

RyanUSA

Ryan Survey Report

Company: Chesapeake Operating Inc.		Date: 11/15/2000		Time: 16:58:26		Page: 1	
Field: Lea County		Co-ordinate(NE) Reference:		Well: Chesapeake 00 Warehouse 2-10			
Site: Chesapeake 00 Warehouse 2-10		Vertical (TVD) Reference:		SITE 3925.0 above Mean Sea Level			
Well: Chesapeake 00 Warehouse 2-10		Section (VS) Reference:		Well (0.0E,0.0N,162.7Azi)			
Wellpath: OH		Survey Calculation Method:		Minimum Curvature			

Field: Lea County New Mexico USA		Map System: US State Plane Coordinate System 1927		Map Zone: New Mexico, Eastern Zone	
Ellipsoid: Clarke - 1866		North Reference: Grid		Geomagnetic Model: igrf2000	
Sys Datum: Mean Sea Level					

Site: Chesapeake 00 Warehouse 2-10 S/2 NE/4 Section 10-16S-36E 1172 FNL 2445 FEL					
Site Position:		Northing: 707433.00 ft	Latitude: 32 56 27.115 N		
From: Map		Easting: 804345.00 ft	Longitude: 103 20 28.743 W		
Position Uncertainty: 0.00 ft			Magnetic Declination: 8.81 deg		
Water Depth: 0.00 ft			Grid Convergence: 0.54 deg		

Well: Chesapeake 00 Warehouse 2-10 Lea County, New Mexico					
Well Position: +N/-S 0.00 ft	Northing: 707433.00 ft	Latitude: 32 56 27.115 N			
From Slot: +E/-W 0.00 ft	Easting : 804345.00 ft	Longitude: 103 20 28.743 W			
Position Uncertainty: 0.00 ft					

Wellpath: OH		Drilled From: Surface	
		Tie-on Depth: ft	
Vertical Section: +N/-S 0.00 ft		V.Section Direction: 162.69 deg	
From: Well +E/-W 0.00 ft			
Measured Depth Reference: SITE	3925.00 ft	Above System Datum: Mean Sea Level	

Casing Points			
MD ft	TVD ft	Diameter in	Name
450.00	450.00	13.375	13 3/8"
4850.22	4850.00	9.625	9 5/8"

Survey History for Definitive Wellpath			
Date: 11/15/2000	Validated: YES	Version: 0.00	
From ft	To ft	Survey	Tool
0.00	8938.00	#1 SS	PM
9009.00	12105.00	#2 Ryan MWD	MWD

Survey									
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	ClsD ft	ClsA deg	Tool
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
160.00	0.25	328.00	160.00	0.30	-0.18	-0.34	0.35	328.00	PM
541.00	0.75	161.00	540.99	-1.36	0.19	1.35	1.37	172.18	PM
1036.00	0.75	20.00	1035.97	-1.38	2.35	2.01	2.72	120.35	PM
1513.00	0.50	175.00	1512.96	-0.52	3.60	1.56	3.64	98.15	PM
1988.00	0.25	228.00	1987.95	-3.27	3.01	4.02	4.45	137.41	PM
2494.00	0.75	320.00	2493.94	-1.48	0.06	1.43	1.48	177.68	PM
2936.00	1.00	228.00	2935.90	-1.84	-4.67	0.37	5.02	248.48	PM
3470.00	0.75	245.00	3469.84	-6.44	-11.30	2.78	13.00	240.33	PM
3912.00	0.75	235.00	3911.80	-9.32	-16.29	4.05	18.76	240.23	PM
4272.00	0.50	314.00	4271.79	-9.58	-19.35	3.39	21.59	243.66	PM
4753.00	0.25	172.00	4752.78	-9.16	-20.71	2.58	22.65	246.15	PM
4850.22	0.26	195.25	4850.00	-9.58	-20.74	2.98	22.84	245.21	San Andres
5197.00	0.50	240.00	5196.77	-11.09	-22.25	3.96	24.86	243.52	PM
5691.00	0.50	272.00	5690.76	-12.09	-26.28	3.73	28.92	245.29	PM
6276.00	0.75	204.00	6275.73	-15.50	-30.38	5.76	34.11	242.98	PM
6438.29	0.73	216.40	6438.00	-17.30	-31.43	7.17	35.88	241.17	Glorieta
6616.00	0.75	230.00	6615.70	-18.96	-32.99	8.29	38.05	240.11	PM