

CERTIFIED SURVEYS

CHESAPEAKE ENERGY CORP.
MI ALLEN #121 →
SEC. 21-T15S-R36E
LEA COUNTY, NEW MEXICO

SUR : 1028/S & 1744/W
BAL : 1190/S & 1763/W

3D-025-34589

MAY 19, 1999

Survey Report

Page 1
Date: 5/19/99
Time: 1:50 pm
Wellpath ID: (SURVEYS)
Date Created: 4/29/99
Last Revision: 5/19/99

Calculated using the Minimum Curvature Method
Computed using PDS VER2.2.6
Vertical Section Plane: N 0.00 E

Survey Reference: WELLHEAD
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

CHESAPEAKE ENERGY
MI ALLEN #1-21
LEA COUNTY, NEW MEXICO
SEC. 21-T15S-R36E

(SURVEYS)

Measured Depth (ft)	Incl (deg.)	Drift Dir. (qdeg)	Course Length (ft)	TVD (ft)	Closure Dist. Dir. (ft) (qdeg)	TOTAL Rectangular Offsets (ft) (ft)	DLS (dg/100ft)
SHL (@ 1028' FSL & 1744' FWL, SEC. 21)							
0.00	0.00	N 0.00 E	0.00	0.00	0.00@ N 0.00 E	0.00 N 0.00 E	0.00
THE FOLLOWING ARE SPERRY-SUN SINGLE SHOT SURVEYS							
514.00	0.50	N 79.00 E	514.00	513.99	2.24@ N 79.00 E	0.43 N 2.20 E	0.10
946.00	0.50	N 79.00 E	432.00	945.98	6.01@ N 79.00 E	1.15 N 5.90 E	0.00
1419.00	0.50	S 89.00 E	473.00	1418.96	10.10@ N 81.43 E	1.51 N 9.99 E	0.02
1894.00	0.50	S 79.00 E	475.00	1893.94	14.14@ N 85.65 E	1.07 N 14.10 E	0.02
2372.00	0.25	S 79.00 E	478.00	2371.93	17.18@ N 88.41 E	0.48 N 17.17 E	0.05
2879.00	0.50	N 79.00 E	507.00	2878.92	20.44@ N 88.07 E	0.69 N 20.43 E	0.06
3357.00	0.75	S 53.00 E	478.00	3356.89	24.99@ S 88.17 E	0.80 S 24.97 E	0.12
3864.00	0.25	N 69.00 E	507.00	3863.87	28.76@ S 85.22 E	2.40 S 28.66 E	0.13
4343.00	0.50	N 42.00 W	479.00	4342.87	28.24@ S 89.05 E	0.47 S 28.23 E	0.13
4821.00	1.25	S 78.00 W	478.00	4820.82	21.74@ S 89.99 E	0.00 S 21.74 E	0.23
5297.00	1.50	N 88.00 W	476.00	5296.68	10.47@ S 85.25 E	0.87 S 10.43 E	0.09
5777.00	1.50	N 66.00 W	480.00	5776.52	2.48@ N 39.73 W	1.91 N 1.59W	0.12
6129.00	1.50	N 82.00 W	352.00	6128.40	11.26@ N 66.87 W	4.42 N 10.36W	0.12
6627.00	0.75	S 89.00 W	498.00	6626.30	20.75@ N 75.28 W	5.27 N 20.07W	0.15
7105.00	0.75	N 16.00 W	478.00	7104.27	25.43@ N 71.12 W	8.23 N 24.06W	0.19
7584.00	1.50	N 11.00 W	479.00	7583.17	31.38@ N 56.34 W	17.39 N 26.12W	0.16
8059.00	1.50	N 4.00 E	475.00	8058.01	40.05@ N 42.14 W	29.70 N 26.87W	0.08
8534.00	3.75	N 37.00 E	475.00	8532.51	51.24@ N 19.48 W	48.31 N 17.09W	0.55
8627.00	3.50	N 32.00 E	93.00	8625.32	54.90@ N 14.51 W	53.15 N 13.76W	0.43
8721.00	3.00	N 29.00 E	94.00	8719.17	58.78@ N 10.83 W	57.73 N 11.04W	0.56
8816.00	2.75	N 25.00 E	95.00	8814.05	62.60@ N 8.15 W	61.97 N 8.87W	0.34
8911.00	2.25	N 25.00 E	95.00	8908.96	66.11@ N 6.19 W	65.73 N 7.12W	0.53
9006.00	2.50	N 32.00 E	95.00	9003.88	69.37@ N 4.33 W	69.17 N 5.24W	0.40
9099.00	2.25	N 23.00 E	93.00	9096.80	72.66@ N 2.72 W	72.57 N 3.45W	0.48

Survey Report

Measured Depth (ft)	Incl (deg.)	Drift Dir. (qdeg)	Course Length (ft)	TVD (ft)	Closure Dist. Dir. (ft) (qdeg)	TOTAL Rectangular Offsets (ft) (ft)	DLS (dg/100ft)
9194.00	2.50	N 32.00 E	95.00	9191.72	76.06@ N 1.22 W	76.05 N 1.62W	0.47
9289.00	2.50	N 34.00 E	95.00	9286.63	79.52@ N 0.46 E	79.52 N 0.63 E	0.09
9382.00	2.50	N 30.00 E	93.00	9379.54	83.01@ N 1.92 E	82.96 N 2.78 E	0.19
9509.00	2.50	N 25.00 E	127.00	9506.42	88.03@ N 3.48 E	87.87 N 5.34 E	0.17
9666.00	2.00	N 35.00 E	157.00	9663.29	93.59@ N 5.12 E	93.22 N 8.36 E	0.40
9793.00	1.50	N 17.00 E	127.00	9790.24	97.15@ N 5.98 E	96.62 N 10.11 E	0.58
10106.00	1.50	N 14.00 E	313.00	10103.13	105.24@ N 6.71 E	104.51 N 12.30 E	0.03
10388.00	1.00	N 15.00 E	282.00	10385.06	111.34@ N 7.14 E	110.47 N 13.83 E	0.18
10855.00	1.50	N 9.00 E	467.00	10851.95	121.48@ N 7.49 E	120.45 N 15.84 E	0.11
LAST SURVEY @ 11379' MD							
11379.00	2.25	N 3.00 E	524.00	11375.66	138.60@ N 7.23 E	137.49 N 17.45 E	0.15
STRAIGHT LINE PROJECTION TO TD @ 12,000' MD							
12000.00	2.25	N 3.00 E	621.00	11996.19	162.92@ N 6.60 E	161.84 N 18.73 E	0.00

CHESAPEAKE ENERGY
MI ALLEN #1-21
LEA COUNTY, NEW MEXICO
SEC. 21-T15S-R36E
(SURVEYS)

HORIZONTAL VIEW
SCALE 10 ft. / DIVISION
SURVEY REF: WELLHEAD



BHL DATA	
TVD	11996.19
MD	12000.00
VS	162.92
N/S	161.84 N
E/W	18.73 E

