

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 19-T2N-R64W

Dechant 4-19HZ

Plan A Rev 1

Survey: Sperry MWD Survey

Standard Survey Report

25 February, 2011

Halliburton Company

Survey Report

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Dechant 4-19HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB 17' @ 4998.00ft (Extreme 8)
Site:	Sec. 19-T2N-R64W	MD Reference:	RKB 17' @ 4998.00ft (Extreme 8)
Well:	Dechant 4-19HZ	North Reference:	True
Wellbore:	Plan A Rev 1	Survey Calculation Method:	Minimum Curvature
Design:	Plan A Rev 1	Database:	EDM 2003.16 Single User Db

Project	Weld County, CO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Sec. 19-T2N-R64W				
Site Position:		Northing:	1,287,012.14 ft	Latitude:	40.117747
From:	Lat/Long	Easting:	3,251,252.99 ft	Longitude:	-104.601593
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.58 °

Well	Dechant 4-19HZ					
Well Position	+N/-S	0.00 ft	Northing:	1,287,012.14 ft	Latitude:	40.117747
	+E/-W	0.00 ft	Easting:	3,251,252.99 ft	Longitude:	-104.601593
Position Uncertainty		0.00 ft	Wellhead Elevation:	4,981.00 ft	Ground Level:	4,981.00 ft

Wellbore	Plan A Rev 1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	2/12/2011	8.76	66.87	53,011

Design	Plan A Rev 1			
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	4.95

Survey Program	Date	2/25/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
37.00	11,374.00	Sperry MWD Survey (Plan A Rev 1)	MWD	MWD - Standard	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.00	0.20	172.90	37.00	-0.06	0.01	-0.06	0.54	0.54	0.00
First Gyro Data Survey									
127.00	0.40	173.50	127.00	-0.53	0.06	-0.52	0.22	0.22	0.67
217.00	0.70	149.70	216.99	-1.32	0.38	-1.28	0.41	0.33	-26.44
307.00	0.80	146.80	306.99	-2.32	1.00	-2.22	0.12	0.11	-3.22
397.00	1.00	144.10	396.98	-3.48	1.80	-3.31	0.23	0.22	-3.00
487.00	0.90	151.00	486.96	-4.74	2.61	-4.49	0.17	-0.11	7.67
577.00	0.60	151.50	576.96	-5.77	3.17	-5.47	0.33	-0.33	0.56
667.00	0.60	155.90	666.95	-6.61	3.59	-6.28	0.05	0.00	4.89
757.00	0.70	135.80	756.94	-7.44	4.17	-7.05	0.27	0.11	-22.33
847.00	0.30	139.10	846.94	-8.01	4.70	-7.57	0.45	-0.44	3.67
937.00	0.30	149.80	936.94	-8.39	4.98	-7.93	0.06	0.00	11.89

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Wellbore:	Plan A Rev 1	Survey Calculation Method:	Minimum Curvature
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Survey

