



Anadarko Petroleum Corporation

Dacono

Dacono 11 Pad

Dacono 28-2 (111426)

Dacono 28-2

Survey: 28-2

Standard Survey Report

11 February, 2012

ARK

Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Dacono 28-2 (111426)
Project:	Dacono	TVD Reference:	KB @ 5031.00ft (Original Well Elev)
Site:	Dacono 11 Pad	MD Reference:	KB @ 5031.00ft (Original Well Elev)
Well:	Dacono 28-2 (111426)	North Reference:	True
Wellbore:	Dacono 28-2	Survey Calculation Method:	Minimum Curvature
Design:	Dacono 28-2	Database:	EDM 5000.1 Single User Db

Project	Dacono		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Dacono 11 Pad		
Site Position:		Northing:	14,556,637.29 usft
From:	Lat/Long	Easting:	1,647,890.09 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in
		Latitude:	40.082118°N
		Longitude:	104.973282°W
		Grid Convergence:	0.02 °

Well	Dacono 28-2 (111426)		
Well Position	+N/-S	0.00 ft	Northing: 14,556,627.45 usft
	+E/-W	0.00 ft	Easting: 1,647,890.06 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	40.082091°N
		Longitude:	104.973282°W
		Ground Level:	5,016.00 ft

Wellbore	Dacono 28-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/10/2012	8.84	66.73	52,853

Design	Dacono 28-2				
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	19.66	

Survey Program	Date	2/11/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
138.00	8,723.00	28-2 (Dacono 28-2)	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	
138.00	0.09	113.12	138.00	-0.04	0.10	-0.01	0.07	0.07	0.00	
231.00	0.88	38.15	231.00	0.49	0.61	0.67	0.93	0.85	-80.61	
324.00	2.29	33.93	323.96	2.59	2.09	3.14	1.52	1.52	-4.54	
400.00	3.60	29.54	399.86	5.93	4.11	6.97	1.75	1.72	-5.78	
489.00	5.01	22.33	488.60	11.96	6.96	13.60	1.69	1.58	-8.10	
578.00	6.28	16.84	577.17	20.21	9.85	22.35	1.55	1.43	-6.17	
666.00	8.09	17.85	664.48	30.71	13.14	33.34	2.06	2.06	1.15	
757.00	9.32	17.06	754.43	43.85	17.27	47.10	1.36	1.35	-0.87	
848.00	10.02	17.32	844.13	58.45	21.79	62.38	0.77	0.77	0.29	

