
1,582.00	14.11	331.35	1,563.61	181.75	-109.20	14,580,693.69	1,720,228.27	40.147831098°N	104.714393764°W
1,672.00	14.11	330.96	1,650.90	200.97	-119.78	14,580,712.88	1,720,217.62	40.147883874°N	104.714431643°W
1,763.00	14.19	330.87	1,739.14	220.41	-130.60	14,580,732.28	1,720,206.74	40.147937259°N	104.714470340°W
1,854.00	13.71	329.24	1,827.45	239.42	-141.54	14,580,751.26	1,720,195.74	40.147989463°N	104.714509507°W
1,945.00	12.92	328.23	1,916.01	257.33	-152.41	14,580,769.14	1,720,184.81	40.148038662°N	104.714548413°W
2,035.00	12.61	326.04	2,003.78	274.04	-163.20	14,580,785.81	1,720,173.97	40.148084528°N	104.714587009°W
2,126.00	13.10	327.53	2,092.50	290.98	-174.29	14,580,802.71	1,720,162.83	40.148131046°N	104.714626678°W
2,217.00	13.40	326.25	2,181.08	308.44	-185.68	14,580,820.14	1,720,151.38	40.148179015°N	104.714667454°W
2,307.00	12.48	328.94	2,268.79	325.45	-196.49	14,580,837.11	1,720,140.51	40.148225703°N	104.714706143°W
2,398.00	10.59	325.86	2,357.95	340.79	-206.26	14,580,852.42	1,720,130.70	40.148267843°N	104.714741094°W
2,489.00	11.12	339.26	2,447.34	355.92	-214.06	14,580,867.53	1,720,122.85	40.148309391°N	104.714769013°W
2,580.00	13.10	331.53	2,536.31	373.20	-222.08	14,580,884.78	1,720,114.77	40.148356830°N	104.714797731°W
2,671.00	13.32	330.17	2,624.91	391.36	-232.22	14,580,902.90	1,720,104.58	40.148406697°N	104.714833984°W
2,761.00	13.40	326.96	2,712.47	409.09	-243.06	14,580,920.60	1,720,093.68	40.148455403°N	104.714872787°W
2,852.00	11.38	326.43	2,801.35	425.41	-253.77	14,580,936.89	1,720,082.91	40.148500223°N	104.714911130°W
2,943.00	10.99	321.33	2,890.62	439.67	-264.16	14,580,951.11	1,720,072.48	40.148539363°N	104.714948291°W
3,034.00	13.18	331.44	2,979.61	455.55	-274.54	14,580,966.97	1,720,062.05	40.148582993°N	104.714985444°W
3,124.00	13.71	330.34	3,067.14	473.83	-284.72	14,580,985.21	1,720,051.80	40.148633192°N	104.715021886°W
3,215.00	12.22	325.24	3,155.82	491.12	-295.55	14,581,002.46	1,720,040.92	40.148680656°N	104.715060635°W
3,306.00	14.59	327.66	3,244.34	508.72	-307.18	14,581,020.02	1,720,029.24	40.148728983°N	104.715102233°W
3,397.00	14.41	327.97	3,332.44	528.00	-319.31	14,581,039.27	1,720,017.04	40.148781936°N	104.715145664°W
3,487.00	14.19	335.57	3,419.66	547.54	-329.81	14,581,058.77	1,720,006.48	40.148835592°N	104.715183249°W
3,578.00	14.19	336.76	3,507.88	567.94	-338.83	14,581,079.15	1,719,997.40	40.148891623°N	104.715215508°W
3,669.00	13.58	330.87	3,596.23	587.53	-348.43	14,581,098.70	1,719,987.73	40.148945397°N	104.715249871°W
3,760.00	13.71	320.85	3,684.67	605.22	-360.44	14,581,116.36	1,719,975.66	40.148993996°N	104.715292853°W
3,850.00	13.89	326.74	3,772.08	622.53	-373.10	14,581,133.62	1,719,962.95	40.149041517°N	104.715338154°W
3,941.00	12.48	328.54	3,860.68	640.05	-384.22	14,581,151.11	1,719,951.77	40.149089632°N	104.715377957°W