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977.00	0.30	143.86	976.94	-8.57	5.09	-8.09	0.08	0.00	-14.85
Final Gyro Data Survey - Tie-on to Gyro Data Survey									
997.00	0.30	140.90	996.94	-8.65	5.15	-8.17	0.08	0.00	-14.80
1,044.00	0.36	122.35	1,043.94	-8.82	5.36	-8.33	0.26	0.13	-39.47
First Sperry MWD Survey									
1,136.00	0.51	113.21	1,135.94	-9.14	5.98	-8.59	0.18	0.16	-9.93
1,228.00	0.43	87.55	1,227.93	-9.29	6.70	-8.67	0.24	-0.09	-27.89
1,320.00	3.38	131.46	1,319.87	-11.07	9.08	-10.24	3.35	3.21	47.73
1,413.00	4.81	145.44	1,412.64	-16.09	13.34	-14.88	1.86	1.54	15.03
1,489.00	6.04	141.35	1,488.29	-21.84	17.65	-20.24	1.70	1.62	-5.38
1,577.00	6.42	138.86	1,575.77	-29.16	23.78	-27.00	0.53	0.43	-2.83
1,666.00	6.37	137.95	1,664.22	-36.57	30.36	-33.82	0.13	-0.06	-1.02
1,756.00	6.48	135.19	1,753.66	-43.89	37.28	-40.50	0.36	0.12	-3.07
1,842.00	6.37	134.76	1,839.12	-50.69	44.09	-46.69	0.14	-0.13	-0.50
1,930.00	6.14	135.24	1,926.59	-57.47	50.87	-52.86	0.27	-0.26	0.55
2,019.00	5.74	133.50	2,015.11	-63.91	57.45	-58.71	0.49	-0.45	-1.96
2,108.00	6.03	127.18	2,103.65	-69.80	64.40	-63.98	0.80	0.33	-7.10
2,195.00	5.82	127.63	2,190.18	-75.25	71.53	-68.80	0.25	-0.24	0.52
2,281.00	5.05	129.51	2,275.79	-80.32	77.91	-73.30	0.92	-0.90	2.19
2,369.00	4.47	128.03	2,363.49	-84.90	83.60	-77.37	0.67	-0.66	-1.68
2,457.00	5.24	130.17	2,451.17	-89.61	89.37	-81.56	0.90	0.87	2.43
2,547.00	5.11	124.50	2,540.81	-94.53	95.81	-85.90	0.59	-0.14	-6.30
2,636.00	6.02	135.99	2,629.39	-100.13	102.32	-90.92	1.61	1.02	12.91
2,725.00	4.76	134.84	2,717.99	-106.09	108.18	-96.36	1.42	-1.42	-1.29
2,814.00	5.26	137.80	2,806.65	-111.72	113.54	-101.50	0.63	0.56	3.33
2,902.00	6.31	135.31	2,894.20	-118.14	119.65	-107.37	1.23	1.19	-2.83
2,989.00	5.56	133.32	2,980.74	-124.43	126.08	-113.08	0.89	-0.86	-2.29
3,076.00	4.81	128.23	3,067.38	-129.58	132.01	-117.70	1.01	-0.86	-5.85
3,162.00	5.41	121.08	3,153.04	-133.91	138.32	-121.47	1.02	0.70	-8.31
3,248.00	6.35	122.71	3,238.59	-138.57	145.79	-125.47	1.11	1.09	1.90
3,334.00	6.17	119.46	3,324.07	-143.41	153.82	-129.60	0.46	-0.21	-3.78
3,422.00	5.69	129.74	3,411.61	-148.53	161.29	-134.05	1.32	-0.55	11.68
3,509.00	5.24	130.21	3,498.21	-153.85	167.64	-138.80	0.52	-0.52	0.54
3,596.00	4.18	126.16	3,584.92	-158.28	173.23	-142.74	1.28	-1.22	-4.66
3,684.00	6.03	130.36	3,672.56	-163.17	179.35	-147.08	2.14	2.10	4.77
3,773.00	5.56	129.87	3,761.11	-168.96	186.22	-152.26	0.53	-0.53	-0.55
3,862.00	4.70	128.10	3,849.75	-173.97	192.40	-156.72	0.98	-0.97	-1.99
3,949.00	4.82	125.90	3,936.45	-178.32	198.16	-160.55	0.25	0.14	-2.53
4,037.00	5.77	130.15	4,024.07	-183.34	204.54	-165.00	1.17	1.08	4.83
4,124.00	6.02	129.58	4,110.61	-189.06	211.40	-170.11	0.30	0.29	-0.66
4,210.00	5.91	127.84	4,196.15	-194.65	218.37	-175.08	0.25	-0.13	-2.02
4,300.00	5.92	139.24	4,285.67	-201.01	225.06	-180.84	1.30	0.01	12.67
4,390.00	5.34	142.99	4,375.24	-207.87	230.61	-187.19	0.76	-0.64	4.17
4,478.00	6.41	141.77	4,462.77	-215.00	236.12	-193.82	1.22	1.22	-1.39
4,566.00	6.22	140.64	4,550.24	-222.55	242.18	-200.81	0.26	-0.22	-1.28
4,652.00	5.93	139.31	4,635.76	-229.52	248.03	-207.25	0.37	-0.34	-1.55
4,742.00	5.79	138.50	4,725.29	-236.44	254.07	-213.63	0.18	-0.16	-0.90
4,830.00	5.35	132.73	4,812.87	-242.55	260.02	-219.20	0.81	-0.50	-6.56
4,919.00	4.64	126.79	4,901.53	-247.52	265.95	-223.64	0.99	-0.80	-6.67
5,005.00	5.42	123.81	4,987.20	-251.86	272.11	-227.44	0.96	0.91	-3.47
5,093.00	6.20	130.22	5,074.75	-257.25	279.20	-232.19	1.15	0.89	7.28
5,182.00	5.75	126.87	5,163.27	-263.02	286.43	-237.32	0.64	-0.51	-3.76
5,270.00	5.56	125.77	5,250.84	-268.16	293.42	-241.83	0.25	-0.22	-1.25
5,358.00	5.20	122.42	5,338.45	-272.79	300.24	-245.86	0.54	-0.41	-3.81