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Wellbore:	Dacono 28-2	Survey Calculation Method:	Minimum Curvature
Design:	Dacono 28-2	Database:	EDM 5000.1 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)
908.00	10.99	21.06	903.13	68.77	25.40	73.31	1.98	1.62	6.23
1,024.00	10.42	14.16	1,017.11	89.26	31.94	94.81	1.21	-0.49	-5.95
1,113.00	12.08	19.12	1,104.40	105.87	36.96	112.13	2.16	1.87	5.57
1,201.00	13.80	17.85	1,190.16	124.56	43.19	131.83	1.98	1.95	-1.44
1,288.00	16.22	17.23	1,274.19	146.05	49.97	154.34	2.79	2.78	-0.71
1,376.00	17.89	21.54	1,358.32	170.36	58.57	180.14	2.38	1.90	4.90
1,465.00	19.29	21.85	1,442.67	196.72	69.07	208.49	1.58	1.57	0.35
1,552.00	20.60	21.06	1,524.45	224.34	79.91	238.15	1.54	1.51	-0.91
1,641.00	21.49	19.83	1,607.52	254.29	91.07	270.11	1.12	1.00	-1.38
1,729.00	22.81	17.63	1,689.02	285.71	101.71	303.27	1.77	1.50	-2.50
1,819.00	23.38	19.74	1,771.81	319.15	113.02	338.57	1.12	0.63	2.34
1,908.00	24.79	18.64	1,853.06	353.45	124.95	374.88	1.66	1.58	-1.24
1,996.00	27.60	18.42	1,932.01	390.28	137.29	413.72	3.20	3.19	-0.25
2,086.00	27.82	19.26	2,011.69	429.89	150.81	455.56	0.50	0.24	0.93
2,175.00	27.11	19.52	2,090.66	468.60	164.43	496.61	0.81	-0.80	0.29
2,263.00	25.18	20.35	2,169.65	505.06	177.64	535.38	2.23	-2.19	0.94
2,355.00	25.71	20.66	2,252.73	542.08	191.49	574.90	0.59	0.58	0.34
2,443.00	26.02	22.33	2,331.92	577.80	205.56	613.27	0.90	0.35	1.90
2,531.00	26.10	20.13	2,410.97	613.83	219.55	651.91	1.10	0.09	-2.50
2,621.00	26.02	17.76	2,491.82	651.22	232.39	691.44	1.16	-0.09	-2.63
2,708.00	26.59	20.92	2,569.82	687.58	245.16	729.98	1.74	0.66	3.63
2,797.00	27.51	22.02	2,649.08	725.24	259.98	770.43	1.18	1.03	1.24
2,886.00	28.70	20.53	2,727.59	764.31	275.18	812.34	1.55	1.34	-1.67
2,976.00	29.49	19.43	2,806.23	805.44	290.13	856.10	1.06	0.88	-1.22
3,064.00	29.71	17.94	2,882.75	846.61	304.05	899.56	0.87	0.25	-1.69
3,155.00	28.61	18.24	2,962.21	888.76	317.82	943.88	1.22	-1.21	0.33
3,244.00	28.78	17.45	3,040.28	929.44	330.91	986.59	0.47	0.19	-0.89
3,333.00	27.11	17.94	3,118.90	969.17	343.59	1,028.27	1.89	-1.88	0.55
3,422.00	27.82	19.04	3,197.87	1,008.10	356.61	1,069.31	0.98	0.80	1.24
3,512.00	26.98	22.16	3,277.78	1,046.86	371.16	1,110.71	1.85	-0.93	3.47
3,600.00	26.50	23.43	3,356.37	1,083.36	386.50	1,150.24	0.85	-0.55	1.44
3,690.00	25.88	24.44	3,437.13	1,119.67	402.61	1,189.85	0.85	-0.69	1.12
3,776.00	25.40	23.12	3,514.66	1,153.72	417.62	1,226.96	0.87	-0.56	-1.53
3,866.00	25.80	19.96	3,595.83	1,189.88	431.88	1,265.82	1.58	0.44	-3.51
3,957.00	24.92	18.16	3,678.06	1,226.71	444.62	1,304.79	1.29	-0.97	-1.98
4,046.00	23.69	19.26	3,759.17	1,261.41	456.36	1,341.41	1.47	-1.38	1.24
4,136.00	24.39	18.42	3,841.36	1,296.11	468.19	1,378.07	0.87	0.78	-0.93
4,226.00	23.51	20.13	3,923.61	1,330.59	480.24	1,414.60	1.25	-0.98	1.90
4,316.00	24.79	18.55	4,005.74	1,365.34	492.43	1,451.42	1.59	1.42	-1.76
4,406.00	25.40	21.76	4,087.24	1,401.15	505.58	1,489.57	1.66	0.68	3.57
4,493.00	26.50	22.02	4,165.47	1,436.48	519.78	1,527.61	1.27	1.26	0.30
4,583.00	26.72	21.85	4,245.94	1,473.87	534.84	1,567.89	0.26	0.24	-0.19
4,671.00	25.31	22.02	4,325.02	1,509.68	549.25	1,606.46	1.60	-1.60	0.19
4,760.00	24.39	19.04	4,405.78	1,544.68	562.38	1,643.85	1.75	-1.03	-3.35