4,032.00	10.50	317.16	3,949.86	654.52	-395.00	14,581,165.54	1,719,940.95	40.149129369°N	104.715416507°W
4,123.00	8.48	318.04	4,039.61	665.59	-405.12	14,581,176.58	1,719,930.79	40.149159769°N	104.715452741°W
4,214.00	10.28	313.47	4,129.39	676.17	-415.50	14,581,187.12	1,719,920.38	40.149188813°N	104.715489886°W
4,305.00	13.71	324.63	4,218.40	690.55	-427.64	14,581,201.47	1,719,908.19	40.149228317°N	104.715533332°W
4,395.00	12.22	323.13	4,306.11	706.87	-439.53	14,581,217.75	1,719,896.25	40.149273127°N	104.715575880°W
4,486.00	10.42	331.97	4,395.34	721.84	-449.18	14,581,232.69	1,719,886.55	40.149314237°N	104.715610404°W
4,577.00	10.11	345.46	4,484.90	736.84	-455.05	14,581,247.67	1,719,880.63	40.149355421°N	104.715631423°W
4,668.00	9.80	357.54	4,574.54	752.31	-457.39	14,581,263.13	1,719,878.24	40.149397904°N	104.715639790°W
4,758.00	8.92	358.86	4,663.34	766.94	-457.86	14,581,277.76	1,719,877.73	40.149438076°N	104.715641464°W
4,849.00	7.51	3.96	4,753.40	779.93	-457.59	14,581,290.75	1,719,877.96	40.149473740°N	104.715640498°W
4,940.00	5.58	11.96	4,843.81	790.19	-456.26	14,581,301.01	1,719,879.25	40.149501921°N	104.715635747°W
5,031.00	2.90	26.64	4,934.55	796.57	-454.31	14,581,307.40	1,719,881.18	40.149519460°N	104.715628772°W
5,121.00	0.79	71.55	5,024.50	798.81	-452.70	14,581,309.64	1,719,882.78	40.149525589°N	104.715623012°W
5,212.00	0.70	188.05	5,115.50	798.45	-452.18	14,581,309.29	1,719,883.30	40.149524622°N	104.715621161°W
5,303.00	0.88	215.95	5,206.49	797.34	-452.67	14,581,308.17	1,719,882.82	40.149521558°N	104.715622907°W
5,394.00	1.01	229.53	5,297.48	796.25	-453.69	14,581,307.08	1,719,881.80	40.149518575°N	104.715626559°W
5,484.00	1.32	292.94	5,387.46	796.14	-455.25	14,581,306.97	1,719,880.24	40.149518270°N	104.715632135°W
5,575.00	0.88	31.03	5,478.45	797.15	-455.85	14,581,307.97	1,719,879.63	40.149521037°N	104.715634300°W
5,666.00	0.48	359.83	5,569.45	798.13	-455.49	14,581,308.96	1,719,879.99	40.149523728°N	104.715633015°W
5,757.00	0.40	351.17	5,660.44	798.82	-455.54	14,581,309.65	1,719,879.94	40.149525636°N	104.715633193°W
5,847.00	0.31	334.87	5,750.44	799.35	-455.70	14,581,310.18	1,719,879.79	40.149527094°N	104.715633736°W
5,938.00	0.31	240.34	5,841.44	799.46	-456.01	14,581,310.28	1,719,879.47	40.149527372°N	104.715634876°W

Survey Report - Geographic

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Guerrero 33-7 (111404) - Slot 33-7
Project:	Guerrero	TVD Reference:	KB @ 5001.00ft (Original Well Elev)
Site:	Guerrero 13-7 Pad	MD Reference:	KB @ 5001.00ft (Original Well Elev)
Well:	Guerrero 33-7 (111404)	North Reference:	True
Wellbore:	33-7	Survey Calculation Method:	Minimum Curvature
Design:	33-7	Database:	EDM5000

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
6,029.00	0.70	294.13	5,932.44	799.56	-456.74	14,581,310.38	1,719,878.74	40.149527661°N	104.715637457°W	