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5,446.00	5.81	128.29	5,426.05	-277.69	307.11	-250.14	0.94	0.69	6.67
5,534.00	5.90	126.56	5,513.59	-283.14	314.24	-254.96	0.23	0.10	-1.97
5,622.00	5.52	127.23	5,601.15	-288.40	321.24	-259.59	0.44	-0.43	0.76
5,711.00	5.49	125.55	5,689.74	-293.46	328.11	-264.05	0.18	-0.03	-1.89
5,802.00	5.99	124.80	5,780.28	-298.70	335.55	-268.62	0.56	0.55	-0.82
5,891.00	5.50	121.43	5,868.84	-303.58	343.00	-272.84	0.67	-0.55	-3.79
5,979.00	6.13	125.32	5,956.38	-308.49	350.44	-277.09	0.84	0.72	4.42
6,069.00	5.73	121.04	6,045.90	-313.59	358.21	-281.50	0.66	-0.44	-4.76
6,112.00	5.68	125.19	6,088.69	-315.92	361.78	-283.51	0.97	-0.12	9.65
6,137.00	5.69	122.65	6,113.57	-317.30	363.84	-284.71	1.01	0.04	-10.16
6,166.00	5.71	115.82	6,142.42	-318.71	366.35	-285.90	2.34	0.07	-23.55
6,195.00	6.50	95.98	6,171.26	-319.51	369.28	-286.44	7.72	2.72	-68.41
6,224.00	9.12	74.79	6,200.00	-319.07	373.13	-285.68	13.28	9.03	-73.07
6,253.00	11.98	63.71	6,228.51	-317.14	378.05	-283.32	12.05	9.86	-38.21
6,284.00	14.54	55.36	6,258.68	-313.50	384.14	-279.17	10.29	8.26	-26.94
6,313.00	16.92	50.38	6,286.59	-308.74	390.38	-273.89	9.43	8.21	-17.17
6,342.00	19.28	47.97	6,314.16	-302.84	397.19	-267.43	8.54	8.14	-8.31
6,370.00	21.01	45.55	6,340.44	-296.23	404.21	-260.23	6.86	6.18	-8.64
6,399.00	22.53	42.09	6,367.37	-288.47	411.65	-251.86	6.86	5.24	-11.93
6,428.00	24.49	35.34	6,393.97	-279.44	418.85	-242.24	11.47	6.76	-23.28
6,457.00	25.67	31.23	6,420.24	-269.16	425.58	-231.42	7.25	4.07	-14.17
6,486.00	27.46	24.80	6,446.18	-257.72	431.65	-219.50	11.67	6.17	-22.17
6,515.00	29.48	19.22	6,471.68	-244.91	436.80	-206.29	11.51	6.97	-19.24
6,546.00	31.22	15.33	6,498.43	-229.95	441.44	-190.99	8.47	5.61	-12.55
6,576.00	32.97	11.58	6,523.85	-214.46	445.13	-175.23	8.84	5.83	-12.50
6,605.00	34.56	9.43	6,547.96	-198.61	448.06	-159.19	6.86	5.48	-7.41
6,634.00	35.73	7.46	6,571.67	-182.10	450.51	-142.53	5.62	4.03	-6.79
6,664.00	37.06	5.95	6,595.82	-164.42	452.58	-124.74	5.35	4.43	-5.03
6,694.00	38.55	4.78	6,619.52	-146.11	454.30	-106.35	5.51	4.97	-3.90
6,723.00	39.86	3.93	6,641.99	-127.84	455.69	-88.02	4.88	4.52	-2.93
6,751.00	41.14	2.95	6,663.28	-109.68	456.78	-69.85	5.11	4.57	-3.50
6,779.00	42.45	1.99	6,684.16	-91.04	457.58	-51.20	5.21	4.68	-3.43
6,806.00	43.75	1.37	6,703.87	-72.60	458.12	-32.79	5.06	4.81	-2.30
6,835.00	44.89	1.11	6,724.62	-52.35	458.56	-12.57	3.98	3.93	-0.90
6,864.00	46.02	0.41	6,744.96	-31.68	458.83	8.04	4.26	3.90	-2.41
6,895.00	47.10	0.47	6,766.28	-9.17	459.01	30.48	3.49	3.48	0.19
6,924.00	48.02	359.81	6,785.85	12.23	459.06	51.81	3.59	3.17	-2.28
6,953.00	49.51	359.90	6,804.96	34.04	459.00	73.53	5.14	5.14	0.31
6,985.00	51.34	0.50	6,825.35	58.70	459.09	98.11	5.90	5.72	1.87
7,014.00	53.87	0.14	6,842.96	81.74	459.22	121.07	8.78	8.72	-1.24
7,043.00	55.95	0.21	6,859.63	105.47	459.29	144.72	7.18	7.17	0.24
7,073.00	57.75	0.27	6,876.03	130.58	459.40	169.75	6.00	6.00	0.20
7,102.00	59.60	0.45	6,891.11	155.35	459.55	194.44	6.40	6.38	0.62
7,131.00	61.67	0.42	6,905.33	180.62	459.74	219.63	7.14	7.14	-0.10
7,161.00	64.19	1.04	6,918.98	207.33	460.09	246.27	8.60	8.40	2.07
7,191.00	66.67	0.57	6,931.45	234.61	460.47	273.48	8.39	8.27	-1.57
7,221.00	68.78	359.30	6,942.82	262.37	460.43	301.14	8.05	7.03	-4.23
7,251.00	71.24	359.00	6,953.08	290.56	460.01	329.18	8.25	8.20	-1.00
7,280.00	73.64	358.54	6,961.83	318.20	459.42	356.67	8.41	8.28	-1.59
7,309.00	75.66	357.53	6,969.50	346.15	458.46	384.43	7.73	6.97	-3.48
7,339.00	78.00	357.61	6,976.34	375.33	457.22	413.39	7.80	7.80	0.27
7,368.00	80.18	357.98	6,981.83	403.78	456.13	441.65	7.62	7.52	1.28
7,392.00	81.70	357.49	6,985.61	427.46	455.19	465.16	6.65	6.33	-2.04
7,444.00	87.53	357.59	6,990.49	479.16	452.97	516.47	11.21	11.21	0.19