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Survey									
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4,849.00	23.60	16.75	4,487.09	1,579.12	573.51	1,680.01	1.37	-0.89	-2.57
4,939.00	23.29	18.95	4,569.66	1,613.20	584.48	1,715.80	1.03	-0.34	2.44
5,027.00	24.52	18.86	4,650.11	1,646.93	596.04	1,751.45	1.40	1.40	-0.10
5,116.00	25.00	20.44	4,730.93	1,682.03	608.57	1,788.73	0.92	0.54	1.78
5,203.00	26.72	21.45	4,809.22	1,717.47	622.15	1,826.66	2.04	1.98	1.16
5,293.00	24.61	19.43	4,890.34	1,753.97	635.78	1,865.63	2.54	-2.34	-2.24
5,383.00	21.88	16.05	4,973.03	1,787.77	646.65	1,901.11	3.37	-3.03	-3.76
5,472.00	19.12	13.76	5,056.38	1,817.87	654.71	1,932.17	3.23	-3.10	-2.57
5,561.00	18.11	11.96	5,140.73	1,845.56	661.04	1,960.38	1.31	-1.13	-2.02
5,649.00	16.08	10.86	5,224.83	1,870.91	666.17	1,985.98	2.34	-2.31	-1.25
5,738.00	14.02	9.94	5,310.78	1,893.64	670.36	2,008.79	2.33	-2.31	-1.03
5,829.00	12.30	8.22	5,399.38	1,914.09	673.65	2,029.15	1.94	-1.89	-1.89
5,918.00	10.02	7.04	5,486.70	1,931.16	675.95	2,046.00	2.57	-2.56	-1.33
6,007.00	8.70	7.13	5,574.51	1,945.53	677.73	2,060.13	1.48	-1.48	0.10
6,095.00	7.29	4.14	5,661.65	1,957.70	678.96	2,072.01	1.67	-1.60	-3.40
6,183.00	5.89	357.24	5,749.07	1,967.78	679.15	2,081.56	1.83	-1.59	-7.84
6,274.00	4.79	353.02	5,839.67	1,976.21	678.46	2,089.27	1.28	-1.21	-4.64
6,361.00	3.91	352.84	5,926.42	1,982.76	677.65	2,095.17	1.01	-1.01	-0.21
6,449.00	2.99	351.44	6,014.26	1,988.01	676.94	2,099.87	1.05	-1.05	-1.59
6,539.00	1.80	16.53	6,104.18	1,991.69	676.99	2,103.35	1.73	-1.32	27.88
6,629.00	1.80	25.23	6,194.14	1,994.32	677.99	2,106.16	0.30	0.00	9.67
6,763.00	1.58	10.55	6,328.08	1,998.04	679.23	2,110.08	0.36	-0.16	-10.96
6,897.00	1.32	8.36	6,462.04	2,001.38	679.79	2,113.42	0.20	-0.19	-1.63
7,030.00	0.88	1.85	6,595.01	2,003.92	680.05	2,115.90	0.34	-0.33	-4.89
7,164.00	1.01	357.15	6,729.00	2,006.13	680.02	2,117.97	0.11	0.10	-3.51
7,297.00	0.79	355.52	6,861.98	2,008.21	679.89	2,119.89	0.17	-0.17	-1.23
7,429.00	0.70	183.83	6,993.98	2,008.31	679.77	2,119.94	1.13	-0.07	-130.07
7,562.00	0.48	195.12	7,126.97	2,006.97	679.57	2,118.60	0.19	-0.17	8.49
7,696.00	0.40	229.14	7,260.96	2,006.12	679.07	2,117.64	0.20	-0.06	25.39
7,829.00	0.31	187.96	7,393.96	2,005.46	678.67	2,116.88	0.20	-0.07	-30.96
7,965.00	0.09	345.33	7,529.96	2,005.20	678.59	2,116.61	0.29	-0.16	115.71
8,097.00	0.31	36.92	7,661.96	2,005.58	678.78	2,117.03	0.20	0.17	39.08
8,230.00	0.62	18.24	7,794.96	2,006.55	679.22	2,118.10	0.26	0.23	-14.05
8,361.00	0.79	354.82	7,925.95	2,008.13	679.36	2,119.63	0.25	0.13	-17.88
8,496.00	0.22	25.54	8,060.94	2,009.29	679.39	2,120.73	0.45	-0.42	22.76
8,615.02	0.34	19.58	8,179.96	2,009.82	679.60	2,121.31	0.10	0.10	-5.01
Dacono 28-2 Tgt									
8,678.00	0.40	17.85	8,242.94	2,010.21	679.73	2,121.71	0.10	0.10	-2.75
8,723.00	0.40	17.85	8,287.94	2,010.51	679.83	2,122.02	0.00	0.00	0.00
Proj to TD at 8723 MD/8288 TVD									

ARK
Survey Report

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Dacono 28-2 (111426)
Project:	Dacono	TVD Reference:	KB @ 5031.00ft (Original Well Elev)
Site:	Dacono 11 Pad	MD Reference:	KB @ 5031.00ft (Original Well Elev)
Well:	Dacono 28-2 (111426)	North Reference:	True
Wellbore:	Dacono 28-2	Survey Calculation Method:	Minimum Curvature
Design:	Dacono 28-2	Database:	EDM 5000.1 Single User Db

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,723.00	8,287.94	2,010.51	679.83	Proj to TD at 8723 MD/8288 TVD

Checked By: _____	Approved By: _____	Date: _____
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