

Elizabeth "A" Cox#8 ST01 Survey Report (Def Survey)

Report Date: April 05, 2012 - 03:00 PM	Survey / DLS Computation: Minimum Curvature / Lubinski
Client: OXY	Vertical Section Azimuth: 49.412 ° (Grid North)
Field: KC, Haskell County (NAD 27 SZ) 2012	Vertical Section Origin: 0.000 ft, 0.000 ft
Structure / Slot: OXY 8-30S-33W (Elizabeth "A" Cox#8) / Elizabeth "A" Cox#8	TVD Reference Datum: KB
Well: Elizabeth "A" Cox#8	TVD Reference Elevation: 2979.100 ft above MSL
Borehole: Sidetrack Wellpath	Seabed / Ground Elevation: 2965.100 ft above MSL
UWI / API#: Unknown / Unknown	Magnetic Declination: 6.544 °
Survey Name: Elizabeth "A" Cox#8 ST01	Total Field Strength: 51811.330 nT
Survey Date: March 13, 2012	Magnetic Dip Angle: 65.220 °
Tort / AHD / DDI / ERD Ratio: 21.256 ° / 124.130 ft / 3.422 / 0.037	Declination Date: March 13, 2012
Coordinate Reference System: NAD27 Kansas State Plane, Southern Zone, US Feet	Magnetic Declination Model: BGGM 2011
Location Lat / Long: N 37° 26' 51.38503", W 100° 56' 54.61131"	North Reference: Grid North
Location Grid N/E Y/X: N 293684.700 ftUS, E 1289256.800 ftUS	Grid Convergence Used: -1.505 °
CRS Grid Convergence Angle: -1.50467402 °	Total Corr Mag North->Grid North: 8.048 °
Grid Scale Factor: 0.99996936	Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	49.41	0.00	0.00	0.00	0.00	N/A	293684.70	1289256.80	N 37 26 51.39 W 100 56 54.61	
Marker MudLine	14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	293684.70	1289256.80	N 37 26 51.39 W 100 56 54.61	
Assume Vertical	2170.00	0.00	0.00	2170.00	0.00	0.00	0.00	0.00	293684.70	1289256.80	N 37 26 51.39 W 100 56 54.61	
First SLB_MWD Survey	2264.00	1.03	10.34	2263.99	0.66	0.83	0.15	1.10	293685.53	1289256.95	N 37 26 51.39 W 100 56 54.61	
	2296.00	1.85	41.87	2295.99	1.39	1.50	0.55	3.47	293686.20	1289257.35	N 37 26 51.40 W 100 56 54.61	
	2359.00	3.58	50.01	2358.91	4.37	3.52	2.73	2.81	293688.22	1289259.53	N 37 26 51.42 W 100 56 54.58	
	2453.00	8.25	58.30	2452.39	13.97	8.95	10.72	5.04	293693.65	1289267.52	N 37 26 51.48 W 100 56 54.48	
	2547.00	8.47	55.46	2545.39	27.52	16.42	22.17	0.50	293701.12	1289278.96	N 37 26 51.55 W 100 56 54.34	
	2610.00	8.10	54.12	2607.73	36.55	21.65	29.58	0.66	293706.35	1289286.38	N 37 26 51.61 W 100 56 54.25	
	2673.00	9.53	56.73	2669.99	46.15	27.12	37.54	2.36	293711.82	1289294.34	N 37 26 51.66 W 100 56 54.15	
	2736.00	9.82	56.60	2732.09	56.65	32.94	46.39	0.46	293717.63	1289303.18	N 37 26 51.72 W 100 56 54.05	
	2799.00	9.77	55.28	2794.17	67.30	38.94	55.27	0.37	293723.64	1289312.06	N 37 26 51.78 W 100 56 53.94	
	2862.00	9.11	50.08	2856.32	77.61	45.18	63.48	1.71	293729.88	1289320.28	N 37 26 51.85 W 100 56 53.84	
	2925.00	8.86	49.59	2918.55	87.45	51.53	71.00	0.41	293736.23	1289327.80	N 37 26 51.91 W 100 56 53.75	
	2988.00	8.53	47.40	2980.82	96.97	57.84	78.14	0.74	293742.53	1289334.93	N 37 26 51.98 W 100 56 53.66	
	3051.00	6.37	41.46	3043.29	105.10	63.62	83.89	3.64	293748.32	1289340.69	N 37 26 52.04 W 100 56 53.59	
	3114.00	5.53	40.43	3105.95	111.56	68.55	88.17	1.34	293753.25	1289344.97	N 37 26 52.09 W 100 56 53.54	
	3177.00	4.27	41.39	3168.72	116.88	72.62	91.69	2.00	293757.32	1289348.49	N 37 26 52.13 W 100 56 53.50	
	3239.00	2.51	40.28	3230.60	120.51	75.39	94.10	2.84	293760.08	1289350.89	N 37 26 52.15 W 100 56 53.47	
Last SLB_MWD Survey	3302.00	0.96	9.71	3293.58	122.27	76.96	95.08	2.78	293761.66	1289351.87	N 37 26 52.17 W 100 56 53.46	
Proj To Section TD	3353.00	0.96	9.71	3344.57	122.93	77.80	95.22	0.00	293762.50	1289352.02	N 37 26 52.18 W 100 56 53.46	

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Survey Tool Type	Borehole / Survey
	0.000	14.000	1/14.000	SLB_BLIND+TREND-Depth Only	Sidetrack Wellpath / Elizabeth "A" Cox#8 ST01
	14.000	2170.000	1/98.425	SLB_BLIND+TREND	Sidetrack Wellpath / Elizabeth "A" Cox#8 ST01
	2170.000	2170.000	Act Stns	SLB_BLIND+TREND	Sidetrack Wellpath / Elizabeth "A" Cox#8 ST01
	2170.000	3302.000	1/1132.000	SLB_MWD-STD	Sidetrack Wellpath / Elizabeth "A" Cox#8 ST01
	3302.000	3353.000	1/51.000	SLB_BLIND+TREND	Sidetrack Wellpath / Elizabeth "A" Cox#8 ST01