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7,487.00	88.39	357.68	6,992.02	522.10	451.20	559.10	2.01	2.00	0.21
7,530.00	89.57	357.24	6,992.78	565.05	449.29	601.72	2.93	2.74	-1.02
7,574.00	90.19	356.90	6,992.87	608.99	447.04	645.31	1.61	1.41	-0.77
7,616.00	90.25	356.38	6,992.71	650.92	444.58	686.86	1.25	0.14	-1.24
7,659.00	90.99	356.42	6,992.25	693.83	441.88	729.38	1.72	1.72	0.09
7,702.00	91.36	356.39	6,991.37	736.74	439.18	771.90	0.86	0.86	-0.07
7,747.00	91.73	356.10	6,990.15	781.62	436.24	816.36	1.04	0.82	-0.64
7,790.00	92.78	355.87	6,988.46	824.49	433.23	858.80	2.50	2.44	-0.53
7,834.00	92.96	355.52	6,986.26	868.31	429.93	902.18	0.89	0.41	-0.80
7,878.00	93.15	356.44	6,983.91	912.13	426.85	945.58	2.13	0.43	2.09
7,921.00	92.91	357.27	6,981.64	955.01	424.50	988.09	2.01	-0.56	1.93
7,964.00	93.34	357.40	6,979.29	997.90	422.50	1,030.64	1.04	1.00	0.30
8,007.00	93.28	356.90	6,976.81	1,040.77	420.36	1,073.17	1.17	-0.14	-1.16
8,052.00	92.91	358.01	6,974.38	1,085.66	418.37	1,117.72	2.60	-0.82	2.47
8,097.00	92.04	357.24	6,972.44	1,130.58	416.51	1,162.31	2.58	-1.93	-1.71
8,141.00	92.10	357.66	6,970.85	1,174.51	414.55	1,205.91	0.96	0.14	0.95
8,185.00	92.10	358.48	6,969.24	1,218.45	413.07	1,249.56	1.86	0.00	1.86
8,230.00	91.98	358.42	6,967.64	1,263.41	411.85	1,294.24	0.30	-0.27	-0.13
8,274.00	92.60	359.55	6,965.88	1,307.37	411.07	1,337.97	2.93	1.41	2.57
8,317.00	92.91	358.77	6,963.81	1,350.31	410.44	1,380.70	1.95	0.72	-1.81
8,362.00	93.15	359.01	6,961.43	1,395.24	409.57	1,425.39	0.75	0.53	0.53
8,406.00	92.91	359.67	6,959.11	1,439.18	409.07	1,469.11	1.59	-0.55	1.50
8,449.00	92.35	359.32	6,957.13	1,482.13	408.69	1,511.87	1.54	-1.30	-0.81
8,492.00	90.31	358.76	6,956.13	1,525.11	407.97	1,554.63	4.92	-4.74	-1.30
8,535.00	89.13	358.77	6,956.35	1,568.10	407.04	1,597.38	2.74	-2.74	0.02
8,578.00	88.89	359.39	6,957.09	1,611.09	406.35	1,640.15	1.55	-0.56	1.44
8,623.00	88.89	358.84	6,957.96	1,656.07	405.66	1,684.91	1.22	0.00	-1.22