6,119.00	1.10	336.93	6,022.43	800.58	-457.58	14,581,311.40	1,719,877.90	40.149530461°N	104.715640464°W	
6,210.00	1.10	3.04	6,113.41	802.26	-457.87	14,581,313.08	1,719,877.60	40.149535063°N	104.715641523°W	
6,301.00	0.79	20.57	6,204.40	803.72	-457.60	14,581,314.54	1,719,877.86	40.149539071°N	104.715640568°W	
6,392.00	0.62	49.84	6,295.39	804.62	-457.01	14,581,315.44	1,719,878.46	40.149541556°N	104.715638433°W	
6,482.00	0.70	60.43	6,385.39	805.21	-456.16	14,581,316.03	1,719,879.30	40.149543164°N	104.715635390°W	
6,573.00	0.62	90.75	6,476.38	805.47	-455.18	14,581,316.30	1,719,880.28	40.149543899°N	104.715631899°W	
6,664.00	0.62	91.94	6,567.37	805.45	-454.20	14,581,316.28	1,719,881.26	40.149543836°N	104.715628376°W	
6,755.00	0.70	103.67	6,658.37	805.30	-453.17	14,581,316.14	1,719,882.30	40.149543429°N	104.715624682°W	
6,845.00	0.79	114.44	6,748.36	804.92	-452.07	14,581,315.75	1,719,883.40	40.149542368°N	104.715620749°W	
6,936.00	1.10	123.36	6,839.35	804.18	-450.77	14,581,315.02	1,719,884.70	40.149540336°N	104.715616094°W	
7,027.00	1.10	127.01	6,930.33	803.17	-449.34	14,581,314.02	1,719,886.13	40.149537573°N	104.715610988°W	
7,117.00	1.19	122.74	7,020.31	802.15	-447.86	14,581,313.00	1,719,887.61	40.149534757°N	104.715605706°W	
7,208.00	1.58	122.57	7,111.29	800.96	-446.01	14,581,311.82	1,719,889.47	40.149531499°N	104.715599078°W	
7,299.00	1.71	114.97	7,202.25	799.71	-443.72	14,581,310.57	1,719,891.76	40.149528071°N	104.715590890°W	
7,389.00	2.02	113.34	7,292.20	798.52	-441.05	14,581,309.39	1,719,894.43	40.149524789°N	104.715581322°W	
7,480.00	2.02	112.55	7,383.15	797.26	-438.10	14,581,308.15	1,719,897.39	40.149521355°N	104.715570751°W	
7,571.00	1.71	112.64	7,474.10	796.13	-435.36	14,581,307.02	1,719,900.13	40.149518231°N	104.715560966°W	
7,662.00	1.32	114.57	7,565.07	795.17	-433.15	14,581,306.07	1,719,902.34	40.149515599°N	104.715553071°W	
7,752.00	0.70	103.06	7,655.05	794.61	-431.68	14,581,305.52	1,719,903.82	40.149514074°N	104.715547780°W	
7,843.00	0.70	110.35	7,746.04	794.29	-430.61	14,581,305.20	1,719,904.88	40.149513198°N	104.715543977°W	
7,934.00	0.79	105.25	7,837.04	793.94	-429.49	14,581,304.85	1,719,906.01	40.149512214°N	104.715539946°W	
8,025.00	0.79	91.63	7,928.03	793.75	-428.25	14,581,304.67	1,719,907.24	40.149511712°N	104.715535536°W	
8,055.00	0.79	90.36	7,958.03	793.75	-427.84	14,581,304.66	1,719,907.66	40.149511693°N	104.715534057°W	
8,108.00	0.79	90.36	8,011.02	793.74	-427.11	14,581,304.66	1,719,908.39	40.149511680°N	104.715531442°W	
Proj to TD at 8108 MD/8011 TVD										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
8,108.00	8,011.02	793.74	-427.11	Proj to TD at 8108 MD/8011 TVD	

Checked By: _____	Approved By: _____	Date: _____
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