



Directional Services

Job Number: 061117505482
 Company: Chesapeake Operating
 Lease/Well: Jordan 12 State, Well #4
 Location: Lea County, New Mexico
 Rig Name: Patterson #504
 RKB: 22'
 G.L. or M.S.L.: GL

State/Country: Texas/USA
 Declination: 7.93°
 Grid: East To Grid
 File name: F:\2006SU~1\CHESAP~1\JORDAN4.SVY
 Date/Time: 17-Apr-06 / 16:45
 Curve Name: Surface - 4,450' M.D.



WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 SURFACE MD to 4,450' MD is, to the best of
 our knowledge a true and accurate account of the
 well bore.

[Signature] 4/17/06
 Multi-Shot Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
500.00	.25	208.27	500.00	-.96	-.52	-.96	1.09	208.27	.05
1000.00	.50	201.24	999.99	-3.95	-1.82	-3.95	4.36	204.75	.05
1500.00	.25	265.21	1499.98	-6.08	-3.70	-6.08	7.12	211.33	.09
2000.00	.25	333.09	1999.97	-5.20	-5.28	-5.20	7.41	225.46	.06
2500.00	.25	290.06	2499.97	-3.85	-6.80	-3.85	7.81	240.48	.04
3000.00	.25	113.03	2999.97	-3.90	-6.82	-3.90	7.86	240.22	.10
3500.00	.75	265.99	3499.96	-4.56	-9.08	-4.56	10.16	243.34	.20
3700.00	.75	291.16	3699.94	-4.18	-11.61	-4.18	12.34	250.20	.16
3900.00	1.50	261.34	3899.90	-4.10	-15.42	-4.10	15.95	255.11	.46

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4100.00	1.75	277.51	4099.82	-4.09	-21.03	-4.09	21.43	258.98	.26
4300.00	2.75	273.68	4299.67	-3.39	-28.85	-3.39	29.05	263.30	.51
Last Survey Depth Recorded									
4450.00	5.00	271.88	4449.31	-2.94	-38.97	-2.94	39.08	265.68	1.50

Survey Report

Report Date: April 26, 2006	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client: Chesapeake Operating	Vertical Section Azimuth: 84.320°
Field: Lea County, NM	Vertical Section Origin: N 0.000 ft, E 0.000 ft
Structure / Slot: Jordan 12 State #4 / Jordan 12 State #4	TVD Reference Datum:
Well: Jordan 12 State #4	TVD Reference Elevation: 0.0 ft relative to
Borehole: Jordan 12 State #4	Sea Bed / Ground Level Elevation: 0.000 ft relative to
UWI/API#:	Magnetic Declination: 8.004°
Survey Name / Date: Jordan_surveys / April 21, 2006	Total Field Strength: 49681.744 nT
Tort / AHD / DDI / ERD ratio: 24.601° / 128.70 ft / 3.501 / 0.017	Magnetic Dip: 61.097°
Grid Coordinate System: NAD27 New Mexico State Planes, Eastern Zone, US Feet	Declination Date: April 21, 2006
Location Lat/Long: N 32 57 19.966, W 103 2 38.086	Magnetic Declination Model: IGRF 2005
Location Grid N/E Y/X: N 713761.200 ftUS, E 895526.600 ftUS	North Reference: Grid North
Grid Convergence Angle: +0.70151409°	Total Corr Mag North -> Grid North: +7.302°
Grid Scale Factor: 1.00008824	Local Coordinates Referenced To: Well Head