8,668.00	89.32	359.81	6,958.66	1,701.06	405.13	1,729.68	2.36	0.96	2.16
8,713.00	89.44	0.93	6,959.15	1,746.06	405.42	1,774.54	2.50	0.27	2.49
8,758.00	88.33	1.32	6,960.03	1,791.04	406.30	1,819.43	2.61	-2.47	0.87
8,801.00	88.15	0.39	6,961.35	1,834.01	406.94	1,862.30	2.20	-0.42	-2.16
8,846.00	88.52	1.25	6,962.65	1,878.99	407.59	1,907.16	2.08	0.82	1.91
8,889.00	88.76	1.64	6,963.67	1,921.96	408.67	1,950.07	1.06	0.56	0.91
8,934.00	89.01	0.83	6,964.55	1,966.94	409.64	1,994.96	1.88	0.56	-1.80
8,977.00	90.56	1.28	6,964.71	2,009.94	410.43	2,037.86	3.75	3.60	1.05
9,020.00	89.57	1.23	6,964.66	2,052.92	411.37	2,080.77	2.31	-2.30	-0.12
9,065.00	88.58	0.45	6,965.39	2,097.91	412.03	2,125.65	2.80	-2.20	-1.73
9,110.00	88.21	0.31	6,966.65	2,142.89	412.33	2,170.49	0.88	-0.82	-0.31
9,153.00	88.33	1.09	6,967.95	2,185.87	412.86	2,213.35	1.83	0.28	1.81
9,198.00	88.39	359.65	6,969.24	2,230.85	413.15	2,258.19	3.20	0.13	-3.20
9,243.00	88.21	0.12	6,970.57	2,275.83	413.06	2,302.99	1.12	-0.40	1.04
9,287.00	88.89	358.83	6,971.68	2,319.81	412.65	2,346.77	3.31	1.55	-2.93
9,330.00	89.01	358.26	6,972.47	2,362.79	411.56	2,389.50	1.35	0.28	-1.33
9,373.00	89.07	358.52	6,973.19	2,405.77	410.35	2,432.21	0.62	0.14	0.60
9,418.00	89.51	358.45	6,973.75	2,450.75	409.16	2,476.92	0.99	0.98	-0.16
9,462.00	90.00	358.48	6,973.94	2,494.73	407.99	2,520.64	1.12	1.11	0.07
9,505.00	89.94	359.37	6,973.96	2,537.73	407.18	2,563.40	2.07	-0.14	2.07
9,550.00	90.12	359.34	6,973.94	2,582.72	406.67	2,608.19	0.41	0.40	-0.07
9,595.00	90.68	359.77	6,973.62	2,627.72	406.32	2,652.99	1.57	1.24	0.96
9,638.00	91.54	359.62	6,972.79	2,670.71	406.09	2,695.80	2.03	2.00	-0.35
9,681.00	90.25	358.96	6,972.12	2,713.70	405.56	2,738.58	3.37	-3.00	-1.53
9,726.00	90.68	359.28	6,971.75	2,758.69	404.87	2,783.35	1.19	0.96	0.71
9,771.00	91.48	1.11	6,970.90	2,803.68	405.02	2,828.18	4.44	1.78	4.07
9,814.00	90.06	0.03	6,970.33	2,846.68	405.45	2,871.05	4.15	-3.30	-2.51

Halliburton Company

Survey Report

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Dechant 4-19HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB 17' @ 4998.00ft (Extreme 8)
Site:	Sec. 19-T2N-R64W	MD Reference:	RKB 17' @ 4998.00ft (Extreme 8)
Well:	Dechant 4-19HZ	North Reference:	True
Wellbore:	Plan A Rev 1	Survey Calculation Method:	Minimum Curvature
Design:	Plan A Rev 1	Database:	EDM 2003.16 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,857.00	90.87	0.54	6,969.98	2,889.67	405.66	2,913.90	2.23	1.88	1.19
9,902.00	89.88	0.97	6,969.68	2,934.67	406.26	2,958.78	2.40	-2.20	0.96
9,947.00	88.95	1.09	6,970.14	2,979.66	407.07	3,003.67	2.08	-2.07	0.27
9,990.00	88.15	0.33	6,971.23	3,022.64	407.60	3,046.54	2.57	-1.86	-1.77
10,035.00	88.20	0.89	6,972.66	3,067.61	408.08	3,091.39	1.25	0.11	1.24
10,080.00	88.89	0.49	6,973.81	3,112.60	408.62	3,136.25	1.77	1.53	-0.89
10,125.00	89.81	359.63	6,974.32	3,157.59	408.67	3,181.08	2.80	2.04	-1.91
10,170.00	90.12	359.41	6,974.34	3,202.59	408.29	3,225.88	0.84	0.69	-0.49
10,215.00	89.81	0.14	6,974.37	3,247.59	408.11	3,270.70	1.76	-0.69	1.62
10,258.00	90.37	359.20	6,974.30	3,290.59	407.87	3,313.51	2.54	1.30	-2.19
10,302.00	91.48	359.01	6,973.59	3,334.58	407.18	3,357.28	2.56	2.52	-0.43
10,346.00	91.42	359.08	6,972.48	3,378.56	406.44	3,401.03	0.21	-0.14	0.16
10,389.00	91.79	359.53	6,971.28	3,421.54	405.92	3,443.80	1.35	0.86	1.05
10,433.00	91.67	357.99	6,969.95	3,465.50	404.97	3,487.53	3.51	-0.27	-3.50
10,476.00	91.24	357.45	6,968.86	3,508.46	403.26	3,530.17	1.61	-1.00	-1.26
10,521.00	90.49	356.71	6,968.18	3,553.39	400.97	3,574.74	2.34	-1.67	-1.64
10,564.00	90.56	356.39	6,967.78	3,596.31	398.38	3,617.28	0.76	0.16	-0.74
10,608.00	90.37	355.31	6,967.43	3,640.20	395.20	3,660.72	2.49	-0.43	-2.45
10,652.00	90.37	353.91	6,967.14	3,684.00	391.06	3,704.00	3.18	0.00	-3.18
10,696.00	90.99	355.04	6,966.62	3,727.79	386.83	3,747.27	2.93	1.41	2.57
10,740.00	91.55	355.76	6,965.64	3,771.64	383.30	3,790.65	2.07	1.27	1.64
10,783.00	91.49	356.31	6,964.50	3,814.52	380.33	3,833.11	1.29	-0.14	1.28
10,827.00	91.48	356.67	6,963.36	3,858.42	377.64	3,876.62	0.82	-0.02	0.82
10,870.00	91.98	358.06	6,962.06	3,901.36	375.66	3,919.22	3.43	1.16	3.23
10,913.00	91.79	358.80	6,960.65	3,944.32	374.48	3,961.92	1.78	-0.44	1.72
10,958.00	91.17	359.94	6,959.49	3,989.30	373.99	4,006.69	2.88	-1.38	2.53
11,003.00	90.37	0.68	6,958.88	4,034.29	374.23	4,051.54	2.42	-1.78	1.64
11,047.00	90.19	2.02	6,958.67	4,078.28	375.27	4,095.45	3.07	-0.41	3.05
11,091.00	90.31	1.82	6,958.48	4,122.25	376.74	4,139.39	0.53	0.27	-0.45
11,135.00	89.88	1.14	6,958.40	4,166.24	377.88	4,183.31	1.83	-0.98	-1.55
11,179.00	89.75	1.58	6,958.55	4,210.22	378.92	4,227.22	1.04	-0.30	1.00
11,221.00	89.75	1.23	6,958.73	4,252.21	379.95	4,269.14	0.83	0.00	-0.83
11,262.00	89.50	0.97	6,959.00	4,293.20	380.74	4,310.04	0.88	-0.61	-0.63
11,307.00	89.13	359.94	6,959.54	4,338.20	381.10	4,354.90	2.43	-0.82	-2.29
11,336.00	89.32	358.98	6,959.93	4,367.19	380.82	4,383.77	3.37	0.66	-3.31
Final Sperry MWD Survey									
11,374.00	89.32	358.98	6,960.38	4,405.19	380.15	4,421.56	0.00	0.00	0.00
Straight Line Projection to TD									