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
Tie-In	4450.00	5.00	271.88	4449.30	-39.10	-2.90	-39.00	39.11	265.75	0.00	33.75G
	4542.00	5.50	275.30	4540.91	-47.40	-2.36	-47.40	47.46	267.15	0.64	13.29G
	4638.00	5.80	276.00	4636.45	-56.66	-1.43	-56.80	56.82	268.56	0.32	169.29G
	4702.00	4.90	278.00	4700.17	-62.49	-0.71	-62.73	62.73	269.35	1.44	-80.40M
	4765.00	3.80	279.60	4762.99	-67.12	0.01	-67.45	67.45	270.01	1.76	-71.60M
	4860.00	2.60	288.40	4857.84	-72.12	1.22	-72.60	72.61	270.96	1.36	-66.10M
	4956.00	1.60	293.90	4953.77	-75.27	2.45	-75.89	75.93	271.85	1.06	-46.30M
	5051.00	0.90	313.70	5048.75	-76.91	3.50	-77.64	77.72	272.58	0.86	46.10M
	5147.00	0.60	46.10	5144.74	-77.01	4.37	-77.82	77.95	273.21	1.15	76.20M
	5242.00	1.40	76.20	5239.73	-75.47	4.99	-76.34	76.50	273.74	0.98	71.30M
	5337.00	2.20	71.30	5334.68	-72.54	5.85	-73.48	73.72	274.55	0.86	71.10M
	5400.00	3.30	71.10	5397.61	-69.60	6.83	-70.62	70.95	275.52	1.75	79.20M
	5464.00	3.60	79.20	5461.49	-65.81	7.80	-66.91	67.36	276.65	0.89	94.40M
	5528.00	3.80	94.40	5525.36	-61.72	8.01	-62.82	63.33	277.27	1.56	104.40M
	5591.00	3.30	104.40	5588.24	-57.96	7.40	-58.98	59.44	277.15	1.26	96.00M
	5655.00	2.70	96.00	5652.15	-54.75	6.79	-55.70	56.11	276.95	1.16	98.70M
	5687.00	2.80	98.70	5684.11	-53.26	6.59	-54.17	54.57	276.94	0.51	91.30M
	5719.00	2.60	91.30	5716.08	-51.78	6.46	-52.68	53.07	276.99	1.25	93.00M
	5783.00	2.50	93.00	5780.02	-48.96	6.35	-49.83	50.23	277.26	0.20	98.70M
	5846.00	3.00	98.70	5842.94	-46.00	6.03	-46.83	47.22	277.34	0.90	97.90M
	5910.00	3.80	97.90	5906.83	-42.32	5.48	-43.07	43.42	277.26	1.25	96.40M
	5974.00	3.90	96.40	5970.68	-38.13	4.95	-38.81	39.12	277.27	0.22	101.70M
	6140.00	2.60	101.70	6136.41	-29.02	3.56	-29.51	29.73	276.87	0.80	92.70M
	6235.00	2.40	92.70	6231.32	-24.99	3.03	-25.42	25.59	276.79	0.46	89.40M
	6330.00	2.40	89.40	6326.24	-21.04	2.95	-21.44	21.64	277.84	0.15	89.60M
	6394.00	2.60	89.60	6390.18	-18.26	2.98	-18.65	18.88	279.07	0.31	93.40M
	6458.00	3.20	93.40	6454.10	-15.05	2.88	-15.41	15.68	280.59	0.98	96.60M
	6521.00	2.90	96.60	6517.01	-11.76	2.59	-12.07	12.35	282.13	0.55	98.30M
	6553.00	3.00	98.30	6548.97	-10.16	2.38	-10.44	10.71	282.84	0.42	99.00M
	6648.00	2.40	99.00	6643.86	-5.82	1.71	-6.02	6.26	285.87	0.63	89.20M
	6742.00	2.00	89.20	6737.79	-2.28	1.43	-2.43	2.82	300.37	0.58	87.60M
	6806.00	1.90	87.60	6801.75	-0.11	1.49	-0.26	1.51	350.20	0.18	90.10M
	6838.00	2.00	90.10	6833.74	0.98	1.51	0.83	1.72	28.90	0.41	94.90M
	6902.00	1.20	94.90	6897.71	2.75	1.45	2.62	2.99	61.04	1.27	112.80M
	6966.00	0.60	112.80	6961.70	3.70	1.26	3.59	3.81	70.66	1.02	165.50M
	7062.00	0.50	165.50	7057.70	4.21	0.66	4.16	4.21	80.98	0.52	-162.90M
	7156.00	0.60	197.10	7151.69	4.08	-0.21	4.12	4.12	92.88	0.33	-118.80M
	7250.00	0.60	241.20	7245.69	3.44	-0.91	3.54	3.66	104.47	0.48	175.60M

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
TD	7345.00	0.70	175.60	7340.68	2.96	-1.73	3.15	3.60	118.80	0.75	124.50M
	7409.00	0.60	124.50	7404.68	3.21	-2.31	3.46	4.16	123.77	0.89	85.40M
	7472.00	0.70	85.40	7467.68	3.85	-2.47	4.11	4.80	120.97	0.71	104.30M
	7536.00	0.60	104.30	7531.67	4.55	-2.52	4.83	5.45	117.56	0.37	0.00M