Halliburton Company

Survey Report

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Dechant 4-19HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB 17' @ 4998.00ft (Extreme 8)
Site:	Sec. 19-T2N-R64W	MD Reference:	RKB 17' @ 4998.00ft (Extreme 8)
Well:	Dechant 4-19HZ	North Reference:	True
Wellbore:	Plan A Rev 1	Survey Calculation Method:	Minimum Curvature
Design:	Plan A Rev 1	Database:	EDM 2003.16 Single User Db

Targets

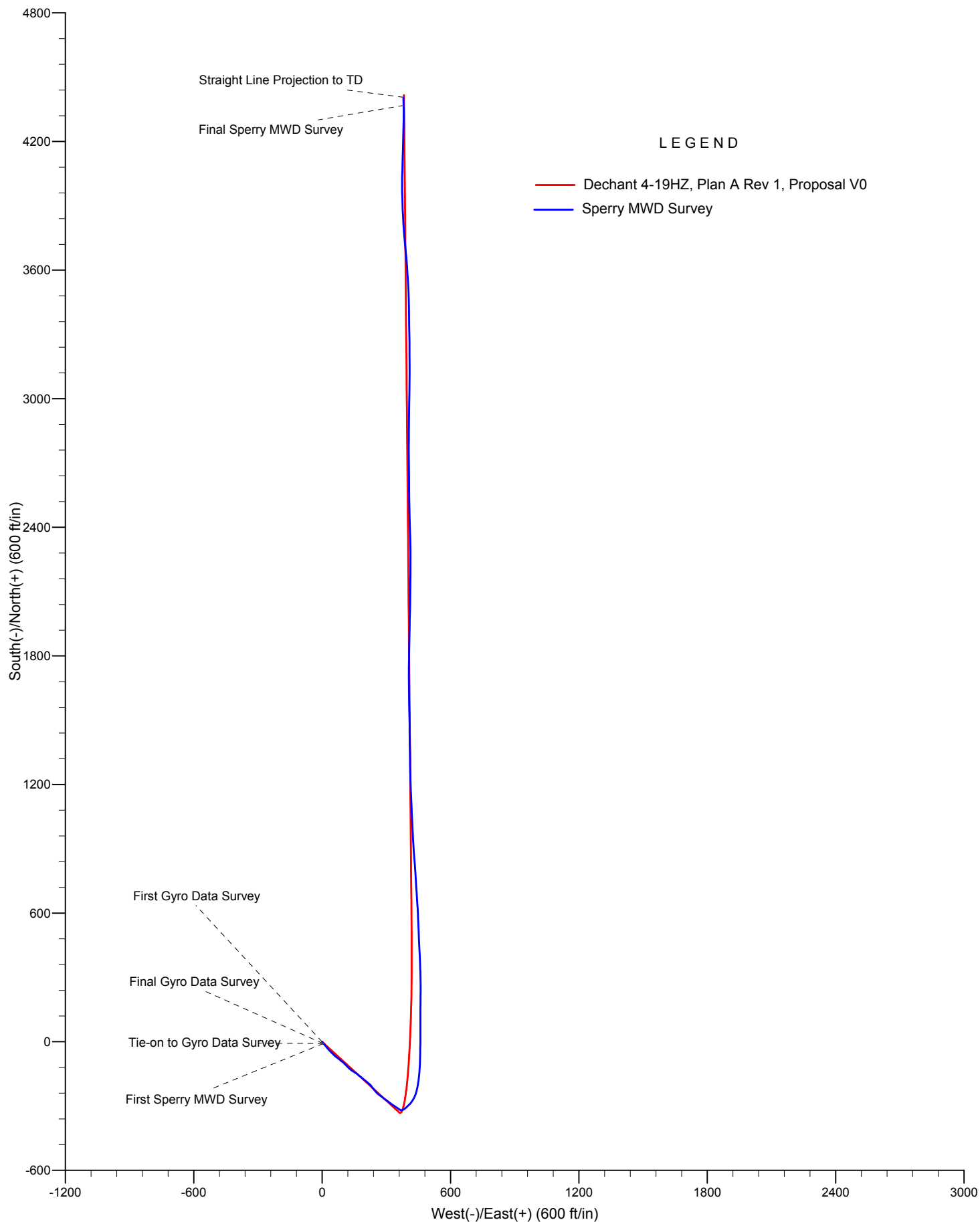
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Dechant 4-19HZ Plan - survey misses target center by 29.86ft at 11374.00ft MD (6960.38 TVD, 4405.19 N, 380.15 E) - Point	0.00	0.00	6,988.00	4,416.26	382.63	1,291,431.86	3,251,590.84	40.129870	-104.600225
Dechant 4-19HZ Sect - survey hits target center - Polygon	0.00	0.00	0.00	0.00	0.00	1,287,012.14	3,251,252.99	40.117747	-104.601593
Point 1			0.00	4,947.00	4,725.00	1,292,006.55	3,255,927.44		
Point 2			0.00	-335.00	4,776.00	1,286,725.55	3,256,031.95		
Point 3			0.00	-385.00	-330.00	1,286,623.83	3,250,926.92		
Point 4			0.00	4,876.00	-367.00	1,291,883.97	3,250,836.63		
Dechant 4-19HZ 460' - survey hits target center - Polygon	0.00	0.00	0.00	0.00	0.00	1,287,012.14	3,251,252.99	40.117747	-104.601593
Point 1			0.00	4,487.00	4,265.00	1,291,541.93	3,255,472.14		
Point 2			0.00	125.00	4,316.00	1,287,180.85	3,255,567.33		
Point 3			0.00	75.00	130.00	1,287,088.45	3,251,382.22		
Point 4			0.00	4,416.00	93.00	1,291,428.67	3,251,301.24		

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
37.00	37.00	-0.06	0.01	First Gyro Data Survey
977.00	976.94	-8.57	5.09	Final Gyro Data Survey
977.00	976.94	-8.57	5.09	Tie-on to Gyro Data Survey
1,044.00	1,043.94	-8.82	5.36	First Sperry MWD Survey
11,336.00	6,959.93	4,367.19	380.82	Final Sperry MWD Survey
11,374.00	6,960.38	4,405.19	380.15	Straight Line Projection to TD

Checked By: _____ Approved By: _____ Date: _____



Project: Weld County, CO (NAD 83)
Site: Sec. 19-T2N-R64W
Well: Dechant 4-19HZ

Anadarko Petroleum Corp.

HALLIBURTON

Sperry Drilling

